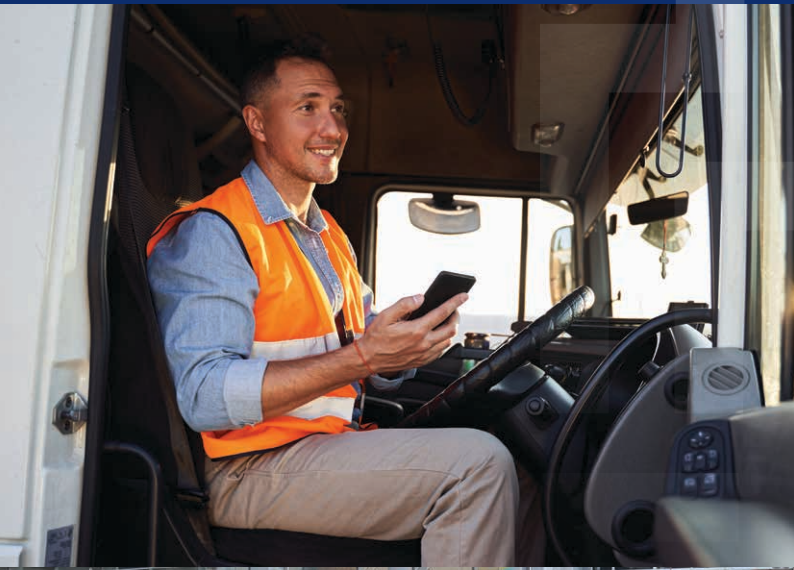


Aotearoa New Zealand Freight and Supply Chain Strategy

Preparing our freight and supply chain
system for the future

August 2023

Government Policy



Ehara taku toa i te toa taki tahi,
engari he toa taki tini] Success is
not the work of an individual, but
the work of many

UARA
OUR VALUES



WHAKAPAKARI
IMPROVING OUTCOMES



AKO
CAPABILITY DEVELOPMENT



MAHI TAHI
WORKING TOGETHER



RANGATIRATANGA
EMPOWERING
AND LEADING



KAITIAKITANGA
GUARDIANSHIP AND
PROTECTION



WHANAUNGATANGA
COLLABORATION
AND UNITY



MANAAKITANGA
CARING FOR AND
VALUING OTHERS

He kupu nā te Minita | Ministerial foreword

New Zealand's freight and supply chain system plays a crucial role in our economy and in upholding the well-being of our people. It underpins all sectors, connecting those producing goods and materials to those who need them.

Major disruptions to freight and supply chains in recent years, caused by COVID-19, severe weather events in the North Island, and the war in Ukraine all contributed to increase costs, delays, and uncertainty of doing business.

Longer term challenges like climate change and geopolitical tensions are also significant.

Our freight and supply chain system has many strengths to build on, not least a flexible and resourceful private sector, but there are many other things we can improve.

We want to build a system which is more productive, which supports the competitiveness of New Zealand businesses, and is more resilient.

This strategy serves as a blueprint for how we can achieve all of this. It introduces an integrated, cross-system view of New Zealand's freight and supply chain system. It sets out enduring principles, goals, and an initial set of actions. This will support coherence and reduce silos across government, the private sector, and other stakeholders. This will require the effectiveness of our collective efforts.

A more collaborative approach will be taken to resolving issues in the freight and supply chain system. The system is complex and no single agency, organisation, or business can effect the necessary improvements on its own.

Thank you for sharing your time, perspectives, and expertise in developing this strategy, and ask that you continue to work with us to improve our freight system.



Hon David Parker
Minister of Transport



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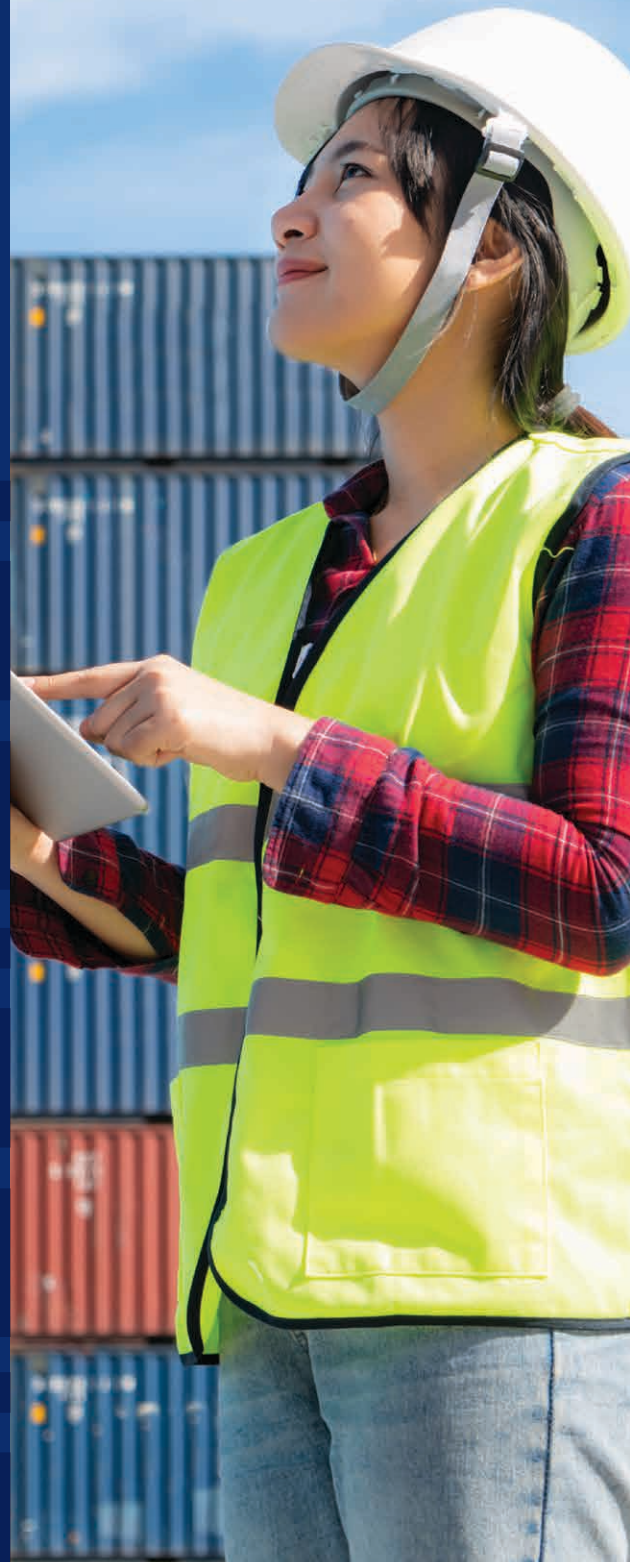
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Introduction



INTRODUCTION

Introduction

The freight and supply chain system underpins New Zealand's economy. The system moves goods from producers to those who need them, at home and abroad. New Zealand's economic goal is to be a high-wage, low-emissions economy that is competitive and economically secure. To do this our freight and supply chain system needs to work well.

The COVID-19 pandemic and extreme weather events at the start of 2023 showed us how vulnerable our system could be. Freight connections to communities and markets were impaired and in some cases cut off, which had serious economic and social costs. Previously considered once in a generation, these events are becoming more frequent and severe. Because of this, we need to make sure our freight and supply chain system performs well and can withstand and recover from disruptions quickly.

This strategy document sets out a 30-year direction to prepare New Zealand for the future. It will establish what we need to focus on to achieve our vision and when, and how we use our limited resources effectively.

Accompanying this strategy document is a plan of immediate actions. It focuses on the most urgent, important, or achievable work in the short term that sets us up for longer-term initiatives. Its success will rely on different groups working together, such as central government, the private sector, iwi/Māori, and local government.

Our vision

Aotearoa New Zealand's freight and supply chain system is underpinned by zero-emission transport, which is resilient, productive, efficient, and upholds safety and environmental sustainability.

Why we need a strategy

While plans and work programmes have existed for different parts of the freight and supply chain system in the past, we did not have an overall strategy for the system as a whole. We think New Zealand needs such a strategy for several reasons.

Because our operating environment is becoming more complex and uncertain

Our freight and supply chain system is under greater pressure than before because of climate change, geopolitical volatility, new technologies, a growing population and increasing urban density. We are more interconnected with the world than ever before and will feel the impacts of these trends more acutely. While some of these trends pose challenges for us, they could also provide opportunities if we deal with them effectively.

Because our system is not set up to respond to this new operating environment

There are issues about how our system works that prevent it from functioning as well as it can. These include uncertainty about the government's long-term plans, limited data and evidence to make decisions about freight, and a lack of focus on the system as a whole. This limits our ability to respond effectively to the major global trends affecting our future.

Because we need a more integrated and coherent way of addressing the issues with our system

We can do this by improving the alignment and coordination of both central and regional government freight transport policies, including infrastructure investment and the different laws and rules impacting the system. This is particularly important because freight and supply chain systems like ours are complex and interconnected.

Planning for New Zealand's future

Over the last year and a half, we have talked to many people involved in the freight and supply chain system to gather feedback and ideas, including through our issues paper published in April 2022. These views, together with the analyses and research we conducted and reviewed, have helped us develop this strategy and its accompanying implementation plan.

From this work, the strategy outlines what we need to do over three time horizons to position New Zealand's freight and supply chain system for the future.

30
YEARS

Over a thirty-year horizon the government and sector stakeholders need to change how we approach the freight and supply chain system. These are our *enduring principles*.

10
YEARS

Over a ten-year horizon we need to achieve a set of goals to change the system. These are our *strategic goals*.

3
YEARS

Over a three-year horizon we need to work with sector stakeholders to decide what to do to achieve our strategic goals. We have identified four key priority areas and have immediate actions in place to progress these areas. These are just the first step.

The diagram on the next page summarises the enduring principles, strategic goals, and our approach to implementation.

Working together will make the strategy happen

This strategy sets out an ambitious programme to transform the freight and supply chain system. To make this happen, the government and sector stakeholders will need to work together and play our respective parts. We intend to collaborate closely with stakeholders to implement the strategy, including forming working groups to design and progress actions.

OVERVIEW

Overview

30
YEARS

30-year horizon

10
YEARS

10-year horizon



Aotearoa is facing strategic challenges to our supply chains



Strategic goals

Over the next ten years our priority will be achieving these goals in line with our outcomes and principles.

System outcomes: what should our supply chain system look like?

- 

ZERO EMISSIONS

New Zealand's supply chains are underpinned by zero emissions freight transport.
- 

RESILIENCE

We are resilient, reliable, and prepared for potential disruption.
- 

PRODUCTIVITY & EFFICIENCY

Our freight sector is highly productive and efficient.
- 

SAFETY AND SUSTAINABILITY

Our freight transport system upholds safety and environmental sustainability.

To position New Zealand for the future and achieve our outcomes these principles need to underpin our actions

- 

NATIONAL INTEREST

We will identify, protect, and strengthen the parts of the freight and supply chain system that are critical to New Zealand's national interest.
- 

SYSTEM STEWARDSHIP

The Ministry of Transport will be a steward of the freight and supply chain system.
- 

PARTNERSHIP

Those involved in the freight an supply chain system will work together for the benefit of New Zealand.

INFRASTRUCTURE AND GOVERNMENT SYSTEMS

1. We are protecting, decarbonising, & optimising nationally significant freight routes & infrastructure.
2. There is a sophisticated, robust, & transparent base of evidence to support decision making in the freight system.
3. We have reliable & adaptive long-term plans for key parts of our freight system.

ENABLING THE SECTOR

4. Government policy enables the sector to accelerate emissions reduction and build long-term resilience.
5. The sector leads change in areas of common interest independently or with government support.
6. The value & function of the freight system is understood across the government and by the public.

INTERNATIONAL CONNECTIONS

7. We have reliable, resilient, competitive, & efficient international shipping & airfreight services.
8. Government & the sector are aware of global supply chain threats & opportunities & are ready to respond & adapt.
9. New Zealand reduces its international freight emissions in line with its international commitments.

3
YEARS**3-year horizon****Focus areas**

Our three year horizon will focus on four high priority areas. We are making a limited set of initial commitments in each of these areas and intend to expand on these commitments as resources allow.

PORTS AND THE CONNECTIONS TO THEIR COMMUNITIES

- About 99% of traded goods by weight flow through our ports. We need to ensure they are resilient to long-term threats and highly productive to support our economic prosperity.
- We will analyse the spatial connections of our ports to help us strengthen our critical freight corridors. We will also undertake analysis of alternative port models.

ROAD FREIGHT DECARBONISATION

- Road freight is responsible for almost a quarter of transport emissions, while rail and coastal shipping are much lower emissions modes of transport. This makes road freight a priority to decarbonise first.
- Initial work will focus on progressing priorities to accelerate the transition to zero emissions heavy vehicles. We will also continue to work on the implementation of the rail plan, and policies to support coastal shipping.

DATA SHARING AND INTEROPERABILITY

- A more sophisticated evidence base will support a better understanding of the freight and supply chain system and improved investment decision making.
- We will identify and invest in freight data needs based on priorities of different public and private sector stakeholders. This could be supported by a partnership with the sector to support mutual data sharing.

INTERNATIONAL ENGAGEMENT

- The COVID-19 supply chain disruptions have demonstrated vulnerabilities in our international freight connections. We need to be better prepared for future disruption and play our part in decarbonising international freight.
- We will maintain collaboration with international partners to prepare for disruption to freight networks and support the establishment of green shipping corridors.

**Collaborative implementation approach**

Across all these areas we will work with the sector to find the most impactful ways we can collaborate and partner on both strategic direction and progressing specific initiatives. This could include establishing ongoing working groups, partnering on shared projects or supporting industry to progress sector led initiatives.



New Zealand's freight and supply chain system



Our vision for the future

New Zealand aims to become a high-wage, low-emissions economy that is globally competitive and that provides its citizens with economic security.¹

To do this, we need to help our businesses become more resilient and sustainable, produce higher-value goods and get even better at the things they are already doing well, like digital technologies, advanced manufacturing, food and fibre, and agritech.

The freight and supply chain system can play its part in the following four outcomes:

New Zealand's freight and supply chain system is underpinned by zero-emissions freight transport

Transport produces 40% of New Zealand's domestic carbon emissions, and around a quarter of that is produced by trucks.² Moving to a zero-emissions freight transport system will help New Zealand meet its goal of net-zero carbon emissions by 2050. Under Aotearoa New Zealand's first Emissions Reduction Plan, New Zealand's freight system will need to emit 35% fewer carbon emissions by 2035 than it did in 2019.³

Reducing emissions created through moving goods domestically and internationally will help us avoid the worst effects of climate change. This will help our supply chains run more smoothly and put us in a more favourable position if our trading partners start taxing or regulating emissions from ships or planes bringing goods into their countries, and as more climate-conscious consumers favour low-emission goods.

If we are successful in achieving this, it means we are moving goods at home and abroad using vehicles that produce little to no emissions. These vehicles would have the right infrastructure and enough fuel sources to operate properly, and would be commercially viable.

New Zealand's freight and supply chain system is reliable, resilient, and prepared for potential disruptions

The COVID-19 pandemic and extreme weather events at the start of 2023 showed us how vulnerable our freight and supply chain system can be. These "once in a generation" events are becoming more frequent and severe. We need a system that is better able to anticipate and recover from such shocks to keep goods moving to and from markets. We also need to make sure we adapt the system to long-term changes ahead of time, instead of reacting as problems happen.

In addition, the nature of land use is also likely to change over time, as climate, demographic, and other systematic changes affect what is and can be grown, manufactured, and transported across the country. To avoid missing opportunities for economic development, freight infrastructure and services will need to be invested in to ensure this land use change is well served by our supply chain system.

If we achieve this, we will be able to monitor how the system is performing, spot major disruptions early, and have plans ready that allow us to respond effectively. We will also know what freight infrastructure is most important for moving goods and protecting them from the impacts of climate change including higher frequency and intensity weather events and to other natural hazards. A resilient system also sees goods continue to move in times of disruptions by using alternative transport modes or routes, and makes sure there is enough spare capacity in the system.

1. Ministry of Business, Innovation and Employment. Our Economic Plan. <https://www.mbie.govt.nz/business-and-employment/economic-development/economic-plan/>
 2. <https://emissionstracker.environment.govt.nz/#NrAMBoCZIXXCM4BEA5AppF2XYkqiQK4CckOMQA>
 3. Ministry for the Environment. *Towards a productive, sustainable and inclusive economy: Aotearoa New Zealand's First emissions reduction plan*. <https://environment.govt.nz/assets/publications/Aotearoa-New-Zealands-first-emissions-reduction-plan.pdf>

NEW ZEALAND'S FREIGHT AND SUPPLY CHAIN SYSTEM

New Zealand's freight and supply chain system is highly productive and efficient

Making our system more productive will improve our ability to get the goods we need and deliver them to markets quickly and cheaply, all while pursuing these other outcomes. This can also help New Zealand's businesses become more globally competitive by reducing the costs that come with being far away from the world's main markets and production centres.

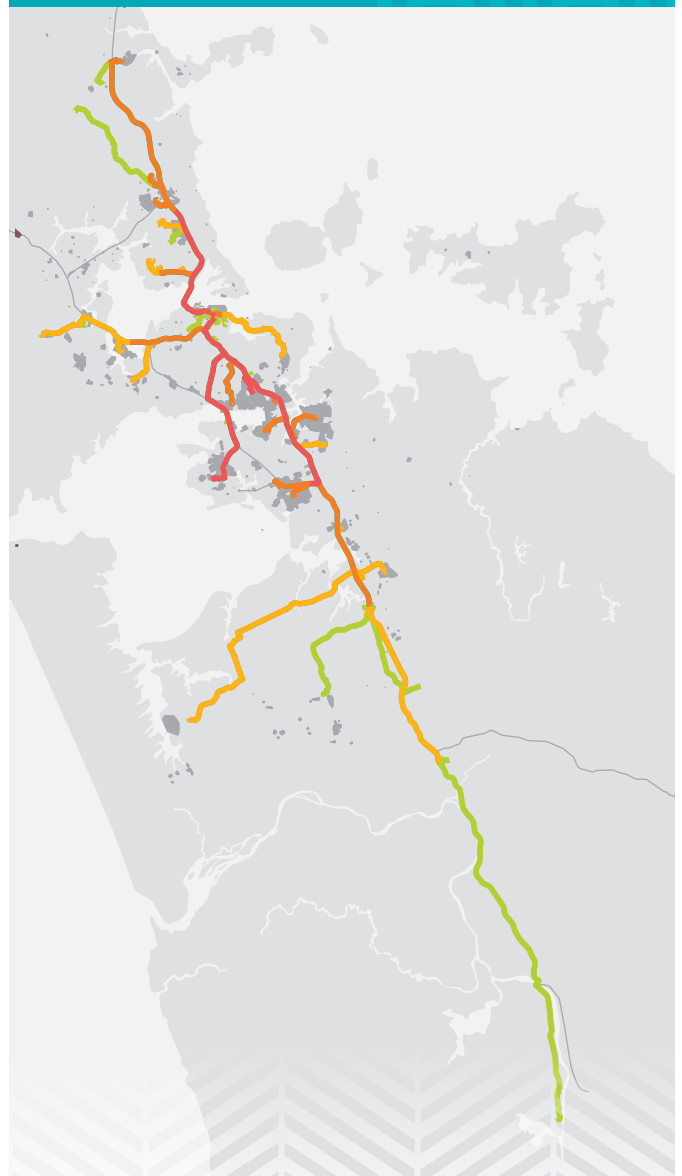
If we achieve this, we will see our freight networks and modes move goods more efficiently between areas of production and consumption, both at home and abroad. Key transport and logistics nodes will be able to process freight flows quickly and smoothly if we use capital and technology wisely, instead of just using more people. We will see people encouraged to innovate and make our system work better. The system would be able to grow and adapt to suit the volumes and high-value profiles of future freight, and would have sufficient workers with the right skills in high-wage, high-quality jobs.

New Zealand's freight and supply chain system upholds safety and environmental sustainability

Our freight and supply chain system needs to support the wellbeing of New Zealanders. It needs to be safe and environmentally sustainable. This includes reducing congestion, trauma on roads and in workplaces, and minimising air, noise, and water pollution that can affect human health.

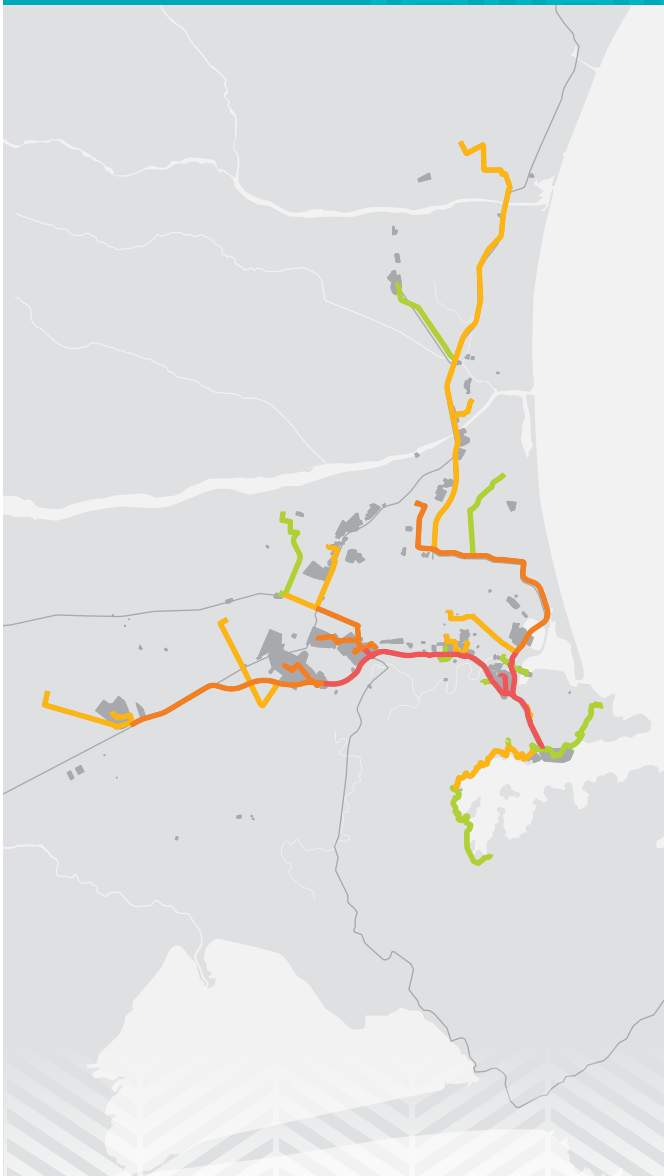
More freight being transported by rail and coastal shipping instead of by road will be one way of reducing the number of vehicles on the road and lower the number of crashes. Together with other work to reduce carbon emissions, transporting more freight by rail and coastal shipping can make New Zealand a better place to live.

Road freight flows to and from Auckland port

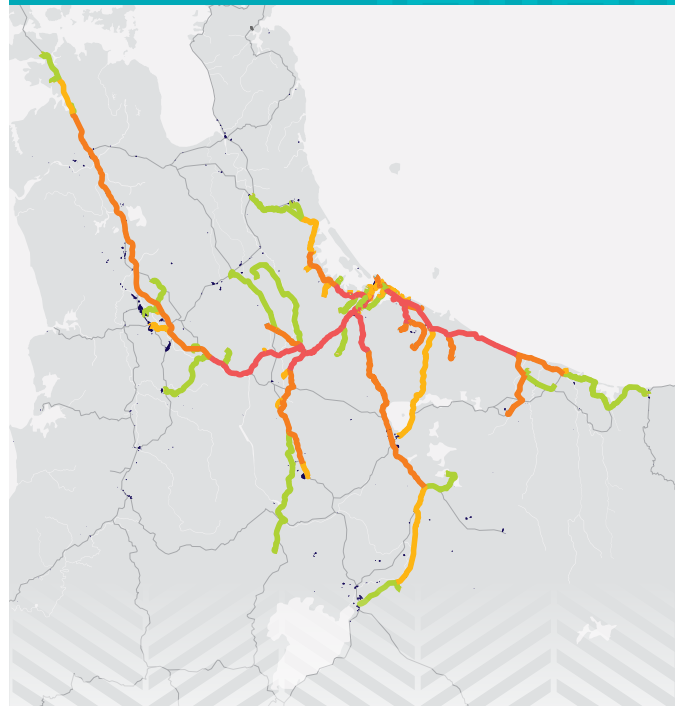


It also means air, noise and water pollution caused by freight activities that affect the environment and communities living nearby are monitored and reduced.

Road freight flows to and from Lyttelton port



Road freight flows to and from Tauranga port



Key: Flow quantiles

- Low
- Medium
- High
- Very high
- State highways
- Industrial clusters

Reference: Flows approximated from aggregated telematic data provided by EROAD for July 2020.

📍 These maps show the movement of freight vehicles between ports and industrial clusters in our three largest port cities. Port cities are dependent on these critical freight corridors. The port feeds into these industrial clusters which in turn provide employment, rates revenue, economic development, and goods and services for the city population.

How our system works

In 2017/2018, trucks, trains, ships and airplanes moved about 280 million tonnes of freight around New Zealand⁴. That is around 56 tonnes per New Zealander. Moving this quantity of goods around such a small, spread-out population is highly complex.

This strategy is focused on moving goods into, out of, and around New Zealand. When we say the freight and supply chain system, we are talking about the physical infrastructure that allow us to move goods around, like roads, railways, ports, airports, freight hubs, container yards, and distribution centres. We are also talking about the different businesses and organisations that move these goods, the regulatory system they need to comply with, and the many other things like information and financial assets that facilitate the transport of goods. The system is complex and dynamic, involving multiple modes of transport, people, and organisations.

The way we move goods around New Zealand depends on a few different factors. These include how long and hilly New Zealand's geography is, how spread out the population is, where things are produced and made, and where ports and airports are located. A significant part of our economy is based on primary production, like horticulture, forestry and livestock, which often come from remote parts of New Zealand that are hard to reach. The goods can also be heavy and take up lots of space, making it difficult to get them to market.

Our road, rail, maritime, and air connections



Seaport total imports and exports by weight (FY2018)

Imports exports

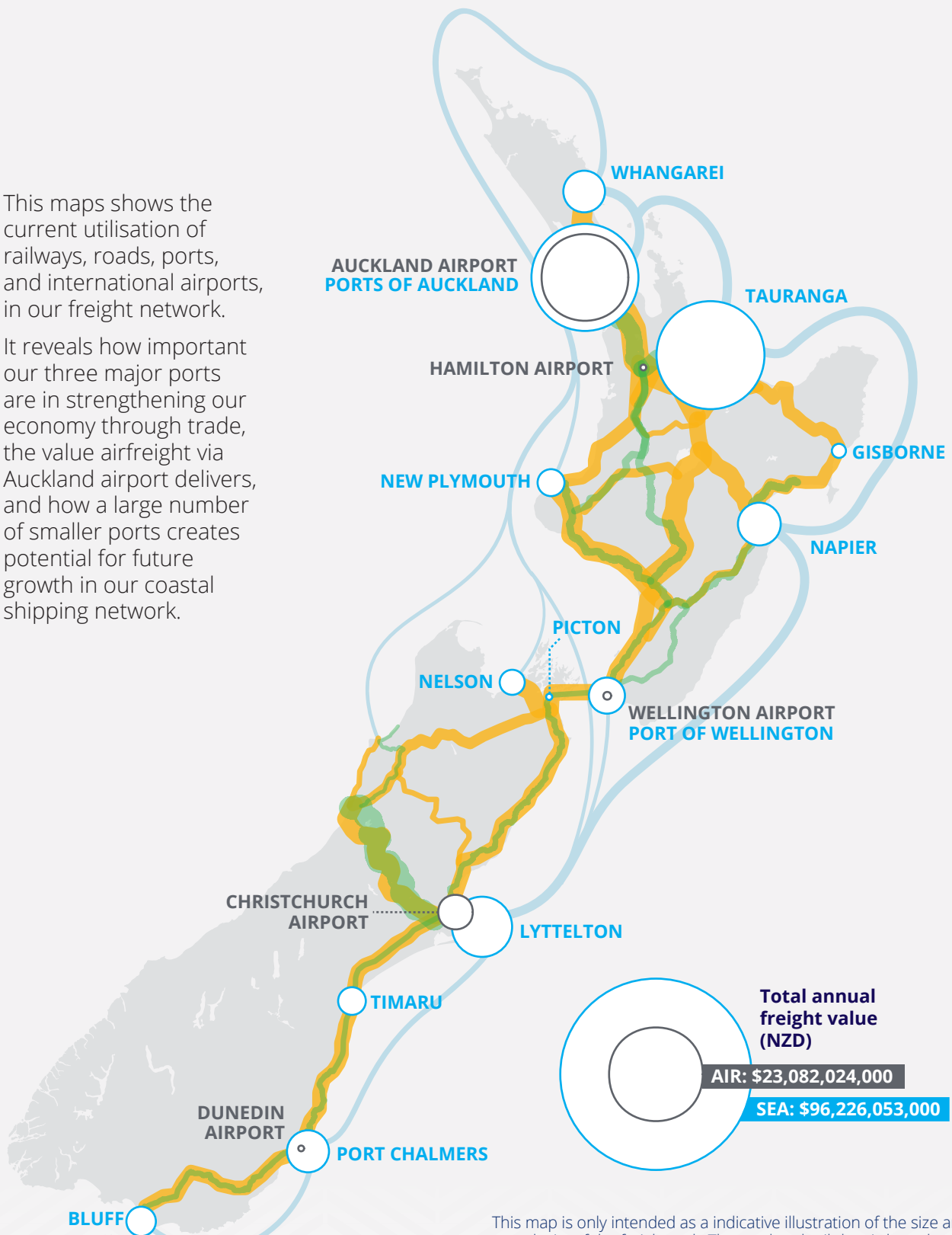
	Bulk	Containerised
Whangarei Ports	5,946.4 3,092.6	6.9 9.3
Ports of Auckland	2,097.1 1,327.3	3,054.9 1,217.2
Port of Tauranga	3,060.7 9,035.0	2,169.6 5,771.8
Port Gisborne	0.0 2999.1	0.0 0.0
Port of Napier	409.6 2,294.9	308.5 1,383.8
Port Taranaki	838.0 3,333.9	17.0 1.2
Centreport	1,104.2 1,645.1	338.0 300.4
Port Marlborough	14.0 726.9	0.0 0.0
Port Nelson	45.6 1,583.1	59.3 344.1
Lyttelton	1,672.5 1,785.2	819.3 1,293.8
Primeport Timaru	773.2 601.5	87.9 224.7
Port Otago	138.2 1,066.9	158.3 1,010.7
Southport	1,446.5 1,235.1	78.3 235.9

(all figures in 000 tonnes)

4. Ministry of Transport. *National Freight Demand Study 2017/18*. <https://www.transport.govt.nz/assets/Uploads/Report/NFDS3-Final-Report-Oct2019-Rev1.pdf>

NEW ZEALAND'S FREIGHT AND SUPPLY CHAIN SYSTEM

📍 This map shows the current utilisation of railways, roads, ports, and international airports, in our freight network. It reveals how important our three major ports are in strengthening our economy through trade, the value airfreight via Auckland airport delivers, and how a large number of smaller ports creates potential for future growth in our coastal shipping network.



This map is only intended as an indicative illustration of the size and complexity of the freight task. The road and rail data is based on the National Freight Demand Study 2017/18. Changes since this time are not included. Port and airport (weight and value) statistics from Statistics New Zealand. This map does not show domestic airfreight flow, intermodal hubs, and other important pieces of infrastructure. We are working to include this in future versions.

NEW ZEALAND'S FREIGHT AND SUPPLY CHAIN SYSTEM

The role of the private sector in our freight system

The private sector makes most of the decisions about how the system is run, especially about day-to-day operational decisions. The private sector, which is made up of lots of different types of businesses, including the ones in the diagram below, is vital to growing our economy, creating jobs and meeting the demand of consumers and the market. While the private sector is mainly driven by commercial interests, it is becoming increasingly responsive to the growing environmental and social concerns of consumers and government.



The role of the government in our freight system

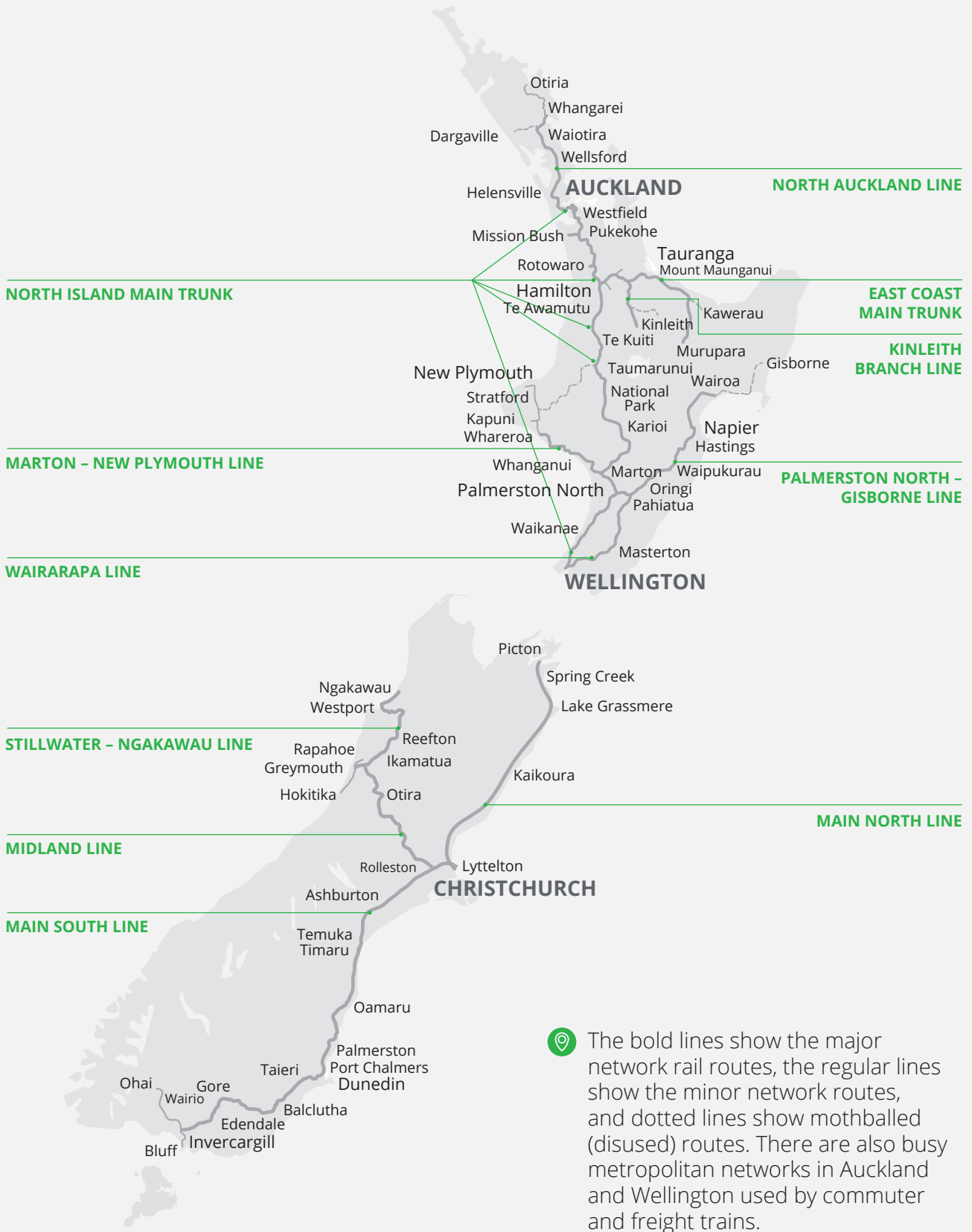
The government's job is to make sure the whole freight system runs well and benefits New Zealand and its people. Specifically this means that the government:

- **supports commerce** by setting rules for the market, investing in public infrastructure, and providing essential services like rail and postal services, that may not otherwise be commercially viable
- **regulates for things like** protecting the environment and the health and safety of workers, vehicles and other transport users
- **helps businesses connect with global markets** and resources by building international relationships and agreements
- **coordinates the different parts of the system**, especially during large scale emergencies like what we saw with the COVID-19 pandemic
- **takes a system-wide view**, monitoring how well the system is working, and planning and investing in the system's future.

Local government also plays a vital role in the freight system. Councils often design and manage local roads, and plan and approve new projects to improve the infrastructure in their areas.

NEW ZEALAND'S FREIGHT AND SUPPLY CHAIN SYSTEM

The national rail network



Freight and Māori economic development

Many Māori businesses operate in the agriculture, forestry, seafood and food processing sectors. These industries rely heavily on the freight and supply chain system to transport goods to markets in New Zealand and abroad. Like other exporters in New Zealand, Māori exporters were heavily affected during the COVID-19 supply chain disruptions.

Māori are also involved in the freight system as freight transport operators, workers, and infrastructure owners (see the case study below). Many iwi take into account future generations when making investments. This can be beneficial to our freight and supply chains which often need long-term thinking and investment. In 2018, a study by the Reserve Bank of New Zealand Te Pūtea Matua found that over 17,000 Māori were employed in the transport, postal, and warehousing sectors (about 5.4% of all workers in these sectors). The study also found that the transport sector accounted for about 6.1% of the Māori economy's financial asset base, which totals \$68.7 billion.⁵

5. Reserve Bank of New Zealand Te Pūtea Matua. *Te Ōhanga Māori 2018: The Māori Economy 2018*. <https://www.rbnz.govt.nz/-/media/0212182a319f481ea4427bcf5dd703df.ashx>

Case study: Ruakura Superhub

The Ruakura Superhub is a large logistics zone that is being developed by Tainui Group Holdings (Waikato-Tainui) to meet an expected 60% increase in freight volumes in the area by 2042.

Ruakura Superhub will become the largest logistics and industrial hub in New Zealand and, when complete, will span over 500 hectares of land and will include an 84-hectare logistics zone. Included in the Superhub is an inland port which provides connectivity for high-capacity rail and road links between the major trade nodes of the New Zealand 'Golden Triangle' (Hamilton, Auckland, Tauranga) as well as southwards to the lower North Island. The inland port is a joint venture between Tainui Group Holdings and Port of Tauranga, who together will operate and expand the inland port as freight volumes grow.

Ruakura Superhub seeks to improve the freight system by transitioning the movement of freight away from the predominance of round-trip, road-based journeys towards more rail-based, one-way movements. With its large scale and links with the Waikato expressway, the Ruakura Superhub is expected to make it easier, cheaper and more sustainable to move goods to and from sea ports and throughout the upper North island.

Tainui Group Holdings has designed a range of environmental measures to support cleaner waterways, increase native habitats, and reduce the carbon emissions of the project. The inland port is expected to remove the need for 65,000 long-haul truck journeys each year, reducing carbon emissions by 600 tonnes per year. Tainui Group Holdings is also keeping track of the economic and social impacts of the development on Māori and Pasifika peoples and businesses.

This Superhub will provide increased resilience against supply chain disruptions, decreased cost of transport, increased volumes transported, all while decarbonising the national freight system – to the benefit to tenants, users and our environment alike.

The government has invested \$40m into enabling public infrastructure for this strategic logistics development and see it as a project of national significance. The Ruakura Superhub is an example of how the Crown and iwi can work together to improve the freight and supply chain system.

NEW ZEALAND'S FREIGHT AND SUPPLY CHAIN SYSTEM

The impact of the freight system on Māori living standards and health

How well the freight and supply chain system works has an effect on Māori standards of living and health. The COVID-19 pandemic has increased freight costs, which in turn made the cost of living higher for groups that were already struggling financially – groups in which Māori are over-represented.

Moving freight around creates air pollution because most of our trucks are fuelled by diesel. The pollutants in diesel can make people more vulnerable to respiratory diseases and worsen the effects of the diseases.⁶ This increased vulnerability could have a big impact on Māori, who are three times more likely to be hospitalised for asthma than other groups in New Zealand.⁷

Māori make up a bigger part of the population in regions where the freight infrastructure is limited and less developed. This makes it more expensive to get goods there and makes those goods more expensive to buy.



6. Ministry of Transport. *Reducing harmful vehicle emissions from road transport.* <https://www.transport.govt.nz/area-of-interest/environment-and-climate-change/vehicle-emissions/>
7. Asthma and Respiratory Foundation New Zealand. *Key statistics: Respiratory disease in New Zealand.* <https://www.asthmafoundation.org.nz/research/key-statistics>

The principles of Te Tiriti o Waitangi

Māori are tangata whenua of Aotearoa, New Zealand. Respecting the principles of the treaty of Waitangi (Te Tiriti) when addressing the freight and supply chain system will be crucial since how well it performs affects Māori communities. The Waitangi Tribunal and the courts have derived guiding principles from Te Tiriti.⁸ This strategy, and its implementation plan, must be guided by two of these principles in particular:

- **Partnership:** This principle imposes on the parties the duty to act reasonably, honourably, and in good faith, which requires the acknowledgement of each other's respective interests and respect in their interaction with each other.⁹ This means that we must continue building a partnership approach with interested Māori groups in our future engagement for the implementation of the strategy.
- **Understanding and protecting Māori interests:** The Waitangi Tribunal has endorsed a holistic interpretation of the duty of active protection of Māori interests in Te Tiriti, which goes beyond protecting Māori property rights.¹⁰ For the strategy, this means the government must delve into specific issues impacting Māori participants in the freight and supply chain system and develop solutions, working in partnership with Māori. We have considered the views of some interested Māori groups in developing the strategy. The strategy implementation process will provide opportunities to explore those issues further, working closely with Māori.

By following these treaty principles, we can enable and empower Māori. The Māori economy and the number of Māori in the workforce are both expected to grow.¹¹ The strategy and its implementation plan must ensure the freight and supply chain supports this growth and the aspirations of Māori involved in the system. We must fulfil our partnership role and help achieve these outcomes for Māori.

Te Manatū Waka, Ministry of Transport, is working to build long-lasting relationships with Māori. This will help us gain a better understanding of Māori needs and interests in the freight and supply chain system.

➤ **The strategy and its implementation plan must ensure the freight and supply chain supports this growth and the aspirations of Māori involved in the system**

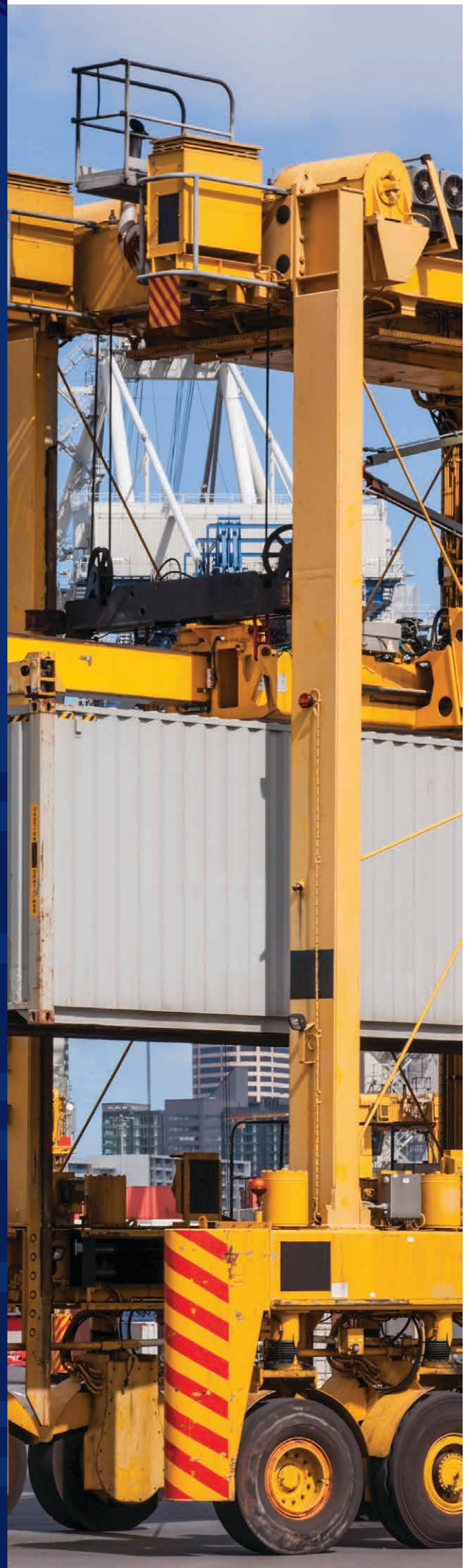
8. Ministry of Justice. *He tirohanga o kawa ki Te Tiriti o Waitangi. A Guide to the principles of the Treaty of Waitangi as expressed by the Courts and the Waitangi Tribunal*. <https://waitangitribunal.govt.nz/assets/WT-Principles-of-the-Treaty-of-Waitangi-as-expressed-by-the-Courts-and-the-Waitangi-Tribunal.pdf>

9. Ministry of Justice. *He tirohanga o kawa ki Te Tiriti o Waitangi. A Guide to the principles of the Treaty of Waitangi as expressed by the Courts and the Waitangi Tribunal*. <https://waitangitribunal.govt.nz/assets/WT-Principles-of-the-Treaty-of-Waitangi-as-expressed-by-the-Courts-and-the-Waitangi-Tribunal.pdf>

10. Ministry of Justice. *He tirohanga o kawa ki Te Tiriti o Waitangi. A Guide to the principles of the Treaty of Waitangi as expressed by the Courts and the Waitangi Tribunal*. <https://waitangitribunal.govt.nz/assets/WT-Principles-of-the-Treaty-of-Waitangi-as-expressed-by-the-Courts-and-the-Waitangi-Tribunal.pdf>

11. Reserve Bank of New Zealand Te Pūtea Matua. *Te Ōhanga Māori 2018: The Māori Economy 2018*. <https://www.rbnz.govt.nz/-/media/0212182a319f481ea4427bcf5dd703df.ashx>

Why we need to change the system



There are four major trends that are driving change in our supply chains: climate change, geopolitical volatility, new technologies, and population densification.¹²



Climate change is threatening our infrastructure and freight networks

Climate change will cause sea levels to rise and produce more frequent and extreme weather events like storms, heavy rain, and heatwaves.¹³ Between 2007 and 2017, climate change-related floods and droughts cost the New Zealand economy an estimated \$840 million.¹⁴ The extreme weather events of early-2023 severely damaged freight infrastructure and triggered a national state of emergency.

The effects of climate change will get worse over time and increase the risk of damaging our freight and supply chain infrastructure, making it more expensive to maintain, fix, and insure. Much of our transport infrastructure is on the coast and needs to be fortified against sea level rises and coastal erosion. Some of it may even need to be moved. We have to build more buffer and flexibility in our supply chains so we can withstand these shocks or adapt to upcoming changes.

12. Ministry of Transport. *Te rautaki ueā me te rautaki whakawhiwhinga o Aotearoa: New Zealand freight & supply chain issues paper*. <https://www.transport.govt.nz/assets/Uploads/Freight-and-supply-chain-issues-paper-full-version.pdf>

13. Ministry for the Environment. *National climate change risk assessment for New Zealand: Arotakenga tūraru mō te huringa āhuarangi o Aotearoa*. <https://environment.govt.nz/assets/Publications/Files/national-climate-change-risk-assessment-main-report.pdf>

14. Ministry for the Environment. *Chapter 4: Climate change and our wellbeing*. <https://environment.govt.nz/assets/publications/our-atmosphere-and-climate-2020/chapter-4-climate-change-and-our-wellbeing>

WHY WE NEED TO CHANGE THE SYSTEM

Limiting global warming from climate change to 1.5°C degrees requires urgent and significant emissions reductions across all sectors

We have committed to ambitious goals to decarbonise our economy – with the freight sector needing to reduce emissions by 35% by 2035 (based on 2019 levels) to support meeting our 2050 net-zero carbon target.¹⁵ This will be challenging as freight volumes are also projected to increase by approximately 20% in that timeframe.¹⁶ Decarbonising our road freight fleet presents the biggest opportunity for reducing emissions in the freight sector, as they deliver 93% of freight volumes and contribute around a quarter of total transport emissions.¹⁷

Technology has been evolving rapidly and some models of zero emissions trucks are already commercially available and viable. However, this transition will take time, as existing diesel trucks will have a long lifetime in our fleet, there is currently a limited global supply of zero emissions trucks as they are developed and their supply chains scaled up, and there are high investment costs associated with adopting new technologies. However, many manufacturers have committed to ambitious zero emissions sales targets over the next decade and these costs are expected to come down over time. While the transition occurs, diesel will remain important to the freight industry, and therefore we need to investigate measures to improve the efficiency of diesel powered freight transport.

Coastal shipping and rail offer lower emissions modes of transport, and utilising them will be key to meeting our targets. These heavier modes of transport, alongside our planes, will also need to decarbonise over the longer term as new technologies and fuels become available.

The world's geopolitics is getting more complex

New Zealand is part of global value chains. This is where the different stages of the production process area spread across multiple countries. Each stage of production adds value to the final product. Global value chains rely on a relatively stable and predictable global order, international trading rules, and affordable international transport, amongst others. However, the international environment is becoming more complex and challenging, with new risks of unpredictability and disruption in our supply chains that we have not faced before.

The most visible example of this trend is the competition for strategic power and influence between the United States and China, two of New Zealand's largest and most important trading partners.

There are risks that tensions could escalate, in unpredictable ways. Consequences could include reduced access to certain goods and markets, or disrupted key trade routes, including on sea lanes that carry 99% of our trade. Because global supply chains are interconnected, New Zealand in particular will feel the impacts especially if they involve a global power or close trading partner, or if they occur within the Indo-Pacific region.¹⁸ Economic fragmentation can already be seen as states seek to build their resilience to these growing geopolitical risks. All these factors make New Zealand's international freight connections less predictable.

15. Ministry for the Environment. *Chapter 10 Transport*. <https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/transport>


16. Ministry of Transport, *National Freight Demand Study*, <https://www.transport.govt.nz/assets/Uploads/Report/National-Freight-Demand-Study-Mar-2014.pdf>

17. <https://emissionstracker.environment.govt.nz/#NrAMBoCZIXXYCM4BEA5ApgF2XYkqiQK4CcKOMQA>

18. *Defence Assessment 2021* has identified the most significant risks for military conflict in the Indo-Pacific to be tensions in Cross-Strait relations, South and East China Seas, North Korea's nuclear and missile development, and conflicts in and through space and cyber-space (at para 101).

Movement of container ships that visited New Zealand in 2021



 This map shows how New Zealand is connected with the world via sea freight. Each line represents a voyage of a container ship that visited New Zealand more than once in 2021. When you look at all movement together you can see the scale and complexity of these movements. Darker lines indicate high density of container ship services.

WHY WE NEED TO CHANGE THE SYSTEM



New technologies are changing how we move freight

New technologies have the potential to change how freight is moved, and New Zealand needs to be ready to take advantage of this. This includes using artificial intelligence or automation which could increase efficiency and create higher quality jobs. Additive manufacturing like 3D printing could allow goods to be produced closer to the consumer, which means less freight would need to be moved.¹⁹

Using digital technology to make freight operations more efficient and increase visibility across supply chains could reduce operating costs and build resilience, but could also make New Zealand vulnerable to cyberattacks.

➤ **In New Zealand, our freight and supply chain system will face challenges as our population is expected to grow and become more concentrated**



Our population is growing and concentrating in cities

In New Zealand, our freight and supply chain system will face challenges as our population is expected to grow and become more concentrated in certain areas like Auckland, Hamilton, Tauranga, Christchurch, and Wellington.²⁰ As a result, freight volumes are expected to increase 55% from 2012/13 to 2042/43.²¹

This will put significant pressure on infrastructure and transport routes. We will need to find ways to balance the transport needs of people as well as freight, and consider the competition for space in cities, to make sure the whole system works well.

All of these changes are happening at once. They are likely to increase the cost of freight, which will in turn increase the cost of living. New Zealand relies heavily on international trade, which makes up about 60% of our economy.²² If we do not position ourselves well for these trends then our economy and society will face serious impacts.

But New Zealand can take advantage of these new trends if we are ready for them.

- **Low-emission technologies**, and their early adoption, can help enhance New Zealand's reputation as an environmentally friendly country and make our goods more attractive to consumers around the world who are increasingly concerned about climate change.
- **New technologies** present opportunities to create higher quality jobs across the supply chain. This could improve the productivity and resilience of the system by reducing its costs and the amount of input it needs.
- **Urban densification** could also improve the commercial viability of lower-emission freight modes by allowing more freight to be carried per journey, and open new markets for first- and last-mile urban deliveries.

19. International Transport Forum. *Decarbonising Maritime Transport*. <https://www.itf-oecd.org/decarbonising-maritime-transport>

20. Stats New Zealand. (2021). *Subnational population projections: 2018(base)-2048*. <http://www.stats.govt.nz/information-releases/subnational-population-projections-2018base2048#grows>

21. Ministry of Transport. (2017). *Transport outlook: Future state*. <https://www.transport.govt.nz/assets/Uploads/Report/TransportOutlookFutureState.pdf>

22. New Zealand Foreign Affairs & Trade Manatū Aorere. *NZ trade policy*. <https://www.mfat.govt.nz/en/trade/nz-trade-policy>

There are endemic issues in the system preventing it from functioning as well as it could

New Zealand's freight and supply chain has some impressive strengths. The World Bank's Logistics Performance Index ranked New Zealand's logistics system as the 26th best in the world in 2023, although this was a decline from 15th best in the world in 2018.²³ The index gave New Zealand high scores in the timeliness of our shipments, the quality of our infrastructure for trade and transport, and the high quality of our logistics services.

New Zealand's freight sector has been said to be resourceful, adaptable, and solutions-focused, which are important qualities to build on. New Zealand has relatively balanced import-export volumes, which makes us commercially attractive for international shipping, while our strong New Zealand brand overseas drives exports.



Despite its strengths, there are some deeper problems with the way our logistics system is set up. These prevent the freight system from performing better and achieving public goals like reducing carbon emissions, improving resilience, and enhancing safety. They also make it difficult for New Zealand to respond to the longer-term trends we discussed earlier. Through our conversations with stakeholders and their feedback on our issues paper, we have become more aware of these long-standing issues and the importance of addressing them.

After our analysis and engagement with stakeholders, we have identified the following endemic issues and how they affect the performance of the system.

1. Some decision making happens in isolation. Different central and local government organisations are in charge of different investments and regulations which often focus on local benefits, but not national or inter-regional benefits. This means that decisions about ports, and the roads and railways that connect to them, are sometimes made without adequately considering their impacts on the national interest.
2. Those involved in planning and designing the system tend to look at each transport mode separately instead of looking at the freight system as a whole. We try to fix problems in one area without thinking about how those fixes will affect the whole system. Government policies affecting the freight and supply chain system are not always aligned. This makes it harder to shift cargo across air, road, rail, and sea freight modes, which reduces the options available for freight owners and makes the network less resilient.

23. The World Bank. *International LPI*. <https://lpi.worldbank.org/international/global>

WHY WE NEED TO CHANGE THE SYSTEM

3. There are not always incentives to prioritise the long-term needs of the freight network within government and the sector. The government currently has a three- to ten-year planning horizon. This limits the certainty needed to plan and build freight infrastructure given the long lead times involved. Long-term planning is often overlooked in favour of urgent needs, especially when resources are limited.
4. There is not enough reliable data and evidence on freight, which makes it hard to target resources, make decisions, and forecast accurately. Data is often fragmented, making it hard for the sector to access data to see what is happening end-to-end in their freight networks which can reduce efficiency and resilience.
5. Some parts of the freight sector have a negative image. This has made it harder to attract new workers, and has led to longstanding labour shortages and an ageing workforce.²⁴
6. Some parts of the freight industry are fragmented with many small actors, which makes it hard to coordinate joint action to achieve things that would benefit the industry as a whole. For example, it can be difficult to share information and pool and coordinate efforts between different parts of the industry on issues like health and safety and reducing carbon emissions. The government and the freight industry need to find ways to better collaborate on this.
7. Small and medium sized enterprises (SMEs) made up almost 99% of all businesses in New Zealand in 2020.²⁵ However, their supply chain knowledge and capability is relatively low compared to the global average, according to New Zealand Trade and Enterprise's (NZTE's) assessment of approximately 300 customers that undertook supply chain reviews between June 2020 and 2022.
8. Commercial incentives have not been sufficient to build resilience and reduce emissions. This makes New Zealand more susceptible to disruptions, including those caused by climate change.
9. New Zealand has limited influence over what happens internationally, even though those developments can greatly affect us. We often have to accept the prices and conditions imposed on us, which can make our freight connections less secure and reliable.

24. There is a considerable shortage of domestic seafarers across many levels and officers, with most certified seafarers between 50 and 69 years of age. The trucking sector is estimated to be short of thousands of drivers, although varying estimates range between 2,400 to 8,000 drivers. According to the 2018 New Zealand Census, 60% of truck drivers were aged over 45 years. Lilley, R. (2022, September 29). *Research to reduce fatal crashes in professional truck drivers*. [Paper presentation]. The Road Ahead 2022 Transporting New Zealand Conference, Invercargill.

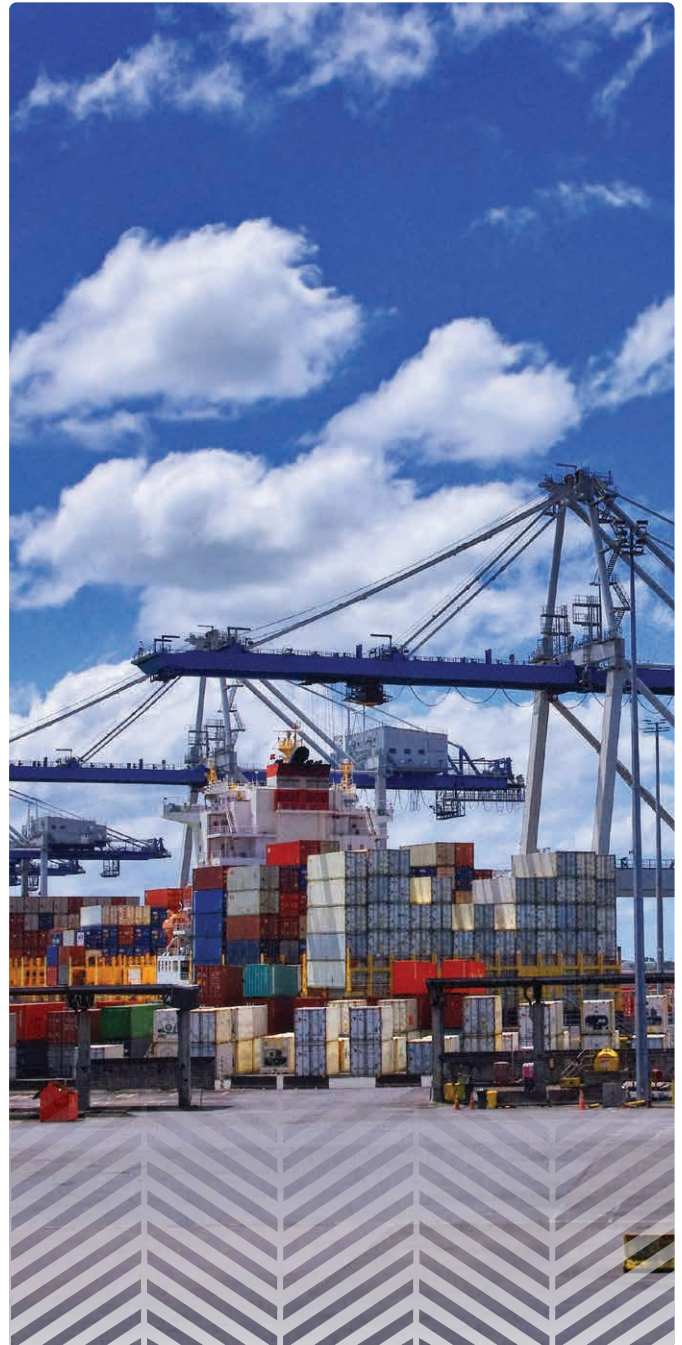
25. Financing SMEs and Entrepreneurs 2022: An OECD Scoreboard. 97% of all New Zealand companies (defined as those with fewer than 20 employees) are SMEs. They account for 29.3% of employment and contribute over a quarter of New Zealand's gross domestic product (Sources: Stats New Zealand and MBIE).

A more integrated, cross-system approach will help us reach our vision

A significant amount of work and initiatives that affect various parts of the freight and supply chain system are already taking place. But there is currently no oversight of how these diverse work programmes might affect the system as a whole.

To put New Zealand in a better position for the future and to achieve our vision, we need to make fundamental changes to the way we approach the freight and supply chain system. Beyond fixing specific problems, we need to change the way we think about and understand the entire system. The next few sections will outline what these changes should be.

➤ To put New Zealand in a better position for the future and to achieve our vision, we need to make fundamental changes to the way we approach the freight and supply chain system



Our plan for New Zealand's future



Businesses and government will need to change their approach to the freight and supply chain system. We have already talked about the threats and opportunities New Zealand will face over the next few decades. But what changes will need to be made so New Zealand can prepare for the future?

We have an ambitious plan to transform the system, but we cannot do everything at once. We need to prioritise. We also need to be able to adapt the plan as things change and we learn more. The strategy is divided into three time horizons.

30
YEARS

Thirty-year horizon: Enduring principles

For the next thirty years, government and businesses will need to make big changes to how they approach the freight and supply chain system. Even though it is hard to predict what will happen over the next thirty years, we think a set of enduring principles will stay relevant throughout this longer period of time.

These principles should guide the way the government makes decisions about the freight and supply chain system and influence how we write policies related to other topics like energy and resource management.

10
YEARS

Ten-year horizon: Strategic goals

We have identified nine goals we will need to achieve over the next decade to improve the system and move closer to meeting the strategy's vision. We will create a set of work programmes that focus on these goals to implement the strategy over time.

3
YEARS

Three-year horizon: Immediate priorities

The first phase of work will focus on the most crucial areas we want to work on for the first three years. We want to work together with iwi/ Māori, local government and the industry to design and implement this programme of work.

The initial actions accompanying this strategy set out the most important and achievable work in the short term. This plan will also prepare us for the longer-term work that needs to be done.

This strategy is a living document: it should be reviewed and updated at least every five years. We need to review both this strategy and the principles, strategic goals and priorities set for the three time horizons above to make sure that we are still on the right track, that we are implementing the plan as expected, and that global and national circumstances have not changed in a way we did not anticipate.

30 YEARS Thirty-year horizon: enduring principles

Over a thirty-year horizon, the way our freight and supply chain system has to work may look very different to how it does now. It depends a lot on what happens with the trends we talked about in the previous section.

We have a set of enduring principles that should guide how we make decisions about the freight and supply chain system now and in the future. These principles will help the government and others working in the system make decisions and invest their resources in a way that helps New Zealand in the long run.

The three principles that can help guide our decisions are:



We will apply these principles when we implement this strategy, and you will see them reflected in the work programmes proposed in the initial actions.

Why we need to focus on national interest

The national interest means that sometimes rather than thinking as individuals, communities, organisations and businesses we can get better results for New Zealand by looking at issues from a national point of view.

This is important because challenges in the freight and supply chain system can cause harm to the economy and society as a whole. For example, we need to focus on combatting climate change as a nation, not just individuals or organisations. Climate change will have long-term impacts on every New Zealander and individuals cannot achieve change alone.

Our freight system is competitive and market-driven and this has worked well for New Zealand in the past. But in the face of the challenges we have outlined, the private sector cannot be expected to address key challenges like climate change and emissions reduction alone. The government will need to figure out when to get involved in the freight and supply chain system and when to let it be driven by the market.

The national interest also means we need to think about how the freight system can help communities who might be more affected by the threats we have outlined and our responses to those threats. When we make decisions about the system, we should think about how freight networks connect with Māori and regional economies so they can thrive. We should also think about how we can help smaller businesses and workers to thrive.

Why we need to focus on system stewardship

Te Manatū Waka – The Ministry of Transport needs to be a steward for the freight and supply chain system. This means it should understand what is happening in the system, work to improve it, think about how it should work in the long term, and make sure government policies support the sector's ability to operate.

People working in the sector have said that they feel the freight sector is not valued enough and that it goes unnoticed by the public and government. They feel that this makes it easy to neglect or deprioritise the industry against other demands.

There are competing objectives and difficult choices to make when planning the transport system. This includes deciding which transport users and infrastructure to prioritise and how to handle the increasing impacts of climate change. The Ministry will need to consider the full implications for the freight system when making these decisions. However, sometimes other priorities may be more important than freight for the national interest, so it may not always be the highest priority.

As stewards of the system, we need to understand how all the different parts of the system are connected regionally, through all modes of transport, and through different government regulations. In the past, decision making and investment in the freight system has been more focused on individual regions and modes of transport without considering how the wider national network could be affected. Joining up initiatives across the different parts of the system and central and local government agencies can improve the planning and investment of the entire freight and supply chain system.

Why we need to focus on partnership

The freight and supply chain system is complex and involves many people and organisations all working together to keep the system running. Changes to one part of the system can affect the rest of the system. Power to address the challenges we have outlined does not sit with one organisation but with many across central and local government, iwi, and the freight sector.

This strategy's vision for the freight and supply chain system is ambitious and difficult to achieve. The government will not be able to reach this vision on its own. It could even make things worse if it tried to do so – particularly if it does not understand the realities of the freight sector.

All of this means government and the freight sector need to work together better. The Ministry is committing to a collaborative approach to implement this strategy. You can see further details on what this looks like in the attached set of initial actions.

Strengthening relationships with mana whenua will be critical. It will enable us to work together to support Māori economic development in our work with the freight and supply chain system.

10 YEARS Ten-year horizon: strategic goals

In the next ten years, we will need to make some big changes if we are to get closer to our vision. But what goals should we set ourselves to make that happen? And how will these goals help us plan our work?

We have organised our goals around these focus areas:



Focus Area 1: Infrastructure and government systems

This involves the government's role in improving infrastructure and making sure our laws and rules are effective



Focus Area 2: Enabling the sector

This focuses on the freight and supply chain sector's role and how the government can support it to overcome challenges



Focus Area 3: International connections

This involves how New Zealand maintains its connections with rest of the world and how we influence and respond to changes around the world.

Each focus area has specific goals to help us meet our outcomes over the next one to ten years.

To establish these goals, the Ministry held extensive discussions with people involved in the freight and supply chain system. This included workshops, meetings, and interviews with leaders and experts from different groups, including Māori and local government. We asked them to help us understand and prioritise the problems and opportunities they see in the system, and to share their vision for the future of freight and supply.

We also looked at how the freight and supply chain system has worked in the past by studying previous government strategies over the last century.

All this work has led to us developing the set of goals outlined below. We believe that achieving these goals will put New Zealand in a much better position for the future and help solve the long-standing issues in our freight and supply chain system.



OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON



Focus area: Infrastructure and government systems

This focus area looks at our domestic infrastructure and government systems that relate to freight. It includes public infrastructure, and the laws, rules and regulations made by government to make sure the system runs.

What does the government need to do differently in the freight and supply chain system to reach the strategy's vision?

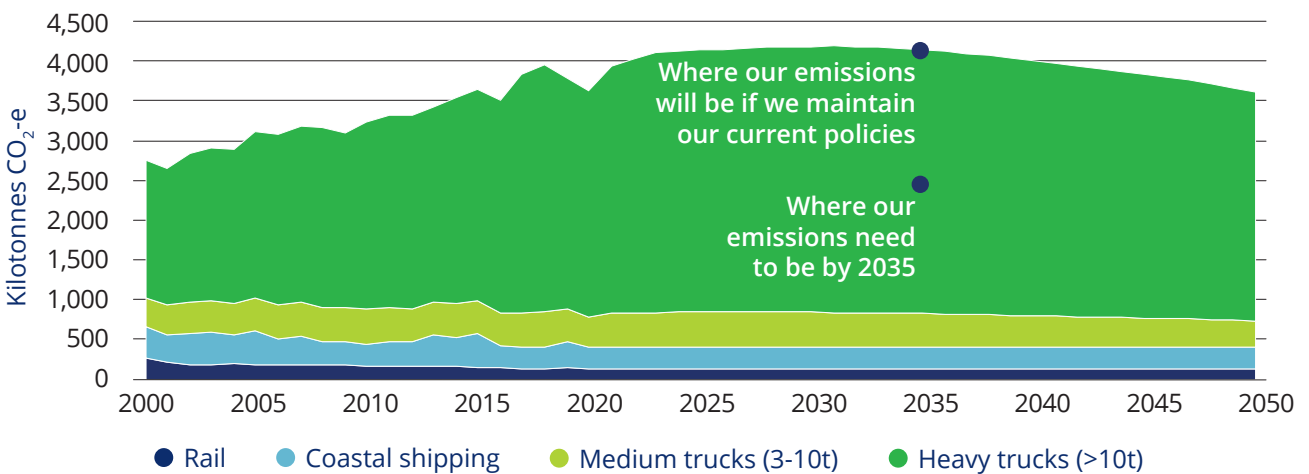
We have a target of a 35% reduction in freight emissions by 2035 (based on 2019 levels). Projecting forward based on our current policies we are not on track to meet this target. We will need to develop new policies that accelerate our emissions reduction. You can see from the graph below that reducing heavy truck emissions will be an important focus.

Our freight infrastructure is facing significant and complex threats

At the start of this strategy we outlined a number of issues that put our freight infrastructure at risk:

- More climate change damage will eventually force us to abandon some of our current infrastructure. Climate change will impact what is produced and where it is produced, causing some freight infrastructure to be underused while other infrastructure may be overused.
- More frequent disruptive events could overwhelm our infrastructure for long periods of time, as occurred during the COVID-19 supply chain disruptions. This could make it difficult for the economy to function and increase the costs of goods, which can increase the cost of living.
- More competition for space and an increase in the amount of freight being moved around as our population grows and more people live in cities. This will put our freight and supply chain system under a lot of pressure.

Freight emissions by transport mode from 2000 to 2050



Source data: *Vehicle fleet emissions model April 2022 update* <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.transport.govt.nz%2Fassets%2Fuploads%2FData%2FTransport-outlook-updated%2FVEM3.2-run202204-basecase-only.xlsx&wdOrigin=BROWSELINK> and *Green House Gas Inventory 1990 - 2020* <https://environment.govt.nz/publications/new-zealands-greenhouse-gas-inventory-1990-2020/>

By 2035, we expect 20% more freight will need to be moved,²⁶ but at the same time we need to reduce the carbon emissions produced by the freight sector.

We cannot keep building more infrastructure to respond to these threats – we need to be smarter about how we invest

The Infrastructure Strategy says that the way the government currently plans, builds, maintains, and pays for public infrastructure is not sustainable. Te Waihanga predicts that if we attempt to build our way out of our infrastructure challenges it will cost around 9.6% of our GDP over a 30 year period, or \$31 billion per year, almost double what we currently spend.²⁷ This spending includes all kinds of infrastructure, not only transportation.

If we continue this approach, our freight network will not be able to grow or respond to threats while also reducing carbon emissions effectively. The Infrastructure Strategy suggests a few other ways we can improve how we plan, build and pay for our infrastructure.

- Use the infrastructure we already have more efficiently: this could mean reducing traffic on the roads by improving public transport and making it more affordable.
- Choose carefully which infrastructure projects to invest in: we should choose our projects based on good evidence and solid business cases.
- Find new ways to pay for infrastructure projects: Te Manatū Waka – the Ministry is currently studying how we will fund transport in the future. This strategy will help that process.
- Build infrastructure faster and more efficiently than we do now.

We need to view our freight network as a national system, and invest in a coordinated way in areas of national significance

Because our money and resources are limited, we will have to make more difficult choices and compromises when it comes to planning and investing in our freight transport infrastructure.

Seeing the freight network as an interconnected national system will help us to make better choices and compromises. In the past, we have not always invested in freight efficiently or in an organised way, often having focused on short-term or narrow goals, instead of the bigger picture.

In our system, different types of transport and infrastructure need to coordinate and work together to make goods move more efficiently, which can involve many different investors and regulators. This is especially true for intermodal freight such as shipping containers which can be transported by trucks, trains and ships. Many parts of our freight system are heavily connected, including between regions, across the country, and abroad, which is especially the case for big ports.

As well as this, our system needs to deal with challenges further in the future, like ensuring a reliable supply of critical goods during times of disruptions, and moving to zero-emission technologies.

By looking at the freight network as a national system we can figure out what we need to focus on to achieve our strategy outcomes. By making clear long-term plans we will also help businesses in the freight industry understand what the government's priorities are so they can invest in infrastructure too. As a start, we need to identify what parts of the freight system are nationally critical so we can make sure they are performing well and are prepared for the future.

26. Ministry of Transport, *National Freight Demand Study*, <https://www.transport.govt.nz/assets/Uploads/Report/National-Freight-Demand-Study-Mar-2014.pdf>

27. Te Waihanga, the New Zealand Infrastructure Commission, *New Zealand Infrastructure Strategy Rautaki Hanganga o Aotearoa* <https://strategy.tewaihanga.govt.nz/strategy/3-case-for-change>

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON

To prepare our freight infrastructure and government systems for the future, we need to achieve the three goals outlined below.

Goal One: We protect, decarbonise, and improve nationally significant freight routes and infrastructure

We need to make sure our freight infrastructure works as well as it can so that our supply chain is productive and resilient.

We have seen evidence that the system is not functioning as well as it could. During our discussions with people in the freight industry, they told us about problems with how the government invests in and regulates the most important parts of our freight infrastructure.

Most of the people we spoke to think that government needs to do more to improve the physical freight network. Here are some of the issues they raised:

- Many owners and operators of important freight infrastructure like ports felt that the Resource Management Act was making it difficult to improve the freight system because the Act made it harder and slower to increase the freight system's capacity.

- Some said that freight issues were too often not seen as a priority by central and local government.
- Some people felt that the government was not doing enough to support regional and Māori economic development.
- Some thought we needed to develop a national spatial plan for intermodal hubs and ports.
- Many thought that a "hub-and-spoke" approach, which improves efficiency and decreases costs by creating bigger central "hub" ports that serve as gateways into the country, would be better for our national port network.
- Some people thought that air freight should be given more attention in the long term, since it is used for valuable and urgent goods, which will become more important as New Zealand moves to a high-value, high-wage economy.
- Some people felt that our logistics infrastructure for refrigerated imports and exports was inadequate.
- Many people felt that urban road transport was being undermined, as city planners were not thinking about strategic freight corridors or access for last-mile delivery.

Many of these problems came about because different choices needed to be made between competing priorities. To address these problems, especially when it comes to reducing carbon emissions from freight, we need to use the ideas of 'national interest' and 'system stewardship' we talked about earlier.

➤ By 2035 we will be moving around 20% more freight than in 2019, but we will need to reduce our emissions by 35%

Identifying parts of the system that are nationally critical

First we need to figure out which parts of the freight network are nationally critical, meaning which parts are important to the whole country. We will need to identify our most important transport nodes and connections, which outcomes we want the system to achieve for us, and the basic services our freight system must deliver. This strategy is a first step, but we will need more detail to fully understand what will be important across the whole system.

Aligning our investment, laws and rules to national priorities

Once we know the parts of our system that are nationally critical, we can ensure they work as well as possible. This means coordinating between central government, local government, port and freight hub companies, and others to make sure we have high quality freight connections. This includes ensuring our resource management system supports greater freight efficiency and development.

This initiative will use and improve upon plans and programmes that already exist, including:

- local government plans for emergency management and route prioritisation
- the National Emergency Management Agency's work on lifeline utilities
- the Department of Prime Minister and Cabinet's work on nationally critical infrastructure
- Arataki, which sets out the Waka Kotahi view on priorities within the state highway network over the next 30 years
- the Emissions Reduction Plan and National Adaptation Plan.



OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON

Goal Two: We use sophisticated, robust, and transparent evidence to support decision making in the freight system

To look at and invest in our freight and supply chain as a complete system, and to achieve our outcomes, we need a lot of sophisticated information to help us understand:

- how freight needs will change over time, including at our ports
- how we can support the growth of regions and industries
- how well our infrastructure and transportation system is performing
- our carbon emissions and where they come from
- the vulnerabilities within our network
- what types of improvement might be the most effective, like building new connections or hubs, or prioritising freight over personal transport along certain routes.

While we will always have to make decisions based on some uncertainty, to implement this strategy we should prioritise improving our understanding of the system.

To do this, we first need to create an evidence-based plan that sets out what information we need to improve our understanding of the whole freight and supply chain system. This plan needs to analyse the needs of central government departments, transport agencies, local government, and key businesses in the transport sector. It should consider:

- what information we need to achieve the goals of this strategy
- how we will address information gaps over time
- requirements or incentives would provide us with information, and ways to collect information that do not burden stakeholders

- how to provide real-time information that can help the whole sector
- how to develop information standards, including exploring options for location data
- how this encourages data sharing and cooperation across the sector.

With this plan, we hope to be able to gather more data about the freight system and get better at using that data to gain valuable insights. It should also help us achieve the goals of various parts of this strategy.

While a lot of data is available, it is hard to collect because it is commercially sensitive to many businesses. Working in partnership with the sector on this issue will be important.

The initiative will use and build on existing work, including:

- the Transport Evidence Base Strategy
- Project Monty – a digital twin of our transport network that enables us to model traffic flow projections under different scenarios
- The National Freight Demand Study – a projection of freight demand by commodity and region
- The Freight Information Gathering System – data on New Zealand freight
- Arataki
- Information collected through NZTE's supply chain review service.

➤ While we will always have to make decisions based on some uncertainty, to implement this strategy we should prioritise improving our understanding of the system

Goal Three: We have reliable and adaptive long-term plans for key parts of our freight system

Making decisions about transport is complicated because infrastructure can last for decades or even centuries. But the government must often plan for and fund projects in cycles of three or ten years.

Businesses in the freight sector have said they would like the government to make more long-term plans about investment, regulation, and transport policies. This would help them make their own long-term plans and investments with more confidence.

The Ministry has created a Generational Investment Approach to make sure the advice we give to decision-makers looks at the long-term. We want to make sure that action taken in the short and medium term will help us achieve our long-term goals. The approach looks from now to 30 to 50 years ahead and aims to give better advice by considering how different parts of the sector affect each other.

As noted above, Arataki provides the Waka Kotahi view on priorities within the state highway network over the next 30 years.

Over the next few years, we will need to expand on this approach and create clear long-term plans for the freight system. An example of this approach is the Rail Plan. This plan sets a goal for rail in New Zealand to be returned to a resilient and reliable state, identifies investment priorities to achieve it, and proposes a long-term way of funding rail in New Zealand.

We need to develop similar detailed long-term plans that align to this strategy for:

- our national port network and maritime sector
- freight hubs and other key logistical infrastructure
- infrastructure to support zero emissions transport that is not covered by the Ministry of Business, Innovation and Employment (MBIE) New Zealand Energy Strategy or the national Electric Vehicle charging strategy
- the freight roading network
- airports and the airfreight sector.

These plans must show how much investment we will need to improve our infrastructure network and the broader freight and supply chain system. They will also be used to inform other plans created by central and local government, such as the Government Policy Statement on Land Transport, and Regional Spatial Strategies. This is to make sure that the government accounts for the needs of the freight industry when deciding how to use resources.

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON

Focus area: Enabling the sector

The freight and supply chain system is made up of thousands of private businesses investing in the system and working to meet the needs of their customers. This focus area looks at what the private sector needs to do to achieve this strategy's vision for the freight and supply chain system.

We need to create an environment that encourages businesses to prepare the system for the future. But how do we enable businesses to make these changes?

Why achieving this vision requires us to do things differently

Shifting to a zero-emissions, more resilient and productive freight and supply chain system will require businesses in the sector to change the way they work. It will mean switching to new fuels and technologies and new approaches to each business's supply chain resilience.

New Zealand's freight and supply chain system is agile and the people working in it are very good at finding solutions to problems. Thanks to this, goods have continued to be transported even during disruptions like the COVID-19 pandemic. We should focus on building upon these strengths to help make the changes needed to transform the system.

➤ **Shifting to a zero-emissions, more resilient and productive freight and supply chain system will require businesses in the sector to change the way they work**

How to remove barriers to enable the sector to achieve change

There are several challenges the freight sector faces that make it difficult to achieve this strategy's vision. Some of these challenges include:

- short-term commercial incentives that do not encourage investment in low or zero-emissions technologies or long-term resilience
- labour and skills shortages
- health and safety issues
- difficulties in sharing data in the sector because of incompatible data standards or confidentiality
- a need to build supply chain capability (including sustainable sourcing, carbon emissions management, waste reduction and supporting international competitiveness).

To address these challenges, we want to understand their causes better. We want to create the conditions that will remove unnecessary barriers and enable the sector to make the changes it needs to prepare it for the future.

Why we need system-level collaboration

To do all of this, businesses and government need to work together closely. This is why we have developed the partnership principle in our strategy. Government needs to listen to the sector, understand its challenges, and work with it to drive change.

We also need parts of the sector to collaborate better together. The freight industry is made up of a range of different subsectors, such as maritime, airfreight, and trucking, each with its own unique challenges. While collaboration within a subsector is usually facilitated by industry bodies and unions, there are no specific structures in New Zealand that encourage subsectors to work together.

Case study: an advisory panel for co-investment in coastal shipping

The government invested \$30 million into coastal shipping through the National Land Transport Fund, and an advisory panel was created to guide the investment decision-making process.

Waka Kotahi, New Zealand Transport Agency convened the panel, which included representatives from KiwiRail, the National Road Carriers Association, the New Zealand Shipping Federation, the port companies CEO group, and the Ministry. The panel found that:

- people in the industry have a shared understanding and willingness to address the challenges facing national freight
- challenges and goals are shared across the freight industry
- the government should work closely with people in the industry to address national objectives
- each participant, through strong participation, was able to better understand their value in the system and the need to work more closely together.

To enable our sector to better prepare for future challenges we will need to achieve the three goals below.

Goal Four: Government policy enables the sector to accelerate emissions reduction and build long-term resilience

Many companies in the sector are trying to reduce their carbon emissions by improving how they operate and by testing new technologies that produce fewer or no emissions. Some are also reviewing their supply chains to make them more resilient in case of disruptions, such as by storing more inventory or investing in digital solutions.

However, some businesses are still not ready to invest in low or zero-emissions technologies and longer-term business resilience because of future uncertainties, lack of capacity, capability and upfront capital, and the longer-term nature of return on investment. Switching to low or zero-emissions technologies and building business

resilience can require large upfront investments that can take a long time to pay off, making them difficult to commercially justify in the near term.

There will also be differences in possible speeds of decarbonisation between different modes that we will have to account for. Some modes have zero-emissions technologies available now but those are relatively more expensive or less mature technologically. Other modes do not have commercial solutions now but may be able to transition more quickly once these are available.

Small and medium-sized businesses with limited resources may also struggle to manage the various risks that come with new technologies, as well as potential disruptions caused by malicious actors.

To make this transition happen on a large scale, and quickly, government policies will need to give businesses the support, incentives and long-term signals they need to invest in a zero-emissions and resilient future.

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON



Reducing emissions

The government's Emissions Reduction Plan sets a target of reducing freight emissions by 35% by 2035. To do this, the plan suggests several initiatives, such as reducing the emissions of road freight, and encouraging the use of coastal shipping and rail, through implementing the New Zealand Rail Plan. The Government also signed a global memorandum of understanding at COP26 to increase the sales of zero-emissions medium and heavy-duty vehicles to 30% by 2030, and to 100% by 2040.

Over the next few years, this strategy needs to do several things:

- Support existing work on road freight decarbonisation by designing policies to incentivise businesses to use zero-emissions heavy trucks.
- Work with the sector to find further ways to decarbonise, such as making freight routes more efficient, reducing emissions from diesel trucks, and changing to lower emissions transport modes like rail and coastal shipping. Small operators should not be left behind in the transition.
- Set a clear pathway to decarbonise other modes, such as maritime and rail, so we can build on the ERP. This will also have to consider the He Pou a Rangi Climate Change Commission's next set of advice due at the end of 2023.
- Continue working with the sector to put in place infrastructure to support zero-emissions vehicles, including implementing actions through the national EV charging strategy, and supporting a hydrogen refuelling network.
- Continue to support research projects, demonstration and deployment trials and commercial partnerships across all aspects of the hydrogen supply chain. This has been supported by \$88 million in already committed government funding and financing. A further \$100 million has been announced in Budget 2023 for Regional Hydrogen Transition consumption rebate.

- Feed into the MBE's New Zealand Energy Strategy, including the Hydrogen Roadmap. A key part of reducing freight emissions is using sustainable and efficient energy sources. The government is already working on transitioning to renewable energy and this work will continue in developing the Energy Strategy by the end of 2024. We need to add to the Energy Strategy by explaining what the freight sector's energy needs are and by coordinating our decarbonisation policies.

Focusing on resilience

The freight industry will have to focus more on resilience because the operating environment is becoming less predictable.

The government needs to make sure the freight industry can keep working during major disruptions, including earthquakes and other natural disasters such as weather events. Some parts of the industry, such as ports and airports, are legally required to function during and after an emergency, even if they do not operate at full capacity.²⁸

During the COVID-19 pandemic, supply chains in New Zealand were disrupted because there were not enough truck drivers or workers at ports, and on ships, to manage increases in freight volumes. To prevent such disruptions in the future, we need to address these longstanding labour issues and make sure the industry can provide quality services safely. As we adopt new technologies to reduce emissions and improve digital services, we will need to start building a workforce with the right skills for the future.

State highway resilience risk now and in future



- 📍 This map shows the parts of our national state highway network that Waka Kotahi evaluate to be under extreme risk of disruption today (in yellow), and the parts that will also be at risk in future (in red). This considers all risks from natural disasters to sea level rise. You can see that large parts of our strategic freight network are already at risk, and that this is going to increase significantly in future.

28. Under the Civil Defence and Emergency Management Act. This is currently undergoing a review that includes proposals for establishing minimum service levels and reporting arrangements for critical infrastructure entities, to ensure greater compliance with emergency management obligations. National Emergency Management Agency Te Rākau Whakamarumarū. *Regulatory Framework Review ("Trifecta") Programme*. <https://www.civildefence.govt.nz/cdem-sector/regulatory-framework-review-trifecta-programme/>

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON**Improving our regulations**

We also need to make sure our policies and rules enable the industry to innovate and invest in new technologies to help reduce emissions and build resilience. The government should consider how such technologies will affect the economy and society and develop regulations that support testing and using the technologies where it makes sense.

To help reach our goal, we will use and build on the existing work, such as:

- the ERP and National Adaptation Plan
- NZTE's work advising exporters on how to improve their supply chains
- the mandatory climate-related disclosure regime, which requires large companies to disclose the risks and opportunities climate change will have on their business – these disclosures should be done according to standards set by the External Reporting Board
- the ongoing review of the Civil Defence Emergency Management Act to improve resilience.

➤ Government needs to make sure its policies and rules enable the industry to innovate and invest in new technologies where it makes sense

Goal Five: The sector leads change in areas of common interest

Government policies can help the industry reduce emissions and build resilience by setting rules, creating incentives and giving businesses a feeling of certainty. While this strategy emphasises strong collaboration between government and sector, sector-driven initiatives have been and will continue to be crucial in effecting enduring change in how the sector operates.

The industry faces many common challenges and opportunities, including how to:

- adopt low and zero-emissions technologies can be adopted
- make the supply chain more efficient by creating better information flows
- give the industry's workers the skills they need for the future
- improve the sector's public image and social acceptance
- make better use of existing and future infrastructure.

The most effective way to address some of these challenges may be through cross-sector collaboration. This idea is not new – it is one of the main reasons we have 'industry bodies'. By working in collaboration the sector can pool resources and be united in its communication with the government and the public. This way, change will happen more quickly and more efficiently. This collaboration (including data sharing) must comply with the Commerce Act and maintain competitive market dynamics to ensure the benefits of competition (such as higher quality services and more innovation).

Strong industry bodies and unions can play an important role in leading changes within the sector. For example, the Sustainable Business Council Freight Group has made a plan to decarbonise New Zealand's freight system over the next 30 years.²⁹ Industry bodies and unions can also help drive change in the sector and support small and medium-sized businesses by giving them the expertise to make changes.

We need better ways for people in the industry to work together

Currently, the freight sector has many different industry bodies representing different industries and regions. Unlike in Australia there is no industry body representing the joint interests of all subsectors within the system, but it could be worth exploring how we can better support industry body coordination.

Sharing more information in the sector

We must also promote resilience by supporting efforts to make it easier to share data across the sector and in some cases standardising it. This would make sharing data much faster, especially during times of disruptions, and allow people in the industry to make better decisions and respond to disruptions more effectively. Better information flows will also help the sector reduce emissions and make its operations more efficient.

Everyone in the industry needs to avoid anti-competitive behaviour but this does not prevent all collaboration

The changes that the sector needs to make are significant and we do not want to miss any opportunities to work together to make these

changes. However, we need to make sure the changes do not break the law. Businesses are understandably concerned about the cartel prohibition for collaborative activities, vertical supply contracts, and joint buying agreements.³⁰ We will work with the sector and the Commerce Commission to help everyone understand the regulations and feel confident about working together in the right ways.

Goal Six: The value and function of the freight system is understood across government and by the public

To make this strategy more effective, the public and government need to be better informed about the value the freight and supply chain system delivers to the economy and the wellbeing of everyone in New Zealand. This awareness could help improve community understanding and acceptance of freight operations and the policies that affect them.

The public perception of freight also has an impact on its attractiveness to future workers. This is because some parts of the industry, like trucking and shipping, are not always seen as stable and safe careers. The freight industry is growing and we need more workers, so we must address this issue.

Some industry-led initiatives are underway to raise awareness and improve the industry's attractiveness, such as the Te ara ki te tua Road to success programme, which promotes a career path in the trucking sector, and the Ports of Auckland hosting open days for the public. We need to make use of more initiatives like these to better promote the industry with the wider public.

29. The Group was made up of thought-leaders from Countdown, Fonterra, Lyttleton Port Company, New Zealand Post, Ports of Auckland, Swire Shipping, The Warehouse Group, TIL Logistics Group and Toll New Zealand. These industry leaders collectively developed the pathway with facilitation from the Sustainable Business Council

30. Commerce Commission New Zealand Te Komihana Tauhokohoko. *Competitor Collaboration Guidelines*. https://comcom.govt.nz/_data/assets/pdf_file/0036/89856/Competitor-Collaboration-guidelines.pdf

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON

Focus area:
International connections

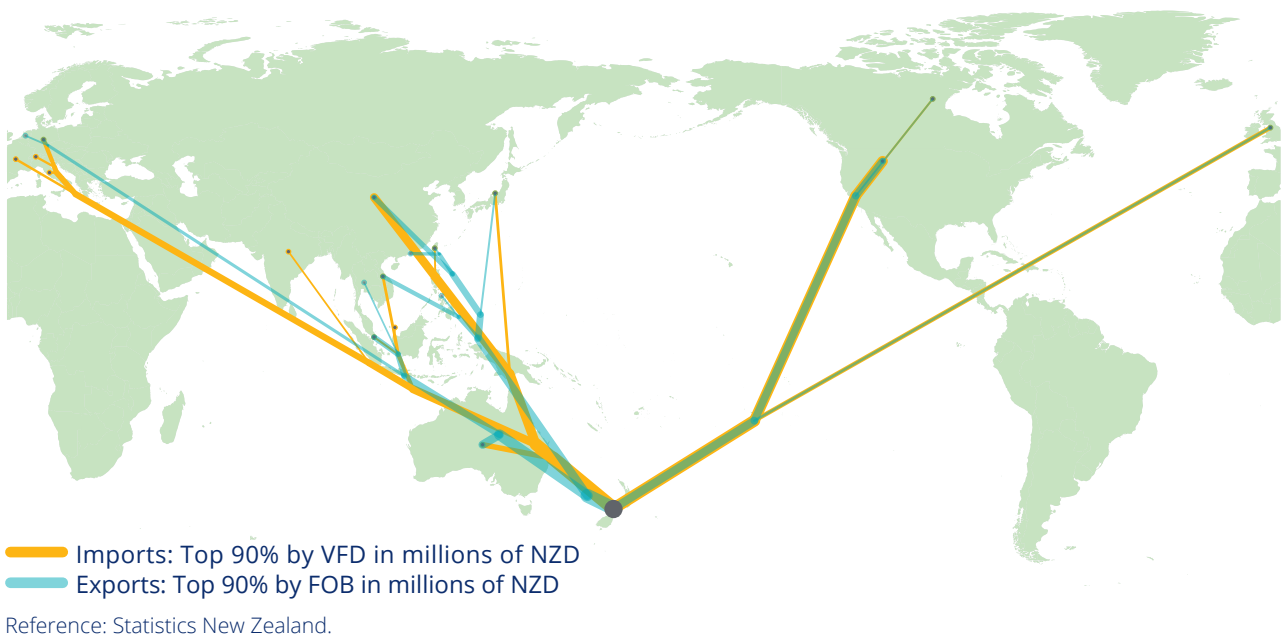
International trade is critical for New Zealand's economy and makes up about 60% of New Zealand's total economic activity.³¹ Being able to move physical goods to and from overseas markets is crucial. This focus area looks at how New Zealand moves goods by air and sea from suppliers and to markets overseas, and outlines how New Zealand needs to manage these connections more proactively.

There are increasing challenges to our ability to move goods overseas

At the beginning of this strategy, we highlighted some of the challenges that show us that reliable, affordable, and timely freight connections can no longer be guaranteed. These challenges were:

- more disruptions and delays due to climate change and geopolitical tensions
- greater climate consciousness potentially reducing demand for long-haul air travel and airfreight capacity
- international freight transport providers prioritising sending their ships and airplanes to more lucrative markets
- potential changes in global trade volumes and centres affecting the availability of international freight services to New Zealand.

NZ imports and exports by air in 2019



31. New Zealand Foreign Affairs & Trade Manatū Aorere. *NZ trade policy*. <https://www.mfat.govt.nz/en/trade/nz-trade-policy/>

New Zealand is more interconnected with the rest of the world than ever. This, and our geographical isolation and small proportion of global cargo volumes, makes us more vulnerable to global disruptions.

Our international connections bring benefits but have inherent vulnerabilities that must be mitigated

Air freight capacity is heavily dependent on passenger volumes.³² High passenger revenues mean cargo can be carried in passenger aircraft belly-holds at a lower cost than on planes dedicated to just air freight. This means that air freight capacity is affected by passenger demand and not freight demand alone.

Almost all shipping services to and from New Zealand are owned by international companies. We have little influence over these companies because of our small cargo volumes and distance from the main East-West shipping routes. But having access to competitive international shipping services allows us to benefit from better freight rates and reach more destinations more frequently.

While the above situations can make us more vulnerable to disruptions in international freight, it can also provide some commercial benefits, such as lower costs and better services. Trying to overcome this vulnerability completely may come at a high cost to our efficiency. Instead, we must find other ways to reduce the risks without giving up the benefits of our situation, or try to minimise the impacts of disruptions.



32. Pre-COVID-19, 80% of air freight was carried in the cargo hold of passenger aircraft. It is less commercially viable to operate dedicated air freighters to and from New Zealand given our distance and relatively small cargo volumes.

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON

COVID-19's impacts on New Zealand's international freight connectivity

After New Zealand closed its borders for passenger travel, significantly fewer passenger planes were available. This led to a big reduction in air freight capacity (80% of air freight was carried in the cargo hold of passenger aircraft before the pandemic). As a result, air freight tonnage fell by 17% in 2020 from 2019 levels.³³ Air freight rates also increased two to three times for some imports during this time. However, air freight capacity recovered to about 90% of pre-COVID levels by March 2021 with the help of government schemes like the Maintaining International Air Connectivity scheme.

The situation for sea freight was different. During the pandemic, global consumer demand increased, which outstripped shipping and port capacity and led to congestion at global and New Zealand ports. Port congestion removed almost 14% of global capacity for container shipping, because the same number of ships took longer to complete each route.³⁴ This reduced the capacity of shipping services to New Zealand and made them less reliable, less frequent, and more expensive. Nonetheless, trade volumes held up relatively well, with volumes of full container imports increasing 5% in 2021 from 2019 levels, but full container exports decreasing 5%.³⁵



✓ 17%

air freight tonnage fell by 17% in 2020 from 2019 levels

90%

air freight capacity recovered to about 90% of pre-COVID levels by March 2021

∧ 5%

2019-2021 volumes of full container imports

∨ 5%

2019-2021 volumes of full container exports

33. FIGS

34. Sea-Intelligence. 11.6% capacity "lost" in February 2022. <https://www.sea-intelligence.com/press-room/133-11-6-capacity-lost-in-february-2022>

35. FIGS

Government needs to play a bigger role in international connectivity to support supply chains

The government's role in international freight transport has mostly been to ensure safety and security, minimise environmental impacts, as well as prevent anti-competitive practices. It also plays a role in setting up the rules of the system so that New Zealand can access the freight capacity it needs. For example, it negotiates air services agreements and periodically assesses our international freight services.

Because the world is becoming less predictable, the government needs to have more oversight and monitoring of global trends and our international freight connections. This will help us respond more quickly and effectively to disruptions. It will also make us a reliable partner to our Pacific Island neighbours and support efforts to improve freight and supply chain resilience in our region.

As a small country, New Zealand has limited influence over many global developments. But there are areas where we can be more effective if we exercised and expanded that influence.

We also need to decarbonise international freight emissions to increase the longer-term resilience of our international supply chains

International shipping is seen as a fuel-efficient way to transport goods around the world due to the amount of cargo ships can carry. But it is responsible for 3% of global carbon emissions, and this is expected to grow.³⁶ The aviation sector also accounted for about 2% of global carbon emissions before the pandemic.³⁷

The government needs to play a bigger role in reducing the carbon emissions produced by international freight. While achieving this will require a lot of upfront investment, doing nothing will cost us more.

The impact of climate change is expected to cost the shipping industry US\$25 billion every year by 2100.³⁸ This cost is likely to be passed on to freight owners, and ultimately to consumers, including New Zealand businesses which already pay higher rates due to our distance from global markets. The longer we delay taking action, the more difficult and expensive it will be to reduce our emissions.

Our policies and approaches must support resilient and low-emissions international freight connections

To prepare New Zealand's freight and supply chain system for the future, government and industry will have to work together towards the three goals below.

36. International Transport Forum. (2018). Decarbonising Maritime Transport: Pathways to zero-carbon shipping by 2035. Paris, France: OECD Publishing. <https://www.itf-oecd.org/sites/default/files/docs/decarbonising-maritime-transport.pdf>

37. International Civil Aviation Organization. *Introduction to the ICAO Basket of Measures to Mitigate Climate Change*.

https://www.icao.int/environmental-protection/Documents/EnvironmentalReports/2019/ENVReport2019_pg111-115.pdf

38. Environmental Defense Fund. *Act Now or Pay Later: The Costs of Climate Inaction for Ports and Shipping*.

[https://www.edf.org/sites/default/files/press-releases/RTI-EDF Act Now or Pay Later Climate Impact Shipping.pdf](https://www.edf.org/sites/default/files/press-releases/RTI-EDF%20Act%20Now%20or%20Pay%20Later%20Climate%20Impact%20Shipping.pdf)

OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON

Goal Seven: New Zealand has access to reliable, resilient, competitive, and efficient international shipping and air freight services

If we want to trade smoothly with other countries, our shipping services have to be competitive and efficient. Such services mean businesses, including SMEs, can afford to move their goods quickly to where they need to, with different options of services to choose from. These services need to be reliable and resilient, and able to handle disruptions, so that goods can continue to flow into and out of New Zealand even during difficult times, particularly imports that are critical for life and health.

But to do this, the government will need to have more oversight over how well our international freight connections serve our supply chains. The government needs to better understand how our economic policies affect the demand for shipping services now and in the future.

We also need to understand what factors determine the supply of freight services to New Zealand and how we can influence them. We have to assess if what we are doing is currently enough, or if we need to take stronger action. We could also work together with other countries to improve access to international freight services where appropriate.

Most of the shipping services we use in New Zealand are provided by foreign companies who continually choose where they deploy expensive assets based on potential profits. To be competitive in this global market, New Zealand has to be an attractive option for shipping companies, even during disruptions. For example, our relatively balanced import-export container volumes and our high-value exports are seen as strengths.

Similarly, even with a flagship national airline, New Zealand has to be an attractive travel destination in order for air services to be viable, especially those that connect us with key international hubs. Our economic policies, especially those related to trade and tourism, need to be better coordinated with our freight transport policies.

➤ **If we want to trade smoothly with other countries, our shipping services have to be competitive and efficient**

We can make New Zealand more attractive for shipping companies through the following:

- **Reduce the costs of operating services to New Zealand.** We can do this by making our ports and airports more efficient and improving the connections between them and other land-based transport networks. This is covered in the focus areas “Infrastructure and government systems” and “Enabling the sector”.
- **Speed up the digitalisation of trade documents to make it easier to move freight across the border.** For example, the Trade Single Window allows traders to submit information about their goods to border agencies electronically. Releases from Customs control (and Ministry for Primary Industries) are made digitally from Trade Single Window direct to ports. We can standardise these platforms or make them interoperable to make this easier while encouraging our trading partners to use similar systems.
- **Make sure our rules and regulations keep New Zealand safe and secure** while making sure our regulatory systems are flexible enough

to allow businesses to adopt new technologies. For example, we are currently reviewing our Air Navigation System and looking to implement new international standards (S-100) to enable e-navigation for shipping.

Apart from making New Zealand more attractive, we have to keep promoting open and competitive markets for international freight services to New Zealand. This will lead to more frequent, diverse, and reliable shipping services at better prices.

To do this, we need to keep pursuing open skies agreements that allow overseas and New Zealand airlines to compete fairly on routes to and from New Zealand. We also need to keep a closer eye on the composition of our international shipping services and make sure we do not rely too much on one service provider on key shipping routes. We need to understand these trends well so we can assess whether our rules and regulations continue to be adequate in maintaining a competitive sector.



OUR PLAN FOR NEW ZEALAND'S FUTURE: TEN YEAR HORIZON**Goal Eight: Government and sector are aware of global supply chain threats and opportunities, and are ready to respond and adapt**

As the world becomes less predictable, it will become more difficult to know when and how disruptions might affect our supply chains. While we cannot plan for everything, we can be better prepared for some things by being more aware of global threats. The government has a role in monitoring these threats and trends so we can be ready if something happens that affects our national interest.

To achieve this goal, the government will have to:

- collect and access more data on air and sea freight services and assess the vulnerabilities in the system
- monitor global threats and trends more closely, and report on them more systematically including within the international freight transport industry -this can provide early warning of emerging risks and opportunities, and help us act quickly if needed
- share information and work with different parts of the government and industry to develop solutions, including to ensure critical goods can access New Zealand when needed -this will help us understand the risks and vulnerabilities in the system and plan for resilience
- work more closely with like-minded countries, including our Pacific neighbours – we can share information and ideas about how to deal with developments in international freight transport, as well as work together on responding to potential crises.

There is some existing work we can use to help with our strategy. This includes:

- The Ministry's Freight Information Gathering System (FIGS) collects aggregate data on how much sea and air freight is being moved and its value.
- The Maintaining International Air Connectivity and the Essential Transport Connectivity schemes set up during COVID-19. We can use the lessons learnt to prepare for future disruptions and minimise the costs of responding to them.
- The work other government agencies are doing to make sure New Zealand's critical infrastructure and supply chains are resilient and able to handle disruptions, and their work to help exporting businesses improve the management of their supply chains.
- Ongoing discussions on supply chains with like-minded countries such as Australia and Singapore.

Goal Nine: New Zealand reduces its international freight emissions in line with its international commitments

The International Maritime Organization (IMO) has committed to reduce international sea transport emissions by 70% by 2050 compared to 2008 levels, and could set even more ambitious targets. Similarly, the International Civil Aviation Organization (ICAO) has declared a long-term aspirational goal of net-zero carbon emissions by 2050. New Zealand has adopted both of these goals.

To tackle climate change, New Zealand needs to be part of an effective global response. We must actively participate in the IMO and ICAO negotiations on international emissions targets, as well as in other multilateral efforts on climate change issues. This will improve our credibility in international negotiations and help us work with like-minded countries to push for more ambitious actions in the future. We also need to support and advocate for the interests of our Pacific Island partners where appropriate.

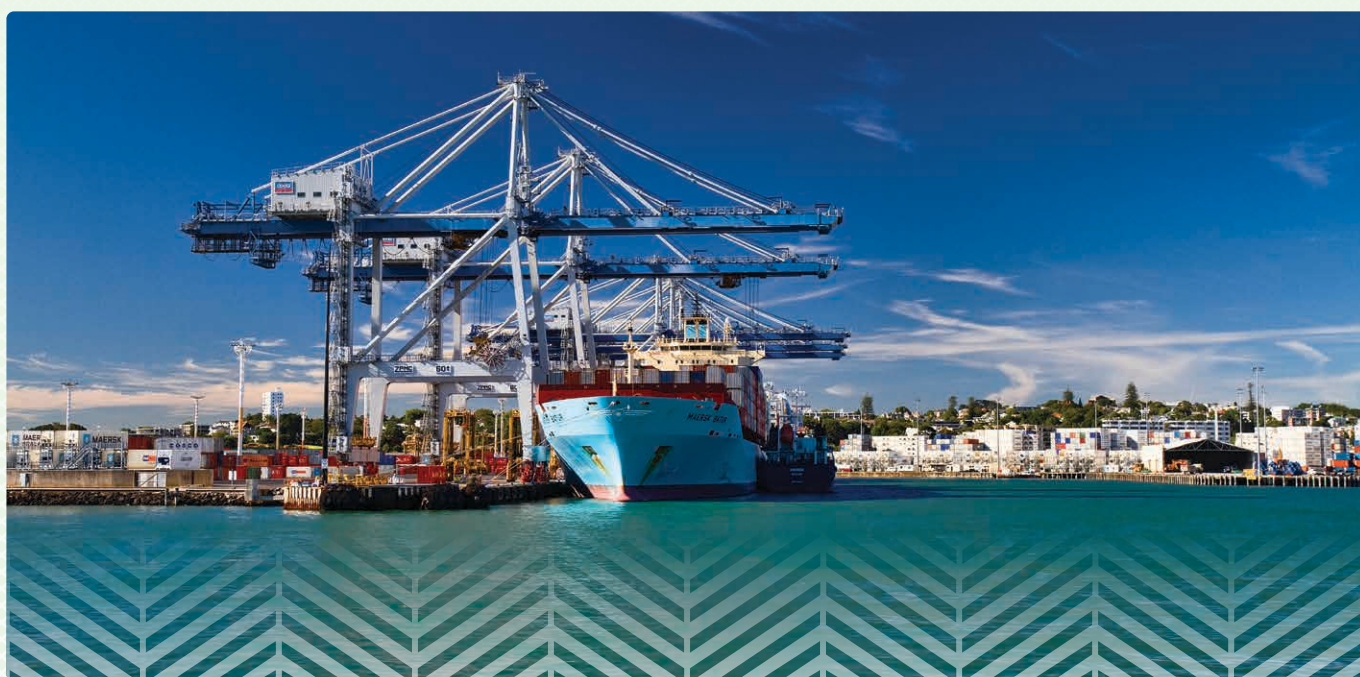
To support our targets, New Zealand has signed up to international agreements. These include:

- Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL), which sets new energy efficiency standards for ships to reduce air pollution.
- the Clydebank Declaration, which aims to establish 'green shipping corridors': emission-free routes between two or more ports.

- the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which allows airlines to offset growth in emissions above a baseline by purchasing emission units.³⁹

To achieve this goal, the government and private sector will need to work together to:

- assess what energy supplies will be needed to reduce emissions including identifying the production and distribution infrastructure needed
- do more research into low or zero-emission technologies and monitor which technologies are being used by other countries
- explore opportunities to make 'low regrets' investments, which means investing in things that are relatively low cost or are certain to provide benefits in a variety of future climate scenarios
- create policies that encourage and incentivise businesses to develop and use low or zero-emission technologies, and make other changes to their operations that would reduce emissions.



39. CORSIA, while an important tool, is an interim measure towards net-zero emissions in the international aviation sector.

3
YEARS

Three-year horizon: A collaborative approach to implementation

In this section we outline our priorities for implementation for the first three years. Our time and resources are limited, so we will need to phase the implementation of this strategy over time. This will include a rolling set of implementation plans. The first one focuses on initial actions we can take now.

Our plan for implementing this strategy involves three main parts:

- putting the initial actions into practice, which sets out four key work programmes to commence immediately
- establishing a strong foundation for the long-term programme
- establishing working relationships between the central government, businesses, local government, and iwi/Māori, to work together on implementing the strategy.

Our initial priorities

We have identified a set of priorities we need to focus on first:

- focus on ports and their connection to communities
- progress road freight decarbonisation
- improve data sharing interoperability
- strengthening international engagement.

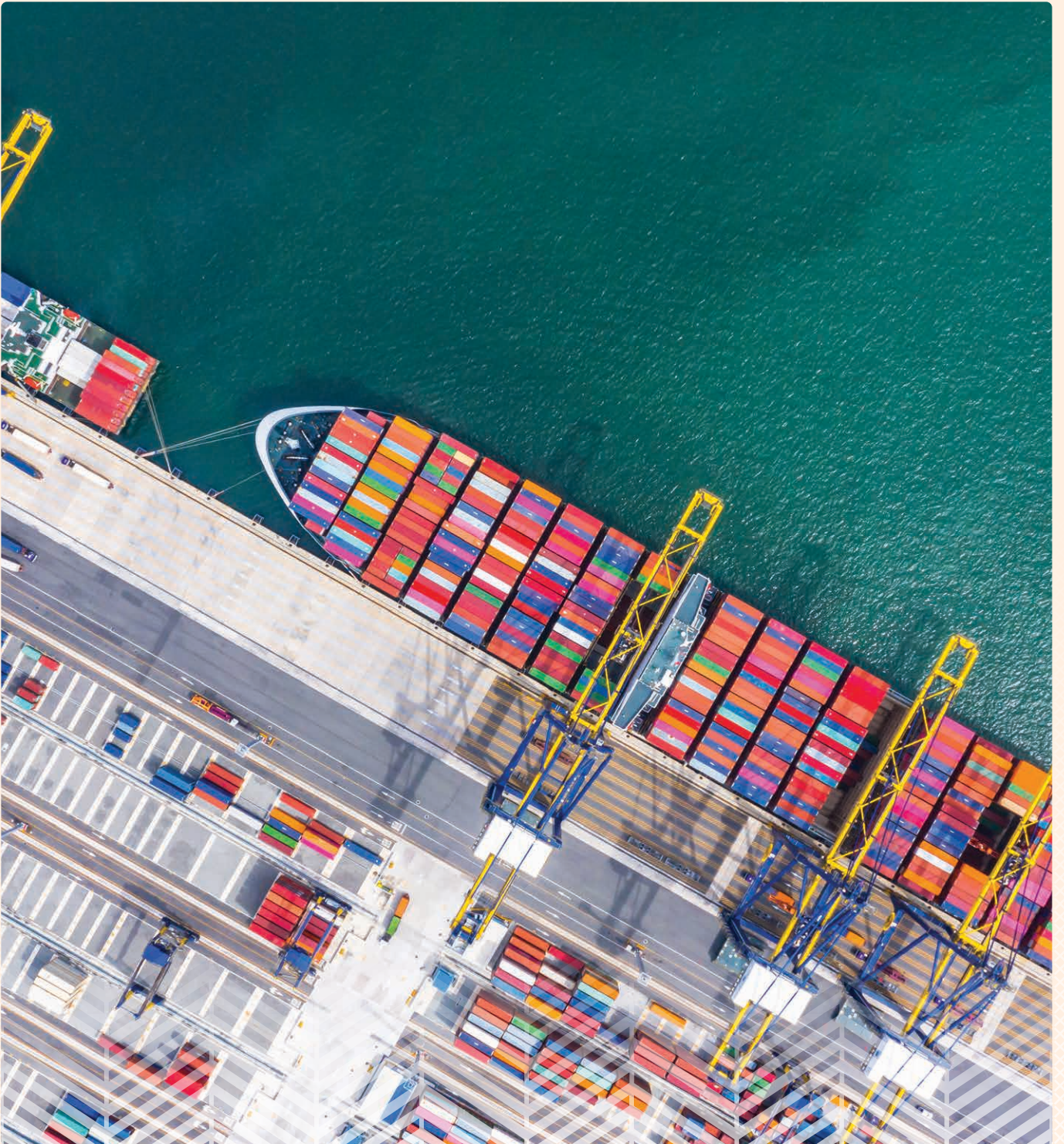
We chose these priorities after considering feedback from the issues paper, our discussions with the industry, available research, and our own ideas exploring what we want to achieve in the future. We also chose these initial priorities based on:

- how urgent the issue is
- what impact the issue would have on achieving the strategy goals
- whether meaningful action can be taken on the issue
- how important the issue is to people in the freight sector
- how strong evidence is for action on the issue.

We are very clear that this is an initial programme of work, to start the ball rolling on achieving the goals of the strategy. Alongside this initial programme of work we will set up an enduring approach to deliver on the strategy – with longer terms plans to be developed after further discussions with the sector.

We will implement this strategy in collaboration with iwi, local government, and freight sector stakeholders.

The initial work programme follows on page 54



Aotearoa New Zealand Freight and Supply Chain Strategy – Initial actions

The Government is making an initial set of commitments to contribute to the delivery of the ambition set out in this strategy.

These reflect the most urgent areas for effort, feedback from stakeholders, and laying foundations for longer term planning. These actions are our initial commitments that can be delivered with the resources currently available. The strategy has identified strategic goals over a ten-year horizon, which would require an additional resource commitment (from government and sector partners) to deliver.



It is our intent to launch a second set of actions in 2024.

We envisage this being a more substantive work programme developed in collaboration with the sector.

Many Industry bodies and private companies will have a leading role in achieving the goals and the actions outlined in this strategy.



Strategic goals



Initial focus

Partnering and collaborating with the sector – At the centre of the work programme will be collaboration. The strategy provides one foundation for the system to work towards a shared goal. But other mechanisms will be required to sustain effort. Establishing collaborative structures, or tapping into exiting ones, and developing shared work programmes will be key early steps in implementation.



Delivery

Government is already delivering work that will contribute to the achievement of these goals.

INFRASTRUCTURE AND GOVERNMENT SYSTEMS

- We are protecting, decarbonising, & optimising nationally significant freight routes & infrastructure.
- There is a sophisticated, robust, & transparent base of evidence to support decision making in the freight system.
- We have reliable & adaptive long-term plans for key parts of our freight system.

PORTS AND THE CONNECTIONS TO THEIR COMMUNITIES

Action 1.1: Develop spatial analysis of port connections that supports future regulatory and investment decision-making. To do this we will identify strategic freight corridors and analyse the role they play in achieving different government objectives.

Action 1.2: Undertake analysis of alternative port models and strategic freight vulnerabilities.

Through the **resource management system reform** we will work to underline the strategic importance of ports to our economy and society. Part of this includes working on new Regional Spatial Strategies. The new National Planning Framework will also be an opportunity to emphasise the critical role of ports.

Through **implementing the rail plan** Government is investing in returning the rail network to a resilient and reliable state, strengthening our long-term ability to grow the rail network and intermodal opportunities.

ENABLING THE SECTOR

- We are protecting, decarbonising, & optimising nationally significant freight routes & infrastructure.
- There is a sophisticated, robust, & transparent base of evidence to support decision making in the freight system.
- We have reliable & adaptive long-term plans for key parts of our freight system.

INTERNATIONAL CONNECTIONS

- New Zealand has reliable, resilient, competitive, & efficient international shipping & airfreight services.
- Government & the sector are aware of global supply chain threats & opportunities & are ready to respond & adapt.
- New Zealand reduces its international freight emissions in line with its international commitments.

PARTNERING AND COLLABORATING WITH THE SECTOR

ROAD FREIGHT DECARBONISATION

Action 2.1: Support the sector to overcome high total cost of ownership barriers to purchasing zero emissions heavy vehicles by introducing a Clean Heavy Vehicle Grant scheme to support operators to purchase a zero emissions truck.

Action: 2.2: Undertake a review of the regulatory system to better enable zero emissions heavy vehicles to operate on our roads.

Action 2.3: Partner with the Sustainable Business Council on a feasibility study into a market-led low carbon freight mechanism and next steps.

DATA SHARING AND INTEROPERABILITY

Action 3.1: Identify and invest in freight data needs based on priorities of different public and private sector stakeholders. This includes both domestic freight and international freight resilience and productivity.

Action 3.2: Seek to establish a partnership with the sector to support mutual data sharing.

INTERNATIONAL ENGAGEMENT

Action 4.1: Maintain collaboration with key international partners to share information and assessments, and strengthen lines of communications for disruption preparedness.

Action 4.2: Support the establishment of green shipping corridors for zero-emissions maritime freight by 2035.

The New Zealand National Energy Strategy led by the Ministry of Business, Innovation and Employment will help to inform future zero/low-emissions energy needs for the freight sector.

The national electric vehicle charging strategy sets Government's strategic vision for Aotearoa's national electric vehicle charging infrastructure system.

The Government has established Sustainable Aviation Aotearoa a public-private leadership body focused on decarbonising aviation.

Te Manatū Waka's Project Monty is an agent based modelling simulation system which shows where, when and what vehicles are travelling around New Zealand.

Te Manatū Waka's Freight Information Gathering System provides an overview of freight movements around New Zealand.

Plans and frameworks within KiwiRail and Waka Kotahi, such as Arataki.

The National Emergency Management Agency's regulatory framework review is considering strengthening the requirements for critical infrastructure entities during crises. This could influence critical transport entities to be better prepared for disruption.

The New Zealand Customs Service is looking at ways to improve trade at the border. This involves working with important trading partners to simplify and standardise trade documentation.

Implementing the fuel resilience policy package, including a minimum fuel stockholding obligation on fuel importers and options for government procurement of onshore reserve diesel stocks.



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