

**webb
henderson**

Legal and Regulatory Advisors

International approaches to transport regulation

Webb Henderson
Legal and Regulatory Advisors

13 October 2015

Contents

Executive Summary.....	2
New Zealand’s transport framework	4
Australia	8
United Kingdom	11
Canada	14
Singapore	18
Emerging themes	22
Appendix 1: Institution diagrams.....	29
Attachment 1: New Zealand Organisation and Legislation Overview	
Attachment 2: Australia Organisation and Legislation Overview	
Attachment 3: United Kingdom Organisation and Legislation Overview	
Attachment 4: Canada Organisation and Legislation Overview	
Attachment 5: Singapore Organisation and Legislation Overview	

Executive Summary

The objective of this research paper is to inform the Ministry of Transport of the different international experiences New Zealand can learn from, in respect of transport regulation. It presents a comparative analysis of the 'frameworks' used in selected countries to regulate transport and related issues.

By 'frameworks' we mean the combination of:

- legislative instruments;
- government organisations which give effect to that legislation; and
- the regulatory approach adopted by different jurisdictions.

Central to this paper are questions about the commonalities and distinctions between transport regulation across comparator countries. The extent to which international frameworks have changed in response to emerging issues is also a consideration.

Emerging themes may be used to inform the New Zealand context. However, because regulation is influenced by local circumstances, such themes must be considered with wider economic, geographic and historical-political standpoints in mind.

Key themes

We have identified the following key themes of potential interest to New Zealand, which we discuss in detail in the final section of the report:

- coordination between policy, regulation and investment;
- coordinated approaches where interests overlap;
- independent organisations to advance strategic stakeholder engagement;
- cross-modal integration;
- cross-cutting issues and non-transportation objectives for the transportation system;
- centralised versus delegated approaches;
- a focus on placing passenger interests at the heart of regulatory frameworks; and
- a technology focus.

Before detailing these themes, we provide an overview of the key aspects of New Zealand's transport framework and those of the survey countries: Australia, the United Kingdom, Canada and Singapore.

Although there are differences in the structures of the different regulatory regimes, the stated agendas of the four countries are surprisingly similar. There appears to be a common drive towards developing transport systems that are safe, secure and

environmentally responsible. Policy goals of supporting quality of life and promoting sustainability, competitiveness and innovation are present across the board.

Specific governance, policy and funding structures may be a product of the unique political cultures of each country, but the types of transportation challenges that these countries are facing are the same. Questions around how to advance passenger interests, increase network capacity, and reduce the environmental impacts of transportation were common among the nations studied.

New Zealand's transport framework

In this first section we summarise the key aspects of New Zealand's current regulatory framework for transport which we have identified as being central to our comparative analysis throughout the report.

Legislative instruments

In New Zealand there are a number of statutes governing the regulation of land, maritime and civil aviation transport.

Land Transport

The two main statutes governing land transport regulation are:

- the **Land Transport Management Act 2003**; and
- the **Land Transport Act 1998**.

The Land Transport Management Act's purpose is to contribute to achieving an effective, efficient and safe land transport system. It provides for the allocation of transport funding and requires the preparation of various land transport planning documents.

The Minister of Transport is responsible for issuing a government policy statement, which sets out the Government's strategic and policy goals for land transport, as well as the funding direction necessary to achieve them.

Regional councils must prepare regional land transport plans that set out the transport goals for their region. These high-level plans provide a strategic link between transport activities at a national level and those at a local level.

The New Zealand Transport Agency must prepare and adopt a national land transport programme that takes into account any relevant national or regional policy statements or plans that are in force under the Resource Management Act 1991.

The purpose of the Land Transport Act is to promote safe road user behaviour and vehicle safety. It sets out the regulatory requirements for participants in the land transport system. These requirements include:

- responsibilities of participants in the land transport system;
- driver licensing;
- transport service licensing;
- offences related to driving; and
- vehicle registration.

The LTA provides the detail governing use of the transport system in practice. It allows participants to make use of the transport system in a safe and responsible way.

Civil Aviation

There are two main statutes governing civil aviation regulation. These are:

- the **Civil Aviation Act 1990**, which establishes the framework for civil aviation safety, security and economic regulation in New Zealand. It also ensures that New Zealand obligations under international civil aviation agreements are implemented; and
- the **Airport Authorities Act 1966**, which gives a range of functions and powers to airport authorities to establish and operate airports.

Maritime

The main statute governing maritime transport regulation is the **Maritime Transport Act 1994**, which defines the statutory powers of Maritime New Zealand. This Act is designed to consolidate and amend maritime transport law, promote safety, protect the marine environment, and enable the implementation of New Zealand's obligations under international maritime agreements.

Organisations

The key regulatory organisations for transport are:

- the **Ministry of Transport**, the Government's principal transport policy adviser. It has a strategic leadership role across the transport system, acting as the Minister of Transport's agent for managing the interface with transport Crown entities;
- the **New Zealand Transport Agency**, which plans and delivers national transport networks and supports local networks. It also works to improve road safety and make public transport and freight networks more effective;
- **KiwiRail**, a State-Owned Enterprise which owns and operates New Zealand's rail transportation network and between-Island ferry service;
- the **Civil Aviation Authority**, which is tasked with enforcing civil aviation safety and security standards. In addition to this role, the Civil Aviation Authority carries out aviation accident and incident investigations in conjunction with the Transport Accident Investigation Commission. The Civil Aviation Authority is also responsible for managing civilian pilot, aerodrome and aircraft licensing in New Zealand;
- **Airways New Zealand**, a State-Owned Enterprise responsible for managing all domestic and international air traffic within New Zealand's airspace;
- **Maritime New Zealand**, a Crown entity responsible for protecting the maritime environment within New Zealand and maintaining safety and security; and
- the **Transport Accident Investigation Commission**, a standing Commission of Inquiry and an independent Crown entity, which investigates significant aviation, rail and maritime accidents.

Approach to regulation

The Government's broad objective for transport is to develop "an effective, efficient, safe, secure, accessible and resilient transport system" that supports the growth of New Zealand's economy.¹

In 2011 the Minister of Transport released *Connecting New Zealand*, a summary of the Government's intended policy direction for transport over the next decade. This document outlines three main areas of focus: economic growth and productivity, value for money, and road safety.²

Connecting New Zealand sets out a number of issues which the Government sees as significant for transport in New Zealand, including population growth, an ageing population and increased demand for freight. Other issues that the Government recognises as significant include environmental protection, transport security and how to take advantage of new technologies.

New Zealand is a trading nation, which needs an efficient transport system in order to enhance its productivity and international competitiveness. In terms of mitigating the negative impacts that trends such as emissions standards or security policy could have on New Zealand's transport system, *Connecting New Zealand* emphasises the importance of effective international relations. In particular, the report suggests that working cooperatively with other countries and developing a strong voice in international transport forums, which set international rules for transport, are key aspects of New Zealand's approach.³

The Government has published a number of other strategy documents which shed light on New Zealand's policy direction for transport. These include the:

- **Thirty Year New Zealand Infrastructure Plan 2015** (2015), which outlines the government's long-term vision for infrastructure in New Zealand, including future challenges and opportunities in the transport sector;⁴
- **New Zealand Energy Efficiency and Conservation Strategy 2011-2016** (2011), which sets out the Government's objective for "a more energy efficient transport system with a greater diversity of fuels and alternative energy technologies";⁵
- **Safer Journeys** (2010), which outlines the Government's road strategy to 2020. It has the central vision of creating "A safe road system increasingly free of death and serious injury";⁶ and
- **Intelligent Transport Systems (ITS) Technology Action Plan 2014-18**, which outlines the Government's strategic approach to encouraging and enabling intelligent transport system technologies in New Zealand.⁷

1 New Zealand Government *Connecting New Zealand* (2011) at 2.

2 At 3.

3 At 11.

4 National Infrastructure Unit *The Thirty Year New Zealand Infrastructure Plan 2015* (2015).

5 Energy Efficiency and Conservation Authority *New Zealand Energy Efficiency and Conservation Strategy 2011 – 2016* (2011) at 18.

6 Ministry of Transport *Safer Journeys Strategy* (2010) at 3.

7 Ministry of Transport Intelligent Transport Systems (ITS) Technology Action Plan 2014-18 (2014).

Webb Henderson
Legal and Regulatory Advisors

Australia

Australia is a federation with six states and two territories. Under Australia's constitution, state and territory governments are responsible for developing efficient, safe and environmentally responsible transport infrastructure and services in urban areas. The Australian Federal Government's transport responsibilities extend to policy formation and the regulation of international and interstate air transportation, maritime transport, heavy vehicles and the national rail network.

In 2005 the Australian Government established a Regulation Taskforce to review key regulatory areas. The Taskforce found there was significant inconsistency and overlap between the regulations of the Australian Government and those of state or territory governments in terms of transport regulation.⁸ Since then Australia has extensively reviewed its governance models for transport regulation. A National Transport Policy Framework was endorsed in 2008.⁹ This Policy Framework outlined a 'new thinking' approach to transport policy which reflected changing industry and operating environments with the objective of developing a seamless, coordinated transport system.¹⁰

Legislative instruments

Laws relating to transport are made at three different levels of government in Australia. There are federal laws, which apply to the whole country, state and territory laws which apply to the respective state or territory, and local laws called by-laws, for each region or district.

The Australian Federal Government facilitates the provision of nationally consistent legislation and regulation regarding road-use management, such as road rules and road freight legislation, but relies on states and territories to ensure compliance with such legislation.

Ministers from the various levels of government work together on matters of common concern. As a result of intergovernmental discussions, uniform national laws have been developed in a number of areas including maritime safety and heavy vehicle regulation.

Organisations

A web of committees and organisations contribute to transport regulation in Australia. At the Commonwealth level, the main organisations are:

- the **Council of Australian Governments: Transport and Infrastructure Council**, which brings together Commonwealth, State, Territory and New Zealand Ministers with responsibility for transport and infrastructure issues, as well as the Australian Local Government Association. Its role is to promote policy reforms that are of national significance or which need coordinated action by all Australian Governments;

⁸ See Australian Government "Rethinking Regulation: Report of the Taskforce on Reducing Regulatory Burdens on Business" (January 2006) at 166.

⁹ National Transport Commission "National Transport Policy Framework: A New Beginning" (February 2008).

¹⁰ See National Transport Commission "Single, National Rail Safety Regulatory and Investigation Framework: Regulatory Impact Statement" (Volume 1, July 2009), Foreword.

- the **Department of Infrastructure and Regional Development**, a department of the Australian Government which is responsible for infrastructure planning, transport safety, land transport, maritime transport, civil aviation and airports and transport security; and
- the **Australian Transport Safety Bureau**, Australia's national transport safety investigator, which is a Commonwealth government body separate from transport regulators, policy makers and service providers. It is responsible for investigating transport-related accidents and incidents within Australia, covering air, sea and rail travel.

The Department of Infrastructure and Regional Development works closely with several mode-specific agencies within its portfolio, including:

- the **National Heavy Vehicle Regulator**, which administers one set of laws for heavy vehicles under the *Heavy Vehicle National Law*;
- the **Office of the National Rail Safety Regulator**, which was established to administer a nationally consistent rail safety law, the *Rail Safety National Law*;
- the **Civil Aviation Safety Authority**, the government statutory authority responsible for the regulation of civil aviation; and
- the **Australian Maritime Safety Authority**, which is responsible for the regulation and safety oversight of domestic commercial vessels and the management of Australia's international maritime obligations.

There are also a number of agencies which help to shape transport policy, including:

- the **National Transport Commission**, an independent statutory body charged with developing regulatory and operational reform for road, rail and intermodal transport; and
- **Infrastructure Australia**, an independent statutory body with a mandate to prioritise and progress nationally significant infrastructure.

Approach to regulation

There is ongoing debate about the ways in which Australia's regulatory framework for transport could be improved. Below are the key features that have emerged through the review process.

Long-term, forward-looking approach

Australia is currently attempting to develop a long-term roadmap for transport reform, following suggestions that the regulatory regime lacked clear policy statements and governmental goals.¹¹

In 2009, the National Transport Commission identified a lack of coordinated and integrated long-term planning at a national level as a key productivity impediment for the transport

¹¹ National Transport Commission "2009 Review of the National Transport Commission" (March 2009) at 22.

industry.¹² The regulatory regime was also criticised for showing a lack of alignment between regulatory cycles, which typically do not exceed five years, and infrastructure investment horizons, which generally exceed 10 to 15 years.¹³ This meant there was a risk of poor asset utilisation and under-investment over the long term.

To improve transport planning, the Australian Government has developed forward-looking strategies in a number of key areas. For instance, it has developed a Policy Framework for Intelligent Transport Systems (2011), a National Ports Strategy (2011), a National Freight Strategy (2012), and a Transport Security Outlook to 2025 (2014).

Consultation with key stakeholders

The practice of augmenting public sector expertise with the knowledge of key stakeholders in the transport industry is becoming an increasingly important feature of the Australian regulatory regime.

The National Transport Commission, in particular, has sought to shift stakeholder management from a reactive risk management approach to a more proactive and transparent two-way strategic relationship.¹⁴ The National Ports Strategy, developed by the National Transport Commission and Infrastructure Australia in 2011, specifically recognises the need for an independent panel of expert advisors, including end users, to guide implementation of the strategy. In doing so, it recognises that a 'one size fits all' approach is not appropriate.

The degree of industry consultation is still considered insufficient in certain areas. An independent review of Australia's aviation regulatory system, commissioned in 2013, found that the relationship between industry and the regulator was a cause for concern.¹⁵ It noted that that the relationship between industry and the Civil Aviation Safety Authority has, in many cases, become adversarial. The review concluded that a more collaborative relationship, founded on mutual trust and respect, was needed to produce better safety outcomes and ensure the regulator stays in touch with rapidly advancing technology and safety practices.

Customer focussed

Australia's regulatory approach has become more customer-centric. New South Wales' Passenger Transport Bill 2014 is representative of this approach. It replaces the narrowly-focused mode specific approach of the Passenger Transport Act 1990 with an approach that places the customer at the centre of policy and decision-making.¹⁶ For instance, it gives the New South Wales public transport agency powers to enter into contracts for public passenger services, regardless of the service mode.¹⁷ This gives transport planners greater flexibility to accommodate the needs of customers.¹⁸

12 At 13.

13 John Stanley "Proceedings from ADC Infrastructure 21: From Incrementalism to Transformational Change" (October 2008) at 6.

14 National Transport Council, above n 11, at 12.

15 Australian Government "Aviation Safety Regulation Review" (May 2014) at 1.

16 Gladys Berejiklian "Passenger Transport Bill 2014, Second Reading" (18 June 2014).

17 Parliament of New South Wales, Passenger Transport Bill 2014.

18 Berejiklian, above n 16.

United Kingdom

The United Kingdom is a compact and well-connected island. However, the Government's approach to regulating transport is fragmented. This is due, in part, to historical devolvement of transport related decision-making to authorities in Scotland, Wales and Northern Ireland. Further, it is necessarily disparate because the United Kingdom's approach to transport is modal and passenger focused with power delegated to issue or sector-specific authorities which focus on issues closer to the day-to-day operations of transport, as opposed to bodies which focus purely on policy.

Legislative instruments

The main piece of transport related legislation in the United Kingdom is the Transport Act 2000. It makes most general provisions for transport and provides for a number of changes to transport infrastructure in the United Kingdom, such as the structure of the privatised railway system. There are also a number of mode and issue specific instruments, for example the Railways and Transport Safety Act 2003.

Devolvement in the late 1990s has meant that some control for transport in Scotland, Wales and Northern Ireland has been transferred to local authorities through devolution legislation, with specific matters reserved for the Department for Transport. There are also regional authorities in England which have statutorily delegated control over limited matters of transport within their jurisdiction.

Organisations

The Department for Transport is responsible for the overall delivery of the government's transport policy and strategy. The Department for Transport creates the strategic framework for transport services, which are delivered through other public and private sector bodies to which the Department for Transport provides funding.

The Department for Transport makes policy for accessible transport, aviation and airports, freight, high speed rail, local transport, the maritime sector, the rail network, the road network and traffic, road safety, transport emissions and transport security.

The Department for Transport is supported by 19 agencies and public bodies. These authorities tend to have a transport mode, sector or issue on which they focus. Other bodies include the department's own executive agencies, trading funds, non-departmental public bodies, public bodies and statutory boards. These include:

- the **Office of Rail and Road**, a statutory board with a combined economic and safety focus for Great Britain's railway network, operating independently of central government; and
- the **Civil Aviation Authority**, which is in charge of safety and management of the United Kingdom's airspace, economic regulation of Heathrow and Gatwick airports, enforcement of consumer protection rules and enforcement of regulations and requirements relating to transporting dangerous goods by air.

There are also some private corporations which take on specific services such as London Continental Railways: a Government-owned company which manages and develops

property assets within a railway context, particularly major infrastructure projects, such as the Channel Tunnel Rail Link.

Recent developments

In the report *Transport – an engine for growth* (August 2013)¹⁹, the Department for Transport noted the Government’s vision for the transport system. One focus of the report was on working with the private sector. This discussed privatisation and ways of driving efficiency. One initiative identified by the report was removing or improving transport regulation as part of the United Kingdom’s ‘Red Tape Challenge’. It is thought that this will make the United Kingdom more attractive to investors.

The report also noted a move towards greater delegation of authority to local bodies and delivery partners in England as well as more devolution of transport decision-making in Scotland, Wales and Northern Ireland. To enable local authorities to use their delegated power effectively the Department for Transport is also moving towards longer-term funding models under which delegated authorities would have certainty over their budget for a long period of time.

Also discussed in the report was a move towards an integrated approach to transport thinking. This shows an adoption of some of the themes that came out of the 2006 Eddington Transport Study.²⁰ This study suggested that the United Kingdom’s transport approach was overly focused on modes, leading to a compartmentalized policy approach with coordination being rare. Following the study, longer-term cycles of planning and investment were implemented. Further, these cycles of planning and investment were aligned for all modes so that policies and programmes could be considered simultaneously. The effect of this change is to align the structural processes around decision-making rather than the modes of transport or transport related issues.

Approach to regulation

Mode specific

The Department for Transport has a mode-specific focus. It is divided into various groups, including the Rail Executive, the Roads Traffic and Local Group, the High Speed Rail Group and the International, Security and Environment group. Policy is also compartmentalised with separate points of focus such as aviation and airports, freight, high speed rail, the maritime sector, the rail network, road network and traffic, and road safety.

This approach means that the majority of policies and regulatory initiatives emerging from the Department are practical and focus on operational issues, such as train capacity or accessibility.

19 Department for Transport “Transport – an engine for growth” (August 2013) GOV.UK <<http://www.gov.uk>>.

20 Sir Rod Eddington “The Eddington Transport Study, the case for action: Sir Rod Eddington’s advice to Government” (2006) Department for Transport <dft.gov.uk>. See also Oliver Jones “Moving Transportation Reform: An Inside Perspective from the U.K.” (Brookings, Metropolitan Infrastructure Initiative Series, May 2010) at 1-2.

Passenger/people focused

The Department has a particular focus on passengers. This approach is unique as it focuses on the end-user rather than the supply of the service which is usually central to economic regulation. This approach could arguably be the result of the United Kingdom's mode-specific focus and authority being increasingly delegated to bodies with greater oversight of the day-to-day issues of transport.

Passenger focused policies are implemented specifically in relation to particular modes of transport. One such example is the Civil Aviation Act 2012.²¹ This Act prioritises passengers in airport regulation by motivating airports through licence conditions to deliver better facilities, provide more information to passengers and give greater incentives to airports to prepare for disruptive events. The Civil Aviation Authority is also given single overriding control of the airports economic functions to promote the interests of passengers through the operation of airport services. Following the Act becoming law the Civil Aviation Authority has engaged consumers, seeking feedback on airport regulation and licence conditions and creating a Consumer Panel from which to seek advice.

Consolidation of economic regulation and consumer standards

In relation to air and rail, the regulator sets both economic regulation and standards relating to consumer health, safety and environmental standards. This consolidation of several roles into one regulator, for rail and air respectively, could be either a benefit for effective regulation or a limitation. In expecting providers to both comply with consumer standards set by the regulator and to meet specified price caps, regulators could set price caps so as to ensure that providers can meet their consumer obligations. Regulators can ensure that the price cap allows the service provider to make enough revenue to fund any required changes. Therefore the regulator could also have the means of ensuring that passenger-focused regulation is met. However, it could also be a limitation if the regulator does not reflect the costs of meeting consumer obligations in the price cap. Overall, it is a lot of power for one regulator to hold, which could result in focused and effective regulation if used effectively. This thought process is evident in the Civil Aviation Act 2012 which gives the Civil Aviation Authority a single overriding duty for an airport's economic functions in order to further the interests of passengers and owners of cargo in the provision of airport operation services, as noted above.

21 Rt Hon Simon Burns "Passengers come first in new Civil Aviation Act" (19 December 2012) GOV.UK Press Release <www.gov.uk>. See also Civil Aviation Act 2012 (explanatory note) at [9], which noted that in relation to the Act that in some sectors of the economy, such as state-owned monopolies where there is limited prospect for effective competition, economic regulation is required to protect consumers.

Canada

Regulating transport in Canada involves significant challenges. Canada is the world's second largest country in total area (9.985 million km²). It is divided into ten provinces and three territories. Transport must cater both to the urban environment and to remote communities. To combat this, the current transport network is based on efficient, high-capacity multimodal systems which span great distances.

Legislative instruments

During the 1980s and 1990s budget cuts meant day-to-day operation of several transport modes were privatised or transferred to local authorities through a range of legislation (detailed in Attachment 4). At the same time, Canada was following the international trend towards less-intrusive regulation. This led to the Canada Transportation Act 1996 which established the current regime and mandate of Canada's separate economic regulator, the Canadian Transportation Agency. Under this less-intrusive regime, railways and airlines have been mainly free of rate regulation. They have freedom of market entry and exit, as well as freedom to abandon operations. Airlines are regulated under international agreements but, domestically, they can operate with relatively little regulation by the government. This last incarnation of the transport regime has been described as the "least-regulated" in Canada's history.²² Competition and market forces are the key drivers rather than strict rules.

The Canadian Government's department for transport, Transport Canada, is responsible for enforcing several pieces of legislation, including the Aeronautics Act, Transportation of Dangerous Goods Act, Motor Vehicle Safety Act, Canada Transportation Act, Railway Safety Act, Canada Shipping Act and the Marine Transportation Security Act. Safety and security inspectors receive delegated power and official credentials from the Minister of Transport.

Organisations

Despite being divided into ten provinces, transport policy and regulation are largely within the jurisdiction of a few bodies at the federal level. Regional offices implement country-wide strategies.

Transport Canada is governed by the Minister of Transport and primarily covers policy and programmes relating to air, marine, rail, and road transport as well as issues of safety, security, the environment and innovation. In relation to road and rail transport, under the Transportation Infrastructure Programs Directorate, Transport Canada manages federal funding for transport network infrastructure. While transport networks within a province are the responsibility of the local authority, Transport Canada is active in matters that involve cross-border flow of people and goods. Transport Canada also has a special focus on innovation which includes programmes and policies which focus on accessible transport, clean transportation, gateways and corridors, Intelligent Transport Systems, a Transport Development Centre and general innovation policy.

²² Cecelia McGuire "100 Years at the Heart of Transportation – An Historical Perspective" Government of Canada (31 July 2015) <www.otc-cta.gc.ca>.

The Canadian Transportation Agency is an independent, quasi-judicial tribunal and economic regulator. It makes decisions and determinations on a wide range of matters involving air, rail and marine modes of transport and resolves complaints about transport services, rates, fees and charges. A decision of the Canadian Transportation Agency can be adopted as an order of the Federal Court, or of any superior court, and would become enforceable as such. In terms of economic regulation it provides approvals, licences, permits and certificates of fitness in relation to federal air, rail and marine transport.

The Transportation Safety Board is an independent agency whose mandate is to advance transportation safety through investigating marine, pipeline, rail and air incidents. Following an investigation the Transportation Safety Board will draft an investigation report which following review, is published. The Transportation Safety Board does not assign fault or determine civil or criminal liability and its findings cannot be used in legal or disciplinary proceedings. The Transportation Safety Board can make recommendations to the government based on its findings.

Recent developments

Transport Canada is currently undergoing a review of the Transportation Act. The Act is reviewed every eight years. The final report is due 24 December 2015. The review intends to take a long term view of transport in Canada (20-30 years) and is considering emerging patterns and shifts in transport and their long term implications. Canadian Minister of Transport Lisa Raitt compared it to “connected vehicle technology ... a sort of early detection system to help alert us to key trends and issues that lie ahead”.²³ The review discussion paper highlights areas of focus which include the continuing efforts to reduce red tape where administrative and compliance burdens are undue and continuing to harmonise regulation with key trading partners.²⁴

Approach to regulation

System-wide and outcomes focused approach

In recent years Transport Canada has made a deliberate policy shift to focus regulation on a system-wide holistic approach to transport in what has been termed a “transportation system perspective”.²⁵

Previously Transport Canada’s focus was on each of the four high-level modes of transport – air, rail, marine and road. However, this has changed with transport now being viewed horizontally, with the journey of freight and passengers being followed end-to-end to ensure a seamless connection between all transport modes. This approach can be seen in Canada’s goals under the National Framework for Strategic Gateways and Trade Corridors.²⁶ This policy aims to connect exporters and importers through a seamless, multimodal system. This multimodal approach tends to impact more upon freight policy

23 “Remarks by the Honourable Lisa Raitt, Minister of Transport to the Vancouver Board of Trade” (7 July 2015) Government of Canada News <news.gc.ca>.

24 David L Emerson “Discussion Paper: Canada Transportation Act Review” (2014) Transport Canada <www.tc.gc.ca>.

25 Denis Lebel “Transportation in Canada 2011” (31 July 2012) Transport Canada <www.tc.gc.ca>.

26 Transport Canada “National Policy Framework for Strategic Gateways and Trade Corridors” (2009) Canada’s Gateways <canadagateways.gc.ca>.

than passenger transport. The Freight Integration and Motor Carrier Policy looks at intermodal transport development issues, identifies infrastructure needs and collaborates with provincial and territorial departments to enable this approach.

This approach goes further than simply integrating the physical infrastructure of different forms of transport, and also looks at ways in which regulation, policy and operation of transport can be assimilated to become more effective. It is thought that this approach will enable critical issues such as technology, the environment, security and safety (which are viewed as transcending mode-specific transport) to be addressed. Therefore, while some policy groups focus on specific modes of transport, others focus on multimodal, issue specific policies. A key goal here is to enable a cross-cutting approach to specific issues while also retaining the expertise to make mode-specific decisions.

Commercial focus

Canada's Transport Minister sees transport as integral to economic growth and prosperity.²⁷ Regulation is viewed as a tool for enabling economic activity.²⁸ Therefore transport regulation has a strong commercial focus, with a key goal being to make Canada's transport infrastructure efficient and competitive.

One of the ways in which this is achieved is by ensuring cooperation in regulation and policy with regional and international partners as well as across government departments and the private sector. This promotes efficiency and furthers relationships with trading partners. Part of this commercially-minded approach is aimed at making Canada attractive to foreign investors through having transparency, predictability and stability in its policies and regulations.

Canada and the US have formed the Regulatory Cooperation Council to increase regulatory transparency and coordination between the two countries. One of RCC's areas of interest is transport, with the two countries looking at working together to develop regulations and standards to support the integration of intelligent transport systems and aligning regulatory approaches towards unmanned aircraft systems. In February 2015, a Bilateral Aviation Technical Arrangement was signed between Canada and China. Under the Arrangement, Transport Canada and the Civil Aviation Authority of China are streamlining approvals for aeronautical products and parts from each other's countries. This aims to minimise redundancies, reduce costs and save time.

Domestically, this commercial approach means Transport Canada is increasingly implementing user-pays principles and focusing policies on market forces when it comes to adapting to changes in the origins and destinations of consumer and freight traffic. This commercial approach further affects other transport thinking. Administrative burdens which create economic barriers are being removed (through the Red Tape Reduction Action Plan) and transport systems which are not cost-effective are being rationalised, such as the railway, with certain tracks being abandoned to account for a lowering use of rail by passengers.

Prioritising innovation

27 "Remarks by the Honourable Lisa Raitt, Minister of Transport to the Toronto Global Forum" (10 July 2015) Government of Canada News <news.gc.ca>.

28 Lebel, above n 25.

Transport Canada sees innovation as vital to meeting the challenges of transport in the 21st century. Therefore Transport Canada is starting to ask questions about what challenges, both traditional and non-traditional, transport will be facing over the next 20-30 years and what can be done now, in terms of regulation, to prepare for these roadblocks. These challenges include urbanisation, new monetary policies, globalisation, aging population, international migration, shifting supply chains and new technologies (such as Remotely Piloted Aircraft Systems and electric cars). As another approach to innovation, Transport Canada is considering revisiting decision-making processes to allow for faster responses to change as it occurs.

Singapore

Singapore is an island City State with a total land area of 718.3 km². Due to Singapore's small geographical size and its single-level governance structure, it is often regarded as a 'special case' in terms of transport regulation. Singapore's land use and transport strategy is designed to be space-efficient with high-density development, low land take for roads, and a large role for space-saving transport.

Legislative instruments

The basic concepts underlying the transport plans and policies for Singapore have remained constant since the 1970s. A non-statutory Concept Plan (incorporating spatial and transport planning elements) provides the development framework for Singapore within which more detailed statutory land-use plans (collectively known as the "Master Plan") are prepared and implemented on an on-going basis.

At the strategic level, the Concept Plan provides the overall vision and broad directions that will guide development over the long term (40 to 50 years). At the local level, the Master Plan provides the detailed planning parameters that will shape actual development.

The Master Plan and the Concept Plan provide a comprehensive planning framework for sustainable development. Within this framework, key organisations work together to prepare and implement integrated land use plans and transport strategies.

Singapore has a number of statutes relating to transport, including specific acts to regulate vehicle use, aircrafts and shipping. It also has statutes which establish national modal regulators in the areas of land, marine and civil aviation transport.

Organisations

The main organisations responsible for regulating transport in Singapore are government statutory boards under the Ministry of Transport. These consist of:

- the **Land Transport Authority**, which is the primary agent for land transport development and policy setting in Singapore. It plans the long-term transport needs of the city, over-seeing all road uses, including private and public transportation. The Land Transport Authority works closely with land use planners to ensure that transport systems are well planned and properly integrated with urban, residential, industrial and commercial developments;
- the **Public Transport Council**, which is responsible for regulating bus and rail fares, as well as bus services. The Land Transport Authority assists the Public Transport Council in this role;
- the **Maritime and Port Authority of Singapore**, which is responsible for the overall development and growth of the port of Singapore. It acts as Port Authority, Port Regulator, Port Planner and National Maritime Representative. It is also tasked with ensuring that shipping and its related activities grow in an environmentally-responsible and sustainable manner; and
- the **Civil Aviation Authority of Singapore**, which has strategic and regulatory functions. Its roles are to enable the growth of the air hub and aviation industry,

oversee and promote safety in the industry, provide air navigation services, and develop Singapore as a centre of excellence for aviation knowledge and human resource development.

The Ministry also has jurisdiction over the **Air Accident Investigation Bureau**, an independent investigation authority responsible for the investigation of air accidents and serious incidents in Singapore.

With a focus on integrating land use and transport policies, the **Urban Redevelopment Authority** is also influential in transport planning. It prepares the Concept Plan and the Master Plan, which influence transport policies in Singapore.

Approach to regulation

Singapore's regulatory regime for transport has a number of key features, including a focus on comprehensive long-term plans, ensuring integration between land use and transport planning, and maximising limited space by restricting car use.

Long-term plans

Singapore uses a strategic planning approach in developing its Concept Plan to overcome some of the common problems associated with the preparation of overarching plans, such as the time needed to prepare them, the amount of detail such plans require and their lack of connection with key levers of influence over urban development (such as infrastructure investments).²⁹ The Concept Plan lays out the vision for land and transport development over a 40-50 year horizon, and the key actions to achieve that vision. The Plan is reviewed and updated in Singapore every 10 years, to allow for more accurate planning.

Integration between land use and transport

The integration of land use and transport developments in Singapore is assisted by having two key agencies for planning and policy, namely: the Urban Redevelopment Authority for spatial development and land use, and the Land Transport Authority for all modes of transport. Rather than combining the two agencies into a single overarching agency, Singapore uses the mechanism of inter-agency committees to achieve integration (see Appendix 1, Figure 6). This works effectively in part because Singapore's Government as a whole is relatively integrated, with a relative absence of 'departmental silos'.³⁰

Another factor contributing towards integration in Singapore is the large percentage of land in government ownership. The Government uses land release strategically as a proactive means to guide the implementation of the Concept Plans. The *Land Acquisitions Act*, which allows the Government to acquire land for any use deemed to be in the public benefit, is also important. This Act allows the Government to get access to land affordably and expeditiously for transport infrastructure development.

29 Paul Barter and Edward Dotson "Urban Transport Institutions and Governance and Integrated Land Use and Transport, Singapore" (2013) at 7.

30 At 8.

Restrictions on car use

In Singapore, as in other countries, a preference for car use over public transport presents challenges in terms of the amount of space needed for roads. In Singapore, however, building additional roads is not seen as a viable option. Instead, Singapore has attempted to curb car use and promote public transport through specific measures such as car quotas and congestion charges.

Despite these measures, there has been a continuing growth in car ownership and use. If car ownership continues to grow it may exceed the supply of road space, leading to pressure for further road widening.³¹ Proactive management (coupled with continuous investment) is needed to make the most effective use of available road space. Regulatory work in this area is ongoing. The Sustainable Singapore Blueprint 2015 sets out targets for increasing the length of cycling paths and rail networks, in order to encourage greater use of public transport.

Specific points of interest

Singapore has introduced a number of recent reforms to improve the safety and international competitiveness of its transport system. Two of these reforms are discussed below.

Unmanned aircraft regulations

In 2015, Singapore passed the Unmanned Aircraft (Public Safety and Security) Act. This Act amends the Air Navigation Act and the Public Order Act to regulate the operation of unmanned aircraft in Singapore in the interests of public safety and security. Following this law change, two permits – an operator permit and an activity permit – are required for flying unmanned aircraft that weigh more than 7 kilograms for any purpose. The Civil Aviation Authority of Singapore is responsible for processing the applications and coordinating with other relevant agencies where needed.

Economic regulation of airports

In 2009, Singapore passed the Civil Aviation Authority of Singapore Act to provide for the corporatisation of Changi Airport, the restructuring of Civil Aviation Authority of Singapore, and the imposition of economic controls at Changi airport. This reform was implemented following an extensive review which included study trips to airports and government regulators in Europe, Australia, New Zealand, North America and Asia, consultations with employees and stakeholders in the aviation industry and an extensive review of the Civil Aviation Authority's existing functions.

The key objectives of corporatisation were:³²

- to provide Changi Airport greater impetus to capitalise on new opportunities and face rising competition;

³¹ At 15.

³² Ministry of Transport Singapore "Corporatisation of Changi Airport and Restructuring of Civil Aviation Authority of Singapore (CAAS)" (2008).

- to create a new corporatized entity with greater flexibility to attract and retain talent to compete with global airport operators; and
- to enable Changi Airport to better leverage on its brand name to develop an international presence.

Emerging themes

In this final section we summarise some of the key themes that have emerged from our comparative analysis of the selected countries. We have grouped these themes under eight headings. Though the different regulatory regimes have features that make them unique at a micro-level, it is possible to identify broad trends across the various jurisdictions which inform decision-making and help to shape transport policy. Distinct differences between some of the countries also show areas in which development is occurring, albeit in different directions.

1. Coordination between policy, regulation and investment

A fundamental challenge in transport regulation is how to maintain a high level of coordination between policy development and administration. This is particularly so where funding decisions are not in the same hands as those making decisions about policies or programmes. It is necessary to ensure that regulatory approaches do not conflict or overlap and that unnecessary compliance costs are not imposed. A coordinated approach promotes stability and certainty in policy, which can in turn encourage private investment.

Previously, in the United Kingdom, funding and decision-making cycles for strategy, planning and delivery of programmes were made separately for each mode of transport and at different times. Following the Eddington Transport Report these cycles were aligned so that strategy, planning and delivery could be considered across all modes at the same time.³³ Transport policies, programmes and funding are now prioritised in line with these three economic areas on an “objective-focused and evidence-based approach”.³⁴ This is intended to be efficient and support economic growth as an objective in its own right. Singapore’s unitary government structure broadly achieves the same objective. It ensures coordination by removing policy, planning and design mismatches that can arise between different levels of government.

In countries such as New Zealand, where transport planning is undertaken at a range of different levels, it might be possible to minimise or manage potential planning mismatches if the roles and responsibilities of the different levels of government were clearly designated, with processes in place for dispute resolution. Further, open communication and discussions regarding policy, programmes and funding across these different levels could occur simultaneously to ensure funding is efficiently prioritised and coordination of the strategy, planning and delivery of plans occurs where possible.

2. Coordinated approached where interests overlap

The shortcomings of developing regulation within policy ‘silos’ is increasingly being recognised. When regulatory solutions are devised within individual government agencies the cumulative impact of regulation across government may be poorly understood, not properly taken into account or inefficiencies may be created. The importance of integrated development was a key theme in a number of the regulatory regimes we examined.

33 Oliver Jones “Moving Transportation Reform: An Inside Perspective from the U.K.” (Brookings, Metropolitan Infrastructure Initiative Series, May 2010) at 11-12.

34 At 1.

Numerous jurisdictions focused on integrated decision-making in relation to transport and land-use. In Australia, the importance of integrated development is emphasised through national policy. In 2003, a National Charter of Integrated Land Use and Transport Planning was endorsed by transport and planning Ministers, committing them to a set of good planning practices. All states, territories and the national government collaborated to develop the Charter. The responsibility for its implementation rests with each state, territory and with federal ministries. Within each state and territory, local governments also play a central role in land use and transport planning for local areas. New Zealand does not currently have a national policy that integrates land use and transport planning decision-making.

In Canada there is a growing interest in integration at an international and regional level, with Canada and the US looking at working together to develop regulations and standards to support the integration of intelligent transport systems. Canada and the US are also looking to align regulatory approaches towards unmanned aircraft systems as part of their work under the Regulatory Cooperation Council. While New Zealand does not have any bordering countries, a regional approach could be worth considering. Developing a more coordinated approach with other Asia-Pacific countries might lead to reduced regulatory compliance costs for New Zealand transport operators and businesses working within the region. Indeed, Canada is adopting cross-agency policy integration at an international level through bilateral agreements with foreign counterparts. One such example is Transport Canada's Bilateral Aviation Technical Arrangement with China's Civil Aviation Authority. This will streamline approvals for aeronautical products between the two countries. In this respect, transport regulation is used as a tool to strengthen ties with trade partners and further Canada's commercial interests more broadly.

3. Independent organisations to advance strategic stakeholder engagement

There have been developments which underscore the importance of effective consultation between policy-makers, regulators and industry stakeholders. Stakeholder engagement is important to ensure that regulation is effective in meeting its objectives over time and does not impose unnecessary costs. The survey countries have incorporated stakeholder engagement in a number of ways.

Australia has two independent statutory bodies to advance strategic stakeholder engagement. These are the National Transport Commission and Infrastructure Australia. Growing recognition of the need for effective consultation in Australia is noticeable in the National Ports Strategy, which sets out the need for an independent panel of expert advisors to guide implementation of the strategy. This theme of enhanced consultation has also been promoted by the results of an Independent Review of Australia's aviation regulatory system, which concluded that a more collaborative relationship between the regulator and industry could produce better safety outcomes. These recommendations indicate a shift in stakeholder management from a reactive risk management approach to a more proactive and transparent two-way strategic relationship with the transport industry.

The United Kingdom uses independent bodies to empower consumers. The Department for Transport funds a consumer watchdog to carry out research and advocate for passengers. The Civil Aviation Authority has formed an independent Consumer Panel with which the Authority consults on issues of consumer interest. This is unique in that it recognises passengers as key stakeholders of transport and is part of a broader trend, discussed below, which places passenger rights at the centre of transport regulation

The benefit of embracing stakeholder engagement is that it can reduce adversarial attitudes between different groups. An Australian review of the aviation regulatory system found that this attitude was prevalent between the industry and regulator. The review concluded that a more collaborative relationship, founded on mutual trust and respect, would produce better outcomes and ensure the regulator stayed in touch with rapidly advancing technology and safety practices.

There seems to be a similar tendency for certain views – perhaps the perspective of passengers in particular – to be lost in consultation processes, but there is no reason why New Zealand could not implement similar approaches. Separate consultative stakeholder groups could be formed for consumers, regional and local bodies and those in the infrastructure and private sector.

4. Cross-modal integration

In a number of countries there has been a shift away from a mode-specific focus towards a more holistic, system-wide perspective of transport networks. In particular, regulators are concerned with ensuring that transport reform outcomes do not inhibit efficient modal choice.

In Australia the National Ports Strategy aims to stop the segmentation of the nation's transport system, recognising that differing approaches in each state and competition between the sectors leads to practical inefficiencies. The National Land Freight Strategy, developed alongside the National Ports Strategy, aims to improve Australia's productivity and international competitiveness through a network strategy where railways are integrated into a multimodal approach.

Canada too has purposively shifted their transport thinking away from a modal focus to look at the system as an integrated whole. Canada looks at transport from end-to-end as a supply chain and will shift investment, infrastructure, policies and programmes according to these shifting supply chains rather than simply expanding the system to meet demand.

Despite this shift towards a more holistic approach, it is difficult (and perhaps unhelpful) to categorise the strategies taken by Canada and Australia as signifying an across the board approach of "regulation by goal" versus "regulation by mode". Both approaches seem to play a role in shaping the transport decisions of these countries. This may be due to the unique considerations found at different levels of the transport planning process. At an infrastructure level, different modes of transport present unique considerations in terms of funding, durability, and functionality which make it difficult to take a mode-neutral approach.

Tension seems to exist between the need to take into account modal differences at an infrastructure level – where modal differences are most apparent – and the goal of a seamless transport network at a service level. As a user of transport services, a passenger is more likely to be concerned with the quality, efficiency and convenience of the transport experience as a whole, rather than the mode of transport as such. This perspective may lend support to efforts for cross-modal integration. However, in many cases the delivery of a satisfactory transport experience may require in-depth knowledge about a particular mode of transport. This suggests that coordination rather than complete policy integration may be the appropriate goal.

5. Cross-cutting issues and non-transportation objectives for the transportation system

Many countries are defining their transport objectives from a broader perspective leading to goals which are not strictly transport orientated. This includes policies which focus on supporting economic growth and trade, promoting foreign investment and meeting environmental standards. This focus on non-transportation objectives is a way of addressing cross-cutting issues that impact the transport sector. It enables transport regulators to achieve the broader policy objectives of set by their government's economy-wide priorities. In a sense this is also an extension of the holistic, system-wide approach noted above, but applied to how the regulator thinks about policy more broadly rather than just the transport network. Much like the transport system, many issues related to transport are seen as interconnected. All of the survey countries recognise a need for a national initiative to reduce the environmental impacts of transportation, by addressing specific issues such as vehicle emissions.

Non transport objectives for the transportation system

In Canada, the integrated holistic approach, noted above, was also intended to apply to transport policy as a whole. Transport Canada places emphasis on the impact transport has on the country's economy through making trade routes efficient and easily accessible. Issues relating to transport are also treated as intertwined, such as safety and the environment or transport networks and the need to find innovative solutions to increasing transport use. Following the Eddington Transport Report, Department for Transport targeted societal and economic goals rather than transportation outcomes. This includes policies such as reducing carbon emissions, increasing the "value for money" ratio of investment decisions and incentivising the prioritisation of the most effective solutions.³⁵ These transport goals indicate an increasingly commercial outlook on transport networks and therefore transport regulation.

In Singapore, the transport system has necessarily been driven by a commercial approach. Transport planners have faced challenges in terms of improving the quantity, quality and level of public transport service to keep up with demand and rising aspirations. Public transport must be continuously improved to be an attractive mode of choice, particularly among high income groups, which may see private cars as a status symbol.³⁶ With limited land available and a growing population, transport planners in Singapore recognised early on that the city could not accommodate the extent of the road infrastructure required to support anticipated travel demand if such travel was undertaken primarily by private car. Singapore's Land Transport Authority is committed to building a sustainable land transport system.³⁷ Strategies to achieve this goal include enhancing public transport and active mobility, improving resource conservation, improving the living environment and maintaining affordable public transport.

³⁵ At 12.

³⁶ Barter and Dotson, above n 29, at 15.

³⁷ See Land Transport Authority "Land Transport Sustainability Update 2014" (March 2015).

Singapore's realism about land use constraints is perhaps something that New Zealand's larger cities could emulate. Although New Zealand as a whole is not tightly constrained in terms of the amount of land available on a per capita basis, Auckland in particular faces challenges in terms of containing urban sprawl and managing traffic flows. Singapore has introduced specific measures such as car quotas and congestion charges to curb private car use and improve the efficiency of its road system.

However, the policy choice is not always this straight forward. Efficiency measures can highlight the economic benefits of transport systems, but can also risk obscuring the social value those systems provide. Policies which impose additional charges on users to make the transport system more effective from a commercial or freight perspective need to be balanced against social interests of accessibility. New Zealand appears to already be aligning with the international trend towards a more commercial outlook on transport, with focuses like value for money, international competitiveness and economic growth. This is an important perspective, but it does mean that the social value of transport in allowing people to access amenities and participate in society is somewhat less clear.

Cross-cutting approaches

Other than a shift in objectives, transport regulators have not undertaken any particularly unique measures or restructured their organisations to deal with cross-cutting issues more effectively. By contrast, in regards to institutions, a trend towards bodies with an increasingly specific mandate is noticeable. For instance, Australia has a separate safety regulator for heavy road vehicles,³⁸ and the United Kingdom has three separate accident investigation authorities for air, rail and marine transport.³⁹

Transport Canada does divide policy responsibility into issue areas, such as safety, security, the environment and innovation. This division is mostly used as a way to organise publicly available information and demonstrate the areas where policy work is undertaken. However, each policy group has specific partnerships with other government organisations, both inside and outside of the transport sector. This approach could be taken further with policy groups having greater authority to undertake cross-cutting initiatives across government departments and other policy groups. Each group would need to have a clear mandate and direction so as not to create inefficiencies by having overlap between policy groups where issues cut across a sector. At this stage, however, this broader cross-cutting approach has not been attempted.

6. Centralised or delegated approach, directive or enabling approach?

Different countries have taken varying approaches to the structure and hierarchies of their transport organisations and delegated authorities. New Zealand, Canada and Singapore have centralised government structures, whereas the United Kingdom and Australia have less centralised government structures. This is largely due to development within certain historical contexts.

Canada has developed a centralised approach to decision-making over the years. There are two central bodies at the government-level: the government department, Transport Canada, and the regulator and the Canadian Transportation Agency. These bodies direct

38 "National Heavy Vehicle Regulator" NHVR <www.nhvr.gov.au>.

39 Department for Transport "Departments, agencies and public bodies" GOV.UK <www.gov.uk>.

regional authorities which are tasked with implementing the government's strategy. Operational oversight of transport is delegated to private or state-owned companies.

The United Kingdom takes a delegated approach, with 19 agencies supporting the work of the main government department. Further, power has been devolved to local bodies, both local and regional, and to government in Scotland, Northern Ireland and Wales. The regulator intends to continue this delegated approach. Further, the United Kingdom approach enables these other bodies to make their own decisions. This is evident in their long-term funding model which intends to support greater decision-making by local bodies.⁴⁰ Having certainty over their budget for a longer period enables bodies to develop longer term plans and programmes rather than taking an inconsistent 'stop-start' approach to planning.

New Zealand's tradition of strong, centralised government has meant that key transport decisions and funding have been undertaken at a national level, even though most transport solutions are local in character. Other jurisdictions devolve more authority for transport decisions to state or local government, but particular approaches tend to be the result of specific historical-political contexts and geographical limitations rather than deliberate planning. Both centralised and devolved approaches have been implemented successfully. What appears to enable the success of each approach is not so much the structural allocation of power but the clear functions and roles of each body that makes up the transport sector of a country and an alignment of strategy.

7. Passenger interests at the core of transport regulatory frameworks

There is growing recognition in each of the survey countries that the success of national transportation policy often depends on its ability to adapt to local context and meet the interests of end-users.

Singapore's 2013 Land Transport Master Plan reaffirms the LTA's commitment to creating "A People-Centred Land Transport System".⁴¹ The plan sets out initiatives for improving the reliability, comfort and convenience of public transport and developing a transport system that meets the diverse needs of different users.

The United Kingdom has implemented several policies and key pieces of legislation which intend to place passengers at the heart of decision-making. The Civil Aviation Act 2012 intends to motivate airports to provide better facilities and more information for passengers through delegation of specific powers to the regulator. The government also sponsors an executive non-departmental public body, Transport Focus, to be a watchdog for transport passengers. The United Kingdom's passenger focus is enabled by its mode-specific regulators which means it has oversight of the day-to-day needs and complaints of users.

In all surveyed countries, the interests of individual users can change depending on the mode of transport, geographical location and population density. In New Zealand, the transport needs of individuals in cities will be different to those in rural areas. As another layer to this, the needs of commercial users will differ to those of individuals. While

⁴⁰ Department for Transport, above n 19, at 5-6.

⁴¹ Land Transport Authority "Land Transport Master Plan 2013" at 15.

individual users may require lighter transport infrastructure in rural areas, this should not be at the expense of heavy road users who require stronger networks for freight. When considering the interests of passengers in New Zealand, all differing requirements on the transport network need to be taken into account.

8. Technology

Another theme that is gaining significance is that of data collection. A number of the countries have developed policies which support information sharing and the creation of transport databases to inform policy. Improved data collection can assist regulators in the creation of benchmarks to monitor performance and make international comparisons. Central to this theme is the international trend towards adopting Intelligent Transport Systems.

Canada is considering ways to adapt decision-making to enable a faster response to changing technology. This sort of thinking places an emphasis on the fact that technology will require not just new rules, but approaches to regulation, as technology will likely develop faster than regulators can keep up.

Given that technological advances will largely present the same issues worldwide, it is worthwhile for New Zealand to continue to see how other countries are adapting to these changes. However, New Zealand's small economy may mean that it is better suited as a test bed or a fast follower of new technologies rather than a leader. In either case there is the prospect of delivering tangible social and economic benefits provided that the regulatory regime is sufficiently flexible and responsive.

Appendix 1: Institution diagrams

Figure 1. Key organisations in New Zealand

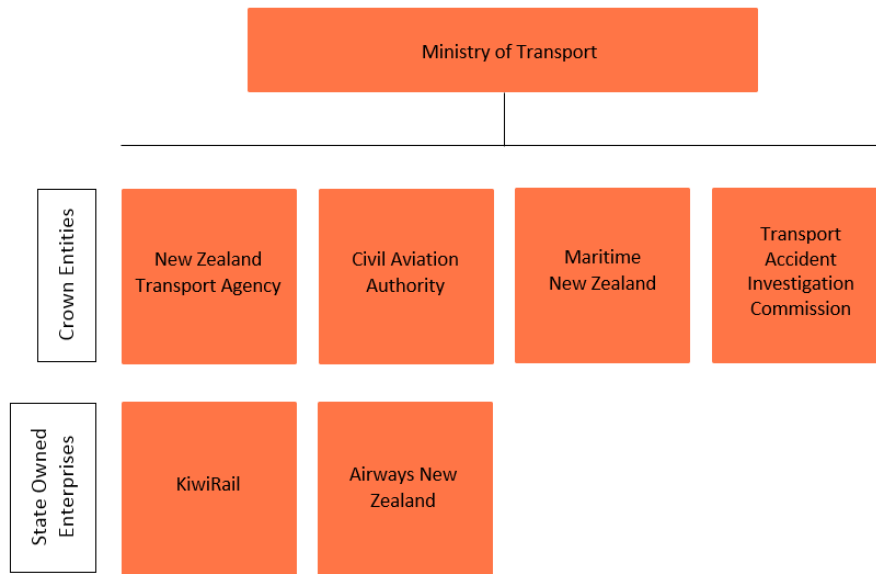


Figure 2. Key organisations in Australia

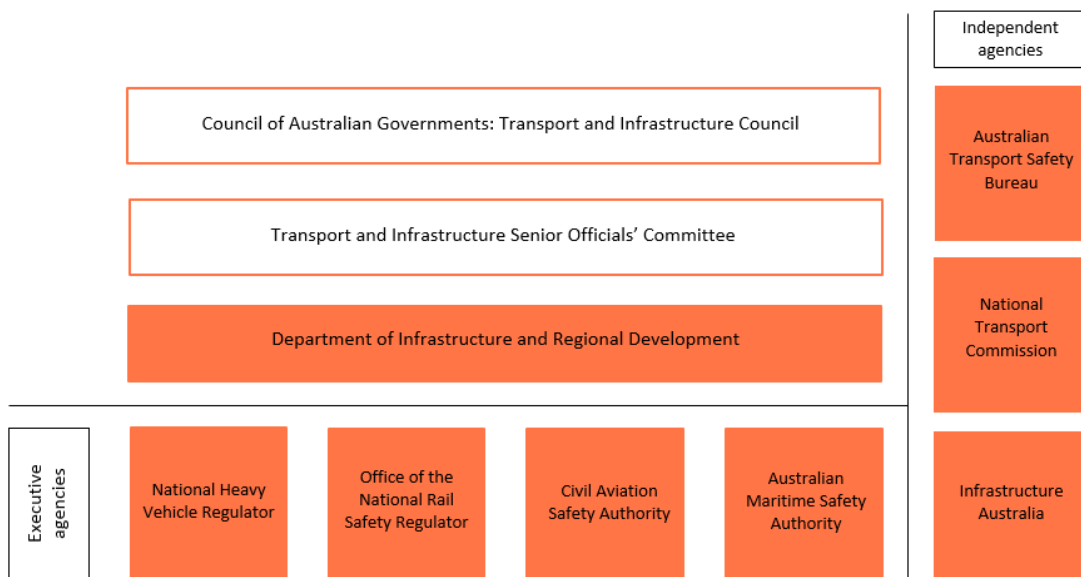


Figure 3. Key organisations in the United Kingdom

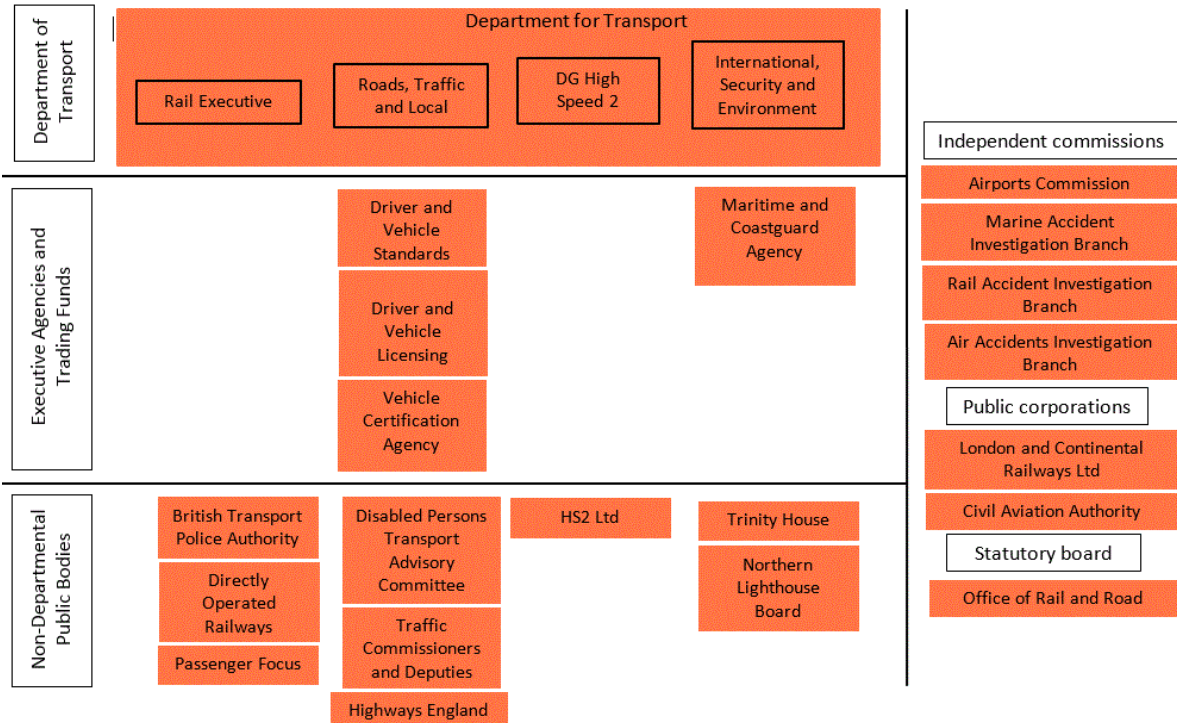


Figure 4. Key organisations in Canada

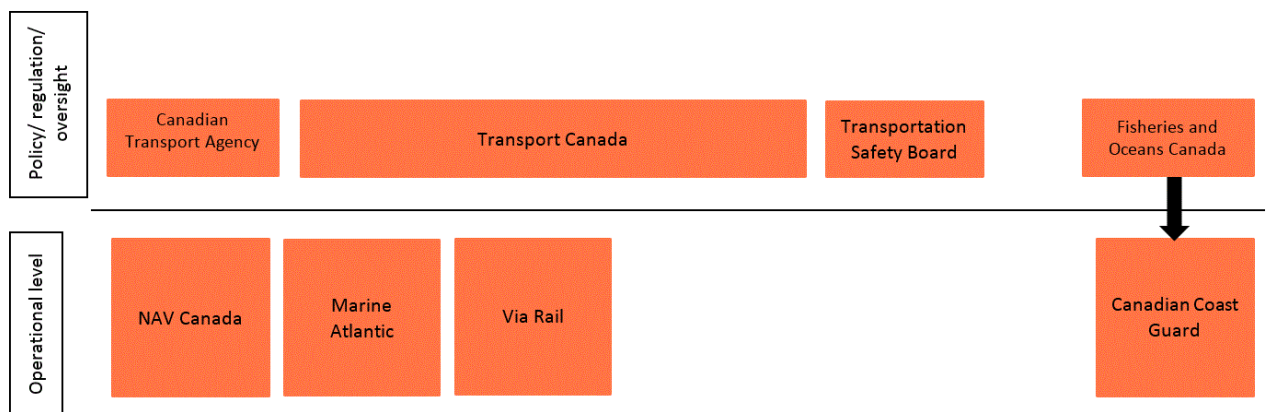


Figure 5. Key organisations in Singapore

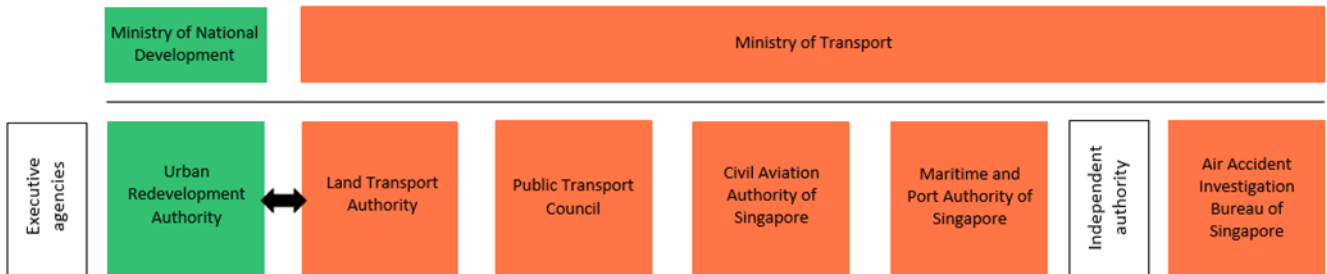
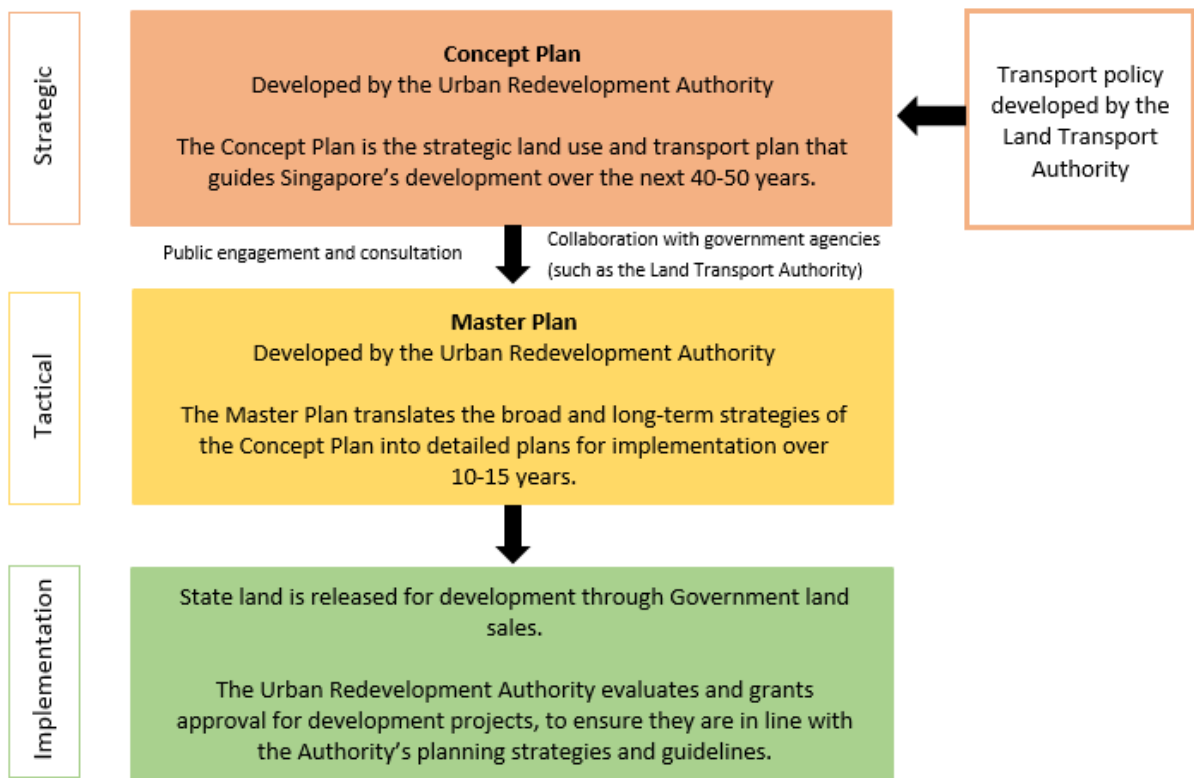
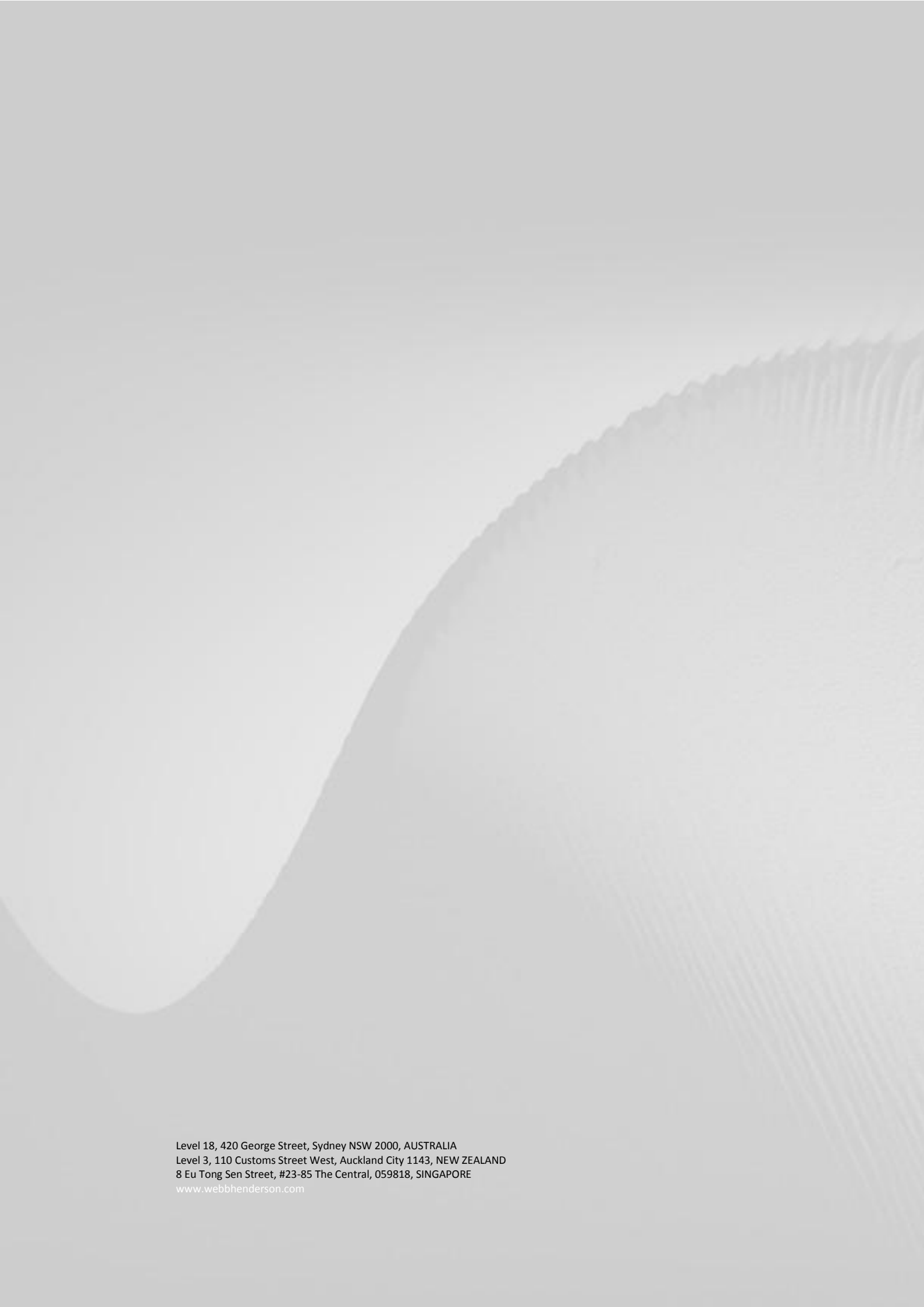


Figure 6. Coordination of land use and transport planning in Singapore





Level 18, 420 George Street, Sydney NSW 2000, AUSTRALIA
Level 3, 110 Customs Street West, Auckland City 1143, NEW ZEALAND
8 Eu Tong Sen Street, #23-85 The Central, 059818, SINGAPORE
www.webbhenderson.com

Attachment 1: New Zealand Organisations and Legislation Overview

New Zealand transport and related organisations

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
General								
<p>Ministry of Transport</p> <p>The Government's principal transport policy adviser. It has a strategic leadership role across the transport system, acting as the Minister of Transport's agent for managing the interface with transport Crown entities.</p>	✓	✓	✓	✓	✓	✓	✓	✓
<p>National Infrastructure Unit</p> <p>This specialist infrastructure unit was established within the New Zealand Treasury to assist the Government in meeting its objective to permanently lift the sustainable growth rate of the economy. The National Infrastructure Unit's role is to take a national overview of infrastructure priorities – providing cross-government coordination, planning and expertise.</p>					✓			
<p>Transport Accident Investigation Commission</p> <p>A standing Commission of Inquiry and an independent Crown entity, which investigates significant aviation, rail and maritime accidents.</p>	✓	✓						
Land								
<p>New Zealand Transport Agency</p> <p>The New Zealand Transport Agency plans and delivers national transport networks and supports local networks, as well as working to make public transport and freight networks more effective and improving road safety.</p>	✓			✓	✓			
<p>KiwiRail</p> <p>A State-Owned Enterprise which owns and operates New Zealand's rail transportation network and between-Island ferry service.</p>								

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
Aviation								
<p>Civil Aviation Authority</p> <p>This agency is tasked with enforcing civil aviation safety and security standards. In addition to this role, the Civil Aviation Authority carries out aviation accident and incident investigations in conjunction with the Transport Accident Investigation Commission. The Civil Aviation Authority is also responsible for managing civilian pilot, aerodrome and aircraft licensing in New Zealand.</p> <p>Airways New Zealand</p> <p>New Zealand’s air navigation service provider. It is a State-Owned Enterprise, responsible for managing all domestic and international air traffic operating within New Zealand's 30 million square kilometres of airspace over New Zealand, Tonga, Samoa and the Cook Islands.</p>	✓	✓						
Maritime								
<p>Maritime New Zealand</p> <p>A Crown entity responsible for protecting the maritime environment within New Zealand and maintaining safety and security.</p>	✓	✓	✓					

New Zealand transport and related legislation

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
General							
<p>Customs and Excise Act 1996</p> <p>An Act to—</p> <p>(a) reform the law relating to customs, excise, and other duties; and</p> <p>(b) provide for the administration and enforcement of Customs controls at the border; and</p> <p>(c) repeal the Customs Act 1966; and</p> <p>(d) provide for related matters</p>				✓			
<p>Commerce Act 1986</p> <p>The purpose of this Act is to promote competition in markets for the long-term benefit of consumers within New Zealand.</p>							✓
<p>Resource Management Act 1991</p> <p>The purpose of this Act is to promote the sustainable management of natural and physical resources.</p>			✓				
<p>Local Government Act 2002</p> <p>The purpose of this Act is to provide for democratic and effective local government that recognises the diversity of New Zealand communities.</p>	✓		✓	✓		✓	
<p>Health & Safety in Employment Act 1992</p> <p>The object of this Act is to promote the prevention of harm to all persons at work and other persons in, or in the vicinity of, a place of work.</p>	✓						
Land							
<p>Land Transport Act 1988</p> <p>An Act—</p> <p>(a) to promote safe road user behaviour and vehicle safety; and</p>	✓		✓				

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>(b) to provide for a system of rules governing road user behaviour, the licensing of drivers, and technical aspects of land transport, and to recognise reciprocal obligations of persons involved; and</p> <p>(c) to consolidate and amend various enactments relating to road safety and land transport; and</p> <p>(d) to enable New Zealand to implement international agreements relating to road safety and land transport</p>							
<p>Land Transport Management Act 2003</p> <p>The purpose of this Act is to contribute to an effective, efficient, and safe land transport system in the public interest.</p>				✓	✓		
<p>Road User Charges Act 2012</p> <p>The purpose of this Act is to—</p> <p>(a) continue the road user charges system by imposing charges on RUC vehicles for their use of the roads that are in proportion to the costs that the vehicles generate:</p> <p>(b) modernise and simplify the road user charges system:</p> <p>(c) improve compliance with, and the recovery of, road user charges:</p> <p>(d) establish a framework for the electronic management of road user charges.</p>				✓			
<p>Railways Act 2005</p> <p>The purpose of this Act is to—</p> <p>(a) promote the safety of rail operations by—</p> <p>(i) stating the duty of rail participants to ensure safety; and</p> <p>(ii) authorising the Minister to make rules relating to rail activities; and</p> <p>(iii) clarifying the nature of approved safety systems established by rail participants:</p> <p>(b) restate and amend the law relating to the management of the railway corridor:</p> <p>(c) consolidate legislation relating to railways.</p> <p>(d)</p>	✓						

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
Aviation							
<p>Civil Aviation Act 1990</p> <p>An Act—</p> <p>(a) to establish rules of operation and divisions of responsibility within the New Zealand civil aviation system in order to promote aviation safety;</p> <p>(b) to ensure that New Zealand's obligations under international aviation agreements are implemented; and</p> <p>(c) to consolidate and amend the law relating to civil aviation in New Zealand.</p>	✓	✓		✓	✓	✓	
<p>Airport Authorities Act 1966</p> <p>An Act to consolidate and amend the Local Authorities Empowering (Aviation Encouragement) Act 1929 and its amendments and to confer powers on certain local authorities and other persons in respect of airports.</p>				✓	✓	✓	
<p>Aviation Crimes Act 1972</p> <p>An Act to give effect to the provisions of the Hague Convention for the Suppression of Unlawful Seizure of Aircraft.</p>		✓					
Maritime							
<p>Maritime Transport Act 1994</p> <p>An Act—</p> <p>(a) to continue Maritime New Zealand;</p> <p>(b) to enable the implementation of New Zealand's obligations under international maritime agreements;</p> <p>(c) to ensure that participants in the maritime transport system are responsible for their actions;</p> <p>(d) to consolidate and amend maritime transport law;</p> <p>(e) to protect the marine environment;</p> <p>(f) to continue, or enable, the implementation of obligations on New Zealand under various international conventions relating to pollution of the marine environment;</p>	✓		✓	✓		✓	

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>(g) to regulate maritime activities in New Zealand and New Zealand waters; and</p> <p>(h) to regulate maritime activities and the marine environment in the exclusive economic zone and on the continental shelf as permitted under international law.</p> <p>Maritime Security Act 2004</p> <p>The purpose of this Act is to—</p> <p>(a) enable New Zealand to meet its obligations under the Convention arising from amendments to the Annex to the Convention;</p> <p>(b) enhance ship and port security; and</p> <p>(c) prevent international terrorism.</p>		✓					

Attachment 2: Australia Organisations and Legislation Overview

Australia transport and related organisations

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
General								
<p>Council of Australian Governments: Transport and Infrastructure Council</p> <p>Brings together Commonwealth, State, Territory and New Zealand Ministers with responsibility for transport and infrastructure issues, as well as the Australian Local Government Association.</p>	✓	✓	✓	✓	✓	✓	✓	✓
<p>Department of Infrastructure and Regional Development</p> <p>A department of the Australian Government responsible for infrastructure planning and co-ordination, transport safety, land transport, maritime transport, civil aviation and airports and transport security.</p>	✓	✓			✓			
<p>Australian Transport Safety Bureau</p> <p>Australia's national transport safety investigator. It is a federal government body, separate from transport regulators, policy makers and service providers. It covers air, sea and rail travel.</p>	✓							
<p>National Transport Commission</p> <p>An independent statutory body charged with developing regulatory and operational reform for road, rail and intermodal transport.</p>						✓		✓
<p>Infrastructure Australia</p> <p>An independent statutory body with a mandate to prioritise and progress nationally significant infrastructure.</p>					✓			
Land								
<p>National Heavy Vehicle Regulator</p> <p>Administers one set of laws for heavy vehicles under the <i>Heavy Vehicle National Law</i>. This national law commenced on 10 February 2014 and applies in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria.</p>	✓	✓						

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
<p>Office of the National Rail Safety Regulator</p> <p>Established to administer a nationally consistent rail safety law, the <i>Rail Safety National Law</i>. This law has been passed in most jurisdictions, except Queensland and Western Australia. Until the <i>Rail Safety National Law</i> is passed in a particular jurisdiction, existing rail safety laws will apply.</p>	✓							
Aviation								
<p>Civil Aviation Safety Authority</p> <p>The government statutory authority responsible for the regulation of civil aviation.</p>	✓	✓				✓		
Maritime								
<p>Australian Maritime Safety Authority</p> <p>Established as the single national regulator for commercial vessel safety under the <i>Marine Safety (Domestic Commercial Vessel) National Law Act 2012</i>.</p>	✓							

Australia transport and related legislation

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic	Competition
General							
<p>Competition and Consumer Act 2010</p> <p>The object of this Act is to enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection.</p>							✓
<p>Work Health and Safety Act 2011</p> <p>The main object of this Act is to provide for a balanced and nationally consistent framework to secure the health and safety of workers and workplaces.</p>	✓						
Land							
<p>National Land Transport Act 2014</p> <p>The object of this Act is to assist national and regional economic and social development by the provision of Commonwealth funding aimed at improving the performance of land transport infrastructure.</p>				✓	✓		
<p>Interstate Road Transport Act 1985</p> <p>An Act to impose a charge by way of or in the nature of a tax in respect of the registration of a vehicle under the Interstate Road Transport Act 1985.</p>	✓			✓			
<p>Land Transport Infrastructure Amendment Act 2014</p> <p>This Act amends the Nation Building Program (National Land Transport) Act 2009, combining provisions relating to national projects and off-network projects to streamline the Act. The amendment also enables funding of research and investigations of transport development and innovation projects, and enables certain partnership and non-corporate Commonwealth entities to be eligible for funding.</p>				✓	✓		
<p>National Transport Commission Act 2003</p> <p>The purpose of this Act is:</p> <p>(a) to establish a National Transport Commission with an ongoing responsibility to develop, monitor and maintain uniform or nationally consistent regulatory and operational reforms relating to road transport, rail transport and intermodal transport; and</p> <p>(b) provide a mechanism for the making of regulations.</p>							✓

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic	Competition
<p>Motor Vehicle Standards Act 1989</p> <p>The main objects of this Act are:</p> <p>(a) to achieve uniform vehicle standards to apply to new vehicles when they begin to be used in transport in Australia; and</p> <p>(b) to regulate the first supply to the market of used imported vehicles.</p>	✓						
<p>AusLink (National Land Transport) Act 2005</p> <p>The object of this Act is to assist national and regional economic and social development by the provision of Commonwealth funding aimed at improving the performance of land transport infrastructure.</p>				✓			
<p>Inspector of Transport Security Act 2006</p> <p>The object of this Act is to improve the security of transport and security regulated offshore facilities by providing for independent inquiry into transport security matters and offshore security matters.</p>		✓					
<p>Rail Safety National Law (South Australia) Act 2012</p> <p>The main purpose of this Law is to provide for safe railway operations in Australia.</p>	✓						
<p>Heavy Vehicle National Law 2012 (Queensland)</p> <p>The object of this Law is to establish a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that—</p> <p>(a) promotes public safety;</p> <p>(b) manages the impact of heavy vehicles on the environment, road infrastructure and public amenity;</p> <p>(c) promotes industry productivity and efficiency in the road transport of goods and passengers by heavy vehicles; and</p> <p>(d) encourages and promotes productive, efficient, innovative and safe business practices.</p>	✓		✓		✓		
Aviation							
<p>Airports Act 1996</p> <p>Provides a system for regulating airports, including ownership.</p>					✓	✓	

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic	Competition
<p>The objects of this Act are as follows:</p> <ul style="list-style-type: none"> (a) to promote the sound development of civil aviation in Australia; (b) to establish a system for the regulation of airports that has due regard to the interests of airport users and the general community; (c) to promote the efficient and economic development and operation of airports; (d) to facilitate the comparison of airport performance in a transparent manner; (e) to ensure majority Australian ownership of airports; (f) to limit the ownership of certain airports by airlines; (g) to ensure diversity of ownership and control of certain major airports; (h) to implement international obligations relating to airports. 							
<p>Airspace Act 2007</p> <p>An Act relating to airspace administration and regulation.</p> <p>The object of this Act is to ensure that Australian-administered airspace is administered and used safely, taking into account the following matters:</p> <ul style="list-style-type: none"> (a) protection of the environment; (b) efficient use of that airspace; (c) equitable access to that airspace for all users of that airspace; (d) national security. 	✓	✓	✓		✓		
<p>Aviation Transport Security Act 2004</p> <p>The main purpose of this Act is to establish a regulatory framework to safeguard against unlawful interference with aviation.</p>	✓	✓					
<p>Civil Aviation Act 1988</p> <p>The main object of this Act is to establish a regulatory framework for maintaining, enhancing and promoting the safety of civil aviation, with particular emphasis on preventing aviation accidents and incidents. The Act establishes a Civil Aviation Safety Authority with functions relating to civil aviation.</p>	✓						

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic	Competition
Maritime							
<p>Maritime Safety (Domestic Commercial Vessels) National Law Act 2012</p> <p>An Act to provide for a national law about marine safety for certain commercial vessels.</p> <p>This Act replaces eight federal, state and territory laws with a single law for the safety of all commercial vessels and their crew in Australian waters. It sets the National Standard for Commercial Vessels for construction, operation and seafarer qualifications. It also establishes the Australian Maritime Safety Authority as the single national regulator for commercial vessel safety.</p>	✓						
<p>Maritime Transport and Offshore Facilities Security Act 2003</p> <p>The purpose of this Act is to safeguard against unlawful interference with maritime transport or offshore facilities. To achieve this purpose, this Act establishes a regulatory framework centered around the development of security plans for ships, other maritime transport operations and offshore facilities.</p>		✓					
<p>Maritime Transport Security Amendment Act 2005</p> <p>An Act to amend the law relating to the security of maritime transport and offshore facilities.</p>		✓					
<p>Australian Maritime Safety Authority Act 1990</p> <p>An Act to establish an Australian Maritime Safety Authority.</p> <p>The main objects of this Act are:</p> <ul style="list-style-type: none"> (a) to promote maritime safety; and (b) to protect the marine environment from: <ul style="list-style-type: none"> (i) pollution from ships; and (ii) other environmental damage caused by shipping; and (iii) to provide for a national search and rescue service; and (c) to promote the efficient provision of services by the Authority. 	✓		✓				

Attachment 3: United Kingdom Organisations and Legislation Overview

United Kingdom Transport and related organisations

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
General								
<p>Department for Transport</p> <p>The Department for Transport is the government department responsible for the English transport network as well as a limited number of matters in Scotland, Wales and Northern Ireland. The Department for Transport has four strategic objectives:</p> <ul style="list-style-type: none"> to sustain economic growth and improved productivity through reliable and efficient transport networks; to improve the environmental performance of transport; to strengthen the safety and security of transport; and to enhance access to jobs, services, and social networks, including for the most disadvantaged people. <p>It is responsible for the overall delivery of the government's transport policy and strategy as well as ensuring that transport is properly aligned with other government aims and objectives.</p>	✓	✓	✓	✓		✓?		
<p>Transport Focus</p> <p>Transport Focus is a non-departmental public body which is sponsored by Department for Transport. It is an independent transport user watchdog. Transport Focus campaigns for improvements to transport services and resolves complaints with rail companies.</p>	✓							
<p>Transport Research Laboratory</p> <p>Transport Research Laboratory was originally established by the United Kingdom Government as the Road Research Laboratory in 1933 and tasked with offering an independent transport consultancy and research service to the public and private sector. It was privatised in 1996. Transport Research Laboratory's key areas of work include road, network and vehicle safety, traffic management, planning and control, investigations and risk management, transport infrastructure, and environmental assessment including work on climate change, noise and air pollution.</p>	✓		✓		✓			
<p>Disabled Persons Transport Advisory Committee</p> <p>Disabled Persons Transport Advisory Committee is an advisory non-departmental public body sponsored by the Department for Transport. The Committee advises the government on transport legislation, regulations and guidance and on the transport needs of disabled people, ensuring disabled people have the same access to transport as everyone else.</p>	✓				✓			

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
<p>Traffic Commissioners for Great Britain</p> <p>Traffic Commissioners are responsible for the licensing and regulation of those who operate heavy goods vehicles, buses and coaches, and the registration of local bus services. They are assisted in this work by deputy Traffic Commissioners, who preside over a number of public inquiries.</p>	✓							
Land								
<p>Driver and Vehicle Licensing Agency</p> <p>Driver and Vehicle Licensing Agency is an executive agency of the Department for Transport. Driver and Vehicle Licensing Agency is responsible for maintaining a database of drives in Great Britain and a database of vehicles for the entire United Kingdom. It issues driving licenses and organises the collection of vehicle excise duty.</p>	✓							
<p>Vehicle Certification Authority</p> <p>Vehicle Certification Authority is an executive agency of the Department for Transport. Vehicle Certification Authority perform Type Approval testing and certification for all road-going vehicles, including cars, trucks, motorcycles, agricultural vehicles, buses, coaches, ambulances, fire engines and motor caravans.</p>	✓							
<p>Highways England</p> <p>Highways England operates, maintains and improves England’s motorways and major A roads.</p>					✓			✓
<p>British Transport Police Authority</p> <p>British Transport Police Authority is a non-departmental public body which is sponsored by the Department for Transport. It oversees the British Transport Police, who patrol the railways in Britain.</p>	✓							
<p>Office of Rail and Road</p> <p>The Office of Rail and Road is a statutory board which has the combined power to regulate economic and safety aspects of Great Britain’s railway network. It is also responsible for monitoring the Highways in England. It operates independently of central government as a non-ministerial governmental department. It was established under the Railways and Transport Safety Act 2003.</p>	✓					✓		
<p>Directly Operated Railways Limited</p> <p>Directly Operated Railways fulfils the Secretary of State's requirements under Section 30 of the Railways Act to secure the continued provision of passenger railway services should an existing franchise not be able to complete its full term.</p>								✓
<p>High Speed Two Limited</p> <p>High Speed Two is an executive non-departmental public body, sponsored by the Department for Transport.</p>					✓			

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
<p>High Speed Two is the company responsible for developing and promoting the United Kingdom's new high speed rail network. It is funded by grant-in-aid from the government.</p>								
<p>London and Continental Railways Ltd</p>								
<p>London Continental Railways is a limited liability company that is wholly owned by the Department for Transport.</p>								
<p>London Continental Railways has specific expertise in managing and developing property assets within a railway context, and in particular property assets associated with major infrastructure projects.</p>								
<p>Rail Accident Investigation Branch</p>								
<p>Rail Accident Investigation Branch independently investigates accidents to improve railway safety, and inform the industry and the public</p>								
<p>Rail Accident Investigation Branch works with the Department for Transport.</p>								
Aviation								
<p>Civil Aviation Authority</p>								
<p>The Civil Aviation Authority is in charge of safety and management of the United Kingdom's airspace, economic regulation of Heathrow and Gatwick airports, enforcement of consumer protection rules and enforcement of regulations and requirements relating to transporting dangerous goods by air.</p>								
<p>Air Accidents Investigation Branch</p>								
<p>The Air Accidents Investigation Branch investigates civil aircraft accidents and serious incidents within the United Kingdom, its overseas territories and crown dependencies.</p>								
<p>Air Accidents Investigation Branch works with the Department for Transport.</p>								
<p>Airports Commission</p>								
<p>The Airports Commission examines the need for additional United Kingdom airport capacity and recommends to government how this can be met in the short, medium and long term.</p>								
<p>Airports Commission works with the Department for Transport.</p>								
<p>NATS Holdings (formerly National Air Traffic Services)</p>								
<p>NATS is the main air navigation service provider in the United Kingdom.</p>								

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
Maritime								
<p>Northern Lighthouse Board</p> <p>The Northern Lighthouse Board is the General Lighthouse Authority for Scotland and the Isle of Man. It is a non-departmental public body which is responsible for marine navigation aids around coastal areas. It is funded by pooled light dues administered by the Department for Transport</p>	✓							
<p>Trinity Lighthouse Services</p> <p>Trinity Lighthouse Services is part of Trinity House a private corporation and guild under the Royal Charter. It is the official General Lighthouse Authority for England Wales, the Channel Islands and Gibraltar. It is also dedicated to the safety, welfare and training of mariners and is a Deep Sea Pilotage Authority, licensing expert navigators to act as deep sea pilots for ships trading in Northern European waters.</p>	✓							
<p>Marine Accident Investigation Branch</p> <p>The Marine Accident Investigation Branch investigates marine accidents involving United Kingdom vessels worldwide and all vessels in United Kingdom territorial waters.</p> <p>The Marine Accident Investigation Branch works with the Department for Transport.</p>	✓							

United Kingdom Transport and related legislation

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
General							
<p>Transport Act 2000</p> <p>The Act's purpose is to make provisions for transport.</p> <p>The Act provided for a number of major changes to the transport infrastructure in the United Kingdom, such as the change in structure of the privatised railway system (the Director of Passenger Rail Franchising and the British Railway Board were both abolished and their functions were transferred to the Strategic Rail Authority). It also set out the framework for the creation of public-private partnerships of the National Air Traffic Services. It introduced road user charging schemes and workplace parking levies. This enabled various road pricing schemes. The Act also enabled the creation of Home Zones (similar to shared spaces in NZ).</p>	✓			✓			
Land							
<p>HGV Road User Levy Act 2013</p> <p>The Act makes provision for charging a levy for using or keeping heavy goods vehicles on public roads. The aim of the levy is to make sure that these vehicles make a contribution to the wear and tear of the road network.</p>				✓			
<p>High Speed Rail Preparation Act 2013</p> <p>The Act authorises the expenditure in preparation for the high speed railway transport network.</p>				✓			
<p>Infrastructure Act 2015</p> <p>The purpose of the Act is to make provision:</p> <ul style="list-style-type: none"> • for strategic highways companies and the funding of transport services by land; • for the control of invasive non-native species; • about nationally significant infrastructure projects; to make provision about town and country planning; • about the Homes and Communities Agency and Mayoral development corporations; • about the Greater London Authority so far as it exercises functions for the purposes of housing and regeneration; • about Her Majesty's Land Registry and local land charges; • to enable building regulations to provide for off-site carbon abatement measures; • for giving members of communities the right to buy stakes in local renewable electricity generation facilities; • about maximising economic recovery of petroleum in the United Kingdom; • for a levy to be charged on holders of certain energy licences; • to enable Her Majesty's Revenue and Customs to exercise functions in connection with the Extractive Industries Transparency Initiative; • about onshore petroleum and geothermal energy; to make provision about renewable heat incentives; 					✓		

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<ul style="list-style-type: none"> about the reimbursement of persons who have paid for electricity connections; to enable the Public Works Loan Commissioners to be abolished; and for connected purposes. <p>Railways and Transport Safety Act 2003</p> <p>The purpose of the Act is to make provision about railways, including tramways; to make provision about transport safety; and for connected purposes.</p> <p>The Act:</p> <ul style="list-style-type: none"> creates the Rail Accident Investigation Branch; replaces the Rail Regulator by a Regulatory Board, the Office of Rail Regulation; creates a Police Authority for the British Transport Police (BTP) allows the BTP to recruit Police Community Support Officers (PCSO) under the Police Reform Act 2002 which previously only extended to Territorial police forces; gives the BTP "statutory authority over the railway"; introduces alcohol limits on the crews of water-borne vessels and aircraft in line with those already existing for railway staff; as well as other miscellaneous matters affecting railway, air and road transport <p>Road Safety Act 2006</p> <p>The purpose of the Act is to make provision about road traffic, registration plates, vehicle and driver information, hackney carriages and private hire vehicles, and truck road picnic areas.</p> <p>The Act contains provisions for improving road safety and achieving casualty reduction targets. It creates a new criminal offence of causing death by careless or inconsiderate driving. It also increases the penalty for the use of hand-held mobile phone devices.</p>	✓						
Aviation							
<p>Civil Aviation Authority Act 2012</p> <p>The purpose of the Act is to make provision:</p> <ul style="list-style-type: none"> about the regulation of operators of dominant airports; to confer functions on the Civil Aviation Authority under competition legislation in relation to services provided at airports; about aviation security; about the regulation of provision of flight accommodation; about the Civil Aviation Authority's membership, administration and functions in relation to enforcement, regulatory burdens and the provision of information relating to aviation; and for connected purposes. 		✓				✓	
Maritime							
<p>Marine Navigation Act 2013</p>	✓						

- Competition
- Economic Regulation
- Infrastructure
- Funding
- Environment
- Security
- Safety

Acts and their purpose

The Act amends existing legislation relating to pilotage and the powers of harbour authorities, ports police and the General Lighthouse Authorities.

Attachment 4: Canada Organisations and Legislation Overview

Canada Transport and related organisations

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
General								
<p>Transport Canada</p> <p>Transport Canada is the government department responsible for developing policies and programmes of transport in Canada. Transport Canada focuses on air, marine, rail and road forms of transport as well as issues of safety, security, the environment and innovation.</p> <p>Transport Canada’s vision is “a transportation system in Canada that is recognized worldwide as safe and secure, efficient and environmentally responsible” and their mission statement is “to serve the public interest through the promotion of a safe and secure, efficient and environmentally responsible transportation system in Canada”.</p> <p>The department consists of programme and support groups working at headquarters in Ottawa and in locations across Canada. The organisation headquarters is made up of a number of groups, including Policy, Safety and Security, Airport and Port Programs, Surface Infrastructure and Corporate Services, as well as the Departmental General Counsel, Communications and Marketing, and Human Resources. Transport Canada's five regions - Pacific, Prairie and Northern, Ontario, Quebec and Atlantic - are headed by regional director generals responsible for the delivery of transportation programmes and services in their respective regions.</p>	✓	✓	✓					
<p>Canadian Transportation Agency</p> <p>The Canadian Transportation Agency is an independent, quasi-judicial tribunal and economic regulator. It makes decisions and determinations on a wide range of matters involving air, rail and marine modes of transportation under the authority of Parliament, as set out in the Canada Transportation Act and other legislation.</p> <p>Their mandate includes:</p> <ul style="list-style-type: none"> • economic regulation, to provide approvals, issue licences, permits and certificates of fitness, and make decisions on a wide range of matters involving federal air, rail and marine transportation; • dispute resolution, to resolve complaints about federal transportation services, rates, fees and charges; and • accessibility, to ensure Canada's national transportation system is accessible to all persons, particularly those with disabilities. 	✓					✓		
<p>Transportation Safety Board of Canada (TSB)</p> <p>TSB is a governmental agency responsible for advancing transport safety in Canada. TSB investigates accidents and makes safety recommendations in relation to aviation, rail, marine and pipelines related transport.</p>	✓							
<p>Infrastructure Canada</p>					✓			

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
<p>Infrastructure Canada is the lead federal department responsible for infrastructure policy development and program delivery. Investments address local and regional infrastructure needs, while advancing national priorities. Transport networks require coordination between Infrastructure Canada and Transport Canada.</p>								
<p>Land</p>								
<p>Via Rail Canada</p> <p>Via Rail is an independent crown corporation subsidised by the Minister of Transport to offer intercity rail services in Canada.</p>								✓
<p>Aviation</p>								
<p>Nav Canada</p> <p>Nav Canada is a privately run, not-for-profit corporation that owns and operates Canada’s civil air navigation system. It is responsible for the safe, orderly and expeditious flow of air traffic in Canadian airspace. It is only allowed to be funded by publicly traded debt and service charges to aircraft operators.</p>	✓							✓
<p>Martime</p>								
<p>Canadian Coast Guard (CCG)</p> <p>CCG is a special operating agency of the Department of Fisheries and Oceans Canada (DFO).</p> <p>CCG services support government priorities and economic prosperity and contribute to the safety, accessibility and security of Canadian waters. CCG’s mandate is stated in the Oceans Act, through the powers given to the Minister of DFO. This includes:</p> <ul style="list-style-type: none"> • aid to navigation; • marine communications and traffic management services; • icebreaking and ice-management services; • channel maintenance; • marine search and rescue; • marine pollution response; • obligations concerning Sable Island; • vessel traffic services; and • support of other government departments, boards and agencies by providing ships, aircraft and other services. <p>Department of Fisheries and Oceans Canada (DFO)</p>	✓	✓	✓					

- Operations
- Competition
- Economic Regulation
- Infrastructure
- Funding
- Environment
- Security
- Safety

Organisations and their purpose

DFO is responsible for developing and implementing policies and programs in support of Canada's economic, ecological and scientific interests in oceans and inland waters. Its mandate includes responsibility for the conservation and sustainable use of Canada's fisheries resources while continuing to provide safe, effective and environmentally sound marine services that are responsive to the needs of Canadians in a global economy.

Canada Transport and related legislation

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
General							
<p>Canadian Transportation Accident Investigation and Safety Board Act</p> <p>This Act establishes the Transportation Safety Board of Canada whose role is to investigate accidents and make non-binding safety recommendations to the government, governmental departments and ministers.</p>	✓						
<p>Canada Transportation Act 1996</p> <p>This Act continues the National Transportation Agency as the Canadian Transportation Agency, to consolidate and revise the National Transportation Act, 1987 and the Railway Act and to amend or repeal other Acts as a consequence.</p> <p>It is declared that a competitive, economic and efficient national transportation system that meets the highest practicable safety and security standards and contributes to a sustainable environment and makes the best use of all modes of transportation at the lowest total cost is essential to serve the needs of its users, advance the well-being of Canadians and enable competitiveness and economic growth in both urban and rural areas throughout Canada. This is achieved through:</p> <ul style="list-style-type: none"> • competition and market forces, both within and among the various modes of transportation, which are the prime agents in providing viable and effective transportation services; • regulation and strategic public intervention are used to achieve economic, safety, security, environmental or social outcomes that cannot be achieved satisfactorily by competition and market forces and do not unduly favour, or reduce the inherent advantages of, any particular mode of transportation; • rates and conditions do not constitute an undue obstacle to the movement of traffic within Canada or to the export of goods from Canada; • the transportation system is accessible without undue obstacle to the mobility of persons, including persons with disabilities; and • government and the private sector working together for an integrated transportation system. 							
<p>Department of Transport Act 1985</p> <p>This Act establishes the Department of Transport and sets out the powers, duties and functions of the Minister.</p>							
<p>Canadian Environmental Protection Act 1999 (CEPA)</p> <p>CEPA aims to prevent pollution, and protect the environment and human health in order to contribute to sustainable development.</p> <p>In relation to transport, CEPA includes provisions to regulate vehicle and equipment emissions.</p>			✓				
<p>Transportation of Dangerous Goods Act 1992</p> <p>This Act promotes the safety in the transportation of dangerous goods.</p>	✓						
<p>Transportation Appeal Tribunal of Canada Act 2001</p> <p>This Act established the Transportation Appeal Tribunal of Canada and makes consequential amendments to other Acts. The Transportation Appeal Tribunal has jurisdiction in respect of reviews and appeals as expressly provided for under the Aeronautics Act, the Canada Shipping Act, 2001, the Marine Transportation Security Act, the Railway Safety Act and any other federal Act regarding transportation.</p>							
<p>International Bridges and Tunnels Act 2007</p>							✓

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>This legislation will provide the federal government with the legislative authority to ensure effective oversight of the existing 24 international vehicular bridges and tunnels and nine international railway bridges and tunnels, as well as any new international bridges or tunnels built in the future.</p>							
Land							
<p>Motor Vehicle Safety Act 1993</p> <p>The purpose of the Act is to regulate the manufacture and importation of motor vehicles and motor vehicle equipment, to reduce the risk of death, injury and damage to property and the environment.</p> <p>Recent regulations enacted under the Act include those relating to restraint systems and booster seat safety, tire safety and an exemption from a requirement for push-out windows for buses for a two- year period.</p>	✓						
<p>Motor Vehicle Transport Act 1985</p> <p>The purpose of the Act is to ensure that the National Transportation Policy set out in section 5 of the Canada Transportation Act is carried out with respect to extra-provincial motor carrier undertakings, specifically:</p> <ul style="list-style-type: none"> the regulatory regime for those undertakings is focused on safety performance assessments based on the National Safety Code for Motor Carriers; and the operating standards that apply to those undertakings are applied consistently across Canada. <p>The Act was amended in 2014 to support the objectives of the Regulatory Cooperation Council (RCC), to better and more rapidly align Canadian and US regulations and boost North American trade and competitiveness.</p>	✓						
<p>Motor Vehicle Fuel Consumption Standards Act 1985</p> <p>An Act in regard to motor vehicle fuel consumption standards.</p>			✓				
<p>Government Property Traffic Act 1985</p> <p>An Act to control traffic on government property.</p>					✓		
<p>Railway Safety Act 1985</p> <p>This Act intends to:</p> <ul style="list-style-type: none"> promote and provide for the safety and security of the public and personnel, and the protection of property and the environment, in railway operations; encourage the collaboration and participation of interested parties in improving railway safety and security; recognize the responsibility of companies to demonstrate, by using safety management systems and other means at their disposal, that they continuously manage risks related to safety matters; and facilitate a modern, flexible and efficient regulatory scheme that will ensure the continuing enhancement of railway safety and security. 	✓	✓					
<p>CN Commercialization Act 1995</p>							

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>This Act provides for the continuance of the Canadian National Railway Company under the Canada Business Corporations Act and for the issuance and sale of shares of the Company to the public.</p>							
<p>Railway Relocation and Crossing Act</p> <p>This Act facilitates the relocation of railway lines or rerouting of railway traffic in urban areas and provides financial assistance for work done for the protection, safety and convenience of the public at railway crossings.</p>	✓			✓	✓		
<p>Canada Strategic Infrastructure Fund Act 2002:</p> <p>This Act established a programme to provide contributions for the carrying out of strategic infrastructure projects.</p> <p>Focus is on large scale infrastructure projects that contribute to economic growth or quality of life in Canada and which advance Canada's objectives with respect to infrastructure.</p> <p>Under the Act, the Minister of Infrastructure Canada enters into an agreement with an eligible recipient to provide for the payment of a contribution for an eligible project under the Act.</p> <p>The Governor in Council makes regulations which prescribes what counts as fixed capital assets for the purposes of strategic infrastructure, define what counts as large scale infrastructure and establishes additional terms and conditions for the Fund.</p>				✓	✓		
Aviation							
<p>Aeronautics Act 1985</p> <p>The main effect of the Act is to enable the Canadian Aviation Regulations. The Act can be broken down as follows:</p> <ul style="list-style-type: none"> • part I deals with Aeronautics in general; • part II deals with military investigations involving accidents between civilian and military aircraft; • part III deals with staff responsibilities; and • part IV dealt with Civilian Aviation Tribunal was repealed in 2001 and replaced with Civil Aviation Tribunal Rules. 		✓					
<p>Canadian Air Transport Security Authority Act 2002</p> <p>CARs are the rules that govern civil aviation in Canada. The Regulations are divided into 9 parts:</p> <ul style="list-style-type: none"> • part I – General Provisions; • part II – Aircraft Identification and Registration and Operation of a Leased Aircraft by a Non-registered Owner; • part III – Aerodromes and Airports; • part IV – Personnel Licensing and Training; • part V – Airworthiness; • part VI – General Operating and Flight Rules; • part VII – Commercial Air Services; • part VIII – Air Navigation Services; and • part IX – Repeals and Coming into Force. 							

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>The regulations consist of regulations, standards and advisory material. The regulations and standards are mandatory and the advisory material is not. Standards relate to specific regulations and deal with how to comply with them.</p> <p>Secure Air Travel Act 2015</p> <p>This Act amends Canada’s Passenger Protection Program and responds to concerns about individuals departing Canada to engage in activities to promote terrorism abroad. In particular, it lowers the threshold for placing a person on Canada’s “do-not-fly” list and provides a mechanism for redress for individuals who are denied air transportation as a result of being placed on the do-not-fly list.</p> <p>Civil Air Navigation Services Commercialization Act</p> <p>The purpose of the Act was to establish Nav Canada and privatise the running of Canada’s air navigation services.</p> <p>Airport Transfer Act 1992</p> <p>An Act to allow for the transfer of airports to designated airport authorities.</p> <p>Air Canada Public Participation Act 1985</p> <p>An Act to provide for the continuance of Air Canada under the Canada Business Corporations Act and for the issuance and sale of shares thereof to the public.</p> <p>Pilotage Act 1985</p> <p>Act regulating pilotage.</p> <p>Aviation Industry Indemnity Act 2014</p> <p>Under this Act the Minister may, in writing, undertake to indemnify one or more aviation industry participants — or one or more classes of aviation industry participant — against their loss or damage, or liability for loss or damage, that is caused by an event.</p>	✓	✓					
Martime							
<p>Canada Shipping Act 2001</p> <p>The objectives of this Act are to:</p> <ul style="list-style-type: none"> • protect the health and well-being of individuals, including the crews of vessels, who participate in marine transportation and commerce; • promote safety in marine transportation and recreational boating; • protect the marine environment from damage due to navigation and shipping activities; • develop a regulatory scheme that encourages viable, effective and economical marine transportation and commerce; • promote an efficient marine transportation system; • develop a regulatory scheme that encourages the viable, effective and economical use of Canadian waters by recreational boaters; • ensure that Canada can meet its international obligations under bilateral and multilateral agreements with respect to navigation and shipping; • encourage the harmonization of marine practices; and • establish an effective inspection and enforcement program. 	✓		✓			✓	

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>Canada Marine Act 1998</p> <p>The purpose of this Act is to make Canadian ports competitive, efficient and commercially orientated, providing for the establishing of port authorities and the divesting of certain harbours and ports, for the commercialization of the St. Lawrence Seaway and ferry services and other matters related to maritime trade and transport and amending the Pilotage Act and amending and repealing other Acts as a consequence.</p>	✓				✓	✓	
<p>Marine Transportation Security Act 1994</p> <p>An Act to provide for the security of marine transportation.</p>		✓					
<p>Shipping Conferences Exemption Act 1987</p> <p>An Act to exempt certain shipping conference practices from the provisions of the Competition Act, to repeal the Shipping Conferences Exemption Act and to amend other Acts in consequence thereof.</p>	✓						✓
<p>Arctic Waters Pollution Prevention Act 1985</p> <p>This Act intends to prevent pollution of areas of the arctic waters adjacent to the mainland and islands of the Canadian arctic.</p>			✓				
<p>Marine Atlantic Inc. Acquisition Authorization Act 1986</p> <p>Act to authorize the acquisition of Marine Atlantic Inc. and to provide for other matters in relation thereto.</p>							

Attachment 5: Singapore Organisations and Legislation Overview

Singapore transport and related organisations

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
General								
<p>Ministry of Transport</p> <p>Overseas the development and regulation of civil aviation and air transport, maritime transport and ports, and land transport.</p>				✓		✓	✓	
<p>Urban Redevelopment Authority</p> <p>Singapore's national land use planning authority. The URA prepares long-term strategic plans, known as Concept Plans, and detailed land use plans for physical development (and conservation), which influence transport policies.</p>			✓		✓			
Land								
<p>Land Transport Authority</p> <p>Responsible for planning, policy and the regulation of all urban transport modes, and their inclusion in the development of the Concept Plans. The Land Transport Authority also constructs and maintains roads and other public transport infrastructure, in accordance with the provisions of the Concept Plans.</p>	✓	✓	✓		✓			✓
<p>Public Transport Council</p> <p>An independent body that regulates bus services, bus service operators, ticket payment services, and bus and rapid transit system fares. The Public Transport Council works closely with players in the public transport industry and in partnership with other public agencies including the Land Transport Authority to bring about quality basic bus services and an affordable public transport system.</p>	✓	✓						✓
Aviation								
<p>Civil Aviation Authority of Singapore</p> <p>A Statutory Board under the Ministry of Transport. The Civil Aviation Authority's roles are to enable the growth of the air hub and aviation industry, oversee and promote safety in the industry, provide air navigation services, and develop Singapore as a centre of excellence for aviation knowledge and human resource development.</p>	✓	✓				✓	✓	

Organisations and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition	Operations
<p>Changi Airport Group</p> <p>Established in 2009 following the restructuring of the Civil Aviation Authority of Singapore. Changi Airport Group is responsible for airport operations and management.</p>								✓
<p>Air Accident Investigation Bureau of Singapore</p> <p>An independent investigation authority, responsible for the investigation of air accidents and serious incidents in Singapore involving both local and foreign civilian aircraft.</p>	✓	✓						
Maritime								
<p>Maritime and Port Authority of Singapore</p> <p>Responsible for the overall development and growth of the port of Singapore, acting as Port Authority, Port Regulator, Port Planner, IMC Champion, and National Maritime Representative. The Maritime and Port Authority is also tasked with ensuring that shipping and its related activities grow in an environmentally-responsible and sustainable manner</p>	✓	✓	✓		✓	✓	✓	✓

Singapore transport and related legislation

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
General							
<p>Land Acquisitions Act</p> <p>Enacted in 1966 and revised in 1985.</p> <p>An Act to provide for the acquisition of land for public and certain other specified purposes, the assessment of compensation to be made on account of such acquisition and for purposes connected therewith.</p> <p>This Act allows the Government to acquire land for any use deemed to be in the public benefit.</p>			✓		✓		
Land							
<p>Land Transport Authority of Singapore Act</p> <p>Enacted in 1995 and revised in 1996.</p> <p>An Act to establish and incorporate the Land Transport Authority of Singapore, to provide for its functions and powers, and for matters connected therewith.</p>	✓		✓	✓	✓		
<p>Railway Act</p> <p>Enacted in 1905 and revised in 1985.</p> <p>An Act relating to railways, addressing issues such as construction, returns, property tax, the responsibilities of carriers, accidents and management.</p>	✓	✓				✓	
<p>Rapid Transport Systems Act</p> <p>Enacted in 1995 and revised in 2004.</p> <p>An Act to provide for the planning, construction, operation and maintenance of rapid transit systems, to transfer the functions, assets and liabilities of the Mass Rapid Transit Corporation to the Land Transport Authority of Singapore.</p>	✓	✓				✓	

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>Road Traffic Act</p> <p>Enacted in 1961 and revised in 2004.</p> <p>An Act for the regulation of road traffic and the use of vehicles and the user of roads and the operation of bus interchanges and for other purposes connected therewith.</p> <p>The Road Traffic Act establishes the rules under which foreign and Singapore citizens can drive within the country.</p>	✓						✓
<p>Public Transport Council Act 1987</p> <p>An Act to provide for the establishment of the Public Transport Council to provide for the licensing of bus services, bus service operators and ticket payment services, to regulate bus, taxi and rapid transit system fares and for matters connected therewith.</p>	✓				✓	✓	✓
Aviation							
<p>Civil Aviation Authority of Singapore Act</p> <p>Enacted in 2009 and revised in 2014.</p> <p>An Act to provide for the transfer of the airport undertaking of the Civil Aviation Authority of Singapore to a successor company, to provide for the reconstitution of the Civil Aviation Authority of Singapore, to provide for the regulation of the operation of airports and for the imposition of economic controls at airports.</p>	✓	✓	✓	✓	✓	✓	✓
<p>Unmanned Aircraft (Public Safety and Security Act) 2015</p> <p>An Act to amend the Air Navigation Act (Chapter 6 of the 2014 Revised Edition) and the Public Order Act (Chapter 257A of the 2012 Revised Edition) to regulate the operation of unmanned aircraft in Singapore in the interests of public safety and security.</p>	✓	✓					
Maritime							
<p>Maritime and Port Authority of Singapore Act</p> <p>Enacted in 1996 and revised in 1997.</p> <p>An Act to establish and incorporate the Maritime and Port Authority of Singapore, to provide for its functions and powers, and for matters connected therewith.</p>	✓	✓	✓		✓	✓	✓

Acts and their purpose	Safety	Security	Environment	Funding	Infrastructure	Economic Regulation	Competition
<p>Merchant Shipping Act</p> <p>Enacted in 1995 and revised in 1996.</p> <p>An Act relating to merchant shipping, addressing issues such as registration of ships, manning and certification, crew matters, survey and safety, inquiries and investigations, delivery of goods and liability of ship owners.</p>	✓	✓					
<p>Prevention of Pollution of the Sea Act</p> <p>Enacted in 1990 and revised in 1991.</p> <p>An Act to give effect to the International Convention for the Prevention of Pollution from Ships 1973 as modified and added to by the Protocol of 1978, and to other international agreements relating to the prevention, reduction and control of pollution of the sea and pollution from ships; to make provisions generally for the protection of the marine environment and for the prevention, reduction and control of pollution of the sea and pollution from ships, and for matters related thereto.</p>			✓				