

Te Ara Matatika | The Fair Path

Why transport matters for equity, and how Aotearoa New Zealand can fairly transition to the connected low-traffic cities we need for a decarbonised future.

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About the Helen Clark Foundation

The Helen Clark Foundation is an independent public policy think tank based in Tāmaki Makaurau Auckland, at the Auckland University of Technology. It is funded by members and donations. We advocate for ideas and encourage debate; we do not campaign for political parties or candidates. Launched in March 2019, the Foundation issues research and discussion papers on a broad range of economic, social, and environmental issues.

Our philosophy

New problems confront our society and our environment, both in New Zealand and internationally. Unacceptable levels of inequality persist. Women's interests remain underrepresented. Through new technology we are more connected than ever, yet loneliness is increasing, and civic engagement is declining. Environmental neglect continues despite greater awareness. We aim to address these issues in a manner consistent with the values of former New Zealand Prime Minister Helen Clark, who serves as our patron.

Our purpose

The Foundation publishes research that aims to contribute to a more just, sustainable, and peaceful society. Our goal is to gather, interpret and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them. We welcome your support: please see our website www.helenclark.foundation for more information about getting involved.

About WSP in New Zealand

As one of the world's leading professional services firms, WSP provides strategic advisory, planning, design, engineering, and environmental solutions to public and private sector organisations, as well as offering project delivery and strategic advisory services. Our experts in Aotearoa New Zealand include advisory, planning, architecture, design, engineering, scientists, and environmental specialists. Leveraging our Future Ready® planning and design methodology, WSP use an evidence-based approach to helping clients see the future more clearly so we can take meaningful action and design for it today. With 55,000 talented people globally, including over 2,000 in Aotearoa New Zealand located across 40 regional offices, we are uniquely positioned to deliver future ready solutions, wherever our clients need us. See our website at wsp.com/nz.

Whakataukī

He aha te huarahi? I runga i te tika, te pono, me te aroha.

What is the pathway? It is doing what is right, with integrity and compassion.

He mihi: Acknowledgements

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Glossary of te reo Māori terms¹

Hapū	<i>Kinship group, clan, tribe, subtribe – section of a large kinship group and the primary political unit in traditional Māori society. A number of whānau sharing descent from a common ancestor, usually being named after the ancestor, but sometimes from an important event in the group's history.</i>
Iwi	<i>Extended kinship group, tribe, nation, people – often refers to a large group descended from a common ancestor and associated with a distinct territory.</i>
Kaitiakitanga	<i>Guardianship, stewardship.</i>
Karanga	<i>A ceremonial call of welcome to visitors onto a marae or equivalent venue.</i>
Kaumatua	<i>An adult, elder, or elderly person – someone of status within the whānau.</i>
Kaupapa Māori	<i>A Māori approach, Māori principles; a philosophical doctrine, incorporating the knowledge, skills, attitudes and values of Māori society.</i>
Kōhanga reo	<i>Māori language preschool.</i>
Kura	<i>School.</i>
Mana whenua	<i>Territorial rights, authority, or jurisdiction over land or territory. Also refers to hapū or iwi with mana whenua, whose history and legends are based in the lands they have occupied over generations.</i>
Marae	<i>Open area in front of a meeting house where formal events take place; often used to describe the buildings that make up a place of cultural significance.</i>
Papakāinga	<i>Original home, home base, village; in relation to housing, refers to communal housing where whānau who whakapapa to the land can live intergenerationally according to Te Ao Māori.</i>
Rohe	<i>Boundary, district, region, territory, area (of land).</i>
Takatāpui	<i>A traditional term meaning ‘intimate companion of the same sex,’ more recently reclaimed to embrace all Māori who identify with diverse sexes, genders and sexualities.</i>
Te Ao Māori	<i>The Māori world.</i>
Te Ara Matatika	<i>The fair path; a path that is right, just, and ethical.</i>
Te Tiriti o Waitangi	<i>The Treaty of Waitangi (Māori version).</i>
Tika	<i>Correct, true, upright, right, just, fair.</i>
Whakapapa	<i>Genealogy, genealogical table, lineage, descent.</i>

¹ In alphabetical order. Most definitions adapted from <https://maoridictionary.co.nz>, except takatāpui, which is adapted from <https://takatapui.nz/>.

Whānau	<i>Extended family – the primary economic unit of traditional Māori society.</i>
Whanaungatanga	<i>Relationship, kinship, family connection; a relationship through shared experiences and working together which provides a sense of belonging.</i>
Wharekai	<i>Dining hall.</i>
Whenua	<i>Land, ground, territory.</i>

Glossary of specialist terms

Accessibility	<i>How easy it is for people to participate in society and take up social and economic opportunities, such as work, education and healthcare. Enabling people to access important destinations is sometimes considered the primary purpose of the transport system.</i>
Car dependency	<i>When individuals or communities are reliant on cars for mobility. Car-centric urban planning perpetuates car dependency by making it difficult to get around by other modes and prioritising cars in the allocation of street space.</i>
Decarbonisation	<i>The reduction of carbon, and the transition to an economic system that specifically reduces and compensates emissions of carbon dioxide.</i>
Forced car ownership	<i>When low-income households retain car ownership due to a lack of alternative transport options, even though the associated cost can be a large proportion of the household budget and have negative health and wellbeing consequences.</i>
Just transition	<i>Recognises that responding effectively to climate change will involve both opportunities and costs, and that transitioning to a low-emissions economy will only succeed when these costs and opportunities are distributed fairly.</i>
Kāinga Ora	<i>Kāinga Ora – Homes and Communities. A Crown entity created in 2019 bringing together the former Housing New Zealand, its development subsidiary HLC, and the KiwiBuild Unit. Governed by a statutory board appointed by the Ministers of Housing and Finance. Responsible for delivering the Government’s state housing build programme, upgrading existing housing stock, leading large-scale urban developments including affordable and market housing, and acting as the landlord for social housing tenancies.</i>
Mobility justice	<i>An overarching theory that goes beyond distributive approaches to transport to bring into focus unjust power relations and uneven mobility.</i>
Net zero emissions	<i>The state at which greenhouse gas emissions into the atmosphere are balanced by greenhouse gas emissions taken out of the atmosphere. Domestically, it refers to each nation balancing its own emissions with measures to offset them.</i>
Te Manatū Waka Ministry of Transport	<i>The Government’s ‘system lead’ on transport, responsible for providing advice on how the transport system needs to change to support the transport needs of New Zealanders and the Government’s signalled priorities. Functions include reviewing legislation and regulation governing the transport system and monitoring and evaluating transport system performance against key indicators.</i>
Transport disadvantage	<i>Disadvantage caused by a lack of transport options, for example not owning a car or not living near reliable public transport.</i>
Transport equity	<i>When the benefits and costs of transport policies and projects are fairly distributed between different groups. Equitable policies allocate resources according to need rather than treating all groups the same.</i>

Transport justice	<i>Benefits and costs of transport policies are fairly distributed, and in addition, decision-making processes are fair, representative, and seek to ensure the transport system meets the basic transport needs of all people.</i>
Transport poverty	<i>Poverty induced by people paying more than they can afford for their mobility (for example taking out a high-interest loan to buy a car or spending a high proportion of their income on petrol, bus fares, or other travel costs).</i>
Transport-related social disadvantage	<i>Missing out on opportunities (including opportunities for employment and social connection) because of a lack of practical transport choices.</i>
VKT	<i>Vehicle kilometres travelled – a measure of total kilometres travelled each year by different vehicle types. Can be expressed as a cumulative total (measured in billions of kilometres), or a per capita average.</i>
Waka Kotahi New Zealand Transport Agency	<i>The New Zealand Transport Agency, a Crown entity governed by a statutory board appointed by the Minister of Transport. Responsible for managing the state highway system, overseeing the planning and delivery of public transport, and managing the funding of the land transport system. Operates at arms' length from government, but is required to make investments that deliver on the Government's policy priorities (as signalled in the Government Policy Statement on Land Transport every three years).</i>

Executive summary

Everyone in Aotearoa New Zealand should be able to get where they need to go affordably, accessibly, and in good time, with a meaningful choice of options that meet their needs, protect the climate, and promote individual and collective wellbeing.

In this report, we make the case that realising this vision (or one like it) should be the primary purpose of the transport system.

At present, our inequitable, car-dominated transport system constrains mobility and limits opportunity for thousands of people and is the second-largest source of domestic carbon emissions. It also kills or injures thousands of people each year, undermines public health, creates harmful air and noise pollution, and is detrimental to our collective mental wellbeing.

To transition to a transport system in which everyone – regardless of income, ethnicity, disability, or gender – can get where they need to go in ways that protect the climate and promote wellbeing, transport policy and investment will need to focus on two things:

1. Making the transport system work better for those who are currently disadvantaged; and
2. Reducing our collective dependence on cars as our main form of urban transport.

In this report, we set out why transport matters for equity, illustrate why reducing car dependence is the key to decarbonising urban transport, explain the risks of pursuing rapid decarbonisation without adequately considering equity, and lay out a path for how Aotearoa New Zealand can transition to the connected, low-traffic cities we need in the future.

Why focus on cities?

While we acknowledge that there are also significant equity and decarbonisation challenges in rural and provincial transport, in this report we restrict our analysis primarily to urban settings.

We take this urban focus because nearly three quarters of Aotearoa New Zealand's population growth in the next 30 years will happen in cities. Tāmaki Makaurau Auckland alone will account for half this growth. By 2048, there will be almost one million more people living in our cities than there were in 2018.

This growth places increasing pressure on our urban infrastructure and creates demand for new and improved transport infrastructure. Te Waihanga, the New Zealand Infrastructure Commission, notes that the major challenges facing our cities include:

- High levels of traffic congestion.
- Poor availability of public transport and walking and cycling options.
- Urban design that leads to poor quality-of-life.

These challenges can be addressed by creating connected urban communities that provide greater access to employment, social and recreation opportunities. How the transport system is configured, and what it is programmed to prioritise, will be critical to addressing these challenges.

Why focus on cars?

Aotearoa New Zealand has been committed to the target of net zero emissions by 2050 for several years and entrenched this target in domestic law with the passage of the Climate Change Response

(Zero Carbon) Amendment Act 2019. In late 2021, at the COP26 UN Climate Change Conference in Glasgow, Climate Change Minister James Shaw also committed to reduce New Zealand's emissions by 50 percent from 2005 levels by 2030.

The transport sector is our second-largest source of carbon emissions, and accounts for around 43 percent of domestic CO₂ emissions. More than half these emissions come from private vehicles.

Reducing private vehicle use is increasingly seen as a key plank of effective climate change policy. The Government is currently consulting on what to include in its first Emissions Reduction Plan (ERP), and the consultation document identifies "reducing reliance on cars and supporting people to walk, cycle and use public transport" as the first of three target areas for decarbonising transport. It also proposes a specific target to "reduce vehicle kilometres travelled (VKT) by cars and light vehicles by 20 percent by 2035 through providing better travel options, particularly in our largest cities."

It is increasingly accepted by experts and decision-makers that it will not be possible to meet our emissions reduction targets without purposefully reducing widespread car dependence. As the ERP consultation document notes, "the scale of change to achieve these reductions and complete decarbonisation cannot be overstated."

Why focus on equity?

Our current transport system is not equitable and contributes significantly to wider social and economic disadvantage. Common barriers to mobility in the current transport system include:

- Cost, including the costs of car ownership and maintenance, parking fees and fines, public transport or taxi fares, the initial outlay required to purchase a bike or scooter, or opportunity costs of work forgone due to inadequate transport.
- Accessibility, for example not living close to reliable public transport, not being able to physically board buses and trains, or not being able to drive, walk, or wheel for health or disability reasons.
- Safety, such as the risk of being harassed or assaulted on public transport, not feeling safe to walk or cycle because of traffic, or suffering injury or losing loved ones on the roads.
- Practicality, for example forgoing or delaying a trip because long congestion delays would defeat the purpose, public transport routes or timetables that do not service your destination at the time you need to travel, or having your bike stolen because of a lack of secure storage.

While everyone will experience some constraints to their mobility from time to time, having your mobility consistently constrained creates ongoing disadvantage and poverty.

People experience **transport disadvantage** when they lack practical transport options, and **transport poverty** when they are forced to spend an unreasonable proportion of their income on transport. **Transport-related social disadvantage** is when people miss out on economic and social opportunities because of a lack of transport options.

Those most likely to experience transport-related disadvantage and poverty include Māori, disabled people, people with low incomes, women, takatāpui, queer, and LGBTQI+ people, and members of minority ethnic groups including Pacific people. All these groups experience other forms of systemic disadvantage, and there is considerable overlap between them. The current transport system not only causes inequitable access to mobility but exacerbates wider economic and social inequity.

Achieving **transport equity** (when the costs and benefits of transport are distributed fairly) and **transport justice** (when everyone's mobility needs are met and transport decision-making is fair and representative) will benefit not only those who are currently disadvantaged, but everyone in Aotearoa New Zealand.

Risks of pursuing decarbonisation without adequately considering equity

There are significant risks that decarbonisation in general, and VKT reductions in particular, could be pursued in ways that entrench existing disadvantage. These risks include:

- Costs falling on those already disadvantaged, for example poorly-targeted congestion pricing schemes that restrict the mobility of disadvantaged groups, while having minimal impact on the transport patterns of those with greater resources.
- Benefits accruing to those already advantaged, for example upgrading public transport based on the habits and expectations of advantaged groups or implementing street-level changes that enhance neighbourhood appeal in high-income areas first.
- Unwanted or inappropriate new infrastructure, for example creating new cycle lanes in low-income areas, without first understanding the first-order transport needs of the community or the actual barriers to cycling.
- 'Baked in' inaccessibility and unmet need, for example, designing new or improved public transport infrastructure based on current demand, rather than to trying address unmet transport need.
- Gentrification, when street-level changes to increase accessibility and reduce traffic or new public transport connections make previously low-income neighbourhoods more attractive, increase property prices, and displace long-term residents.

These risks – and others associated with an insufficiently equitable climate change response – must be avoided. With Aotearoa New Zealand's endorsement of the International Just Transition Declaration at COP26, our international commitments now also include a promise to avoid them.

Te Ara Matatika: the fair path

If Aotearoa New Zealand is to honour its commitment to a just transition, achieve transport equity, and meet net zero emissions targets, our cities will need to look very different in future.

Increasingly, international and local evidence suggests the 'fair path' leads away from car-dominated cities with a 'hub and spoke' model of commuting from outlying suburbs into the CBD, towards connected, localised urban communities in which people can access most of their needs close to home and have ready access to public and active transport options when they need to go further.

Arriving at these equitable, low-traffic cities in the future requires reprogramming the policy settings that govern transport, land use, and urban design now. We need to create urban environments that reduce the overall need to travel, shorten the distances between key destinations, and promote social connection. We also need to overhaul the way we allocate transport investment.

Fair, sustainable transport policy should promote walking, wheeling, public transport, and ride share options above private car use for the movement of people. Transport investment should also be allocated accordingly. Investments that reduce demand for car travel, create active transport infrastructure, improve public transport, and maintain and improve existing roads should take precedence over the creation of new car-dominated transport infrastructure.

Summary of recommendations

We have five overarching recommendations that would help to fairly transition Aotearoa New Zealand's cities to the connected, low-traffic communities we need for a decarbonised future. Under each, we direct specific recommendations to relevant Ministers and agencies. These recommendations are summarised below, and appear in full starting on page 54.

1. 'Reprogramme' the transport system

- Set an ambitious vision for the transport system.
- Make improving equity and reducing car dependence key priorities in support of this vision.
- Integrate this vision and priorities into all relevant transport policies and strategies.
- Introduce legislation to make it easier for councils to make low-traffic interventions at scale.
- Align the road safety strategy with this vision.
- Change how investment is allocated to deliver against these two priorities.
- Require the Ministry of Transport and Waka Kotahi New Zealand Transport Agency to use new assessment and decision-making tools that measure equity and VKT impact of transport projects.
- Commission research that fills current knowledge gaps about transport equity.

2. Make sure the transition is tika (right and just)

- Partner with Māori to uphold Te Tiriti o Waitangi obligations in the transport system.
- Ensure representation from disadvantaged communities in transport decision-making.
- Apply the principles of a tika transition to all transport and climate change decisions.
- Co-design new urban transport infrastructure with affected communities.

3. Reduce the overall need to travel

- Make reducing VKT an explicit goal of new developments as part of RMA reform.
- Require urban planning that reduces the overall need to travel, shortens distances between key destinations, and promotes social connection.
- Pilot this approach in Kāinga Ora-led developments, using the principles of 20-minute cities.

4. Make sure the costs and benefits fall in the right place

- Ensure future congestion pricing schemes maximise equity.
- Align transport, climate change, housing, land use, taxation, and income policies and coordinate better between government agencies.
- Encourage and fund low-carbon, shared community transport solutions.
- Make sure policies to incentivise mode-shift benefit those who are currently disadvantaged.
- Pilot innovative solutions in a wide range of settings and communities.
- Design transport infrastructure based on unmet need, not current demand.
- Make public transport cheaper and better for low-income communities.

5. Kickstart the transition

- Make a bold intervention to incentivise rapid mode shift, such as making public transport free for a sizeable target group (such as young people under 25 and/or Community Services Card holders).

Two stories to open this report

Hana's story: 2021

Hana is 21. She lives in Onehunga, in Tāmaki Makaurau Auckland, with her parents, grandmother, and three younger siblings. Hana is studying full-time to be a social worker at Unitec in Waitākere, which involves face to face classes three days a week, and some distance learning from home.

Hana receives a student allowance of \$203.11 a week after tax. She also works ten hours at night, cleaning offices in the CBD. This pays minimum wage and is taxed at the secondary tax rate of 17.5 percent, so Hana gets about \$160 a week from this job after tax. She aims to give about \$150 a week to her parents to help with rent, food, and power, leaving her with about \$210 of disposable income.

Hana commutes to campus three days a week. Driving is much quicker than the two buses it takes to get there by public transport, and at \$6-8 a day, student parking is almost as cheap as a return bus fare (\$5.50), so Hana decided to buy a car. She had another good reason for this too: her own car offered a safe way to get to and from her late-night cleaning job.

Unfortunately, Hana had a poor credit rating from bad experience with a mobile shopping van a couple of years ago, so her bank wouldn't lend her \$3000 for her 2005 Nissan Teana. Instead, Hana got a loan from a high-interest lender with offices in her neighbourhood. The repayments are \$35 a week, and she is paying 20 percent interest. It will take her seven years to pay off the loan, and by then she will have paid a total of \$5400. Hana's petrol costs are about \$60 a week.

When Hana bought the car, the registration and WOF were paid in advance. When they expired, Hana paid \$30 to renew the registration for three months, but the car failed its warrant because it needed two new tyres. Hana couldn't afford the \$200 right away, so she didn't buy them.

Hana knew it was a bad idea to drive without a WOF, so she switched to catching the bus to campus. This can be slow in peak hour, especially because she has to change buses on the way, so she leaves home at about 7.20am to get to her first lecture at 9am and is sometimes still a few minutes late.

She tried using public transport to get to her cleaning job too, but the night services are infrequent, and sometimes she waited up to half an hour in the dark. After one nasty experience being followed to the bus stop, she spent \$25 on an Uber – losing almost half the earnings from her shift.

Eventually, Hana felt so uncomfortable that she started taking her car to her night job, even though she still hadn't replaced the tyres. Last week, the inevitable happened: she got a \$200 fine for having no warrant, and an additional \$150 fine for worn tyres. After her initial despair, Hana negotiated to pay the fines off in instalments – \$35 a week over ten weeks.

Now, Hana spends \$120 a week on transport-related costs: \$50 on bus fares and \$70 on repaying the loan and fines for a car she isn't using. This is about 33 percent of her weekly income. After giving her parents \$150 to contribute to the family finances, Hana has \$93 left. She spends \$10 a week on an endless data plan so she can study online at home (Hana's family doesn't have wifi), and tries to put \$20 aside for the new tyres, which she's still hoping to buy.

Hana can't risk driving again until she has a WOF, so for now she has parked the car on her parents' lawn. They are not happy about this, and nor is their landlord, but she can't park it on the street in case she gets another ticket. She is back to catching the train to her cleaning job and feeling unsafe.

Aisha's story: 2040

Like Hana, Aisha is 21 and lives in a large city with her whānau. They live in a papakāinga community that was built about fifteen years ago as a joint initiative of mana whenua, the council, and Kāinga Ora. Their whare houses Aisha, her mum, and her two siblings, and her grandmother lives nearby in a kaumatua flat that is part of the same development. Aisha's mum is working towards home ownership, but she will not hold freehold title. If they decide to move in the future, they can cash out the equity they have built up, but not sell on the open market. Other houses and units in the community are social rentals, and most residents whakapapa to mana whenua.

The community produces net zero emissions and there are no cars beyond the perimeter. Aisha's whānau and their neighbours move between each other's homes and the communal facilities, which include a wharekai, meeting house, and play area that is visible from all the houses. The wide, covered paths between the buildings allow for walking, slow wheeling (like little kids on bikes and scooters, and non-powered wheelchairs), and faster wheeling (like powered mobility scooters, e-scooters, and bikes).

A few residents have cars, which they park and charge at the perimeter in dedicated spaces (though they pay extra unless they can't use other transport modes). Most use one of several communal e-vehicles when they need to travel longer distances or transport bulky items. These are also used as community shuttles at nights and weekends, and there is a roster of residents with current drivers' licenses to do a monthly shift.

There is a bus stop right by the main entrance to the community, and buses come past every 5-10 minutes to service local destinations like schools, the village shopping area, and community facilities. They also connect to the city-wide rail network.

Most days, Aisha takes a bus and a train to get to university where she is studying to be a teacher. The ticketing is integrated. She only waits a couple of minutes to transfer, and as a student, her public transport is free. It takes about 25 minutes.

The suburb is also connected to a wide, separated active travel network. About once a week, Aisha bikes to a park or the beach with her three younger cousins (who also live in the community) to give her Aunty a rest. They can ride two-abreast so they can talk on the way and Aisha can keep an eye on the younger kids.

Aisha receives a student allowance indexed to the living wage that matches the national guaranteed minimum income. She doesn't need to work on top of this, but chooses to do one shift a week waitressing for a catering company because she is saving for a trip to Rarotonga with her friends to celebrate when they graduate next year. If she finishes work after last bus, or goes out late with friends, she calls the community shuttle and someone picks her up, no questions asked.

Part 1: The Fair Path – why transport matters for equity

Being able to get where you need to go – to get to work or school on time, do your own grocery shopping, go to the doctor when you are sick, or visit your friends and family – is both a basic need, and a human right.²

Everyone in Aotearoa New Zealand should be able to get where they need to go affordably, accessibly, and in good time, every time. Everyone should also have a meaningful choice of options that meet their needs, protect the climate, and promote individual and collective wellbeing.

At the moment, our inequitable, car-dominated transport system constrains mobility and limits opportunity for thousands of people and is the second-largest source of domestic carbon emissions. It also kills or injures thousands of people each year, undermines public health, creates harmful air and noise pollution, and is detrimental to our collective mental wellbeing.

To transition from what we have now to a transport system in which everyone – regardless of income, ethnicity, disability, or gender – can get where they need to go in ways that protect the climate and promote wellbeing, will require future transport policy and decision-making to focus on two things:

1. Making the transport system work better for those who are currently disadvantaged; and
2. Reducing our collective dependence on cars as our main form of transport.

In Part 1, we address the first of these: a more equitable transport system.

There are thousands of people in Aotearoa New Zealand who live with significant constraints on their mobility. As ‘Hana’s story’ on page 12 illustrates, these barriers can take many forms. Often many are present at once, and they frequently intersect with, and exacerbate, other forms of disadvantage like low-income, inadequate housing, or lack of digital access.

In this Part, we outline some common barriers to mobility in the current transport system, show which groups and individuals are most likely to be affected, and highlight how they contribute to other forms of disadvantage. We make the case that improving equity should be a key objective of transport policy and highlight how everyone stands to benefit from a more equitable transport system. We conclude with the observation that achieving equitable transport outcomes will require changing the inputs used to make transport decisions.

This Part includes a Q&A from Erin Gough, a human rights expert and disability advocate whose experiences highlight how the transport system can restrict disabled people’s mobility and rights.

A note on sources: Under the headings, ‘Common barriers to mobility’, and ‘Whose mobility is constrained’, we draw extensively from two reports summarising available evidence about transport and equity in Aotearoa New Zealand. These are:

- [Social impact assessment of mode shift](#), commissioned by Waka Kotahi New Zealand Transport Agency and undertaken by the University of Otago, released September 2020; and

² Freedom of movement within the borders of the state is recognised in Article 13 of the Universal Declaration of Human Rights and in section 18 of the New Zealand Bill of Rights Act 1990. In addition, the UN Charter on the Rights of Persons with Disabilities sets out in Article 9 the right of disabled people to live independently and fully participate in all aspects of life, and notes that this requires States to identify and remove the barriers that prevent this in a range of settings, including roads and transportation.

- [Equity in Auckland’s Transport System](#), commissioned by Te Manatū Waka Ministry of Transport and undertaken by MRCagney, released November 2020.

Unless otherwise stated, the information in these sections is sourced from these reports. It would be unwieldy to footnote every instance, but we gratefully acknowledge the authors for gathering this evidence, and the commissioning agencies for making it available. Anyone wanting to learn more about transport and equity in Aotearoa New Zealand should read these reports in full.

Any mistakes in the interpretation of the evidence are ours. Sources other than these are cited fully.

Common barriers to mobility

Cost

Having insufficient income limits many people’s day to day options and activities when they choose not to travel because of the cost. This can be harmful, such as when people forgo essential medical care or keep their children home from school because they don’t have the money to pay for the trip.

But some trips, like commuting to work, can’t be avoided. For this reason, many people end up spending a disproportionately high percentage of their income on the cost of travel, most often by owning a car, even when their budget does not reasonably allow for the costs of petrol, maintenance, registration and WOF updates. This is known as forced car ownership. Very often people will go into debt to purchase a vehicle, so high-interest loan repayments become another inequitable cost of transport.

Other transport-related costs that can be unaffordable for many people include parking fees, fines (especially for lapsed WOF or registration which may not have been paid due to the cost), public transport fares (which cost more for those who can only afford to pay trip by trip than for those who can afford to purchase multi-trip passes), taxi and ride-share fares (which are often not an option for those on low incomes), and the initial outlay and ongoing maintenance costs associated with purchasing an alternative like a bike or scooter.

Accessibility

In a transport context, accessibility refers to the ease with which people can get to the places they need to go to enable them to participate in society, such as workplaces, schools, and healthcare facilities. It refers to all people, although disabled people often experience the most barriers to mobility because of the many ways an ableist society restricts their participation, including in transport.

Many aspects of the transport system can restrict accessibility. For example, someone who lives in an area where there is no public transport within a convenient walking or wheeling distance is experiencing an accessibility barrier. Likewise, someone might live within a reasonable distance of a public transport service, but not be able to use it because of physical accessibility issues, like steps up to train or bus stops for wheelchairs or buggies, or insufficient seating on buses or trains for pregnant people, older people, and those with chronic health conditions. Some public transport options are only accessible to a limited number of travellers, like buses with only one or two spaces for wheelchair users, or seats that are not wide enough for large-bodied people. See the Q&A with wheelchair user and human rights expert Erin Gough on page 18 for an illustration of some of these accessibility barriers in the public transport system.

Non-physical accessibility barriers include complex or confusing timetable, fare, or ticketing information (known as 'wayfinding' information). This can be challenging for both children and older people, people with low vision or hearing impairments, speakers of English as a second language, or people with intellectual impairments. Likewise, noisy, crowded, or overwhelming street or public transport environments can also be triggering or dangerous for very young or older people, people with neurodiverse conditions like autism, Attention Deficit Hyperactivity Disorder (ADHD), or sensory processing disorders, and people with some mental health conditions (like anxiety or Post-Traumatic Stress Disorder (PTSD)).

Even driving can be inaccessible – some people have health conditions or impairments that make operating a standard car difficult or impossible, older people may lose their drivers' licence, or extreme congestion or busy traffic conditions may make driving impractical or unsafe for some.

Safety

Road traffic kills and injures thousands of people in Aotearoa New Zealand every year. On average, one person is killed on our roads every day, and another is injured every hour, an unacceptable situation that creates huge health, social, and economic costs for society, as well as causing untold grief and stress for thousands of families.

Fears about road safety constrain some people's independence by discouraging them from driving on particular roads or in particular conditions, but more than that, safety concerns also govern many people's decisions about transport mode, discouraging them from walking and wheeling or allowing children to use these modes. This can create an unfortunate vicious cycle where some people avoid active modes because high traffic volumes make these modes unsafe, in favour of driving, which of course contributes to the perceived safety problem.

Even on footpaths, non-car hazards can discourage people from walking regularly. Many urban areas are not well-equipped for pedestrians, either with no footpaths (as in some light industrial areas), or footpaths that are poorly-lit, not wide enough, or cluttered with obstacles like parked cars, business signs, and poorly-positioned trees or plants. Furthermore, cars are prioritised on most roads, and genuinely safe, separated cycle lanes are rare. This means footpaths are often used by other 'wheelers' – skateboards, scooters and e-scooters, children on bikes, wheelchairs, and mobility scooters. These are important active modes that should be encouraged, but when crowded onto footpaths with pedestrians, they can create additional hazards that make walking dangerous or intimidating, especially for young children, older people, or those with underlying health conditions.

Hazards from accidental collisions are not the only safety barrier that can constrain people's mobility. Bullying, harassment, and violence in public spaces are real risks for some people and can constrain their transport choices. For example, having to wait for a long time for a bus or train at night can put women, LGBTQI+ people, and some ethnic minorities at increased risk of targeted violence, including sexual violence, and even when on board a service, harassment and threatening behaviour can occur.

Practicality

Similar to accessibility barriers, there are some features of our current car-dominated transport system that work to constrain the mobility and limit the transport options of many people. While driving or taking an alternative mode of transport might technically be possible for people in these situations, the actual lived experience of doing so may be so inconvenient, slow, or stressful that in practice, these situations are acting as barriers that constrain people's mobility. As with all the

barriers outlined in the previous sections, these factors tend to apply disproportionately to groups or individuals who may already be experiencing multiple forms of disadvantage.

For example, current public transport routes and services have generally been designed to service a particular type of traveller: weekday commuters travelling from outer suburbs into urban centres during morning and evening 'peak' times. People who work part-time and want to commute by public transport can find themselves faced with long waits for infrequent services outside of peak hours and opt for the immediate convenience of driving instead. Similarly, those who work in multiple locations, such as home carers, resource teachers, or tradespeople are unlikely to be able to access frequent public transport services that can connect them from one work location to the next without causing unreasonable delays and disruptions to their work hours.

People outside the paid workforce also have transport needs that are not well supported by current public or active transport infrastructure. This group includes at-home parents who may need to travel with one or more children, make multiple stops to do drop-offs and pick-ups, and bring bulky items like pushchairs and nappy bags, making public transport a logistical headache. Even the brave parent who is confident cycling with children may find that existing cycle lanes and shared paths are impractical, not being wide enough to accommodate a trailer or older child riding alongside, or with gates or barriers designed to keep motorised vehicles off shared walking and cycle paths actually preventing larger cargo and passenger bikes from using these facilities.

One practicality barrier that impacts almost every type of traveller is the excessive delays and long journey times created by high traffic volumes. Most city-dwellers, especially those in Tāmaki-Makaurau Auckland, will have stories of long car or bus trips spent stuck in traffic, being made late for work or school or missing important appointments, and arriving at their destination stressed and anxious. Many will also describe actively choosing not to travel at certain times of day, or forgoing work opportunities or social events because they determined that the inconvenience and stress of navigating highly congested roads to get there was not worth the benefit.

“I can never just expect to be able to get where I need to go”: Q&A with Erin Gough

Erin Gough is a senior advisor and child rights lead at the Office of the Children’s Commissioner. Born in South Africa, Erin spent her high school and university years in Ōtautahi Christchurch before moving to Te Whanganui-a-Tara Wellington in 2015. Erin has worked in legal, advocacy, and policy roles in the community and public sectors. Disabled since birth, Erin is a strong advocate for the rights of disabled people.

Erin, you’re a wheelchair user who commutes daily into the CBD. Can you talk us through a typical day from a transport perspective? How accessible is your commute?

When everything goes to plan, it’s fairly accessible! But this relies on several factors, like:

The local mechanic not having cars they’re working on parked over the footpath. If this happens, I have to yell out for them to move the cars and by the time I’ve done that, I’ve often missed my bus.

There being no prams or wheelchair users on the bus already. Even though there are theoretically two spaces, there is usually not enough room for me to get past into the other one, because I have a bulky power chair. One of my flatmates also uses a power chair, which means we usually take separate buses if we go out together (yes really). On older buses, I sometimes have to reverse down the aisle and off the ramp because there is no turning space. This feels stressful and unsafe!

An accessible bus stop. Due to Wellington’s geography, there are quite a few stops that I can’t get to – up or down steps, on steep hills, and so on – so I sometimes use the stop before or after the one I actually need and take a longer route.

The bus actually stopping. This hasn’t been a problem in the last few years, but I have had awful experiences in the past when drivers would pretend not to see me and leave me waiting because they didn’t want to stop and put out the ramp.

What about outside of your commute – how easy is it for you to access transport for activities in your down time?

Fairly difficult! Especially if I want to go somewhere that doesn’t have a direct bus route, or go with my wheelchair-using flatmate. There is a huge shortage of accessible taxis, especially in Wellington. None tend to operate past about 6pm unless I book days in advance, and even then, there’s no guarantee. This is hugely limiting and has been the cause of many missed events when figuring out the logistics was just too stressful. As you can imagine, it is not conducive to down time at all.

A few years ago, a flight I was on was so delayed that by the time it landed in Wellington, the airport bus had finished for the night. I phoned everywhere trying to find an accessible taxi, and in desperation, ended up paying \$200 for a driver from the Kāpiti Coast. There was a media story about it later and some people commented that I should have planned more carefully! I still get angry thinking about it.

Based on your observations, roughly how much time and mental load do you spend planning your mobility compared to what a non-disabled person might?

As you can see from my responses, I can never just expect to be able to get where I need to go, like non-disabled people can. I spend at least some time planning every trip. If it’s just my regular commute, I will build in time in case any of the things I listed in the first question happen, but it is generally quite automatic.

If I'm going somewhere less familiar though, I spend significant time researching the route, the topography, the types of buses, and how often they come. Going out as a flat requires even more planning, since we usually need to take separate buses. If we're lucky, one of us will only be left waiting for the others for a few minutes; if not, it could be fifteen or twenty.

There's no longer a direct bus to the airport, so if I'm flying, I plan weeks in advance, usually choosing my flights based on when I'm most likely to get a taxi. In April, I went to Queenstown with two friends, one of whom also uses a wheelchair. I contacted a local company and was told there was only one accessible taxi and it could only take one wheelchair. In the end, we hired an accessible taxi from Christchurch. We paid for someone to drive it to Queenstown, and then my friend drove it for the week. It was pricey, but worth it for the freedom. This is a classic example of a *crip tax*.³

You're also a human rights expert – how well do you think Aotearoa New Zealand's transport system upholds the rights of disabled people to live independently and participate fully in all aspects of life?

Not well. Not having accessible transport has huge impacts on where people can live and what kind of life they can lead. These issues are exacerbated in rural areas and small towns, where many people have no accessible public transport options at all. There is also a complete lack of accessible transport options *between* cities and towns; none of the InterCity buses are wheelchair accessible. And of course, accessibility is not only about wheelchair access, but also things like visual and audio announcements and timetable information in accessible formats like Easy Read.

The UN Convention on the Rights of Persons with Disabilities says States should ensure disabled people have equal access to transportation. New Zealand is clearly falling well short of this obligation, despite ratifying the Convention in 2008.

The Human Rights Commission held an inquiry into accessible transport in 2005 which found disabled people faced acute, ongoing difficulties. While there have been small improvements, most of the recommendations from its report still apply sixteen years on, which is depressing.⁴

In this report we advocate for policies to reduce New Zealanders' collective dependence on cars. Can you see any potential fishhooks for disabled people in these kinds of policies?

Yes. While these sorts of policies are clearly important, often they forget to take disabled people into account and end up further isolating an already marginalised group.

For some disabled people, a car is very much a mobility aid, and should be treated as such. I think the solution is to encourage non-disabled people for whom cars are a 'nice-to-have' to use them less by providing solid public and active transport infrastructure, rather than making disabled people 'prove' they need a car. I'd like to see lots of practical, accessible alternatives to driving, so that we can assume without judgement that anyone using a car has a good reason.

For more from Erin, [follow her on Twitter](#) or read her personal essay "Repairing 'an invisible coat of shame'" on the [RNZ website](#).

³ Many disabled people have reclaimed 'crip' as an empowering self-identifier (from the outdated and ableist term 'crippled'). Erin's use of 'crip tax' here refers to the hidden costs of disability. For a useful explainer, see "The 'Crip Tax': Everything Has a Cost, but for People with Disabilities That's Quite Literally the Case," John Loepky, CBC, April 15, 2021, <https://www.cbc.ca/news/canada/saskatchewan/crip-tax-opinion-1.5856848>.

⁴ Inquiry into Accessible Public Land Transport in 2005, Human Rights Commission, <https://www.hrc.co.nz/our-work/people-disabilities/past-projects/accessible-journey/>.

Whose mobility is constrained?

Everyone will experience some barriers to mobility at different times and may decide to temporarily vary or alter their travel decisions accordingly. In 2019, 10 percent of adults reported being unable to make a beneficial transport journey in the past week, due to cost, time, lack of transport and/or too much traffic. This gives an indicative snapshot of how people's mobility is constrained at any given time.

The odd deferred journey due to temporary, external conditions is no big deal, but some people and groups are much more likely to experience multiple, ongoing, and compounding mobility barriers that restrict their mobility in a more permanent way. The result is an inequitable transport system that disproportionately restricts the mobility (and thus reduces the employment, education, social, and cultural opportunities) of already disadvantaged people.

Those most likely to experience ongoing transport disadvantage and poverty include: Māori; disabled people; people on low incomes or who live in low-income areas; women; takatāpui, queer and LGBTQI+ people; new migrants and ethnic minorities; and Pacific people. Often people will belong to more than one of these groups and may experience overlapping and compounding transport inequity as a result.

Māori

Globally, indigenous populations contribute little to carbon emissions, and tend not to have benefited equitably from the mobility that has caused these emissions. Despite this, they are often most likely to experience transport-related disadvantage and poverty, and may be especially vulnerable to the negative impacts of climate change. This arises from a combination of the inter-generational impacts of colonisation, and contemporary policies and practices that fail to adequately consider, uphold, or address the needs of indigenous people.



In Aotearoa New Zealand, Te Tiriti o Waitangi creates obligations on the Crown to recognise and uphold the rights of Māori as tangata whenua and ensure that public policy and services (including the transport system) deliver equity for Māori. This is not being achieved at present. While there are gaps in data and research specifically about Māori and transport, the available evidence points to a situation in which Māori experience disproportionate disadvantage and harm in the transport system compared to non-Māori.

Māori are much more likely than non-Māori to live in low-income households, meaning they are more likely to experience transport poverty and cost-related barriers to mobility. Māori are more likely than non-Māori to go without seeing a doctor due to a lack of transport. This not only creates a transport disparity but contributes to the well-documented health disparities and lower life expectancy that Māori also experience on average.

There are also pathways from transport disadvantage to the criminal justice system that disproportionately affect Māori. Research suggests that, due to cost, Māori (particularly Māori men) may be more likely than non-Māori to drive without a licence or drive unregistered or unwarranted vehicles. Sometimes this is done to meet their own urgent transport needs, and often to support the needs of whānau.⁵ Unfortunately, Māori are also more likely to be stopped by Police than non-Māori and thus more likely to be issued with fines for relatively minor traffic infringements which, if they go unpaid, can eventually result in imprisonment. According to the Howard League for Prison Reform, 65 percent of Māori offenders have a driving offence as part of their initial prison sentence, and about 5 percent of all sentences are just for driving without a licence.⁶ On top of that, around 80 percent of employers require a current drivers' licence as a condition of employment, so Māori finishing prison sentences or who have lost their licence as the result of a driving offence can face an additional barrier to reintegration.

Māori also experience major inequity in road safety outcomes. Because they are more likely to experience low income, Māori are less likely than non-Māori to own a vehicle, and the vehicles they do own are more likely to be old and unsafe compared to more modern vehicles. Māori of all ages face higher risk of road trauma than all other ethnicities, likely due to a combination of higher rates of travel in less safe vehicles, lower levels of driver education, and higher exposure as a pedestrian because of lack of access to cars.

Finally, Māori have higher rates of disability than any other ethnic group, which as we will see in the next section also disproportionately predisposes them to transport poverty and transport-related social disadvantage. The net effect is that many Māori experience multiple, intersecting risk factors that restrict their mobility and contribute to other forms of disadvantage.

Disabled people

In her contribution to our April 2021 report about pandemic loneliness *Still Alone Together*, Disabled Persons' Assembly NZ Chief Executive Prudence Walker explained the 'social model' of disability:

*"As disabled people, we are not disabled by our bodies but by society and the constructs (physical, social, attitudinal, informational) within it. [The social model of disability] places the responsibility on society to create a non-disabling world and not [on] individuals who live with impairments."*⁷

The transport system is unfortunately a major source of exclusion for disabled people, and this can take many forms. Some disabled people have impairments that mean driving is their only transport

⁵ K. Raerino, Alex K. Macmillan, and Rhys G. Jones, "Indigenous Māori Perspectives on Urban Transport Patterns Linked to Health and Wellbeing," *Health & Place* 23 (September 1, 2013): 54–62, <https://doi.org/10.1016/j.healthplace.2013.04.007>.

⁶ "Driving Programme," The Howard League for Penal Reform New Zealand, n.d., <https://www.nzhowardleague.org.nz/driving/>.

⁷ Holly Walker, "Still Alone Together: How Loneliness Changed in Aotearoa New Zealand in 2020 and What It Means for Public Policy," Post-Pandemic Futures Series (Auckland: The Helen Clark Foundation and WSP, April 2021), <https://helenclark.foundation/still-alone-together-report>.

option. Because disabled people are much more likely than non-disabled people to live on low incomes, this places many in a situation of forced car ownership and transport poverty. For others, their only option may be to be driven by others. While subsidies are available through the Total Mobility scheme to reduce the cost of taxis and public transport for people in this situation, even a half-price taxi can be out of reach for someone on a very low income, and many people report availability issues when trying to book a taxi through this scheme.

Another group of disabled people are those who do not drive, either because their impairments prevent it, or because the costs of car ownership are too high. These people are heavily reliant on public transport. Yet as illustrated by Erin Gough on page 18 public transport is often inaccessible to disabled people, including: physically inaccessible bus stops or train stations; public transport vehicles with limited seating for wheelchair users or inadequate seating for those with invisible, chronic, or underlying impairments; timetable, fare, and ticketing information and systems that are hard to read or overly complicated for those with hearing impairments, low vision, or intellectual impairments; and crowded, noisy, or overwhelming transport environments that are triggering or overstimulating for those with neurodiverse conditions. These factors likely prevent many disabled people from travelling as often as they would like to, and contribute to the compounding systemic barriers that keep many disabled people underemployed, socially isolated, and excluded from society. This is known as transport-related social disadvantage.

Active transport is another area in which many disabled people are effectively excluded. Some disabled people can use the limited active transport infrastructure we currently have, but others could make greater use of active transport modes if footpaths, cycle lanes, and shared paths were designed with disabled people in mind. This could include wider cycle lanes for those with modified bikes, less cluttered footpaths with fewer hazards for those with low vision, safe spaces for wheelchairs or mobility scooters (either wider footpaths or genuinely shared lanes that make adequate provision for mobility aids as well as bikes), and better aural cues and soundscaping to help people with hearing impairments to navigate urban spaces.

One major gap in our knowledge about disabled people's transport needs (and other forms of transport inequity) is that we do not collect good data about the trips that people forgo because of a lack of transport options. While we know from qualitative studies and statistics about disabled people's general wellbeing that this is an important issue, there is not enough sound data about unmet transport need to enable transport planners to model the likely effects of a more accessible public transport system on disabled people's mobility or increased total patronage.

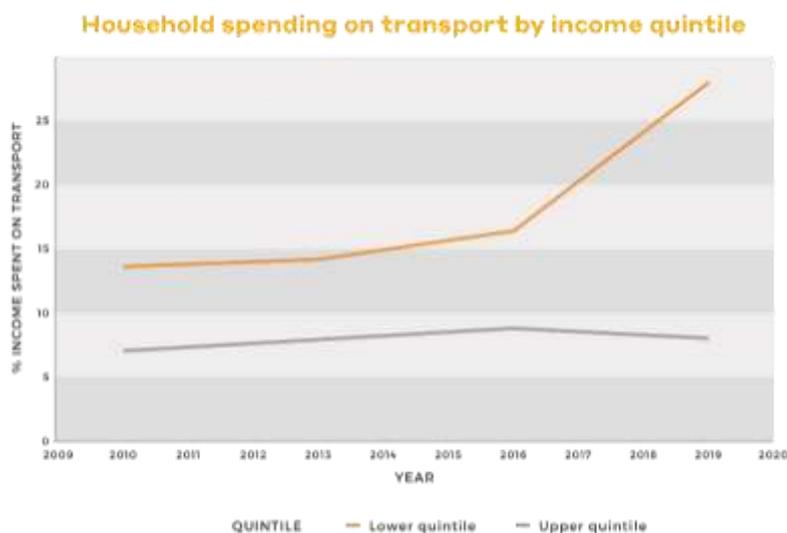
People on low incomes (or who live in low-income areas)

Low income is a leading cause of transport inequity, disadvantage, and poverty. People living on very low incomes are more likely than others to forgo necessary trips because of cost, whether this is the cost of fuel or public transport. They are less likely to have access to a vehicle, and (on the flipside of the same coin) are also more likely to experience forced car ownership because of a lack of realistic alternatives.

As an example, on any given day, driving may be the only available option for someone on a very low income, because it does not incur immediate cost. While the actual cumulative costs of fuel and car maintenance may make driving more expensive on a per-trip basis than a bus or train ride to the same destination, those costs are hidden and deferred. Public transport requires on the spot payment (whether in cash or with a topped-up card), and for many people on low incomes, this is a challenge. In fact, people on low incomes often pay *more* than people with higher incomes to use

public transport, because they are more likely to purchase single fares than buy discounted multi-trip tickets, monthly passes, or make large top-ups on an electronic ticketing card. In this way, multi-trip fare subsidies can make it harder for people with low income to get around, require them to spend more on travel than others (in both real and proportional terms) and, perversely, reward those who can reasonably afford to pay more upfront with the cheapest travel.

There is significant disparity in the proportion of income that low-income households spend on transport compared to high income households. In 2019, households in the lowest income quintile spent 28 percent of their household budget on transport, while those in the highest quintile spent just 8 percent.⁸



While it had been the case since at least 2010 that low-income households spent a greater proportion of their income on transport than high-income households (by a margin of roughly 6 percent), the gap has widened rapidly since 2016, with the transport spend of high-income households falling slightly, while that of low-income households steeply increased. It is not clear exactly what precipitated this dramatic change in 2016. Petrol prices experienced a reasonably sharp rise around that time, as did housing unaffordability. More low-income households may have moved out of urban centres in search of affordable housing, creating longer travel distances. More research is needed to understand exactly what caused and continues to drive this widening inequity in transport spending.

As well as spending a greater percentage of their income on transport and sometimes paying more per trip than those with greater financial resources, people whose mobility is constrained by cost are also likely to pay more for basic consumer items. They are more likely to purchase food and groceries from local dairies and convenience stores that charge high mark-ups, and may also purchase household items like clothes, small appliances, and gifts from mobile shopping vans offer low or no-deposit upfront but charge extremely high compound interest. Such purchases can fuel a further cycle of financial stress for many families.

There are also disadvantages to living in a low-income area (which is mostly, but not entirely correlated with having a low income). Across Tāmaki Makaurau Auckland, only a little over 40

⁸ *Inclusive Access: Household Spending on Transport*, Transport Indicators (Ministry of Transport), <https://www.transport.govt.nz/statistics-and-insights/transport-indicators/>.

percent of people live within walking distance of public transport; this tends to be worse for people in low-income areas. A 2019 study measured public transport connectivity in Auckland based on the extent of train and bus services, stops, and stations, and concluded that, on average, people in low-income areas had poorer connectivity and were more likely to live further from their destinations, face longer journey times, and need to transfer between services to reach their destinations.⁹ Current farebox recovery requirements incentivise public transport operators to focus on profitable high-patronage routes over meeting the unmet transport needs of disadvantaged communities.

By contrast, people with high incomes are more likely to benefit from public transport, because they are more likely to live within walking distance of a stop, be able to reach their destination with a single trip, and be served by more frequent and reliable services. They also tend to be more vocal in requests for improvements, more likely to participate in consultation, and more likely to vote in local and national elections. As a result, they may be the first to benefit from network improvements or new services, even if the unmet need is higher in low-income areas.

⁹ Saeid Nazari Adli, Subeh Chowdhury, and Yoram Shiftan, "Justice in Public Transport Systems: A Comparative Study of Auckland, Brisbane, Perth and Vancouver," *Cities* 90 (July 1, 2019): 88–99, <https://doi.org/10.1016/j.cities.2019.01.031>.

Low-carbon, shared community transport solutions

‘Community transport’ refers to volunteer-based transport services that are specifically designed to meet the needs of a particular group. There are a huge range of activities captured under the umbrella of community transport. Examples include:

- Schools with teen parent units that provide a shuttle service to bring mothers and their babies to school (and its onsite crèche) in the morning and home in the afternoon.
- Door-to-door services to connect older people with important local destinations like supermarkets, doctors’ surgeries, and libraries;
- Formal and informal shared mobility within whānau, hapū, and iwi to support to access important locations like marae, attend events like tangi or wānganga, or transport tamariki to and from kōhanga reo or kura.
- Workplaces that provide all-hours transport for shift workers.

Expanding the range and reach of community transport schemes like these has significant potential to improve equity and respond to unmet transport need in diverse communities, yet they are largely absent from transport policy discussions. Indeed, those who operate these services probably don’t often think of themselves as providing a transport service either.

Community transport solutions need to be part of the decarbonisation strategy for urban transport. At scale, operating frequently and achieving wide coverage, they have the potential to significantly reduce the need for individual car ownership within a diverse range of communities.

Ramping up the provision of low-carbon, shared community transport to the extent that it could start to influence VKT will require much greater collaboration than currently exists between communities, transport agencies, and local and central government. We need to know where community vans and shared vehicles already exist, how they are used, and what kind of support they need, and then start to provide that support. This could include direct funding, but also things like streamlined procurement of vehicles, assistance with the costs of insurance and maintenance, and recruitment and support for volunteer drivers.

Women

At a broad level, men and women have different travel patterns. In general, men tend to travel more, take more and longer work trips, and travel more at peak times. By contrast, women travel more at off-peak times, use cheaper transport modes, take more trips with multiple destinations strung together (known as ‘trip-chaining’), and are less likely to have access to a car. Women are also more likely than men to take frequent trips over short distances for social or recreational purposes.

This is important, because by and large, our transport system – from its embedded assumption that cars will be the primary mode, to public transport designed to move large numbers into urban centres at peak times, to narrow cycle lanes designed for medium distance commuter cyclists – has been designed with men’s travel patterns in mind.

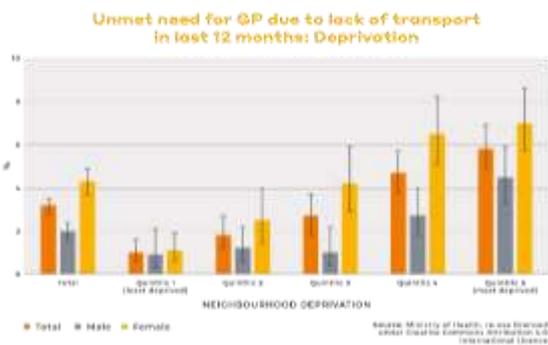
This creates gender disparity in the experience of transport disadvantage and barriers to mobility. Internationally, women are more likely to experience transport-related social disadvantage from missing out on opportunities to participate in society due to a lack of transport options (this may be especially true of sole parents, who are predominantly women, because of both the cost and

complexity of trip patterns with children). They are also much more likely to experience the threat of harassment or violence in public spaces, to report feeling unsafe using or waiting for public transport or in taxis or ride shares, less likely to travel alone, and more likely to report stress or anxiety from the logistics and planning involved accessing important destinations while managing these risks.

These international trends are reflected in Aotearoa New Zealand, where women travel less distance overall by car than men, and are more likely to be passengers than drivers. They travel greater distances by public transport than men, despite the fact that public transport services tend not to be well-matched to their transport needs. They walk greater distances than men, but are much less likely to cycle.

A recent study of attitudes to cycling for Māori and non-Māori women in one city found that safety was a major barrier, with participants identifying “a triple burden” of perceived traffic danger, personal safety as women, and the need to be safety-conscious because of their responsibilities for others making them less likely to cycle.¹⁰ Gendered differences in active transport start young, with girls less likely than boys to be allowed to travel independently to school, and considerably less likely to cycle, often citing reasons of school uniform.

Women are more likely than men to forgo a doctor’s visit for transport reasons, with young Māori and Pacific women most likely to be affected.



While most gender-related transport disadvantage is experienced by women and minority genders, there are also negative implications for men, namely in road deaths and injuries. Men are more likely than women to be killed or injured on the roads and have a higher hospitalisation rate for traffic injuries across all transport modes.

Takatāpui, queer, and LGBTQI+ people

There is a lack of detailed and specific research about the transport experiences of the queer community both here and overseas, but there is emerging evidence to suggest that they also face considerable transport-related inequity, disadvantage, and poverty.

Like women, takatāpui and queer people may face heightened risks of bullying, harassment, threatening behaviour, and physical or sexual assault in public spaces, including while using or waiting for public transport. In the ‘Counting Ourselves’ survey of more than 1000 transgender and nonbinary people in Aotearoa New Zealand in 2019, 18 percent reported avoiding public transport or taxis due to fear of being mistreated. Such fears are well-founded: reflecting on their experiences of using public transport or taxis, 9 percent of respondents reported being treated unfairly, 15

¹⁰ Marie Russell et al., “Pedalling towards Equity: Exploring Women’s Cycling in a New Zealand City,” *Journal of Transport Geography* 91 (February 1, 2021): 102987, <https://doi.org/10.1016/j.jtrangeo.2021.102987>.

percent reported being verbally harassed, and 2 percent reported having been physically attacked.¹¹ Fixing this problem is not simply a matter of reducing the incidence of harassment or violence in public spaces; as Kiri Crossland points out in a paper on queer urban planning, truly public spaces must also be actively welcoming to people who are not straight men.¹²

Because of the discrimination they can face in wider society, transgender and nonbinary people are more likely to be unemployed and/or live on very low incomes. In a US study, transgender and gender non-conforming participants reported low incomes and either a lack of employment opportunities, or precarious casual employment that did not conform to peak commuter times. The low-income areas where they could afford to live tended not to be well-served by public transport (an international phenomenon that is replicated here, especially in Tāmaki Makaurau Auckland), and they reported infrequent services and long wait times which heightened their vulnerability to harassment and abuse. In Aotearoa New Zealand too, respondents to the ‘Counting Ourselves’ survey of transgender and nonbinary people reported an income approximately half that of an average New Zealander. This means transgender and nonbinary people (and others from the LGBTQI+ community) are more likely to experience transport poverty and disadvantage. In the ‘Counting Ourselves’ survey, 77 percent said they had done without, or cut back on trips to the shops or other local places.¹³

Pacific people and other ethnic minorities

Globally, ethnic minority groups are more likely to experience transport inequity due to a combination of lower-than-average income, being more likely to live in outer suburbs that are not well-served by public transport, and having greater exposure to safety risks like harassment, air pollution, and traffic accidents (especially as pedestrians since they are less likely to own a car).

Pacific people in Aotearoa New Zealand experience many of these things, but with particular characteristics that are worth noting. Like Māori, Pacific people are much more likely than other ethnicities to go without visiting a doctor for transport reasons, and this contributes to wider well-documented health disparities. Recent analysis of transport patterns and contributions to climate emissions between different ethnic groups is revealing important findings about Pacific people’s mobility. Pacific people travel the shortest distances of any ethnicity across all transport modes, own the fewest cars, and contribute the least of any ethnic group to carbon emissions, by approximately one-third.¹⁴ This means it will be particularly important to ensure our efforts to decarbonise the transport system do not negatively impact Pacific people.

Specific research about transport inequity for ethnic minorities in Aotearoa New Zealand more generally is patchy, but it supports the conclusion that they are more likely to experience low income and the transport disadvantage and poverty that comes along with this. Asian women are amongst those more likely to report missing a GP visit for transport reasons, for example. It is likely that difficulties with accessing timetable and ticketing information or communicating with drivers in

¹¹ Jaimie Veale et al., “Counting Ourselves: The Health and Wellbeing of Trans and Non-Binary People in Aotearoa New Zealand,” Report (Transgender Health Research Lab, 2019), <https://researchcommons.waikato.ac.nz/handle/10289/12942>.

¹² Kiri Crossland, *Sex(Uality) in the City: Planning for Queerer Public Space*, MRCagney, August 19, 2021, <https://www.mrcagney.com/about/blog/sexuality-in-the-city-planning-for-queerer-public-space/>.

¹³ Veale et al., “Counting Ourselves.”

¹⁴ Caroline Shaw and Jemaima Tiatia-Seath: *Travel Inequities Experienced by Pacific Peoples in Aotearoa/New Zealand* (unpublished research, paper under review), 2021.

English as a second language is a barrier to mobility for some people from ethnic minorities, particularly new migrants.

A 2016 issues paper noted that in Tāmaki Makaurau Auckland, a high proportion of young people from ethnic minority and migrant backgrounds are enrolled in tertiary education in the central city and elsewhere.¹⁵ Their transport needs are primarily to access education and part-time jobs, but there has been little research undertaken into how well Auckland’s transport system enables them to do this.

We don’t have good data about how trip patterns vary between ethnic groups, nor how well members of ethnic minorities feel they are served by the current transport system. It is likely that there is considerable unmet need amongst these groups, and considerable variability between them, but with current data currently it is not possible to get a clear picture of the extent of unmet transport need amongst ethnic minority and new migrant communities.

¹⁵ Paul Spoonley et al., “Transport Demand Implications of Changing Population Age and Ethnic Diversity in Auckland: A Thought Piece,” Auckland Knowledge Exchange Hub (Massey University, May 2016).

Why a fairer transport system is better for everyone

As we have illustrated, there are major issues of equity and fairness in Aotearoa New Zealand's current transport system. There are many reasons to pursue **transport equity** (when the benefits and costs of transport policies and projects are fairly distributed), **transport justice** (when decision-making processes are fair, representative, and ensure the transport system meets the basic needs of everyone), and **mobility justice** (when unjust power relations and uneven mobility are fully addressed). Achieving an equitable transport system will benefit everyone.

Basic fairness and human rights

Few would contest the statement that everybody should be able to get where they need to go affordably, accessibly, and in good time. Being able to do so is a necessary precondition to accessing employment, education, social, and cultural opportunities. Yet as long as transport planners and decision-makers keep resourcing a transport system that restricts mobility for some while enabling it for others, we will never enjoy equality of opportunity in Aotearoa New Zealand.

This affects us all. At different times in our lives, we all experience some barriers to mobility. Often, this happens suddenly via a change of circumstances such as the birth of a child, the onset of an illness or impairment, loss of employment, or the ageing process. Such rapid loss of mobility can leave us isolated and vulnerable and can hinder recovery by making it harder to find work, see friends and family, or access recreation. In an equitable transport system, a change in circumstances would not necessarily entail a loss of mobility, and those with permanent impairments and restrictions would also enjoy full mobility. As noted by Erin Gough on page 19, the fact that Aotearoa New Zealand does not currently provide equal access to the transport system puts us in breach of our international human rights obligations.

Te Tiriti o Waitangi

It also puts the Crown in breach of its Te Tiriti o Waitangi obligations. The fact that Māori are more likely to have low incomes, experience disability, have chronic health conditions, be killed or injured on the road, find themselves on a path to the criminal justice system via minor traffic offences, and experience transport disadvantage and poverty are the legacy of discriminatory colonial policies over many decades.

When it was signed in 1840, Te Tiriti promised Māori tino rangatiratanga and equal citizenship, but it was consistently breached by the Crown in the way the country was settled and governed. Today, it creates obligations on the Crown to ensure public services (including the transport system) recognise Māori as tangata whenua, partner with hapū and iwi to deliver equitable outcomes for Māori, and share power and resources to enable 'by Māori for Māori' solutions and the exercise of tino rangatiratanga.

In transport, this could look like mandating Māori representation on transport decision-making bodies, handing authority to iwi and hapū to manage aspects of the transport system in their rohe, partnering with Māori to develop specific plans to improve transport outcomes for Māori, and supporting hapū, iwi, and kaupapa Māori organisations with the resources they need to play a larger part in transport decision-making and governance.

Opportunity cost

At present, there is a considerable opportunity cost from all the restricted mobility our inequitable transport system produces. It is difficult to quantify, because we don't have good data about the full extent of forgone trips, unmet transport need, or repressed demand, but it is reasonable to assume that if the transport system prioritised equity, there would be widespread benefits, not only for those directly affected, but for our economy and society as a whole. These benefits could include:

- More people accessing primary healthcare, reducing the demand for (and costs of) urgent care and hospitalisations when untreated conditions become critical.
- Fewer people injured or killed on the roads (especially the disproportionate trauma experienced by Māori), producing cost savings for the ACC and health systems and preventing grief, stress, and lost income for many families.
- More disabled people in employment, improving their income, skills, and quality of life, and producing productivity gains for the wider economy.
- Low-income households spending a smaller percentage of their income on transport, freeing up more income for the other things they need, and boosting their consumer power and economic impact.
- Greater use of active transport modes like walking, wheeling, and cycling (especially among Māori, Pacific people, and women) producing public health benefits from increased activity levels and reducing the unfair burden of ill-health.
- Safe, inclusive, violence-free public spaces that create the conditions for social connection and genuinely reflect the diversity of urban populations.

Learning the equity lessons from COVID-19

All over the world the COVID-19 pandemic has highlighted the consequences of allowing gross economic, social, and health disparities to emerge and continue between different groups in society. We have seen the impact of this in the inequitable burden of serious infections and deaths in disadvantaged populations, the greater economic impact sustained by people in precarious or low-paid jobs, and in uneven vaccination rates between different ethnic groups and geographic areas.

We should apply the lessons from these experiences and take the opportunity to address and improve widespread inequity and disadvantage with the policies, projects, and investments we pursue as part of the pandemic recovery effort. Investing heavily in more equitable transport will be an important way to do this.

As we have outlined, the solutions that will produce a more equitable transport system – such as more reliable and affordable public transport, fully accessible urban environments, safer streets for walking, cycling, and wheeling, and reduced congestion – will benefit everyone. By making the transport system work better for those most currently disadvantaged, we can not only reduce transport inequity, but improve the overall performance of the transport system and the fairness of our economy and society for everybody.

Fair outcomes require a fair process

Many of the barriers to mobility and inequitable outcomes documented in Part 1 have been understood for some time – long enough that we might reasonably expect them to have been factored into transport policies and decision-making processes to ensure that major new transport

investments reduce existing inequities. Unfortunately, this has not generally been the case either here or overseas.

The challenge of quantifying equity impacts

In many cases, proposals for new or upgraded transport projects are assessed using cost-benefit analyses (CBA), a process which involves identifying, measuring, and applying a value to potential costs and benefits of a project, and aggregating these to determine an overall score known as a Benefit-cost Ratio (BCR). This can be positive (the project will generate more benefits than costs), or negative (more costs than benefits). The BCR is then used to determine both whether the project is a sound investment, and to see how it compares to other similar or alternative projects.

Researchers over many years have pointed out that CBAs and BCRs tend not to adequately consider the social impacts of transport, or the fact that these impacts are not evenly distributed.¹⁶ These social and equity impacts are sometimes left out entirely, or they may be noted but disregarded. In part, this stems from the fact that the CBA method relies on being able to attach a monetary value to the costs and benefits of a project. This might be possible when it comes to factors like construction cost, current demand, journey times, job creation, and potential revenue, but is much harder for factors like failure to unlock existing unmet mobility needs, perpetuating gendered patterns of transport, or continuing to suppress active modes with high traffic volumes. When equity factors *are* included in CBA and BCR appraisal methods, they can tend to focus on the potential distribution of the quantifiable, monetised impacts across income brackets but exclude other dimensions of equity like gender, ethnicity, and disability.¹⁷ Researchers and policy-makers in Aotearoa New Zealand and elsewhere are beginning to expand the range of tools available to assess the equity implications of transport decisions, but this is yet to be widely reflected in the outcomes produced by the transport system, and more conventional CBA BCR methods remain dominant.

Embedding equity principles in high-level strategies

One way to address the challenge of quantifying equity impacts is to instead include equity principles in the strategies and plans that govern overarching transport spending, so that a clear intent to prioritise equitable outcomes is signalled to transport agencies and local authorities. This is the intent signalled in the Government Policy Statement on Land Transport 2021-2031 (GPS 2021)¹⁸ and the National Land Transport Programme 2021-24 (NLTP).¹⁹

The GPS 2021 states that the purpose of Aotearoa New Zealand's transport system is to "improve people's wellbeing, and the liveability of places" by delivering against four strategic priorities for the transport system in the next ten years: safety, better travel options, improving freight connections, and climate change. The NLTP is a three-year programme of prioritised activities and is intended to

¹⁶ Karel Martens, "Substance Precedes Methodology: On Cost-Benefit Analysis and Equity," *Transportation* 38, no. 6 (September 17, 2011): 959, <https://doi.org/10.1007/s11116-011-9372-7>.

¹⁷ A. Curl et al., *Social Impact Assessment of Mode Shift*, p 43, (NZ Transport Agency Research Report, University of Otago, September 2020), <https://www.nzta.govt.nz/resources/research/reports/666>.

¹⁸ *Government Policy Statement on Land Transport 2021-2031* (Wellington: Ministry of Transport, September 2020), <https://www.transport.govt.nz/area-of-interest/strategy-and-direction/government-policy-statement-on-land-transport-2021/>.

¹⁹ *Ngā Kaupapa Huarahi o Aotearoa National Land Transport Programme 2021-2024* (Wellington: Ministry of Transport and Waka Kotahi, August 2021), <https://www.nzta.govt.nz/planning-and-investment/national-land-transport-programme/2021-24-nltp/>.

give effect to the GPS 2021 by determining exactly where transport expenditure will be invested, using the policy intent signalled in the GPS as a guide.

Although both documents have a reasonably strong focus on wellbeing and equity in their high-level objectives, by the time they get to detailed policies, priorities, and projects, they are vague about specifically how these will advance equity in the transport system. In this way, there is a risk that these national instruments will replicate international findings that even when strategies and plans mention equity, they have underdeveloped objectives and tools for addressing it. In such circumstances, it is easy to see how decision-makers fall back on conventional evaluation tools like BCRs, perhaps noting that equity impacts of a policy or project should be monitored, but not actively using them to guide their decisions.

‘Reprogramming’ the transport system

Delivering a transport system that achieves the Government’s stated purpose of “improving people’s wellbeing and the liveability of places” will require effectively ‘reprogramming’ the decision-making policies and process that govern the transport system in Aotearoa New Zealand to embed equity at all levels. This should include:

- Developing new tools and methods to accurately evaluate the social and equity impacts of transport decisions (not simply grafting these onto existing methods).
- Gathering robust data that fills current knowledge gaps about transport and equity, especially about forgone trips, unmet need, and latent or suppressed demand for mobility that could be unlocked by more equitable policies and programmes.
- Enhancing how equity considerations influence decision-making, aiming not simply to mitigate negative impacts, but to actively improve the fairness of the transport system.
- Involving members of disadvantaged communities in transport decision-making, including by mandating Te Tiriti partnership, ensuring representation from affected communities on transport decision-making bodies, co-designing local projects with those directly affected.
- Taking a more proactive and purposeful approach to community engagement to ensure a wider range of voices and perspectives are heard.

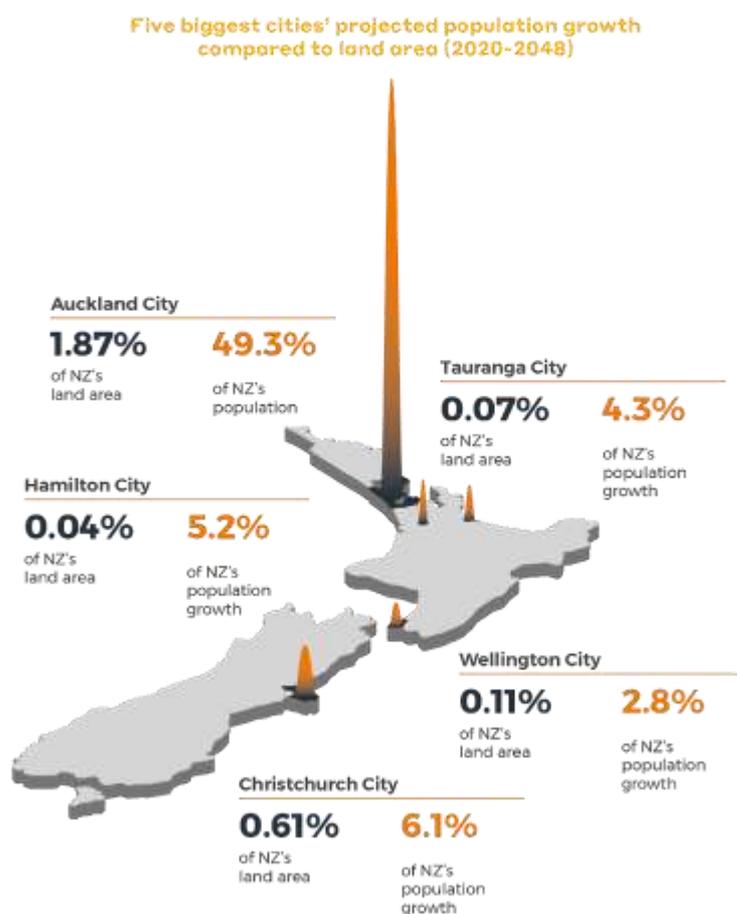
The many inequities in the current transport system are the result of decades of transport planning with a certain set of underlying assumptions and criteria. As with many systems and processes, we get out what we put in. If we base our future transport decisions on equitable inputs, it is much more likely to deliver equitable outcomes.

Part 2: The Shared Path – why reducing car dependence is critical, and the risks of getting it wrong

Part 1 illustrated how our inequitable, car-dominated transport system constrains mobility and limits opportunity for thousands of people. The transport system is also our second-largest source of carbon emissions. It kills or injures thousands of people each year, undermines public health, creates harmful air and noise pollution, and is detrimental to our collective mental wellbeing.

In Part 2, we focus on the second key objective that transport policy and decision-making will need to prioritise if Aotearoa New Zealand is to transition to the equitable, low-traffic cities we need in the future: reducing our collective dependence on cars as our main form of urban transport.

Nearly three quarters of Aotearoa New Zealand’s population growth in the next 30 years will happen in cities. Tāmaki Makaurau Auckland alone will account for half this growth. By 2048, there will be almost one million more people living in our cities than there were in 2018.



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²⁰ “He Tūāpapa Ki Te Ora | Infrastructure for a Better Future: Aotearoa New Zealand Infrastructure Strategy Consultation Document” (New Zealand Infrastructure Commission Te Waihanga, May 2021), 63, <https://infracom.govt.nz/assets/Uploads/Infrastructure-Strategy-Consultation-Document-May-2021.pdf>.

This growth places increasing pressure on our urban infrastructure and creates demand for new investment, including new and improved transport infrastructure. Te Waihanga, the New Zealand Infrastructure Commission, notes that the major challenges facing our cities include:

- High levels of traffic congestion.
- Poor availability of public transport and walking and cycling options.
- Urban design that leads to poor quality-of-life.²¹

All these challenges stem at least in part from the same problem: a transport system predicated on an assumption of car dominance. They also have a shared solution: reduced car dependency.

But we must take care with how we pursue reduced car dependency in the transport system. By and large, those most disadvantaged by the current system are also those who contribute least to transport-related emissions and are most likely to experience transport-related poverty or disadvantage. It is therefore essential that whatever policies we adopt to encourage people to drive less do not unfairly impact those who are not causing the problem.

In this Part, we first set out the climate change, road safety, and wellbeing arguments for pursuing reduced car dependency, including the commitments the Government has made both domestically and internationally that will require significant change in this area. We then detail the risks of attempting to decarbonise urban transport without adequately considering equity, before setting out what equitable, low-traffic cities could look like in Aotearoa New Zealand in future. We look at Scotland's recent National Transport Strategy 2020-2040 as a model of what it looks like to embed improved equity and reduced emissions into transport policy, and comment on the potential of street-level changes to reduce traffic volumes to play an ongoing part in our COVID-19 recovery.

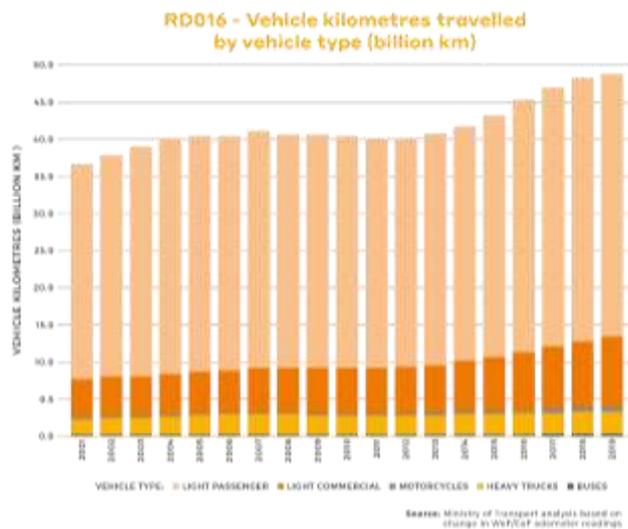
This Part features two inserts from our partners at WSP, one about the potential of the 20-minute cities movement to advance equity and decarbonisation in Aotearoa New Zealand (building on their own recent report on this topic),²² and one proposing four bold ideas that could rapidly decarbonise urban transport.

²¹ "He Tūāpapa Ki Te Ora | Infrastructure for a Better Future: Aotearoa New Zealand Infrastructure Strategy Consultation Document."

²² "20-Min City in Aotearoa" (Auckland: WSP New Zealand, 2021), <https://www.wsp.com/-/media/Insights/New-Zealand/Documents/20-Min-City-in-Aotearoa.pdf>.

The case for reducing car dependency

Aotearoa has one of the highest rates of car ownership in the OECD, and we spend the vast majority (83 percent) of our travel time in cars. The cumulative distance New Zealanders travel by car each year has increased steadily since 2011 and totalled 35.5 *billion* kilometres in 2019.²³ That's about the same distance as travelling from the Earth to Mars and back 325 times.



The fact that most people choose driving as their primary mode of transport makes sense within our car-dominated transport system. When the alternatives to driving are inconvenient, inaccessible, unsafe, or non-existent, driving is sometimes the only practical option, and can often seem easier and more affordable than taking public transport, walking, or cycling, at least at face value. This can especially be the case for disadvantaged or marginalised groups or individuals, as set out in Part 1.

Many people require a car for their jobs, especially if they live or work in an area that is not well-served by public transport. Not having access to a car can be a significant barrier to accessing employment and healthcare, especially for young people and Māori.²⁴ Some disabled people have impairments that make cars – whether self-driven or driven by others – their only transport option (though many other disabled people are heavily reliant on public transport). Māori driving patterns often reflect and uphold cultural values like whanaungatanga, and very often driving is the only way to access important cultural destinations like marae that are not located on public transport routes.

For those who have grown up in societies or cultures that strongly normalise car use, cars have come to represent and embody values like freedom, independence, and opportunity. We often view cars as extensions of our homes and reflections of our personalities, and it can be very hard to imagine life without them. Car manufacturers and advertisers sell us on this vision of convenient, car-based personal mobility, but in reality, it simply cannot be delivered in a growing city. Instead, we are left

²³ The impact of the COVID-19 pandemic in 2020 is yet to be reflected in the Ministry of Transport's statistics.

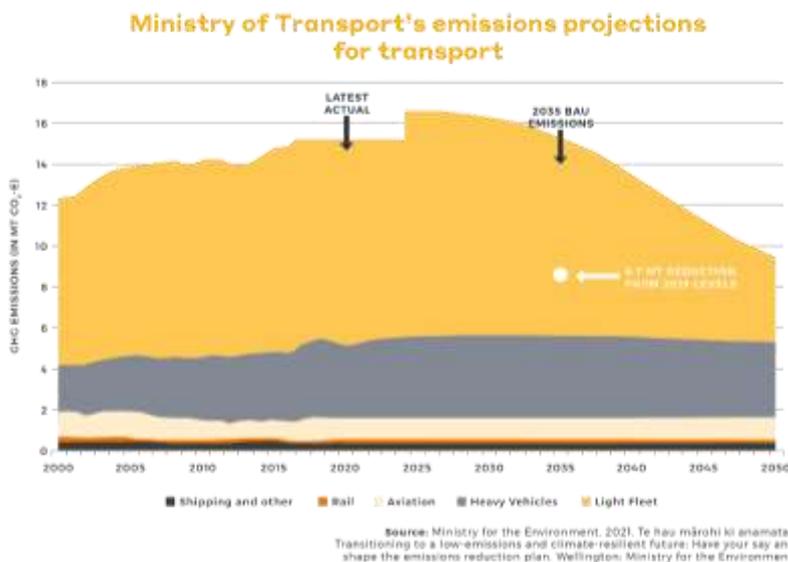
²⁴ Greer Hawley et al., "The Normative Influence of Adults on Youth Access: Challenges and Opportunities in the Context of Shifts Away from Car-Dependence," *Journal of Transport & Health* 16 (March 1, 2020); K. Raerino, Alex K. Macmillan, and Rhys G. Jones, "Indigenous Māori Perspectives on Urban Transport Patterns Linked to Health and Wellbeing," *Health & Place* 23 (September 1, 2013): 54–62.

stuck in traffic, frustrated, and ready to demand more roads and parking spaces to ‘fix’ the problem, when in fact, this collective reliance on cars comes at huge cost.

Climate change

The transport sector is our second-largest source of carbon emissions, and accounts for around 43 percent of domestic CO₂ emissions (and 20 percent of gross domestic greenhouse gas emissions).²⁵ More than half these emissions come from private vehicles and in Tāmaki Makaurau Auckland, 40 percent of all carbon emissions come from private cars.²⁶

Reducing private vehicle use is increasingly seen as a key plank of effective climate change policy, here and overseas. The ERP consultation document identifies “reducing reliance on cars and supporting people to walk, cycle and use public transport” as the first of three target areas for decarbonising the transport sector, and proposes a specific target to “reduce vehicle kilometres travelled (VKT) by cars and light vehicles by 20 percent by 2035 through providing better travel options, particularly in our largest cities.”



While policies to reduce car dependence and VKT are far from uncontroversial with the public (quite the opposite), it is increasingly accepted by experts and decision-makers that it will simply not be possible to meet emissions reduction targets without significantly and purposefully reducing widespread car dependence in the transport system.

In Tāmaki Makaurau Auckland, even building six major new public transport projects, electrifying buses, increasing vehicle emissions standards and increasing the proportion of electric vehicles will have little impact on transport-related emissions unless there is a major reduction in the number of

²⁵ *Te Hau Mārohi Ki Anamata - Transitioning to a Low-Emissions and Climate-Resilient Future: Emissions Reduction Plan Consultation Document* (Wellington: Ministry for the Environment, October 2021), <https://environment.govt.nz/assets/publications/Emissions-reduction-plan-discussion-document.pdf>.

²⁶ *Decarbonising for a Prosperous New Zealand*, <https://www.beca.com/ignite-your-thinking/ignite-your-thinking/may-2020/decarbonising-for-a-prosperous-new-zealand>

cars on the road.²⁷ As the ERP consultation document notes, “the scale of change to achieve these reductions and complete decarbonisation cannot be overstated.”

Crucially, electric vehicles are included in the need to reduce car dependence and VKT. Auckland University researchers have pointed out that relying primarily on electric vehicles to decarbonise transport will not reduce emissions quickly enough to meet our 2050 targets and leaves disadvantaged populations increasingly vulnerable to the risks of climate change. Simply replacing petrol and diesel cars with electric ones will do nothing to address car dependency and forced car ownership and risks effectively locking these causes of transport poverty and inequity into the future transport system.²⁸

Relying on electric cars to reduce our net emissions is also globally irresponsible. Making cars (regardless of how they are powered) contributes significantly to emissions in the country of manufacture and fuels unsustainable demand for component minerals in others. If we import large numbers of electric vehicles, we will make our displaced emissions someone else’s problem, and contribute to exploitative mining and human rights abuses in countries with few regulatory protections. Reducing traffic volumes, on the other hand, would be good for both domestic and international inequity, because it has the potential to reduce our reliance on imported embedded carbon at the same time as creating major environmental, health, safety, and equity benefits here.

People with greater resources tend to drive more and produce higher emissions than those on low incomes or from transport-disadvantaged communities, meaning efforts to reduce VKT should be targeted initially at those who contribute most to the problem. If this produced a 10 percent reduction in VKT from private cars each year, every year, we could see a 62 percent reduction in emissions from driving by 2040, and traffic volumes comparable with those during a COVID-19 Alert Level 4 lockdown – without the attendant loss of mobility.²⁹

Road safety

Road traffic also kills and injures thousands of people every year. On average, one person is killed on our roads every day, and another is injured every hour. The estimated social cost of these deaths and injuries is almost \$5 billion each year.³⁰ All of these road deaths and injuries were preventable. This fact is acknowledged in *Road to Zero*, Aotearoa New Zealand’s road safety strategy for 2020-2030, which sets the ambitious and ethical target that by 2040, no-one should die on New Zealand’s roads, with an interim goal of halving the number of fatalities on the roads in 10 years.³¹ *Road to Zero* is New Zealand’s contribution to ‘Vision Zero’, a revolutionary global road safety movement founded on the principle that “it can never be ethically acceptable that people are killed or seriously

²⁷ Marc Daalder, “10 Years to Turn Auckland into Copenhagen,” Newsroom, May 18, 2020, <https://www.newsroom.co.nz/page/10-years-to-turn-auckland-into-copenhagen>.

²⁸ Alistair Woodward, Kirsty Wild, and Rhys Jones, “Climate Policy That Relies on a Shift to Electric Cars Risks Entrenching Existing Inequities,” *The Conversation*, May 27, 2021, <http://theconversation.com/climate-policy-that-relies-on-a-shift-to-electric-cars-risks-entrenching-existing-inequities-160856>.

²⁹ Eloise Gibson, “Life in Light Traffic: Engineering a Future Minus Cars,” <https://interactives.stuff.co.nz/2020/06/life-in-light-traffic/>

³⁰ “Social Cost of Road Crashes and Injuries,” Ministry of Transport, <https://www.transport.govt.nz/mot-resources/road-safety-resources/roadcrashstatistics/social-cost-of-road-crashes-and-injuries/>

³¹ “Road to Zero: A New Road Safety Strategy for New Zealand,” accessed March 12, 2020, <https://www.transport.govt.nz/multi-modal/keystrategiesandplans/road-safety-strategy/>.

injured when moving within the road transport system.”³² These strategies take an ethics-based (rather than cost-benefit) approach to road safety, and shift responsibility for road safety away from individual road users and on to transport system designers and decision-makers. Yet the action plan accompanying *Road to Zero* significantly undermines this ethical approach by making no mention of reducing traffic as a road safety measure. The more we drive, the more we crash, at exponential rates.³³ Meeting the goal of zero deaths on the road, or even making meaningful progress towards it, will not happen without policies to reduce traffic and encourage the use of alternative modes.

Health and wellbeing

Excess traffic can also contribute to a lack of social connectedness in our cities and neighbourhoods. Communities thrive when people know their neighbours and feel a sense of belonging and connection. The more dangerous people perceive their streets to be, including from high traffic volumes and speeds, the less likely they are to spend time outside and get to know their neighbours. By contrast, when streets are safe, open, and friendly to pedestrians and bicycles, people are much more likely to stop and chat, spend more time outside, and feel a sense of wellbeing and belonging.³⁴ Reducing traffic volumes and opening up our streets for people can enhance social wellbeing by providing opportunities to connect with others. It can also improve physical health by encouraging children to play outside and prompting more people to use active modes of transport.

A car-dominated transport system has significant negative health impacts in addition to the preventable burden of deaths and injuries from road traffic accidents. Restricted physical activity contributes to high and growing levels of obesity, heart disease, diabetes and other illnesses.³⁵ Air pollution was associated with an estimated 1,277 premature deaths, 236 cardiac hospitalisations, 440 respiratory hospitalisations, and 1.49 million restricted activity days in 2016.³⁶ Excessive noise from motorised traffic can disturb sleep, cause cardiovascular and psychophysiological effects, reduce performance and provoke changes in social behaviour.³⁷

Research commissioned by Waka Kotahi New Zealand Transport Agency in 2020 found that transport environments that protect good mental health include high-quality walking and wheeling environments, low-stress traffic conditions, and low-cost and accessible public transport systems. The report recommends improving neighbourhood walkability, reducing long commutes, increasing

³² Claes Tingvall and Narelle Haworth, “Vision Zero - An Ethical Approach to Safety and Mobility,” in *Accident Research Centre* (6th ITE International Conference Road Safety & Traffic Enforcement, Melbourne, 1999), <https://www.monash.edu/muarc/archive/our-publications/papers/visionzero>

³³ “Qualitative and Quantitative Analysis of the New Zealand Road Toll: Final Report” (Deloitte, Ministry of Transport, March 14, 2017), <https://www.transport.govt.nz/assets/Uploads/Research/Documents/e60f942181/Deloitte-Analysis-of-NZ-Road-Toll-Report.pdf>

³⁴ Ade Kearns et al., “‘Lonesome Town’? Is Loneliness Associated with the Residential Environment, Including Housing and Neighborhood Factors?,” *Journal of Community Psychology* 43, no. 7 (September 2015): 849–67.

³⁵ Frank W. Booth, Christian K. Roberts, and Matthew J. Laye, “Lack of Exercise Is a Major Cause of Chronic Diseases,” *Comprehensive Physiology* 2, no. 2 (April 2012): 1143–1211.

³⁶ “Health Effects of Air Pollution,” Environmental Health Indicators New Zealand, <https://www.ehinz.ac.nz/indicators/air-quality/health-effects-of-air-pollution/>

³⁷ “Health Topics: Noise,” World Health Organisation, <https://www.euro.who.int/en/health-topics/environment-and-health/noise>

active commuting, and reducing the cost and improving the comfort of public transport to improve urban mental health.³⁸

For all these reasons, Aotearoa New Zealand needs a substantial reduction in traffic volumes in our cities: fewer people driving fewer cars, less often. Policy discussions about traffic reduction, when they happen at all, tend to frame the issue as one of personal choice, and leave it up to motivated individuals to pursue alternatives to driving if they feel strongly enough about it. But leaving it up to individuals to change their transport patterns in a social and physical environment that is often hostile to alternatives will never be enough to achieve the significant changes required. Instead, reducing traffic volumes should be an explicit objective of transport policy and decision-making. Forecasting tools should be developed to model the likely impact of new transport projects and investments on VKT, and strong weighting should be given to projects and interventions that are modelled to result in meaningful VKT reductions.

Risks of attempting to decarbonise transport without adequately considering equity

Because the equity implications of transport decisions tend not to be well quantified or reflected in transport policy and decision-making, there is a risk that Aotearoa New Zealand's decarbonisation strategy, and in particular the VKT reductions anticipated in the ERP consultation document, could be pursued in a way that inadvertently entrenches existing disadvantage or worsens current inequities. This is why we advocate giving equal priority to the twin goals of reducing car dependence and increasing equity in the transport system.

Some of the risks of pursuing VKT reductions without adequately considering equity include:

Costs falling on those already disadvantaged

Internationally, pricing tools are increasingly considered an important element of efforts to decarbonise transport.³⁹ They offer a way to reflect some of the externalised costs of driving (like carbon emissions and road deaths and injuries) in the direct cost to individuals, and hopefully encourage people to drive less and use alternative modes where possible.

However, congestion pricing schemes can have significant negative equity impacts, depending on where and how they are implemented. In car-dominated transport systems like ours, it can be very difficult to meet basic transport needs without a car, especially when the existing public transport system does not provide a realistic alternative. Congestion pricing therefore risks worsening existing transport poverty and increasing the already disproportionately high percentage of income that low-income households spend on transport. It also risks worsening transport disadvantage if people opt not to drive because of the new price but lack practical alternatives. This could increase unmet transport need and reduce economic and social opportunities for already disadvantaged groups. Those with greater access to financial resources, meanwhile, may be able to afford to continue driving at the same rates, and the new congestion price may not be set at a level that prompts them to drive any less or take alternative modes, even when these are more readily available.

Tāmaki Makaurau Auckland looks set to be the first city to introduce congestion pricing in Aotearoa New Zealand. The Congestion Question, a joint initiative of central government and Auckland

³⁸ Kirsty Wild et al., "The Relationship between Transport and Mental Health in Aotearoa" (Auckland: NZ Transport Agency and the University of Auckland, September 2020).

³⁹ "The Congestion Question: Main Findings" (Auckland: New Zealand Government, July 2020), <https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionMainFindings.pdf>.

Council to investigate the implications of a congestion pricing scheme for Auckland, released its final report in July 2020, recommending that such a scheme be introduced, subject to wider stakeholder engagement.⁴⁰ In 2021, Parliament's Transport and Industrial Relations Committee conducted its own inquiry into congestion pricing, using the Congestion Question report as a starting point. It recommended that a congestion pricing regime consistent with the Congestion Question recommendation be introduced in Auckland, and that Parliament progress legislation to enable any New Zealand city to use congestion pricing as a tool in transport planning in future.⁴¹

The select committee heard many submissions about the potential negative equity impacts of a congestion pricing scheme. They acknowledged these in their final report, but resisted recommending exemptions for disadvantaged groups, noting that a high number of exemptions could increase operating costs and reduce effectiveness of the scheme. Instead, they recommended that the revenue raised by the congestion pricing scheme be used to mitigate its equity impacts.

Depending on how one is implemented, it may also be possible to minimise negative equity impacts of a congestion pricing scheme without exemptions. This requires careful consideration of the days, times, routes, and mechanisms by which the scheme will operate and the transport patterns and unmet needs of a wide range of people.

Equity considerations should be paramount in decisions about how and where Auckland's congestion pricing scheme will operate, as well as in future proposals to develop similar schemes in other cities

Benefits accruing to those already advantaged

There is also a risk that without sufficient consideration of equity, benefits of policies to reduce VKT and decarbonise transport could accrue most to those who already have the greatest financial resources and ability to access alternatives. As we saw in Part 1, people on high incomes are already more likely to live within walking distance of public transport and be able to reach their destination with a single trip. Current farebox recovery requirements may encourage public transport operators to prioritise these kinds of profitable, high-patronage routes over-extending better coverage to communities with greater unmet need.

Those with greater resources may benefit more from public transport subsidies because of their ability to pay upfront for multi-trip discounts, and they are also more likely to be able to afford to purchase a bike or scooter to switch to active modes. They tend to own newer vehicles with better safety and fuel efficiency standards than those on low incomes, and they are also more likely to take up the new clean car discount to reduce the price of electric cars. Despite all this, they contribute the most to carbon emissions.

It can be tempting for local authorities to pilot innovative approaches to encourage transport mode shift in areas where there is already good uptake and provision of public transport, because they can integrate more easily with existing infrastructure and may be more likely to succeed. While lessons from such pilots can inform wider implementation of similar projects, their applicability may be limited because of the different travel patterns and mobility needs of more diverse populations.

⁴⁰ "The Congestion Question: Main Findings."

⁴¹ "Inquiry into Congestion Pricing in Auckland," Report of the Transport and Infrastructure Committee (New Zealand Parliament, August 2021).

Policies and projects that aim to reduce VKT in line with the Government’s emissions reduction plan will need to be assessed using robust tools to evaluate their equity implications – not only to mitigate their potential negative impacts, but to ensure that only projects that improve underlying fairness proceed. Using this metric, it will be important to identify when the benefits of a proposal are likely to accrue to those who are already advantaged, and either amend the proposal to extend the benefits to everyone or replace it with something fairer.

Unwanted or inappropriate interventions

While new policies and projects to reduce VKT and promote active and public transport need to target disadvantaged communities, it is important to note that the solutions that work for these groups are unlikely to be the same things that work for high income communities.

Rolling out hundreds of kilometres of new cycle lanes in low-income areas, for example, will not necessarily lead to more people cycling unless other underlying factors are addressed first. People experiencing transport disadvantage or poverty are more likely to walk and cycle out of necessity and a lack of alternatives than as a lifestyle choice. Investing heavily in inappropriate active transport infrastructure risks creating underutilised resources and fuelling dissatisfaction if higher-order priorities for the community go unaddressed.

Interventions that could increase equity and reduce VKT in diverse communities might instead be things like wider footpaths, better pedestrian crossings, more bus stops, new and more frequent public transport routes, shared paths that allow family and whānau groups to walk or wheel side by side, safe storage options to protect bikes and scooters from theft, and funding for community transport schemes like shared vehicles and communal bike pools.

Recent research about cycling amongst Māori found that, while Māori cycle at similar (low) rates to non-Māori, this occurs against a “backdrop of stark social, economic and transport-related inequities. Particular barriers for Māori may include inflexible work conditions, concerns about neighbourhood safety, inadequate provision for social cycling, and lack of access to places of [cultural] importance.” Potential solutions include more whānau-friendly and culturally safe cycling infrastructure and cycling programmes designed around Māori commitments to whanaungatanga and kaitiakitanga.⁴² Without adequate understanding of these barriers, and engagement with Māori, conventional cycling infrastructure is unlikely to succeed at encouraging more Māori to cycle.

The specific changes that could work to reduce VKT and increase equity will look different for every group and community. It will be vital to prioritise robust engagement to understand the lives, transport patterns, unmet needs, values and concerns of diverse populations, and to co-design changes that meet each community’s specific needs.

We described what this best-practice engagement can involve in *The Shared Path*:

[Start] with preliminary conversations to identify community views, attitudes, needs and concerns, and [be] open to hearing about and acting on community priorities beyond the immediate project. Engage with mana whenua from the earliest opportunity. Create opportunities to share preliminary designs and ideas with local people in the places where they are, rather than putting things online and waiting for people to make submissions. Set up market stalls, knock on doors,

⁴² Rhys Jones et al., “Cycling amongst Māori: Patterns, Influences and Opportunities,” *New Zealand Geographer* 76, no. 3 (2020): 182–93, <https://doi.org/10.1111/nzg.12280>.

and hang out in high foot traffic areas to ask questions and share concepts. Conduct proactive local engagement to find out how people feel about their local streets and neighbourhoods and test key concepts. Ensure local disabled people are heard, build support, and emphasise community-wide benefits. When a project is in the trial phase, be nimble and responsive to early concerns and be prepared to make changes and improvements over the life of the project. Be responsive to, and respectful of, local concerns.

‘Baked in’ inaccessibility and unmet need

As we move towards greater investment in active and public transport, there is a risk that new infrastructure and services may ‘bake in’ current disadvantage if they are designed based on current use, rather than unmet need.

Existing transport infrastructure already tends to benefit advantaged groups, because it is generally based on the needs of full-time employees commuting into city centres at peak times. We noted in previous sections how this tends to overlook the mobility needs of women, people who work part-time or in multiple jobs, disabled people, and people in low-income areas.

Forecasting demand for new transport infrastructure based on current travel patterns risks perpetuating the same trip patterns and prioritising those who are already comparatively well-served by the transport system, while neglecting areas where there is a high level of unmet need. To offset this risk, the authors of the *Social Impact of Mode Shift* report recommend focusing new investment on trips made by part-time, female, low-income, and ethnic minority groups.⁴³

To be able to do this well, research will be required to fill current evidence gaps about the extent of unmet need, forgone trips, and suppressed demand for mobility from disadvantaged groups.

Gentrification

The kinds of interventions that can work to reduce VKT and create connected urban communities – like low-traffic neighbourhoods, better active transport infrastructure, and fast, reliable public transport – can also make neighbourhoods more appealing and increase property prices.

In low-income areas and diverse neighbourhoods, this risks pricing out the very residents who were the intended beneficiaries of the changes. This process is known as gentrification, and it risks worsening transport disadvantage and inequity if residents are forced to move into areas with even greater transport challenges. It is a particularly acute risk during a housing affordability crisis like the one we are currently experiencing, because middle-high income earners are increasingly looking to previously low-income suburbs and neighbourhoods for homes they can afford to purchase.

However, concerns about gentrification should not be used as an excuse not to improve transport infrastructure in diverse communities. Rather, these efforts need to be coordinated with wider housing, land use, and taxation policies to reduce the risk of gentrification. Taking deliberate action to ensure that new housing is kept affordable, such as setting affordability restrictions on new developments close to transport hubs, has also been shown to reduce the risk of gentrification.⁴⁴

The risk of gentrification also provides a sound basis for planning large areas together and making changes at the neighbourhood, suburb, and city levels at the same time to avoid creating pockets of

⁴³ Curl et al., *Social Impact Assessment of Mode Shift*, pp 57–58.

⁴⁴ Curl et al., p 53.

advantage in some neighbourhoods while leaving others behind. This is especially important when making low-traffic interventions, to ensure that vehicle traffic is not simply displaced from one neighbourhood to the next without achieving meaningful overall VKT reductions.

Avoiding and mitigating these and other risks of insufficiently equitable decarbonisation are increasingly recognised as part of globally responsible climate action. In November 2021, Aotearoa New Zealand signed up to the International Just Transition Declaration at COP26, committing us to:

“Climate change mitigation and adaptation action that is fully inclusive and benefits the most vulnerable through the more equitable distribution of resources, enhanced economic and political empowerment, improved health and wellbeing, resilience to shocks and disasters and access to skills development and employment opportunities.”

Our endorsement of the declaration requires us to not only pursue this goal domestically, but to support developing nations and emerging economies to do the same.⁴⁵

What we can look forward to in equitable, low-traffic cities

What will Aotearoa New Zealand’s cities and towns look like in future if we succeed in reducing car dependence, increasing equity, and realising the vision of everybody being able to get where they needed to with a meaningful choice of safe, low-emissions options?

Increasingly, international and local evidence suggests the ‘fair path’ to decarbonisation leads away from car-dominated cities with a ‘hub and spoke’ model of commuting from outlying suburbs into the CBD, towards connected, localised urban communities in which people can access most of their needs close to home and have ready access to a range of public and active transport options when they need to go further afield.

Ideally, many residential areas will be low-traffic neighbourhoods, in which vehicle through-traffic will be discouraged, and most street space will be allocated for walking, wheeling, and socialising. It will be common to see children travelling independently to school and playing in the street, and friends and family will be able to ride two or more abreast on safely separated cycle lanes and shared paths.

Public transport will be frequent, reliable, and affordable, especially for those on low incomes. It will be fully accessible for disabled people, and most people will live within a short walking or wheeling distance of a public transport connection.

It will be increasingly common for cars to be communally owned and shared between several families, or provided as a community service by NGOs, marae, neighbourhood groups, and other community organisations. Some people will still own private cars but will use them mostly for longer journeys that cannot be easily duplicated by public or active modes. Those who do need to use cars as their main form of transport will have good reasons for doing so. Most cars will be electric, and there will be affordable, renewable charging infrastructure for them.

Arriving at these equitable, low-traffic cities in the future requires reprogramming the policy settings that govern transport investment now. A visual hierarchy known as the sustainable (or healthy)

⁴⁵ “Supporting the Conditions for a Just Transition Internationally,” UN Climate Change Conference (COP26), November 4, 2021, <https://ukcop26.org/supporting-the-conditions-for-a-just-transition-internationally/>.

transport pyramid is sometimes used in transport policies and decision-making processes to illustrate the appropriate mode share in a sustainable transport system, from most trips to least:



Optimal transport policy promotes walking, wheeling, public transport, and car-sharing options above private cars for the movement of people in almost every instance.

The sustainable transport pyramid appears in a few local and central government transport policies and planning guides in Aotearoa New Zealand, such as Te Whanganui-a-Tara Wellington's *Urban Growth Plan* and Waka Kotahi New Zealand Transport Agency's *Pedestrian planning and design guide*. But for such policies to translate into outcomes, transport *investment* also needs to be allocated accordingly.

Investments that reduce demand for car travel, create active transport infrastructure, improve public transport, and maintain and improve existing roads should be funded ahead of new roads in almost every instance, but this is a long way from how transport spending is currently allocated. Changing this will require not only embedding tools like the sustainable transport pyramid into Waka Kotahi New Zealand Transport Agency's Investment Decision-making Framework, but also over time reorganising the internal structure and activities of the organisation to reflect the desired outcomes in the transport system.

Arriving at the equitable, low-traffic cities of the future will also require changes to the policy settings that govern how we design, build, maintain and upgrade our cities. We should be aiming to create urban environments that reduce the overall need to travel, shorten the distances between key destinations, and promote social connection.

The 20-minute cities movement envisages urban communities in which residents' basic needs can all be met within a 20-minute walk, cycle, or public transport ride of where they live, and offers exciting possibilities for Aotearoa New Zealand.

The 20-Minute City: An equitable solution

Around the world, local authorities are grappling with a host of challenges, including transport and health inequalities, climate change, and congested streets and roads.

Aotearoa New Zealand is not immune from having to confront these big complex problems. There's no quick fix, but evidence suggests that the right blend of planning and design can make all the difference in creating cleaner, safer, better-connected and more equal neighbourhoods.

Consider the 20-minute city - an innovative approach to urban design where all the things that contribute to living a good life are within a 20-minute walk, cycle or quick public transport trip. Your home, work, essential services, public amenities and favourite hospitality and retail haunts are just a stone's throw away.

20-minute cities are a response to rising transport emissions and sprawling urban regions where long-suffering commuters sit in heavy traffic or spend hours on public transport getting to and from work. They also nicely respond to transport, health and housing inequalities, and bring communities closer together.

We know that due to issues of geography, cost and practicality, many people in towns and cities across Aotearoa New Zealand don't have equal or easy access to existing transport systems. Plus, those living in distant suburbs or satellite towns are often forced into cars through lack of practical alternatives.

Placing more affordable housing, workplaces and public amenities close together in the heart of local neighbourhoods means there's less need for people to use cars. Private vehicles feature less in the 20-minute city - replaced instead with well-connected paths, streets and public spaces designed for everybody.

Prioritising equity and accessibility

A core tenet of the 20-minute city should also be its ability to improve equitable outcomes and improve accessibility for our increasingly diverse communities through effective urban planning and infrastructure design. 20-minute cities connect the dots with non-motorised modes of travel, public transport links, ride sharing and multi-modal transport. This makes it easier for people to quickly get to where they need to be, without a heavy reliance on private motor vehicles, and helps create more equitable and accessible outcomes for everybody in the community.

In adopting a 20-minute city model, the local community and minority groups need a voice in the planning process. Involving locals throughout the process means planners can identify where people are unable to meet their daily needs. Plans can then be shaped around reducing existing neighbourhood inequalities.

Here in Aotearoa, we have an opportunity to create our own definition of the 20-minute city – one that incorporates our unique cultural identity and embraces our unique diversity. Ultimately, success for Aotearoa would be in applying the Te Ao Māori principle of sustainability and stewardship, kaitiakitanga. A 20-Minute city in Aotearoa could also look to and learn from papakāinga, a collective form of Māori living.

Build the way we want to live

The concept of a 20-minute city has gained traction recently thanks in part to the global pandemic making it more attainable and desirable.

Globally, our cities have been growing rapidly. By 2050, two-thirds of the projected world population will live in urban centres. Here in Aotearoa, around 86 percent of our population live in cities – and the number is on the up.

We can't continue to build the way we have been. Our cities have largely been designed on post-war principles of people living in suburbs commuting to work in a CBD by motor vehicle. With 70 years of urbanisation came densification and grid-locked cities, which necessitated a re-think in city planning.

Shifts in social behaviour that embrace flexible working, active and environmentally sustainable travel, and a digitally-enabled world where everything is at our fingertips and on demand is driving a return to localism. That's where 20-minute cities come in.

Building back public transport

As a result of COVID-19, the public transport sector underwent steep ridership declines and the need to meet major health and safety considerations. This forced transit agencies, local authorities, and related stakeholders to urgently rethink how to address mobility needs in our cities. Far-reaching challenges lie ahead, but opportunity exists for public transport to evolve and once again connect people to each other and destinations both in and beyond their communities. There is significant opportunity to advance the development of integrated, efficient and accessible public transport systems through the concept of a 20-minute city.

Many of our cities in Aotearoa are primed for adopting the features of a 20-minute city – and some like Kirikiriroa Hamilton are exploring the idea. There's a laundry list of reasons for other local authorities to get on board. Plenty of evidence overseas, including in Melbourne, Paris and Portland shows how compact and connected neighbourhoods do wonders for equality of opportunity, quality of life, the environment, and social and community connection.

Find out more

Read more about the 20-minute city here: [The 20-min city in Aotearoa | WSP](#).

Low-traffic neighbourhoods

Our 2020 report *The Shared Path* made the case for rapidly accelerating the use of low-traffic neighbourhoods in Aotearoa New Zealand. Along with urban planning based on the principles of 20-minute cities, we see low-traffic neighbourhoods as a key intervention to deliver improved equity and reduced car dependence in the transport system. Here we briefly describe how they work. For more detailed information about low-traffic neighbourhoods, and advice for communities and councils wishing to implement them in their area, please see *The Shared Path*.

A low-traffic neighbourhood is a group of residential streets where through-traffic is discouraged. Instead, buses, trucks, and other vehicles driven by non-residents travelling through the neighbourhood stick to identified main roads which border the low-traffic area. People who live inside the low-traffic neighbourhood can drive directly to and from their homes, arrange deliveries, and be accessed by emergency services, but non-residential traffic is discouraged. There are several ways this can be achieved. Often it will involve the creative deployment of wider footpaths, bollards, planting, and traffic calming measures to slow traffic down, direct drivers onto main through roads, and encourage residents to make greater use of alternative modes such as walking, wheeling, or cycling for short local trips. For this to work, the low-traffic area needs to be quite small; ideally, residents should be able to walk or wheel from one side to the other in less than 15 minutes. This equates to roughly one square kilometre. Low-traffic neighbourhoods are also most effective if they are part of an integrated, city-wide plan and network of connected low-traffic areas, so that people can cross easily between neighbourhoods to access key destinations, and in order to keep main arterial routes safe for all.

When well planned and executed, low-traffic streets and neighbourhoods can dramatically reduce traffic volumes, not only in the streets inside the low-traffic neighbourhood, but also in the surrounding residential area. Low-traffic neighbourhoods have also been shown to improve air quality, increase physical activity, benefit local business, and even increase life expectancy. Other benefits of low-traffic neighbourhoods include reduced carbon emissions, increased road safety, and greater health, equity, and social connection.

An international model: Scotland's National Transport Strategy

Aotearoa New Zealand and Scotland have some interesting parallels. Both are island nations with populations of around 5 million that are ageing and urbanising, and with arguably similar national characteristics, like valuing fairness, relatively high democratic participation, and a strong sense of independent national identity (although our colonial context and Te Tiriti o Waitangi set us apart in important ways).⁴⁶

Scotland's National Transport Strategy for 2020-2040 offers a compelling example of how a comparable country to ours is using policy tools to 'reprogramme' its transport system to deliver different results.

Adopted in February 2020, the strategy leads with a vision for Scotland's transport system:

A sustainable, inclusive, safe and accessible transport system helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.

It then sets four priorities, that Scotland's transport system will:

1. Reduce inequalities (provide fair access to services and be accessible and affordable for all);
2. Take climate action (help deliver Scotland's net zero target, adapt to the effects of climate change, and promote greener, cleaner choices);
3. Help deliver inclusive economic growth (get people and goods where they need to go, be reliable, efficient, and high-quality, and use beneficial innovation); and
4. Improve health and wellbeing (be safe and secure for all, enable healthy travel choices, and make communities great places to live).⁴⁷

These priorities are then used to identify and assess specific actions that will be taken to deliver them, published in annual delivery plans.

Aotearoa New Zealand's closest equivalent, the 2021-2031 GPS on Land Transport, while touching on similar themes, is less concrete in its vision and more technical in its priorities. It states that the purpose of the transport system is to:

Improve people's wellbeing, and the liveability of places.

And its four priorities are:

1. Safety (developing a transport system where no-one is killed or injured);
2. Better transport options (providing people with better transport options to access social and economic opportunities);
3. Climate change (developing a low carbon transport system that supports emissions reductions, while improving safety and inclusive access); and
4. Improving freight connections (improving freight connections for economic development).

⁴⁶ There are other significant differences too – Scotland's population is much less ethnically diverse than ours with 92 percent identifying as white, and the urban population is spread more evenly between the main cities of Glasgow, Edinburgh, Dundee, and Aberdeen, compared to our high concentration of more than one third of the population in the very diverse city of Tāmaki Makaurau Auckland.

⁴⁷ "National Transport Strategy 2020-2040," Transport Scotland, February 5, 2020, <https://www.transport.gov.scot/our-approach/national-transport-strategy/>.

The GPS is accompanied by the Transport Outcomes Framework, which identifies inclusive access, healthy and safe people, economic prosperity, environmental sustainability, and resilience and security as the five key outcomes sought from the transport system. However – unlike the Scottish strategy – these outcomes are distinct from the priorities identified in the strategy. The intent is that the transport system will achieve these outcomes, but the outcomes themselves do not drive Waka Kotahi New Zealand Transport Agency’s decision-making about which transport projects to fund in the National Land Transport Programme.

By contrast, by requiring transport investment to be allocated according to the desired outcomes of reduced inequality, climate action, inclusive growth, and improved health and wellbeing, the Scottish strategy generates a radically different prioritisation of transport investment. It embeds the sustainable travel hierarchy (also known as the sustainable transport pyramid, see page 43) in transport-decision making, and commits the Scottish Government to actively promote walking, wheeling, cycling, public transport and shared transport options over single occupancy private car use.

Whether Scotland’s strategy delivers on its promise of course remains to be seen and will depend largely on how successful it is at genuinely allocating investment according to its stated priorities.

Nevertheless, there is an important lesson for Aotearoa New Zealand in Scotland’s strategy. Embedding the goals of improved equity and reduced emissions directly into the process that determines how transport investment is allocated generates a radically different investment profile. This is more likely to result in tangible progress towards the bold objectives than an outcomes framework that sits alongside, but does not directly determine, how transport decisions are made.

Street-level changes as part of pandemic recovery

In the UK, street-level changes to make walking and cycling easier and encourage social distancing easier have been a significant component of the pandemic response from central and local government. In May 2020, the central Government made £250 million of emergency active travel funding available to local authorities, resulting in the creation of more than 200 low-traffic neighbourhoods in more than 50 jurisdictions.⁴⁸ In London, this investment continued into 2021 with the Streetscapes for London programme issuing funding and guidance to boroughs wanting to make walking, cycling, and public transport safer and easier during the pandemic.⁴⁹

These measures were introduced in recognition of both the immediate challenge of enabling safe social distancing on footpaths and on public transport, and the longer-term implications of the pandemic for social connectedness, public health, and mental wellbeing, recognising that connected neighbourhoods and more opportunities for physical activity could be effective ways to mitigate some of these risks. In London, they are also key strategies for achieving the Mayor’s target of 80 percent of trips being made by foot, bike, or public transport by 2041.⁵⁰ While popular with many,

⁴⁸ Natalie Berg, “Peak Car And The Hyper-Local Retail Opportunity,” Forbes, October 1, 2020,

<https://www.forbes.com/sites/natalieberg/2020/10/01/peak-car-and-the-hyper-local-retail-opportunity/>

⁴⁹ “Streetspace Funding and Guidance,” Transport for London, <https://www.tfl.gov.uk/info-for/boroughs-and-communities/streetspace-funding>

⁵⁰ “The Mayor’s Transport Strategy,” Transport for London, <https://www.tfl.gov.uk/corporate/about-tfl/the-mayors-transport-strategy>.

neither the goal of replacing car journeys with active and public transport, nor the creation of low-traffic neighbourhoods, are without controversy in the UK.⁵¹

Here in Aotearoa New Zealand, Waka Kotahi New Zealand Transport Agency created the Innovating Streets Programme in 2019 to support temporary or semi-permanent physical changes to make streets safer and more liveable and in June 2020 the Government announced two additional rounds of funding to make these transitions faster and easier and specifically help councils respond to the challenges of COVID-19.⁵² Projects funded by Innovating Streets have included safety improvements to school streets, temporary “play streets” in several cities, and reallocated street space in a major retail precinct in central Auckland to improve accessibility.⁵³ Unfortunately, the high-profile trial of a low-traffic neighbourhood in Onehunga funded under the scheme was cancelled in May 2021 after vandalism undermined the safety of the project.⁵⁴

The Innovating Streets programme, and street-level changes to improve accessibility and reduce car dependence in urban areas more generally, should continue to play a significant role in helping communities reimagine their neighbourhoods as part of both COVID-19 recovery and decarbonisation efforts. The Government has committed to investing a further \$30 million in the Innovating Streets programme over the next three years, but the exact parameters of this investment are yet to be determined.

In our view, for this to succeed, it will need to be accompanied by wider regulatory, policy, and funding changes to reorient transport policy and spending towards reducing car dependence. The kinds of projects funded by the Innovating Streets programme will need to expand from small, short-term interventions to coordinated, semi-permanent changes at the neighbourhood, suburb, and city levels.

The Onehunga experience illustrates how important it is that local authorities who pursue these kinds of changes are not left exposed by a lack of regulatory and political support. Central government will need to take the lead in creating a national mandate for significant street-level change in all Aotearoa New Zealand’s cities, and should implement specific tools – like experimental traffic orders that make it easier for councils to implement these kinds of changes over longer periods of 18 months to 2 years – to buffer local authorities against the short-term local opposition that inevitably accompanies them.⁵⁵ It also demonstrates the importance of planning large areas together and progressing multiple, inter-connected low-traffic neighbourhoods at the same time, both to reduce the risk of displacing traffic into adjacent streets, and to increase the likelihood of community acceptance.

⁵¹ John Surico, “In COVID-19 Recovery, London Bets Big on Low Traffic,” *Bloomberg*, July 29, 2021, <https://www.bloomberg.com/news/articles/2020-07-28/how-london-s-low-traffic-streets-keep-cars-at-bay>.

⁵² “Innovating Streets COVID-19 Guidance,” Waka Kotahi New Zealand Transport Agency, <https://www.nzta.govt.nz/roads-and-rail/innovating-streets/COVID-19-guidance/>

⁵³ “Innovating Streets Case Studies,” Waka Kotahi New Zealand Transport Agency, <https://www.nzta.govt.nz/roads-and-rail/innovating-streets/case-studies/>

⁵⁴ Ben Leahy, “Auckland Traffic: Onehunga Low-Traffic Neighbourhood Trial Cancelled,” *NZ Herald*, May 20, 2021, <https://www.nzherald.co.nz/nz/auckland-traffic-onehunga-low-traffic-neighbourhood-trial-cancelled/W53YBTT7WDFAP7HSDQGYH3PNQ4/>.

⁵⁵ Fergus Tate, “Try Then Modify Approach to Traffic Change,” *Insights* (Auckland: WSP New Zealand, June 28, 2021), <https://www.wsp.com/en-NZ/insights/try-then-modify-approach-to-traffic-change>.

Four bold ideas to rapidly decarbonise our cities

By Rowan Dixon

With the right thinking, funding and public support, there are countless ways we can reduce our transport emissions. Dr Rowan Dixon, WSP Technical Principal, Sustainability and Resilience, pitches four bold ideas for rapidly decarbonising our transport system while not worsening existing transport inequities.

For Aotearoa New Zealand to achieve its target of net zero by 2050, we need to do more to decarbonise our transport sector. Not only does transport account for almost half of the country's total carbon emissions, but it's our fastest growing source of emissions. Domestic transport emissions increased by 90 percent between 1990 and 2018.⁵⁶ Emissions across the whole economy increased by 24 percent during the same period.

But reducing these sky-high carbon emissions can't be done in isolation. We must also consider existing inequities in our transport system, where not everybody has the same access to public transport and road networks. And importantly, we must not make these inequities worse. With a well-crafted package of policy changes, we can achieve a socially-just and climate-safe transport system that drives broader equity in people's wellbeing and living standards.

Here are four bold ideas to support such a package:

1. Ban imports of light internal combustion engine (ICE) vehicles. Now!

The Government has signalled it intends to introduce such a ban from 2035,⁵⁷ but we need to be more ambitious. Replacing some existing vehicles with Electric Vehicles (EVs) will help reduce climate damaging emissions and harmful local air pollution. A ban today will be complicated because the supply of EVs isn't there yet and supporting infrastructure needs to catch up. Exemptions will be needed for special cases, for example in areas where the infrastructure to support EVs doesn't yet exist. Still, for the sake of bold ideas and to push this urgency along, a total import ban now would shift the carbon reduction dial. It doesn't however address the equity issue, or the congestion issue.

2. Buy-back/trade in light ICE vehicles and offer EV subsidies.

Light ICE vehicle buy-back approaches seem to have worked elsewhere to remove a bunch of them from streets. It will cost a fortune to replace all 3.3m light ICE vehicles in Aotearoa New Zealand. The Government is already giving taxpayer-funded rebates for new and used EVs. But we should explore linking eligibility to our welfare and tax systems to ensure equity and support to those that need a vehicle. This kind of government support would be the equitable way to ensure fair access to EV ownership. Otherwise, there's a real risk that a portion of our population are left stuck paying high fuel prices and maintenance on aging cars, with no other option.

3. Supercharge incentives for public transport

Getting more people out of cars and onto public transport will go a long way towards decarbonising our cities. To encourage greater use of public transport, we should offer incentives or subsidies that reduce the cost to users – things like free or discounted bus and rail passes. Overseas, incentives like these have been shown to increase public transport use and get commuters out of cars and into

⁵⁶ <https://www.stats.govt.nz/indicators/new-zealands-greenhouse-gas-emissions>

⁵⁷ <https://evsandbeyond.co.nz/nz-ban-on-new-ice-passenger-vehicle-sales-suggested-from-2035/>

active travel options that are better for the environment and people's health and wellbeing. They can also help people reach that 'Eureka' moment in realising that public transport can be a valuable, usable alternative. In Aotearoa New Zealand we prioritise SuperGold card users, who can travel free on off-peak rail, bus and harbour ferry services. But why stop there? Let's extend the same kinds of free and heavily discounted fares to others in the community, including under 25s and low-income groups.

4. Embrace car-less cities and prioritise people over road traffic.

Without cars, we can give priority to more equitable and accessible ways of getting around. When it comes to bold ideas, you might think car-less cities takes the cake. But it's already happening elsewhere in the world, such as in Merwede, a 'car-less' neighbourhood development in the Netherlands.⁵⁸ We're starting to see a small number of similar developments in Aotearoa New Zealand. In Merwede the neighbourhood's 12,000 residents will still require access to some form of car-based transport from time to time. That's why it's estimated that there will be three spaces for every 10 households reserved for cars and 300 of these will be for shared vehicles. A large number of Merwede's apartments will also be dedicated to social housing, with cheaper prices that allow access to a wider majority of the population. These kinds of equitable game-changing ideas that prioritise people and wellbeing over cars and roads require a sizeable investment. But it's the right thing to do.

Over the past two years as we've been in and out of COVID-19 lockdowns, we've found a renewed sense of place in our own neighbourhoods – without cars. Let's leverage our new-found love for our local communities to usher in our very own largescale Aotearoa Neighbourhood Project. Why not run more neighbourhood events, craft pedestrian-friendly bylaws, and establish new norms that pull people out onto the streets to bump into each other and embrace local living – weaving ourselves into other people's lives, into our place to stand, to belong and be noticed. *He aha te mea nui o te ao? He tangata, he tangata, he tangata.*

⁵⁸ <https://dutchreview.com/traveling/cities/utrecht/utrechts-exemplar-city-design-that-prioritises-people-over-cars/>

Te Ara Matatika: how we can transition to the equitable low-traffic cities we need

We opened this report two people's stories: Hana the social work student in 2021 and Aisha the trainee teacher in an imagined 2040. The two were in comparable situations, with similar resources and backgrounds, but had vastly different experiences, due in large part to the different factors governing transport and urban planning in the two scenarios.

In our current transport system, Hana made a series of choices that seemed logical: she bought a car using the finance available to her to take advantage of relatively cheap parking and a convenient commute to university, and to keep herself safe from harassment and violence. As the consequences of these choices within an inequitable system began to compound though, things spun out of Hana's control, and we left her spending more than a third of her income on transport-related costs, mostly to service debt on a car that she couldn't drive. She was also vulnerable to violence and harassment after work at night. Who could blame her if she gave up and started driving her unwarranted car again one night? If she did though, she'd risk further fines and a possible criminal conviction, which could set her off on a very different path from the social work career she aspired to.

There are many people in situations just like Hana's in 2021.

Aisha, on the other hand, enjoys a largely unconstrained mobility in our imagined 2040. Aisha lives in an intergenerational kaupapa Māori community, grounded in her whakapapa and connected to the whenua. She can walk and wheel safely and easily anywhere she needs to go both within her community, and nearby. To get to uni, she can take fast, reliable public transport that avoids the stress of driving and costs her nothing. Aisha and her whānau enjoy moving together for fun and recreation, and the infrastructure that enables this supports Aisha to show whanaungatanga. Aisha feels safe and secure in the transport system, whether she's biking with little kids or out late at night. Aisha's papakāinga produces net zero emissions and her wider neighbourhood is a low-traffic neighbourhood; importantly, Aisha feels a sense of ownership and connection to these climate change efforts. Thanks to a meaningful Te Tiriti partnership to deliver papakāinga at scale, and coordination between transport, housing, urban development, and social development agencies, Aisha not only experiences equitable mobility, but also equitable housing, income, and employment opportunities. As a result, it is within her reach to plan an overseas trip to celebrate a significant milestone like her forthcoming graduation, and the criminal justice system is not even on her radar.

If our leaders choose the right policy settings now, we could transform many experiences like Hana's into experiences like Aisha's within the next two decades. At the same time, we could also rapidly decarbonise urban transport and meet our climate change goals. Equitable, low-carbon cities, where everyone can get where they need to go and participate fully in society, are within our reach, but we need to act fast.

If our leaders don't put the right conditions in place now, we stand little chance of meeting our ambitious emissions reduction targets or getting on top of runaway climate change domestically or globally. Thousands of people will continue to be injured and killed on our roads each year, current inequities in the transport system will be entrenched and worsen, and the mobility needs of many disadvantaged communities will continue to go unmet, contributing to wider inequity and injustice.

Fortunately, we are in a moment in which the need to rapidly decarbonise transport – and the fact that this cannot be achieved without massive VKT reductions from private vehicles – is increasingly understood and accepted, by policy-makers if not yet the wider public. It seems likely that VKT

reduction will feature as a key target in the first Emissions Reduction Plan when it is finalised next year. Clearly, there is a significant gap between where we are now, and where we need to be. We are entering the transition to a low-emissions future, and it will be challenging.

As Associate Professor Maria Bargh (Te Arawa, Ngāti Awa) has noted, Aotearoa’s necessary transition to a low-emissions future “will require trade-offs and, at best, some uncomfortable changes for individuals, households, communities, the private sector, and government.” She emphasises that “to be enduring for Aotearoa, the transition must be tika.”⁵⁹ By a tika transition, Bargh means applying a framework of tikanga Māori, Treaty of Waitangi obligations, and international law to decision-making and policy planning for Aotearoa’s low-emissions future.⁶⁰

This tika transition needs to be bold and ambitious. It also needs to be just and fair. Equity concerns are not a reason to stop or slow our climate change response. The planet can’t wait, and the equity impacts of an unchecked climate crisis will be even worse than what we currently experience.

Instead, we need to embed the twin goals of improving equity and reducing car dependence as key planks of a reprogrammed transport system, starting now. We need to radically and quickly change how we allocate transport investment, and we need much greater collaboration between transport agencies and other sectors like housing, social development, and local government to improve how our cities work for the people who live in them.

We have five overarching recommendations that would help to fairly transition Aotearoa New Zealand’s cities to the connected, low-traffic communities we need for a decarbonised future. Under each, we direct more detailed recommendations to relevant Ministers and agencies.

⁵⁹ Maria Bargh, “A Tika Transition,” in *A Careful Revolution: Towards a Low-Emissions Future*, ed. David Hall, BWB Texts (Wellington: Bridget Williams Books, 2019), 36.

⁶⁰ Bargh sets out a *Tika Transition Toolbox* which identifies elements from tikanga, Te Tiriti o Waitangi, and relevant UN conventions, and proposes a (non-exhaustive) list of questions that decision-makers can ask to ensure that their decisions to move Aotearoa towards a low-emissions future are tika. The *Tika Transition Toolbox* appears in *A Careful Revolution* and is reproduced in full in our previous report *The Shared Path*.

Recommendations

1. 'Reprogramme' the transport system

We recommend that the Minister of Transport:

- 1.1. In either the next GPS on Land Transport, or a new national transport strategy, set an ambitious and specific vision for the transport system, that emphasises the importance of universal access, affordability, safety, reducing emissions, and improving wellbeing.
 - 1.1.1. For example: *"Everybody in Aotearoa New Zealand can get where they need to go affordably, accessibly, and on time, with a meaningful choice of safe options that meet their needs, protect the climate, and promote wellbeing."*
- 1.2. Set at least two strategic priorities in support of this vision that include making the transport system work better for those currently disadvantaged and reducing collective dependence on private cars as the main form of urban transport.
- 1.3. Comprehensively integrate the Transport Outcomes Framework into the GPS (or new strategy) and into Waka Kotahi New Zealand Transport Agency's investment decision-making framework, so that the outcomes sought *are* the strategic priorities, and transport policy and investment decisions are actively determined by them (not just assessed against them).
- 1.4. Introduce legislation to support local authorities and transport agencies to make street-level changes that improve accessibility and reduce traffic volumes, including creating experimental traffic orders to encourage the creation of low-traffic neighbourhoods at scale.
- 1.5. When it is next updated, align the Road to Zero Road Safety Strategy with this vision by incorporating improved equity and reduced car dependence as road safety priorities.
- 1.6. Direct the board of Waka Kotahi New Zealand Transport Agency to:
 - 1.6.1. Shift from a 'predict-and-provide' investment model based on current assumptions about car traffic growth, to a 'decide and provide' investment framework based on reducing VKT, increasing mode-share of active and public transport, and maximising opportunities for people to live, work and play in their local communities.
 - 1.6.2. Include analysis of unmet mobility needs in its investment decision-making framework.
 - 1.6.3. Require local authorities to gather data about unmet mobility needs and to provide before and after evaluations of equity outcomes as a condition of receiving transport funding subsidies.
- 1.7. Direct Te Manatū Waka Ministry of Transport to:
 - 1.7.1. Further develop and refine methods and tools to assess the equity and VKT reduction implications of transport decisions.
 - 1.7.2. Embed and socialise these tools across the transport sector and actively use them to assess new projects, prioritise work programmes, and allocate investment.

- 1.7.3. Gather or commission research that fills current knowledge gaps about transport equity, especially about forgone trips, unmet need, and latent or suppressed demand for mobility from disadvantaged groups.

2. Make sure the transition is tika (right and just)

We recommend that the Government:

- 2.1. Work in partnership with Māori to uphold its Te Tiriti o Waitangi obligations in the transport system. This could include:
 - 2.1.1. Developing specific strategies to improve transport outcomes for Māori.
 - 2.1.2. Setting requirements for Māori representation on transport decision-making bodies.
 - 2.1.3. Supporting hapū, iwi, and kaupapa Māori organisations to play a larger part in transport decision-making and governance, for example by providing resources to support Māori organisations to upskill on transport issues, or by ensuring that mana whenua views are always gathered and listened to on projects in their rohe.
 - 2.1.4. Funding kaupapa Māori community transport solutions like marae-based shuttles to provide healthcare access or kōhanga reo pick-up and drop-off services.
- 2.2. Ensure representation from currently disadvantaged communities and individuals on transport governance and decision-making bodies.
- 2.3. We recommend that local authorities and regional transport governance bodies:
- 2.4. Apply the principles of tika (right and just) transition and use the tika transition toolbox to evaluate all transport projects and investments.
- 2.5. Co-design new urban transport infrastructure and street-level changes to improve accessibility and reduce traffic with affected communities.

3. Reduce the overall need to travel

We recommend that the Ministers of Transport, Housing and Urban Development, and the Environment work together to:

- 3.1. Make reduction in VKT an explicit goal of new development as part of the Resource Management Act reform currently underway and require transportation impacts to be mitigated through a net increase in walking, cycling and public transport that is greater than any forecast increase in car trips.

We recommend that the Minister of Housing and Urban Development:

- 3.2. Issue guidance under the National Policy Statement on Urban Development that emphasises the need for new developments to reduce the overall need to travel, shorten the distances between key destinations, and promote social connection in urban communities.
- 3.3. Ensure that these principles underpin all Kāinga Ora-led urban developments, and encourage Kāinga Ora to pilot the 20-minute city approach in Aotearoa New Zealand.

We recommend that local authorities:

- 3.4. Use appropriate policy and regulatory tools to mandate urban planning and placemaking that reduces the overall need to travel, shortens the distances between key destinations, and promotes social connection.
- 3.5. Embed the principles of 20-minute cities into relevant plans, policies, and spatial planning guidelines for their cities.

4. Make sure the costs and benefits fall in the right place

We recommend that Cabinet:

- 4.1. Ensure that forthcoming legislation to enable congestion pricing schemes in all Aotearoa New Zealand cities emphasises the need for these schemes to maximise equity by redirecting revenue into more efficient, frequent, direct public transport services, beginning with low-income communities.
- 4.2. Coordinate efforts between government agencies to align transport, climate change, housing, land use, taxation, and income policies to increase equity, reduce all forms of social and economic disadvantage, and meet emissions reduction targets. Focus these efforts in particular on:
 - 4.2.1. Ensuring equity considerations are central to the final Emissions Reduction Plan and supported by specific actions to increase the fairness of the transport system.
 - 4.2.2. Aligning housing, transport, and land use policies to reduce the overall need to travel, reallocate street space to increase accessibility and reduce VKT, and reduce the risk of gentrification.
 - 4.2.3. Ensuring people have adequate income to participate fully in society.
- 4.3. Establish a fund to encourage the development and expansion of low-carbon, shared community transport solutions to reduce the need for individual vehicle ownership and help communities to meet self-defined priorities. This could include (but is not limited to) ideas like shared community vehicles, affordable mobile shopping and delivery options, school and ECE pick-up services, late-night shuttles for shift workers, or communal transport for sports clubs and cultural activities.
- 4.4. Target future financial incentives to encourage mode-shift, such as subsidised public transport fares and rebates for zero-emissions vehicles, towards those who are currently most disadvantaged in the transport system.

We recommend that local authorities and transport agencies:

- 4.5. Ensure equity considerations are paramount in decisions about specific operation of any future congestion pricing schemes (including the scheme currently proposed for Tāmaki Makaurau Auckland).
- 4.6. Pilot innovations like reallocated street space, new active transport infrastructure, and incentives to use active and public transport in a wide range of settings, to ensure that the results are representative of diverse communities and reflect their actual transport challenges.

- 4.7. Co-design low-carbon community transport solutions directly with communities experiencing transport disadvantage and poverty, and ensure funding mechanisms are flexible enough to enable a wide range of these community initiatives.
- 4.8. Design new and upgraded urban transport infrastructure based on current unmet mobility needs, rather than on current patterns of demand.

We recommend that Waka Kotahi New Zealand Transport Agency:

- 4.9. Incentivise more affordable, reliable, and accessible public transport for those currently disadvantaged through reinvesting fares in subsidised transport for low-income people, alongside investment in better public transport in low-income communities.

5. Kickstart the transition

We recommend that the Government:

- 5.1. Consider a bold intervention to incentivise rapid mode shift, such as making public transport free for Community Services Card holders and/or young people under 25, and committing significant new investment to improving public transport frequency, reliability, and accessibility in low-income areas.