TE ARA MATATIKA

VOLUME II

A FAIR CHARGE FOR BETTER CITIES

The potential for congestion charging to help unlock our transport system

A REPORT BY **TOM JAMES**
MAY 2022

THE Helen Clark FOUNDATION

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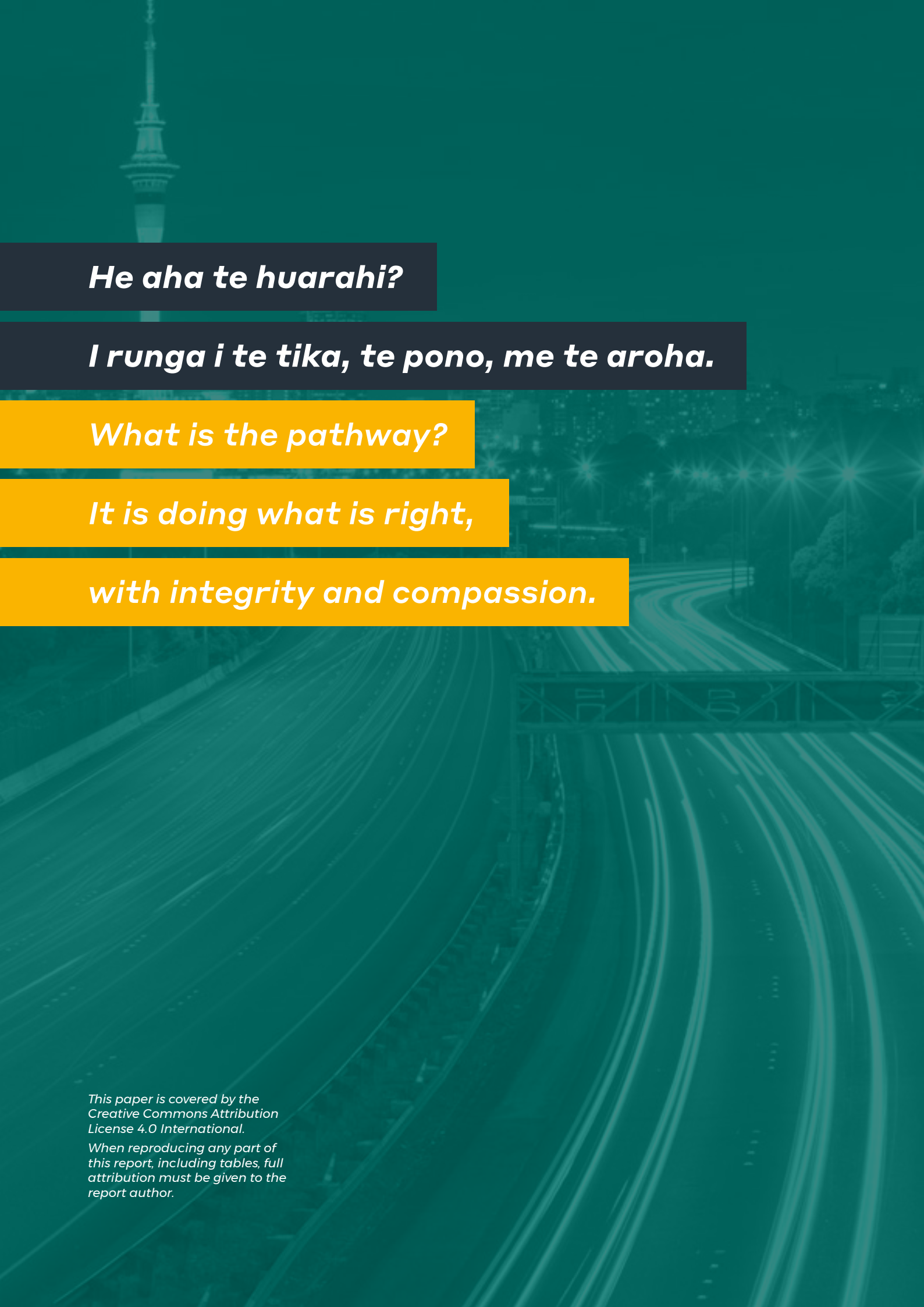

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ABOUT MAHI A RONGO | THE HELEN CLARK FOUNDATION

Mahi a Rongo | the Helen Clark Foundation is an independent public policy think tank based in 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 Aotearoa 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 ONZ, 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

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HE MIHI:

ACKNOWLEDGEMENTS

While I am acknowledging and thanking specific people below, there are many others who have shaped my thinking and helped in other ways. To those who have helped get me to this point – ngā mihi nui ki a koutou.

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- Brian Michie from Auckland Transport
- Martin Glynn from the Automobile Association
- Richard May from Waka Kotahi New Zealand Transport Agency

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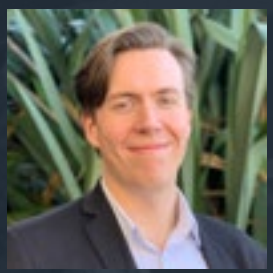
Finally, a special thank you to Rob Carr for his wisdom on the Emissions Trading Scheme (and many other topics).

ABOUT THIS PAPER – AUTHOR'S NOTE

Transport is an area that touches the lives of everyone. There's a reason everyone has an opinion on it – every time we leave our homes, we interact with our transport system in some way and many of our choices are influenced by it. Importantly, other peoples' choices affect ours as well. The person sitting in backed up traffic complaining about the congested roads is part of the congestion. Someone biking on the road who must remain vigilant and watch out for dangerous drivers because a separated cycle lane hasn't been created. The child who isn't allowed to walk to school because their parents or caregivers are worried about all the cars going too fast down their street. We're all connected by transport. Previous papers from the Helen Clark Foundation and WSP in New Zealand have made this point well.

I find this giant web of choices, consequences, and the factors that shape those choices in the first place fascinating. This is probably why I looked forward to writing this report as I was able to do a deep-dive into a policy that can have a big impact across all of them. Congestion charging is one of those policies based in pure economic theory. Dampen demand and you get fewer people using the good you have priced – in this case driving. Seems simple, but, as with all transport policy, I really wanted to explore what this means in reality for people. Families having to get around and pay their bills isn't just theory, after all. No one should be left behind in our journey to make our cities fairer and more liveable. I hope this report goes some way to help us along this path.



Tom James
WSP Fellow,
2 May 2022

GLOSSARY OF SPECIALIST TERMS

Accessibility	*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.*
Car dependency	*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.*
Decarbonisation	*The reduction of carbon, and the transition to an economic system that specifically reduces and compensates emissions of carbon dioxide.*
Forced car ownership	*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.*
Just transition	*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.*
Kāinga Ora	*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.*
Mobility justice	*An overarching theory that goes beyond distributive approaches to transport to bring into focus unjust power relations and uneven mobility.*
Net zero emissions	*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.*

Te Manatū Waka Ministry of Transport	*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.*
Transport disadvantage	*Disadvantage caused by a lack of transport options, for example not owning a car or not living near reliable public transport.*
Transport equity	*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.*
Transport justice	*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.*
Transport poverty	*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).*
Transport-related social disadvantage	*Missing out on opportunities (including opportunities for employment and social connection) because of a lack of practical transport choices.*
VKT	*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.*
Waka Kotahi NZ Transport Agency	*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).*

EXECUTIVE SUMMARY

Congestion charging is likely to be implemented in at least two cities in Aotearoa New Zealand. There is a policy consensus about this. There have been multi-year cross-agency initiatives to examine the practicalities, most political parties support it, and the Government has already consulted on whether to enact legislation to enable it. The purpose of this report is to provide recommendations to make the policy as fair as possible so that the least well off are not disproportionately affected.

This report reiterates the case that congestion charging is a useful tool to reduce traffic and emissions in cities alongside other urban transport policies. This is because we will likely not be able to achieve our climate goals without some form of demand management like congestion charging. R– relying on the Emissions Trading Scheme (ETS) or more public transport infrastructure investment alone will not suffice. The way our cities have been built over the last 70 years means that for most trips driving is the only practical option. Distances between amenities can be long, and public transport or active links are not adequate. This locks many people into having to own and drive a car, which has led to an inequitable transport system, as well as rising emissions and unsafe streets. There is a range of policies that can help reduce this dependence on cars, including better urban planning and low-traffic neighbourhoods. As seen from the experience of cities that have congestion charging, it can make a real difference in helping to reduce the amount of driving and should be enacted alongside other measures.

This report also examines what the impacts of congestion charging could be in Tāmaki Makaurau Auckland and Te Whanganui-a-tara Wellington. Both cities were specifically consulted on for moving forward with congestion charging as part of the Government's draft Emissions Reduction Plan, so are likely to be the first places to have it enacted. Modelling for both cities shows significant reductions in traffic, and therefore congestion and emissions, if congestion charging is implemented.

If a congestion charging zone was created in Tāmaki Makaurau Auckland's central business district (CBD), then it would likely not have large negative equity impacts. Travel data shows that most people who commute to and from the CBD use public and active transport, and most come from more affluent suburbs. Some households may even be better off financially, as they will have fewer trips into the CBD, avoiding parking and driving costs. However, analysis indicates that active and public alternatives are not sufficient outside of the CBD currently, which means a charging zone outside of it will likely have negative equity impacts. More investment needs to be made in public transport services and active transport infrastructure before a charging zone would be justifiable elsewhere.

The equity impacts if a congestion charging zone was implemented in Te Whanganui-a-tara Wellington's CBD are less clear, as there has been less modelling and analysis. The city has the highest rates of walking and cycling and public transport use into the CBD, which indicates there are good alternatives to taking the car. However, the available modelling shows that some lower-income communities could be disproportionately affected as they will continue to make trips to and through the CBD at similar levels. Further research needs to be done on the equity impacts and design of a regime specific to Te Whanganui-a-tara Wellington.

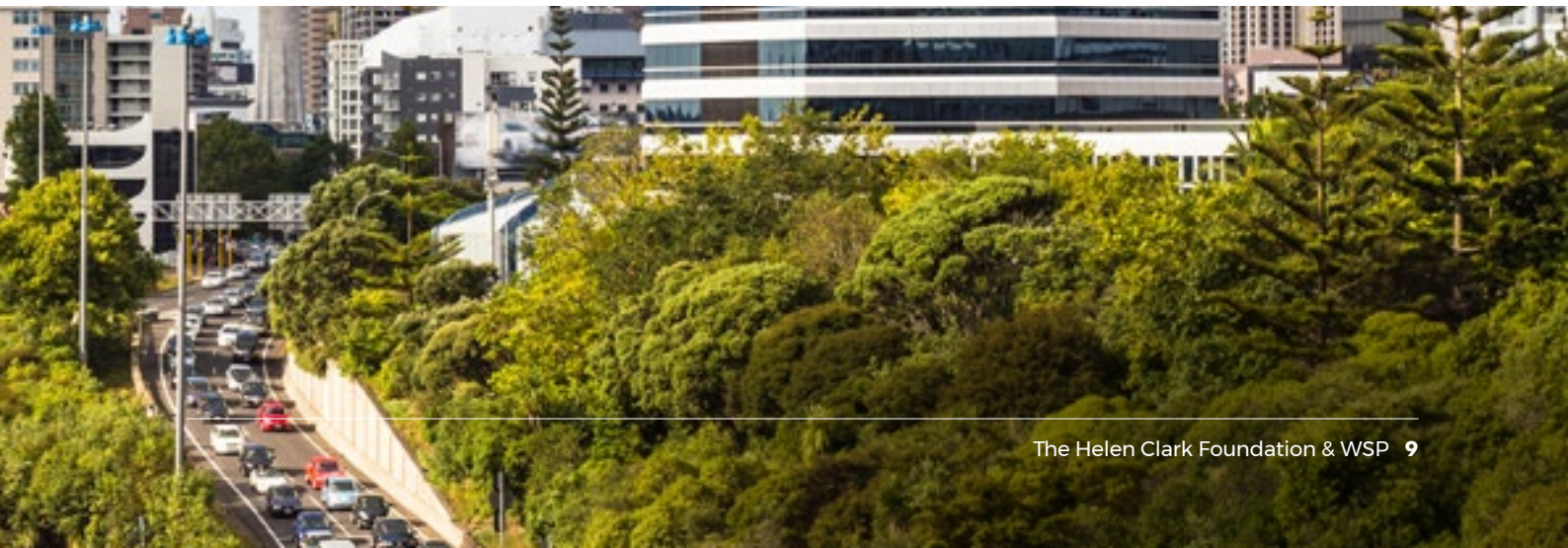
Finally, this report lays out specific design considerations and principles that could be applied to any congestion charging scheme to make it fair. These are based on the experience of cities that both successfully enacted and failed to implement congestion charging, academic research, and the feedback on Aotearoa New Zealand's proposals.

Given legislation is needed to make congestion charging a reality, key principles should be enshrined in it to ensure any scheme is equitable. These include:

- Making sure there are specific levels of public transport available in an area before congestion charging is enacted.
- Ensuring revenue from the regime goes back to improving transport and making it more affordable to move around in the city with the charging zone.
- There should be daily charging caps to avoid disproportionally affecting those who must come and go from a charging zone a lot, while still encouraging behaviour change.
- The charging zone should not operate during times when there are not safe alternatives to driving, such as overnight between the evening and morning peaks.

Building public confidence in the policy will be key to avoiding a political backdown. Strong community engagement will be needed for communities inside and around any proposed charging zone. This should not just be online engagement asking for submissions, but active, local, and, ideally, face-to-face engagement. A pilot project or small initial rollout has also helped sway public opinion in other jurisdictions because it makes the benefits tangible and disproves misinformation.

Some categories of vehicle should be exempted from any charging regime to ensure fairness. Public transport vehicles should be made exempt as it does not make sense to add costs to a service we want more people to take. Both emergency vehicles and those that provide mobility for disabled people should also be exempt as they provide a public safety role in the case of the former, and the latter have no choice but to drive and should not have to pay more to provide their services.



RECOMMENDATIONS

This report provides three over-arching recommendations for the Government and councils to consider. They correspond to each section of the report so readers can go to the relevant section if they want more detail on each recommendation.

1.

Congestion charging should be part of the policy mix to improve our cities and help meet our climate goals

- International evidence shows congestion charging can be an effective policy to reduce congestion and emissions.
- Equity concerns need to be addressed before implementation, and robust community engagement and strengthened alternatives like better public transport must be done at the same time.
- It should be implemented alongside complementary policies like investing in frequent public transport services and rapid transit, and creating low-traffic neighbourhoods with lower speed limits – congestion charging will not fix our transport issues alone.

2.

Congestion charging could be implemented in Tāmaki Makaurau Auckland's CBD fairly

- City-specific modelling shows that a congestion charge will meaningfully reduce traffic and emissions in Tāmaki Makaurau Auckland.
- Analysis indicates that there are sufficient alternatives for those travelling to and from Tāmaki Makaurau Auckland's CBD, and that lower income communities largely do not commute to the CBD, so a charge will not impact them.
- However, a charge outside the CBD is unlikely to be justified due to the lack of public and active transport alternatives.
- Further analysis and modelling needs to be done for Te Whanganui-a-tara Wellington, as the initial research indicates there could be equity issues with a CBD charging zone.

3.

Equity should be embedded into the design of any congestion charging scheme in Aotearoa New Zealand

- There should be sufficient public and active transport alternatives before a charging zone is enacted in any particular area.
- Revenue should go back into improving transport options for the city implementing it and funding mitigations.
- Robust community engagement is essential and should not be passive.
- There should be daily caps on charges, and the operating hours of the scheme should be limited to between, just before morning peak traffic, and after afternoon/early evening traffic to avoid unduly impacting on shift workers.
- Exemptions should be limited to public transport, emergency vehicles, and those who provide mobility for disabled people.
- The above key principles should be enshrined in the enabling legislation.
- A pilot scheme or smaller initial rollout would be helpful to showcase the benefits and monitor the equity impacts.

INTRODUCTION

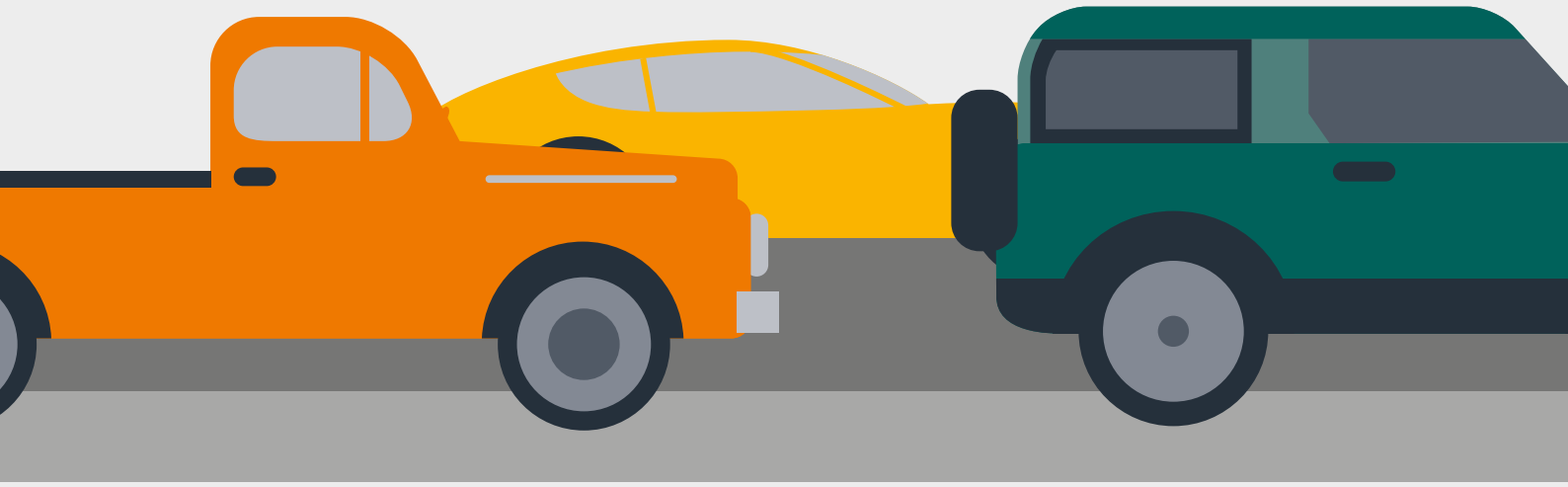
Let's begin with the stories of people trying to get around in the present and what their journeys could look like in the future with the right policies to set the scene for this report.

MICHAEL'S STORY

Michael lives in Glen Innes, Tāmaki Makaurau Auckland. He's 26 with a partner and two small kids. He gets up early, helps get the kids ready for school and heads off to his full-time work at the factory in Avondale in his Toyota Hilux. It's a slow drive to the Ellerslie on-ramp and getting on the motorway is bumper to bumper. Traffic is not as bad as it was pre-COVID-19, but as more people stop working from home, there's more cars on the road during the morning commute. It takes Michael 40 minutes to get there. This is still about half the time it would take on the bus, so it's the only realistic choice if he wants to help get the kids ready in the morning. Coming back, it's a bit worse on the southern motorway, so it takes a bit longer – around 50 minutes. It's frustrating being stuck in traffic but what other choice is there?

A potential future for Michael – 10 years later

Michael still commutes to Avondale from Glenn Innes, but it's become easier. Thanks to the congestion charge in the CBD and investments into real travel alternatives, there are fewer cars going into the city in the morning. As he doesn't go through the CBD, he doesn't have to pay the charge, but still gets the benefits of having to compete with fewer vehicles heading there as he gets onto the Ellerslie on-ramp. The drive to work takes under 30 minutes now and the commute home has improved similarly. Thanks to the new and affordable cross-city public transport system partly funded by congestion charging, there's even some days where Michael can leave the car at home. The improved walking and cycling infrastructure means he also feels at ease letting his kids cycle to Glendowie College, as it is much safer.



SHARNA'S STORY

Sharna is a 19-year-old journalism student at AUT who often gets the bus into town. She lives on a street off Dominion Road near Balmoral, Tāmaki Makaurau Auckland, so it's easy for her to get to the main stretch and take an express bus into the city when she has classes. She doesn't believe biking is an option as she feels unsafe having to share the road with the buses and other vehicles going into the city. If she has an 8am class, she drives, as it can be difficult to rely on the buses during the peak hours with all the extra traffic. This adds a lot of extra stress and costs, given that she must both tackle the morning traffic while trying to get to class on time and pay for parking and petrol.

A potential future for Sharna – 10 years later

Sharna now works as a producer for a media company in the city and commutes from Mt Eden. Despite her early starts, she takes the bus into the city every morning as it is much quicker with the reduced traffic going into the city, thanks to the congestion charge and dedicated bus lanes. She occasionally cycles down the dedicated cycle lanes when she is doing an afternoon shift. It is also much quicker to get around town to set up for location shoots. There is a charge for taking the van out but having the certainty about when you arrive helps make it worth it.

PENNY'S STORY

Penny is a 31-year-old mum to a young daughter. She lives in Birkdale on the North Shore of Tāmaki Makaurau Auckland and works part-time in retail in the city. On days she's working, she must drive to drop off her daughter at day care in Grafton before heading into the CBD. Getting down Birkdale Road and then the Harbour Bridge is not easy at that time in the morning, not to mention having to navigate through the CBD to get to Grafton during rush hour.

A potential future for Penny – 10 years later

It's now quicker and cheaper to get into the city by public transport than before, with more services going more frequently. Taking the bus has become more of a real option now they come more often all day. But there are still days when Penny drives, as she needs to drop off her daughter at school before work. Dropping her off at Ponsonby Intermediate means she avoids the congestion charge in the CBD but gets the benefits of there being less traffic on the Harbour Bridge. She can avoid the charge in the CBD to get to Grafton, but sometimes she'll go through it as it has become a lot quicker.

THE POTENTIAL ROLE OF CONGESTION CHARGING IN BUILDING CLEANER, MORE ATTRACTIVE CITIES

INTRODUCTION

This section looks at the state of our cities and why they need to change, explains what congestion charging is and what are the outcomes, as well as examining alternatives to congestion charging.

Key takeaways from this section:

- We must change our transport system to make it fairer and to enable people to drive less. This has huge safety, liveability, climate, and public health benefits.
- Congestion charging can be an important tool in making that transition to a more equitable and low carbon transport system.
- Cities around the world have had positive outcomes when congestion charging is brought in with thorough community engagement and improvements to public and active transport.
- Congestion charging is not a 'silver bullet'. It should be implemented alongside complementary policies like investing in frequent public transport services and rapid transit and creating low-traffic neighbourhoods with lower speed limits.
- There are equity concerns around congestion charging that need to be addressed before it is implemented.
- Without congestion charging as part of a comprehensive urban transport policy, our transport system will remain inequitable and car dominant.

CURRENT STATE OF OUR CITIES AND THE CASE FOR CHANGE

Simply put, the way our cities have been built means most people use a car. Over the past 70 years, infrastructure and urban planning choices in cities around the world have meant cars and road space have been prioritised over people. An example of this is building extra lanes to solve traffic problems rather than changing how we travel. Unfortunately, because of the principle of induced demand, where more people choose to use improved amenities, adding more lanes just creates more traffic. Aotearoa New Zealand's cities are no different, which has led to us having the fourth-highest rate of per-capita car ownership in the world.[1] We live in sprawling low-density urban areas supported by motorways, and this has led to vehicle dependence for many and has limited the potential for public transport and active transport use. For most trips, driving is the only practical option as the distances between amenities can be long and do not have adequate public transport or active links. This means driving can be easier and more affordable than taking public transport, walking, or cycling – which has negative consequences on our environment, health, wellbeing, and equity.

Emissions

A major consequence of our cities being built around cars is that transport is one of the biggest drivers of climate change in Aotearoa New Zealand. Emissions from transport make up about 20% of our domestic greenhouse gas emissions, and almost half of our carbon dioxide (CO_2) emissions.[2] It is even worse in our largest city Tāmaki Makaurau Auckland, where 40% of emissions come from private cars.[3] Transport emissions are still increasing, while other sources of emissions have plateaued, and they have risen more than any other source with an increase of approximately 90% between 1990 and 2018. This compares with 24% for gross emissions across the total economy. We know that our vehicle use is the core driver of this, as most transport emissions come from light vehicles (67%), followed by heavy vehicles at 23%.[4] This not only contributes to climate change, but also makes people sick. There are 256 premature deaths each year in Aotearoa New Zealand related to vehicle emissions, with social costs of $934 million.[5] On our current trajectory, transport emissions will not fall fast enough to meet our climate commitments and to meet them we will have to make significant changes to our cities and how we move round them.[6] Tackling climate change by reducing emissions is also an equity issue, as people in lower income communities suffer disproportionately from air pollution and this has been found to be the case in Aotearoa New Zealand.[7]

Safety

The fact we have to make an extremely high number of vehicle journeys because of our reliance on cars also leads to the deaths of hundreds of New Zealanders every year from physical trauma. In 2021, 318 people died on our roads in crashes.[8] While this is down from the recent peak of 378 deaths in 2017, that is still nearly a person a day dying unnecessarily and at least some of this reduction can be attributed to people travelling less during the pandemic. These are not just car drivers – they also include motorcyclists, passengers, cyclists, and pedestrians. On top of this, there are thousands of injuries from crashes every year and half of major trauma injuries treated in our hospitals are from road crashes.[9] The total social cost of all these deaths and injuries is estimated at approximately $4.9 billion a year.[10] But, beyond the cost on individuals, our health system, and disruption to traffic, we need to consider the immeasurable impact of these avoidable tragedies on whānau, friends, and communities. This would not be considered acceptable in any other sector. This is a serious issue in cities like Tāmaki Makaurau Auckland. Auckland Transport's crash statistics show 80% of deaths and serious injuries happen on 50 km/h local urban roads, while 45% of deaths and serious injuries involve pedestrians, children, the elderly, and disabled people.[11] Unsafe roads also disproportionately lead to deaths and injuries for those on lower incomes, so improving safety is an equity issue as well.[12]

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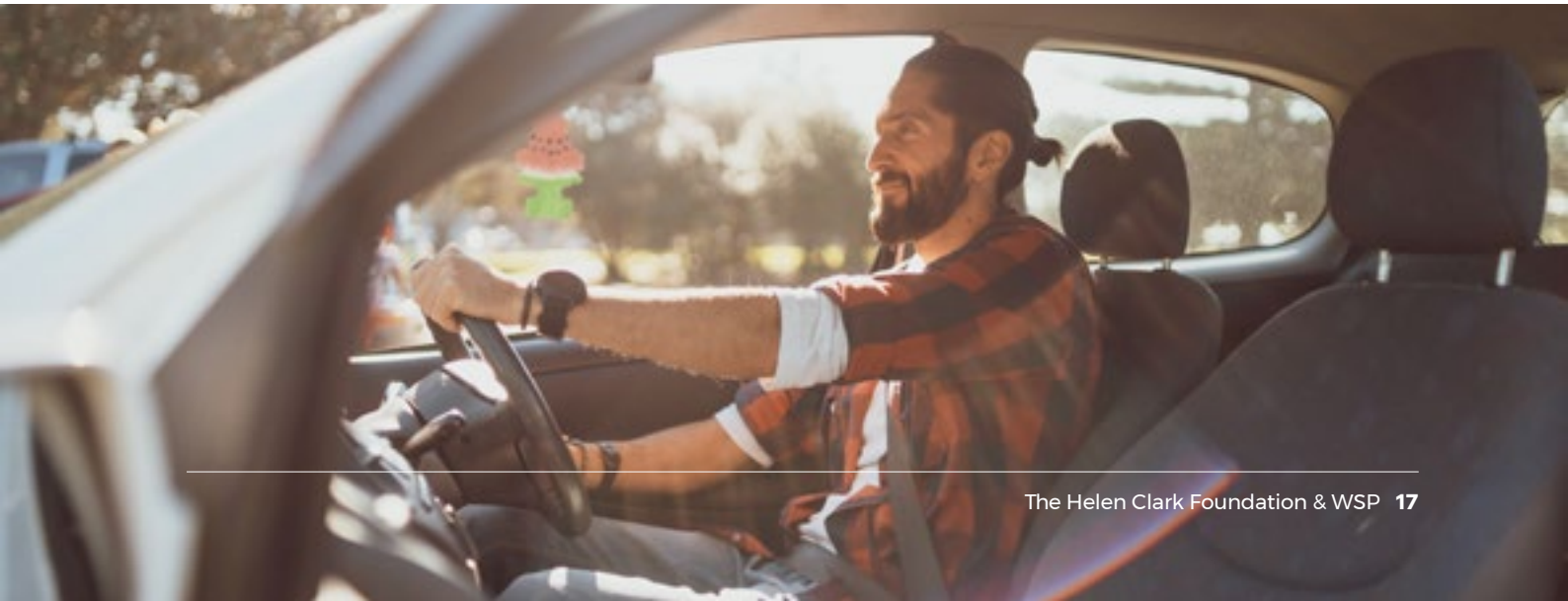

Wellbeing

As well as contributing to climate change and being a leading cause of deaths and injuries in our society, the way our cities have developed can lead to a lack of social connectedness in our neighbourhoods. We're more likely to get to know our neighbours if the areas around our communities are safe and open to pedestrians, which can foster wellbeing and belonging.[13] On the other hand, it's more difficult for us to meet people and build this sense of community when we perceive our streets to be dangerous to navigate and unfriendly to walk and bike around. Unfortunately, more traffic creates this sense of unfriendliness. This also means people are less likely to use active transport modes or let their children play outside around the neighbourhood, both of which would lead to better physical and mental health.

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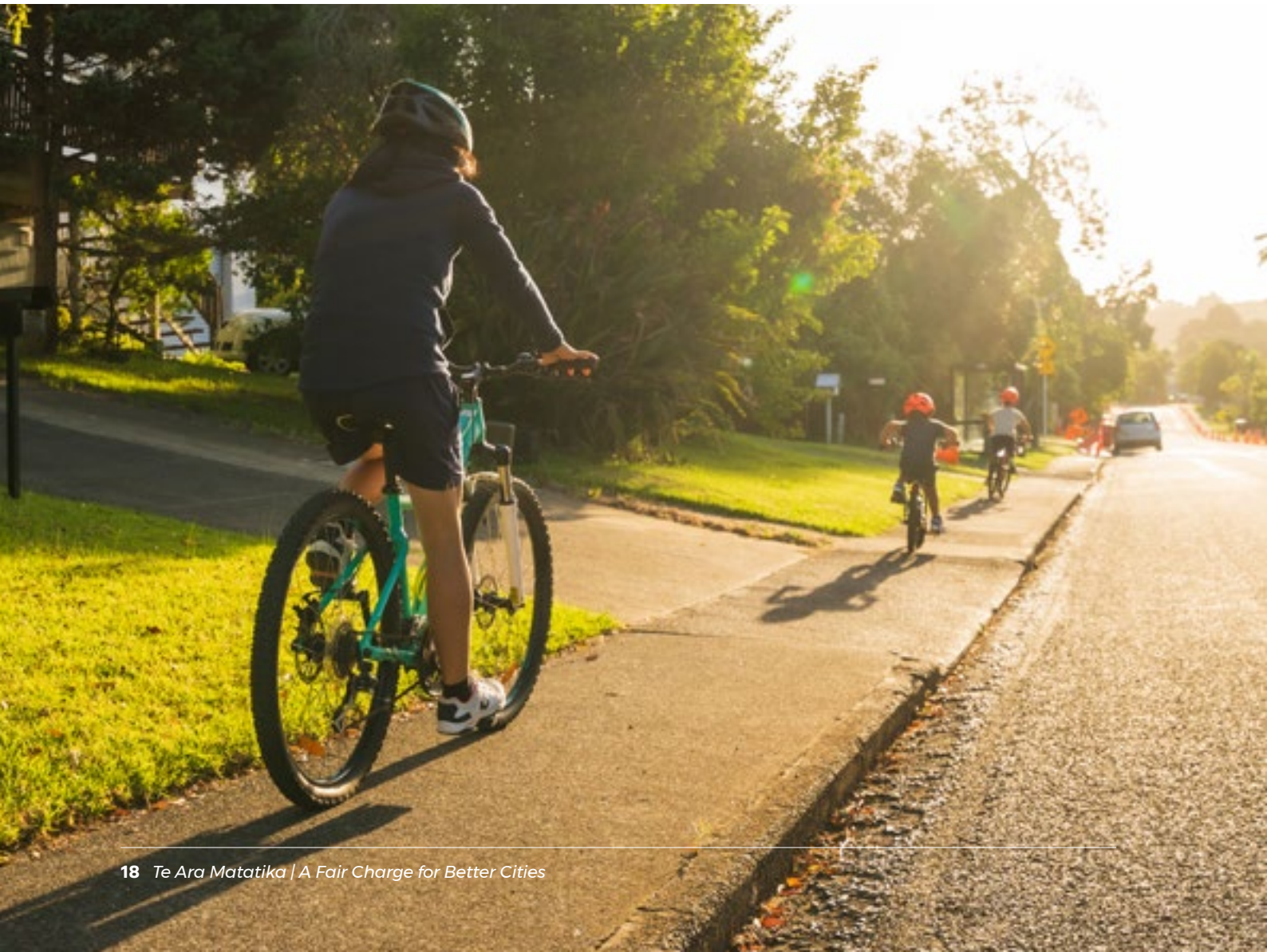
[16] MRCagney (2020). Equity in Auckland's transport system. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/NZ3060_Equity_in_Auckland_Transport_System.pdf

[17] Neurodivergence is the term for people whose brains function differently in one or more ways than is considered standard or typical, for example, autistic, dyslexic, and dyspraxic people.

[18] Ministry of Transport. (2022). Transport Indicators Inclusive Access: Household spending on transport. Retrieved from: https://www.transport.govt.nz/statistics-and-insights/transport-indicators/sheet/inclusive-access



A note on sources: On this page we draw extensively from a report summarising available evidence about transport and equity in Aotearoa New Zealand. This is Equity in Auckland's Transport System ***www.transport.govt.nz/area-of-interest/auckland/equity-in-aucklands-transport-system****, commissioned by Te Manatū Waka Ministry of Transport and undertaken by MRCagney, released November 2020. Unless otherwise stated, the information here is sourced from this report. 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 the report in full. Any mistakes in the interpretation of the evidence are ours. Sources other than these are cited fully.*

Equity

We also should consider who is the most constrained by our car-dominated system. Some people physically cannot drive a standard car due to health conditions or impairments. But it's not just an inability to drive that can be a barrier – in 2019, 10% of adults reported being unable to make a trip in the past week, due to cost, time, lack of transport, and/or too much traffic. While this seems like a relatively small number, some people and groups face ongoing restrictions on their mobility, which limits their choices and opportunities in life. These groups are often already disadvantaged in our society and include Māori and Pacific people, disabled people, people on lower incomes, women, LGBTQI+, and ethnic minorities.[14]

There has been some research into the experience of Māori public transport users specifically. Public transport stops and services are often not well placed and infrequent in areas that many Māori live and work in. This is compounded by other inequalities they are more likely to face, including lower average incomes and being more likely to have a disability at a younger stage than non Māori.[15]

Women can be adversely impacted by the way our transport system is set up. Often transport systems and services are designed for those working full time and who travel in peak hours. As a result, public transport runs less frequently and reliably outside of those peak hours. Women are more likely to have caring responsibilities and work in part time jobs, which can lead them to have variable trips with multiple legs. This means they are underserved by a public transport system that focuses on services during peak hours.[16]

How safe public and active transport is can also be a barrier for women. There can be added costs for women having to find and take safe routes, especially at night. These costs are not just monetary, but also time and mental load from having to take longer journeys and researching the best way and times to travel, all of which can create stress.

As MRCagney wrote in their 2020 report ***Equity in Auckland's Transport System***

> *"There is little local evidence on the transport needs and experiences of the LGBTQI+ community. Transgender and non-binary people are more likely than other groups to report harassment and to feel vulnerable when walking and using public transport. However, avoiding those modes introduces costs, and this group is also more likely to have a lower income than other groups. Therefore, they are prone to transport poverty.*
>
> *Disabled people are also more likely than others to experience transport poverty due to lower incomes on average than other groups. Further, disabled people have specific needs for accessibility of transport, which reduces their choices."*

Even when there are alternatives to driving available, these can be inaccessible for some. While there could be bus stops in a community, they could be too far to walk or wheel for some, or the height of the kerb and the lack of an accessible entrance to the bus could stop wheelchair users from using them. Neurodivergent[17] people, the very young, and the elderly may be overwhelmed by noisy and congested streets or public transport – effectively limiting their travel choices.

Even for those who can drive, the cost of car ownership can be onerous, despite being a necessity in most cases. On top of ongoing costs like petrol, a warrant of fitness, and licensing, there are other costs like the need to repair a car when it breaks down, and parking tickets. All these costs can add up to having less money to spend on essentials like healthcare, rent or a mortgage, and food. This can lead to dire coping strategies for those least able to pay – those on the lowest incomes spend proportionately far more on transport than those on higher incomes, up to 28% versus 8%.[18] Often, people will borrow to be able to buy a car, so high-interest loan repayments become another inequitable cost of transport. There are also costs associated with public transport and active modes, such as tickets and bike/scooter purchasing, and it is important to make those options more affordable as well[19] so people will choose them rather than defaulting to taking their car.

How do we turn this around?

People benefit from living where there are good car-free transport alternatives, so they don't have to drive and they encounter less traffic. Reducing the amount of driving people must do has positive impacts on public health and wellbeing, equity, and the environment.

There is a range of policies that can be implemented to help achieve this, which will also change the shape of our towns and cities. These include:

- integrating land-use, urban development, and transport planning,
- encouraging quality, compact, mixed-use urban development through planning rules,
- investing in frequent public transport services and rapid transit,
- redirecting funding away from major urban highway and road expansion projects if they would induce more vehicle travel,
- building safe and accessible walking and cycling networks,
- encouraging shared options such as car sharing/pooling and shared micromobility,
- creating low-traffic neighbourhoods with lower speed limits, tactical street changes, and universal design principles[20],
- introducing transport demand management, e.g. congestion pricing.[21]

This report focuses on the final point, as congestion charging has not been implemented in Aotearoa New Zealand and is not familiar to most people. It is important to underline that congestion charging is a policy for urban centres – not provincial or rural towns. These areas will also need to decarbonise but the mix of policies will be different.

19 Walker, H. (2021). 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. Auckland: Helen Clark Foundation.

20 In our previous report, The Shared Path, we outline how we need low-traffic neighbourhoods and cities to reduce emissions, improve road safety, and create connected urban communities.

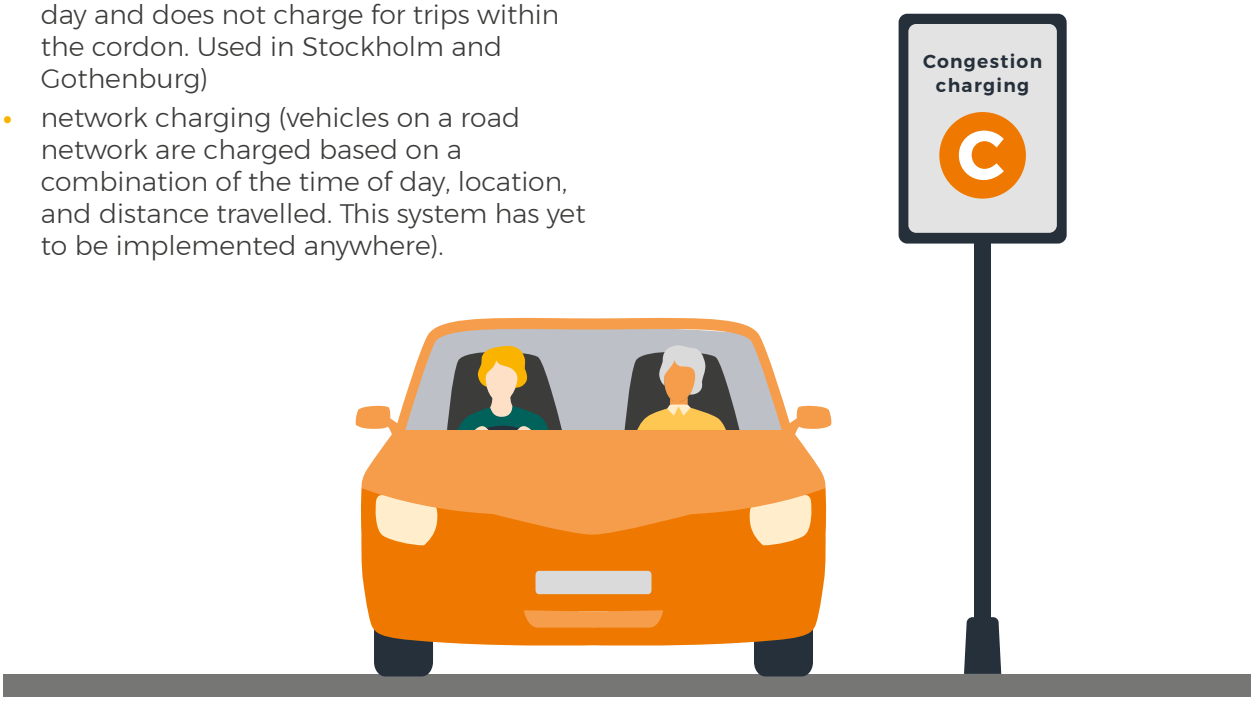
21 He Pou a Rangi the Climate Change Commission. (2021). Ināia tonu nei: A low emissions future for Aotearoa. Retrieved from: https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf; Ministry for the Environment. (2021). Transitioning to a low-emissions and climate-

WHAT IS CONGESTION CHARGING AND WHAT ARE ITS BENEFITS?

Congestion charging (also called congestion pricing) is one of the tools that can be used to help reduce traffic and gain the benefits associated with that reduction. It helps reduce the amount of driving in an area by charging a fee to move through it. These fees can range from around $0.50 to $8, with the London charge being the outlier at around $20. There are a range of ways to implement the policy in a city, such as using:

- area-based charging (charging vehicles for crossing a ring or driving within that ring at specific times of day. Used in London)
- corridor-based charging (charging vehicles to use all the roads in a particular corridor. Used in Singapore and Dubai)
- cordon charging (charging vehicles for crossing a ring or line of charge points across a series of roads at specific times of day and does not charge for trips within the cordon. Used in Stockholm and Gothenburg)
- network charging (vehicles on a road network are charged based on a combination of the time of day, location, and distance travelled. This system has yet to be implemented anywhere).

Charging road users at different times and/or locations encourages some drivers to change the time, route, or way in which they travel. It is important to differentiate it from toll roads, which are often set up to help pay back the cost of building the road, rather than to influence travel patterns. Congestion charging is still relatively uncommon around the world, with only eight cities having some form of it currently (Singapore, London, Stockholm, Dubai, Valetta (Malta), Milan, Gothenburg, and Bergen).[22] However, some cities in the United States are currently looking at whether to implement the policy, including San Francisco, Los Angeles, Portland, Boston, Seattle, and Washington DC. New York City is also expected to implement congestion charging at the end of 2023.[23]



resilient future: Emissions reduction plan discussion document. Wellington: Ministry for the Environment; Ministry of Transport. (2021). Hīkina te Kohupara – Kia mauri ora ai te iwi – Transport Emissions: Pathways to Net Zero by 2050. Wellington: Ministry of Transport.

22 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

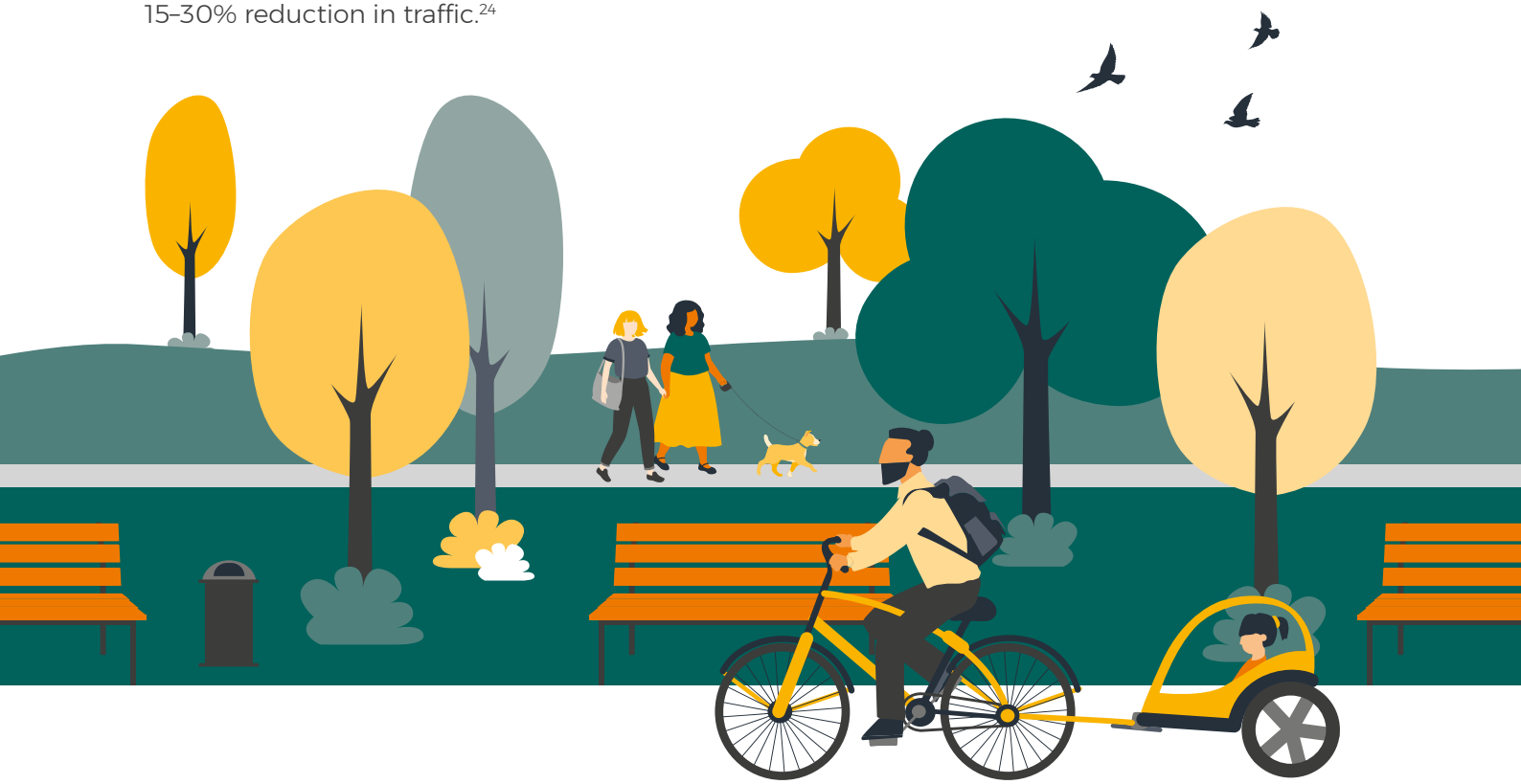
A note on sources: In this section we draw extensively from a report summarising available evidence about congestion charging. This is 'Review of international road pricing schemes, previous reports and technologies' by D'Artaganan Consulting, commissioned by Te Manatū Waka Ministry of Transport and released in 2018. Unless otherwise stated, the information here is sourced from this report. 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.

Benefits of congestion charging

Cities that have implemented congestion charging have experienced a range of benefits from the policy. The one major benefit encountered across all schemes is reduced traffic and therefore congestion. Broadly, the benefits across all cities have ranged from a 15–30% reduction in traffic.[24]

Stockholm's queuing times have reduced by up to 50% at peak times, making trips much quicker for those paying the charge, and improving the speed of public transport. Gothenburg experienced a 20% reduction in peak traffic in the first month the scheme was introduced, and travel times were halved in the north-east of the cordon area.

Although the benefits during peak traffic have reduced to 8–11% subsequently, this still represents thousands of trips avoided every day. In London, traffic entering the congestion charging area has remained stable at 27% lower than pre-charging conditions in 2002, which means nearly 80,000 fewer cars in the city centre each day.[25]



Reducing emissions and pollution

One of the inevitable consequences of reducing traffic is that emissions in the area also reduce. Congestion charging has been shown to produce greenhouse gas reductions of 15–20%.[26] In Stockholm, citywide CO_2 emissions have reduced by 2.7% due to the decline in traffic, and there has been a 10–14% reduction in harmful emissions within the cordon.[27] In London's wider low emissions charging zone, on average there were around 47,000 fewer older, more polluting vehicles seen each day in the zone compared to the two weeks before the expanded scheme was introduced in November 2021 - a reduction of 37%.[28]

There were also 11,000 fewer vehicles driving at all, each day. As a result of these changes, Transport for London estimates there will be a 5% reduction in CO_2 emissions from cars and vans in the newly expanded zone in its first year. This is on top of the 6% reduction in CO_2 emissions in the central London area since 2019.[29]

Boosting alternatives

Disincentivising driving with congestion charging also has the effect of more people using public and active transport. For example, cycling levels in London's congestion charging zone are up by 66%.[30] Importantly, the revenue from the scheme can be reinvested into transport projects to help reduce emissions and congestion.

This has been the case in London, Milan, Stockholm, and Gothenburg, where the revenue from the schemes has been spent on either specific projects or improving public transport services in and around congestion charge zones.

The design of any congestion charging scheme can also be adjusted to achieve certain outcomes, for example, by helping to encourage people to switch over to alternative fuelled cars to lower emissions. In Stockholm, a temporary exemption for low carbon vehicles was included to get more people to buy them. The proportion of registered low carbon vehicles in Stockholm increased five-fold from 3–15% during the five-year exemption period.[31]

23 Chung, J. (2022). MTA expects congestion pricing to start at the end of 2023. Retrieved from: https://gothamist.com/news/mta-expects-congestion-pricing-to-start-at-the-end-of-2023

24 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

25 Transport For London. Congestion charge factsheet. Retrieved from: https://content.tfl.gov.uk/congestion-charge-factsheet.pdf.pdf

26 International Council of Clean Transportation. (2010). Congestion charging: Challenges and opportunities. Retrieved from: https://theicct.org/sites/default/files/publications/congestion_apr10.pdf

27 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

28 Greater London Authority. (2021). London Atmospheric Emissions Inventory. Retrieved from: https://www.london.gov.uk/sites/default/files/ulez_first_month_report_december_2021.pdf

29 As above.

30 Transport For London. Congestion charge factsheet. Retrieved from: https://content.tfl.gov.uk/congestion-charge-factsheet.pdf.pdf

31 Eliasson, J. (2014). The Stockholm congestion charges: an overview. KTH Royal Institute of Technology CTS Working Paper. Retrieved from: https://transportportal.se/swopec/cts2014-7.pdf

Concerns around congestion charging

While there are positives, it is also important to acknowledge potential negatives. Some of the most common concerns were summarised in the final report of the transport and infrastructure select committee's inquiry into congestion pricing as follows.[32]

> *"A congestion charge might not be affordable or reasonable for some people, including those with low incomes, people doing shift-based work (noting that Māori, Pasifika, and ethnic communities are overrepresented in this group), people with disabilities or different mobility needs, and women."*

Proposed congestion charges in Helsinki, Manchester, and Edinburgh were abandoned partially due to concerns around equity impacts and lack of intervention to mitigate them.[33] Beyond the need to ensure an equitable transition, it is important to explain any mitigations planned to help with public acceptance.

As the select committee noted, people on low incomes would be disproportionately affected by a congestion charge, given it is a flat fee, and those on the lowest incomes spend proportionately more on transport costs than those on higher incomes. It would be people with low incomes who would have to change their behaviour the most, because people with more disposable income would be able to pay the charge and continue using their cars. Researchers concluded that Gothenburg's scheme has the greatest negative impacts on those with the lowest incomes because of the high use of private cars among that population.[34]

There could be more rat-running,[35] which can lead to increased congestion on residential streets, causing danger for residents and undermining the scheme and broader goals. This has been a concern raised with the Dubai scheme and highlights why it is important to consider the consequences of the type and area of a proposed congestion charge zone before implementing it,[36] to avoid undermining it and inadvertently diverting traffic and making other streets less liveable, rather than reducing traffic overall.

Congestion charging is often a seen as a purely revenue generating exercise, rather than a way to reduce emissions and traffic. This perception was seen as one of the reasons the policy was not popular in Gothenburg before it was implemented. Revenue gathering being either an explicit or implied goal is often cited as the reason the public rejected the proposed schemes in Edinburgh, Manchester, Oslo, and Copenhagen. When revenue from charging has been committed to transport infrastructure or service improvements, this has helped with public acceptance.[37]

These concerns highlight why equity should be at the forefront of policy design. These points need to be addressed specifically by decision-makers before any implementation in Aotearoa New Zealand to ensure the policy is fair, and to increase the prospects of public support.

32 Transport and Infrastructure Select Committee (2021). Inquiry into congestion pricing in Auckland. Report of the Transport and Infrastructure Committee. Retrieved from: https://www.parliament.nz/resource/en-NZ/SCR_115680/822bf3a0a73ab30ad20c15c02adf334e1548bb67

33 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

34 West, J., & Börjesson, M. (2016). The Gothenburg Congestion charges: CBA and equity. CTS Working Paper 17.

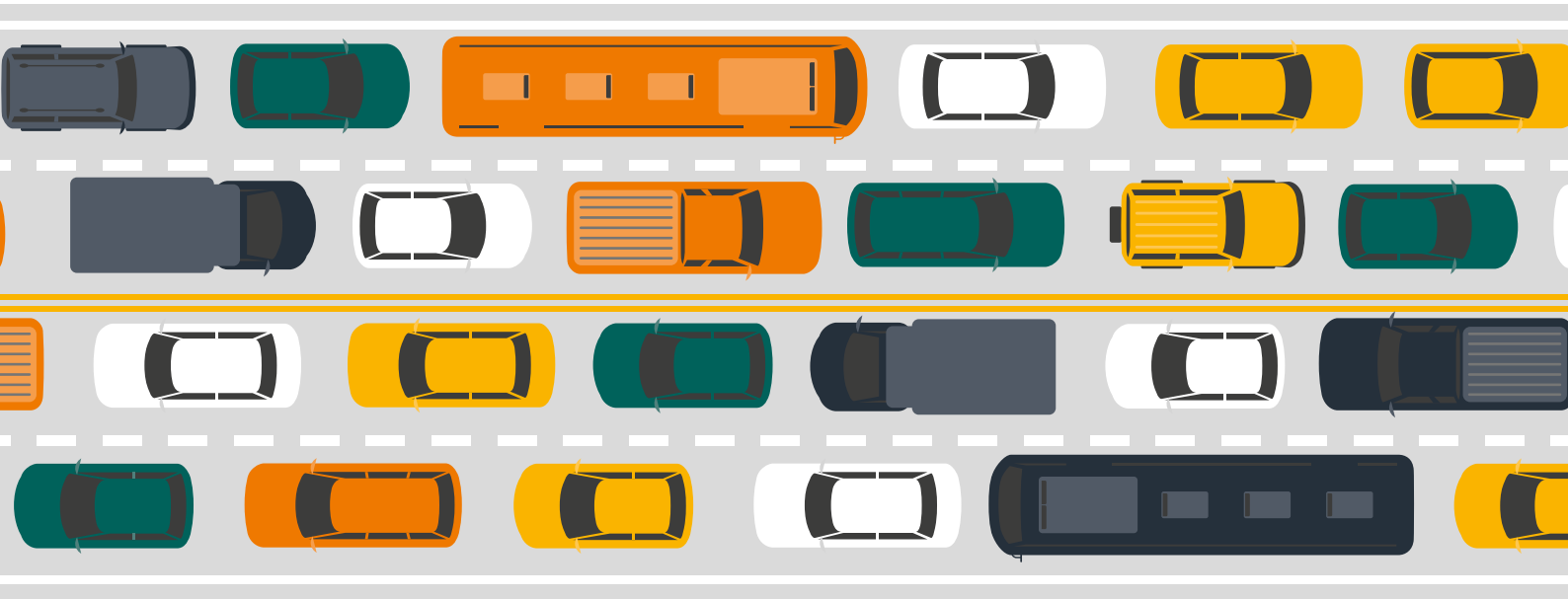
35 'Rat running' is when drivers use residential streets and streets not intended as shortcuts instead of main roads designed to handle larger volumes of traffic.

36 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

37 Bekken, J.-T., & Norheim, B., (2007). Use of toll revenues and investment in Oslo. Research in Transportation Economics, 19, 143-160; D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

THE COST OF DOING NOTHING OR ALTERNATIVES TO CONGESTION CHARGING

So far, this report has covered both the benefits and potential drawbacks from congestion charging as one of the tools to help make our cities better for us, but it is also important to consider the counterfactual – what if we stayed with the status quo or tried something else? Earlier in this section we covered why our cities need to change.



Sticking with the status quo is inequitable

In our previous report, *Te Ara Matatika | The Fair Path*, we examined how disadvantaged groups are already having to grapple with an unfair transport system and the impacts of climate change. As seen from the international evidence and modelling, congestion charging is very effective at reducing car trips and emissions, which improves our health and wellbeing. Doing nothing to address car dependency and, in effect, forced car ownership risks locking these causes of transport poverty and inequity into the future transport system. That is not to say that congestion charging should be the only policy Aotearoa New Zealand pursues in this area and that it shouldn't have equity at the heart of it – but if we continue with the current system, then those who are already disadvantaged will remain so.

Can we build our way out instead?

While we do need more rapid transit, public and active transport infrastructure, that alone will not produce the emissions reductions and liveability improvements Aotearoa New Zealand needs to meet its climate action commitments and improve wellbeing. The 2021 Auckland Transport Alignment Project (ATAP) report explained that even with record investments across climate-friendly transport infrastructure and reduced public transport fares for Community Service Card holders, transport emissions will increase in Tāmaki Makaurau Auckland over the next decade by 6%.[38] The same analysis also showed that congestion will continue to worsen for drivers, especially on the motorways.[39]

The Government's draft Emissions Reduction Plan also notes that "a range of pricing mechanisms [are] [sic; is] integral to the transition, alongside changes to land use and investment in public transport."[40]

Reduced travel demand is a large chunk of the Climate Change Commission's modelling in its demonstration path for transport emissions, and that is separate from its modelling of people taking public or active transport instead of their car.[41] This implies that demand management measures, like congestion charging, are necessary on top of building new public and active transport infrastructure. Reaching the Government's goal of reducing vehicle kilometres travelled (VKT) by cars and light vehicles by 20% by 2035 to achieve the Climate Change Commission's carbon budgets will likely not be possible without demand management tools like congestion charging.

Congestion charging also takes a relatively short amount of time to set up the infrastructure for compared to other projects. The Dubai scheme took only a year to set up, and the London and Stockholm schemes took about two and a half years.[42] The New York City scheme is expected to take only a year after final approval to set up the infrastructure and supporting bureaucracy to enable operation.[43] The Congestion Question Report also suggests implementation in Auckland could be brought forward before 2025, but a barrier to that is that there is no legislative vehicle to allow congestion charging to take place.[44] Compare this to the length of time that projects like metro rail and light rail take to be completed – typically between eight and 10 years. Congestion charging can have a much more immediate effect than relying on public transport infrastructure projects alone.

What about relying on the Emissions Trading Scheme?

Some have argued that if your goal is to reduce emissions and meet climate goals, Aotearoa New Zealand should just use its Emissions Trading Scheme (ETS).[45] It is, however, important to point out that the ETS alone cannot be expected to produce the behaviour change needed to reduce emissions to meet our targets, and non-pricing policies can deliver emissions reductions even while enacted under an emissions trading scheme with a volume cap.[46] Perhaps instead of using congestion charging, Aotearoa New Zealand could rely on using a sufficiently high carbon price through the ETS to increase the cost of petrol to the point where it discourages driving and gets people to switch over to active and public transport. To encourage a high level of behaviour change, however, the price of petrol would need to increase very significantly. A recent study estimated that to get people to switch over to electric vehicles in similar numbers as the Clean Car Discount is incentivising, would require a carbon charge of about NZ$575, which would add approximately $1.30 per litre to petrol prices.[47] That would lead to a highly inequitable transition and hit the least well off the hardest. As covered earlier in this report, those on the lowest incomes spend proportionately the most on transport costs and are more likely to be locked into car dependency and debt. Taking this approach would also mean petrol prices would rise nationwide, rather than just charging in a particular area with good transport links. That in turn would mean there would be many people in rural areas and in suburbs underserved by public transport who would have no credible alternative to driving and would have to absorb the increased costs. In short, relying on the ETS alone would be so inequitable that the behaviour changes needed would be unable to sustain public support.

38 Ministry of Transport. (2021). Auckland Transport Alignment Project 2021–2031 investment programme. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ATAP20212031.pdf

39 Ministry of Transport. (2021). Auckland Transport Alignment Project 2021–2031 investment programme. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ATAP20212031.pdf

40 Ministry for the Environment. (2021). Transitioning to a low-emissions and climate-resilient future: Emissions reduction plan discussion document. Wellington: Ministry for the Environment (p. 68).

41 He Pou a Rangi the Climate Change Commission. (2021). Ināia tonu nei: A low emissions future for Aotearoa. Retrieved from: https://ccc-production-media.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa/Inaia-tonu-nei-a-low-emissions-future-for-Aotearoa.pdf, p. 106

42 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

43 Chung, J. (2022). MTA expects congestion pricing to start at the end of 2023. Retrieved from: https://gothamist.com/news/mta-expects-congestion-pricing-to-start-at-the-end-of-2023

44 The Congestion Question. (2020). The Congestion Question technical report. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionsTechnicalReport.pdf

45 Burgess, M. (2021). To support lower emissions, oppose the Climate Commission's plan. Retrieved from: https://www.nzherald.co.nz/business/matt-burgess-to-support-lower-emissions-oppose-the-climate-commissions-plan/CRENSDBLLTQBRQHDXLDCNTEZUY/

46 Hall, D., & McLachlan, R. (2022). Why emissions pricing can't do it alone. Policy Quarterly, 18(1).

47 Concept Consulting. (2021). Shifting gear: How New Zealand can accelerate the uptake of low emission vehicles. Report 1: Policies to incentivise EV uptake. Retrieved from: https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf?fbclid=IwAR1WLGKzwVoYtLH5H8jMkA0upiBMlmmGJjYe1I3bTsupuct3otz0iJP58NM

What about other demand management tools like road pricing?

Instead of congestion charging, an argument could be made for a nationwide or regionalised road pricing scheme, using Global Navigation Satellite System (GNSS, also known as GPS) technology in vehicles that could provide for variable time, distance, and location-based charges for all road vehicles. That could be an alternative to the flat fees (which are often higher at peak periods) that congestion charging offers, and would allow adjustments of charges based on traffic conditions at any time of day to give greater incentives to people to leave their car at home and target the places and times where congestion is an issue. In 2017, the London Assembly's Transport Committee recommended moving away from a congestion charge towards this kind of road pricing, so each driver would pay according to how much they contribute to congestion.[48]

There appear to be two main issues with moving to this kind of road pricing based on GPS data. While the technology for it exists, it has not been implemented anywhere. That means there are no lessons or blueprints from other countries from which we can draw, as well as there being no testing of the privacy implications of having a system to track movement in every vehicle. Second, it is a much bigger and more complicated proposal to bring to the public, which could derail the debate and lead to staying with the status quo. That is what happened in Finland when a congestion charge was mooted for Helsinki. Equity concerns around replacing new car taxes with this system, and the cost of installing GNSS technology in every vehicle, led to the Finnish government not implementing any kind of pricing at all.[49] The Government is currently investigating road pricing as one of the ways to phase out petrol taxes and road user charges, but that is separate from the congestion charging work and should remain so to avoid confusion.[50]

48 London Assembly. (2017). London stalling: Reducing traffic congestion in London. Retrieved from https://www.london.gov.uk/sites/default/files/london_stalling_-_reducing_traffic_congestion_in_london.pdf

49 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

50 Coughlan, T. (2021). Government looks to phase out fuel taxes, road user charges under transport review. Retrieved from: https://www.stuff.co.nz/national/politics/300283956/government-looks-to-phase-out-fuel-taxes-road-user-charges-under-transport-review

Parking charges as an alternative

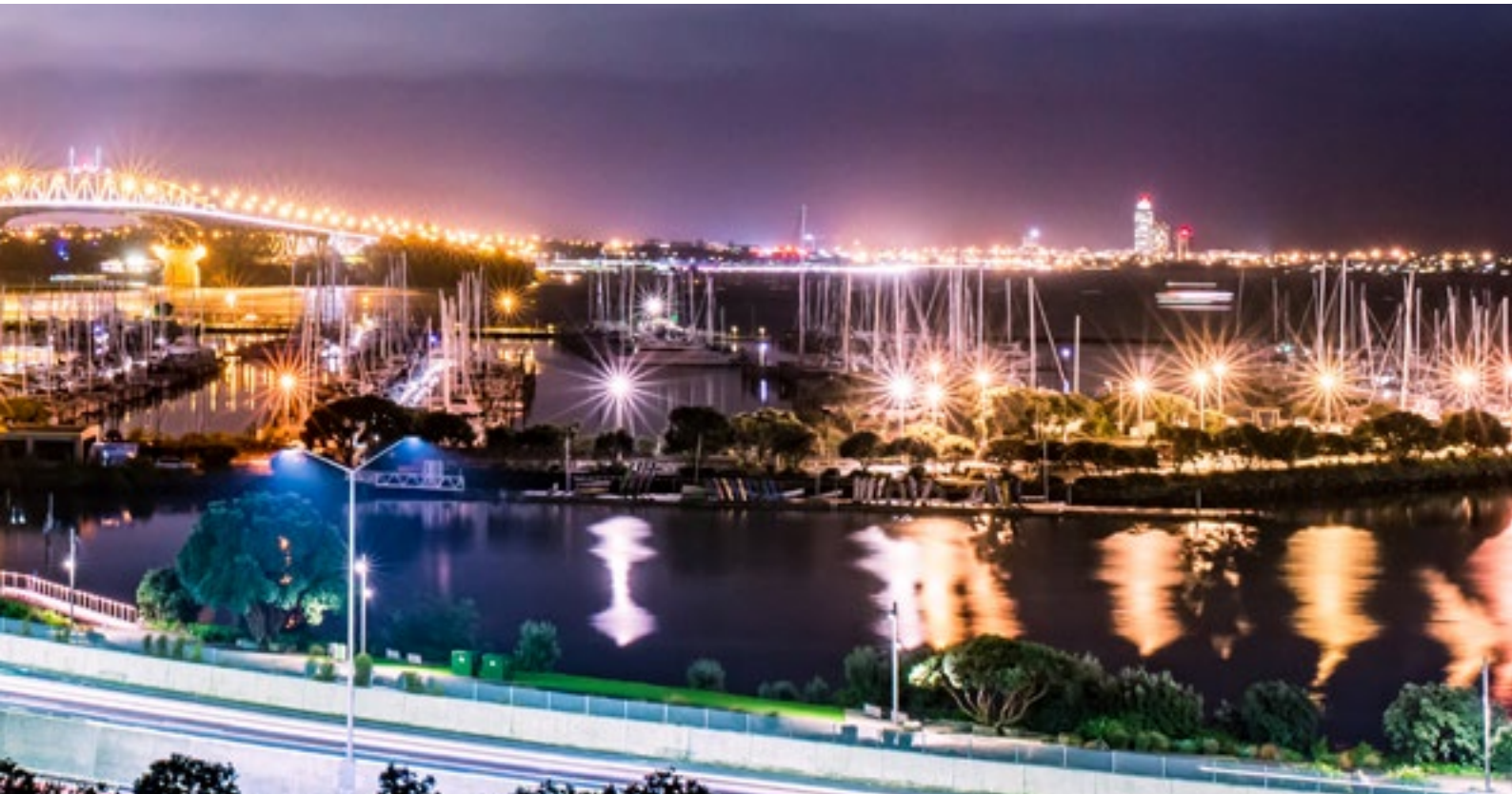
A parking charge or levy could be an alternative demand management tool used to help reduce car trips. For example, that could be where an annual fee is applied to private off-street car parks, such as commercial parks leased by employers for employees or visitors. Experience from overseas suggests either levying or removing workplace parking can be reasonably effective at reducing commuter trips.[51] One case study in Los Angeles showed that charging for workplace parking reduced the number of single occupancy vehicles by 13%.[52] Analysis from Let's Get Wellington Moving indicates an annual parking levy of $2,500 would be expected to reduce the number of car trips by 2,016, or just over 10% of the total, into Wellington CBD each weekday.[53] While this is promising, it is important to point out that these reports are focused on commuter trips. So, policies targeting only commuters miss out on influencing the range of other car trips made. The Congestion Question team looked at using parking policy changes as a way of achieving the same outcomes, but concluded that, partly due to a range of parking charges already in place, they did not represent an "...effective stand-alone intervention capable of improving network performance in a meaningful way".[54] As with other transport policies, parking charges or levies should be used in conjunction with congestion charging to help make our cities better places to live.

51 Willson, R. W., & Shoup, D. C. (1990). Parking subsidies and travel choices: Assessing the evidence. Transportation, 17(2), 141-57; Vaca, E., & Kuzmyak, J. R. (2005). Traveler response to transportation system changes. TCRP Report 95: Chapter 13 – Parking pricing and fees. Washington DC: Transportation Research Board.

52 Vaca, E., & Kuzmyak, J. R. (2005). Traveler response to transportation system changes. TCRP Report 95: Chapter 13 – Parking pricing and fees. Washington DC: Transportation Research Board.

53 Shields, C. (2021). Wellington commuter parking levy final report. Let's Get Wellington Moving. Retrieved from: https://lgwm-prod-public.s3.ap-southeast-2.amazonaws.com/public/Documents/Nov-1-MRT/2021-04-12-LGWM-Commuter-Parking-Levy-Final-Report.pdf

54 The Congestion Question. (2020). The Congestion Question technical report. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionsTechnicalReport.pdf, p. 68



WHAT CONGESTION CHARGING COULD LOOK LIKE IN AOTEAROA NEW ZEALAND AND WHAT THAT MEANS FOR US

INTRODUCTION

This section examines where we are in Aotearoa New Zealand's congestion charging journey, how far down the path Tāmaki Makaurau Auckland has gone and what that means for its residents, as well as what impacts it could have for Te Whanganui-a-tara Wellington. This section also includes a Q&A with Dr Huhana Hickey, a disability rights lawyer and advocate for disabled people, to highlight why inequities in our transport system need to be addressed before congestion charging is implemented.

Key takeaways from this section:

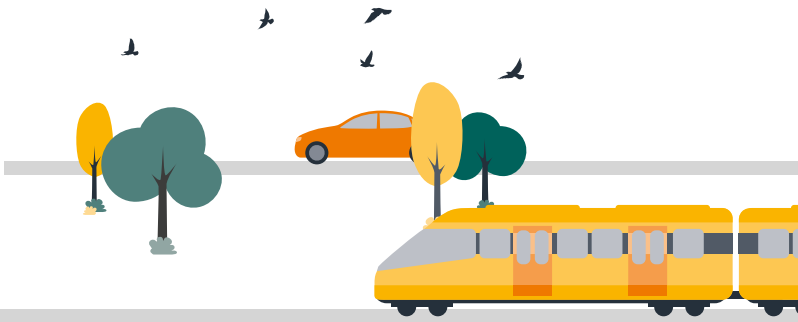
- Law change to enable congestion charging regimes is likely.
- Tāmaki Makaurau Auckland and Te Whanganui-a-tara Wellington in particular could use congestion charging to reduce emissions and traffic.
- A working assumption is that having a congestion charge around Tāmaki Makaurau Auckland's CBD would not have a major impact on less affluent communities whose members mostly don't commute into the CBD by car for work, and there are decent alternatives for those who do.
- Charges outside of both cities' CBDs are unlikely to be justified given the current lack of public and active transport alternatives.

AOTEAROA NEW ZEALAND'S HISTORY WITH CONGESTION CHARGING AND THE STATE OF PLAY

While congestion charging has not been implemented in Aotearoa New Zealand, there have been several studies released since 2006 looking at the issue. The Government, in partnership with Auckland Council, has been investigating what congestion charging could look like in Tāmaki Makaurau Auckland in detail since 2016 through the Congestion Question. This cross-agency partnership[55] has produced several reports, the latest of which at the end of 2020 stated:

> *...there is a strong case for implementing congestion pricing in Auckland for demand management purposes. However, prior to a final decision on whether or not to implement congestion pricing, [The Congestion Question] recommends that a comprehensive stakeholder and public engagement exercise should be undertaken.*[56]

Transport Minister Michael Wood subsequently asked the Transport and Infrastructure Select Committee to undertake an inquiry into the latest report.[57] The Committee accepted, and the inquiry was completed in August 2021. The Committee unanimously recommended that the Government should progress the policy and made a number of specific recommendations on the shape of it.[58]



Recommendations from the Transport and Infrastructure Select Committee on the Congestion Question Phase Two Report

The Government should:

- Progress legislation to enable Aotearoa New Zealand cities to use congestion pricing as a tool in transport planning
- Implement a congestion pricing scheme in Tāmaki Makaurau Auckland, including, as described in the Congestion Question technical report:
  - A region-wide strategic corridors scheme starting in the city centre
  - An access charge that would apply once per journey in peak times
  - The use of automatic number plate recognition (ANPR) technology to identify vehicles that incur a charge

The Government responded to these recommendations by consulting on whether to introduce congestion charging through the draft Emissions Reduction Plan (ERP). Specifically, their consultation included whether to do the following over the next three years:

- Progress legislation to enable congestion pricing in urban centres, and work with Auckland Council to implement the first phase of congestion pricing based on the Congestion Question report recommendation,
- Work with Wellington City Council and Wellington Regional Council in response to their requests for congestion pricing,
- Consider other pricing tools (such as parking management, low-emission zones, and incentives for using public transport, walking and cycling) for urban centres,
- Ensure regulation enables and encourages local government to use these tools,
- Look at ways to reduce the equity/ distributional impacts of pricing tools,
- Investigate how pricing can encourage mode-shift and reduce emissions, as part of the Ministry of Transport's review of the revenue system.[59]

The Government is expected to release the final ERP, and therefore a decision on congestion charging, in May 2022.

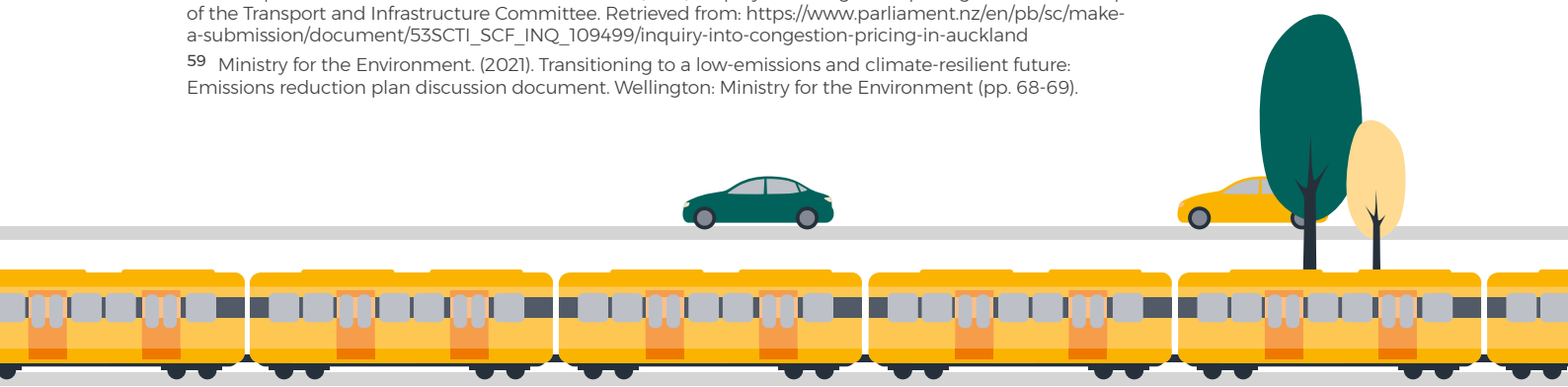
[55] Comprises Auckland Transport, Auckland Council, Waka Kotahi New Zealand Transport Agency, Treasury, Ministry of Transport, and the Public Service Commission.

[56] The Congestion Question. (2020). The Congestion Question technical report. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionsTechnicalReport.pdf (p. 133).

[57] Niall, T. (2020). Auckland congestion charge: Parliamentary inquiry to explore what happens next. Stuff. Retrieved from: https://www.stuff.co.nz/national/123597826/auckland-congestion-charge-parliamentary-inquiry-to-explore-what-happens-next

[58] Transport and Infrastructure Select Committee. (2021). Inquiry into congestion pricing in Auckland. Report of the Transport and Infrastructure Committee. Retrieved from: https://www.parliament.nz/en/pb/sc/make-a-submission/document/53SCTI_SCF_INQ_109499/inquiry-into-congestion-pricing-in-auckland

[59] Ministry for the Environment. (2021). Transitioning to a low-emissions and climate-resilient future: Emissions reduction plan discussion document. Wellington: Ministry for the Environment (pp. 68-69).



- Undertake broad public engagement to help people understand the costs and benefits of a specific scheme
- Consider whether existing schemes could be used to reduce inequity caused by a congestion charge
- Use any revenue raised by a congestion pricing scheme to:
  - Mitigate equity impacts
  - Reinvest in public and active transport in the region where the charge applies
- Undertake research into whether changes to, or the removal of, the Auckland regional fuel tax may be appropriate if congestion pricing is implemented
- Investigate the potential for any enabling legislation for congestion pricing to provide also for low-emission zones
- Closely monitor the effectiveness of any congestion pricing scheme, and act promptly to mitigate any unintended congestion in areas not included in the network.

What's next?

It's highly likely the Government will agree to implement congestion charging in Tāmaki Makaurau Auckland and Te Whanganui-a-Tara Wellington, and to progress legislation to enable the policy this year. There is support across a wide range of organisations such as the Employers and Manufacturers Association, Auckland Chamber of Commerce, Wellington Chamber of Commerce, Generation Zero, Bike Auckland, Movement, Women in Urbanism, Greenpeace, Wellington City Council, Greater Wellington Regional Council, Auckland Business Forum, and the Auckland branch of Federated Farmers.[60] There has also been consensus among political parties. The Select Committee inquiry unanimously recommended introducing it in Auckland and the Leader of the Opposition recently called for it to replace the Auckland Regional Fuel Tax.[61] Most experts agree the scheme is likely to be legislated this year, and there is cautious optimism that political support will hold long enough for the scheme to be implemented. However, there remains a risk that public backlash could cause a backdown. There was a large gap between individuals and organisations who submitted on the Select Committee's inquiry – only 30% of individuals supported congestion charging compared to 72% of organisations.[62] This seems to indicate that, while stakeholders are supportive, the general public might not be. The Government will need to be clear from the outset that it is addressing equity and other concerns.

60 New Zealand Parliament. (2021). Submissions to the Select Committee Inquiry on Congestion Charging. Retrieved from: https://www.parliament.nz/en/pb/sc/submissions-and-advice/all?Criteria.page=VirtualListing&Criteria.Related=INQ_109499&Criteria.ViewAll=1

61 Radio New Zealand. (2022). National leader Christopher Luxon calls for vaccine mandate timeline, doesn't support protesters. Retrieved from: https://www.rnz.co.nz/news/political/461152/national-leader-christopher-luxon-calls-for-vaccine-mandate-timeline-doesn-t-support-protesters

62 New Zealand Parliament. (2021). Submissions to the Select Committee Inquiry on Congestion Charging. Retrieved from: https://www.parliament.nz/en/pb/sc/submissions-and-advice/all?Criteria.page=VirtualListing&Criteria.Related=INQ_109499&Criteria.ViewAll=1

TĀMAKI MAKAURAU AUCKLAND'S CONGESTION QUESTION AND LIKELY IMPACTS

Tāmaki Makaurau Auckland desperately needs better public transport. Before the Covid-19 pandemic, the city had estimated productivity losses of up to $1.3 billion a year through congestion alone.[63] While traffic volumes are nearly back at pre-pandemic levels, there are still far fewer people using public transport.[64] As this trend continues, congestion and emissions are likely to return to, and then get worse than, pre-pandemic levels. It is often essential for Aucklanders on low incomes to own a car as many have few viable alternatives for moving across the metropolis for work. Public transport is not frequent or direct enough for people who do not work in the central city and live close to stations or bus stops, and walking and cycling options are either not safe or not close enough.[65] Over the next 30 years, the city's population is expected to grow by an additional 740,000 people to reach 2.4 million. This strong population growth is expected to lead to a 6% increase in emissions over the next decade, despite record investments in public and active transport.[66] This despite Auckland Council's goals of reducing emissions by 50% by 2030 and achieving net zero emissions by 2050. As discussed in the first section of this report, congestion charging can be one of the tools to help turn this around and fund improvements.

63 New Zealand Institute of Economic Research. (2017). Benefits from Auckland road decongestion. Retrieved from: https://infrastructure.org.nz/wp-content/uploads/2021/08/Benefits-Auckland-Roads-Decongestion-Report.pdf

64 Niall, T. (2022). Auckland public transport users spike, but cheap fares are only half the story. Stuff. Retrieved from: https://www.stuff.co.nz/national/politics/local-government/128334985/auckland-public-transport-users-spike-but-cheap-fares-are-only-half-the-story

65 MRCagney (2020). Equity in Auckland's transport system. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/NZ3060_Equity_in_Auckland_Transport_System.pdf

66 Ministry of Transport. (2021). Auckland Transport Alignment Project 2021–2031 investment programme. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ATAP20212031.pdf

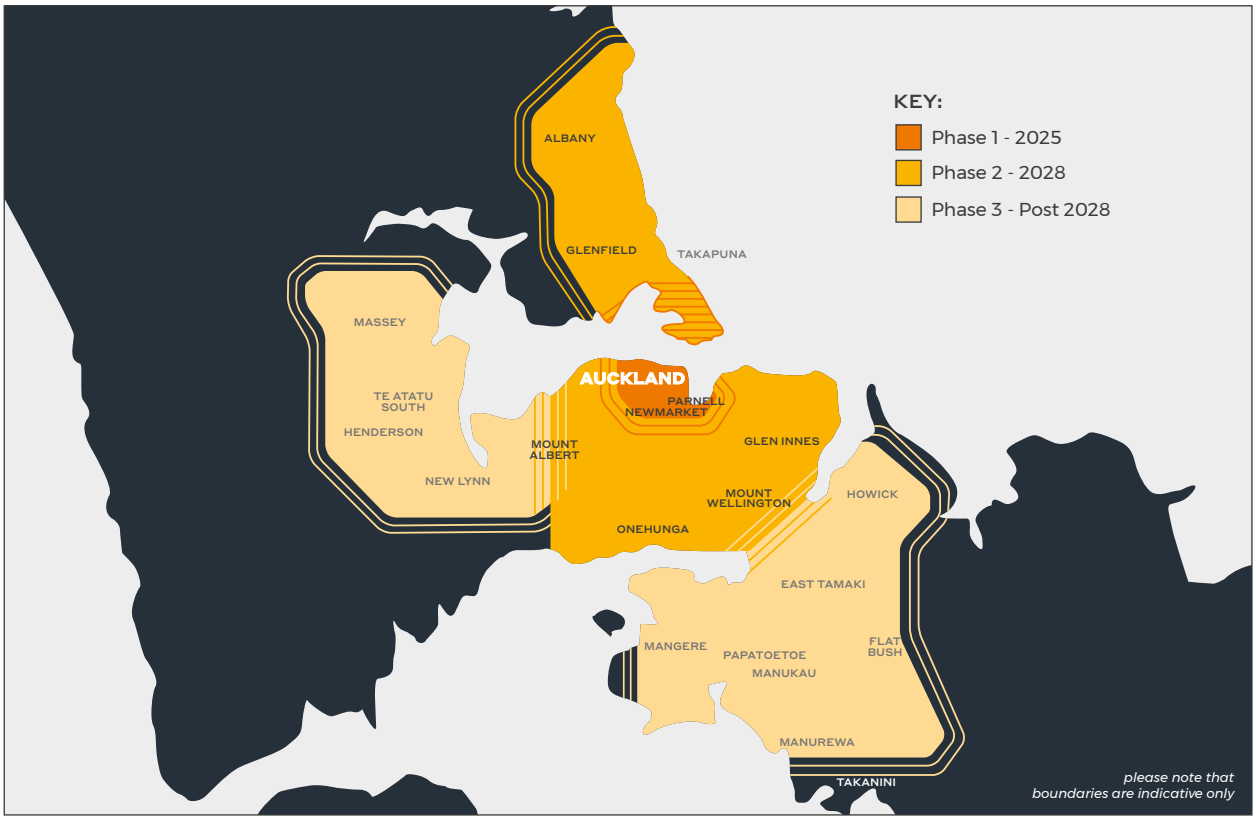
What congestion charging plans are on the table?

The Congestion Question work has provided a comprehensive proposal for congestion charging in our largest city. They recommended:

- A region-wide strategic corridors scheme that applies to the main arterial roads and motorways targeting the most congested corridors. The implementation could be periodically phased to align with improvements to rapid transit, including the opening of City Rail Link, Eastern Busway completion, North-West Busway completion, and improvements to the Northern Busway. The scheme could start with congested corridors in the city centre, specifically once the City Rail Link was completed.
- Higher charges for peak time periods, with a charge applied only once (within a two-hour window) regardless of distance travelled (no charge between 1900 and 0600, off peak $1.50, shoulder times $2.50, and peak periods $3.50).
- Mitigating the impacts of a congestion pricing scheme on vulnerable households. Mitigation could be through price subsidies or discounts, and could be linked to the Community Services Card.
- ANPR technology is the most feasible option in the short term for implementing congestion pricing. Other technologies are not yet ready for a region-wide rollout (on-board units) or provide sufficient coverage (smart phone apps).
- Revenue is used for transport infrastructure or measures that will support those most negatively impacted, and that specifically there should be consideration of congestion charge discounts for those who have Community Services Cards.[67]

When fully implemented, the strategic corridor option is estimated to deliver an 8–12% reduction in congestion, which is about the same as the improvement in congestion seen during the school holidays, and to reduce total travel time delay by 30%. It would also result in 91,168 fewer tonnes of carbon dioxide equivalent emitted, which is 0.8% of the city's total.[68]

Figure 1: Indicative phases of an Auckland congestion pricing scheme



What would the equity impacts be?

Looking at the initial city-centre scheme with a cordon charge around the CBD, it would seem unlikely to impact significantly on low-income communities based on the travel patterns of commuters. According to census travel data, while the central city attracts commuters from across the region, the bulk of the workforce comes from the isthmus and the southern North Shore.[69] In contrast, very few trips into the CBD are made from the south or southeast, and relatively few from the west. Public transport and active modes account for 55% of the commuting trips made into the city centre, which is much higher than for other places and indicates there are relatively good services into the city. By having access to real alternatives for driving, commuters have a real choice between taking the car and getting charged or taking public transport.

Analysis undertaken for the Congestion Question shows the CBD cordon charge option would cost a maximum of 0.02% of low-income households' income.[70] It would also have a financial benefit of close to 0.1% of low-income households' income in Waitematā as they would be likely to make fewer car trips because of the congestion charge and would avoid petrol and parking costs.

67 The Congestion Question. (2020). The Congestion Question technical report. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionsTechnicalReport.pdf

68 Xie, S. (2020). Auckland's greenhouse gas inventory to 2018. Auckland Council. Retrieved from: https://knowledgeauckland.org.nz/media/2011/tr2020-026-aucklands-greenhouse-gas-inventory-to-2018.pdf; The Congestion Question. (2020). The Congestion Question Main Findings. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionMainFindings.pdf Page 15

69 Richard Paling Consulting. (2020). Analysis of the 2018 Census Results Travel to Work and Travel to Education in Auckland. Auckland Transport. Retrieved from: https://knowledgeauckland.org.nz/media/2060/analysis-of-the-2018-census-results-travel-to-work-travel-to-education-auckland-at-october-2020.pdf

70 Covec & MRCagney. (2018). Congestion pricing options for Auckland: Analysis of distributional effects. The Congestion Question. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Paper/SocialEvaluation1.pdf

Beyond the CBD

However, any scheme expanded from just the CBD is unlikely to be justified as there are not yet any adequate transport alternatives. Those who experience transport disadvantage and are locked into car ownership would experience disproportionate costs. Even on the isthmus, despite the expansions in services in recent years, there are still many areas that do not have a bus stop or train station within 500m that runs frequent services (at least one every 15 minutes) every day from 7am to 7pm.[71] There are large sections in Mount Roskill and Maungakiekie in particular that do not have frequent services, both of which are more likely to have people who experience transport disadvantage, given their diverse populations.

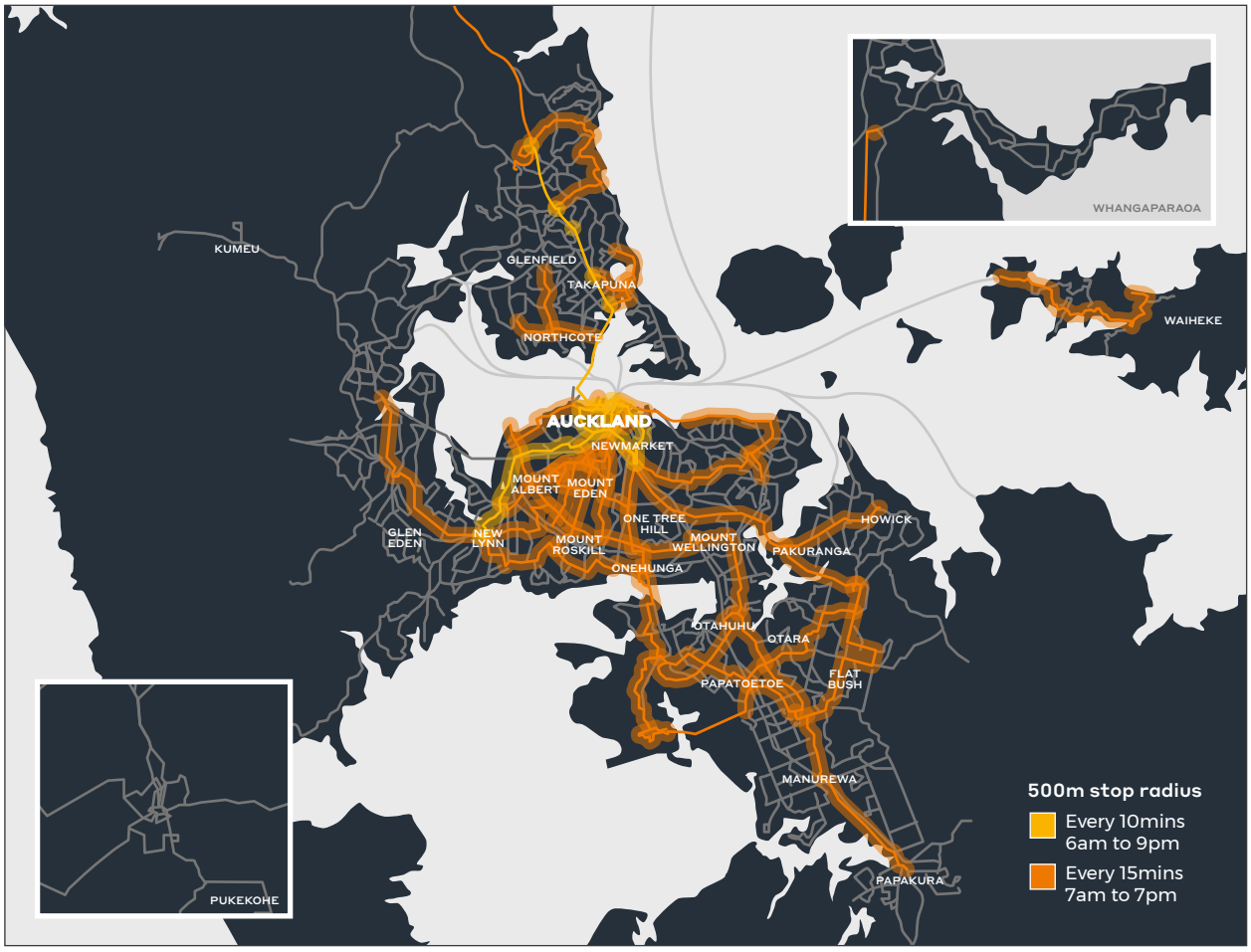
We know also that the transport issues that affect low-income people in the city are concentrated in South Auckland, the West, and the area around Glen Innes/Tamaki.[72] Expansion of a congestion charging scheme to the strategic corridors option would disproportionately impact these communities. The cost increases for low-income households would be nearly double the average and vary significantly by area. For example, it would cost 0.12% of annual income for high-income households in Ōrākei compared to 1% of low-income households' income in Ōtara-Papatoetoe.[73] Public and active transport options should be significantly boosted in areas with transport disadvantage before consideration is given to implementing a congestion charge outside the CBD.

71 MRCagney. (2021). Road pricing: A boost for Auckland's transit? Retrieved from: https://www.mrcagney.com/about/blog/road-pricing-a-boost-for-aucklands-transit/

72 MRCagney. (2020). Equity in Auckland's transport system. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/NZ3060_Equity_in_Auckland_Transport_System.pdf

73 Covec & MRCagney. (2019). Congestion pricing options for Auckland: Analysis of distributional effects. The Congestion Question. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Paper/SocialEvaluation2.pdf

Figure 2: Auckland Public Transport - Frequent Service Network Existing



THE CAPITAL QUESTION – TE WHANGANUI-A-TARA WELLINGTON AS NEXT CAB OFF THE RANK

Te Whanganui-a-tara Wellington has increasing congestion and emissions. Growth pressures are expected to make this worse. Many of its transport corridors lack joined-up and separated cycle lanes, and safe streets for children to walk to school. Over the next 30 years, it is projected that there will be between 22,000 and 31,000 more jobs in Wellington's CBD, and between 50,000 to 80,000 more people living in Aotearoa New Zealand's capital city. That will put a lot more pressure on its transport network, given that it is a geographically constrained and compact city with 200,000 already living in the central city, and will lead to an increase in emissions if mitigations aren't put in place.

As well, the main regional hospital is located south of the central city, which means people from the entire region must travel through the CBD to get to it. With visits to the Wellington Hospital emergency department forecast to increase by 60% by 2030, that would add additional pressure on the city's transport system, including its roads. The recent opening of the Transmission Gully motorway north of the city has improved the efficiency of taking car trips into the city, with the likely result that there will be more people taking their cars into the city. Given that transport emissions are already responsible for 53% of Te Whanganui-a-tara Wellington's total emissions, that will make it even more difficult for the city to achieve its goal of reducing city emissions by 57% by 2030, and to net zero by 2050.[74]

[74] Wellington City Council. (2021). Te Atakura First to Zero 2021 update. Retrieved from: https://wellington.govt.nz/-/media/environment-and-sustainability/climate-change/files/te-atakura_first-to-zero_2021-update_web.pdf?la=en&hash=E0716740D03EE21585ED51C999E082A98E68CFA5

What is proposed?

Unlike Tāmaki Makaurau Auckland, Te Whanganui-a-tara Wellington has not had a formal process or consultation to propose a congestion charging scheme. Let's Get Wellington Moving (LGWM) is a cross-agency initiative set up in the wake of a previous local transport project being struck down by the High Court. LGWM proposes a range of worthy interventions to reduce the number of vehicle trips in the city and improve its liveability, including rapid transit, traffic calming measures like safer speeds, and dedicated cycling infrastructure.[75] In the package endorsed by the Government and councils, there are travel demand measures mentioned, such as parking policy, but little further detail has been released.[76] A report commissioned by LGWM has recently been released outlining what a congestion charging scheme could look like.[77] It modelled the impacts of a cordon charge on the city side of SH1 from the offramp at Aotea Quay, along Vivian Street and Cambridge Terrace to the harbour. A charge of $3.50 for vehicles travelling into the city during the morning peak and the same for traffic departing the city during the afternoon peak was modelled, as well as a $1.75 charge to cross the boundary in either direction between peak traffic times.

According to their analysis, the results stayed the same across variations of the LGWM package. They forecast a reduction of 3,500 car trips to the city centre during the morning peak, a 10% reduction in vehicle kilometres travelled (VKT) within the city centre compared to without charging, and a 3% reduction in VKT citywide. They also modelled that this reduction would lead to an increase in public transport use, with half the reduction in car trips coming from the north, leading to a 60% increase in public transport use from the same area. The overall increase in public transport patronage would be up to 20% for buses and approximately 8% for rail compared to not having congestion pricing in place.

75 Let's Get Wellington Moving. (2022). All projects. Retrieved from: https://lgwm.nz/all-projects/

76 Twyford, P. (2019). Green light from Govt to get Wellington moving. New Zealand Government. Retrieved from: https://www.beehive.govt.nz/release/green-light-govt-get-wellington-moving

77 PWC. (2021). Let's Get Wellington Moving initial assessment of travel demand management (congestion) pricing. Retrieved from: https://lgwm-prod-public.s3.ap-southeast-2.amazonaws.com/public/Documents/Nov-1-MRT/2021-08-09-LGWM-Initial-assessment-of-TDM-pricing-DRAFT.pdf

Figure 3: Example cordon scheme

What would the equity impacts be?

Given the lack of modelling done on distributional impacts of a congestion charge in Te Whanganui-a-tara Wellington, it is difficult to give precise figures for different populations. The capital city has the highest proportions of commuters travelling to and around by public transport or walking.[78] Those living in the city take the bus or walk or jog to work at a rate around four times more than the national average. For those who specifically come into Te Whanganui-a-tara Wellington's central city during the morning peak times, on average about 54% either walk, cycle, or take public transport.[79] This is very high proportionately, given that only 13.6% of New Zealanders usually travel that way to work.[80] This indicates there are good alternative travel choices to and around the central city for many already. A congestion charge in the CBD that included revenue going towards further improving transport options to and from the central city would be a good way of improving liveability in the city.

Nonetheless, some lower income communities could be disproportionately affected by congestion charging, and further analysis should be undertaken before considering implementation. Looking at the modelling done for LGWM, the results of implementing a congestion charge in the CBD also include better travel times for most travellers, but worse travel times from Johnsonville to the airport and hospital during the morning and afternoon peaks.[81] This seems to indicate that many from that area will continue to make car trips to these amenities regardless of a charge, and not switch over to public or active transport. Alternatively, they would possibly bypass the charge in the city, putting pressure on other routes. Any design of congestion charging would need to take this into account, and further research should be done on the distributional impacts of the policy.

78 Stats NZ. (2019). Car streets ahead for travel to work and education. Retrieved from: https://www.stats.govt.nz/news/car-streets-ahead-for-travel-to-work-and-education

79 Greater Wellington Regional Council. (2021). Wellington Regional Land Transport Plan – Annual Monitoring Report 2021. Retrieved from: https://www.gw.govt.nz/assets/Documents/2021/12/Annual-Monitoring-report-for-RLTP-2021-final.pdf

80 Stats NZ. (2019). Car streets ahead for travel to work and education. Retrieved from: https://www.stats.govt.nz/news/car-streets-ahead-for-travel-to-work-and-education

81 PWC. (2021). Let's Get Wellington Moving initial assessment of travel demand management (congestion) pricing. Retrieved from: https://lgwm-prod-public.s3.ap-southeast-2.amazonaws.com/public/Documents/Nov-1-MRT/2021-08-09-LGWM-Initial-assessment-of-TDM-pricing-DRAFT.pdf

Q&A WITH DR HUHANA HICKEY

Dr Huhana Hickey (MNZM) (Ngāti Tāhinga, Whakatōhea) is an academic and disability rights lawyer. She has multiple sclerosis, was the first openly disabled Housing NZ (now Kāinga Ora) board member and is a strong advocate for disabled people.

Q ***Can you talk us through what a typical day looks like for you from a transport perspective? How easy is it to get around?***

A As I can no longer drive, I rely on my carer supports to use my van. Weekends and holidays, I'm with my wife. She doesn't drive either, so we rely on the trains as the buses are not accessible for my power chair and service dog. However, the trains often don't run, which then traps me at home, and due to Covid we don't use taxis, so a typical day is using the van as public transport – and it falls short of meeting our needs.

Q ***What changes are needed to make it easier for you to get around?***

A We need good transport that is affordable and accessible. The trains often don't run and are the only form of transport for some disabled people. Also, the [Tāmaki Makaurau Auckland] southern line often doesn't run on weekends or public holidays, which further limits my ability to travel. It would be good to see trains throughout the country because they create opportunities for disabled people to travel and visit family and friends – we don't currently have that.

Q ***This report argues that congestion charging has the potential to help make our cities better places to live in by reducing traffic – do you see any issues arising for disabled people from the policy?***

A Because public transport is not always able to meet the needs of the disabled, we rely on our vehicles more. The cost of petrol and the cost of running and owing vehicles is also prohibitive, which; traps more disabled people at home as the public transport system is currently inadequate for our needs. It needs to be more reliable and affordable, and provide for the access needs of disabled, including for our service dogs. Until that is fixed and consistent, disabled people will remain struggling under a congestion charging regime. Often disability isn't considered when these kinds of policies are added or changes are made. Ideally, it should be front and centre of all the thinking around this, otherwise it creates unfair barriers to disabled travellers.

Q ***This report argues there should be an exemption for mobility vehicles, given the difficulty some disabled people have accessing the things they need without an appropriate vehicle. What are your thoughts on this, and do you have any other recommendations to help mitigate the impact of the policy on disabled people?***

A Absolutely agree. The only issue is the risk of fraud by non-disabled in the same way there is abuse of our total mobility parking scheme. Any scheme that incorporates and ensures disabled people have protections and exemptions will make it fairer, as well as easier for the disabled to keep participating in society. It's important these initiatives have a disability lens applied, and those compensations or accommodations are made to reduce any negative impact on disabled people.

Q ***Given your background as a disability rights lawyer and advocate, what would you like decision-makers to be mindful of with regard to implementing congestion charging?***

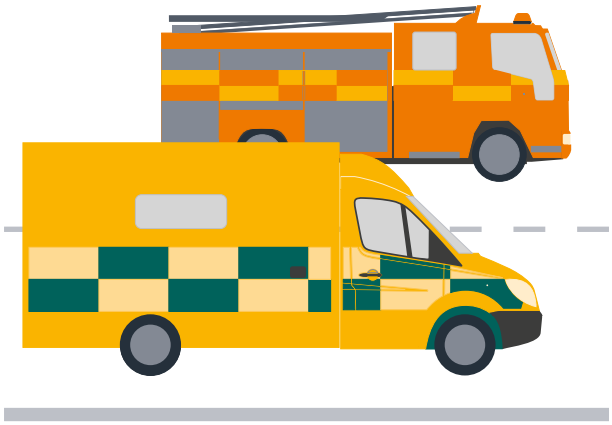
A We have a core subset of people who live within chronic levels of poverty who require support. This is as relevant for others in poverty – the only difference is, if the buses are made affordable or free, non-disabled people can access them. However, if you are disabled, some buses will never be a real choice for you. We need structures in place to ensure the ability of all to be able to travel without barriers. This means, where roads are taken out or moved into shared spaces, that there is parking for disabled vehicles. That if the trains are not available, there is a way for disabled people to get around. For example, specialised shuttles. They need to bring disabled people with the right skillset onto transport boards and as advisors. Also, for safety purposes, they should keep the train conductors or security on the trains.

If disabled people have no choice other than to use their vehicles, especially here in Tāmaki Makaurau Auckland where it's difficult to get good public transport, then those with mobility parking cards should be considered as the first cabs off the rank for any mitigations. A possibility is that they are exempted from congestion charges or even can apply and get a refund as some way of compensating them for the cost if they're not exempted.

RECOMMENDATIONS TO ACHIEVE FAIR CONGESTION CHARGING IN AOTEAROA NEW ZEALAND

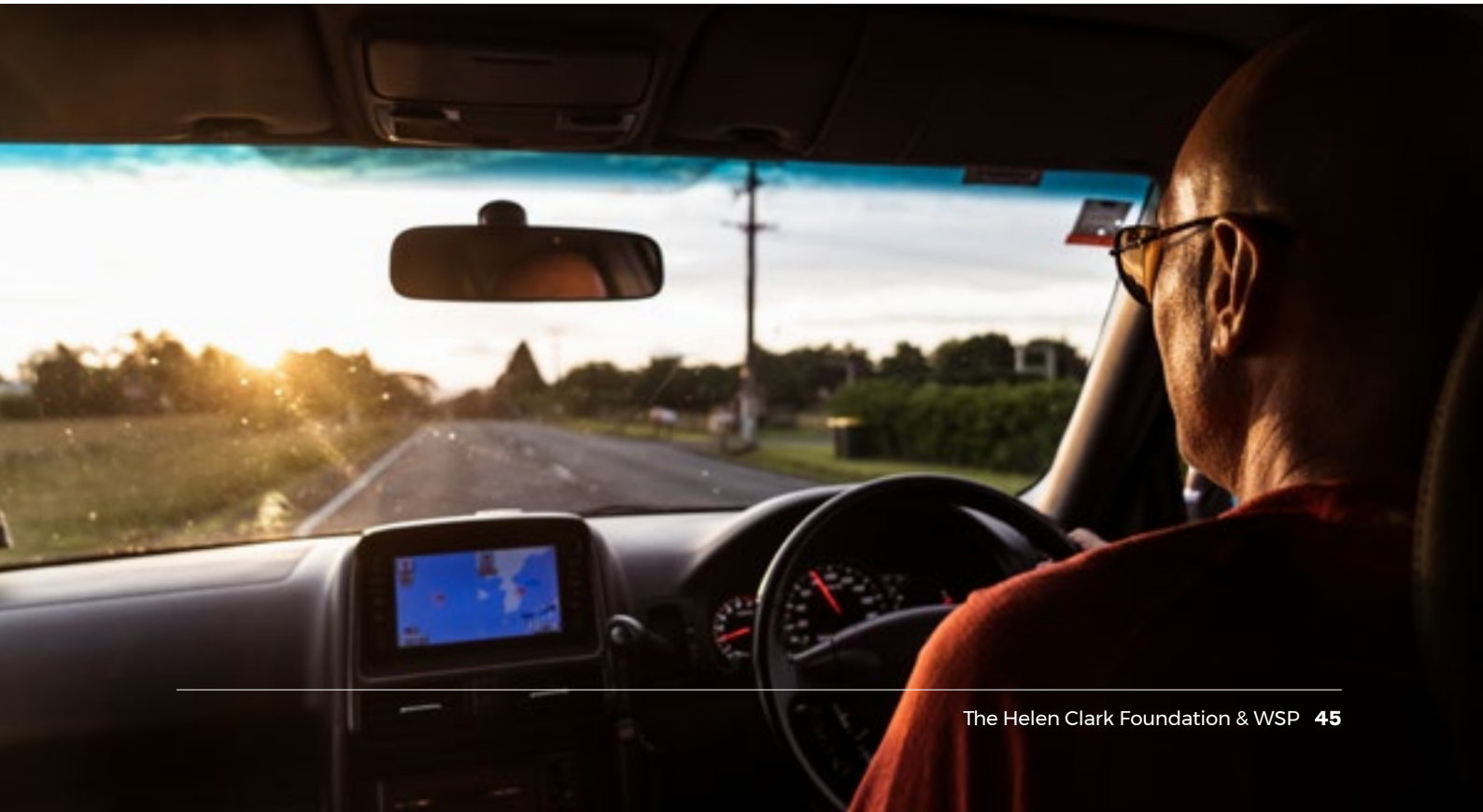
INTRODUCTION

This section draws on lessons and analysis from the first two sections to provide recommendations for implementing equitable congestion charging in Aotearoa New Zealand.



Key takeaways from this section:

- There should be key principles in legislation that any scheme must meet before being enacted.
- Robust community engagement is needed to gain support and combat misinformation.
- The design of the policy needs to consider those who have to come and go from the charging zone often, those who work irregular hours, and the unintended consequences on local streets.
- There should be a demonstration project or smaller initial rollout to build public confidence and monitor equity impacts.
- Exemptions should be limited to public transport, emergency vehicles, and those who provide mobility for disabled people.
- Other mitigation proposed by others or used in different jurisdictions can undermine the goals of the policy.



KEY PRINCIPLES AND LEGISLATION

There should be principles in the legislation that any proposed scheme would need to meet to be enacted in order to keep equity at the centre of the policy. Regardless of whether the legislation will be set up, so that councils can propose schemes or proposals that need to come from the Government, they should include the following:

For those who are likely to have to pay a charge, there must be public transport that is both close enough to their dwellings and at high enough frequency to be a real transport option. Depending on the city, the actual metric of how to evaluate this will be different, but rapid transit/bus stop within 500m that runs at least once every 15 minutes could be a useful indicator.[82] We want people to have real transport choices and to make our cities better places to live. It undermines the policy if a charge is implemented on an area without adequate alternatives, as people living there cannot change their behaviour or the charges reduce their opportunities to move about, limiting their choices.

Revenue from congestion charging should go back into improving transport options for the city implementing it, for the purpose of funding mitigation such as improving the affordability of alternatives. That could include free or more heavily subsidised public transport or a subsidy for e-bikes/bikes. It is common in other cities that have implemented congestion charging to have the revenue from the policy go into transport infrastructure and/or improved services to enhance the desired outcomes of the charge.[83] These investments should be into projects that will not induce more traffic, so new roads and motorways should not be included. Rather, public transport and walking and cycling infrastructure, additional trains and/or buses, and rapid transit routes should be invested in.

Revenue raising should not be the goal of the policy. As seen in other jurisdictions, having revenue gathering as either an explicit or implicit goal undermines public confidence in the policy.[84] It also creates a perverse incentive to charge for what would raise the most revenue rather than what would produce the best outcomes. A focus on the profits of congestion charging would not help public acceptance. The goals should be explicitly about making our transport system more equitable, sustainable, and efficient by reducing traffic, emissions, and improving safety.

ROBUST COMMUNITY ENGAGEMENT

Both the international experience across different cities and the Aotearoa New Zealand parliamentary select committee inquiry have shown why it is important to have robust community engagement before congestion charging is implemented. One of the issues highlighted by the select committee inquiry was the lack of awareness and understanding of the benefits of congestion charging.[85] Presenting the public with an extra cost without being clear about the benefits tends to sour public opinion, which may mean the policy is not enacted, and therefore the benefits won't be realised.

To avoid that, there needs to be real engagement with communities whenever congestion charging is planned. Before the introduction of the policy in London and Stockholm, officials ensured there was no shortage of material provided to stakeholders, residents of affected areas, the media, and the general public about the charging schemes.[86] That helped dampen down speculation and misinformation. It is alleged that Edinburgh and Manchester did not provide sufficient information, which allowed incorrect information to spread and helped build public opposition. A third of Manchester residents who were surveyed during the congestion charging referendum thought they would be charged on roads on the boundary of the proposed zone when they would not have been.[87] That underlines why it is important that engagement is meaningful and the benefits of the scheme are emphasised. This can be done through initiatives like setting up market stalls, going door to door, and holding street-corner meetings – rather than just putting up information online and waiting for locals to give feedback.

82 The definition could align with the regional council's definition in their plans of a walkable catchment of the following: (i) existing and planned rapid transit stops, (ii) the edge of city-centre zones, and (iii) the edge of metropolitan centre zones – which they are required to have due to the National Policy Statement on Urban Development.

83 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

84 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

85 Transport and Infrastructure Select Committee. (2021). Inquiry into congestion pricing in Auckland. Report of the Transport and Infrastructure Committee. Retrieved from: https://www.parliament.nz/en/pb/sc/make-a-submission/document/53SCTI_SCF_INQ_109499/inquiry-into-congestion-pricing-in-auckland

86 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

87 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

DESIGN OF CHARGE AND CORDON

There are design elements of any charging scheme that can help ensure its impact on the least well off is as small as possible.

There should be daily price caps of double the peak charge at a minimum to avoid excessively penalising those who potentially must drive through the charging area a lot for business purposes daily, as couriers, for example, do. It should not be lower than double the peak charge as the fees at both the morning and afternoon peaks need to encourage the full behaviour change benefit of the scheme. That means the peak charges will need to be carefully modelled to produce the best level of mode shift, while also not being too expensive from both a public opinion and a household income standpoint.

To avoid impacting on shift workers, the operating hours of the scheme should be limited to between just before morning peak traffic and just after afternoon/early evening traffic. Those working irregular hours are often on lower incomes, and include cleaners, security guards, and supermarket workers.[88] Given there may not be real transport alternatives during the off-peak times, it would not be fair to charge them. Those who have jobs in affected areas at night should not be penalised when there are no public transport services running and they have no other choice but to drive.

The design also needs to take into consideration potential rat-running routes to avoid pushing more traffic into residential areas. As seen in Dubai's experience, traffic can reroute onto local roads if the design of the scheme allows it, causing issues for residents.[89] It may be that there will always be some trips diverted to different routes rather than people taking a different means of transport. But if there are corridors that are likely to have increased traffic due to the congestion charge, then traffic calming, or other measures, should be installed to reduce the impact on residents and improve the cityscape.

88 Enchautegui, M. E. (2013). Nonstandard work schedules and the well-being of low-income families. Washington: The Urban Institute.

89 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

90 Eliasson, J. (2014). The role of attitude structures, direct experience and reframing for the success of congestion pricing. Transportation Research Part A: Policy and Practice, 67, 81-95.

91 van Amelsfort, D., & Brundell-Freij, K. (2018). Congestion charging: Policy and global lessons learned. Sweden: WSP.

92 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

93 MRCagney. (2020). Equity in Auckland's transport system. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/NZ3060_Equity_in_Auckland_Transport_System.pdf

94 While it's difficult to estimate the exact number of modified mobility vehicles, out of the 5.6 million vehicles registered in Aotearoa, there are about 846,000 registered as goods van/truck/utility. Modified vehicles are likely to only make up a small proportion of that total number.

95 This subsidy scheme is open to people with a permanent, temporary, or fluctuating disability that prevents them from travelling on buses, trains, or ferries, or getting to or from where the public transport starts or ends. It also provides funding assistance to purchase and install wheelchair hoists in taxi vans. The scheme has no minimum fare threshold. A 50% discount applies until a maximum subsidy is reached. The maximum subsidy varies between regions.

96 The Congestion Question. (2020). The Congestion Question technical report. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionsTechnicalReport.pdf

STAGING

Any congestion charging scheme should be piloted or rolled out in a relatively small area to begin with, before being expanded. Public opinion on congestion charging often improves dramatically after being piloted or implemented.[90] The quicker and safer trips, as well as the charges often being less expensive than first thought, means people tend to adapt and accept the policy relatively quickly.[91] A shorter implementation time also gives less time for misinformation to spread, which can derail proposed schemes.[92]A smaller area and a 'quicker to install' scheme can help build public confidence in the policy, rather than a full-scale rollout that would take longer. It also gives officials time to monitor the equity impacts and adjust the design or improve mitigation before a larger rollout.

EXEMPTIONS

Several types of vehicles should be exempted from any congestion charge, including those used for public transport, emergency vehicles like ambulances, and those that provide mobility for disabled people. Given the role public transport plays in reducing congestion and emissions, it doesn't make sense to add costs to its operation. Emergency vehicles also play a crucial role in society and should be exempted. They have to operate, and they don't contribute in any significant way to urban congestion.

Even if made more affordable and frequent, public transport may continue to not be a realistic option for some disabled people. Stops or stations may be too far away, and way finding may be too difficult for those with cognition, sight, or hearing impairments. Sometimes, public transport provides an inferior service for disabled people, which can stigmatise the person using it (for example, a seat facing towards the other passengers).[93] It is also important not to add costs to the mobility services that disabled people use, given they are more likely to be on low incomes. There could be a corresponding increase in any subsidies provided for mobility services if they were not exempted, however. But it would be much simpler and put less pressure on the already over-subscribed fund used to pay for these services if an exemption was given for disability vehicles instead.

Disability vehicles also do not make up a significant proportion of the total fleet, and an exemption for them should not undermine the goals of the policy.[94] The Congestion Question identified that the eligibility criteria described for the existing Total Mobility Scheme[95] and modified vehicles certified by the Low Volume Vehicle Technical Association could be useful ways to identify appropriate vehicles to be given exemptions.[96]

OTHER MITIGATIONS CONSIDERED AND WHY THEY ARE NOT BEING RECOMMENDED

Given there is a wide range of potential mitigation options, it is important to address why some have not been recommended.

The Congestion Question suggested giving Community Service Card holders discounts. This was thought to be a good way to identify people on low incomes who may face an unreasonable financial burden from congestion charging.[97] If the goal is to have less driving, then it goes against the aim of the policy to provide discounts for such broad groups. Instead, those groups should have access to affordable and reliable public and active transport options. If the aim is both to reduce car dependence and improve equity, then initiatives like making public transport free for low-income populations like Community Services Card holders would be a better intervention.[98]

Exemptions for motorcycles and scooters were considered as well. The argument is that they do not contribute meaningfully to congestion, so shouldn't have to pay a charge. While that is true, they are still involved in road deaths and injuries, as well as releasing harmful emissions. If the goal is to make streets safer and cities more liveable, rather than just reduce congestion, then they too should be included in the charging scheme.

While London has exemptions for zero or low emissions vehicles, that is not a recommendation this report makes for schemes set up in Aotearoa New Zealand. If the goal is only to reduce air pollution and emissions in a given area, then such an exemption makes sense. If, however, the aim is to get the congestion-reducing benefits of congestion charging and reduce the amount of driving overall to make roads safer, then there should not be exemptions for those vehicles. Having exemptions for these types of vehicles would not improve equity, as those on higher incomes are currently more likely to drive them.[99]

During the Select Committee inquiry, several submitters asked for sector specific exemptions. This report does not agree there should be exemptions beyond those it has recommended. Sector specific exemptions would undermine the overall effectiveness of the scheme, and effectively subsidise certain groups to drive. Moreover, sectors like logistics will already be getting the benefits of more efficient trips. Having an exemptions process also adds administrative costs and could lead to people who aren't eligible trying to claim exemptions unfairly.

Some jurisdictions have discounts or exemptions for those who live within a congestion charging zone.[100] If the objective is to reduce driving in these zones, then that risks undermining the purpose of the scheme. If there are not adequate alternatives, but a charge is being brought in anyway, then a time-bound exemption would be appropriate. That is what happened on the island of Lidingö in Stockholm. Lidingö residents faced no choice but to pay the charges or stay at home given the geography. To help with acceptance and equity, the scheme initially exempted trips by residents until revenues from the scheme helped build a bypass that gave them options.

97 ibid p. 115 The Congestion Question. (2020). The Congestion Question technical report. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/TheCongestionQuestionsTechnicalReport.pdf (p. 115).

98 As originally recommended in Walker, H. (2021). 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. Auckland: Helen Clark Foundation.

99 Ministry of Transport. (2021). Hīkina te Kohupara – Kia mauri ora ai te iwi – Transport emissions: Pathways to Net Zero by 2050. Wellington: Ministry of Transport.

100 D'Artaganan Consulting. (2018). Review of international road pricing schemes, previous reports and technologies. Retrieved from: https://www.transport.govt.nz/assets/Uploads/Report/ReviewofInternationalRoadPricingSchemes.pdf

BREAKING THE GRIDLOCK:

A TALE OF TWO CITIES

For decades, the Swedish cities of Stockholm and Gothenburg suffered under rising levels of bumper-to-bumper traffic. That is, until congestion charging was introduced in the mid-2000s. They've since made great strides in unclogging roads and improving air quality. With congestion charging a likely prospect for at least one major centre in Aotearoa New Zealand in the not-too-distant future, there's plenty we can learn from the Swedish experience.

Paying for passage

With a population much the same as Tāmaki Makaurau Auckland's, Sweden's capital, Stockholm first trialled congestion charging in 2006. Ringed with charging cordons, motorists pay between NZD$2.29 - $6.86 to travel into Stockholm's central business district – capped at $20.58 a day.

In 2013, Gothenburg used legislation already in place from Stockholm's rollout to introduce its own congestion charging scheme. The city of 500,000 people is similar in area to Te Whanganui-a-Tara Wellington. Its congestion charge is much lower – ranging from NZD$1.50 to $3.50 per trip - capped at $10.

In both cities, there's no charge during the July summer holiday period. The only major pricing difference is that Gothenburg has a multi-passage exemption – meaning motorists can pass as many charging cordons as they like in one hour and only pay once.

It works

A report from the Swedish National Road and Transport Research Institute found that when congestion charging was introduced, the effect was immediate. In Stockholm, traffic volumes fell by 20 percent. Gothenburg saw a 12 percent reduction, with commuters in both cities switching to public transport and benefiting from drops in queue and travel times1.

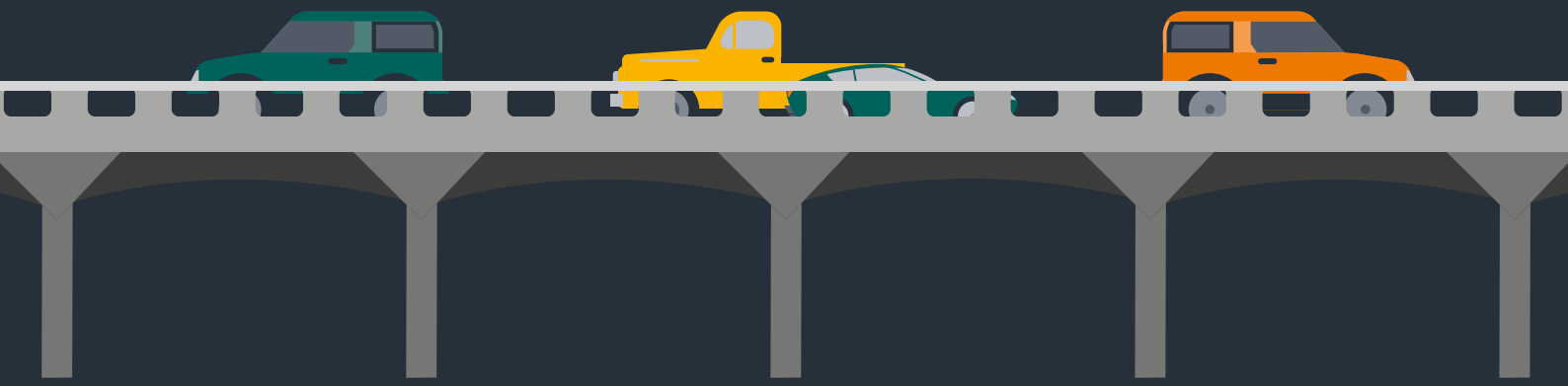
There have also been environmental benefits. Estimates show that carbon emissions in Stockholm and Gothenburg reduced by 3 percent. This may seem like a small number but, for a single measure, is not to be sneezed at. Nitrogen oxide emissions from cars and trucks – a major contributor to air pollution - fell by around 8 percent.

Expect initial public opposition

Before Stockholm's 2006 trial, the public were against having to pay to drive into the city. But with a significant decrease in traffic volume during the trial, people quickly began to see the benefits. Travel times improved and queues decreased. People traveling on buses also benefited from less time sitting in traffic.

After Stockholm's trial, a referendum was held asking if people wanted congestion charging made permanent. The 'yes' vote won. In contrast, after being introduced in Gothenburg, a non-binding referendum was held. The answer was 'no,' but local politicians forged ahead anyway.

Today, most road users in Sweden accept the congestion charging schemes.



Revenues are a means to an end

In Stockholm, congestion revenues were initially used to pay for road improvements in and around the city. They're now used to fund new public transport infrastructure, including an extension of the metro system. It's the same story in Gothenburg, with one of its original objectives to raise 14 billion krona ($2.1 billion NZD) for infrastructure investments over 25 years - including a rail tunnel under the city to benefit commuters traveling into the city from surrounding municipalities.

Geography informs design

When it comes to designing a congestion charging scheme, geography matters. Stockholm, for instance, is built on fourteen islands. To get anywhere you drive over bridges, which, before the congestion charge, acted as traffic choke points.

Transport planners were able to take advantage of Stockholm's natural water barriers when deciding where to locate charging cordons. The same approach wasn't possible in Gothenburg, which is bisected by the Göta älv River and has over twice the land area of the Swedish capital.

Test, learn and adapt

There's been some changes to congestion charging in Stockholm and Gothenburg over the years. In Stockholm, low emissions vehicles were initially exempt but are now included. In 2016, the city's network of charging cordons was extended to include motorways. Charges have been hiked twice – in 2016 and 2020.

What we can learn from the Swedish experience is that congestion charges, while not initially popular, are effective in meeting their objectives and come to be accepted by the public - not just as a way of reducing congestion, but in fighting climate change, financing new infrastructure and reducing local air pollution. The big question for Aotearoa now is just where, when and how do we go ahead and break our gridlock?

BREAKING THE GRIDLOCK:

EQUITY, ENGAGEMENT, OPENNESS AND TRANSPARENCY

Among a host of issues bound to crop up in the early days of any congestion charging debate are the equity effects of road pricing, the importance of engaging with those most affected, and how and where the revenues will be spent. International evidence shows that addressing these critical success factors early on will help win over the public and boost a city's chances of congestion charging success.

What's fair and what's not?

The benefits of congestion charging are not always distributed equally. People on high incomes are more likely to pay the charge and benefit from a faster trip; while people on lower incomes living in areas underserved by alternative transport options may be forced into spending a higher percentage of their salary just to get to work.

Discussions around equity usually revolve around ideas of adjustable charging, mobility credits or free passage. In London, for example, disabled Blue Badge permit holders can register for a 100% discount. In some circumstances, NHS patients and staff, care home workers, charity employees and volunteers are eligible for a congestion charge reimbursement.

Implementing these kinds of measures can be technically complex, undermine the intent of the scheme and may not even be possible in some jurisdictions, so some places may look at adjusting other taxes instead – meaning lower income people still pay a congestion charge but benefit from a discount elsewhere.

Regardless of pricing and exemptions, successful schemes don't happen in isolation. In almost all cases, they're implemented alongside improvements in public transport. Making sure that more vulnerable car-dependent people are well-connected to mass transit alternatives has been shown internationally to be a major success factor for equity and one that we would like to see explored in Aotearoa New Zealand.

Designing a scheme within a flexible legislative framework is equally as important. This will help give transport planners the freedom to design a system that can allow for equitable outcomes. By not dictating how pricing should work, cities can design schemes that work for their population and in their own unique local context.

Community involvement

Paying new or additional charges to drive into key parts of a city is a new, unfamiliar and perhaps alarming concept for most living in Aotearoa. We know from congestion charging experiences in the US and Scandinavia that there's usually strong initial opposition.

But by involving the community in genuine discussions, transport planners can educate those who will be most impacted about the social, environmental and health benefits of congestion charging - while also hearing early on about potential issues that may derail a successful rollout.

WSP experts in the Northern Hemisphere report that engaging with communities early (and often) softens negative perceptions and strengthens public support. And because congestion charging schemes deliver immediate benefits, people quickly get over their status quo bias, their overestimation of cost and underestimation of benefits.

Revenues

In planning a successful congestion charging scheme, it will be important for our transport authorities to deliver on the reality of the vision in a transparent way. That includes being open about where congestion charging revenues will be spent.

Research from Aotearoa and the UK shows that there are strong levels of support for road pricing – but only so long as revenues are used to improve public transport1. That's exactly what's been legislated for in London, Stockholm and Gothenburg – where the money is put towards bus network improvements, metro line extensions, rail tunnels, and other sustainable transport initiatives.

Add it all up and the international evidence from the Northern Hemisphere is clear. Congestion charging reduces traffic volumes, reduces journey times, helps tackle air pollution and can boost people's use of public transport. But that can only happen if schemes are designed right.

The difference between congestion charging success and failure can be razor thin. But by being sensitive to issues of equity, engagement and openness from the outset, we're confident that Aotearoa will come up with its own winning formula.

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