



Making rail work

A community's proposal for the re-introduction of an intercity passenger rail link to Tauranga



Author: Katrina Ramage
May 2022



“The true measure
of any society can be
found in how it treats
its most vulnerable members.”

- Mahatma Gandhi

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With thanks to BayTrust for funding this proposal.



We also appreciate donations from a number of kind individuals for printing, publication and promotion, and we respect their wishes to remain anonymous.

“There is no reason to believe that bureaucrats and politicians, no matter how well meaning, are better at solving problems than the people on the spot, who have the strongest incentive to get the right solution.”

Elinor Ostrom

“We’ve not just compromised the future of our young people. We have been stealing it. We are still stealing it, but it is not too late to do something.”

*Jane Goodall PhD DBE, UN
Messenger of Peace*

Acknowledgements

Contributions to this proposal have been made by a collection of passionate Kiwis who want to see a more sustainable future for Aotearoa. Our skills, opinions, perspectives, and political alliances may differ massively but we have worked together to create a united vision for others to now consider.

We would like to thank BayTrust for funding this paper through its Toolbox Grant funding programme. This has enabled us to work with people who would not usually be able to afford time to contribute to the discussion or the report writing process. It has not only allowed the creation of this report, it has also helped a number of our contributors to establish themselves professionally in a post-COVID economy, or weather themselves through the hard times.

With this in mind, we would like to acknowledge Emma McIver for graphic design, publishing, documenting evidence, and mapping design; Ian Skelton for stakeholder and project management support; Chris Ramage for picture sourcing; Shirley Porter and Harriet Preddey for evidence gathering and copy-checking support; and JudeaTech for illustration and design support.

About Tarakin Global Limited

Established in January 2008, Tarakin Global Limited designed and conducted a range of primary stakeholder surveys and central government policy reviews for UK, European and Global policymakers. Katrina Ramage, company director, is currently advising the G20 on how to encourage values-driven policies in a post-COVID, post-Ukrainian war and climate-conscious world. All advice is apolitical and designed to invite scrutiny.

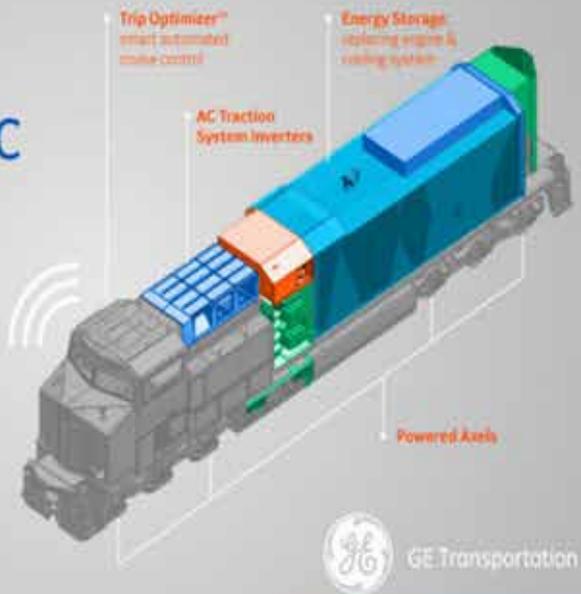
The Tarakin Framework was commended as Best Practice in Government Communications by the UK's Office of Government Commerce and received an excellent rating by the Number 10 Mission Critical Assessment Team in 2008. It has since been used as a tool for trouble-shooting complex policies that are not meeting their targets at all levels of government, including a range of public, private and community partnerships.

In 2020, Katrina joined the local Tauranga Rail Advocacy Group. Following an evidence gathering and stakeholder review exercise in 2021, Katrina agreed to draft this policy paper in the style she developed during her time as a strategic policy and communications adviser in the UK.



GE Transportation's
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Massive power generation capabilities up to **2400 kWhrs**
 Huge fuel savings of at least **10-15%**



Title: Examples of electric trains from around the world.
 Sources: Please see Appendix C for evidence reviewed for this proposal

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“Il meglio è nemico del bene”

“Best is the enemy of the
good”

*François-Marie Arouet, also known
as Voltaire, citing an old Italian
proverb in 1770*

Executive Summary

In Tauranga, it sometimes feels like the status quo is the enemy of progress. Plans, often made in the last century, are pursued without regard to up-to-date information, trends, attitudes, coherent enquiry into or regard for current preferences of those who live here. If Tauranga wants to realise its potential as a global cosmopolitan city then it will have to start to set itself in context with the demand for community-led transformation, its role in the rest of its region, and the possibilities afforded by connecting the 'Golden Triangle' in a regenerative, resilient way, fit for the 21st century.

Regardless of how you engage in the local community, reintroducing passenger rail to Tauranga should be something you are informed about and have an opinion on. *Making Rail Work* is a community proposal, or People's Paper, that summarises the evidence that is readily available to the public and presents ideas for how rail might be brought back.

We have challenged ourselves to think about how we can 'make rail work' for the cost of living crisis; for the impacts of climate change; for jobs; for population growth; for community cohesion; and for maximising returns on inward investment opportunities.

The primary recommendation of this proposal is for government and elected officials to unite behind the idea of a New Zealand rail co-operative, which would be the first transport co-operative in the country. Our suggestion is that this marks the next important step for a strategic economic plan for the Golden Triangle, which confirms it as Aotearoa's largest growth area.

The greatest travesty, as far as rail is concerned, is that inter-city policy was abandoned and so many networks were shut down. We may have had an influx over time of cheap imported cars but with hindsight that was no reason to throw a perfectly good mixed-use transport strategy away and become dependent on imported fuel and vehicles.

If we look at the outcome of a similar strategy in Sri Lanka, which is living beyond its means and has become dependent on imports we see the hardship that has caused for its people. Outcomes for New Zealand may not be an exact mirror image, but for Kiwis, doubling of food and fuel prices are already having similar impacts.

The fact that so much house building has happened in the Bay of Plenty without any proper master-planning or any form of future-proofed infrastructure plan is horrendous. Responsible governance should be thinking about future generations, not creating unnecessary challenges for them. It is almost inevitable that future governments will be forced into compulsory purchase of land so they can retrofit the infrastructure and allow medium density living options that would have been cheaper to implement within this generation.

This proposal will not dwell on or cast blame for errors of the past. Its intention is rather to encourage those with influence, power, and money to realise that passenger rail would be something that improves the lives of everyone in society, including themselves. Those who have contributed to this document have done so with intent to honour the principles of Te Tiriti o Waitangi. However, we recognise more work needs to be done in this area. Our belief is that, if a rail co-operative was introduced, it would represent a neutral platform for discussion incorporating these founding standards. The additional advantage, which should not be overlooked, is that migrant cultures who do not associate with either Māori or Pākehā will also be able to engage, offer contributions and, learn about Aotearoa mana whenua, New Zealand's original laws of the land.

We have looked at the obstacles faced by those communities the proposed rail line would pass through, from those living in desirable residences on waterfronts close to the rail line, to those who could upskill themselves and have a better chance of finding their own home and sustainable income as a result of rail connectivity.

Governance and funding

- 1. Invest** time and expertise in exploring the idea of a rail co-operative to align stakeholders in the southern section of the Golden Triangle.
- 2. Define** a communications framework for local planning authorities to connect with rail discussions related to the UK:NZ Free Trade Agreement.
- 3. Explore** the idea of formally defining the Golden Triangle as a strategic economic growth area, especially if the team of five million is going to grow to ten.
- 4. Publish** government's approach to 'tipping point' infrastructure investment, and the specific differences it has for off-shore and on-shore investors.

Route and timetables

- 5. Collaborate** with Tauranga port and other freight rail services to project their expected dependency, so that passenger rail can plan for the gaps.
- 6. Review** global flood defense and mitigation strategies where rail and domestic residency co-habit. Engage both indigenous cultures and insurance representatives.
- 7. Identify** all potential New Zealand tunneling. Consider all infrastructure, including undergrounding utilities and improving run-off water flood defences.
- 8. Revise** the data referenced in this chapter so that government spending and co-operative fund-raising targets and public expectations can be responsibly managed.

Global impacts

- 9. Assemble** a team to review traditional baseline CO2 emission measures, creating a 'COVID factor' for all built environment projects.
- 10. Review** all global trade and diplomatic agreements, from both sides, to identify opportunities for collaboration and knowledge sharing.
- 11. Connect** with global rail and regeneration initiatives to share best practice and practical intelligence.
- 12. Appoint** representatives from School Strike 4 Climate and the UN LCIPP Youth to be inter-generational consultants to this work.

The specific recommendations listed are discussed in more detail in the chapters that follow. These are the resulting suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers and anyone with an interest in the future of public rail transport in New Zealand.

Stakeholder engagement

- 13. Review** categories and maps to create a fully detailed and prioritised database. This should be used to define committees for a rail co-operative.
- 14. Share** this proposal with all organisations listed in this document, asking if they would like to join in with early discussion about the recommendations.
- 15. Identify** government officials, architects and local head masters and educational leads who are interested in exploring the Planning for Real approach.
- 16. Consider** piloting the Planning for Real model in Tauranga as part of the existing vision work being done by Tauranga City Council.

Placemaking

- 17. Confirm** where a passenger rail station would be placed in Tauranga CBD and if it would be connected to the ferry and public transport network.
- 18. Reassess** the region's approach to housebuilding, with a view to considering transport infrastructure and Collective Housing first.
- 19. Engage** with communities in Waharoa to garner opinions on the ideas about a rail station and masterplanning project presented in this proposal.
- 20. Identify** global architectural design competitions, practices demonstrating good outcomes in the areas concerned; engage support and design global pitch ideas.

Political approach

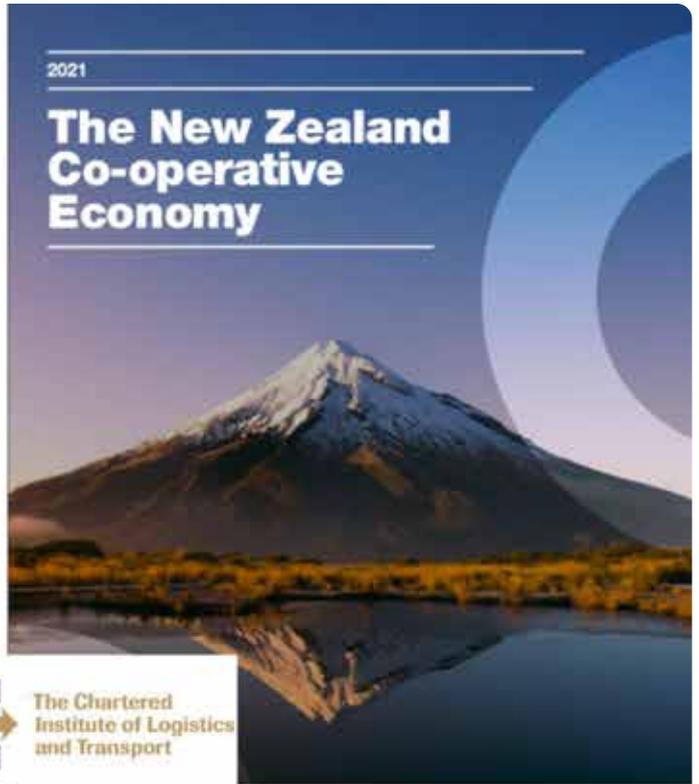
- 21. Empower** the Electoral Commission to use this report to educate would-be political candidates, engage non-voters, and increase local electoral turnout.
- 22. Appoint** a Roving Minister, or Minister for Growth, responsible for identifying ways taxpayers money can be better spent using cross-policy spending agreements.
- 23. Identify** an international liaison team to represent the Golden Triangle communities and negotiate with the UK for rail, via New Zealand House in London.
- 24. Ensure** Ngāti Rānana, the London Tribe, is engaged so Māori considerations are treated in respect of Te Tiriti o Waitangi and on behalf of all Tangata Whenua.



Bay of Plenty metro passenger service opportunities



nzherald.com.nz



The Chartered Institute of Logistics and Transport

nz.coop
CO-OPERATIVE BUSINESS NEW ZEALAND



Bay of Plenty Region Passenger and Freight Rail

Phase 1 Investigation

May 2019

Prepared by Janeane Joyce, Chartered Planning and Contracting on behalf of the Bay of Plenty Regional Council. Contact janeanejoyce@gmail.com

newsroom.co.nz



Railway Industry Association
The voice of the UK rail supply community



Ngā Kaupapa Huarahi o Aotearoa
National Land Transport Programme



Title: Sample of publications and sources reviewed for this proposal
Sources: Please see Appendix C.

Introduction

This is an independent proposal written on behalf of a group of New Zealand business leaders and residents who believe that connectivity is fundamental to our community and economy. We believe that, as a country, we need to change our approach and attitude to passenger rail, once and for all.

We can already see this happening with freight rail. However, as a result of current government spending structures and policy decision-making frameworks, we believe that passenger rail is being continually rejected and overlooked as a way of justifying investment in freight. Essentially, we think that policy officials and decision-makers see rail enhancements for passenger rail as an 'either-or' decision.

It is our belief that, if managed correctly, New Zealand could create a world-leading rail network that could benefit society as a whole and inspire other countries to follow our lead; perhaps not at the same technical level that high density countries can afford, but a clean, green and sophisticated solution that shows what rail can look like in low to medium density countries. Respected and effective transport solutions should not be the preserve of rich nations or rich individuals, i.e. tourists and commuters.

The title of this proposal, *Making Rail Work*, is a call for us all to see rail as an enabler of economic stability and sustainable growth. If it is embraced, rail culture can help us achieve our national targets. It provides support for climate change targets, cost-of-living, societal empowerment, housing, job-creation, environmental management, and global economic placemaking.

Rail can be used to improve health and wellbeing for all ages, cultural cohesion, and education. Rail can bring hard-to-reach communities opportunities to raise their professional attainment levels and life ambitions.

It is widely accepted that New Zealand's dependency on roads needs to be curtailed. There are some, mostly rural, who are genuinely car-dependent, and there are those, mostly urban, who have no viable alternative and no obvious motivation to change their behaviour, whether or not they are fully aware of the personal and planetary gains achieved from adopting transport lifestyle changes.

We know that only a small portion of society makes life changes for personal health and environmental reasons. As such, we need to be better at explaining why behaviour change will help everyone financially, at the same time as encouraging these benefits. We need to be better at making these behaviour changes appealing, savvy and smart, and articulate how the benefit will be felt in everyone's household budget.

This proposal has been drafted based on reference to multiple research reports and articles. It provides an overview of how passenger rail can be extended to Tauranga so we can activate the economic opportunities of the Golden Triangle for the good of the whole country.

It reviews the obstacles and challenges listed in government reports and papers published since 2002. The ideas and suggested solutions proposed are accompanied by case studies and data where they exist. They are specific to the introduction of an intercity passenger rail line between Tauranga, Hamilton and Auckland. Metropolitan rail is not directly reviewed or discussed in this proposal.

In addition, given the ever-changing nature of political leadership in Tauranga, we will be using this proposal to brief Council and MP candidates, officials, and Political Parties, in forthcoming elections.



Case Study A: UK Sustainable Communities Plan 2003

In 2003, in the UK, the Office of the Deputy Prime Minister (ODPM) published its Sustainable Communities Plan. Its purpose was to create a framework for local government authorities, arms-length bodies, non-departmental public bodies, and publicly-funded organisations, to connect funding decisions that would usually be difficult to align or measure when responding to central government policy targets, which tend to be siloed or ring-fenced by HM Treasury.

Basically, four 'growth areas' were identified (Fig 0.1), and where local authority planning departments could not take ownership of local delivery, statutory development corporations were set up. This was based on where housing needs were in highest demand and population over-crowding was overwhelming societal infrastructure like healthcare, education, transport, water, waste, and energy etc.

It is important to remember that these are the places where people wanted to live and work. These were the desirable locations that could add value to the country's overall GDP (Gross Domestic Profit), and global economic standing, if they functioned smoothly. They also had huge societal divide. Gentrification was creating increases in households in poverty and gang-related criminal activity; marginalisation and increases in benefits were no longer an option in terms of addressing these issues.

In a country with very little land available for development, the Plan prioritised brownfield sites. Government committed to remediating chemical and industrial damage so that commercial investors could work with local partners to bring these locations to the domestic and commercial markets.

In the UK priority regeneration areas, the statutory development corporations were granted devolved planning powers from central government to aid with compulsory land purchase, land remediation, and approvals for contractual agreements with inward investors. Development corporations also helped with aligning funding decisions between central government departments.

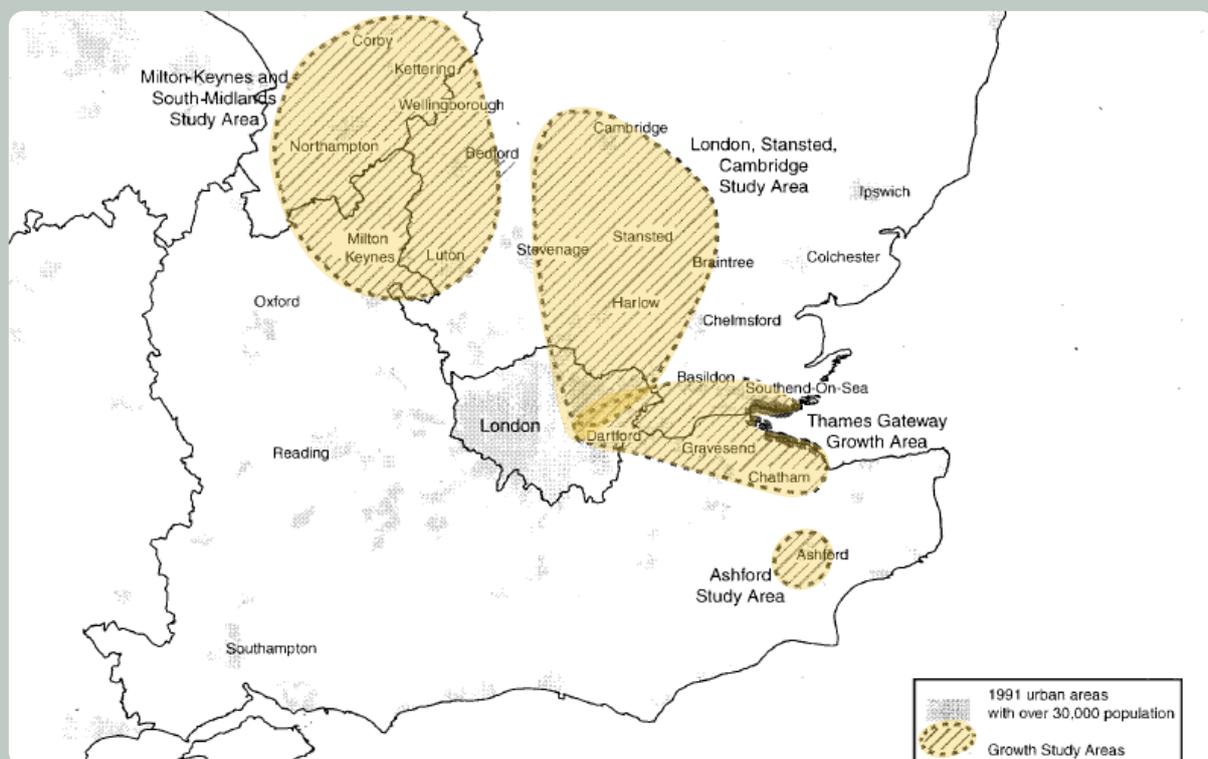


Fig 0.1: Four UK strategic, economic growth areas defined by ODPM in 2003



Title: *Tauranga CBD & Port*

Sources: <https://thespinoff.co.nz/society/15-05-2018/>

tauranga-the-miami-of-new-zealand-neednt-be-a-cultural-wasteland

There are eight obstacles that stand in the way of reintroducing passenger rail to Tauranga:

1. Cost

2. Tauranga Harbour Bridge

3. Population density

4. Competition with freight rail strategies

5. The Kaimai Tunnel

6. Availability of rail stocks and supplies

7. Impact on road users (level crossings)

8. Political resolve

9. Public attitude

Fig 1.1: Obstacles to re-introducing intercity rail to Tauranga

Approach

Since 2002, many reports have been written relating to or mentioning the validity of passenger rail in New Zealand. As a recognised part of New Zealand's 'Golden Triangle', and home to its largest port, Tauranga is top of the list of cities that should be reconnected to a central network. While local communities and commercial businesses seem enthusiastic about rail, governmental organisations tend to shy away from expressing support. We believe this is because they do not want to take financial ownership of the obstacles listed on page 12.

To date, these obstacles have been considered insurmountable challenges based on the factors used to measure the success of rail in New Zealand, which tend to focus on balancing projected ticket sales with capital, maintenance and running costs. With no easy way of evidencing guaranteed demand for rail in the regions, it has been almost impossible to justify public spending on passenger rail infrastructure.

Local government priorities in Tauranga and the Bay of Plenty have been more focused on work that needs to be done within the next ten years to manage the accelerated growth of the region. Conclusions drawn in the Urban Form + Transport Initiative's report in 2020 add additional financial pressure and expectation to any potential delivery strategy.

Essentially, passenger rail tends to get put on the back burner, or it is placed in the 'too hard and too expensive basket'. Discussions about hydro-electric cars and light rail options are used as a way of keeping the conversation alive, and passenger rail advocates at bay, without making any progress.

That said, the case for encouraging more freight onto rail has been made and won in the name of meeting climate change targets. Ambitions to use rail as a way of reducing carbon emissions associated with the port are well documented, accepted and evidenced.

While some see this as a way of upgrading the existing rail corridors for all rail, opinions are divided on whether both freight and passenger rail can co-exist in the Bay of Plenty. Train carriages can have different gating and run at very different speeds. Plus, the health and safety standards for passenger rail are, understandably, far

more extensive and expensive to maintain than those associated with transporting non-perishable freight. Concerns that stations could slow freight delivery are also a sticking point. It therefore stands to reason that local decision-makers would prioritise getting freight right first because of the immediate benefits it brings.

As far as using freight to reduce congestion is concerned, the jury is also still out on that matter. Increasing the number of trains on the track will automatically increase the number of times level crossings are used, which in turn slows traffic. There is also evidence to show that, without changing attitudes to car usage, domestic drivers will see reduced congestion as a reason to use their cars more often.

Pioneering city initiatives, like Tauranga's Wednesday Challenge, are already starting to inspire a new way of thinking about single occupancy vehicle usage and unnecessary short journeys. However, much more needs to be done to support and encourage alternative modal transport options in our towns and cities.

Briefing provided to incoming Ministers in 2017, and released under the Official Information Act, confirm that central government officials do see intercity, regional, and metropolitan passenger rail as an opportunity that comes with great societal and environmental benefits.

A report, conducted by Ernst & Young, and commissioned by the Ministry for Transport in February 2021 reaffirms this and demonstrated that, for the two passenger rail networks that support commuters in Auckland and Wellington, investment is not only justified, increasing capacity on these lines would bring significant and note-worthy benefits.

Overcoming the obstacles

The global evidence reviewed in this proposal is an attempt to provoke a can-do attitude. The challenges that stand in the way of passenger rail are complex, which means the solutions required will not be simple. *'Making Rail Work'* is not about giving up at the first hurdle. So, let us start with the list in Fig 1.1, mentioned earlier, and go from there.

1. Cost

It should not come as a surprise to anyone that the money available for major infrastructure funding is in short supply. Enhancements to acute healthcare infrastructure, and bridging support funding for our hospitality sector, understandably take priority over passenger rail.

In Chapter 3 we explore the idea of a community-led Public Private Partnership that could oversee governance and funding using a co-operative model. This approach is already being used in France for the line between Bordeaux and Lyon, see Case Study B. Much like the line to Tauranga, this is an underused line that would need to share freight and passenger rail.

Central, regional and local government funding will still be required for the project, especially if it is to retain its status as a New Zealand owned public asset. However, public funding that comes from the taxpayer should be seen as a way of underwriting setup costs so the initiative can become commercially viable.

The community-led partnership approach is not just favoured by the co-operative communities. The Institute of Public Policy Research published a report in March 2021, which asserts that devolution of public project ownership is the only way to ensure sustainable climate change outcomes. Parameters and recommendations are also discussed in Chapter 3.

2 . Tauranga Harbour Bridge

The purpose of this document is to review the case for intercity rail. If a destination terminal was placed in the CBD then upgrades to Tauranga's Harbour Bridge would not be essential to that phase of development.

Ongoing connections with Mount Maunganui could be considered as a train-to-ferry modal shift solution. This would also support work being done by Wednesday Challenge to re-educate Tauranga residents about using alternative modes of transport. This and other ideas for placemaking are discussed in Chapter 7.

3. Population density

Debates around population density can create a circular chicken-and-egg discussion, which is rarely helpful and mostly frustrating. However, it also highlights some unanswered questions about New Zealand's population growth projections and its future population management strategies.

Today, we are the 'Team of Five Million', with an additional one million overseas. What do we want that number to be ten, twenty or thirty years from now?

Because, if the answer is ten million, at any time, then we'd be hard-pushed to find anyone who would question the need for passenger rail as an intrinsic part of New Zealand's multi-modal transport future.

In Chapter 6, we consider future population projections from a community engagement perspective. What has been done to ask these questions of future generations, X, Y and Z, for example? At the same time, European immigrants may continue to increase in numbers, but relationships with countries like India and China also need to be considered.

Above all, Tangata Whenua expectations of population growth is paramount to this discussion. Māori and Pasifika communities must be invited to help lead the creation of strategic plans and targets, which is also discussed in Chapter 6.

Essentially, every part of Kiwi society should be deliberately engaged in the intercity rail debate.

4. Competition with freight rail strategies

Investment in rail should be holistic and consistent. While policy officials might work in budgetary silos, those divisions should not be noticeable when investment is considered for rail as a whole.

5. The Kaimai Tunnel

Additional tunneling needs are discussed in Chapter 4.

6. Availability of rail stocks and supplies

One of the greatest challenges faced by those leading the reintroduction of passenger rail between Auckland and Hamilton was the availability of train carriages.

In fact, while it would not have been the first choice, repurposing diesel engines was one of the compromises required to keep the initiative on track.

When we started brainstorming ideas for this challenge, we considered the idea of diplomatic arrangements with countries that have large numbers of residents here. India and China are obvious, as is the UK and the U.S.

It came as a surprise to learn that the UK: NZ Free Trade Agreement, which was signed on 1st March 2022, contains a transport clause, which offers not only supplies for the introduction of a rapid rail network, but also project management and industry expertise.

Maximising this opportunity, at the same time as ensuring the public asset is owned, operated and managed in New Zealand, by New Zealanders, is explored in Chapter 3.

7. Impact on road users (level crossings)

This is one of the most complex challenges because it represents the problems created by success.

When someone lives in, or moves to London, the first question asked is 'Which station am I closest to?', and the second is 'Where can I get to without changes?'

The question that Kiwis ask themselves is 'Why should I get out of my car?' Their vehicle is considered an extension of their home. It is a status symbol that they are not willing to give up without a fight.

More level crossing closures will have an impact in terms of freight alone. This will be the first time road users will be made to feel they are being sidelined for their transport choices.

We could introduce priority lanes for climate-friendly vehicles but it would not be a long-term solution. Creating strategies that appease disgruntlement would simply create more problems down the line.

Targeted community initiatives, like the Wednesday Challenge to encourage attitude and behaviour change are essential. We consider these in Chapter 5.

8 - Political resolve

Recent political manoeuvres have, yet again, created uncertainty in Tauranga. For a city with such potential, it lacks consistent governance and political vision.

Chapter 8 looks at the challenges and opportunities created by political timetables and election schedules.

In June 2022, we will see a by-election play out in our city, which will do one of two things: it will galvanise and re-engage people in our city, or we will all feel even more embarrassed and disenfranchised by the whole pantomime of playground politics.

It is likely that the outcome of this by-election will have an impact on the forthcoming general election. For this reason, we should use the by-election as an opportunity to raise the debate about passenger rail so it can be debated centrally as well.

To ensure New Zealand's Governmental commitment to rail, before time and money is wasted, we must also ensure that all levels of departmental officials are engaged in decision-making.

9 - Public attitude

How do you separate a Kiwi from their car? The answer is that you probably cannot. Can they use them less?

Does the fact that fuel prices have risen, as a result of the war in Ukraine, create an opportunity to remind Kiwis just how expensive their car choices are?

The truth is that, in the long term, fuel is going to be too expensive for most countries. New Zealand does not have the buying power to command supply. Supply we do get should be prioritised for essential services.

Educating Kiwis on the importance of making good fuel choices will be a hard job but it has to happen.

Passenger rail provides a certainty that other options do not. In Chapter 7 we look at the opportunities intercity rail creates in terms of urban placemaking. We consider what the connection between housing, rail and co-operative business models would look like.

We also explore the idea that, if you do not have to own a car to travel then you would have more to spend on buying your house, feeding your family, and investing in the future of your community, country and planet.



Title: What could an iconic train station look like in Tauranga CBD?
 Sources: Please see Appendix C.

Vision

The Golden Triangle rail concept has been discussed, debated, debunked, deliberated and dismissed many times over. It is time to get around to it. We must start by working together, and accepting that we achieve our greatest accomplishments when we work towards a united vision. The greatest challenge is that no one wants to be responsible for paying for it or managing it. Let us share the burden, and let us make sure that all Kiwis have access to being part of the team that also shares in its success. Here is our proposal for our guiding principles.

1. The focus of this vision must be specific to an intercity connection between Tauranga, Auckland, and Hamilton. Intermediate station destinations will be reviewed but extensions to the line will not be incorporated at this stage.
2. All stakeholder groups affected by passenger rail must be able to contribute to the development of this vision. Specifically, Generations X, Y, and Z, must be engaged in advance of forthcoming elections.
3. Close collaboration with iwi and hapu is essential to ensure that our indigenous culture and landscapes are respected, and that the stories of our land are told as part of the passenger rail experience.
4. Those invited to share the financial burden must prioritise New Zealand's interests. They should not be able to offshore or on-sell their investment outside of New Zealand.
5. Opportunities created by passenger rail must demonstrate that people from all walks of life have access to services. They should never be seen as a move to gentrification.
6. Gains in terms of climate change targets and reduced congestion must be measurable and sustainable. They must allow for carbon spent in terms of future-proofing.
7. Passenger rail proposals must not compete with or hinder the delivery of Tauranga Port's freight rail strategy, or the improvement of road and vehicle quality standards.
8. Data captured, and delivery measures that are agreed, must collect information in a way that is compatible with related government priorities.
9. Baseline metrics associated with intercity passenger rail must be redefined to account for behaviour change associated with COVID-19, and global commodity prices associated with the war in Ukraine.
10. Inward investment proposals and essential skills visa strategies should positively promote New Zealand's ambition to embrace passenger rail so that those arriving in the country feel encouraged to favour both freight and passenger rail services over road.

“Ehara taku toa I te toa takitahi
engari he toa takimano.”

“My strength is not that of
an individual but that of the
collective.”

Whakatauki, Māori proverb

Governance and funding

There has been much discussion about making public transport free in New Zealand as a way of countering the impacts of rising fuel costs. It is also a great incentive for getting people out of their cars and reducing carbon emissions. In today's New Zealand, passenger rail only exists in primary urban centres. As such, free public transport, like hydro-electric cars, will only benefit the metropolitan urban rich. Neither will benefit the whole team of five million. Let us think about how we work together to create a solution that is fair and accessible for all.

Public Private Partnerships (PPPs)

There are many different versions of PPPs, which we will refrain from listing here. Suffice to say, the one formed in Wellington to build the motorway has taught transport government officials a great deal of lessons in terms of what both good and bad PPPs look like.

Our primary concern about PPPs is that they tend to be used to attract overseas financiers; money that Kiwi businesses are not able to invest. We believe that by using a co-operative model, we can raise money to help with the funding process, at the same time as garnering loyalty to rail and alternative transport options.

KiwiRail would be intrinsic to the co-operative. However, while it is focusing on optimising freight rail benefits, the co-operative would be laying the foundations for the passenger rail that follows.

This organisational setup would also mean that non-transport and engineering companies would be able to take a seat at the decision-making table, which would improve community spending impacts.

Community members, such as those who have compiled this document, would also be able to join and influence decisions. This would also allay concerns that foreign parties are likely to take over.

UK Free Trade Agreement

The UK version of this agreement is encouraging in terms of ensuring that passenger rail is being taken seriously by central government decision-makers. However, we must ensure that local engagement is managed correctly, respectfully, with a Kiwi-focus.

The UK version of the agreement states that:

"New Zealand's planned metro and rapid rail projects have created demand for UK expertise in numerous areas from consulting and engineering design, to signalling and project management. The deal removes tariffs on rail-related goods, such as rolling stock parts and traffic signalling equipment."

It also quotes Darren Caplan, Railway Industry Association CEO as saying:

"UK Rail suppliers have a wealth of expertise which is highly regarded across the world. Many are interested in the opportunities new Free Trade Agreements provide, particularly with Australia and New Zealand."

Distribution companies DHL and UPS are also quoted as being excited about establishing themselves in New Zealand. Some further digging found that the TPP started advertising in January, months before the free trade agreement was signed, inviting engineers and project managers to sign up to their training course:

"In 2022, the Transport Planning Professional (TPP) Partnership launched its pilot scheme to roll out this unique transport planning qualification worldwide. The pilot areas will include Hong Kong; Australia & New Zealand; India; and the Middle East."

We believe that the establishment of a co-operative would provide globally invited experts with the local information they need to ensure that rail solutions work for everyone in our society.

A co-operative would also be able to engage and support New Zealand-born engineers and project management strategists who want to upskill themselves and become part of a new Kiwi industry.

It is the unionship founded on sharing objectives that create truly rich and sustainable communities. If we can find common ground as opposed to reasons to work in silos then we stand a chance of creating societies that our children's children will be proud of.

Auckland | Hamilton | Tauranga

These cities are not chosen as the Golden Triangle just because of their proximity to each other. Their unique identities are complementary to each other. Between domestic and commercial inhabitants, the area makes up more than 50% of New Zealand's economy.

Many years, and considerable money, has been spent trying to invest in roads that connect them in a better, more prosperous way. Yet they still function in silos.

The only thing that better roads have achieved is more traffic and increased urban sprawl, which in turn requires more roads. The whole thing is a carbon-hungry, perpetuating loop of ridiculousness.

The truth is that these cities do not compete with each other: they each have different commercial and domestic offerings. Their landscapes and lifestyles are different. Collectively, they celebrate, embrace and support global cultures and socio-groupings, but independently they find themselves lacking.

Consider the idea that a global company wishing to move to New Zealand might not want all of its staff in one place. Logistical and operational staff would be best-placed in the centre of the country in Hamilton. Managerial staff would be best placed in Auckland. And global sales teams could create C-suites in Tauranga's Central Business District that provides shop windows for the best corporate lifestyle New Zealand has to offer.

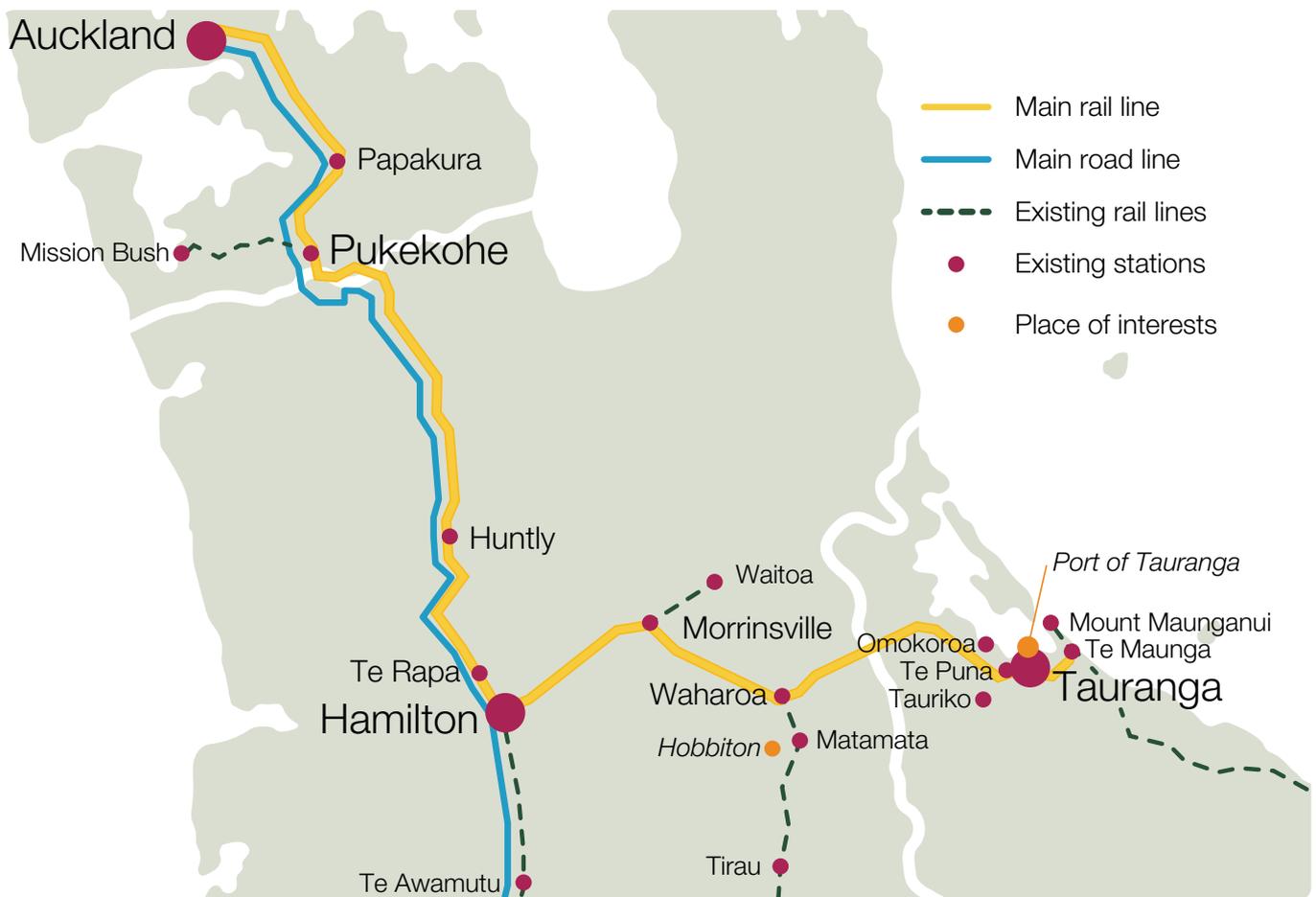


Fig 3.1: Train routes and areas of interest in New Zealand's Golden Triangle



Title: Railcoop team and owner-members
Sources: <https://www.ica.coop/es/node/15651>

Investors from other continents are accustomed to multi-cultural environments and diversity. We should amplify the multitude of lifestyles that New Zealand has to offer. Having an inter-city rail link is about perceived national commitment to the uniqueness of each place, and their collective identity. It is about investment reassurance: the whole is greater than the parts.

The Co-operative Model Applied

Case Study B is the most relevant and recent example of a rail co-operative: France's Railcoop SCIC.

Using the co-operative model has not only raised funding from local communities, companies, associations and industry bodies, it also helped to allay concerns about passenger demand and projected usage. At the time of this report, it had already signed over 12,000 individual members.

Railcoop membership costs €100 for each individual and 50¢ per inhabitant for each local authority that benefits from the route.

The governance structure of Railcoop allows all members to engage via two regional discussion groups and ten thematic groups, all of which feed into the General Assembly. This kind of structure allows the co-op to direct those with skills in particular areas to use their expertise in addressing the obstacle or challenge that is slowing or hindering progress.

It is this uniquely democratic process that would be well placed to pilot in Tauranga, especially at a time when the city council is being run by commissioners appointed by central government.

We believe we can also be creative with funding sources if a co-op was established. Government funding should be focused on ensuring society is not dependent on taxpayer contributions. It should not be restricted by central budgetary policy silos.

By way of suggesting what a good system might look like, let us say that WINZ networks are used to funnel some Waka Kotahi funding to the rail co-operative.

Gifting a \$100 membership to each person in the immediate area who is on income support would be a way of spending taxpayers money at the same time as ensuring those who cannot usually afford shares or investments are granted the right to vote on infrastructure in their area.

Cooperative Business NZ has participated in the early stages of discussions and see benefit in further exploring the opportunity to establish a community owned transport network. Given its relationships with the International Co-operative Alliance (ICA), New Zealand government and its existing membership base, it has the opportunity to draw upon this expertise as part of refining the co-operative business structure to meet the needs of the vested parties.

Case study B: Pioneering French Railcoop tracks new course for rail

Reasons for Railcoop's establishment

The co-op was set up in response to the liberalisation of the rail market in France in 2020. The initial group involved in setting it up included people who were involved in the railway sector, local development and sustainability initiatives. They decided to go for the co-op model to enable local people, companies, associations and local authorities to develop the project together.

Established in 2019, in advance of the planned liberation, today Railcoop is a co-operative society of collective interest (SCIC) with over 12,000 individual member owners, 200 companies and associations, and 30 local authorities, that aims to run passenger and freight trains without public subsidies.

As a SCIC, also known as a general interest co-operative, Railcoop will have to direct 57.5% of its surplus to its reserves, before owner members receive dividends.

The project is run by an operational group of 15 people with input from individual members, who get involved in discussions about how to advance the initiative. Member engagement takes place via twelve discussion circles, two of which are regional and ten thematic.

In March 2021 the co-op reached the minimum threshold of 1.5million EURO capital set by the state to become a private operator. It has since raised over 7million EURO and achieved its license to operate freight rail, which was formally launched in November 2021



Fig 3.2: Railcoop CEO Nicolas Debaisieux



Fig 3.3: Railcoop passenger rail

The Unicorn: Licoomes

Railcoop itself is part of a collective called Licoornes, made up entirely of co-operatives which provide various services, from telephony to power generation and ethical finance. Licoornes means unicorns – the name was chosen as a symbol of the co-operative alternatives.

The Licoornes co-ops say they were brought together by a set of common values – environmental protection, social justice, and solidarity. Their united ambition is to offer an alternative economic model.

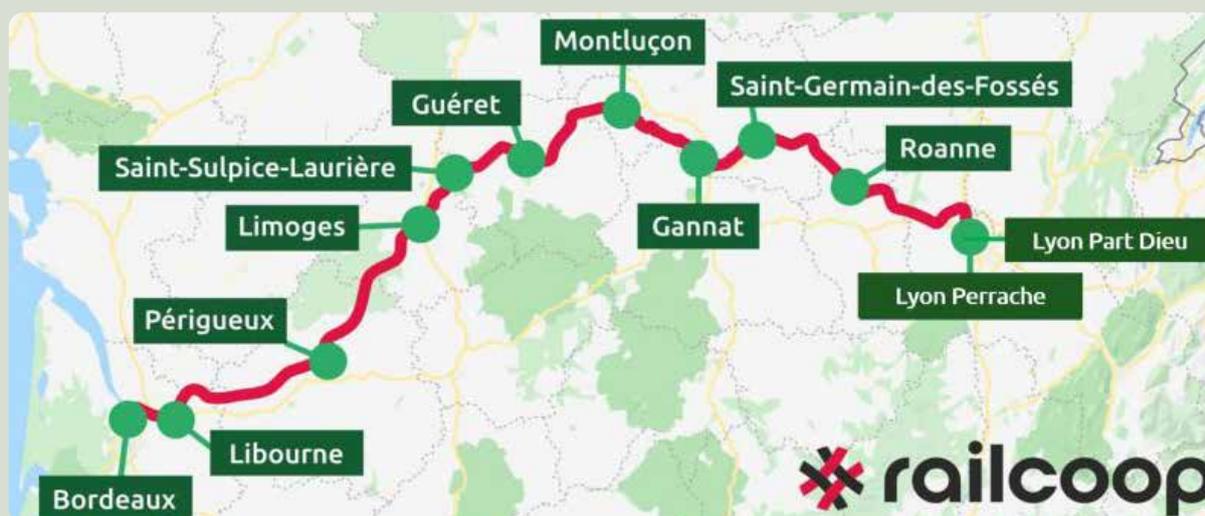


Fig 3.4 Railcoop SCIC map

Timescale for passenger rail services

Railcoop's passenger rail target of opening passenger rail services in December 2022 has been delayed. However, they have overcome all but two barriers to operation, a significant accomplishment given COVID-19, the war in Ukraine, and national political electioneering.

First of all, the finalisation of the financial package remains conditional on the firm and definitive commitment of the banks, institutional investors and actors of the Social and Solidarity Economy (SSE).

Railcoop says it is now aware of the fact that the financial and banking players are reluctant to commit themselves, "including the players who claim to support the emergence of new economic models and the development of rural areas, in the face of a promising but nascent market."

Second, the availability of the rolling stock depends on the ability of the industry to renovate the available second-hand trains within a reasonable timeframe.

These announcements were made in April 2022, and should be seen as a positive outcome. All of the other requirements for operation have been met and there are only these two hurdles left to face.

The first is actually dependent on the second. Once access to rolling stock can be confirmed, costs can also be confirmed, which will make financiers happier. Postponement of passenger rail targets could also be seen as wise because of the uncertainty that the war in Ukraine is creating.

Either way, government officials, investors and the media should see the timing of the announcement, more than eight months prior to the original deadline, as a sign of consummate professionalism from the Railcoop team.

A small poppy among giants

In the way that France's Railcoop is part of a wider co-operative alliance, so too would this co-operative. New Zealand has some of the most successful co-operatives in the world, as evidenced by Cooperative Business NZ and PWC's 2021 report 'The New Zealand Co-operative Economy'.

The establishment of a rail co-op would be New Zealand's first transport co-operative

We should also remember that, as part of the Queen's Commonwealth, this initiative would also be supported by international ambassadors who champion increased use of rail and public transport as a way of addressing climate change targets.

The information set out in the UK version of the Free Trade agreement, provides that reassurance. In addition to that, the neutrality of the global co-operative community ensures that tumultuous Anglo-Franco relations, Brexit fallout, and forthcoming elections, would not hinder a New Zealand rail co-op from working with initiatives from non-Commonwealth countries as well. Essentially, there will be plenty of support and guidance for this endeavor.

Addressing regional concerns

These international connections could also be used strategically to overcome barriers outlined in the 2020 Urban Form + Transport Initiative report (Fig 3.5).

Most have already been discussed in the early sections of this proposal. Although, what France's Railcoop experience tells us is that we are all facing the same challenges when it comes to rail.

Attractive passenger rail carriages, attract passengers, investors and service stability.

We will consider inward investment opportunities in more detail in Chapter 7. However, from a global negotiation perspective, working with partners overseas to demonstrate united demand for upgraded and re-purposed rolling stock could create enough projected demand to reduce supply production prices for all.

Newer battery-operated trains could also be a more cost-effective way of overcoming the expense and environmental costs of line electrification.

In terms of other barriers set out in the report, we believe that suggesting costs associated with new

The Urban Form + Transport Initiative Report (BoP extract - May 2020) suggest that the re-introduction of passenger rail to Tauranga could be unaffordable. The UFTI report only examines inter-city services so does not consider issues relating to the Kaimai Tunnel or the line beyond that to Hamilton.

1. KiwiRail does not have any spare locomotives or rolling stock that can be used for any Metro operation. New rolling stock will be required – typically this has a five-year procurement timeframe.
2. While some of the routes have existing traction electricity, no investment scenario has been assumed for this to be implemented elsewhere.
3. Any infrastructure costs presented assume no freight contribution to paying for the stated improvements, and that the Metro business case stands alone, even in the instance where freight demand drives the capacity constraints.
4. Provision of traction electricity requires a step change in costs, as existing signalling needs to be replaced to ensure that resulting signalling is immunised from the effects of a 240KV electrical field.
5. It is the assumption that for passenger operation the Harbour Bridge would need to be replaced as a part of the minimum investment case.

Fig 3.5 Tauranga's existing cost barriers

bridges, and that freight funding should be ring-fenced, is endemic of the problems created by siloed government funding systems.

Blinkered policy approaches like this are traditionally wasteful in terms of getting best use of the taxpayers dollar. We would refer the authors of this report back to Case Study A, and ask them to consider opening their minds to alternative match and group funding ideas.

Rail can be the skeleton of a sustainable transport system; roads should be seen as the veins and arteries. The only way the whole system will work is if it works together.

Optimising transport for all

Intuitive ticketing solutions are already being discussed globally. This is a conversation that New Zealand must join if it wants to learn and grow in this field.

We will consider ideas for engaging all members of the community in Chapter 6. For now, consider the benefits of London's Freedom Pass.

Those over 60 in the UK are, theatrically speaking, given the key to city. Public transport is free for them, which creates many diverse benefits.

Firstly, they tend to have money so the more they move around the more they spend, which helps micro economies. Also, the fact that they move around for free makes them more active, which reduces impacts on the healthcare system.

This generation is also made up of self-sufficient, former business professionals. They tend to self-organise (even if you'd prefer that they did not!), and ensure that those in their own age demographic are encouraged to participate in activities.

As co-operative members, in the UK, many remember the co-operatives formed after the war, and the community spirit they embodied.

Additionally, they are more likely to adopt energy efficient practices because they tend to be think about the impacts that they have had on the planet their grandchildren will inherit.

Freedom passes are considered a gift to those who have put their service into the country. It is an invitation for them to enjoy the country they have helped create.

From a hospitality perspective, Freedom passes are used to offer discounted ticketing to cultural, historical and entertainment offers.

When one considers the cost savings in terms of other policy areas, and the increase in micro-economic spending, it is hard to understand why passenger rail is judged on ticket revenues alone.

The obliquitous benefits of free transport for those who cannot afford a car to get to work should also be taken into consideration. Paid tickets should be priced at premium for last minute single trips and tourists.

Calls to action

These are suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers, and anyone with an interest in the future of public rail transport in New Zealand.

- 1. Invest** time and expertise in exploring the idea of a rail co-operative to align stakeholders in the southern section of the Golden Triangle.
- 2. Define** a communications framework for local planning authorities to connect with rail discussions related to the UK:NZ Free Trade Agreement.
- 3. Explore** the idea of formally defining the Golden Triangle as a strategic economic growth area, especially if the team of five million is going to grow to ten.
- 4. Publish** government's approach to 'tipping point' infrastructure investment, and the specific differences it has for off-shore and on-shore investors.

“If you want to
go fast, go alone;
if you want to
go far, go together”

Anon

Source: Quoted regularly in U.S. speeches, originates from
indigenous African and other cultural teachings.

Route and timetables

Few people would suggest that New Zealand has the population required to justify public spending in rail, based on useage alone. So why do it? But in the same vein, how did younger European countries justify it when they were less populated than they are today? The fact is, they used rail to grow their economies, and enable their people. Populations that are moving physically produce health in both the economy and themselves. But how do we start to build a network? Which places should be connected first, second, or not at all?

Let us start with justifying why Tauranga is the best and most likely next step on a national network, based on the lines that are already functioning, and the rail corridors that already exist.

Introducing or, in New Zealand's case, re-introducing a national rail network does not happen overnight. It is foolish to believe that it can be delivered within an election cycle. And once delivered, iterative expansions and contractions will be necessary.

Referring back to the UK's Sustainable Community Plan (Case Study A), connecting population centres is the best way to encourage economic growth without losing control of urban sprawl. Rail is the ideal way of connecting these centres. It increases passenger numbers, due to the fact that population centres have lots of people, and it increases business connectivity, which improves market competitiveness.

When managed transparently, long-term forward planning is a good thing for people and businesses. Moreso than roads, rail helps domestic residents expand their horizons in terms of connecting with communities in other towns and cities. It affords them time to plan their personal and professional futures.

A ten, twenty, or even a thirty, year vision could also be used to help create cross-bench commitment, which would also help provide reassurance to rate and tax payers, inward investors, and those wishing to join the rail commuter movement.

If the population is going to increase then government needs to be upfront about where that growth is going to be focused. Others need to plan as well.

A skeletal strategic framework would also help with aligning central policies and ensure that related funding decisions are addressed constructively, and separate from political debate. It can also set out a delivery timeline so that expectations can be managed in areas that will not benefit immediately.

While that sounds complicated, it does not have to be confusing. Basically, start with identifying the largest populations in the country and connect them together first. That creates 'Level One'.

Fig 4.1 shows that by viewing the UK at night we can see the highest population densities: they are the brightest spots on the map. Based on these centres, London is used as a European gateway to the UK from Paris, by high-speed rail. The influx is then encouraged to disperse to more northern secondary cities.



Fig 4.1 UK at Night

This approach has been used by transport and regeneration planners in the UK to explain why rail infrastructure spending is focused on city connections.

Given New Zealand is a little behind the curve when it comes to embracing rail, let us start with looking abroad for some of the answers. The UK has a similar landscape, climate and population spread as New Zealand, so it makes sense to consider its approach.

Most UK rail policy officials admit its network would not exist if its inception was measured by today's standards. That said, the principle decision-making about primary rail station locations remains the same.

Making the case for Tauranga

Fig 4.2 shows New Zealand at night, which highlights its population centres. By comparison, we can definitely see the difference between the UK's population of 67.44 million versus New Zealand's five million.

Based on this map, Auckland is the country's primary city, and Hamilton is the obvious second city to link by rail. Tauranga is, again, the obvious third, especially given its port and shipping capacity.

This approach confirms the Golden Triangle as New Zealand's primary growth area. So let us look at what areas would benefit from a route to Tauranga.



Fig 4.2 New Zealand at Night

Where would it stop?

Fig 4.3 and 4.4 show the stopping points along the route. They are based on the existing rail line that was used for passenger rail in the past and now for freight. Had the line been developed more recently, it may have been routed through different townships and regions. Changing the route at this stage does not seem to have any advantages for the costs incurred.

The placements of stops also considers line curvature and places where battery operated trains could recharge so that rural line electrification is not required, thus reducing overall running and environmental costs.

Who would use it?

In Chapter 7 we consider the stops from a placemaking perspective. This includes housing, inward investment, tourism and enabling those who struggle to find work.

As per the title of this proposal, *Making Rail Work*, we suggest the focus should be on those who do not require essential use of vehicles.

We would define essential vehicle use as journeys that add more holistic value to the national GDP than they cost.

While this proposal considers how rail can be justified by connecting it to other policy priorities, we also have to consider it from a fundamental business perspective.

Business users would be beneficial to the line from two perspectives. Firstly, once professional commuters get used to using a transport mode, they rarely deviate. Secondly, their praise of the line will also encourage others to use it so they should be considered influencers.

Tactically, in terms of the co-operative proposal levied in Chapter 3, engaging the businesses who could use it and inviting them to be owner-members of the passenger rail line would expediate this process.

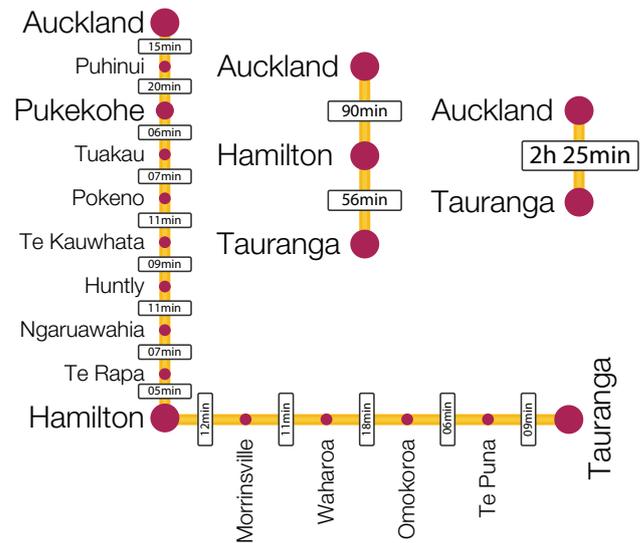


Fig 4.3 Timing Map

Inward investors are also key to increasing user projections. Most professionals who arrive with Essential Skills Visas come from countries that commonly use rail. When they arrive, they find themselves in a place that requires each household to own at least two cars, which forces them to change their behaviours in a way that is detrimental to our environment, our country and the planet.

Connecting immigration services to local initiatives like the Wednesday Challenge could be a good first step in helping those who are unfamiliar with alternative modes to connect with those who are. Again, this might also help with societal integration and community cohesion.

Referring back to New Zealand's Fair Trade Agreement with the UK, mentioned in Chapter 4, we could start by targeting UPS and DHL as distribution infrastructure experts who could help us lead the charge on convincing others to buy into rail over road.

As a nation, we must stop creating the conditions for people to live in silos. The cultural sideeffects are too great, which we will discuss in Chapter 6.



Fig 4.4 Stop Timing Map

How fast would it go?

Fig 4.5 shows the times anticipated for a stopping train, using the existing lines.

These numbers will have to be reviewed, based on increased freight usage and any upgrades and changes that might be made to the line.

Based on the stations listed below, this schedule would allow a rail line to compete with road. However, it would be dependent on the use of electric rolling stock.

Once that can be confirmed, timetabling could allow for even faster services. Most inter-city rail lines around the world have 'stopping' and 'non-stopping' services.

Travel times and stations	Between Station (metres)	Stationary Time (seconds)	Cruising Speed (km/h)	Acceleration Time (seconds)	Acceleration Distance (metres)
Tauranga		0			
	11300		80	44	494
Te Puna		45			
	5690		80	44	494
Omokoroa		45			
	27610		100	56	772
Waharoa		45			
	23200		160	89	1975
Morrinsville		45			
	26900		160	89	1975
Hamilton Central		45			
	5000		80	44	494
Te Rapa		45			
	13700		160	89	1975
Ngaruawahia		45			
	14800		100	56	772
Huntly		45			
	17200		160	89	1975
Te Kauwhata		45			
	22200		160	89	1975
Pokeno		45			
	9000		100	56	772
Tuakau		45			
	8000		100	56	772
Pukekohe		45			
	31200		100	56	772
Puhinui		45			
	22800		100	56	772
Auckland - Britomart		0			
Total Line Distance (km)	238.6				
Average Speed (km/h)	96.62				
Total Line Distance (km)	220				
Total Trip Time (seconds)	8197				
Total Trip Time (hr:min:sec)	2:16:37				

Fig 4.5 : Julian Tankard, Independent NZ Engineer

How would ticketing be managed?

As mentioned earlier, premium prices should be paid by those who book last minute. Package ticketing should be the primary approach to ticket sales.

Cross ticketing with other modes of transport like buses and ferries should be considered. Corporate season ticket offers also create a range of opportunities.

Monthly or other periodical passes, on-peak and off-peak rates, and bundle vouchers would all be included.

Freedom passes, mentioned in Chapter 4, and job-seekers passes can also be used to capture public money while improving opportunities for all.

Waikato's new Inland Port, and the University's new campus in Tauranga could also offer packages.

Deceleration Time (seconds)	Deceleration Distance (metres)	Cruising Time (seconds)	Dynamic Time (seconds)	Static Time (seconds)	Accum Time (seconds)	Accum Time (minutes)
				0	0	12:00:00 AM
44	494	464	553			
				45	553	12:09:13 AM
44	494	212	300			
				45	898	12:14:58 AM
56	772	938	1050			
				45	1993	12:33:13 AM
89	1975	433	611			
				45	2649	12:44:09 AM
89	1975	516	694			
				45	3388	12:56:28 AM
44	494	181	269			
				45	3702	1:01:42 AM
89	1975	219	397			
				45	4145	1:09:05 AM
56	772	477	588			
				45	4778	1:19:38 AM
89	1975	298	476			
				45	5299	1:28:19 AM
89	1975	411	588			
				45	5932	1:38:52 AM
56	772	268	380			
				45	6357	1:45:57 AM
56	772	232	344			
				45	6745	1:52:25 AM
56	772	1068	1179			
				45	7969	2:12:49 AM
56	772	765	876			
				0	8890	2:28:10 AM
	Sub Total Trip Time (seconds)		8305	585		
	Sub Total Trip Time (minutes)		2:18:25 AM	12:09:45 AM		
	Total Trip Time (seconds)		8890			
	Total Trip Time (minutes)		2:28:10 AM			

Coastal erosion, flood defenses and marsh

The factors that should be considered when flooding is being considered as a risk are complex. Runoff water from rainfall, tidal patterns and sea level rises are obvious. However, you must also consider the design of water and waste management infrastructure, land use in terms of domestic and commercial development, and the position and flow of freshwater habitats.

The report conducted by Opus for Tauranga City Council suggests four areas on the rail line to Tauranga CBD may be prone to flooding. Unsurprisingly, the four areas of concern are on coastal fronts, or near a bridge or estuary. Some are affected by run-off water as well.

More recently, NZ Searise published an interactive online platform that considers land movement and falls alongside sea level rises. Fig 4.6 combines this information to create a more complete picture of the severity of the problems these areas create.

Broadly speaking, this area of New Zealand coastline is faring well by comparison to areas around Auckland and Wellington. In a way, embracing the idea of creating a Golden Triangle growth area would be a way of

safeguarding and future-proofing New Zealand's largest economy by distributing it more evenly across the area

Four flood risk areas

Given sea level rises and the increased threat of natural disasters, these four areas are already long overdue for an upgrade. A rail co-operative could work together, cross-policy, to use passenger rail as a way of getting all of the improvements considered in one go. This would not only reduce overall costs, it would also help justify ratepayer contributions.

There are plenty of examples of successful and unsuccessful flood defense practices from across the world. Case Study C shows how indigenous flood management succeeded in South Sudan where modern technologies failed.

Te Tiriti o Waitangi mandates engagement with iwi in terms of all changes to the physical landscape and respect for its people's needs.

However, in the same way they did in South Sudan, we should also look to Tangata Whenua to learn from the way these challenges have been managed and solved in the past.

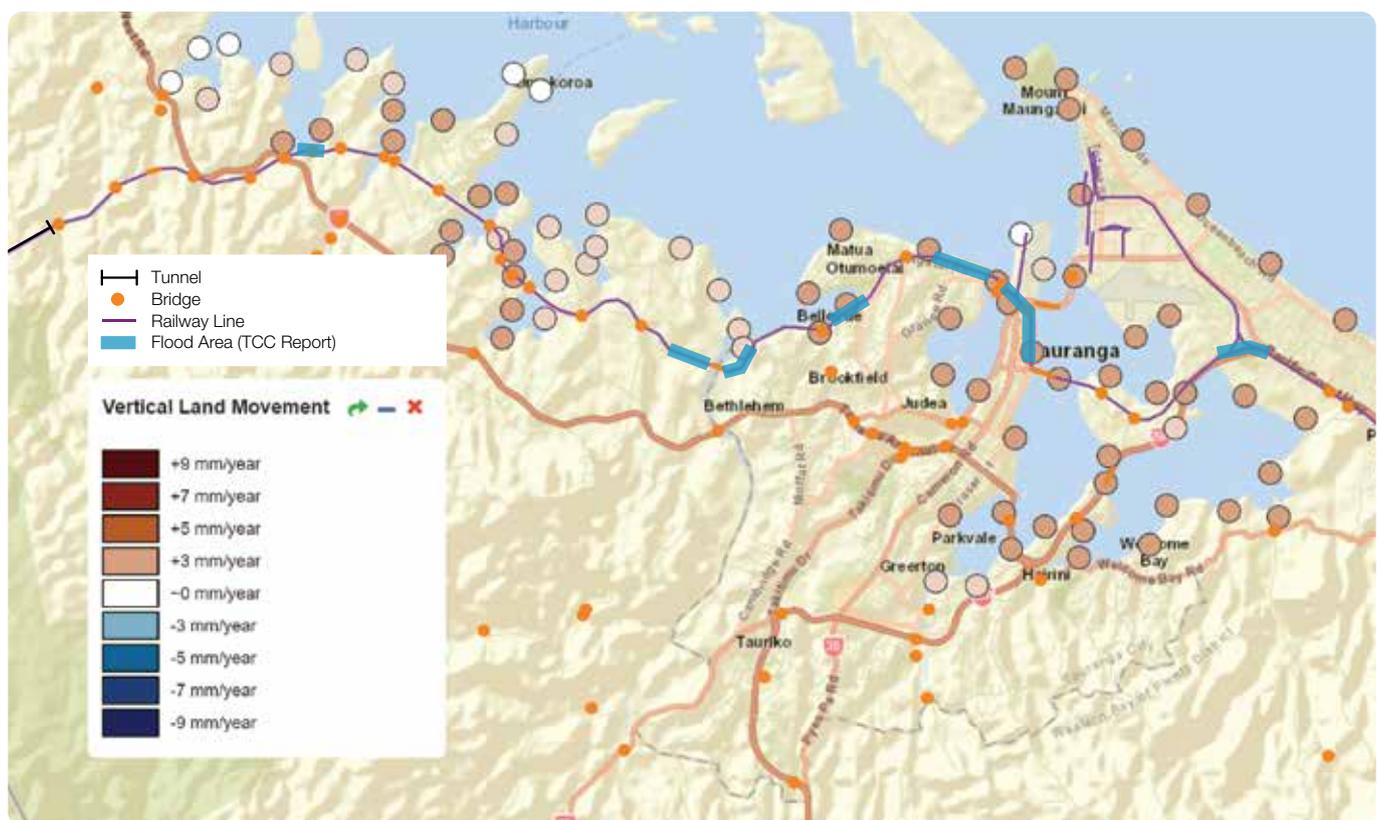


Fig 4.6: SeariseNZ map overlaid with the Opus report flood areas

Case study C: Award winning flood defences in Sudanese capital: Tuti Island

The 18,000-strong community of Tuti, a River Nile island in the Sudanese capital Khartoum, has long been vulnerable to floods.

Their knowledge and understanding of the River Nile has kept them free from major loss of life and in 2015 they were recognised as champions of disaster risk reduction by UNISDR.

The Mahas tribe has lived there for centuries. They successfully faced down major flood crises in 1946, 1988, 1998, 2006, 2013, and 2014.



Fig 4.7: Masterplan of Tuti Island



Title: Road bridge connecting Tuti Island to Khartoum
Sources: http://photos.wikimapia.org/p/00/04/62/33/35_big.jpg

All caused many casualties elsewhere in the country, where modern defenses were used.

After centuries of experience, Tuti's inhabitants have accumulated their own indigenous knowledge and skills.

Fig 4.7 shows the island and the masterplan for the areas it allows to flood when tides are high during the wet season. During the drier seasons, its eight square kilometres also keeps the mainland supplied with fruits and vegetables.

This gives the community on the island peace of mind in terms of floodrisk, work, housing, and it makes them feel proud, valuable and respected.

Letting water in

Identifying managed flood areas doesn't have to be impractical or unsightly. There are some high-density housing schemes in Europe where lower levels of car parking facilities are used to capture and hold run-off water so that water and waste infrastructure is not overwhelmed.

Some managed flood areas even provide playing fields and entertainment space in the dry seasons, and then live underwater during the wet season.

Facing realities

The truth is we will have to start making some decisions about how we manage sea level rises and flooding.

If we wait for our coastline to disappear under the surface then flood defenses will be more expensive to implement. Abandonment strategies will also become the subject of serious discussion, just as they are in the Pacific Islands at the moment.

Regardless of how many more people we welcome to our shores, the reality is we may have to start planning for relocation of some settlements within New Zealand in the not-too-distant future. Growth area strategies could provide Kiwis with relocation options now.

The introduction of a passenger rail line will not exacerbate flooding issues, which some reports suggest. But, considered strategically, it could be the catalyst to some of the solutions our country needs anyway.

Winners and losers

The data released by Searise in May 2022 will have concerned many homeowners across the country. Not only will they be concerned about their homes, they will also be facing increased insurance costs in the coming months and years.

While that sounds like the insurance industry would be able to make a profit from this, that would only be true in the short term.

We would want to work with all parties to see how a passenger rail line could help focus all parties on designing a more secure future for the whole area.

Double tracking

Far too many rail enthusiasts in New Zealand have attempted to make the case for double tracking as a way of increasing capacity to allow for passenger rail.

Fig 4.8 shows the costs required. The estimations were gathered in 2019. However, it is thought that these costs are also applicable to a post-COVID world. Updates in risks associated with sea level rises should be considered when updating revising numbers.

Partial double tracking helps get the train on the track so that those who need it can begin to benefit. However, as discussed in Chapter 8, the political propensity has been to make derogatory statements comparing our rail services unfavourably with the high standards in China and Europe. This is counter-productive to proposing and considering iterative strategies that are based on a cyclic process of planning, testing, analysing and refining.

We can learn from the journeys of those who went before us. We can skip the mistakes they made and adopt the successes they earned. We cannot compare the experience of rail in those countries with our own, in the same way that we cannot compare our football or table tennis accolades.

We can only be the best for ourselves. We should not wait for the rest of the world to solve our problems for us and then hand us solutions on very expensive plates.

Tunneling opportunities

From speaking to both road and rail enthusiasts, there is no shortage of suggestions about where tunnels should and should not be placed.

Item	Units	Unit Costs	Total
Track per km	107	\$ 385,000.00	\$ 41,195,000.00
Tunnel Double Track per km	8.9	\$ 80,000,000.00	\$ 712,000,000.00
Bridges	10	\$ 5,000,000.00	\$ 50,000,000.00
Crossings	10	\$ 500,000.00	\$ 5,000,000.00
Electrification per km	107	\$ 4,000,000.00	\$ 428,000,000.00
Harbour Crossing & elevated Track	1	\$ 300,000,000.00	\$ 300,000,000.00
Subtotal			\$ 1,536,195,000.00
Contingency	30%		\$ 658,369,285.71
Total			\$ 2,194,564,285.71

Fig 4.8 Tunnelling costs, as at 2019

The simple fact is that the boring technology required to create tunnels has to be brought in from overseas. How many Kiwis would hire a Rug Doctor to clean a single rug? Well, hopefully none!

The case for a new Kaimai tunnel beside the existing rail tunnel is obvious. However, the geological impact might not be worth facing before passenger numbers are proven. Double tracking on either side of the tunnel might be able to carry demand while making the case.

That said, in Tauriko specifically, the new GIB® factory will be expected to deliver to housing development sites across the country. There are calls for a tunnel to allow quick passage through the Kaimais between Tauriko and Matamata Piako.

Ultimately, this is a small pocket of need as far as tunneling or tunnel-widening is concerned. Central government should assess the costs and determine how many problems of this nature they can solve across the country with this kind of technology.

How would taxes and rates be affected?

When we consider the cost to the public purse, we have to consider costs in two ways: upfront setup costs; and ongoing service subsidies.

The former is essential to get rail up and running; the latter is what we are aiming to avoid with this plan.

We are also trying to be more creative about how public money can be used positively in this way, and how decision-making stops being the preserve of the elite.

Can we combine funding for rail set up, at the same time as solving or easing other problems that our society faces?

Residential and commercial impacts

Ratepayers in both senses will benefit from increased property values so it is only right that they should bear some of the cost. That said, they should not feel lumbered with footing the whole bill blindly.

The route should be broken down into sections so that the parts of the line that need substantial work can be identified. In some areas, like those around the stations, commercial ratepayers might pay more but domestic ratepayers may be subsidised in some way, both as a result of predicted increased footfall in their vicinity.

In areas where line upgrades, either tracking or flood defense, are required there may be opportunities to improve local areas at the same time as investing. Again, the impact on domestic and commercial ratepayers should be proportionate to the benefit or disadvantage they inherit.

Either way, managing this process through a co-operative would be a good way of ensuring that all of those affected have a formal vote in proceedings.

Replacing the Harbour Bridge

As for creating a formal rail link to Mount Maunganui, the Western Bay of Plenty and links with Rotorua, it does seem inevitable. But for now, let's just say that we will cross those bridges when we come to them.

Calls to action

These are suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers, and anyone with an interest in the future of public rail transport in New Zealand.

5. Collaborate with Tauranga port and other freight rail services to project their expected dependency, so that passenger rail can plan for the gaps.

6. Review global flood defense and mitigation strategies where rail and domestic residency co-habit. Engage both indigenous cultures and insurance representatives.

7. Identify all potential New Zealand tunneling. Consider all infrastructure, including undergrounding utilities and improving run-off water flood defences.

8. Revise the data referenced in this chapter so that government spending and co-operative fund-raising targets and public expectations can be responsibly managed.

“Nothing else will matter if we cannot look after the Earth for current and future generations. This is our home.”

*Sophie Handford, North Island
organiser New Zealand's School
Strike 4 Climate*

Global impacts

Decades of trickle down economic theory, coupled with globalisation, and compounded by COVID-19, fuel price increases and the Ukrainian war have had irreparable impacts on global economies. Supply chain disruption, inflated commodity prices and the increased cost of living which leads people to abandon hopes and dreams, is altering how we plan for our futures. Climate change continues to remind us that it cannot be ignored, and social and racial discrimination is being drawn into sharp focus in every corner of the world, including our own.

The 'Kiwi way of life' has also been the subject of discussion across the world. The relative safety we have here in Aotearoa is the envy of many. Realities on the ground tell a different story in some areas, which we will discuss in more detail in Chapters 6 and 7.

From a local perspective, we have used the time to accelerate conversations about equality and multiculturalism. From a global perspective, we are in a good position to take advantage of significant inward investment and diplomatic opportunities.

Cost of living

COVID-19 has already disabled the global supply chain and distribution networks. Cost of living increases are being felt across the world. Import and export duties are increasing, and staff shortages from seasonal and skilled workers and long-haul trucking are creating even more price increases.

The war in Ukraine is having multiple impacts on commodity prices. Food and fuel are scarcer now, and resultant price rises are unlikely to return to pre-COVID levels, even if the war ends and the world gets a handle on COVID-19.

Two groups in society have been inadvertently thrust into the limelight because of these factors: the climate lobby, and the racial equality lobby.

It is important to understand these lobbies when we are planning for future generations. This section of the report focuses on understanding and responding to these two perspectives, in terms of inter-city rail. We will also then look at the Global Alliances that support the work we are proposing.

Climate change

Electric cars are becoming more expensive. While they are seen by many as the panacea of all ills, the truth is that for decades to come they will be the preserve of the upper classes. New Zealand is in a prime position to create hydroelectric energy, but investment in this should be part of a long-term solution that benefits everyone in society.

Returning to the issue of the world's dependency on fossil fuels, climate targets and fuel increases are the reason that petrol and diesel engine vehicles must be reduced. Politicians and government officials made statements about slow transitions to cleaner energy. The world changed in the last few years and we should allow them to revise their opinions and reassess the evidence in front of them.

Can we invest in hydroelectricity with a view to powering battery trains that do not require rural line electrification? Is this too pioneering for New Zealand? Is tall-poppy syndrome stifling our growth and affecting our choices and creativity?

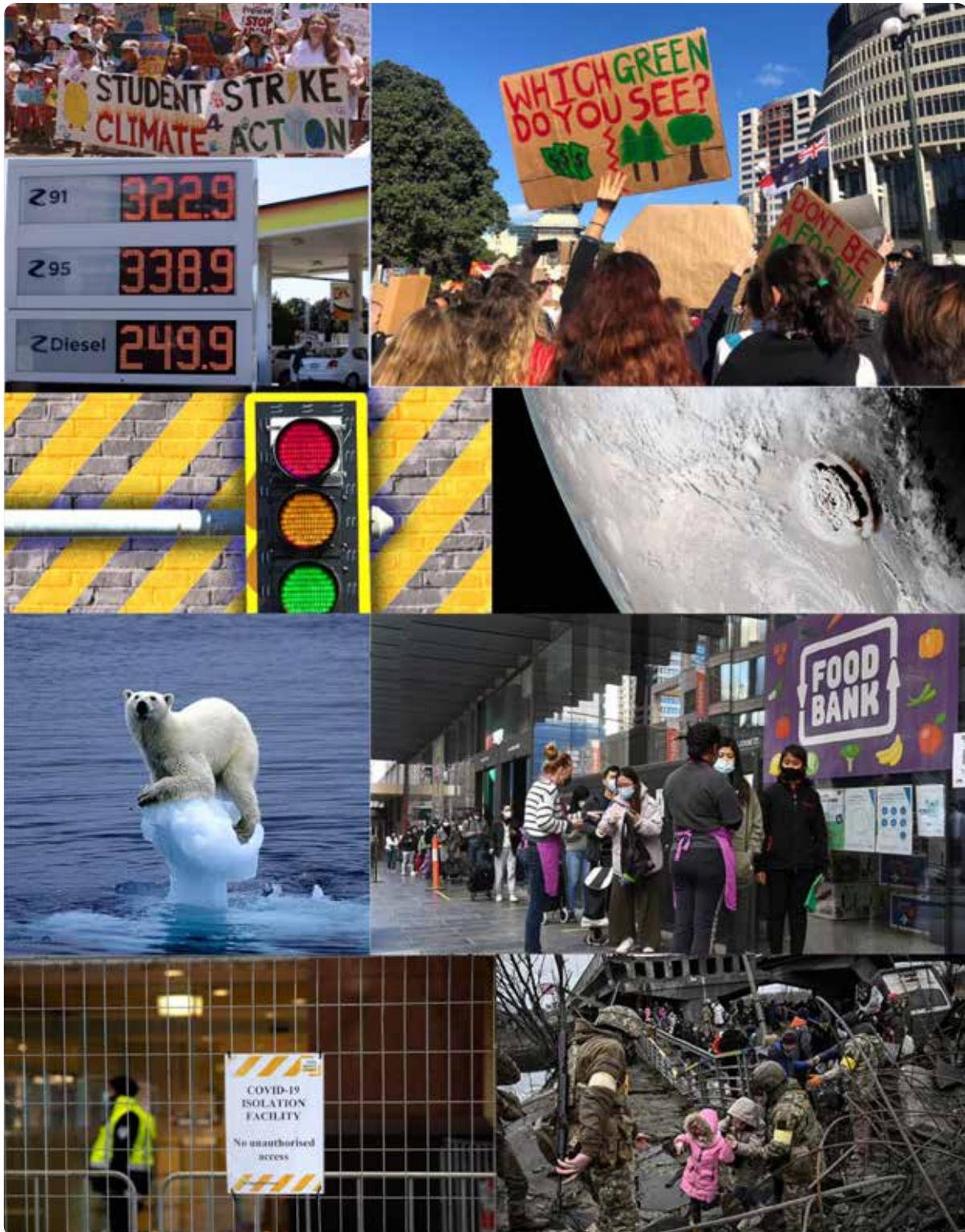
We only have to listen to the voices of those who joined the School Strike 4 Climate in New Zealand to realise that our future generations want us to think differently.

Social and Racial Discrimination

Even though we have social and racial divide in New Zealand, we are much farther ahead than most countries in terms of community cohesion. COVID-19 did highlight health and accessibility inequalities in the system, which are now, rightly, the subject of focused political and societal debate.

Fuel and food poverty are now going to further exacerbate the divide. It will be important for all countries to acknowledge that communities with European origins have fared better through the pandemic and some are also prospering from it. Black and ethnic communities, on the other hand, have not been so lucky overall.

COVID-19 and the Black Lives Matter movement have encouraged the media to carry the voices of indigenous communities. The Nobel Peace Prize 2021 was awarded to two journalists for standing up for oppressed indigenous voices. COP26 in Glasgow 2021 also saw indigenous communities taking the main stage, more substantially than in previous year.



Title: Snapshots of the global challenges we face on Earth today.
Sources: Please see Appendix C.

Young Māori activist, India Logan-Riley told the delegation of global leaders that the world's climate crisis has its roots in colonialism and that the solution lies in abandoning modern-day forms of it.

Te Tiriti o Waitangi is a unique agreement and one that both Pākehā and Māori should be proud of. Countries like Canada and Spain are struggling to right the injustices of their colonial pasts; writing this kind of document in retrospect is far harder than being able to use it as a cornerstone as the world evolves.

So how does this relate to inter-city passenger rail? We believe that an inter-city rail strategy could be a platform or vehicle for developing a new way of thinking about societal equality in New Zealand.

Rail could help create jobs at all levels of society, encourage growth opportunities for those who want to climb the managerial corporate ladder, and inspire new conversations about our country's future.

If the co-operative model were to be embraced, then we could take that a step further and make those in disadvantaged communities owner-members of a piece of New Zealand infrastructure that will be used by generations to come.

Global Alliances

We have already mentioned the UK Free Trade agreement as a good example of connecting with a country that embraces rail. As previously mentioned, support with Rapid Rail services to enhance New Zealand's distribution network is already in motion.

The Prime Minister's recent trip to Singapore is also significant. Plans for a High-Speed rail line between China and Singapore, via Thailand and Malaysia, is currently being activated. Sharing technology and combining buying powers for signalling and tracking could be a subject for diplomatic discussion, especially as part of global climate change efforts.

Central government budgets, global organisational grants, and charitable trust funding opportunities tend to focus on raising the top bar, as opposed to the bottom bar. In recent years their focus has changed.

Values-driven policy-making is becoming a must. Admittedly, some countries are taking the easy way out by using PR to reposition the message without changing anything centrally. However, those countries that are genuinely taking hits so they can change course, like Canada, are benefiting from the outcomes. Following its recent election, France is beginning to engage in a similar stark dialogue with its people.

Again, what does this mean for passenger rail? To start with, there is a wealth of knowledge outside of our borders that comes in all shapes and forms. Processing this intelligence and making it work for New Zealand will need to be done in a constant state of public consultation, which is not easy.

It also means that we are not alone in our endeavours. Much like the suggestion that we could work with France's Railcoop, mentioned in Case Study B, we could also support the formation of a global alliance that could reduce our costs in terms of evidence gathering and purchasing of materials.

Calls to action

These are suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers, and anyone with an interest in the future of public rail transport in New Zealand.

9. Assemble a team to review traditional baseline CO2 emission measures, creating a 'COVID factor' for all built environment projects.

10. Review all global trade and diplomatic agreements, from both sides, to identify opportunities for collaboration and knowledge sharing.

11. Connect with global rail and regeneration initiatives to share best practice and practical intelligence.

12. Appoint representatives from School Strike 4 Climate and the UN LCIPP Youth to be inter-generational consultants to this work.

“Tangata ako ana I te kāinga, te tūranga ki te marae, tau ana.”

“A person nurtured in the community contributes strongly to society.”

Whakatauki, Māori Proverb

Stakeholder engagement

Has anyone actually asked the Gen X, Y or Z community what they want New Zealand's transport network to look like 30 years from now? Given they are going to be tomorrow's voters, rate payers and decision-makers, it only seems polite for us to engage them in the conversation. Not to mention the fact that we are creating a rail industry, which could create globally transferable jobs for young engineers and town planners. And what about our cultural communities? What are the benefits for iwi, hapu and other cultures?

Defining stakeholder groups

Before we start answering those questions, we should begin with identifying key stakeholder groups that are relevant to passenger rail. Fig 6.1, is our first attempt at grouping stakeholders so we can begin to understand their interests and potential participation.

With further study these groups may need to be redefined. However, for now they provide an insight into the communities that will require tailored communications when it comes to educating them on the benefits of passenger rail, and the co-operative approach to making it happen.

It goes without saying that many people will not have the capacity to be involved in the creation of New Zealand's first transport co-operative. That said, if everyone jumped in at once then we would all probably be overwhelmed so let's pray for being overwhelmed with interest, but be quietly content with a steady incline in those who opt in and get involved!

As mentioned in the Railcoop case study (page 22) in Chapter 3, two regional and ten thematic committees were formed based on specific issues relating to delivery of the line.

It will be important to ensure that a cross-section of representatives from these stakeholder groups are included on each committee that is formed for a co-operative.

Before we start to look at what groups and networks already exist, the following pages provide a more detailed breakdown of our current understanding of the groups mentioned in Fig 6.1.



Title: *Planning for Real launch in Acton, UK*
Sources: <http://www.planningforreal.org.uk/>

Residents & Ratepayers

Domestic Business & Tourism

Import & Export Industry

Indigenous & Migrant Cultures

Generational Groups

Hard-to-Reach Communities

Education & Training Facilities

Government & Emergency Services

Fig. 6.1: Rail stakeholders



Import & Export Industry

Supporting the Golden Triangle ports by scaling up use of freight rail for non-perishable exports and imports is a priority. Working with those scheduling timetables and route upgrades will be an essential part of determining schedules and delivery of passenger rail.

Considering passenger rail alongside this work should be seen as a benefit all round. The distribution centre that is being planned in Waikato will require staff. If more of those employees could travel to work by rail, it would mean less requirements for car parking. In addition, it would open up the employment market to those who cannot afford a car or get a license.

Inviting companies from abroad wishing to establish in New Zealand should be a strategic target. The co-operative model would allow them to engage fully, while ensuring that New Zealand retains full ownership.



Indigenous & Migrant Communities

While Māori culture makes up the dominant part of New Zealand's domestic and global identity, Pasifika, European, Chinese and Asian cultures are also celebrated across Aotearoa. Storytelling across a rail network can be a great way of showing how these cultures have become a part of New Zealand's fabric.

More importantly is the intelligence these communities bring with them. When it comes to finding new ways of dealing with climate change impacts, the answers often lie in the ways that indigenous cultures managed their lands before modern constructed technologies existed. Demonstrating multiculturalism in our societies is the best way of building global trade relationships.

Inviting knowledgeable members of these communities to be part of the working groups for these issues would be a focus for a New Zealand rail co-operative.



Educational & Training Facilities

Case Study D, which follows in this chapter, discusses the opportunities for engaging school children up to Intermediate Year 8 (age 10 – 13). This involves engaging them in the planning process as part of their civic society studies. Students beyond that age should be engaged as guest contributors to the rail co-operative until they are 18 and can be member owners. They will also benefit from ticketing packages.

Involving students in the process could influence their choice of career, or their choices in terms of what kind of first home they aspire to. It is also a good way of engaging with movements like School Strike 4 Climate.

Secondary and tertiary education facilities should be signing up owner-members. This would provide students from all disciplines with direct insights into how their skills can be used for the greater good of society. Yes, rail need ethical engineers, but it also needs interior designers, caterers, business managers etc.



Government & Emergency Services

Traditionally, government organisations at all levels have felt the weight of responsibility for taking ownership of the problems people face on the ground. Budgets in these environments are managed in silos, which has always been a good way of reducing the amount of money and time spent on internal pitch funding. As highlighted in Case Study A, there are ways of linking funding across these silos.

The establishment of a community led rail co-operative would challenge government to create a cross-departmental strategy team, which could discuss joint funding opportunities with public spending. Once tested in the Golden Triangle rail environment, this practice could be emulated for other policy areas.

In addition, all emergency services should be engaged in a co-operative, either as consultant members or owner members, depending on service impact.

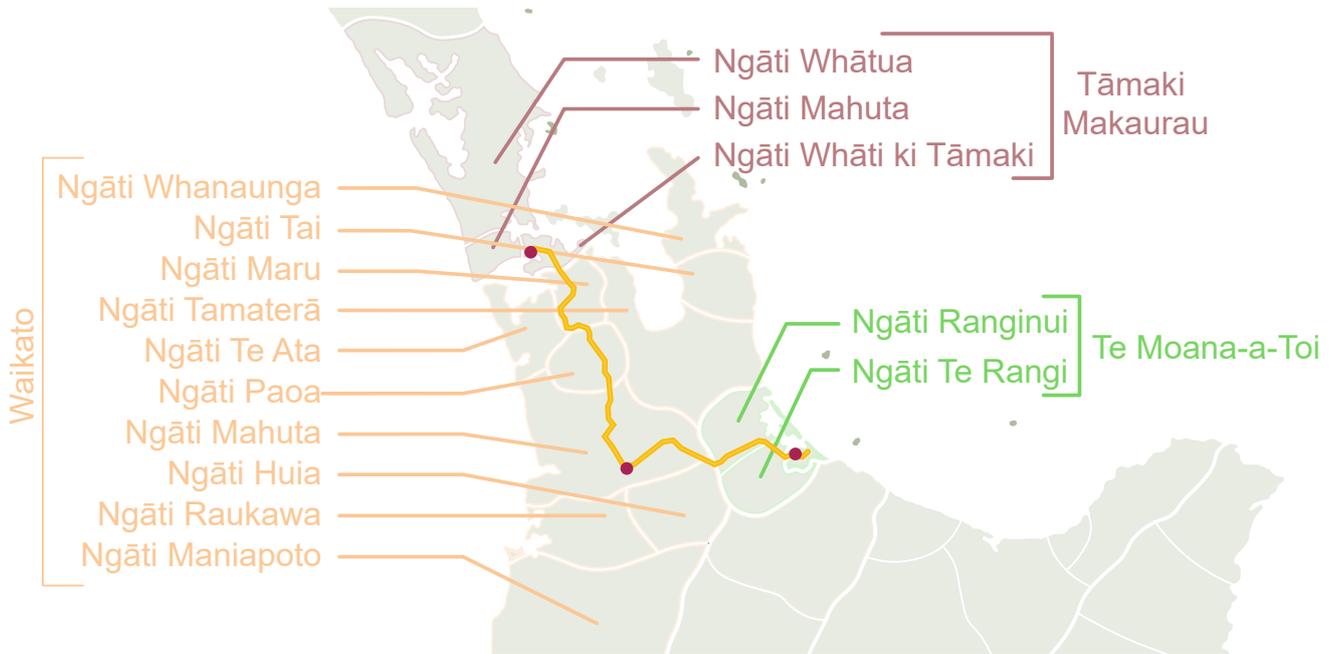


Fig 6.2: Iwi boundary lines

Generation Name	Births Start	Births End	Youngest Age Today*	Oldest Age today*
The Lost Generation The Generation of 1914	1890	1915	107	132
The Interbellum Generation	1901	1913	109	121
The Greatest Generation	1910	1924	98	112
The Silent Generation	1925	1945	77	97
Baby Boomer Generation	1946	1964	58	76
Generation X (Baby Bust)	1965	1979	43	57
Xennials	1975	1985	37	47
Millennials Generation Y, Gen Next	1980	1994	28	42
iGen / Gen Z	1995	2012	10	27
Gen Alpha	2013	2025	1	9

(*age if still alive today)

Fig 6.3 Generational categories

Tangata Whenua

Ensuring that knowledge and understanding of the land is incorporated into the development of passenger rail is paramount to its success.

Fig 6.2 shows the iwi that are directly affected by the rail line. Significantly, the rail corridors already exist. However, expansion of these corridors and the introduction of stations, dwellings, and commercial hubs, must align with Te Tiriti o Waitangi and ensure local iwi and hapu ambitions are incorporated.

Most iwi are already engaged by local authorities in terms of transport broadly and freight rail. However, the skill sets and time required to work with a new co-operative may be too much to ask of those who are already committing time elsewhere.

Respectfully, iwi must be engaged on their terms and given time to identify the members of the community who are best placed to provide insights into their knowledge of the land and to speak on their behalf.

Generational breakdown

Attracting representation from all cultures at all ages will be an ongoing objective for the rail co-operative. This will ensure that all potential rail users are represented in decision-making.

There are many interpretations of how the generations are broken down into groups. Fig 6.3 shows the parameters we are working from. This has been taken from an organisation that considers the generations in terms of their working age and career requirements.

Our choice to use this breakdown is based on the economic ambitions of the Golden Triangle. Lifestyles and transport requirements for each of these groups differ hugely.

We believe that the business model will attract those in the middle age groups on this list, and that those at the bookends will benefit most from the line itself.

Existing committees and groups

Fig 6.4 shows the local authorities that would be impacted by the passenger rail line. For each local authority, city, district, or regional, a person or team is responsible for transport policy and delivery.

Organisations like Western BOP Transport Systems Plan (TSP) also bring together a cross-section of community representatives. Similar committees exist across the Golden Triangle as a whole.

Given their remits go wider than passenger rail, those identified as primary points of contact will be able to help identify connections if the co-operative finds gaps.

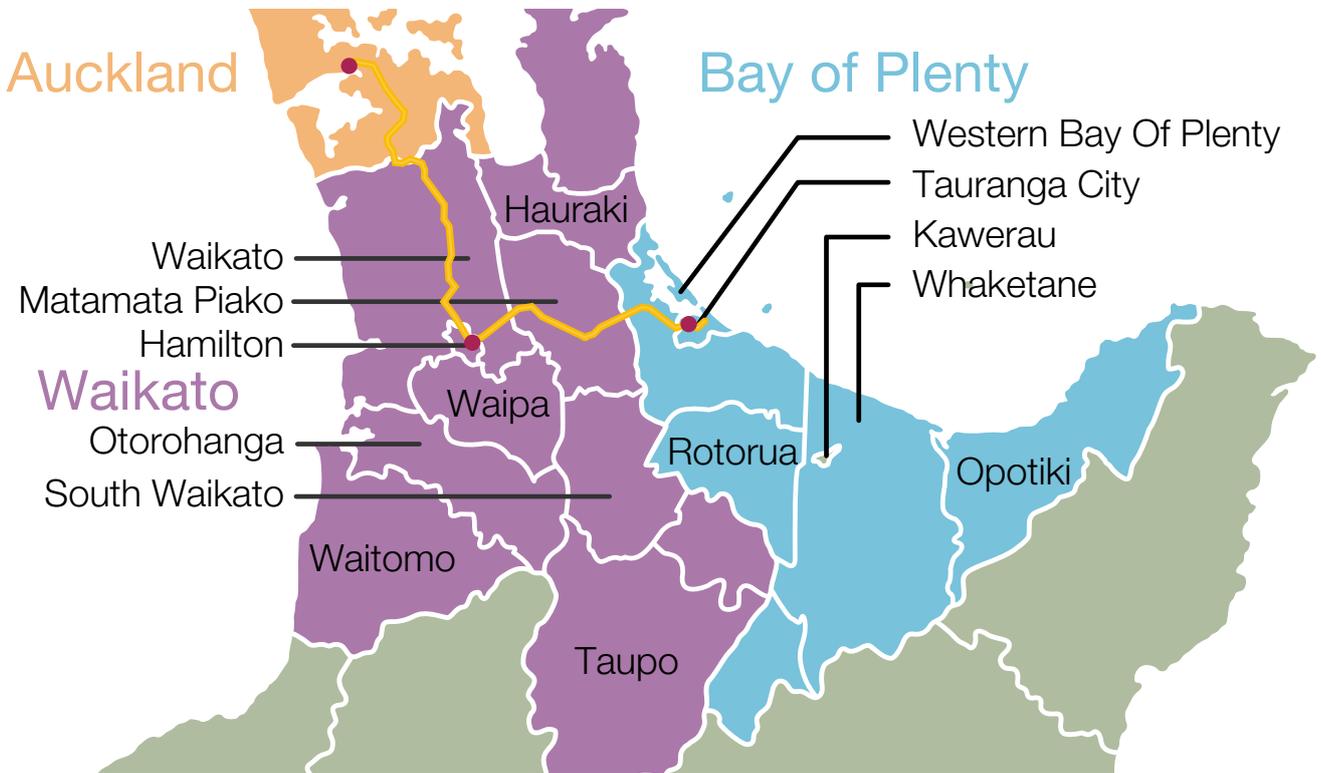


Fig 6.4 Local city and regional authorities boundary lines

Case study D: Planning for Real (P4R)

The Isle of Sheppey sits at the end of the Thames Estuary, before it joins the English Channel. It might only be a few hours' drive from Central London, but you would believe you were in a Dickens' novel if you found yourself on one of its marshland wildlife reserves.

Queenborough and Rushenden started out as two small villages with a road running between them. The location of the Isle in the UK made its small fishing port an attractive place to build a port that brings German-made cars into the UK. The sudden influx of activity had both good and bad consequences on the villages, and the Isle as a whole.

Home to three open prisons and some social housing estates, residents in the villages were not considered skilled enough to apply for the new jobs that were brought to the area. New housing was planned for the area, including a new fly-over bridge to take the car transporters away from the villages. It is at this stage that the local economic development partnership decided to adopt the Planning for Real approach.



Title: *Isle of Sheppey Port*
Sources: https://www.flickr.com/photos/john_fielding

Models were overseen by an appointed architect but made with involvement from children at a school, aged between 7-11, many of whom will live in the area. The model making stage was an early, informal opportunity to learn some of the history of the area from residents, some of their concerns and how they feel about where they live.

The model is made up of small (600 x 600mm) sections of polystyrene board which means that they are easily transportable and can be taken to different locations where people naturally meet. By using the model as a focus, the consultation is non-confrontational, and the suggestions are anonymous so that people do not feel inhibited in expressing their opinions

The process not only reduced the cost of governmental planning consultation, it also increased the uptake of skills and employment programs by those living in the area who were dependent on benefits. Most of young school children who participated in the initiative went onto secondary education and, in many cases, university.



Title: *Queenborough and Rushenden model*
Sources: <http://www.planningforreal.org.uk/projectsqueenborough-and-rushenden-masterplan/>

Best practice in community engagement

Engaging school children would not involve making them owner members of the co-operative, rather they should become our consultant partners. The Planning for Real approach, described in Case Study D, has been implemented successfully across the world.

The approach allows for public consultation to take place at the earliest stage of the planning process. School children are able to take the 'planning tiles' into their homes and communities, which allows them to garner responses and opinions from people who would not usually speak to bureaucratic authorities.

The educational value also leaves a significant impression on the school children who get involved, many go on to consider jobs in town planning, architecture, engineering and construction. Most areas that adopt the process also see a significant increase in civic pride, and a reduction in littering and fly-tipping.

Applying P4R to the NZ Golden Triangle

If an initiative like this were to be implemented in New Zealand, it would have to be done with wider economic benefits in mind. Rail alone would not be enough to justify the expense or the intrusion on the school calendar and curriculum.

That said, if a wider Golden Triangle economic Planning for Real project could not be defined, it would be worth engagement with schools. Areas like Waharoa, considered in Chapter 7, would benefit hugely from the line, and could be used to pilot the scheme.

Contributing primary school

Years 0–6 (ages 4 or 5–11)

Full primary school

Years 1–8 (ages 5–12)

Intermediate school

Years 7–8 (ages 10–13)

Secondary school

Years 9–13 (ages 13–18)

Fig 6.5 School year groups and age brackets

Regardless of the scope of the planning exercise, community interest groups, charities, media correspondents, online influencers and support services should also be included. Based on Fig 6.5, older secondary students could lead on presenting information and capturing data, while younger intermediate students could use their art skills to keep the masterplan map up-to-date.

When we create engagement platforms of this nature, stakeholders are more than likely to cross over between groups. This is not only of benefit to the formal public consultation process, it also helps break down barriers in communities. When and where it does draw out frictions or rifts, these become easier to resolve when our future generations are the question masters.

Calls to action

These are suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers, and anyone with an interest in the future of public rail transport in New Zealand.

13. Review categories and maps to create a fully detailed and prioritised database. This should be used to define committees for a rail co-operative. .

14. Share this proposal with all organisations listed in this document, asking if they would like to join in with early discussion about the recommendations. .

15. Identify government officials, architects and local head masters and educational leads who are interested in exploring the Planning for Real approach.

16. Consider piloting the Planning for Real model in Tauranga as part of the existing vision work being done by Tauranga City Council.

“Originality consists of returning to the origin. Thus, originality means returning, through one's resources, to the simplicity of the early solutions.”

Antoni Gaudí i Cornet, architect and the greatest exponent of Catalan Modernism, Barcelona

Placemaking

Truly inspiring places make you want to walk so you can take in the vistas, the atmosphere, and the culture. They force you to forget the problems of yesterday and tomorrow, so you focus in the moment. They teach you something that you never knew you never knew. You find yourself eating food you never tried, or a dish you had forgotten from your childhood or overseas trip. Inspiring places help you breathe deeper and feel more ambitious, romantic, and positive. Businesses, residents, and visitors feel nurtured from being in inspiring places.

First impressions matter

How we arrive in a place makes a huge difference to the mindset we have when we are there. If you arrive by car in Tauranga's CBD, travelling there via Cameron Road, you may already feel fraught. Once there, confusing parking parameters, coupled with the rarity of parking spaces tends to make you question the importance of your trip.

Cars do play an important role in our society – travel by road is critical for some of our most important essential services. However, diversifying transport options is also critical. It increases resilience and improve the likelihood of positive society-wide outcomes while reducing the risks that threaten that egalitarian and thriving future.

The role rail can play

When you consider the opportunities that rail brings to the placemaking experience, you begin to realise just how much scope you have for inspiring visitors, workers, and residents.

Imagine travelling in a carriage from Hamilton, or any of the other stops on the rail line: stories of Tauranga's unique heritage and landscapes can be told through carriage design, and local retail offers from local traders can be presented.

Incorporating inspiring art in carriages, on platforms and in stations can enhance the experience of rail travel even further. Indigenous cultures can work with migrant cultures to tell the story of how Tauranga continues to be a safe anchorage and resting place for all travellers. The station itself would feel like a marketplace, showcasing the best of the city: from food and fashion, to art, beauty, business and technology.

"The meaning of Tauranga has been variously interpreted – it may mean "landing place", "anchorage for canoes", or "place of the talisman". But the name may be interpreted in many different ways."

Source: <https://teara.govt.nz/en/1966/tauranga>

London's Borough Market and Borough High Street is a great example of this kind of project.

Compared to driving a car to Tauranga CBD, arrival by rail sounds idyllic. Addressing the lack of mobility options beyond arrival is a further problem to solve, especially if the weather is not being kind. This is one of the reasons The Wednesday Challenge is so important. It would be easy to pass it off as a superficial competition, but to do so would be short-sighted. Any attempt to get people to think about how many times they jump in a car without considering how damaging it is to the environment, society, and the economy, should be applauded and encouraged.

While the Wednesday Challenge is only half way through its maiden challenge, one of the things it has already highlighted is the number of ways a person can travel around Tauranga without a car.

Onward travel options do need to be more consistent in terms of journey times and price. It is interconnectivity with other modes of transport that create a flow which signals to visitors and locals alike that this is a lively city with lots to see and do. Increasing options for how people move around the city spreads that energy even further and enhances the city's reputation.



Title: Ahuriri, Napier, CBD

Sources: <https://www.bookabach.co.nz/d/40830/napier>

Best practice in placemaking

When it comes to re-inventing cities, we really do not have to look too far from home for great examples where the vision and courage to make big investments in placemaking have paid dividends.

Ahuriri, Napier, is known across the world for its unique identity and city experience. It has also been commended globally for its art deco city facades and streetscapes, at the same time the unique, attractive cityscape serves as a shop window for some of New Zealand's finest vineyards.

Government officials at the time set aside their differences and agreed that, in the face of devastation, they would use the opportunity to unite the city's residents behind a united vision.

The catalyst to its resurgence was a natural disaster, and therefore not comparable to Tauranga's current state. However, one could say that the dishevelled state

of parts of Tauranga's CBD provide similar opportunities to those faced in Ahuriri after the earthquake in 1931. And the approach adopted by Napier Council's city officials, businesses and residents should be emulated so that Tauranga can realise a similar resurgence.

Tauranga's placemaking challenges

The Commissioners appointed to lead the city council through tough times have taken steps to provoke this kind of regeneration.

Finding the balance between keeping the public informed of council business and asking them to get enthusiastic about a city vision that is not founded in democratic decision-making, is a tough sell.

The fact that the Commissioners were not elected has no bearing on the challenge or the ideas that need to be debated. However, simply asking people what they want their city to be is also not a reasonable question.



Fig 7.1 Tauranga CBD

Destination Tauranga

As mentioned, several times in this report, train stations are used in most of the world's most successful cities as gateways.

Having a fixed arrival point for the bulk of footfall to the city creates the opportunity to start a narrative for the city. The stories of the city that follow can vary but these are the ideas that makes the city's heart beat.

Fig 7.1 shows Tauranga CBD and the freight rail line that runs along The Strand. It also highlights the ferry terminal and the city centre bus stops. Based on the existing rail lines, a station could be constructed in the Cliff Road parking areas, accessed from Dive Crescent.

This would not be an easy 'off-the-shelf' station, but that in itself creates an opportunity for a domestic and international architectural design competition.

The construction of the station could still hold parking spaces, create a connection to the Trinity Wharf Hotel, and it could connect to Robbins Rose Garden. It would also allow for the line to continue along The Strand if it was considered appropriate in future.

Having the station set at a distance from the main retail area offers several opportunities. Concession outlets are often used in airports, stadiums, and European rail stations. These might serve commuters who do not have time for a full shopping experience in town but need to pick up some flowers, food for an evening meal, or even get a haircut before heading home for a family event.

Leisure passengers arriving in the city might want a coffee or a glass of wine while they wait for friends to arrive. Those arriving for shopping would be forced to walk along The Strand, which would increase footfall for the restaurants and bars.

Ongoing connections

There have been lots of ideas about what an ongoing network could look like. Fig 7.2 shows Matthew Beardsworth's proposal for a local network, which incorporates intercity rail, proposed light rail, buses and ferry services.

Even if a rail line ended in Tauranga, a map like this, that should include cycleways and cultural points of interest, should be provided in carriages and for each station.

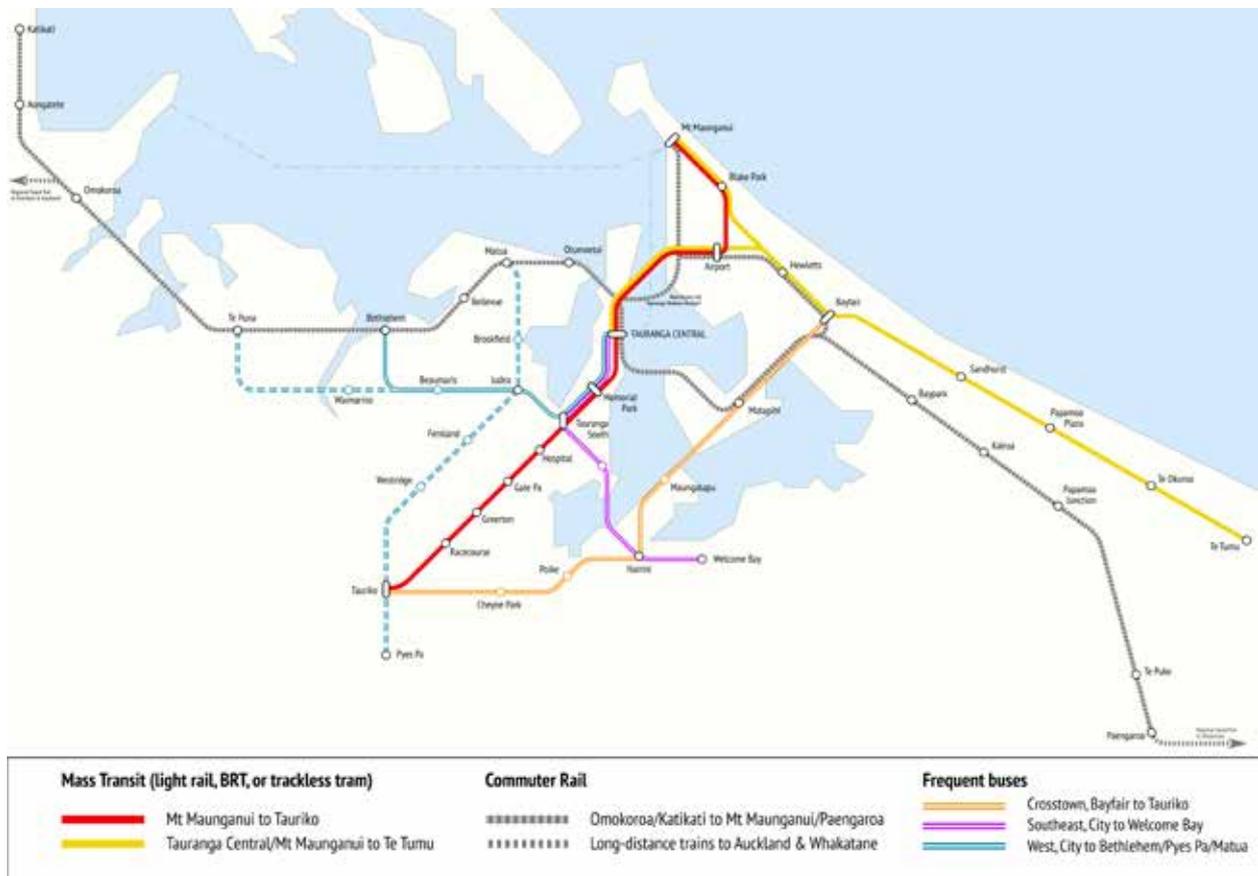


Fig 7.2 Tauranga congestion free map

Case study E : Nightingale 2 Melbourne, Australia

Nightingale Housing believes that homes should be built for people, not profit, and provides apartments that are socially, financially, and environmentally sustainable. Conceived by Six Degrees Architects and delivered in collaboration with HIP V. HYPE, Nightingale 2 is the second completed Nightingale project.

Six Degrees and Nightingale 2 Investment Pty Ltd received a license to deploy the Nightingale model on the site situated next to Fairfield Station – a popular Melbourne train station.



Title: *A look inside Nightingale 2*
Sources: <https://nightingalehousing.org/nightingale-2>



Title: *A look inside Nightingale 2*
Sources: <https://nightingalehousing.org/nightingale-2>



Title: *A look inside Nightingale 2*
Sources: <https://nightingalehousing.org/nightingale-2>

As well as the obvious public transport amenity, the project's location and configuration make it a rare 'island' site.

It offers an excellent opportunity to bring light and cross-ventilation through the building, delivering a carbon zero development.

The units sold for below market valuation thanks to savings achieved through Nightingale Housing's development process.

Retrofitting public transport

The decision to allow urban sprawl, without installing good public transport links in advance, is both irresponsible and short-sighted. Decision-makers in Tauranga and the Bay of Plenty have effectively ensured that a high percentage of its residents will be completely dependent on their cars for at least a generation.

It is ludicrous they then complain that retrofitting public transport is too expensive and would not encourage people out of the cars. The plots or houses were sold to these residents, based on having a car. That is the lifestyle they planned for. It is little wonder they are reticent to lifestyle and behaviour change.

So, let us ask ourselves what is more expensive to the taxpayer: retrofitting public transport or undoing the mistakes of short-sighted political decision-makers?

Many in power will attest to the notion that 'it was the developers that did it'. However, it was not the developers' responsibility. Housing developers are only concerned with selling plots and building houses. They only cater for those at the upper end of the socio-economic spectrum. We simply cannot expect this part of the housing sector to be anything different. At the end of the day, the scorpion will always be a scorpion.

All is not lost

There are still opportunities in the housing market across the whole of the Golden Triangle area. Case Study E provides an overview of Melbourne's Nightingale 2 housing development, which is strategically situated beside a train station.

If we set this in context with collective housing options, set out in Fig 7.3, then we have the ability to create housing schemes that would attract buyers who do not want to be addicted to their vehicles

Collective housing

As The Urban Advisory explains: 'under the banner of Collective Housing sits multiple tenure and delivery models already in use in Aotearoa, from cohousing to papakāinga, community land trusts and co-operative ownership models.'

Based on this newly categorised rung on the housing ladder, in 2021, Motif published the *How We Live*

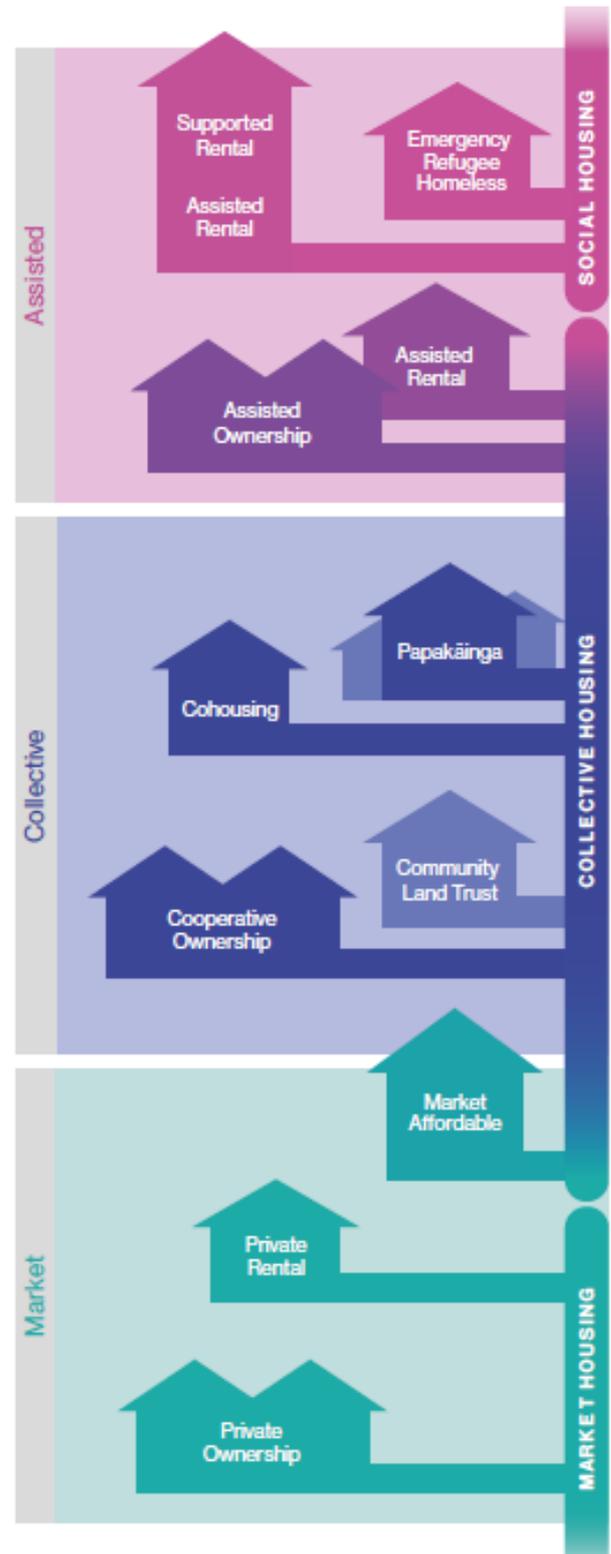


Fig 7.3 The necessary elements of the housing continuum

report, advising the New Zealand housing sector on how to navigate the challenges of climate change and the cost of living in New Zealand. The report was endorsed by the Ministry of Housing and Urban Developments' General Policy Statement 2021.

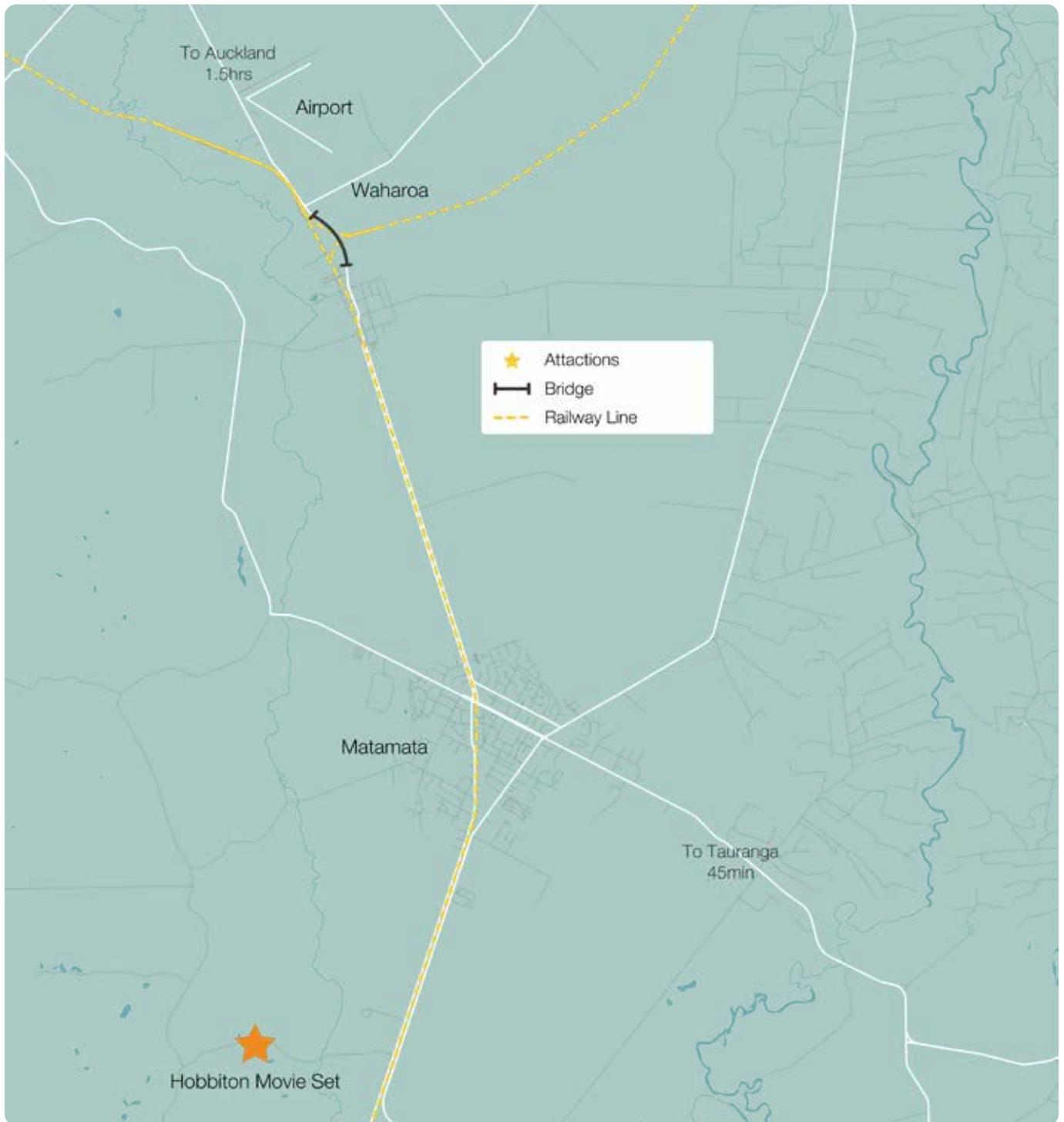


Fig 7.4 Waharoa in relation to the Hobbiton Move Set

Government decision-makers should take heed of the impact young activists like Greta Thunberg are having on our youth. Schemes like Nightingale 2 will become desirable, regardless of a person's buying power.

Golden opportunities

There are times in life when all of the right elements come together, and we have the opportunity to do something truly unique and inspiring.

Masterplanning is an art, a science, and community celebration all in one. Architects across the world struggle to find all of the elements required to design truly encapsulating places.

While it might come as a surprise to some Kiwis, Waharoa represents the perfect opportunity for demonstrating the benefits sustainable masterplanning can bring to the country as a whole.

A passenger rail link through this town could invigorate it and the areas around it. How much they want to embrace ideas and development should be up to them.

In this situation, adopting the Planning for Real approach, suggested in Case Study D, would ensure that the town is able to retain control of its own masterplanning process. It would also create a new wave of excitement about Hobbiton, and potentially be the beginnings of a Hobbiton World Experience?

No one ever tries to overpower children when they are planning their futures, especially in New Zealand.

However, if the rail station existed then the community would be overcome with approaches from commercial developers and house builders.

A short-sighted government representative might look for quick wins in this area. Absent-mindedly selling off land or granting planning permissions would be documented as failures by future generations.

Building a blockbuster

In the same way that architects and designers would eagerly enter design competitions for station design in Tauranga, they would do the same in Waharoa because of Hobbiton.

Simply put, placing a passenger rail line in Waharoa is not only good for the town, it is also good for New Zealand's global film industry franchises. Think Hobbit

platform art like Harry Potter's Platform 9¾ at King's Cross Station in London with a carriage to match.

The area could be sympathetically designed to embrace the theme and additional tourism elements could be added, which would create jobs.

We are not talking about getting the residents to dress up as Orks or Elves, but the facades of housing could be upgraded to create a sense of place. New housing would have to follow a similar pattern.

In the same way that Napier and cultural cities in the UK have heritage stamps, Waharoa could use these principles to upgrade existing housing stock, raise the attainment levels and job prospects of existing residents, and create a new dimension for the tourism industry in the area.

Matamata would be connected with decent public transport links and both communities would benefit from a unique identity within New Zealand.

Time to tell the story

All of the stations and surrounding areas along the rail line would also benefit from storytelling of this nature. Tourists travelling by rail read more about attractions.

Omokoroa is another stop that has so much to offer in terms of tourist experience and growth potential, as would stations around the Waikato Freight Hub, and planned distribution centre.

Calls to action

These are suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers, and anyone with an interest in the future of public rail transport in New Zealand.

17 Confirm where a passenger rail station would be placed in Tauranga CBD and if it would be connected to the ferry and public transport network.

18. Reassess the region's approach to housebuilding, with a view to considering transport infrastructure and Collective Housing first.

19. Engage with communities in Waharoa to garner opinions on the ideas about a rail station and masterplanning project presented in this proposal.

20. Identify global architectural design competitions, practices demonstrating good outcomes in the areas concerned; engage support and design global pitch ideas.

“There are those who never stretch out the hand for fear it will be bitten. But those who never stretch out the hand will never feel it clasped in friendship.”

Baron Michael Heseltine, CH, PC

Political approach

The only exact science in politics is hindsight. Without it, we must use our communication skills, scientific knowledge, and best judgement to minimise the likelihood of potential misjudgements in the future. We must also consider the oversights or ill-considered decisions of the past. Should New Zealand have an intercity passenger rail network already? Yes. We do not realise what we have been missing. The longer we leave it, the more expensive it becomes. As they say, the best time to plant a tree is twenty years ago; the next best time is now.

White elephant investments and governmental vanity projects only happen when there is no seasoned strategic thinking behind the investment decision. That said, opposing a good idea because it was poorly executed and turning it into a political football is equally as short-sighted.

Playground politics has no place in recovering, values-driven economies. Those who get a thrill from click-bait and one-upmanship will not last long in a post-COVID, climate-conscious world.

The time has come for our politicians to set aside their historic differences; with each other, and at every level of government, both political and administrative.

Addressing the elephant in the room

Te Huia, the train service connecting Auckland and Hamilton, was the right idea, in the right place, at the wrong time; mainly due to the unforeseen impacts of COVID-19. However, it also lacked a strategy or commitment that stretched beyond upcycling the bits we already have in the country to enhance rail.

Just think what Te Huia could have been today if it had been set within the context of a nationwide economic and transport strategy, with a financing budget and governance structure to match.

On the up-side

Apparently, behind the scenes, conversations are being had with global partners about introducing rapid rail to New Zealand. The UK free trade agreement, discussed in Chapters 4 and 5, sets out the opportunities that the UK rail and distribution industry is gearing up for.

Admittedly, this might be post-Brexit posturing from a UK Prime Minister and Party that is flailing. Either way, the declaration provides New Zealand, and the regions in the Golden Triangle, with an opportunity to optimise on the deal.

The UK dichotomy

A floundering Prime Minister in the UK wants to do right by his Monarch, who 'accepted him as The People's choice to form a government in Her name'.

Given the state of the UK, especially considering recent political outcomes in Northern Ireland, the Crown will not be feeling comfortable that Her elected members are looking after Her best interests.

As one of Her most favoured and cherished Commonwealth countries, Aotearoa has more negotiation power with decision-makers in Westminster and Whitehall than the powers in the Beehive realise.

Hong Kong is one of the other territories the UK lists as prime for rail industry expertise. Considering recent election announcements, it will be a struggle for the UK to grapple back any standing in this region, let alone send its experts there to advise on rail. Why would China allow it when they have their own experts?

Using, without hesitation, New Zealand's favour with Buckingham Palace would allow us to enhance our rail systems and inherit essential expertise, at the same time as showcasing the support The Crown provides to those who are loyal and decent.

Engaging Ngāti Rānana to help with negotiations, would be a way to ensure Tangata Whenua interests are met.

Upcoming political events

18 June 2022

Tauranga by-election

23 June 2022

BOPRC Public Transport
Committee Agenda meeting

30 June 2022

Auckland Transport Board meeting

22 August 2022

Waikato Regional Transport
Committee meeting

October 2022

New Zealand Rail Conference, The
Hilton, Auckland

G20 will be held in Bali, Indonesia

November 2022

COP 27 will be held in Egypt city of
Sharm el-Sheikh

2023

China's change of office

New Zealand will host the CPTPP
Commission (Spring)

G7 will be held in Japan (June)

2024

NZ General Election (January)

India General Election (May)

USA General Election

2025

UK General Election (January)

Japan General Election (October)

Meanwhile, back at home...

The next two years will be filled with elections and electioneering debate in Aotearoa. Fig 8.1 shows some of those dates, and some of the other governmental and committee meetings, that will be taking place. We have also included relevant global political events that may have a bearing on discussions in New Zealand.

These are all opportunities for us, as a community, to debate the relevance and merit of reintroducing a passenger rail line to Tauranga, as well as the relevance and importance of public transport overall.

Welcoming a new Tauranga MP

Tauranga has lost a significant amount of political experience in Simon Bridges. However, the introduction of a new MP, a year before the city waves goodbye to the commissioners and starts to elect a new mayor and councilors, marks the fresh start that the city and region has been waiting for.

With each of these elections, the stakeholder groups mentioned in Chapter 6 should be encouraged to engage and participate. A particular effort should be made with indigenous and migrant communities, as well as hard-to-reach communities.

When the same group of people share the decision-making power across the region, it is inevitable they will run out of ideas for solving the problems of those who are not represented.

We suggest that all election candidates should use this report to engage these groups in discussions about the future of our region.

While some will not agree that rail should be an essential service, their opinions on what should be done instead will be important to bring to the debate.

The role of civil servants

Before we consider how we manage the challenges of budgetary silos, it is worth noting the role of the Electoral Commission. Until now, their remit has predominantly focused on the promotion and management of general elections, which they do well.

We suggest their remit should be expanded to increase voting turnout across all formal elections. Passenger rail policy has suffered because those in power do not represent the views of everyone in society.

Fig 8.1 Key political dates, meetings and milestones

It is not their fault they were elected into organisations lacking diversity. If we want to right the balance, then we must solve the problem at its root. Otherwise we run the risk of having good policy cast aside when it comes to delivery on the ground, in the same way that rail has been in the past.

Overcoming budgetary silos

We call for incumbent government and opposition government to appoint a 'roving' Minister Without Portfolio. This is the term used in the UK. Essentially, this Minister would not oversee a department, rather they cut across all departments with a view to finding ways to make policy align and get better returns for the taxpayer dollar.

This would be good for rail, and transport as a whole. However, housing, health and education would also benefit hugely. Local authorities would also have an alternative route to the Beehive when they want to discuss creative cross-policy initiatives.

Educating voters and would-be candidates

It is all well and good that the Beehive has 'MP School' after the elections have been fought and won. But would it not be better to educate the candidates, so they know what they are getting themselves into before they stick their head above the parapet?

Passenger rail is one policy that most people can understand. As demonstrated by this proposal, debate

around this subject can be used to help everyone to better understand the political landscape we live in.

While we might not like tall poppies, especially in politics, can we try learning and growing together? Can we make an effort to use this election season to reduce political apathy and increase ballot diversity?

Getting everyone onboard

Ultimately, we need all political parties in New Zealand to sign up to a cross bench agreement on the future of rail and public transport.

This would be a Party level commitment to a single overarching strategy, not dissimilar to the agreement the UK has in terms of the NHS.

Stopping and starting delivery of infrastructure investment is expensive in terms of time, money, and progress. Let us stop wasting our precious resources.

Adopting a more holistic approach to infrastructure management will create reassurance in the domestic private sector, the global inward investment market, and among good honest Kiwis whose own life plans are affected by tumultuous policy management.

New Zealand has the opportunity to right its mistakes, and bring itself up to global standards, without sacrifice. The only question we have to ask ourselves is:

Are we followers, or are we pioneers?

Calls to action

These are suggested actions for central government, Waka Kotahi, KiwiRail, and other associated public bodies, local authorities, political influencers, and anyone with an interest in the future of public rail transport in New Zealand.

21. Empower the Electoral Commission to use this report to educate would-be political candidates, engage non-voters, and increase local electoral turnout.

22. Appoint a Roving Minister, of Minister for Growth, responsible for identifying ways taxpayers money can be better spent using cross-policy spending agreements.

23. Identify an international liaison team to represent the Golden Triangle communities and negotiate with the UK for rail, via New Zealand House in London.

24. Ensure Ngāti Rānana, the London Tribe, is engaged so Māori considerations are treated in respect of Te Tiriti o Waitangi and on behalf of all Tangata Whenua.

“Kia kaha, kia māia, kia
manawanui.”

“Be strong, be brave, be
steadfast.”

Whakatauki, Māori Proverb

Appendices

A: Collaborators, contributors and constructively critical friends

Collaborators and contributors

Jo Allum
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Venture Centre NZ

Sue McArthur
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Wednesday Challenge Founder

Julian Tankard
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New Zealand

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Railcoop SCIC
France

Susan Trodden
Spokesperson
TRON

Constructively critical friends

Larry Baldock
Former Deputy Mayor
Tauranga City Council

James Llewellyn
Transport & Urban Planning
Bay of Plenty Regional Council

Glen Crowther
Executive Director
Sustainable BoP Charitable Trust

Todd Muller MP
Member of Parliament
Bay of Plenty

Dean Kimpton
Independent Chair
Western Bay of Plenty Transport System Plan

Alistair Rhodes
Chief Executive
BayTrust

Dan Kneebone
Property & Infrastructure Manager
Port of Tauranga Limited

Nigel Tutt
Chief Executive
Priority One

B: Evidence list

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34	4.8	Julian Tankard, independent NZ Engineer
41	6.1	Tarakin Global Limited
44	6.2	Tarakin Global Limited – Information extracted from https://www.tkm.govt.nz/region/tauranga-moana/
44	6.3	CareerPlanner.com
45	6.4	Tarakin Global Limited – Information extracted from https://statsnz.maps.arcgis.com/apps/webappviewer/
47	6.5	Tarakin Global Limited – Information extracted from https://en.wikipedia.org/wiki/Education_in_New_Zealand
50	7.1	Tarakin Global Limited – Information extracted from https://www.leisuretours.co.nz/port-maps/
53	7.2	TTAP 2018 By GreaterTauranga
53	7.3	https://www.howwelive.co.nz/
54	7.4	Tarakin Global Limited
58	8.1	Tarakin Global Limited

“There is no power for change greater than a community discovering what it cares about.”

Margaret J. Wheatley

Source: <https://www.passiton.com/inspirational-quotes/8209-there-is-no-power-for-change-greater-than-a>



“O, wad some Power
the giftie gie us
To see oursels as others see us!
It wad frae monie a blunder free us.”

- Robert Burns



The policy for inter-city and community rail networks should never have been abandoned in New Zealand without a proper inter-generational and cross-societal discussion.

Networks like rail make everyone in society feel connected. The longer we avoid the conversation, the more expensive it gets to fix the oversights of the past. It is time to start a new conversation.

This proposal presents a community's appeal to our country's local and central influencers. Please start including us in the discussions that will shape our futures, and the futures of those who follow us. We have a lot to offer. We are not here to attribute blame or highlight failings of the past. We just want to make our country's infrastructure work for everyone, as opposed to just a select few. We champion co-operation in all of its forms, and hope you do too.

"Passenger rail is a key component to the successful delivery of medium and large scale collective housing projects. The shift to such sustainable transport options means the benefits of Collective housing can be fully realised."

Greer O'Donnell
Director and Urban Strategist
The Urban Advisory

