

## **BETTER PUBLIC TRANSPORT INFRASTRUCTURE THROUGH COLLABORATION**

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### **Abstract**

The New Zealand Transport Agency (NZTA) invests in public transport services across New Zealand. This paper outlines how a collaborative cross-sector working group is developing public transport infrastructure guidelines that will lead to better public transport facilities in New Zealand. A draft set of public transport infrastructure guidelines will be published as a toolkit. The first part of the toolkit will be a principle based document designed to align investment. Safe, Accessible and value for money infrastructure are the principles that lead the document. The second element of the toolkit will be a 'how to' document and contain best practice case studies. As case studies are developed they will be published online and result in a quality resource that will facilitate the introduction of better public transport infrastructure. The benefits of collaboration discussed in this document include a broader knowledge base for planning, more widely accepted guidelines document and better facilities for the public transport. The potential to have better outcomes through collaboration in public transport is illustrated by three recent examples where collaboration has resulted in better Requirements for Urban Buses, better options for bus stop kerbs and better value bus shelters.

## Introduction

The New Zealand Transport Agency (NZTA) invests in public transport services across New Zealand. The NZTA is taking the lead of several projects that are focused on improving the effectiveness of public transport. This paper highlights a project that is developing national guidelines for public transport infrastructure and looks at how cross-sector collaboration developing these guidelines will lead to better public transport infrastructure, better customer experience and more effective public transport.

## Public Transport Infrastructure & Facilities for New Zealand

Buses, Trains, Ferries and even an Elevator<sup>1</sup> are funded as public transport. For public transport to operate in New Zealand some supporting infrastructure and facilities are required. These enable passengers to board public transport, provide information and improve safety. Some benefit the operators and drivers, while others chiefly benefit the passengers.

NZTA investment activity classes describe public transport infrastructure and facilities as “facilities such as bus stops, rail stations, bus and rail interchanges, park and rides facilities and ferry terminals. Also electronic ticketing and real-time system infrastructure, signalling upgrades for the efficient operation of bus services, pedestrian and cycle access to public transport facilities, cycle storage at park and ride infrastructure” (NZTA, 2013a) & (NZTA, 2013b).

For simplicity reasons, throughout this paper I will be referring to public transport infrastructure. This will be used to describe the wide variety of physical features that come under NZTA descriptions of Public Transport Infrastructure or Public Facilities.

## Who Provides the Infrastructure?

Funding provision of public transport infrastructure and facilities in New Zealand is complex. A common example is the funding of new bus stop shelters<sup>2</sup>, which are usually planned by regional councils and partially funded out of regional council rates. Additional funding is usually obtained from NZTA and then the city council is contracted to install and maintain the bus shelter<sup>3</sup>. The National Land Transport Fund (NLTF) investment in public transport facilities<sup>4</sup> is given direction by the Government Policy Statement on Land Transport Funding (Ministry of Transport, 2011) and the regional council investment is given direction by the Regional Land Transport Strategy (RLTS). There are other examples where city councils

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<sup>1</sup> Drurie Hill Elevator, Whanganui.

<sup>2</sup> There are approximately 18,000 bus stops in NZ.

<sup>3</sup> Territorial authorities usually install and maintain bus shelters because they are the road controlling authority.

<sup>4</sup> The NLTF activity class for public transport infrastructure includes road and ferry infrastructure to support public transport services. Rail infrastructure is generally excluded from this activity class and is intended to be funded outside the NLTF.

fund infrastructure directly<sup>5</sup> and a few examples of private individuals and business providing the infrastructure<sup>6</sup>.

The provision of public transport services are usually the responsibility of the Regional Council. This responsibility can be delegated to a territorial authority<sup>7</sup>.

Because of this complex arrangement to provide public transport, there are usually multiple stakeholders interested in the outcomes of money invested into public transport infrastructure. As each stakeholder can have different priorities, this has led to a large variance in the level of public transport infrastructure investment across New Zealand.

## **Who Controls the Land?**

Public transport infrastructure is generally provided on land under the control of a local city or district council. It can be privately owned or publicly owned land, but the rules regarding the installation of public transport infrastructure are usually controlled at the city council level.

In the main, the city council district plan rules will need to be applied to infrastructure that is planned by the regional council. Of course, with unitary authorities the council has the functions of both the regional and district council. In Auckland, the Auckland Transport Agency has the responsibility for public transport usually held by a regional council, however Auckland Transport is a city council controlled organisation.

## **Major Challenges**

A lot of the infrastructure for public transport has been recently renewed across New Zealand e.g. metro rail upgrades in Auckland and Wellington. Despite this investment there is a constant need to replace due to age, review of optimal location or upgrade to accommodate new technology. New infrastructure, renewals and upgrades have historically been undertaken without reference to a consistent national standard and sometimes without reference to a consistent standard within a territorial authority area. This has resulted in varying standards for public transport infrastructure in New Zealand. This leads to higher procurement costs and can result in an under optimised network.

With sometimes complex funding and provision arrangements involving all levels of government, it is quite possible that the goals and direction desired at one level of government is not reflected at the next level of government. It is not common for the various levels of government to have contradictory directions, but there are examples where the level of priority given to new or improved public transport infrastructure varies between the investors at NZTA and the regional council. Variance in public transport infrastructure priority

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<sup>5</sup> E.g. recent changes to bus lanes and bus signals in Wellington have been funded directly by the Wellington City Council.

<sup>6</sup> E.g. The Sylvia Park Train Station was funded by the builders of the Sylvia Park Mall.

<sup>7</sup> Invercargill City Council has delegated responsibly for the public transport services

has previously lead to compromised standards of facility and an under optimised public transport network.

## **Development of National Public Transport Infrastructure Guidelines**

Wise use of the money invested in public transport and public transport effectiveness is a critical issue on a national scale. The Public Transport Leadership Forum<sup>8</sup> has endorsed an action plan that included the recommendation of national public transport infrastructure guidelines.

The New Zealand Public Transport Infrastructure Guidelines is considering a voluntary toolkit of resources to guide the investment in public transport infrastructure. This new resource will have the overarching goal of improving the effectiveness of public transport in New Zealand through better infrastructure. The guidelines will show that in most cases better infrastructure does not mean more expensive. Rather it means smart design, standardisation and looking at the whole of life costs. An important assumption with these new guidelines is that better infrastructure will lead to more users of public transport, which improves the farebox recovery of the public transport and leads to reduced urban congestion at peak travel times.

Work on these new guidelines started in late 2011. To date this has involved a working group of public transport sector representatives who have developed and refined the principles and considerations behind the draft guidelines. These principles and considerations were tested in wider sectors workshops<sup>9</sup> to socialise ideas and draw out case studies of successful public transport infrastructure examples.

The current internal draft of the Public Transport Infrastructure Guidelines currently contains a set of three documents that are being referred to as a toolkit. The first document in the toolkit provides an overview with a series of principles that will be the foundation for success. The three principles currently seen as crucial for improved public transport infrastructure are that it is:

- accessible,
- safe and
- provides value for money.

To support these guiding principles the draft document includes and discusses some key considerations. These are;

- quality infrastructure design,
- standardisation,
- provision of information,
- station access hierarchy,

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<sup>8</sup> Sector leaders in New Zealand formed the Public transport Leadership Forum (PTLF) in 2009. The founder members were the NZTA, Ministry of Transport, KiwiRail, Bus and Coach Association of New Zealand, and regional councils.

<sup>9</sup> Workshops include round-table workshops at 2Walk and Cycle Conference 2012.

- reduced negative environmental impact and
- commercial opportunities.

This first document will be widely circulated as it is seen as a document to influence the providers of public transport infrastructure and to convince them to follow these guiding principles and key considerations.

The second draft document of the toolkit is currently discussed within the working group as a 'code of practice'. This is a set of best practice examples for the provision of public transport infrastructure. The document includes details and will be seen as a 'how to' document that could eventually be linked to funding. A 'code of practice' developed from the best current examples from within New Zealand and overseas would be a substantial resource tailored for the New Zealand public transport environment. The intention with developing a 'code of practice' type resource would be to make it relevant for councils regardless of their size or current levels of public transport. Development of the code of practice would not be possible without collaboration from the sector, as best practice in rural and small urban public transport networks varies significantly from the best practice in our large urban public transport networks.

The final part of the toolkit is a series of local and international case studies. These case studies will be published online and downloadable. It is anticipated that the case studies will be 'live' and 'renewable'. The results of "public transport infrastructure trials" involving these new guidelines will also be made available as case studies online. It is anticipated that the trial results will provide evidence to support our current assumptions that better public transport infrastructure will reduce over costs and increase patronage. At the outset the pool of case studies will be small, however over time this will increase as more local examples become available and are published online.

As the elements of these new national guidelines are put into practice and are shown to be effective at reducing operating costs and increasing patronage, results will be included in the online case studies. Ideally the results will be compelling and will lead to sufficient evidence to make the adoption of these guidelines a mandatory requirement to receive funding.

## **Achieving Collaboration**

The intention of the New Zealand Public Transport Infrastructure Guidelines has always been to be a principle based, guiding document. Through good examples and case studies the guidelines will influence and gain essential cross-sector buy-in. The original working group was developed from a task identified within the public transport effectiveness action plan, which was endorsed by the Public Transport Leadership Forum. An initial group of 'champions' for the work of improving public transport infrastructure led to the development of a working group representing more than 10 organisations from the public transport sector.

The initial working group included delegates from some of the larger regional councils representing a significant proportion of the country's public transport network. In order to achieve good collaboration the group has met together, shared knowledge, shared local

successes and worked together to improve the direction of the draft public transport infrastructure guidelines.

This year the working group has expanded to draw in more knowledge from across the sector. Reviewers from: NZTA, Regional Councils, City Councils, the wider Roads Controlling Authority Forum, LGNZ, the Bus & Coach Association and some accessibility advocates are assisting in the refining of the draft public transport infrastructure guidelines. The project working group will continue to draw upon the best knowledge in the sector in a collaborative method that achieves the best outcomes for the public transport infrastructure guidelines.

## **Benefits of Collaboration**

Initially the reason for using a combined working group, for the public transport infrastructure guidelines project, was to seek buy-in from across the sector. This initial objective for collaboration has been achieved amongst the organisations that have contributed to the development to date. However there remains a challenge to get the smaller councils and road controlling authorities involved in this project. As the number of parties that contribute to the public transport infrastructure guidelines increase, there will be a wider cross section of the sector with genuine buy-in to this guideline approach.

Collaborating as a group has also meant that a much broad base of experience and knowledge been drawn upon do develop what will be national guidelines. Collaboration of this group also means that implementation of the guidelines will be easier as the guidelines will be relevant and applicable to the councils who provide public transport infrastructure.

A major anticipated benefit of collaboration will be the introduction of new and shared ideas that have emerged during the development of the guidelines. This will be significant for the public transport service operators who should be able to run services more effectively at a reduced cost leading to a more effective public transport network.

The development of guidelines has seen councils benefit from the sharing of ideas that have worked well in other parts of the country. Councils also benefit from reduced capital and operational costs. If followed as intended, there will also be wider social benefits, such as reduced isolation and environmental benefits like reduced CO2 emissions from these guidelines.

A collaborative effort leads to all parties willingly heading in the same direction. Where a current investment decisions could have different priorities between NZTA and the regional council, these guidelines should provide a standard which both organisations have previously agreed and reduces the potential for misalignment of public transport infrastructure investment and level of property given. Heading in the same direction with the same priorities will also reduce the amount of unnecessary waste of time and resources. Early pre-investment collaboration like this is vital to achieving outcomes in the complex funding and multi layered environment in which we currently operate.

With such a large project with such a wide scope the working group anticipates additional benefits from this collaborative approach are likely to be revealed in time.

## **Good Examples**

The following examples demonstrate how collaboration in the public transport sector can lead to greater effectiveness.

In 2011 NZ Transport Agency published the Requirements for Urban Buses (NZTA, 2011). This document set out common standards for urban buses in New Zealand. This document was developed in collaboration with councils, accessibility advocates, bus operators and bus builders and resulted in an achievable urban bus standard that would achieve the goal of reducing bus fleet costs but also increase the quality standard of buses in New Zealand. Prior to these standards individual councils had their own standards for each bus contract. Through adoption of these standards the urban bus fleet in New Zealand becomes transferable within the country and the individual unit cost of buying a bus has reduced due to bus builder certainty, and increased production volumes. With the support of the sector NZTA made the Requirements for Urban Buses a condition of funding. With operators able to reduce the cost of the bus fleet, those cost savings can be reflected in lower tender prices to operate bus routes within New Zealand leading and with that saving reinvested into the public transport network this has led to improved effectiveness in investment in public transport.

A Kassel Kerb is a concave section of kerb used at bus stops to improve the docking between the low floor bus and the bus stop. The design of the kerb enables easier access by the passengers and reduces the tire wear on the bus. This type of kerb has been installed in a few sites in Auckland. Although costing more to install, this design improves the docking between the bus and the bus stop this speeds up operations, reduces running costs and improve accessibility to the bus. Additionally there is less wear and tear on the bus tyres and this reduces maintenance costs and improves reliability. Wider use of Kassel kerbs will lead to greater effectiveness of the bus network (Wood, 1998). Auckland Transport has Kassel Kerbs under trial and will be sharing the results to demonstrate the effectiveness of this piece of infrastructure. By trialling this new infrastructure and making the benefits known to the public Auckland Transport is operating in a collaborative way that has demonstrated a simple way better infrastructure can improve the effectiveness of public transport. From the Auckland demonstrations it appears that most busy urban bus routes in New Zealand would benefit from the installation of the Kassel Kerb.

In Dunedin a collaborative partnership has enabled a saving of approximately \$575,000 on the provision of new bus shelters. Bus shelters in Dunedin were funded 60% by NZ Transport Agency, planned and funded by Otago Regional Council, installed and maintained by Dunedin City Council. Previous quotes for the replacement of bus shelters in Dunedin have proven too costly and not acceptable, leading to the possibility of a long staged replacement of bus shelters. Collaboration between the Dunedin City council, Otago regional Council and NZTA has saved money and enabled all the bus shelters to be replaced in a single round of installation. During 2011 Dunedin City Council changed the district plan to

allow the installation of street furniture (including bus shelters) to be a permitted activity. This simple change removed the need for resource consent to be granted for each bus shelter and saved processing costs. Additional savings were obtained through the procurement of modern standardised shelters (NZTA, 2012). This collaboration has enabled the replacement of bus shelters to occur much faster than previously anticipated and save a total cost of approximately \$575,000. This money saved can eventually be invested into other areas of the public transport network. Working together the City Council and Regional Council have demonstrated the 'One Network' approach.

## **Conclusion**

To provide effective and efficient public transport infrastructure across New Zealand collaboration is essential. Working together will build a broad enough knowledge base to provide best-case effective solutions to all situations faced in our many and varied public transport networks. Collaboration at the higher levels of our public transport related organisations will set a common direction and enable common priorities for investment. This also allows our councils to procure new and replacement infrastructure at better prices.

The public transport infrastructure guidelines project would not be possible without a significant collaborative effort. This is because quality guidelines need to benefit all parties: NZTA as investor, Regional Council as operator and the bus or ferry company as provider. Without significant and demonstrated benefit you will not get take up across the sector for the non-mandatory guidelines and the effect of everyone using the same guidelines would not be realised. Collaboration in the development stages is building significant buy in that will lead to a successful roll out of these new guidelines.

Collaboration in the public transport sector will lead to a better infrastructure for the public transport network.



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