

INVESTMENT QUALITY ASSURANCE (IQA)

PROJECT DETAILS	
Project/Activity Name	National Ticketing Solution DBC
Approved Organisation / Region	Waka Kotahi

RECOMMENDATION	
Delegated decision maker ⓘ	Vanessa Browne, National Manager, Programme and Standards - Endorse Howard Cattermole Chief Financial Officer, Investment & Finance - Endorse Waka Kotahi Board - Approve
Recommendation and commentary	Recommended with conditions precedent/subsequent
Proposed conditions (if applicable)	We recommend that the National Manager P&S includes the following conditions: As a condition precedent that: <ul style="list-style-type: none"> A Participation Agreement is signed with all Public Transport Authorities to adopt the National Ticketing Solutions As a condition subsequent that: <ul style="list-style-type: none"> The benefit measures are reviewed and an appropriate Benefits Realisation Plan is developed.
Does this activity breach the significance policy? ⓘ	Yes. The NTS will be highly visible and the complexity of implementation means there is a reputational risk to Waka Kotahi.

SUMMARY			
Proposal overview	The proposed National Ticketing Solution is founded on a partnership between Auckland Transport, Greater Wellington Regional Council, Environment Canterbury, the Regional Consortium (comprising the smaller regional councils across New Zealand), and Waka Kotahi. The proposed solution is a flexible, modern, integrated ticketing system which will make it easier for people to pay for public transport anywhere in the country.		
Scope of activity for this IQA ⓘ	Review of the National Ticketing System DBC. The next phase is Implementation.		
Results alignment / GPS alignment ⓘ	High (Applicant) High (Reviewer)	Scheduling	High (Applicant) High (Reviewer)
Efficiency / Cost-benefit appraisal ⓘ	Low (Applicant) Low (Reviewer)	BCR (expected) BCR range	1.7 0.93-2.4
IPM priority order ⓘ	5 (Applicant)	5 (Reviewer)	
IPM commentary	GPS Alignment: High 1) GPS 2021, paragraph 150, states that: "The Minister expects Waka Kotahi will... more actively influence the way local government designs and delivers public transport services. This includes driving more integrated planning of transport solutions at a local level, prioritising the delivery of modern integrated ticketing systems in New Zealand's main centres, and driving the Government's mode shift priority through its planning and funding levers for public transport."		

	<ul style="list-style-type: none">The National Ticketing System will address these expectations. As Integrated ticketing is specifically mentioned as an expectation in the GPS, it would be appropriate to assume a High alignment. <p>2) <i>IPM, Better Travel Options, High Criteria: Improving connections to nationally significant tourism destinations/attractions.</i></p> <ul style="list-style-type: none">A key benefit of the NTS is that it will reduce barriers for local and international travellers to easily use public transport anywhere in the country, including to and from airports and nationally significant tourism attractions. This is an important source of increased mode share for this activity. <p>Scheduling Rating: High</p> <p>1) <i>High Criteria: Need to undertake this activity to deliver/ prepare for remainder of programme/package where its implementation is to begin in 2021 or early 2024 NLTP.</i></p> <ul style="list-style-type: none">Note that the High scheduling rating applies for ECAN and GW, and the delivery of supporting services. <p>2) <i>Medium Criteria: Need to undertake this activity to deliver/ prepare for remainder of programme/package where its implementation is to begin in 2024 NLTP.</i></p> <ul style="list-style-type: none">Note that a Medium rating would be achieved by AT and RITS.	
Economic robustness ⓘ	Robust analysis (including incremental analysis if appropriate) completed in line with PIKB guidance, MBCM, and NMBM?	Yes
	Sensitivity tests of appropriate factors?	Yes
Finance	Preferred option included in the NLTP? ⓘ There has been an increase of \$8M in the overall cost which WAS not included in the NLTP.	Yes
	Preferred option above the investment threshold in the NLTP?	Yes
	Have Activity Class Manager(s) and Manager, Treasury and Cashflow confirmed funding availability?	No
	Have costs been calculated using SM014 ? A P95 cost estimate has not been provided.	No
Procurement ⓘ	Does the applicant have a currently endorsed Procurement Plan/Strategy and does the intended approach align with this? Procurement is already underway and negotiations with a supplier continue.	N/A
Independent Review (if required) ⓘ	Peer review as per Waka Kotahi requirements?	Yes
	Parallel costs estimate? Procurement and negotiations with a tenderer underway.	N/A
	Road safety audit?	N/A
Readiness / urgency factors to consider	Ready to proceed to next phase within three months of funding approval	Yes
	Environment Canterbury has ageing equipment and devices with limited functionality such as tag-on only which are at end-of-life and, with its ticketing provider contract also coming to an end in 2023, urgently needs a replacement solution. If the NTS isn't endorsed as the preferred solution by Waka Kotahi and/or the Participation agreement cannot be agreed, then it is highly likely that ECan will look to procure another solution.	
	As all regions are looking to replace their existing systems in the next few years, this is an opportune time for a national solution to be introduced. If the regions procure	

new individual ticketing solutions, then it will likely be more difficult to gain buy in for a national solution in the future.

The business case notes that the RITS Bee Card and GW Snapper on Rail were implemented as interim solutions, with the expectation of the NTS being delivered.

OVERALL ASSESSMENT: IS THERE A COMPELLING CASE FOR INVESTMENT?

IQA Reviewers	Sam Breen, Lisa Faulke, section 9(2)(a) .
Definitions	<p>Key Public Transport acronyms and terms used in this IQA:</p> <ul style="list-style-type: none"> • NTS – National Ticketing System • PTA – Public Transport Authorities • TTP – Transport Ticketing and Payments, a support service provided by Waka Kotahi. • RC - Regional Consortium. A collaboration of 9 regional councils for public transport systems. • Integrated ticketing – Enabling a single customer charge for a journey across transfers, services and modes. • Open loop – Accepting PayWave from credit or debit cards as a ticket option
Business Case Process / Local Government Partnerships assessment	<p>The proposed solution in its steady state will cost New Zealand approximately the same as the most likely do minimum (after an additional capital outlay of circa \$128M), but instead will provide a modern, national system, with economies of scale, more powerful data, lower barriers to public transport, and a better service to New Zealanders that supports GPS and ERP priorities. Overall, the NTS is a reasonable, value for money solution for New Zealand.</p> <p>Internationally, closed loop systems with stored value cards have been superseded by open loop ticketing solutions using customers' existing bank cards. 70% - 90% of current customers have contactless payment cards or virtual cards on a mobile device that could be used with the new system. A separate transit card can be provided to those who require it.</p> <p>As all regions are looking to replace their existing ticketing systems in the next few years, this is an opportune time for all parties involved to reach an agreement on a national solution.</p> <p>Value for Money Value for money is provided in the following ways:</p> <ul style="list-style-type: none"> • <i>Economies of scale:</i> The NTS will provide a modern ticketing solution to all New Zealand regions, including those that would not otherwise have the resources to fund and support this type of solution. • <i>Efficiency:</i> A single shared service function, Transport Ticketing and Payments (TTP) operated within Waka Kotahi, will enable a consistent and efficient use of data and resources across New Zealand. • <i>Effectiveness:</i> Delivery from a single platform using a proven global solution. • <i>Lowest consumer cost:</i> Lowest cost to the public for local journeys across multiple public transport modes. • <i>Equity:</i> The same system across New Zealand to improve accessibility and access for all customers and to contribute to increased mode shift. <p>There is no consensus on what a mode share increase might be due to the NTS. The business case suggests a 2% increase nationally – which feels about right, though conceivably it may be much higher than that, however there is uncertainty as to how much would be attributable to the NTS given this will be rolled out in conjunction with other service improvements i.e. new fare products, simplified fare structures. Getting an accurate mode share increase attributable to NTS would be difficult, hence why applying a conservative approach like this is prudent, both in the likely additional uptake and the potential positive impact on the BCR. The rollout of NTS may well be in conjunction with other service improvements i.e. new fare products, so getting an accurate mode share increase attributable to just NTS will be difficult</p>

PTA Participation Agreements

The PTA Participation Agreement Part 1, dated 10 December 2020, contemplated a second Part 2 agreement that would outline how governance, funding, provision of, and access to the NTS are to occur.

It is expected that once Waka Kotahi has endorsed the DBC and approved funding for implementation, that this will send a strong signal to the PTAs, giving them confidence that they can sign up to the Participation Agreement Part 2 where they will commit to transitioning to the NTS. As that agreement hasn't been signed yet, the exact details around how that partnership will work and how costs will be divided have not yet been finalised. It is expected that funding of the NTS would require significantly greater funding from the NLTF than the do minimum, due an enhanced FAR which is expected to be applied as shown in the table below:

Cost type	Cost description	FAR
Capital	Includes software and licences, equipment (both back and front office), compliance and certification, design build & test, Merchant Acquirer setup, Transit Card Programme Manager setup, Retail Manager setup, and TTP setup.	100%
Operating	Includes Ticketing Provider costs, Merchant Acquirer costs, Programme Manager costs, Retail Network costs, TTP support costs.	100%
Other	Includes local transition costs, phase out of existing systems, local networks, local ticketing solution costs.	Normal

The enhanced FAR funding model will:

- Simplify the commercial relationship between Waka Kotahi and the PTAs.
- Avoid duplication of investment.
- Enable more efficient hardware purchasing.
- Manage ticketing nationally to strengthen supplier procurement bargaining power.

The current indication is that all PTAs are on board with the proposal for the NTS and their participation is expected. The provisional go-live date for each participant is:

Environment Canterbury: July 2023
 Greater Wellington: March 2024
 Auckland Transport: November 2024
 Regional Consortium: February 2025

Transport Ticketing and Payments service (TTP)

A key part of the NTS proposal is a national TTP, operated by Waka Kotahi. The purpose of the TTP is to provide efficient day to day support for the NTS both to the PTAs and the public.

Details around where the TTP will be located and how it will be staffed are yet to be finalised. It is likely that the TTP will include 50 – 60 people at its peak size, though this is likely to decrease once the NTS has been fully implemented and a steady state team is optimised. Initial conversations have been undertaken with the Waka Kotahi property team around location, and it is likely that some staff will be situated in a co-location with staff from the Ticketing Services Provider. Call centre staff are likely to be situated within the existing Palmerston North call centre. Some call centre operations will still sit with the PTAs.

As timelines are bound to change and negotiations around the Participation Agreements may result in adjustments to the to the current plan, successful delivery of the NTS will be especially reliant on the TTPs project management expertise and ability to problem solve. Ensuring the right people are in place with strong leadership will be critical.

DBC - Key IQA Issues

Generally, the business case tells a clear story. Though someone unfamiliar with ticketing terminology may find it difficult to decipher some of the terms and abbreviations used throughout, many of which are missing from the glossary. The peer review highlights that the terminology used changes throughout the document and this could be made clearer.

The proposed benefit KPIs are mostly qualitative and will prove difficult to measure. No baselines or targets have been provided. Thought should be given as to whether more quantitative

	measures could be specified and baselined, which would provide more tangible measures of success. The peer review also indicates that the specified KPIs will not provide reasonable evidence that the benefits have been delivered. A review of the KPIs and development of a benefits realisation plan is suggested as a funding condition.		
Assessed by	Sam Breen	Date	May 2022
Investment Assurance assessment (if applicable, e.g. >\$50M, breaches significance)	<p>The overall case for investment in the NTS is well made due to the high alignment with the GPS, potential for mode shift to PT and resulting reduction in greenhouse gas emissions and reduction in VKT. In addition, the NTS is an identified activity in the ERP actions list., However there are some high implementation risks: Two notable risks are:</p> <ul style="list-style-type: none"> this is a complex project which is IT dependent, although this is mitigated by the fact that the technology is now tried and tested overseas. a high risk is the low confidence that the NTS will proceed from some of the AO's to date will need to be addressed through the Participation agreement – this is a proposed funding condition. 		
Assessed by	section 9(2)(a)	Date	8 June 2022

STRATEGIC CASE

A. Are the problem statements clear and is there evidence to support them? Are the problems a strategic priority in national, regional and local contexts?

Facilitated ILM workshops were held in 2016, attended by senior managers from Waka Kotahi, AT, GW, ECan and the RC. These workshops developed investment logic maps which included the following problem statements:

- Problem 1**, 45% - Outdated fare collection systems are a significant barrier to adopting modern fare policy and customer-centric business models
- Problem 2**, 35% - Lack of journey information is sustaining suboptimal transport networks
- Problem 3**, 20% - Disparate needs, priorities and investments are inhibiting the timely delivery of integrated ticketing

Problems 1 and 2:

Current ticketing and payment systems vary considerably in capability and customer experience region-by-region across New Zealand. There is no consistent approach with, for example, Auckland Transport's HOP system providing integrated ticketing and comprehensive data while Wellington's rail network, until recently, has still been using paper tickets and has lacked the data to fine-tune the network and help guide targeted investment. As all regions are looking to replace their existing systems in the next few years, this is an opportune time for a national solution that addresses these problem statements.

Problem 3:

Integrated ticketing is suggested here as a solution within the problem statement. While it's not best practise to include a solution within the problem statement, integrated ticketing is discussed as being the standard expected for large public transport networks internationally, as discussed throughout the business case and described in the international examples provided in appendix 3. Integrated ticketing enables a single method (ticket) to be used for a public transport journey that involves transfers between services and/or modes (bus train and ferry) across an entire day, the lowest available fare can then be applied to the entire journey.

Summary:

Limited evidence is presented in section 3.5.2 and in Appendix 1 to support these problem statements, however, these problems are generally self-evident based on the current situation across New Zealand - which is described throughout the business case. These problems would be best addressed at the national level, meaning a national solution is desirable.

Addressing the problem statements would align with the GPS, the New Zealand Disability Strategy, the Emissions Reduction Plan, Regional Public Transport Plans, and may enable deployment of government policy initiatives such as the Community Connect card.

B. Are the benefits clear and a logical consequence of resolving the problems? Is there a clear line of sight from problems and benefits through to the proposed investment objectives, performance measures and targets?

Benefits were identified at the ILM workshops, and are as follows:

- **Benefit 1**, 35% - Enhanced customer experience that substantially reduces the barriers to travel
- **Benefit 2**, 30% - An affordable and efficient public transport network that delivers operational efficiencies and strategic information
- **Benefit 3**, 20% - Efficient, least cost, regional and national investment
- **Benefit 4**, 10% - Improved public and government confidence in ticketing investment

It is reasonable to expect that these would be the benefits achieved from addressing the problem statements.

An ILM map is provided in Appendix 1, which links the problem statements through to these benefits and KPIs.

The proposed KPIs are mostly qualitative and will prove hard to measure. No baselines or targets have been proposed. Thought should be given to whether more quantitative measures could be developed and baselined, which would provide more tangible measures of success. The peer review also indicates that the specified KPIs will not provide reasonable evidence that the benefits have been delivered. A funding condition is proposed that the benefit measures are reviewed, and an appropriate Benefits Realisation Plan is developed.

C. Demonstrate how the investment objectives are consistent with the four strategic priorities of the GPS?

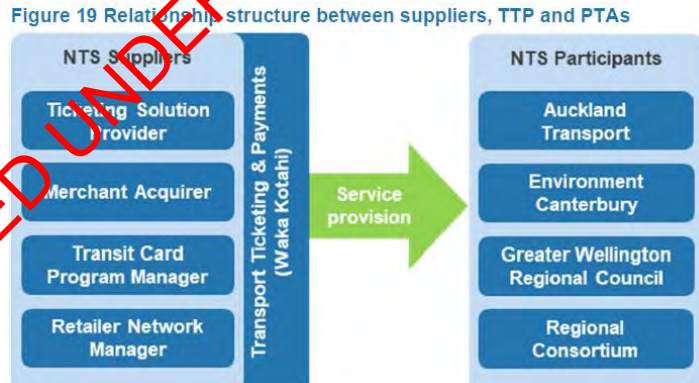
The main priority addressed is Better Travel Options. While all 4 priorities would be supported by a growth in public transport patronage, an increase is not the main benefit of investing in a National Ticketing System.

The following table is a summarised version of figure 8 provided in the business case. It describes how the NTS is consistent with the four strategic priorities of the GPS:

GPS outcome	NTS contribution
<p>Better travel options: Providing people with better travel options to access places for earning, learning, and participating in society</p> <p>Improve people's transport choices in getting to places where they live, work and play, and to make sure our cities and towns have transport networks that are fit for purpose and fit for the future.</p> <p>Short to medium term results (by 2031)</p> <ul style="list-style-type: none"> • Improved access to social and economic opportunities. • Public transport and active modes that are more available and/or accessible. • Increased share of travel by public transport and active modes. • Reduced greenhouse gas emissions. • Reduced air and noise pollution. 	<p>A modern ticketing and payment solution that is account-based and open loop would:</p> <ul style="list-style-type: none"> • Make it easy and convenient to access public transport anywhere in New Zealand and pay in the same way with a bank-issued debit/credit card or virtual card on a mobile device. There would be no need, for example, to purchase a ticket, pay by cash, or top up before travelling. Transit cards, SuperGold and single tickets would also be options for some people. • Guarantee the lowest fare option each day for every customer's journeys • Enable customer self-service benefits from managing their own and their family's transport accounts anywhere in New Zealand • Receive better information because customers can control the information they receive • Provide better information about passengers' trips that informs continual improvements to network design and operations. <p>This convenience and ease of use would help to make public transport more accessible and a more viable alternative to private vehicles, leading to increased patronage and mode share and, in turn, reduce GHG and air/noise pollution. Improved business information from a modern ticketing solution underpins ongoing refinement of network design and operations, which then delivers better customer service and makes public transport an increasingly viable travel option.</p>
<p>Safety: Developing a transport system where no-one is killed or seriously injured.</p>	<p>More people travelling by public transport with its higher safety record would contribute to a safer land transport network and reduced numbers of deaths and serious injuries.</p>
<p>Climate change: Transforming a low carbon transport system that supports emissions reductions aligned</p>	<p>More people travelling by public transport, which is becoming increasingly electrified, would contribute to fewer private</p>

with national commitments, while improving safety and inclusive access.	vehicles and consequently reduced emissions and air/noise pollution.
Improving freight connections: Improving freight connections to support economic activity.	More people travelling by public transport would contribute to fewer private vehicles and consequently reduced congestion resulting in freight routes that are more reliable and efficient.

ECONOMIC CASE	
D. Have a suitable range of alternatives or options been identified in the long list, drawing on the intervention hierarchy? ①	
Yes. These are documented satisfactorily in the latest version of the DBC Version 6 and include a Do Nothing option based on the status quo and a Regional Upgrade Option as well as the preferred NTS option.	
E. Has an appropriate approach to evaluating long list options been developed and has it been implemented effectively to deliver a robust options short-list?	
Yes	
F. Is there sufficient evidence to demonstrate the preferred option / preferred way forward is the most economically efficient and effective response to the problems?	
Yes. Peer review by experienced ticketing operators has been undertaken.	

COMMERCIAL CASE	
G. Is the proposed procurement approach for the next and subsequent phases clearly explained and aligned to an approved and current procurement strategy?	
<p>To date, the arrangements between Waka Kotahi and PTAs for NTS procurement have been recorded in a Multi-Party Funding Agreement dated 27 July 2018, and a Participation Agreement (Part 1) dated 10 December 2020.</p> <p>The NTS requires procurement of the following services:</p> <p>Figure 19 Relationship structure between suppliers, TTP and PTAs</p>  <pre> graph LR subgraph Suppliers [NTS Suppliers] A[Ticketing Solution Provider] B[Merchant Acquirer] C[Transit Card Program Manager] D[Retailer Network Manager] end subgraph WakaKotahi [Transport Ticketing & Payments Waka Kotahi] E[] end subgraph Participants [NTS Participants] F[Auckland Transport] G[Environment Canterbury] H[Greater Wellington Regional Council] I[Regional Consortium] end Suppliers --> WakaKotahi WakaKotahi -- "Service provision" --> Participants </pre> <p>Procurement of the ticketing solution and for financial services has been undertaken in parallel with the development of the DBC.</p> <p>The procurement strategy for the ticketing solution assumed a single procurement of the whole solution, not just a system, meaning that the design, build, test and deployment of the core software and equipment is included.</p>	

The procurement of financial services includes the Merchant Acquiring Services (processing payments), Transit Card Program Manager Services (providing transit cards), and Transit Card Retailer Network Manager Services (retail outlets for transit cards).

The purpose of the Transport Ticketing and Payments (TTP) service is to provide efficient day to day service delivery, this service is provided by Waka Kotahi. Waka Kotahi will be the sole Party who contracts with each NTS Supplier under the relevant Master Service Agreement for the benefit of the PTAs and itself. This reduces the number of third party service provider contracts and supports a multi-tenanted solution.

Procurement of the ticketing and financial services has involved a Market Sounding, Registration of Interest, Request for Proposal, and a Best and Final offer process for the ticketing solution, alongside a Request for Tender process to secure the financial services.

The next stage of procurement is to undertake contract negotiations with the preferred suppliers.

Key risks are about affordability and funding, slow decision-making, withdrawal by one or more participants, and insufficient capacity and capability to deliver to timeframes and quality. In addition a key risk is procurement process is robust, and will provide a good, reliable operator (tech related product) over the course of both the system role out and running it, and we will "own the product" have full access to it. These risks are manageable and mainly fall within the responsibility of Waka Kotahi, the NTS Participants Group, and the national Mobility Payments Governance Group.

FINANCIAL CASE

H. Is the preferred option a funding priority and is it affordable? What are the proposed funding arrangements?

The preferred option of implementing the NTS has an investment profile of HHL and Funding Priority 5.

The funding availability for Capex in the PT Infrastructure Activity Class has been confirmed but this could change if funding needs to be transferred to PT Opex Class due to costs pressures.

- 1) The Opex is above the current funding availability. Comment from Martin Shearman "The Opex component is not affordable as a PTS activity without a revision to investment targets so I cannot see either the ACM or myself providing any support for priority or funding until that is resolved."
- 2) In addition the Activity Class Manager stated:

At the current time the OpEx cost (section 9(2)(b)(iii) total cost 2021-24 NLTP, 100% FAR, phase ID 281638, work category 525) is not affordable to the Public Transport Services activity class for the following reasons:

- There are significant cost pressures in this activity class due the baseline public transport service operating costs far exceeding the forecast costs on which the 21-24 NLTP funding allocations were based. It is highly likely the activity class investment target will be exceeded on these baseline cost pressures alone.
 - At the time of NLTP development the NTS cost was submitted as one phase to the Public Transport Infrastructure activity class, ie. the OpEx costs were not planned for in the right activity class. This means the investment target for Public Transport Services was not developed to accommodate an extra section 9(2)(b)(ii) that is now being requested. I acknowledge this is a administrative issue and can be corrected by the Waka Kotahi Board readjusting the Public Transport Infrastructure and Public Transport Services investment targets.
- 3) Given the current issues around current affordability further work is being done by the activity class managers to resolve affordability. Adjustments to the scope and timing of the NTS will be made to suit the affordability envelope in conjunction with the P2 Agreement – this is a condition precedent of the funding approval. Alternatively additional funding from other sources (e.g. CERF) maybe sought. The NTS detailed scope and funding will be finalised as part of the P2 Agreement negotiation which is a condition of funding.

To be confirmed once funding application finalised.

MANAGEMENT CASE

I. Is the proposed option sufficiently well planned and specified to enable the next phase to proceed successfully? ①

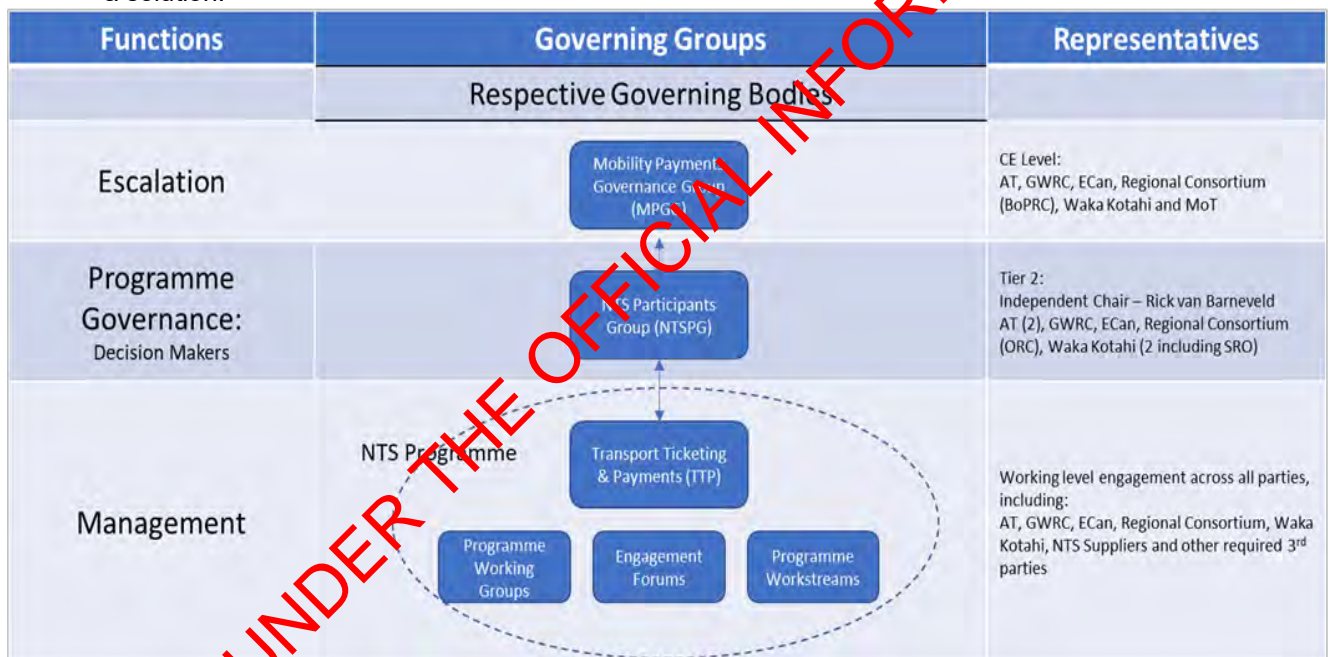
Overall, the implementation requirements of the NTS appear to be well considered and thought out. The design of Governance and Management structures are well advanced, including the proposed TPP, which will be key to successful implementation – as a large scale and complex NTS will require an agile and competent delivery team. It is probable that through the negotiation of the next stage of the Participation Agreement Part 2 with the PTAs that some details proposed in the business case will change - this agreement is discussed further below.

Governance

Delivery of the NTS will be governed by a participant group and managed through the TTP

The governance structure is illustrated below and comprises:

- An NTS Participants Group made up from senior leaders from each NTS partner, which will be responsible for providing oversight and strategic leadership.
- The Mobility Payments Governance Group (MPGG) which comprises the CEOs of each NTS partner. This group will be convened as necessary to resolve escalated issues if a disputes process is unable to reach a solution.



Management

As indicated in the management level in the diagram above, a shared services function will be provided by Waka Kotahi as an internal business unit – Transport Ticketing and Payments (TTP). The purpose of the TTP is to provide efficient day to day support for the NTS.

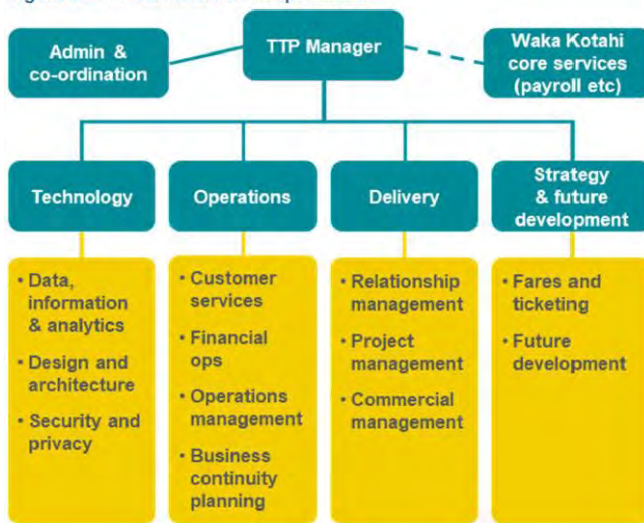
The responsibilities of the TTP will include:

- Day-to-day management flows
- Contract management of NTS suppliers.
- Management of the TTP NTS service obligations.
- Providing assurance of the overall NTS to the governance structure.
- Programme management for the establishment and transition of PTAs to the NTS (PTAs will be responsible for their change management planning for transition).
- Stakeholder management and engagement.
- Assessment of needs, strategic direction and policy/legislative requirements to support the future NTS direction.

- Creation and management of an annual planning process.

The TTP will be structured under four functions as indicated in figure 22 below:

Figure 22 TTP functions and capabilities



TTP have specific responsibility for development and maintenance of a quality plan and assurance plan with regular reporting requirements to the Participants Group. This will include post project reviews. These will be critical following the first implementations to ensure lessons learned result in improvements to each successive transition.

Each PTA will have a nominated Relationship Manager within TTP. There will be regular engagement between each Relationship Manager and the PTA, and this will be supported by cross-organisational Engagement Forums.

Details around where the TTP will be located and how it will be staffed are yet to be completed. It is likely that the TTP will include 50 – 60 people at its peak size, though this is likely to decrease once the NTS has been fully implemented and a steady state team is optimised. Initial conversations have been undertaken with the Waka Kotahi property team around location, and it is likely that some staff will be situated in a co-location with staff from the Ticketing Services Provider. Call centre staff are likely to be situated within the existing Palmerston North call centre.

PTA Participation Agreements

The Participation Agreement Part 1, dated 10 December 2020, contemplated a separate agreement – Participation Agreement Part 2 – that would outline the terms on which governance, funding, and provision of and access to the NTS will occur (among other things) and that Waka Kotahi would act as a scheme operator for the purpose of the NTS. In this role, Waka Kotahi would contract with and manage the NTS services providers to facilitate the provision of the NTS for the benefit of PTAs and Waka Kotahi.

It is expected that once Waka Kotahi has endorsed the DBC and approved funding for implementation, that the PTAs will have enough confidence in the NTS to sign the Participation Agreement Part 2, where they will commit to transitioning to the NTS. The current indication is that all NTAs are on board with the proposal for the NTS and their participation is expected.

Work Plan

The DBC assumes a high level workplan and clear responsibilities for implementation subject to detailed planning between TTP, PTAs and the ticketing services provider when contracted.

It is described that that the work plan will include the following:

- Establish TTP as a business unit within Waka Kotahi. TTP will provide the shared services functions of the NTS and stand up the capability - realisation, resourcing, facilities, systems, etc.
- NTS design including:
 - Build and implementation of core ticketing platform

- Financial Services - Merchant Acquirer establishment
- Financial Services - Program Manager establishment
- Financial Services - Retailer Network Manager establishment
- Program Office (for planning and oversight of the multi-year transition program)
- ECan Bus Solution Implementation – supplier side
- ECan Bus Solution Implementation – ECan side
- Repeats 3 and 4 above for GW, AT and for each member of the Regional Consortium.

PTAs will determine the most cost-effective, practical, transition technology option in conjunction with TTP and the ticketing service provider, including possible infrastructure re-use.

A conceptual roadmap sets out indicative go-live dates starting with ECan in July 2023 and ending with the Regional Consortium in February 2025.

During the implementation phase TTP will be primarily responsible for holding the suppliers to a delivery programme and consequent contractual performance.

J. Are there appropriate plans in place for benefit realisation measurement and reporting?

An appropriate Benefits Realisation Plan has not been provided.

It is described that the TTP will provide benefits management support as part of the project management for each regional implementation.

Developing more qualitative benefits and a benefits realisation plan has been suggested as a funding condition.

K. Are the risk management arrangements adequate?

The DBC applies the Waka Kotahi risk management framework. As is expected with a programme of work of this nature, there are a number of risks to both the delivery of the NTS, and to Waka Kotahi. Risks with high likelihood and/or significant consequences have been provided in Appendix 7, along with suitable risk mitigations. The ongoing management of risks by the Governance and Management structures will be key to the successful delivery of the NTS.

There are four key risk areas highlighted by the business case:

1) Customer risk

- Risk of a poor experience during transition
- Failure of the system or a breach of security/privacy

Mitigation: Strong systems and controls including cyber security measure and effective public communications will be critical in mitigating customer risks.

2) Partner risks

- Lack of political will and capability to collectively deliver for NZ
- Misalignment and timing of contracts and regional plans
- Slow collective decision making
- Limited capability and capacity to deliver
- Ability to effectively both deliver and manage across multiple AOs
- Ensuring the product can deliver and we have full access to the data to ensure Waka Kotahi can use for this for all necessary analysis of performance of the network (things like patronage boardings/ boarding types, transfers, pax kms, fare revenue, free travel (SGC), & for each service)
- that at an appropriate time in development, in working in combination with councils, an overarching national fare policy is both adopted and accepted by councils

Mitigation: Effective governance arrangements, including at Chief Executive level, Participation Agreements with all partner PTAs, and strong trust, co-operation and collaboration will be important mitigation factors.

3) Supplier risks

- Technology tie in for 14 years
- Capability to deliver over a long-time horizon

Mitigation: The ticketing supplier is very experienced, having implemented ticketing and payment solutions for more than 10 years including London, New York, Sydney and South East Queensland (Brisbane).

4) Funding risks

- Unaffordability, inability to agree funding arrangements and delays in meeting planned transition staging timeframes.

Mitigation: Participation Agreements between Waka Kotahi and PTAs will clarify funding, roles, and responsibilities.

The NTS programme includes a Gateway review process facilitated by The Treasury. A Gateway Review 0-3 (Strategic Assessment / Investment Decision) was conducted in November 2021. This resulted in an Amber/Red rating which means successful delivery is in doubt with major risks or issues apparent in several key areas. This rating was mainly due to the complexity of needing all regions to adopt the NTS in order to realise the full benefits expected in the business. The follow up Gateway Review of the NTS is expected to occur in July 2022.

GENERAL

L. Can the activity really be delivered (programme, costs, risks, timeframes, governance, etc)?

The detail provided by the DBC alongside discussions with the NTS team provide a good level of confidence that the NTS is being managed competently, and that it has a reasonable probability of successful delivery.

Customer insights were used to help identify and develop the business requirements for a solution that best meets customer needs. Successful adoption of open loop ticketing payments is dependent on a high proportion of bank-issued contactless bank cards in use in the retail environment, which was measured at 88% in September 2020.

The NTS team has worked hard to ensure that the PTAs remain onboard with the plan for the NTS, obtaining board approval for funding to both Environment Canterbury – to get their NTS programme underway, and to Greater Wellington – to ensure they had an interim solution for rail services until the NTS is rolled out.

As timelines are bound to change and negotiations around the Participation Agreements may result in adjustments to the current plan, successful delivery of the NTS will be especially reliant on the TTPs project management expertise and ability to problem solve. Ensuring the right people are in place with strong programme management leadership will be critical.

There are many international comparisons with large cities (though not entire countries) that have implemented integrated, open loop systems described in the business case. Cities around the world have been introducing open loop and/or account-based ticketing systems since London in 2013 (introduced alongside the Oyster Card), Chicago in 2014, Philadelphia, Portland and Boston in 2016 and Sydney in 2017, amongst others. Several of these implementations have parallels with the New Zealand NTS. For example, from 2020, South-east Queensland began introducing account-based ticketing and open loop (EMV) including mobile payments (iPhone, Android), a multi-tenanted solution, and has a large geographic area, a similar patronage profile with one large region (Brisbane) and several smaller regions, and a similar population. These examples including how each are relevant for a New Zealand NTS are set out in Appendix 2. These examples give confidence that the proposed solution can be successfully implemented in New Zealand.