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Greater Wellington Regional Council

Wellington City and Hutt Valley Bus Network Implementation Review

December 2018



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2. INTRODUCTION

L.E.K. Consulting (L.E.K.) was engaged by the New Zealand Transport Agency (NZTA) and Greater Wellington Regional Council (GWRC) to undertake an independent review of the implementation of the Wellington City and Hutt Valley bus networks to determine their effectiveness in delivering:

- the objectives of the Wellington Regional Public Transport Plan
- levels of service that meet the needs of Wellington City and Hutt Valley communities

The findings from this review are contained in this report.

2.1. Scope

In accordance with the Terms of Reference (ToR), included in *Appendix 1 – Terms of Reference*, this report assessed GWRC's actions leading up to, during, and post the new network implementation. Specifically, this report investigates:

- whether programme management was effective in managing resources, timelines, risks and contingencies, and whether the correct governance structures were in place to enable visibility to senior decision makers within GWRC
- the adequacy of resourcing and capability within GWRC's implementation team to understand whether they were appropriately equipped to foresee and manage issues
- the effectiveness of procurement and contract management to determine how this may have contributed to some of the issues experienced post implementation
- the extent of public consultation and external communications to understand whether GWRC effectively engaged key stakeholders throughout the process

The following issues were specifically out of scope for the Stage 1 review:

- the inherent design and philosophy of the new Wellington network
- bus services outside of Wellington City and the Hutt Valley
- rail and harbour ferry services
- PTOM (Public Transport Operating Model) contracts
- fares policy

2.2. Inputs

The findings in this report were developed from a number of sources, as listed below:

- Documents - Minutes from programme management, operator transition, select committee and council committee meetings, council reports, budget documentation, submissions to committees and risk registers
- Data - Performance data (e.g. on-time performance, cancellations, patronage), customer complaints data, and RTI system accuracy data
- Interviews - Over 40 interviews were conducted with key personnel from GWRC senior management and programme delivery teams, external consultants, Wellington City and Hutt City councils, and bus operators. A full list of interviewed stakeholders can be found in *Appendix 2 – List of interviewed stakeholders*.

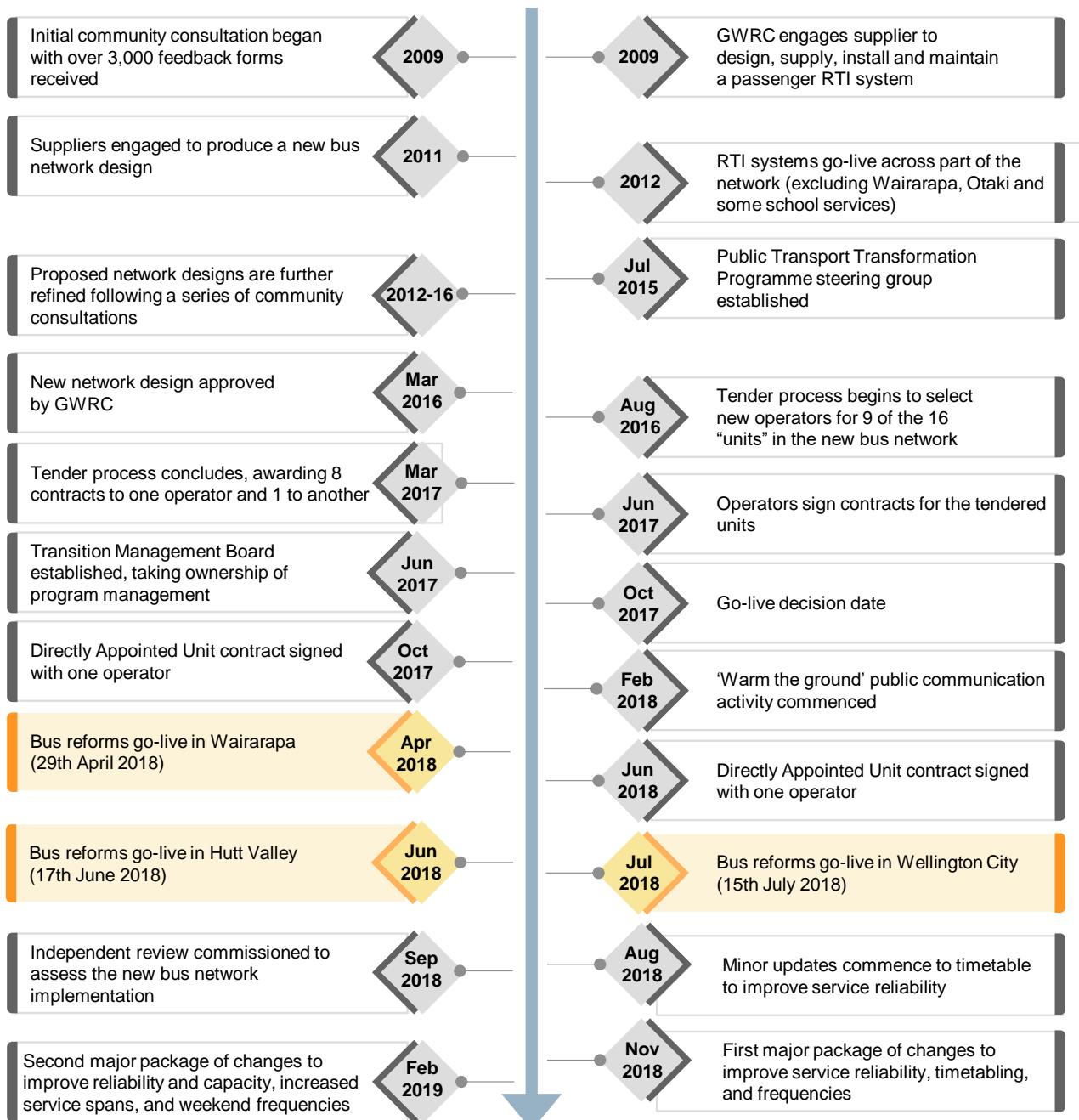
3. CONTEXT

Between June and July 2018, GWRC implemented a range of reforms to Wellington City and Hutt Valley bus networks. This included changes across the following dimensions:

- **Operators** – Through a competitive tender of over half the bus network, GWRC selected two operators to operate services, in addition to incumbent providers who would operate the remaining services. This was part of the new PTOM (Public Transport Operating Model).
- **Fleet** – New operator contracts required 50% of the bus fleet to be updated to new vehicles, including double deckers on selected high demand routes
- **Routes** – The routes in Wellington underwent significant redesign relying on core, high demand routes to transport the bulk of passengers into the city, supplemented by connected high frequency routes serving lower demand areas that intersect at bus hubs
- **Timetables** – New timetables were required for the new routes and optimised for transfers at bus hubs and to increase the frequency of services in under-served areas
- **Information technology (IT) systems** – IT systems were upgraded to improve GWRC's capability in real-time bus tracking, web systems, and Business Intelligence (BI) reporting. In addition, significant updates to Metlink's website and app were also implemented
- **Fares and ticketing** – GWRC standardised the ticketing system used throughout the bus network to one system, replacing multiple previous systems. Fares were also changed to introduce discounts for off-peak travel, tertiary students and people with disabilities, as well as a 3% overall increase in regular fares.

3.1. Chronology of key events

Whilst the bus reforms went live between April and July 2018, planning has been underway since 2009. The primary milestones relevant to this review are summarised below:



4. FINDINGS

The implementation of the bus reforms in Wellington City and Hutt Valley was a complex undertaking. It required a multi-agency Governance structure, involved staff from multiple functions of GWRC and depended on several external parties to deliver over 20 inter-dependent streams of work. This, combined with the customer facing nature of the change, created a substantial challenge.

Customers experienced poor reliability and punctuality post-implementation. These issues appear to have been substantially more severe in Wellington, where customer complaints peaked at 11 times normal levels (Hutt Valley complaints peaked at 4 times normal levels¹) – as such, many of the findings in this report are focused on the Wellington go-live. However, key performance metrics demonstrate ongoing and sustained improvements in the services being delivered. In the three and a half months post implementation, punctuality improved from 86% to 93%, reliability increased from 94% to 99%, and correct bus size performance rose from 66% to 80%²

Summary of findings

Governance: GWRC had robust governance structures and processes in place, with appropriate meeting cadence, decision processes and accountabilities in place. However, GWRC Councillors did not fully appreciate programme risks because the information provided to them was at an aggregate level and hence did not provide visibility on programme readiness at a local level

Resourcing, capability and capacity of the implementation team: The collective capability of the public transport team and dedicated programme team was insufficient for the transformational nature of the changes required. The programme team was proactive in identifying capability gaps, although this was often later than required. Furthermore, the PTOM requires a different operating model and capabilities from the old regime, which have yet to be fully addressed

Programme Management: A significant proportion of the programme was delivered successfully on time, including the new routes, timetable, fares and ticketing system. However, several elements of the programme were delivered late or insufficiently, including bus hubs, fleet, performance measurement systems, accurate RTI information and adequately trained drivers from original planned timelines. Noting that some elements of delivery were outside of GWRC's control

GWRC were proactive in ensuring there was a minimal viable service for go-live across all programme deliverables. The late or insufficient delivery of key milestones was due to insufficient phasing of the roll out, lack of testing, and GWRC visibility of operator readiness. Inaccurate performance information also hampered response efforts. GWRC took a collaborative approach to manage operators, but this approach did not adequately influence all operators

Risk and contingency management: Risks were effectively managed and detailed contingency plans were developed. This process was effective in mitigating risks relating to fleet and bus hubs, but was insufficient in managing operator readiness

Procurement: The bid and directly appointed unit assessment and operator plan assessment processes did not inherently identify major delivery challenges, resulting in issues such as driver and fleet allocation and resilience in scheduling being identified late. GWRC offered assistance to operators to address these issues. Not all operators availed themselves of this support. GWRC also experienced challenges with suppliers regarding the upgrade to the RTI system and delivery of Bus Hubs. The management of the ticketing system was successful, with only minor issues experienced

Public Consultation: Public consultations were extensive and conducted over a long time period, however the bulk of the consultation was early on in the process, resulting in some members of the public forgetting it had occurred. Consultations focused on elements of the design rather than implementation. Following go-live significant public feedback was received and acted upon

Communication: There was substantial external communications prior to launch, which was successful at generating high awareness levels of the change. However, the communication strategy failed to adequately set expectations pre-launch, (despite GWRC being aware of significant risks) and failed to control the agenda post go-live.

¹ GWRC complaints data

² GWRC performance data (from 16/07/18 to 31/10/18)

4.1. Governance

4.1.1. Appropriate programme governance structures, policies and processes were established well in advance of go-live, and sustained through the programme

- The governance structure for the programme was clearly defined and involved all relevant parties
 - the Public Transport Transformation Programme (PTTP) Steering Group was set up in July 2015³ and included representatives from GWRC, NZTA and WCC
 - this Steering Group was overseen by a Governance Board (made up of the Chief Executives of GWRC and NZTA) which it reported to on a monthly basis
 - GWRC would have benefitted from more direct involvement from NZTA to leverage learnings from similarly transformative PT implementations where NZTA had experience
- The programme was overseen by GWRC Councillors, who had oversight through Council workshops, the Sustainable Transport Committee, the Finance, Risk and Assurance Committee (FRAC), and the full GWRC Council to approve key decisions⁴
- The governance structure appropriately evolved as go-live approached
 - in June 2017, GWRC's Executive Leadership Team replaced the PTTP Steering Group with a Transition Management Board, comprised of all members of GWRC's Executive Leadership Team and chaired by the Chief Executive⁵
- The change programme was divided into 20⁶ work streams and sub-projects, with leads allocated to each. All issues and risks were assigned an owner responsible for management and resolution⁷
- Good record keeping and information sharing practices were adhered to
 - all meetings were minuted (including key information shared and decisions made), and the minutes approved at the subsequent meeting
 - the progress of key milestones were tracked according to a "gold", "silver" and "bronze" rating, reflecting the quality of implementation that could be achieved. Bronze represented the "minimum viable promise"⁸
- The governance structure remained post implementation which allowed for senior stakeholders, including the CEO, to be responsive in addressing issues

4.1.2. An appropriate regular and frequent meeting cadence was maintained throughout the programme

- The programme delivery team met on a fortnightly basis during the planning stages and increased their meeting frequency to weekly, six months prior to go-live
- GWRC Council oversight occurred in monthly scheduled meetings (quarterly for the FRAC). Whilst these meetings did not increase in frequency as the commencement approached⁹, informal council workshops were frequently conducted in the lead up to go-live.
- Steering Group, Transition Management Board and Governance Board meetings were conducted on a monthly basis. The frequency of Transition Management Board meetings (comprising members of GWRC Executive Leadership Team) increased from monthly to every two weeks in March 2018¹⁰

³ Transition Board Terms of Reference v0.2

⁴ Public Transport Transformation: Governance Structure for PTOM Transition Phase

⁵ PT Transition Management Board Terms of Reference v1.0

⁶ PTTP Risk and Issues Register

⁷ PTTP Risk and Issues Register

⁸ Critical Path Process - 28 February 2018

⁹ Formal council reports - STC, FRAC & Council

¹⁰ PTTP Transition Management Board Meetings

4.1.3. The information provided to GWRC Councillors was provided at an aggregate level and hence did not provide visibility of programme readiness at a local level

- The sign off for activities on the critical path was only escalated to GWRC councillors for items that may affect the “reputation of the council”, others relating to the “transformation”, “cross functional” or “PT operational” matters were signed off by GWRC officers¹¹
- GWRC Councillors were briefed on the programme’s risks throughout the process. However, Councillors were presented summarised information at an aggregated level, limiting visibility into the status of discrete project milestones at a local level.¹²

4.1.4. Continuing elements of the programme have not yet been fully transferred to BAU

- Approvals and decision-making processes are not yet part of BAU activities, with the transition processes currently operating in parallel. For example, weekly operator meetings are currently attended by both BAU and transition personnel
- GWRC is currently working towards transitioning responsibilities to the BAU team¹³

4.2. Resourcing, capability and capacity of the implementation team

4.2.1. The collective capability of the Programme team and Public Transport team was insufficient for the transformational nature of the changes required, with many key resources and skill gaps filled late

- The capability for a transformational project of this magnitude did not exist internally as GWRC had not made substantial changes to the bus network for c.20 years. The programme team was proactive in identifying skill gaps, although some key members of the programme delivery team were appointed later than required (e.g. change management and IT), which impacted implementation timelines
- In December 2017, the programme delivery team identified they had insufficient resourcing, and a decision was made to recruit an additional 11 individuals¹⁴. At this point, the programme was well into delivery mode and the project was already over budget¹⁵
- Late resourcing decisions include:
 - appointing a Change Manager and other related experts in November 2017 only after GWRC’s business readiness was assessed to be at high risk¹⁶. Change management expertise was identified as a key gap in October 2016 by an external consultant review¹⁷
 - nominating an IT representative later than the programme timeline required¹⁸, resulting in insufficient time for systems implementation
 - assigning a bus hubs change lead in November 2017¹⁹ when GWRC realised the supplier was at risk of not delivering on-time

¹¹ Critical Path Process - 28 February 2018

¹² Council Workshop - PTTP Update - 14 March 2018

¹³ PTTP Transition Management Board - 6 August 2018

¹⁴ PT Transition Management Board 18 December 2017

¹⁵ PTTP Transition Management Board - 18 December 2017

¹⁶ Council Workshop - PTOM Bus Transition - 18 October 2017

¹⁷ Public Transport Review (External Consultant) - October 2016

¹⁸ Interview with GWRC - 5 November 2018

¹⁹ PTTP Contractor Audit - 1 October 2018

- appointing a Contract Performance Manager on 1 July 2018 (an existing internal resource), which may have contributed to GWRC's inability to generate accurate data for performance measurement until October 2018²⁰
- The project team is continuing to be supplemented with experienced external contractors to help implement changes and establish new capabilities within GWRC, such as managing the ticketing system, revenue protection and sophisticated KPI management²¹. This included:
 - identifying that the programme delivery team required an additional 11 people in December 2017
 - introducing six Customer Experience Leads in October 2018 to improve overall passenger satisfaction in the network²²
 - appointing external network design experts in October 2018 to formalise the change process
 - bringing in external bus operation experts immediately after capability gaps were observed during the Hutt Valley implementation²³

4.2.2. The PTOM requires a different operating model and capabilities from the old contract regime, which have yet to be fully addressed

- New capabilities were required to successfully operate under the new contracts as noted in an external consultant report in 2016 (revenue collection and protection, sophisticated KPI management, and the new ticketing system). The recommendation required GWRC to hire new resources, and train existing internal staff to be able to perform these tasks effectively
- As GWRC's internal team did not have experience in these areas²⁴, external contractors were brought in during the implementation process
- GWRC has identified there are a number of capability and capacity gaps in its BAU processes, for example contract management and network design, and has engaged external consultants to address network design issues²⁵
- GWRC also recognises that the current PT organisational structure does not match with the new PTOM environment and a restructure is required, which will occur once the network is stabilised²⁶

4.3. Programme Management

4.3.1. Robust programme management processes, including the scheduling and prioritisation of activities, contingency plans and quality control were developed and adhered to

- Programme Management identified 63 GWRC and 54 operator deliverables
- Activities contributing to the deliverables and their solution completeness were tracked in a framework rating each deliverable as "gold", "silver" or "bronze" for go-live. Bronze was the "minimum viable promise". The team developed contingency plans for deliverables rated silver or bronze²⁷

²⁰ External Bus Operator KPI Review Report - Final - October 2018

²¹ Interviews with GWRC - multiple dates and GWRC Contractor Audit

²² Sustainable Transport Committee Update - 25 October 2018

²³ PTTP Contractor Audit - 1 October 2018

²⁴ Interviews with GWRC - multiple dates and Public Transport Review - External Consultant - 7 October 2016 Key Findings

²⁵ PTTP Transition Management Board - 6 August 2018

²⁶ PRRP Transition Management Boars - 6 August 2018

²⁷ Critical Path Process - 28 February 2018

- Any activity determined to be on the “critical path” and associated contingency plans went through a quality control process with senior programme team members²⁸. The plans were signed off at various levels, depending on their potential impact
- Standard project management process was followed, including the development of comprehensive risk registers with associated “treatment actions”, and an issue management process was developed

4.3.2. A significant proportion of the programme was delivered successfully at the go-live date, however several elements of the programme were delivered late or not to an acceptable standard

- A decision was made to deliver a full service on day 1, and a number of elements of the programme were delivered for go-live:
 - commencement of new operators
 - new route network
 - new timetable
 - new fares (permitting free transfers and a range of discounts)
 - new ticketing system (revenue collected by GWRC rather than operators) – although there were some issues with drivers using new ticketing hardware correctly and GPS fade (the hardware losing signal and failing to connect)
- Elements of the programme not ready for go-live:
 - new bus hubs (temporary bus hubs were in place at launch but were not adequate for a winter go-live)
 - required new fleet (an interim fleet of existing buses were procured to mitigate the late delivery of new fleet)
 - fully developed and accurate performance measurement system (ready in October 2018)
 - acceptable standards of Real Time Information (RTI) (accurate several weeks after go-live)
 - sufficient number of adequately trained drivers were unable to be supplied by the operators, resulting in use of out-of-town drivers to minimise driver related cancellations

4.3.3. A number of key elements of the programme were commenced late, resulting in insufficient time to deliver and adequately test all elements

- Bus Hubs were not completed ahead of go-live, due to a number of delays and planning complexity, as the process started too late and did not allow sufficient time for key aspects of the project timeline
 - the principal design and project management contractor, was not hired until November 2017²⁹
 - the extent of required consultation with key stakeholders was underestimated and not adequately planned for in the project timeline
 - conflicting infrastructure works from other transit authorities compounded the issue
- Protracted commercial negotiations with a key operator did not leave enough time for the operator to acquire new fleet in time for go-live

²⁸ Critical Path Process - 28 February 2018

²⁹ Supplier Proposal and Contract for Services

- negotiations with the operator were completed in January 2018³⁰ and the contract signed in June 2018³¹
- this led to GWRC agreeing with the operator to use an interim fleet, which the operator indicated meant that 10% of buses were smaller than initially intended in the contract³²
- supplier issues such as weather events in the UK (where some buses were being manufactured) and minor delays at Wellington's port also contributed to the delays, although the inadequate lead time from order confirmation was the major cause
- Lack of time for staff training and late upgrades to the RTI system resulted in customer and driver issues, noting that vendor performance was a major driver of this outcome
 - after the Wellington City launch, only 80% of services were tracked on 16th July³³, suggesting many services could not be accurately presented on RTI boards
 - as a consequence, this also directly affected drivers who relied on the system to time their runs
 - operators ultimately directed drivers not to use the RTI system, and instead use written time cards³⁴
- Although some user acceptance testing took place, performance measurement was not adequately provisioned for or tested ahead of go-live
 - the new performance data processing systems (using RTI and ticketing data) were not sufficiently tested prior to the launch of the new network³⁵
 - the Contract Performance Manager role within GWRC responsible for developing and collating performance measurements was filled (by an existing internal resource) on 1st July 2018³⁶
- Though it became clear that more time was required for significant elements of the transformation to be delivered on time, GWRC thought that further delays to the go-live date were not feasible due to contractual arrangements with operators

4.3.4. GWRC took a collaborative approach to manage operators throughout the implementation process. They relied on operators being forthcoming and transparent about their true state of readiness, which resulted in GWRC being alerted late to key issues

- During the preparation period for go-live, GWRC had frequent communication with operators, although they relied on operators to be forthcoming, timely and transparent about their true state of readiness for go-live
- Where issues were identified, GWRC was proactive in assisting operators to develop workarounds and provided additional resources where required

Drivers

- One operator had a shortfall of 110 drivers on 23rd May 2018 and expressed a “high level of confidence”³⁷ that all driver positions will be filled by go-live. However, at commencement, the operator estimated they were 70-80³⁸ drivers short

³⁰ Operator submission to Select Committee - 25 October 2018

³¹ PTTP Transition Management Board - 2 July 2018 (3 of 6 - PT Transition Status Report)

³² Operator submission to Select Committee - 25 October 2018

³³ Management Board PT Transition Presentation - 6 August 2018

³⁴ Interview with Operator - 15 November 2018

³⁵ PTTP Update to Council Workshop - 6 June 2018

³⁶ Interview with GWRC - 5 November 2018

³⁷ PTTP: Memo to Transition Board - 23 May 2018 (Contingency plans in the event of bus or driver shortfall)

³⁸ GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

- As a result, up to 50³⁹ drivers had to be sourced from out-of-town to meet the requirements (at additional cost to the operator⁴⁰). Time constraints did not allow these drivers to receive adequate training and therefore drivers did not know their routes well and on occasion made wrong turns
- Another operator communicated to GWRC on 6th July 2018⁴¹ that they had sufficient appropriately trained staff (including drivers) to commence the contract, however, significant sickness and absenteeism since go-live has continued to affect operations⁴², suggesting a lower than appropriate contingent workforce⁴³
- GWRC had previously explored the possibility of transferring drivers between incumbent and new operators, however GWRC concluded that the large number of operators and Collective Agreements with “differences in approach [made] it impractical to specify which terms and conditions are the best and should be protected.” GWRC also concluded that “intervention in the labour market would certainly impact value for money outcomes”⁴⁴

Fleet allocation to routes

- Every operator had the agreed target number of buses of each type and met the contractual Peak Vehicle Requirement (PVR)
- Despite meeting the correct number of buses of each type (set by operators), there were significant issues with incorrect bus types running on some routes. In the case of one operator this was due to the “incorrect allocation of buses to the services as specified in contracts”⁴⁵
- GWRC did not have full visibility of how operators allocated buses to routes
- As a result, at go-live the capacity of some buses was not sufficient for the demand on certain routes
- The situation has improved, by the week ending 19 October 2018 87.7%⁴⁶ of services had the correct bus type

Route testing

- The run times used in the new timetable were calculated from the previous timetable RTI recorded run times, and signed off by the operators. However, changes in the network were not fully accounted for or tested “on the ground” as GWRC believed this would not have provided an accurate picture due to the highly inter-related nature of the network.
- As a result a number of runs were unachievable as timetabled. Although some influences, such as customer behaviour change, and traffic conditions would have been difficult to account for ahead of go-live.

4.3.5. GWRC leveraged Auckland Transport’s reform experience to inform their implementation process.

- GWRC engaged with Auckland Transport (AT) in 2015 and have held monthly phone calls thereafter. GWRC benefited from a number of lessons from AT which helped inform how the network changes were approached and implemented within the Greater Wellington area including⁴⁷:
 - being more inclusive with industry during the tender process to encourage more competition, to ensure the balance in commercial risk and incentive was correctly allocated between GWRC and potential operators

³⁹ GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

⁴⁰ Interview with Operator - 15 November 2018

⁴¹ Email from Operator - 6 July 2018

⁴² Interview with Operator - 20 November 2018

⁴³ GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

⁴⁴ Council - PE 16.446; Council Workshop - 26 May 2016

⁴⁵ Email from Operator - 17 August 2018

⁴⁶ Sustainable Transport Committee - 30 October 2018

⁴⁷ Transition Scoping Workshop - 1 May 2017

- providing more communication to customers (e.g. brochure drops into households)
- using “AmBussadors”
- providing extra signage at bus stops
- using temporary bus stops (as a mitigation, if required, for the late completion of bus stops)
- allowing for extra call centre staff for the week leading up to, and few weeks after, go-live

4.3.6. The decision to implement a variety of changes simultaneously in each geography, overnight with insufficient implementation time, resulted in compounding service and operating issues

- The simultaneous implementation of new operators (with new fleets, drivers, KPI reporting regime), new network (with new routes and timetables), new fares and ticketing system resulted in a number of failures coinciding with each other and amplifying each other's effect on customer experience. This created a significant challenge for operators and GWRC to respond to. The decision to go-live in winter also exacerbated the impact on customers
- The decision to implement the new network at the same time as new bus operating contracts is longstanding, having been in the Regional Public Transport Plan (RPTP) in 2014. Alternatives in operator and network change sequencing were considered but discounted. Other options were judged to be “too complex, time consuming, expensive and more disruptive to customers”⁴⁸
- Councillors endorsed the simultaneous approach, and made a decision to implement the package of fare changes concurrently with the new bus network changes⁴⁹
- However, the programme team rated the risk of service disruption due to simultaneous significant network change and operators commencing operations as “Very High” with a “Major” impact rating in August 2016⁵⁰
- Some of the changes (such as fares, ticketing, performance data collection and shadow KPI regime) could have been introduced ahead of the operator and route change. This would however have come at a cost premium

4.3.7. The small scale of the earlier geographic phases resulted in few actionable “lessons learned” to address key challenges in subsequent phases. Not all issues were resolved before Wellington go-live

- The geographical scale and magnitude of change of the earlier phases was too small to flush out all of the problems which arose in the Wellington City network change
 - the implementations in Phase 1 and 2, in Wairarapa and Hutt Valley respectively had significantly lower passenger volume (<1% of total patronage is in Wairarapa, and c.20% of total patronage is in Hutt Valley)⁵¹ and had less significant route changes than Wellington City
- The scale of the problems customers experienced increased significantly in later phases, with a larger proportional increase in the number of complaints after the Wellington go-live date⁵²
- Although some issues were identified in the earlier phases, such as RTI system faults and drivers failing to log onto routes, these challenges were not resolved before the Wellington City go-live

⁴⁸ Bus Transition Strategy 2016 and GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

⁴⁹ Sustainable Transport Committee meeting, 8 August 2017

⁵⁰ PTTP Risk and Issue Register

⁵¹ Patronage data provided by Metlink

⁵² Metlink contact centre complaints data

4.3.8. The lack of accurate and useable performance information immediately post go-live hampered response efforts and created confusion between GWRC and its operators

- The lack of available, complete and accurate performance management data had a number of negative consequences⁵³:
 - factual uncertainty as to the actual performance of services because the full performance measurement system was not operational. GWRC had to rely on information from drivers, “AmBussadors” and other staff to monitor services
 - inability to impose or enforce the full contractual financial performance incentives⁵⁴, (which are expected to be in place in March 2019)
 - significant time lag for GWRC to discover causation of delays and cancellations, requiring correspondence with an operator via GWRC staff to diagnose root cause.⁵⁵
- This situation was compounded by the fact that in the new model GWRC took ownership of all data and provided a subset of this to operators. Previously operators had access to all performance information. Some operators perceived they were not receiving sufficient data (such as revenue and loadings data)⁵⁶
- Since go-live the two main operators have increased their resources working on performance data analysis. For example an operator accepted assistance with their performance analysis function (offered to all operators by GWRC) and has since improved their capabilities and now generates daily reports on performance from the data made available

4.3.9. GWRC and its operators were proactive in looking for ways to minimise customer impact, especially leading up to and immediately post go-live

- Temporary bus hubs were in place before go-live, which minimised adverse impacts to customer experience
- Interim buses were sourced by all operators to ensure they met the agreed target number of each vehicle type in their fleet by go-live⁵⁷
- Emphasis was placed on improving driver training and unit-by-unit diagnostics post go-live, resulting in an increased proportion of trips tracked on RTI from 80% to 88%⁵⁸ in the first two weeks following Wellington City go-live
- An external consultant was appointed to undertake an external audit to suggest improvements to the accuracy of the performance management system and validity of the data⁵⁹

4.3.10. When issues were identified post go-live, GWRC were slow to acknowledge the severity of the situation but did move quickly to implement contingency plans

- Immediately post go-live GWRC Councillors were told by the Programme Team that they were just experiencing “teething problems” but this understated the extent of the performance issues
- When issues were identified they were acted upon quickly

⁵³ External Bus Operator KPI Review Report - Final - October 2018

⁵⁴ PTTP Transition Management Board - 11 July 2018

⁵⁵ Interviews with GWRC - 7 November 2018

⁵⁶ Operator submission to Select Committee - 25 October 2018

⁵⁷ Interviews with GWRC - 6 November, Assurances from Bus Operators to GWRC

⁵⁸ PTTP Transition Management Board - 6 August 2018

⁵⁹ External Bus Operator KPI Review Report - Final - October 2018

- Where there were capacity issues (route 2, 3, 36) it was resolved with the operator to “remedy fleet size and associated operating practices”⁶⁰, although the identification of the cause of some capacity issues did take several weeks to identify.
- Where there was significant cancellations and late running they used “banker” buses and managed headways, unconnected routes (e.g. 1 and 7) to prevent contagion of late running and changed the way shift transfers occur to improve punctuality⁶¹
- Buses with inconsistent matches between the ticketing system and location (GPS fade) was resolved by repositioning aerials on offending buses⁶²

4.3.11. The speed that GWRC can implement improvements to the network is dependent on the operator/s affected.

When introducing network changes, it takes time to evaluate the benefits, conduct public consultation and allow sufficient time for operators (regarding their resourcing and bus allocations)

- Some operators are faster to implement changes than others, meaning that depending on which part of the bus network is altered, changes can take between 16 and 30 weeks to implement, with some operators able to implement changes faster⁶³
- GWRC therefore can potentially only make major network changes once or twice a year due to this restriction

4.4. Risk and contingency management

4.4.1. GWRC were disciplined in their approach to assessing and monitoring risks

- The programme management team had a risk register in place since May 2016, detailing all potential risks, ownership and ratings pre and post mitigating actions
- In the lead up to go-live, risks were analysed and reviewed weekly by the programme management team, with key risks presented to the Transition Management Board

4.4.2. GWRC developed detailed contingency plans and activated these plans as circumstances dictated

- Contingency plans were developed for any activity identified on the critical path, these all had to be in place 60 days before go-live. Contingency plans were developed for risks including bus hubs, fleet delivery and driver shortage
- GWRC monitored these activities, and activated contingency plans as required to mitigate potential negative impacts⁶⁴

4.4.3. GWRC’s risk and contingency management was effective in identifying most risks and related workarounds, except for operator readiness associated with Directly Appointed Units

- Key risks that ultimately impacted implementation were identified, including operator readiness and the potential for service levels to be impacted by changing too many network elements at once

⁶⁰ Sustainable Transport Committee - 30 October 2018

⁶¹ Sustainable Transport Committee - 30 October 2018

⁶² PTTP Transition Management Board - 6 August 2018

⁶³ Sustainable Transport Committee - 30 October 2018

⁶⁴ PTTP Risk and Issues Register

- GWRC worked with operators to proactively manage risks, such as procuring sufficient interim buses to mitigate late fleet delivery, and recruiting temporary drivers from other regions to mitigate driver shortages
- Ahead of go-live the risk of a decrease in the performance of the Directly Appointed Units was rated as low⁶⁵ and as such received comparatively less attention from GWRC than other risks. However, upon commencement performance in terms of cancellations and correctly matched buses was lower than expected⁶⁶

4.5. Procurement

4.5.1. The procurement process relied upon operator assurances to provide a true and accurate perspective of operator planned operations

- As a result there was inadequate resilience in driver and fleet resourcing for some operator timetables
 - timetables were developed by the operators with very little, or no, layover time between timetabled runs. This created a situation where if a bus runs late on one route, it will be late on subsequent routes for that day without intervention
 - There is a contractual minimum of 2 minutes between timetabled runs, intended for driver changeover, vehicle inspection, turning on RTI system, etc. which should be included in planning in addition to contingency time⁶⁷
 - GWRC identified 35 occasions in an operator's schedules with less than 2 minutes between runs on 13th August⁶⁸
 - the problem of insufficient catch up time was compounded by inaccurate estimates of the time required for runs on specific routes for all operators
 - Another operator had also not included sufficient contingency time in their bus scheduling, however they were able to adjust their bus and driver allocations and add additional resources to rectify the issue two weeks after launch⁶⁹

4.5.2. GWRC offered assistance to operators, and adjusted the network where possible (post go-live) to mitigate issues identified

- Assistance provided by GWRC to operators included the provision of:
 - additional "banker" buses to supplement capacity and extend routes⁷⁰
 - bus "buddies" to assist drivers who did not know the route⁷¹
 - Customer Experience Leads to understand customer pinch points⁷²
 - placement of operational staff within an operator⁷³
 - assistance with operator tasks (such as updating Route Cards)⁷⁴

⁶⁵ Council Workshop Update - 6 June 2018

⁶⁶ GWRC performance data

⁶⁷ Operator Contracts (3.32.3)

⁶⁸ GWRC analysis of Operator timetables

⁶⁹ Interview with Operator - 15 November 2018

⁷⁰ GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

⁷¹ GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

⁷² Sustainable Transport Committee Update - 25 October 2018

4.5.3. The RTI and Bus Hub suppliers failed to deliver key elements of the programme on time. Conversely, there were few issues with the ticketing system vendor

RTI system

- The agreement with the supplier was long standing, and GWRC were locked into using their systems given existing investments in their hardware
- GWRC was assured by the supplier in November 2017⁷⁵ that existing fleet RTI hardware would work with the new systems and could be used for passenger RTI and KPI management
- However, after go-live, interoperability issues were discovered with existing hardware and had to be updated at short notice⁷⁶

Bus Hubs

- The supplier provided an estimate in November 2017 that the Bus Hub construction would be complete by 6 July 2018 and commissioned in August 2018⁷⁷, with an understanding that GWRC would work with the supplier to achieve a completion date prior to go-live. However, many bus hubs are still not completed
- The timeline did not include sufficient time for consultation with key stakeholders, such as Wellington City Council and electricity utility providers

Ticketing system

- The management of the roll out of the ticketing system to all services was successful, with only minor issues experienced. Smartcard usage was c. 70% before the changes and is now up to c. 83% as of November 2018
- The system represented a change in process and ownership from the previous model, with fares now collected by GWRC rather than the operator. This was in addition to the change in the experience for some customers, although the majority of Wellington and Hutt Valley customers were already familiar with the system as it was the main ticketing system with the incumbent operator
- GWRC and the ticketing supplier were agile in overcoming problems, including accommodating increased workload due to the use of interim buses⁷⁸
- The system has been mostly accurate with about 90% of buses having no issue with correctly processing fares – the remaining 10% experienced an issue requiring on board equipment (GPS aerials) to be reconfigured⁷⁹
- There was relatively low customer impact associated with this as automatic refunds were issued to any passenger who experienced any technical issues⁸⁰

4.5.4. Operators were not subject to any performance based financial incentives until 1 October 2018

- Operators were not incentivised or penalised based on financially based performance KPIs until 1st October 2018 as GWRC applied a grace period and were unable to accurately produce relevant KPIs
- A simplified interim reporting regime (measuring basic, high-level metrics, such as reliability) is now in place and was reviewed on 30 November 2018 and extended until March 2019 when full KPI reporting and incentives may commence⁸¹

⁷⁵ Minutes of conference call with supplier in November 2018

⁷⁶ Email correspondence with supplier - July 2018

⁷⁷ PR Wellington Hutt Bus review (revised) - 23 October 2018

⁷⁸ Interviews with GWRC and supplier - 7 & 19 November 2018

⁷⁹ PTTP Transition Management Board - 6 August 2018

⁸⁰ PTTP Transition Management Board - 6 August 2018

⁸¹ Sustainable Transport Committee - 30 October 2018

4.6. Public consultation

4.6.1. Public consultation was extensive and conducted over a long time period, however the bulk of the consultation occurred several years ago

- GWRC engaged the public in multiple different forums since 2009 to elicit feedback on the bus network changes, including community focus groups, public meetings, information sessions, and citizen engagement panels⁸²
- Although the consultations occurred over several years, some elements of the consultation happened early in the process. As a result the public perception of some was that it had not occurred
- Consultations focused on elements of the design rather than implementation choices
- Substantial changes were made to the design based on responses to consultation. Including a significant reduction in the requirement to transfer between buses and co-design of routes with communities
- In the implementation phase customers were consulted regarding specific decisions, such as the placement of Bus Hubs

4.6.2. Following go-live significant public feedback was received and acted upon

- Since go-live GWRC has received feedback from a customer engagement panel, councillors and complaints
- Responses to customer feedback post go-live included the use of additional “banker” buses, adding additional stops to express buses, modifying/extending routes and improving the quality of the customer facing RTI system⁸³
- Customer feedback regarding elements of the route design and timetabling has also been acted upon by GWRC wherever feasible

4.7. Communication

4.7.1. There was a substantial volume of external communications prior to launch which succeeded in generating high levels of awareness

- Internal assessments of the strength of the campaign suggest that a high degree of customer awareness was achieved, with 84.2% of the target audience reached, which was above the 80% set target, with a projected average frequency of 24.7 (the number of times each person viewed each message) between May 7 and July 31⁸⁴
- On the ground “AmBusadors” were used to support customers in the early stages of implementation and overcome transition challenges

4.7.2. Leading up to go-live, the communication strategy failed to adequately set expectations, when the programme team was aware they would only meet the “minimum viable promise” on some elements of the transition

- Expectations were not sufficiently managed with key stakeholders (customers and Councillors) regarding the initial performance of the new bus system, including the likely length of time required to overcome initial implementation issues
 - communications continued to focus on ensuring widespread knowledge of the changes, improving awareness and understanding⁸⁵.

⁸² GWRC Briefing to Transport and Infrastructure Select Committee - 27 September 2018

⁸³ Interviews with GWRC - multiple dates

⁸⁴ GWRC PTTP Public information programme

⁸⁵ Communication phrases from network go-live - August 2018

- communications did not sufficiently convey the likely difficult transition, even though the project team were aware of significant risks and “bronze” (minimum viable promise” delivery

4.7.3. Messaging was updated post go-live to appropriately reflect the true status of implementation, however GWRC failed to manage the conversation, and communicate the benefits of the changes

- In August 2018, messages in communications were updated to reflect a more understanding tone. Reflecting that there “may be bumps”, and to show that GWRC is “listening, learning and changing its overall stance”⁸⁶
- GWRC also developed a Crisis Communications Plan which included keeping GWRC on the “front foot”⁸⁷ and councillors were regularly available to the press⁸⁸
- However, GWRC was not experienced in crisis PR management and failed to manage the media successfully. The press was highly critical and negative in tone and focused on problems with little mention of any benefits
- GWRC communications continued to focus on providing customers with useful information rather than promoting the benefits of the new network. Positive news, such as the introduction of new electric buses and a successful simpler fares roll-out was overshadowed by negative news regarding performance
- The lack of accurate performance data compounded the issue. In the initial weeks of new operations in Wellington City, GWRC did not have accurate performance information available to share with the press and public⁸⁹

4.8. Conclusions

Our review of the bus reforms in Wellington City and Hutt Valley identified a number of inter-related factors that hampered the implementation the new network.

Of these, some factors had a more detrimental impact on overall customer outcomes than others. These are summarised below:

- Underestimation of the transformational nature of the changes required which led to insufficient capability and capacity on the programme team, and late resourcing to fill in the gaps. As well as not leaving enough time to deliver all elements of the programme to the originally defined specification
- Simultaneous implementation of changes on the Wellington network. Phasing elements of the implementation (e.g. fares, ticketing and performance data collection ahead of other elements) could have eased some of the pressure on the team and prevented compounding issues between respective deliverables
- The reform process did not include a thorough assessment of operator readiness to discover and prevent any avoidable readiness issues (e.g. insufficient layover time and bus matching in operator plans)
- Failure to adequately set customer and stakeholder expectations ahead of go-live, by adjusting tone and messaging of communications to better reflect the “minimal viable promise” that would actually be delivered

⁸⁶ Communication phrases from network go-live - August 2018

⁸⁷ Crisis Communications Plan

⁸⁸ GWRC note on Media management Wellington bus network implementation post July 15

⁸⁹ External Bus Operator KPI Review Report – Final – October 2018

5. SUMMARY & RECOMMENDATIONS

The change undertaken across Wellington City especially and to a lesser extent Hutt Valley networks was significant, involving substantial changes to all aspects of the bus network as well as ways of working for the GWRC team.

As a consequence of having robust programme governance and a diligent focus on risk and contingency management, GWRC were able to deliver a “minimum viable promise”, even though a number of elements of the programme were not delivered as originally fully specified.

Since the implementation, operator performance and the number of complaints is nearing longer-term averages, and significant effort has already been made to respond to and act on public feedback.

The attention for GWRC now needs to turn the long-term sustainability of the implementation, through:

- strengthening its capability and changing its operating model to reflect the changes required under the PTOM
- improving its operator, network and system performance by ensuring all data is robust and available, and using this to support decisions around change and enforce the KPI regime
- building collaborative relationships with all operators within a partnering framework
- managing the media agenda, by being more proactive (rather than reactive) and using data to support a factual perspective of the true state of performance of the network

5.1. Capability

Fill capability gaps and update the organisation model to recognise newly required expertise and change in risk sharing approach

Under the new model, GWRC is required to perform new functions regarding the bus network, including managing the ticketing system, revenue protection, sophisticated KPI management, and managing performance-based operator contracts.

Given the criticality of these roles and increased risk that GWRC now bears under the PTOM and new contract regime, there is a need to supplement the existing team with these additional capabilities and for the organisational structure to reflect this new operating paradigm. An organisational review is underway to address these issues.⁹⁰

5.2. Operator, network and systems performance

Ensure all required data is robust, available, analysed and utilised by all stakeholders

Data is a critical resource that underpins operations in the reformed network. For example, data is required by contract performance managers to measure operator performance against KPIs, network planners to design routes and timetables effectively, and customers to be informed of bus location and impending arrival. GWRC needs to ensure that data is always available and reliable.

Use data to provide factual support for incremental improvements to the network, rather than relying on anecdotal evidence or pressure from stakeholders

GWRC should leverage the data available to evaluate the need to make further incremental improvements (e.g. changes to its route and timetable design). This should occur as part of a regular formal review process that would holistically consider all potential change impacts and ensure the most critical items that need to be addressed are prioritised. GWRC has already recognised this, having engaged external contractors to develop and implement a standardised process.⁹¹

⁹⁰ PTTP Transition Management Board - 6 August 2018

⁹¹ GWRC has hired an external consultant since October 2018 to assist with data analysis and to develop and implement a standardised process

Supplement capability of operators (e.g. performance analysts)

GWRC has observed a significant capability gap in operators' ability to analyse and utilise performance data⁹². GWRC has already placed a specialist within an operator to assist with performance analysis who has now joined their team.

Implement the full performance regime as soon as possible to incentivise operators as fully intended in the contract and PTOM

The performance regime is a key enabling feature of the PTOM changes and should be implemented as a priority now that reliable data is available from GWRC's systems. Subjecting operators to the full suite of financial incentives will likely drive faster performance improvement.

Ensure the environment and surrounding infrastructure is suitable for buses

Continue to work with Wellington City Council (WCC) to ensure that the environment surrounding bus routes are suitable for the fleet servicing the routes. (e.g. repositioning of lamp posts that are too close to bus stops and cutting back trees that may damage buses).

Improve bus priority

In situations where the timetable cannot be easily be fixed to allow for reliable and seamless connections, work with Wellington City to prioritise bus traffic ahead of other road traffic.

5.3. Operators

Increased open communication between operators and GWRC

A key aspect of cultivating a collaborative partnership with operators is having frequent and open communication. During implementation, this was not always the case where GWRC had limited visibility into the details of operators' progress and readiness to go-live in some cases. Moving forward, improved communications will be important to ensure GWRC and operators can work effectively together to identify network and performance issues and make improvements more efficiently and effectively.

GWRC will need to develop a more collaborative relationship with operators to achieve the partnership goals as set out in the PTOM

Whilst GWRC and operators collaborated together to deliver reforms to the network, the relationship with some operators has not been as collaborative as it should be. Moving forward, GWRC and all operators need to work together to ensure ongoing improvements to the bus network are made as effectively and efficiently as possible.

5.4. Communications

Provide information to media more proactively, promoting the benefits of the new network and make performance data (including causation) public

GWRC should take control of communications agenda and be more proactive in the promotion of system and performance improvements (including recent incremental improvements). This will provide passengers greater visibility into the positive aspects of network change. In addition, informing passengers of the causes for service disruptions (e.g. late buses or cancellations) will likely mitigate some of the frustration experienced.

⁹² Based on Operator Report login tracking

6. APPENDIX 1 – TERMS OF REFERENCE

Terms of Reference

Wellington City and Hutt Valley bus network implementation review

Purpose

In order to provide assurance to the Regional Council and Central Government agencies, GWRC and NZTA seek an independent review of the implementation of the new Wellington City and Hutt Valley bus networks to determine their effectiveness in delivering:

- the objectives of the Wellington Regional Public Transport Plan
- levels of service that meet the needs of Wellington City and Hutt Valley communities

The first stage of the review will be undertaken to a defined scope and tight deadline.

Timing

GWRC requires a final report on the first stage of the review to be presented to the 13 December 2018 Sustainable Transport Committee Council meeting. The agenda for this meeting will close on 6 December 2018. A draft report will be required by 29 November 2018.

Background

Implementation of changes to the region's bus services started on 30 April in Wairarapa, then 17 June in the Hutt Valley and finally 15 July in Kapiti, Porirua and Wellington. Much of the region is enjoying an improving and increasingly consistent service. However, issues continue to affect the customers' experience. Service levels in Wellington City are generally improving but still not yet at required levels.

The GWRC Chief Executive has taken personal responsibility for overseeing the performance and improvement programme working with a dedicated team and drawing resources from across the organisation. Interim measures are being put in place to address some capacity issues and the team are working hard to improve on-time performance and transfers, minimise cancelled trips, resolve issues with the Real Time Information System and complete the bus hubs.

Alongside the operational interventions to improve the performance of the bus network in Wellington, the Council has requested an urgent independent review of the situation. This is seen as the first stage of the review process. A complete *post implementation* review, including the inherent design of the network, will follow as part of this process in early 2019.

The first stage of the review requested in this Terms of Reference will focus on a clear articulation of what happened *during implementation*. It will review management and operators' responses to the various circumstances encountered, identify, and recommend any further action that could be taken to improve the network operation and customer experience.

Scope

The review should cover the following aspects in detail:

1. The planning and management of the bus transition, with an overview of the following:
 - Governance
 - Resourcing and capability and capacity of the Council's implementation team
 - Programme management
 - Risk and contingency management
 - Procurement
 - Public consultation
 - Communications
2. The review will take into account the circumstances leading up to and following implementation. We have identified the following areas as key

- Operator performance
 - Network performance (is it working as designed)
 - Systems performance (Real Time Information, data management, revenue collection)
 - Programme interdependencies
 - Contractual and commercial framework
 - Interim ticketing (Systems) and fare changes
 - Bus hub readiness
 - Industrial relations and resources
 - Customer and public feedback
 - The application of this feedback into service and network design changes
 - Operator performance in applying network optimisation changes with agility
 - Media and stakeholder reaction
3. An evaluation of initial and ongoing responses to the circumstances listed in (2.) above
 4. An assessment of whether the main issues being experienced are indicative of systemic issues.
 5. An informed view of whether all available and practical options to improve operational performance have been implemented or considered.
 6. Recommendations of further actions to improve the situation for customers.

Out of scope

Detailed assessment and analysis of the following elements are excluded from this first stage of the review:

- The inherent design and philosophy of the new Wellington network
- Bus services outside of Wellington City and the Hutt Valley
- Rail and harbour ferry services
- PTOM (Public Transport Operating Model) contracts
- Fares policy

Next Stage

The next stage of the review will include a more thorough assessment of those attributes that affect the effectiveness and efficiency of Wellington City and Hutt Valley bus services, including:

- contractual arrangements with operators (including employee protections and industrial relations; performance indicators, incentives and penalties, and sharing of risk and reward)
- network design and time tabling,
- bus fleet composition and ownership
- depots and other operator-owned assets,
- fare policies,
- supporting technology and systems, including ticketing, real time information, journey planning, customer support, bus hubs, stops and shelters and bus priority traffic measures.

This next stage will have its own terms of reference, which will be informed by the outputs from the first stage.

7. APPENDIX 2 – LIST OF INTERVIEWED STAKEHOLDERS

The full list of key stakeholders consulted on this project are as follows:

GWRC staff

- Chief Executive
- GM Public Transport
- PTTP Programme Director
- Programme Director Bus Services Transformation
- Team Leader, Service Delivery
- Contractor, Tender Process
- Programme Lead
- Acting Manager Bus Operations
- Contracts Performance Manager
- Chief Information Officer
- Enterprise Architect
- GM People and Customer – Customer engagement
- Communication team
- Acting Manager Bus Network and Infrastructure – Network Design, Operations
- Senior PT Planner
- Manager Public Transport Planning
- Chief Financial Officer
- Fleet Transition Manager
- Hub Implementation Manager
- Service Design Consultant
- Customer Experience Manager
- Customer Experience Journey Lead

GWRC Councillors

- Councillors from Wellington, Kapiti Coast, Lower Hutt and Porirua-Tawa constituencies

Operators

- Transport and Operations Director, Tranzurban
- General Manager Strategy, NZ Bus
- Chief Executive, Mana

External stakeholders

- Chief Executive, Wellington City Council
- Transport Manager, Hutt City Council
- Network design consultants
- NZTA
- Snapper
- Independent consultant

8. APPENDIX 3 – GLOSSARY OF ACRONYMS

BAU - Business as usual
FRAC - Finance Risk and Audit Committee
GWRC - Greater Wellington regional Council
KPI - Key performance indicators
NZTA - New Zealand Transport Agency
PTOM - Public Transport Operating Model
PTTP - Public Transport Transformation Programme
PVR - Peak vehicle requirement
RTI - Real Time Information
RTPT - Regional Public Transport Plan
WCC - Wellington City Council