greater WELLINGTON
REGIONAL COUNCIL

Report	10.403
Date	4 August 2010
File	TD/06/01/03
Committee	Transport & Access Committee
Author	David Lewry, Major Projects Team Leader

Real-Time Information Project; Pilot Acceptance and Next Steps

1. Purpose

To provide the Committee with an update on the acceptance process for the Real-Time Information project Pilot, and to add further detail to the anticipated implementation timeline.

2. Significance of the decision

The matters for decision in this report **do not** trigger the significance policy of the Council or otherwise trigger section 76(3)(b) of the Local Government Act 2002.

3. Background

This Committee considered an update on the progress of the Pilot phase of the project at its 15 June 2010 meeting.

The Pilot phase is designed to prove the operation and performance of the real-time information system in situ in Wellington, prior to its full scale deployment. Acceptance of the Pilot is the trigger for progression to the main implementation phase of the project, and is a major contractual milestone

The previous update noted the completion of the live running element of the Pilot phase, and provided some detail of the assessment process being initiated at that time.

4. Pilot Phase acceptance

The assessment of the Pilot phase underpins the formal acceptance process through the incorporation of a range of pre-defined tests. These are designed to ensure that all scenarios and conditions are encountered and successfully dealt with, and that the system meets or exceeds the original functional requirements and performance criteria.

The process takes into account the host bus operator's experience with the system, and incorporates an independent external review of the acceptance process and of specific aspects of the Pilot performance.

As reported in the previous update, the fundamental performance of the system has been highly satisfactory, and no major issues have been encountered.

A limited number of inevitable 'fine tuning' or 'shakedown' matters identified during the initial period of the Pilot have been successfully resolved. Each has been the subject of thorough investigation, before a solution or adjustment has been proposed and subsequently tested. These are reflected as minor amendments to the Final System Specification, to which the implementation of the full system will comply.

The Pilot assessment process is now complete, and the formal Acceptance has been agreed.

4.1 Independent review

The independent external review endorsed the assessment process for the Pilot, and its findings support the resolution of each of the minor adjustments made.

The review also noted a number of positives. These included the responsiveness of the supplier and its local implementation partners to requests for information, and the comprehensiveness of the responses provided. The high degree of configuration flexibility of the system to meet local implementation conditions was recognised. It was also noted that in some areas – particularly in its reporting capability – the system's performance exceeds that of the original requirements.

Useful recommendations for the roll-out process have also been provided. These include methods for the ongoing monitoring of certain system performance key performance indicators (KPIs), and suggestions on the testing and integration process of successive implementation phases.

4.2 Data

The terms of the agreement under which operators will participate in the real-time system, provide for the joint use of system-generated data for the purposes of identifying and monitoring refinements to the scheduling and timetabling of services. It is this process that it is anticipated will lead to progressively improved reliability of bus services over time.

The available extent of system-generated data, and the ease and flexibility with which it can be manipulated and reported on, are most impressive. This provides a formidable tool for optimising service efficiency, reliability and performance, and is of significant value both to Greater Wellington and to bus operators.

It is notable that during the Pilot phase, and independently of any specific action by the bus operator, the overall trend on the Route 14 has been one of improved reliability. This is partly attributable to the system's on-bus

equipment, which provides the driver with a real-time display of early/late deviation from schedule.

The Pilot phase has confirmed and quantified known inadequacies in the existing Route 14 timetable, and has supported the long-standing proposal for re-scheduling of this service. It has recently been possible to introduce the revised timetable as planned, and this is now being monitored. Although outside the scope of the Pilot itself, this process has provided valuable experience for incorporating future timetable and associated schedule changes into the real-time system.

The live running of the 26 buses equipped for the Pilot is being continued throughout the period leading up to the start of the main programme of fitting of on-vehicle equipment. With Go Wellington's agreement the data for Route 2 has been added, to enable further tracking of buses and monitoring of the system on an ongoing basis.

4.3 Bus priority

As previously reported, it has not yet been possible to demonstrate the required bus priority functionality with the SCATS traffic control system, as part of the Pilot scope. This is due to the third party constraints on the development of the required interface.

Joint working with Wellington City Council continues and testing of an interface specification is expected to take place shortly, using the City Council's off-line SCATS test system. The delivery requirement for demonstration of the bus priority functionality has been incorporated into the main project roll-out phase.

5. Next steps

The immediate next steps following the Pilot acceptance can be summarised in three main areas, as follows;

5.1 Operator participation

The Pilot has been conducted under a specific participation agreement with Go Wellington. The positive Pilot experience and clear demonstration of the system's capabilities have provided a solid foundation for development of the participation requirements, towards a substantive agreement.

Bus operators in the Region have been consulted on a proposed framework for a definitive participation agreement, and responses to this are being reviewed for incorporation into a draft agreement for subsequent comment and execution. The framework covers, for example, the responsibilities of parties, the commercial principles governing the provision, use and arrangements for maintenance of equipment, the provision of commercial (scheduling) data and the permissible use of system-generated reporting data.

It is expected that in due course, the provisions for real-time participation will be subsumed in service provision contracts. At that time, it is anticipated that

further provisions will be incorporated, to extend the use of system-generated reporting data for the purposes of monitoring and ensuring service quality. However, this is not yet feasible in the absence of clarity of the developing Public Transport Operating Model (PTOM) implications for service provision contracts.

5.2 On-bus equipment installation programme

The programme of installation of equipment on buses is subject to the agreement of operators under the terms of the participation agreement.

Initially with Go Wellington, buses will be progressively prepared by 'pre-wiring' in readiness for the real-time equipment. This method will permit the actual installations to take place across the fleet in a condensed period. The Pilot experience indicates that the unit time for equipment installation is less than originally anticipated. Through the system supplier and their local implementation partners, production of the necessary wiring looms is scheduled to commence shortly.

The proposed approach ensures that equipment is not deployed for some time before it is actually used, and also supports the roll-out approach preferred by stakeholders, which is to go 'live' with real-time on a complete operator-by-operator basis, rather than piecemeal or route-by-route.

The intended sequence of operator installations remains unchanged. Following Go Wellington, Valley Flyer buses will be equipped, and then the Mana Newlands fleet.

5.3 Display signs and installation schedule

The site-specific implications of each potential display sign site identified in an initial schedule have been assessed. The Committee will recall that the contract provides for the installation of up to 250 display signs, and recognises that the cost of installation varies considerably, depending primarily upon the availability and proximity of a suitable power supply to each site. Flexibility to achieve balance between site selections and installation costs is built in.

The approach to the selection of locations for assessment has been on the basis of the relative significance of bus stops, including the importance of their role as interchange points between services, the level of passenger usage and the location of the stop in relation to neighbourhood centres. Input from the bus companies has also been incorporated.

The inevitable implication of using these selection criteria is clearly a higher concentration of signs in the more dense parts of the Metlink network. However, it has been ensured that a suitable number of signs are proposed in suitable locations in the main population centres and at the main interchanges, outside the Wellington urban area.

It should be noted however, that real-time information will be available for stops and stations whether or not a display sign is installed, through the Metlink website and via txtBUS and txtTRAIN.

It should also be noted that the installation costs of a small number of potential sites are prohibitive. In this case, locations may be substituted with others nearby, or alternative solutions for obtaining power supplies, proposed. For example, negotiations are in progress to mount a display sign from the street awning at Stokes Valley library adjacent to the bus stop. This overcomes the requirement for and cost of an extensive length of trenching to bring power to the bus stop.

Alternative means of providing power are under investigation for selected sites, including local battery storage where electricity supplies may be taken from non-permanent sources (such as street lighting circuits), and solar power.

A number of different display sign types, suited to their location and role, are included in the programme. The main Wellington CBD ('Golden Mile') stops will have a purpose-designed totem structure, incorporating a flat-screen real-time display sign and the static Metlink information in an integrated unit designed to complement existing street furniture. Advance provision for the installation of these, including their foundations and power supplies, has been incorporated in the Manners Mall works contract.

The standard 3-line flag-type display sign is the most numerous, and is a refinement of the type installed in the Level 6 reception area for the Pilot. The majority will be pole-mounted, but provision is made for a number to be mounted from bus shelters, or from beneath street awnings or station platform canopies where appropriate. In each case, efforts have been made to ensure that the installation of the real-time sign is as logical and consistent as possible, and does not result in a proliferation of visual clutter at bus stop locations.

The project requirements include provision for blind and low-vision users at bus and train display sites. Tenderers were originally asked to propose means by which this would be achieved, and we have worked with organisations representing the blind community to determine the acceptability of possible solutions. The preferred solution is for the audio announcement capability of the display signs to be activated by the individual using a hand-held key-fob unit. Means of administering the provision of these, and how they would be made available to visitors, are under investigation.

A schedule of proposed display sign installation sites, reflecting work in progress on the assessment and feasibility processes described above, is provided for information at **Appendix 1**. While the schedule illustrates the anticipated distribution of display sign locations, it should be noted that it is not yet complete.

6. Real-time information via Metlink services

The incorporation of real-time information into the Metlink website continues to be developed. The data integration process is complete, and alternatives for presentation are being developed for consideration.

Similarly, the data integration into the txtBUS service has been developed, and alternatives for the most suitable presentation of real-time information in text form are being developed for consideration.

Options for the timing of the introduction of the real-time improvements to Metlink services are under investigation. If possible, they will be progressively phased to broadly align with roll-out progress.

7. Real-Time for rail

The joint working with KiwiRail and ARTA on requirements for real-time for rail continues, and has progressed recently. A set of requirements that will satisfy the needs of both Auckland and Wellington real-time information systems has been agreed. This is now being used by KiwiRail to develop the detail of a specification for the provision of train tracking and timetable data via a single source. This will serve ARTA and Greater Wellington, as well as internal KiwiRail business optimisation clients.

Further work remains to be done to enable the consistent and accurate association of individual trains with specific services. On buses, this is done automatically via the ticket machine, but there is no equivalent action in the train case.

Implementation of real-time for rail is scheduled to follow the programme for the bus network. The timeline for the installation of display signs on rail stations is designed to reflect this, although the feasibility and site investigations are already in progress as part of the overall sign installation programme. Co-operation with the rail station improvement programme has in some cases enabled the advance incorporation of provisions such as electrical ducting for real time display signs.

8. Implementation timeline

The Pilot acceptance has been reached approximately a month later than anticipated in the original project timeline. This is partly due to the extension of the live running element of the Pilot, and partly to the interactions required to complete the independent review process.

Despite the slightly extended Pilot acceptance process, it is anticipated that the implementation timeline for beginning the on-bus equipment fitting reported at the 15 June meeting, will not be significantly affected. This anticipates beginning the first phase of fitting for Go Wellington in September 2010.

In order to ensure that the roll-out process is as logical and communicable as possible, the display sign commissioning programme will as far as possible reflect the main operating territory of the bus companies. This implies an initial concentration on Wellington urban area signs, before the programme spreads to the Hutt Valley and Kapiti Coast areas to complement the presence of equipment on buses operating in those areas.

It is expected that development will be sufficiently advanced to allow the preliminary works for display sign installations to begin from October or

November 2010. It may however, be preferable to defer the point at which signs become visible on the streets, until a logical group of buses that will be capable of activating them has been fitted with the necessary equipment. It is generally accepted that having display signs visible too long before they are activated, is undesirable.

Further refinement of this aspect of the roll-out plans will be reported to future meetings of this Committee.

A more detailed Communications Plan therefore remains under development. This will address 'go-live' stages for the scheme, including the upgrades to the functionality of Metlink services, and will propose suitable means for their effective communication at each stage.

9. Recommendations

That the Committee:

1. ***Receives*** *the report.*

2. ***Notes*** *the content of the report.*

3. ***Notes*** *the achievement of the major project milestone of Pilot phase acceptance.*

4. ***Notes*** *the continuing progress and positive development of activities relating to the scheme roll-out.*

5. ***Notes*** *that the display sign installation schedule is not yet definitive.*

Report prepared by:	Report approved by:	Report approved by:
David Lewry Major Projects Team Leader	Brian Baxter Manager, Public Transport Design and Development	Wayne Hastie General Manager, Public Transport