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Committee Transport and Access
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Integrated Ticketing - update

1. Purpose

To inform the Committee of progress with the Greater Wellington integrated ticketing project and to give an update of related national and regional developments.

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

At the Committee meeting on 7 June 2007 the Committee was informed about the progress of the Greater Wellington integrated ticketing project (report 07.395). The report also gave recommendations regarding the next steps of the projects. The Committee discussed the options for collaboration with the Auckland Regional Transport Authority (ARTA), as ARTA is about to tender for an integrated ticketing system.

Based on the recommendations and discussion the Committee decided to:

- proceed with the integrated ticketing project with the focus on developing an electronic ticketing concept for the Wellington rail system. The introduction of an electronic ticketing system for the rail system is seen as a first step towards a region wide integrated ticketing system; and
- ask officers to further investigate the options for collaboration with the ARTA integrated ticketing project.

4. Update on related national and regional developments

There are a number of related developments that impact on the Greater Wellington integrated ticketing project. These are discussed below.

4.1 Land Transport New Zealand and ARTA

Integrated ticketing has high priority on the national political agenda, with the Minister of Transport promoting the idea of an integrated ticketing system for the whole of New Zealand.

Land Transport NZ has recently developed five principles to guide the development of smartcard ticketing projects in New Zealand and to progress a national system:

“Principle 1: Regional Councils to specify smartcard system requirements, including requirements for ensuring confidentiality in access to, and use of, commercial data.

Principle 2: Smartcard system operation to be independent of public transport operators.

Principle 3: Regional Councils to use open procurement procedures (compliant with section 25 of the Land Transport Management Act) to select smartcard system contractors.

Principle 4: Regional Councils to be encouraged to seek economies of scale by sharing clearinghouses and other elements of smartcard systems.

Principle 5: Regional Councils and their smartcard system contractors ensure that their systems are developed to achieve interoperability as opportunities arise.”

In recent months, Land Transport NZ has assessed different options to progress a national integrated ticketing system. These options have been assessed with the following in mind:

- A national scheme has to consider the already existing regional Integrated Ticketing systems in Christchurch, Hamilton and (starting in November 2007) Dunedin. These schemes do not comply with an interoperability standard, as they were introduced before the discussion regarding a national scheme started
- The development of the ARTA integrated ticketing project, which will be the biggest one in New Zealand when implemented.

In October 2007 the Land Transport NZ Board decided to adopt the following approach:

“Work with ARTA to design a system where certain parts of it can be ‘cloned’ by other approved organisations when updating or implementing new integrated ticketing systems in their regions, and to provide for interoperability between these systems through standard interfaces at the smartcard and central system to clearinghouse level.”

ARTA will be required to negotiate the availability of reusable parts of the system design for other regional councils with the preferred supplier during the tender phase.

In practice this means that the supplier ARTA chooses and the interoperability standard this supplier offers will become the national standard, which has to be adopted by other regions. As a consequence, other councils that are working on implementing integrated ticketing or increasing their existing system will have to wait for more details regarding the national interoperability standard until ARTA has finished their negotiations (which will not be before approximately August 2008).

During recent months Greater Wellington officers have been in close contact with Land Transport NZ and ARTA to discuss the options for collaboration, and the effects a national scheme would have for the Greater Wellington integrated ticketing project. As a follow up to these discussions Land Transport NZ is starting a process to identify regional issues and requirements around implementing a 'nationally-applied' smartcard system design, and also to identify some initial work that needs to be done to make the national approach more of a reality.

Land Transport NZ is aware that a national scheme is not going to happen overnight. However, it recognises the need to get things started now so that the work it is doing with ARTA will be useful to other regions, provide opportunities for economies of scale, and enable interoperability between smartcard integrated ticketing systems.

5. Update on Greater Wellington work on Integrated Ticketing

After the Committee meeting in June officers began work on the system concept for the integrated ticketing system. As a first step consultant Booz Allen Hamilton (BAH) investigated the following questions:

- Having decided to work on electronic ticketing for rail as a first step towards integrated ticketing, should the system concept and business case focus on
 - Option 1: Rail only, with capability for extension to bus at a later stage; or
 - Option 2: Combined rail and bus from the outset?
- What is the best approach to maximise the benefits from collaboration with ARTA?

The main results of this investigation are summed up below.

5.1 System concept and business case

BAH investigated the advantages and risks of the two options mentioned above. Their overall conclusion is that option 1, concentrating on a business case and system scope for the rail part only, is a valid and viable approach, but the risks need to be understood and managed well.

The main arguments in favour of concentrating on the rail part of the system are:

- The rail only option can work as a stand alone system. This would be important if Greater Wellington decided at a later date not to implement an integrated ticketing system for all transport modes
- The timeline for a rail only system is shorter than for a rail and bus system. Less preparation time is required. If the project proceeds quickly, an electronic ticketing system for rail will probably be available by the time the other rail improvements, such as the new rolling stock, take effect
- Stakeholder engagement is less complex for the rail only option in the short term, because the focus will be on Tranz Metro only
- A rail only focus simplifies the initial transition challenge, because it affects one mode only.

BAH also identified risks of focussing on a rail only approach and gave recommendations on how to mitigate these risks.

Based on the work undertaken by BAH, work on the system scope and the business case will proceed, keeping the long term goal, a regional integrated ticketing system, in mind. In other words, the rail electronic ticketing has to be future proofed in terms of an integrated ticketing system. Officers will also take the recommended steps to mitigate the risks identified by BAH.

The work done by BAH has therefore reconfirmed the project scope. In the light of the work undertaken by BAH the Committee is therefore asked to reconfirm the scope of the project, being “rail only, with capability for extension to bus at a later stage.”

5.2 Collaboration with ARTA

Officers have discussed different options for collaboration with ARTA and Land Transport NZ during the last months. The options are:

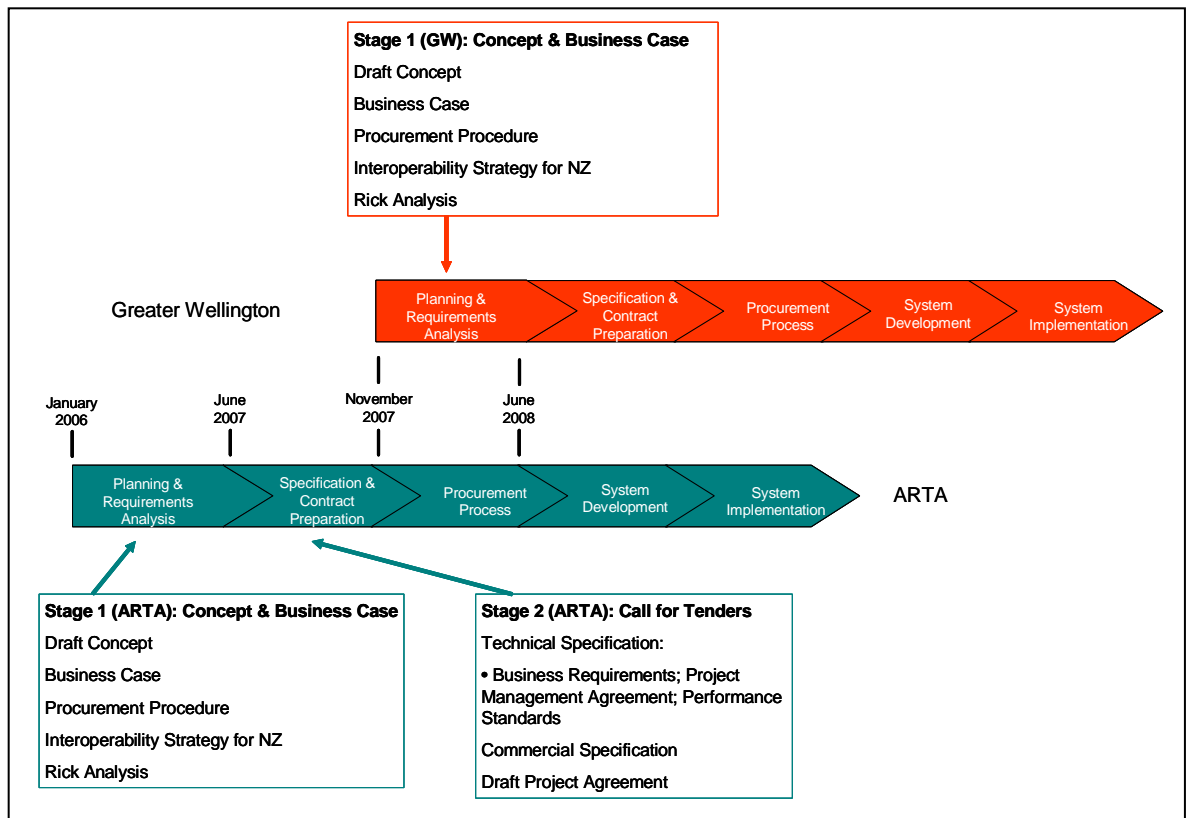
- A joint ARTA and Greater Wellington integrated ticketing system. This would be the most extensive form of collaboration
- Greater Wellington using the same interoperability standard as ARTA does. This would enable passengers to use their Wellington smartcard for public transport in Auckland, and the other way round. As discussed earlier, this approach is promoted by Land Transport NZ as a first stage towards a national smartcard system

- Sharing of information. This is a “cut and paste” approach, in which Greater Wellington can make as much as possible use of the work ARTA has already done within their project.

Each of these options was investigated by BAH, and is discussed briefly below.

5.2.1 A joint ARTA and Greater Wellington integrated ticketing system

ARTA’s integrated ticketing project is far ahead of Greater Wellington at this stage. Whereas Greater Wellington is still at the beginning of the system concept and business case phase, ARTA is to tender later this year. This puts ARTA almost two years ahead of Greater Wellington at the moment, as the following figure shows:



BAH assessed the option of a joint system and recommended that ARTA should continue to proceed alone, but with flexibility to accommodate other schemes at a later stage. Arguments for this recommendation are:

- The implementation of the stand-alone system will be faster and involve less risk. This is an important argument as ARTA has high political and operational pressure to implement the system as soon as possible
- ARTA is at the moment almost two years ahead of Greater Wellington with its project. In combination with the time pressure on the ARTA project a joint system is not a viable option at this stage

- There are other reasons that would potentially complicate a shared scheme, such as different fare structures and policies.

5.2.2 Using the ARTA interoperability standard

This option involves GW using the same interoperability standards as ARTA, which is in line with the Land Transport NZ approach. This means that all integrated ticketing schemes in New Zealand will be able to work together in the future, and can be seen as a first stage towards a national smartcard system. Land Transport NZ Board resolved recently that it would use its funding and procurement powers to achieve the principles (as quoted in 4.1) that must lead to a ‘virtual national scheme’. Greater Wellington will have to use the ARTA interoperability standard if we want to get funding from Land Transport NZ.

Using an interoperability standard in general has the advantage that it helps avoiding being locked in by one supplier, because in an interoperable system all suppliers would be able to deliver add-ons to the existing system.

Another important advantage for other Regional Councils is that this approach makes reusable parts of ARTA’s integrated ticketing system design available to them, which potentially saves substantial development costs.

In this option, there is an opportunity for Greater Wellington or other Regional Councils to join the ARTA scheme, if the same supplier that won the ARTA procurement procedure was used. ARTA and other Regional Councils could then even share one central system and the open standard would not be required, because all systems would have been developed by the same supplier and be interoperable.

The risk for Greater Wellington is that procuring a system that meets the requirements of the ARTA interoperability standard might be more expensive than to choose a proprietary system. A way to mitigate this risk is to tender for both an interoperability standard system and a proprietary system to check the price difference. Negotiation could then take place with Land Transport NZ about the options for extra funding if the interoperable system is more expensive.

5.2.3 Sharing of information

Because ARTA’s integrated ticketing project is far ahead of the Greater Wellington project, we will not be able to catch up to ARTA in terms of project concept and timing. At the same time many of the technical and business requirements for Greater Wellington are likely to be very similar to ARTA. This leads to a third option for collaboration: a “cut and paste” approach. This is the approach recommended by Booz Allen Hamilton.

In this approach Greater Wellington would use ARTA’s system concept and business case as the baseline for the Wellington system. As much use as possible would be made of the work done by ARTA (asking for each issue “what would prevent the ARTA concept from being adopted by Greater Wellington?”). More detailed work would be undertaken only on the subjects

that differ from the Auckland situation. The expectation is that ARTA's concept contains substantial elements that are equally applicable to Wellington.

Using the "cut and paste" approach is expected to deliver a smartcard system for the Wellington rail in the least time and to reduce costs for Greater Wellington during the planning, specification and procurement phase.

This approach has the following advantages for Greater Wellington:

- working jointly with ARTA will enable Greater Wellington to take advantage of the work already undertaken by ARTA
- it creates opportunities for better "value for money" in the procurement
- it significantly reduces the lead time for Greater Wellington going to the market for a smartcard system.

ARTA and Land Transport NZ officers have agreed to follow this process and it has been tested during the last month. The work BAH has done for Greater Wellington so far (which is summed up in this report) is based on the 'cut and paste' approach.

From being about two years behind the ARTA scheme at the moment this approach is expected to close that gap to about one year within a period of two years.

5.2.4 Conclusion

The analysis undertaken by BAH indicates that a joint ARTA/Greater Wellington integrated ticketing system is not viable at this time. Using the ARTA interoperability standard will be a Land Transport NZ requirement, and sharing information will be beneficial to Greater Wellington.

6. Next steps

Officers will continue to work towards the introduction of electronic ticketing on rail, and continue to work closely with ARTA and Land Transport.

7. Recommendations

That the Committee:

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Reconfirms** the scope and approach of the Greater Wellington integrated ticketing project as "rail only, with capability for extension to bus at a later stage".

4. *Notes that Greater Wellington is working closely with Land Transport NZ and ARTA, and acknowledges the support of ARTA in allowing Greater Wellington to use the work already undertaken by them.*

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