

**In Committee**

<b>Board Paper No.</b>	09/06/0207
<b>Submission Date</b>	3 July 2009
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<b>Recommended by</b>	Dave Brash, Group Manager Regional Partnerships and Planning
<b>Subject</b>	<b>AUCKLAND INTEGRATED FARE SYSTEM (AIFS)</b>

**Purpose**

- 1 The report is in three parts and addresses issues related to the future development of the Auckland Integrated Fare System (AIFS).
  - i) Part A addresses the approach to the development of the AIFS in light of the Auckland Regional Council's decision to reduce the amount of funding for the project, and our reassessment of the potential role of the NZTA in a national integrated ticketing programme. The report discusses a number of different options, including NZTA directly funding the central clearing house of the ticketing system, which would create the platform for other such systems to use in other parts of the country. An important question is whether the existing tender process run by the Auckland Regional Transport Authority (ARTA) can reasonably be adapted to incorporate a changed approach, or whether tender process should start again. We recommended a way forward and seek the Board's approval to enable further investigation of a preferred option;
  - ii) Part B outlines the investigations and reviews that have been conducted by the NZ Transport Agency (NZTA) over the last 6 months into the AIFS (in response to complaints by one party to the ARTA tender process), which have involved an extensive review of the value for money proposition of the AIFS and the NZTA's earlier funding decision. The conclusion is that the AIFS tender process has been run appropriately and the NZTA funding decision represents value for money; and
  - iii) Part C outlines the proposed approach to national integrated ticketing and ensuring maximum national benefits are obtained from the AIFS investment.

## Recommendations

### 2 That the New Zealand Transport Agency Board:

In relation to Part A:

- a. **notes** that when the Board considered funding for the AIFS in October 2008, it approved NZTA capex funding of \$42m of an estimated total project cost of \$70m, with an annual operational funding subsidy of \$3.9m of an estimated total annual operating cost of \$6.5m, conditional on confirmation of Auckland Regional Council's (ARC's) local share;
- b. **notes** that in February 2009, the ARC confirmed the local share funding for the AIFS to be capped at \$32 million and subject to the NZTA reconfirming funding;
- c. **notes** that in June 2009, the ARC reduced the funding for the AIFS to \$15.3m spread over three years;
- d. **notes** that the principles and approach to national integrated ticketing agreed by the Land Transport NZ Board in July 2007 and September 2007 (ref Board Papers 07/07/2018 & 07/10/2090) have been used to guide the assessment of options outlined in this paper;
- e. **notes** that the AIFS programme has been reviewed to ensure it remains a value for money investment for the NLTF, which has included a review of the Business Case and the sensitivity of the estimates of patronage growth estimates and implementation costs, with resulting high benefit to cost ratios;
- f. **notes** that ARTA has confirmed that the key AIFS business case benefit factors have not changed since the original NZTA funding decision, nor will they be materially affected by potential changes to the Public Transport Management Act;
- g. **agrees** that in order to achieve NZTA policy objectives of a contestable market for public transport services, best value for money from our investment, adequate service delivery and contract controls, access to good transport planning information, and flexible fare setting and route optimisation a comprehensive funder/regulator led approach is required;
- h. **agrees** that best value for money can be achieved by adopting open and common equipment standards and alternative funding, funder and financing options that enable operators alternative equipment choices where ever practical;
- i. **notes** that the option of completely re-tendering, based on a set of national open system requirements, has been rejected at this stage because the AIFS procurement process is still sound and risks are manageable, whilst starting again would waste the investment to date and risk a comparatively unmanaged ticketing environment for 1 – 2 years;
- j. **agrees** to an approach that adapts and modifies the previous AFIS proposal by:
  - (i) The NZTA taking responsibility for the central processing system development, in conjunction with the development of specified open standards that can be used by a range of operator equipment;

- (ii) ARTA manages on-bus/rail ticketing equipment and local interchange/station infrastructure, which will be funded in part or in total by operators or external financiers; and
  - (iii) ARTA undertaking a staged and sequenced roll-out of the system that will enable testing of the equipment and system at each stage before further development;
- k. **agrees** that the NZTA joins ARTA as an equal party in the procurement process, but that ARTA remains the contracting party;
- l. **agrees** for the purposes of negotiation with the preferred tenderer to the flowing funding envelope:
  - (i) 100% of the central system development estimated at up to \$20million, and the opportunity to partner with external financiers; and
  - (ii) Residual AIFS ticketing and local infrastructure requirements of up to \$40m is funded at a 60% FAR, with the NZTA share would be up to \$24m;resulting in total NZTA funding in support of AIFS of up to \$44m;
- m. **approves** ARTA notifying all AIFS tenderers that it is entering into negotiations with the preferred tenderer for the AIFS, but that any subsequent award of the contract for the implementation of a modified AIFS by ARTA is subject to:
  - (i) the Chief Executive reporting back by the August or September 2009 Board meeting in regard to the technical, legal, and commercial implications of the funding and financing options, providing recommended approaches for proceeding, including final agreed costs, cost shares, and agreements; and
  - (ii) Board approval of funding of the AIFS programme, subsequent to the Chief Executive's report;
- n. **notes** that stakeholder communications plans are being developed in respect of these decisions for discussion at the Board meeting, including notification to the Minister of Transport and a media briefing;

In relation to Part B:

- o. **notes** that following a complaint from a tenderer, the NZTA investigated the background to, and ARTA's conduct of, the tender for the AIFS under section 36 of the Land Transport Management Act (LTMA), and that this investigation concluded there were no grounds to take action under 36(2) in respect of the complaint;
- p. **notes** that following further complaints from the same tenderer in respect of the NZTA's actions under section 20 of the LTMA in granting its funding approvals for the AIFS, NZTA officials reviewed these approvals and concluded that the processes followed and the nature of the approvals granted by the NZTA (and previously LTNZ), have been appropriate and consistent with the requirements of section 20 of the LTMA, with one exception (discussed below);

- q. **notes** that when the Board considered funding for the AIFS in October 2008, it did not expressly take into account the national energy efficiency and conservation strategy (NEECS), as it was required to do under section 20(3)(d) of the LTMA but that advice from officials is that the AIFS contributes towards the achievement of the high level targets for the transport sector contained in NEECs, and that this would have strengthened the previous recommendation to the Board to approve funding for the AIFS;
- r. **notes** that, having expressly taken NEECS into account, the Chief Legal Counsel has confirmed that the processes followed by the NZTA in granting its previous funding approvals for the AIFS, have been appropriate and consistent with the LTMA;
- s. **confirms** that NZTA officials correctly interpreted the approved procurement procedure to give effect to the Board's intentions in regard to the clearing house function in the approved integrated ticketing principles, namely that it was the ownership and control of the clearing house *function* (rather than ownership and control of the *system*) that the Board wished to see remain with a public organisation;

In relation to Part C:

- t. **endorses** the initiation of a NLTP funded national integrated ticketing programme, including design and development activities as necessary to give effect to a national ticketing approach to maximise overall value from integrated ticketing investments; and
- u. **agrees** to keep Board paper 09/06/0207 In Committee until the contract for the implementation of AIFS has been awarded by ARTA and associated communications have been executed.

### **Executive summary**

- 3 There has been a significant number of developments since the Board approved funding for AIFS in October 2008 (Board Paper 08/10/0066). These developments have been progressively reviewed, considered, and addressed as appropriate, and this paper reports back on these.
- 4 There is a strong case for NZTA involvement in public transport ticketing. This case ranges from ensuring a contestable market for public transport services and achieving best value for money from significant public transport subsidies, to achievement of public transport policy objectives, including service delivery and contract controls, and access to good information. Internationally funder/regulator led ticketing and fares initiatives have been the most successful from a policy and effectiveness perspective. Ticketing enhances the ability to deliver many of the building blocks of a quality public transport system. The analysis also concludes that best value for money and spreading of risk can be achieved by adopting open and common equipment standards and alternative funding, funder and financing options that enable operators alternative equipment choices wherever practical.

- 5 The ARC's decision to reduce the funding for the AIFS from \$32m to \$15.3m has required a reassessment of the overall AIFS approach. This paper tables alternative funding options for the Board to consider, as well as the recommended approach to allow further investigation of the preferred option. Investigation of the proposed funding options cannot be adequately performed without commercial and technical engagement with the AIFS tenderers. While the purpose and validity of the AIFS tender is consistent across all funding options, some options have the potential to materially change the nature of supply for the successful tenderer.
- 6 Additionally, most of the options involve increased NZTA funding on the basis of specific wider national usage. The commercial willingness and technical ability of the preferred tender to support this wider national usage needs to be specifically confirmed to ensure greater NZTA investment represents value for money. To assist with this process it is recommended that the Board approve ARTA nominating its preferred tenderer to allow these investigations to progress.
- 7 The proposed interim declaration of a preferred AIFS tenderer is a continuation of an existing, approved, robust AIFS procurement process, will improve commercial certainty for all three tenderers and end unhelpful market speculation. Commercial process tension will still remain as the final result will still be subject to commercial negotiations, preferred option investigations, and final NZTA Board funding approval. The investigation will be guided by appropriate legal, commercial, and procurement probity advice from both ARTA and the NZTA, and may include equivalent discussions with other tenderers, if required.
- 8 This paper recommends that officials be asked to develop a national integrated ticket programme to ensure the NZTA is able to maximise the national outcomes and benefits from the AIFS investment. The approach previously agreed by the Board has been to lever off the AIFS to gain interoperability and avoid paying twice for the same system, and then allow this to evolve into a national system where this made economic sense in other cities. To realise these potential national benefits in other cities will require active planning and management over a number of years by the NZTA. This work will include developing relevant commercial agreements with ARTA to define respective scopes of activity, partnership principles, commercial interests, and deliverables as a result of the options investigations, and any resulting NZTA Board funding conditions.
- 9 The options considered included declining funding and re-tendering for a wider national solution and various options for funding the current AIFS solution. The options for funding AIFS are based on the premise that proceeding with the system is still the best way to achieve current public transport customer benefits in Auckland, and achieve long term value for money by providing the core components of a national system. The rationale for using the AIFS investment as a lead/pilot component of a national ticketing system as well as the concept of public funding of integrated ticketing and fares systems in New Zealand is thus reconsidered, and confirmed as sound.
- 10 Additionally, this paper reports-back on the considerable work undertaken by NZTA Officers in relation to the AIFS initiative. This work has included reviews to determine whether the conduct of the AIFS procurement by ARTA was appropriate, and the NZTA funding approvals were appropriate and justified.

- 11 Other investigations have sought to provide reassurance that:
  - a. the programme continues to deliver important Auckland public transport system and strategic benefits to customers, operators, and funders;
  - b. the BCR has continued validity and is very resilient to cost and/or benefit changes; and
  - c. the programme is not materially affected by recent environmental changes (Auckland governance and proposed changes to the Public Transport Management Act 2008).
- 12 This paper recommends that the NZTA join ARTA as an equal partner in procurement negotiations with the preferred tenderer (and that ARTA remain the contracting party). For the purposes of those negotiations the following funding envelope is proposed:
  - a. 100% of the central system development estimated at up to \$20million, and the opportunity to partner with external financiers; and
  - b. residual AIFS ticketing and local infrastructure requirements of up to \$40m is funded at a 60% FAR, with the NZTA share being up to \$24m;resulting in total NZTA funding in support of AIFS of up to \$44m.
- 13 The preferred alternative funding and funder option is that the NZTA provides up to 100% funding for the Central System development (external financial partners will be explored). On-bus ticketing, equipment is funded by either external financiers or bus operators, and the residual AIFS funding requirement of up to approximately \$40m is funded at a 60% FAR, with the NZTA share being up to \$24m, resulting in total NZTA funding in support of AIFS of up to \$44m.
- 14 The next step would be for ARTA to notify all AIFS tenderers of the preferred tenderer for the AIFS, to enable officials to explore the approaches for proceeding, including costs, cost shares, and agreements; and to allow due diligence to be conducted regarding the technical, legal, and commercial implications of the agreed funding, funder and financing options. This would then be reported back to the Board for approval of funding of the AIFS programme.
- 15 Given the potentially contentious nature of the issues, there will also have to be careful communication of these decisions to the Minister and key stakeholders. A draft comprehensive stakeholder communications plan has been prepared for this purpose, highlighting key messages.

## **Background**

### **Introduction**

- 16 This paper arises out of changes to the environment since the AIFS programme was originally approved by the NZTA Board in October 2008. There have been a number of material changes such as:
  - a. significant change in the availability of the ARC local funding share;
  - b. the announcement of proposed changes to the Public Transport Management Act (2008), and Auckland regional governance;

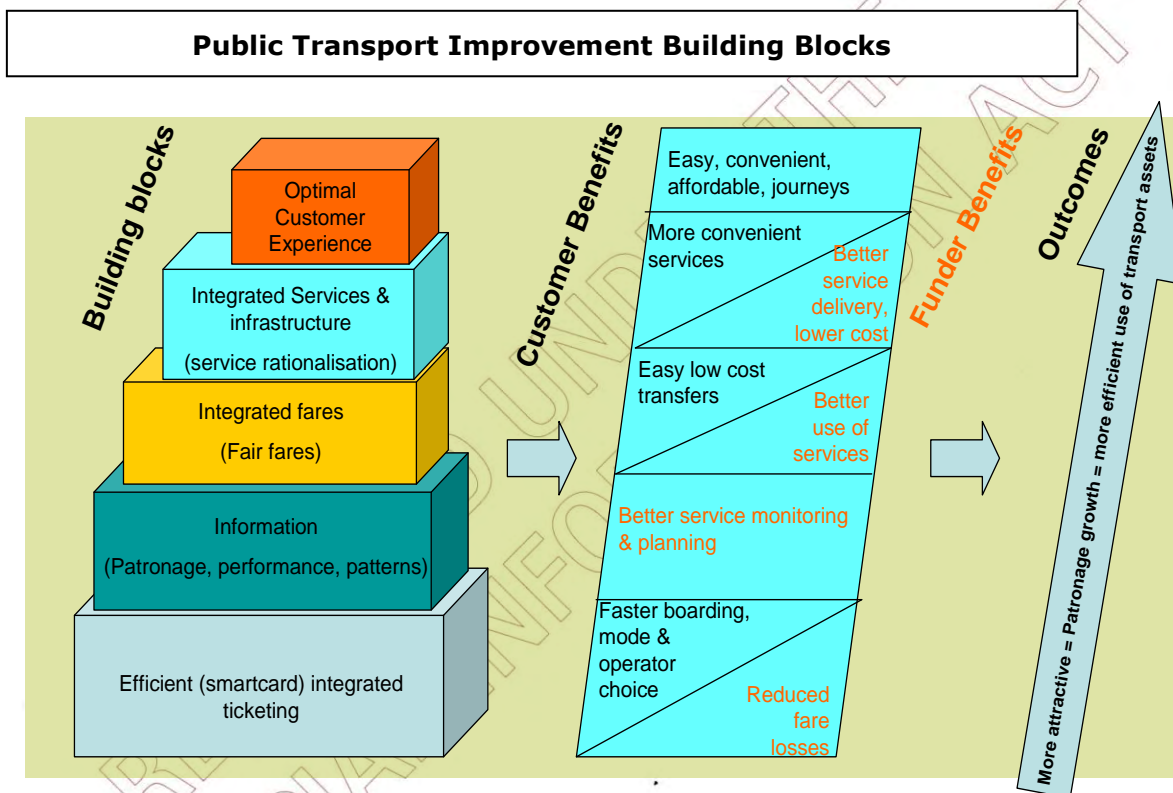
- c. the evolution of integrated ticketing internationally; and
  - d. reviews of the AIFS procurement and the overall NZTA approach to integrated ticketing have been undertaken, following the receipt of complaints.
- 17 This paper considers each of these matters and tables options for further investigation to establish the best way forward. It also includes a consideration of the rationale for public involvement in ticketing and fares, a review of the continued validity of the AIFS business case, and recommendations relating to a national ticketing approach.
- 18 The paper is separated into three parts: Part A covers the proposed approach for the development of AIFS; Part B outlines the investigations and reviews; while Part C outlines the proposed approach to national ticketing.

## **Part A: Proposed approach to the development of AIFS**

### **The rationale for NZTA involvement in ticketing**

- 19 There are a number of compelling reasons for NZTA (and previously LTNZ) and Regional Authorities such as ARTA to have direct involvement in public transport ticketing in New Zealand. These range from ensuring market optimisation and achieving best value for money from significant public transport subsidies, to achievement of public transport policy objectives, including service delivery and contract controls and access to good information.
- 20 There have been previous attempts at integrated ticketing in Auckland and an operator consortium (Auckland Integrated Ticketing Limited – AITL) was established in 2003 with limited success. In 2005 the ARTA Board declined an AITL proposal to provide integrated ticketing on the grounds that, although it required funding from ARTA, it did not permit ARTA to deliver its policy objectives.
- 21 For policy and effectiveness reasons most successful world-wide ticketing and fares initiatives have been led by funder/regulators. This intervention has delivered key success factors, such as the ability to integrate intensely competitive operators, as well as integration with wider public transport planning initiatives, such as fares and service reforms. Additionally, it is evident in many overseas case studies that this central leadership approach provides significant long-term value for money advantages through effective area-wide planning, the development of common and open equipment standards to allow full operator/mode integration and participation, the efficient conduct of large-scale competitive procurement, and cohesive/effective stakeholder change communications.
- 22 A further critical success factor has been the ability to equitably manage disparate operator commercial interests, maximise operator participation and technological innovation, and mitigate any tendency for a dominant operator to engage in market behaviours that might result in compromised, ineffectual implementation and higher long-term system costs.
- 23 There is also a need to recognise the trend towards partnerships, open systems and convergence with banking smart card systems and integration with wider business models (e.g. small transactions), although the benefits to integrated ticketing are marginal.

- 24 The enablement of fare and services integration is widely regarded a critical component of major ticketing and fares collection improvements. Jeremy Meal of MVA Consultancy, a UK based Integrated Ticketing Consultancy, has been recently involved in reviewing key components of the AIFS process and our National approach. He comments, “*hence a vital argument in provisioning integrated ticketing is that a system fit for purpose may allow large savings through the optimisation of the transport network...*”.
- 25 The delivery of this optimisation is typically only achieved by careful co-ordination of activity between planners, stakeholders, and delivery organisations. The AIFS initiative has these optimisation activities as key programme deliverables.



- 26 The ability to deliver to these building blocks is enhanced by the evolution of ticketing technology, enabling ticketing and fares to become far more effective and responsive policy instruments. Not only is fare collection more efficient, but the capture of rich travel information enables effective monitoring with enhanced ability to plan and respond. A good example of these reforms is Singapore where fares integration and resulting service reforms led to significant operational cost efficiencies.

### Principles to guide ticketing investment

- 27 Early development of ticketing principles for New Zealand has sought to underpin the above logic. In July 2007 the LTNZ Board adopted the following five guiding principles:
- Regional Councils to specify smartcard system requirements, including requirements for ensuring confidentiality in relation to access to, and use of commercial data;



- Smartcard system operation not to be run by a public transport operator;
- Regional Councils to use open procurement procedures to select smartcard system contractors;
- Regional Councils to be encouraged to seek economies of scale by sharing clearing houses and other elements of smartcard systems; and
- Regional Councils and their smartcard system contractors to work towards interoperability.

28 These principles are still relevant and have been used to guide all subsequent NZTA funded ticketing investments and in the consideration of various future national ticketing delivery options. The emphasis of these principles has been on effective and efficient progressive regional ticketing system delivery to meet local needs, whilst encouraging future component sharing and funder opportunities when appropriate.

### **AIFS investment summary**

- 29 The AIFS programme is intended to deliver all components of an efficient and effective integrated ticketing and fares system in the Auckland metropolitan region, comprising of smartcard tickets, rail, bus, and ferry ticket vending and reading equipment, and associated central systems management equipment, and improved operational practices. This will include progressive implementation of journey-based fares that will enable more attractive multi-modal public transport and subsequent service efficiency reforms. The programme is consistent with overall Auckland regional transport strategies and wider objectives of being a world-class city.
- 30 A review has confirmed that the AIFS business case is robust and the project is resilient to change and continues to offers value for money. These aspects are discussed in more detail in other later parts of this paper.

### **Auckland local share funding**

- 31 In October 2008 the NZTA Board approved AIFS Funding (Board Paper 08/10/0066), subject to a number of conditions, including availability of local share funding. In February 2009 the ARC resolved to fund the 40% local share of the total cost, capped at \$32 million, subject to reconfirmation of funding by NZTA. Shortly thereafter, the government announced that it would not support the previously proposed regional fuel tax, thus limiting available ARC funding for a number of planned regional transport initiatives, including the AIFS programme.
- 32 On 8 June 2009 the ARC adopted their new draft LTCCP, including 15.3m intended for AIFS (as part of its multi-modal capital funding for ARTA) and this is scheduled for formal adoption on 30 June 2009. This reduced local share funding effectively means that AIFS cannot be funded on the same basis as previously approved by both the NZTA and ARC. Various options to address this funding shortfall have been discussed between respective NZTA, ARTA and ARC Officers to establish workable funding (and consequent financing) alternatives. These funding options are outlined below.

- 33 The AIFS funding options considered for proposal to the Board have been based on the following premises:
- a. that AIFS is still an appropriate public transport regulator intervention and that continued ARTA/ARC and NZTA investment is justified. This aspect is considered further later in this paper;
  - b. that AIFS is appropriately scoped and should not be reduced in overall scope, and that part funding or significantly extended staging are unacceptable options as they introduce procurement process issues as well as delayed benefits and higher overall project costs;
  - c. the NZTA has had a consistent and open interest in AIFS as the lead/pilot of a national ticketing approach, and that funding, funder and financing approaches that give greater effect to that, and are consistent with the previously approved National ticketing principles, are appropriate for consideration; and
  - d. that the procurement of AIFS has been appropriate in scope and conduct and that the funding options considered and approved and support this procurement.
- 34 Alternatively the option of discontinuing with the AIFS solution and re-tendering for a specific National solution that would also meet Auckland needs is also considered.

### **Funding options**

- 35 NZTA Officers have identified five options for addressing the funding situation outlined above. Four of these options would either require, or make desirable, greater NZTA interest in the current ARTA procurement process. Options for that greater interest are discussed in the following 'contracting options' section.
- 36 In considering these funding options it is important to clearly distinguish between:
- the parties that will ultimately meet the costs of the project (referred to as '*funding*' in this paper); and
  - if relevant, any party that provides capital to help meet the upfront costs, and is then repaid over time (referred to as the '*financing*' in this paper).
- 37 In practice, the most likely significant funders of the AIFS project are the NZTA, ARC and passengers. It is also possible to structure the arrangements so that operators and/or banks provide some funding or financing. However, the risk would clearly be that most of these costs would ultimately be shifted back to the NZTA, ARC or passengers through higher contract services pricing.
- 38 Some of the options outlined below therefore could involve the NZTA meeting a greater portion of the costs of the integrated ticketing project than previously agreed. However, some involve external financing to allow that funding cost to be spread over time, and incurred as operating expenditure rather than capital. Other arrangements where an increased NZTA contribution (e.g. for the Central System) might be offset by transaction charges (and thus shared with local funders and operators running commercial services) are possible.

39 The five options are:

- a) *NZTA meets the full capital shortfall* – under this option NZTA would fully meet the shortfall in funding (approx NZTA total funding = \$65m);
- b) *NZTA fully funds central system and partly funds components* – under this option the NZTA would fully fund the central system elements of the ticketing system (which could be used for ticketing systems in other cities in the future) at a approximate total cost of \$20m, and retains its 60% funding of all other elements. Note: this option would not fully meet the predicted funding shortfall; ARC would be required to provide \$9m more than the \$15.3m they have indicated they have available. (approx NZTA total funding = \$56m);
- c) *NZTA fully funds central system and NZTA or ARTA accesses private financing* – this option builds on Option B. The NZTA would fully fund the central system elements, and either the NZTA or ARTA would secure private financing to meet the estimated \$20m capital costs for the bus components of the system (removing the need for the ARC to provide additional capital). Both the NZTA and ARC would then share the increased, ongoing operating costs that result from that use of private financing. (approx NZTA total funding = \$44m). It may also be possible to access private finance partners for the central system thus reducing these costs;
- d) *NZTA fully funds central system, ARTA funds local infrastructure and Bus operators provide all on-bus hardware* – under this option operators would be required to purchase or procure all on-bus ticketing equipment. This is estimated to reduce the total amount of capital needed from ARC and the NZTA by \$20m, thereby helping to reduce the funding shortfall. (approx NZTA total funding = \$44m); and
- e) *NZTA declines funding for AIFS* – under this option the NZTA declines to fund the current AIFS solution and re-specifies and re-tenders for a wider scoped National solution that would also meet Auckland needs.

### **Assessment of options**

40 Table 1 below sets out the costs to the NZTA and ARC under each of the options described above. These stated costs are compared against the previous \$70m capital cost shares approved in October 2008, the revised \$80m capital amount as at February 2009 and explicit in ARC funding share approval at that stage of \$32m. In other words, the figures show the indicative options for funding and financing to meet the local share funding shortfall.

**Table 1 – Estimated total costs under each funding option**

	NZTA		ARC	
	<i>Capital</i>	<i>Annual Future Operating</i>	<i>Capital</i>	<i>Annual Future Operating</i>
October 2008 Base	\$42m	\$3.9m	\$28m	\$2.6m
Feb 2009 Base	\$48m	\$4.2m	\$32m	\$2.8m
Option A	\$65m	\$5.7m	\$15m	\$1.3
Option B	\$56m	\$4.9m	\$24m	\$2.1
Option C	\$44m	\$5.9m	\$16m	\$2.7m
Option D	\$44m	\$5.9m	\$16m	\$2.7m
Option E	Not Known	Not Known	Not Known	Not Known

Note for simplicity the following assumptions have been made in this table;

- that external financing costs will be at 8%;
- that Operator additional financing charges may be higher than 8% and will be reflected in operational contract charges (but are included in the table at 8% for completeness);
- that the NZTA shares in the cost of financing options C and D at a 60% FAR;
- that the NZTA will not apply operational cost recovery charges on the Central System; and
- that no central system financing is assumed – this could apply to all options.

The preferred option(s) will be investigated further to clarify these costs.

- 41 Option A has the obvious benefit of ensuring that the AIFS project could go ahead promptly, as it removes the need to discuss the possibility of ARC increasing its funding, or the need to engage with the private sector on financing arrangements. However, it has the equally clear disadvantage of substantially increasing the NZTA’s costs without providing any additional benefit. It could also risk establishing an implicit precedent around the NZTA’s willingness to increase its funding share of the cost of strategically important projects where the relevant local authority faces financial constraints. We recommend against this option.
- 42 Under option B, the NZTA would see its capital costs increase relatively significantly. But in contrast to option A, the NZTA would receive additional value for this increased payment, as it would enable long term control of the key central system elements of the AIFS. This would increase the NZTA’s ability to reduce the cost of introducing integrated ticketing arrangements in other cities in the future. It would also improve the ability of the NZTA to ensure interoperability between different systems across the country.

The key disadvantage of this option is that it does not fully address the shortfall in the Auckland funding share and would require ARC to provide additional capital funding of \$9m and does not allow operators to provide compatible components. Our understanding is that the Council is currently unable to provide any more funding.

- 43 Option C retains most of the benefits of option B, while removing its key disadvantage. Instead of requiring the ARC to provide additional capital funding, private financing would be secured to meet the shortfall. The ARC would ultimately be required to meet 40% of the costs of the financed amount. However, due to this cost being spread over time, this should prove less difficult for it to do.
- 44 In turn, the key downsides of option C are that the NZTA would face increased ongoing operating costs in addition to its already increased capital costs, and that the overall cost of the project in present value terms would be increased (as financing always comes at a cost). Note that there are a range of different ways this financing arrangement might be able to be structured, ranging from a simple loan from a third party, to some form of 'lease to buy' arrangement provided by the vendor. If this option is preferred, staff will undertake further analysis of the optimal financing approach.
- 45 Option D would reduce the capital costs facing the NZTA and/or ARC as it would see operators meeting the upfront costs of all on-bus/rail equipment. Operators could either be required to purchase the equipment from the vendor under prescribed terms and conditions, or be free to purchase them from any supplier that could meet the prescribed technical standards. The benefits of this option are that it would reduce the level of upfront capital payments required from the NZTA and ARC, whilst also removing the need for external finance. A key disadvantage of this option is that the costs borne by operators could ultimately be passed back to the NZTA and ARC in a non-transparent way, when operating contracts are re-tendered in the future. A second disadvantage is that the competitiveness of future tenders for operating contracts could be undermined, as incumbent operators that already owned the on-bus equipment would have a cost advantage over new entrants. We recommend that staff be directed to undertake further analysis of the practicality and desirability of this option, but that no decision be taken on its use at this stage.
- 46 A further derivative of option D is that Auckland bus operators are permitted to obtain their own smartcard readers, which would need to be compliance certified to an appropriate national standard. This approach would require early investment in developing national interface standards and establishing a suitable rigorous testing environment and supporting technical resources. This option could be further extended to permit NZ Bus (or other operators) to supply their own branded card system (e.g. "Snapper"). This option could allow the Operator card to only be used on that Operator's services, but still be required to accept a system-wide (e.g. "Maxx") card.

Aside from the Operator funding advantage, it has the added advantage of allowing some Operator flexibility for alternate business models, and does help to address the future integration of the existing Snapper investment in its Wellington ticketing system. The obvious downsides are the technical complexities and risks, the potential to undermine the marketing value of the system card, and that it is an unproven integrated ticketing delivery model.

47 Finally, Option E would involve declining the current funding application for AIFS in favour of a completely fresh look at the national integrated ticketing needs and subsequent re-tendering based on a wider set of national open system requirements. This option has some significant implications and could result in a comparatively unmanaged (and higher public cost and/or reduced benefit) ticketing environment in the 1–2 years this process might take before an Auckland solution was available. This is analysed as follows:

- NZ Bus would proceed with their declared intention to implement the Snapper solution on their Auckland fleet, and some bus boarding efficiencies for NZ Bus services and patrons would arise;
- Competitor bus companies have stated they would not join such the Snapper scheme although we have been told informally that other bus operators will shortly join the system in Wellington. Thus all or some of may proceed to implement their own alternative smartcard ticketing solutions;
- Rail revenue losses from the inability to collect fares on crowded suburban rail services would continue until a solution was implemented;
- All Operators would reclaim ticketing equipment capital and operating funding costs through contract prices. Potential new operators might be discouraged from market entry by high costs to join existing, or establish their own ticketing solutions;
- Transfers between bus operators and modes would continue to require individual mode or operator tickets or will be difficult to integrate due to completely disparate implementation designs and standards;
- Integrated ticketing and fares and related service delivery re-structure and service efficiency gains would be virtually unachievable. *There are very few world-wide examples of smartcard integrated ticketing systems being effectively introduced through an operator-led or private investment approach; and*
- The national ticketing approach and related national efficiency gains will be delayed. Other regions (most specifically Wellington who have the same modal mix) that will be looking to actively re-use these common development components in the next few years will be delayed.

48 Expert advice and world-wide evidence suggests that this laissez-faire approach would be a higher cost long term solution for public transport delivery, would lead to reduced optimisation opportunities across wider transport assets, and ultimately poorer economic development outcomes.

49 In summary, we recommend an approach that adapts and modifies the previous AFIS proposal as follows:

- The NZTA would take responsibility for the central processing system development in conjunction with the development of specified open standards that can be used by a range of operator equipment;
- ARTA would manage on-bus/rail ticketing equipment and local interchange/station infrastructure which will be funded in part or in total by operators or external financiers.
- ARTA would also undertake a staged and sequenced roll-out of the system that will enable testing of the equipment and system at each stage before further development.
- The NZTA would join ARTA as an equal party in the procurement process, but ARTA would remain the contracting party;
- for the purposes of negotiations with the preferred tenderer a funding envelope would be established of 100% of the central system development up to \$20million and residual AIFS ticketing and local infrastructure requirements of up to \$40m. This would be funded at a 60% FAR, with the NZTA share would be up to \$24m and the resulting total NZTA funding in support of AIFS being up to \$44m; and
- the opportunity to partner with external financiers would be examined as a part of this process,

### **Options for NZTA contractual arrangements**

50 As noted, all of the funding options discussed above would see the NZTA increasing its portion of the total AIFS cost. Based on the preferred options, this cost would be partially offset by NZTA securing increased value in the form of greater control over the specification of the central elements of the ticketing system, and an ability to use those central elements when integrated ticketing systems are introduced in other cities in the future, thereby reducing long term costs and improving interoperability.

51 NZTA Officers consider that under any of the funding options discussed above, it would be desirable for NZTA to become more actively involved in the final stages of ARTA's ongoing procurement process. We have identified four possible options for securing this greater level of involvement:

- a. *ARTA continues to run the procurement process, but NZTA negotiates a detailed MOU with ARTA to ensure its interests are protected* – under this option NZTA would make its funding of AIFS conditional on its specified requirements for the central system elements of the AIFS being met. These requirements would be set out in a separate, detailed agreement;

- b. *NZTA joins the procurement process as an equal party, but ARTA remains the contracting party* – under this option NZTA staff would become active participants in the final stages of tender evaluation and technical negotiations with the preferred vendor. This would ensure that the central system elements, which NZTA may end up fully funding, met its requirements. Some form of MOU between NZTA and ARTA would likely still be needed under this option, clarifying their respective roles and responsibilities in the final stages of the procurement process;
  - c. *NZTA joins the procurement process as an equal party, with both ARTA and NZTA entering into separate contracts with the vendor* – under this option the NZTA would ultimately contract directly with the vendor for the central elements of the system, and ARTA would contract for all of the remaining elements. Both parties would jointly conduct the final stages of the procurement process; and
  - d. *NZTA replaces ARTA in the final stages of the procurement process, and becomes the contracting party* – under this option NZTA would contact all of the short-listed bidders for the AIFS project, explain that it was planning to take control of the procurement process given the need for it to increase its share of the funding, and seek their agreement to transfer their existing bids to the NZTA.
- 52 In choosing between these options, the Board faces a key trade-off between increasing the NZTA's degree of control over the procurement process on the one hand, and maximising the likelihood of successful, timely completion of the current procurement process on the other.
- 53 On balance, staff recommend that option b be adopted. We consider that the NZTA would run the risk of compromising the current procurement process if it sought to be a contracting party, or take over the process completely (as would occur under options c or d) and it would fundamentally alter the scope of the existing process. There is a risk that bidders would see either change as imposing substantial new risk, and refuse to consent to the changes without the right to provide a revised tender. If the Board wish to pursue this option, it would need to seek assurance regarding this risk.
- 54 On recommending option b it will still be very important to have a robust MOU agreement to fully protect the NZTA's interests in the central system elements of AIFS. In evaluating tenders and negotiating technical changes with preferred tenderers, important trade-offs can be made. We consider that it would not be possible for the NZTA to negotiate a 'behind the scenes' agreement with ARTA (as would be required under option a) that was sufficiently detailed to ensure its interests were fully protected.
- 55 Option b strikes a middle ground between these extremes. Through being 'in the room' NZTA staff will be able to ensure that their organisation's interests are being protected, and will be able to conduct appropriate investigations.



## **Investigation approach**

56 The approach to investigating the options for the NZTA to fund a greater proportion of the cost of AIFS are based on performing due diligence on the options in respect of the following criteria;

- a. willingness of the AIFS preferred tenderer to enter into a revised commercial arrangement with ARTA to give effect to the preferred funding option(s), and licensing agreements in relation to national use;
- b. assessment of the technical feasibility, cost, and value for money of securing use of the Central System for processing national smartcard ticketing transactions;
- c. financing options and appropriate commercial approaches; and
- d. establish the core components of an appropriate delivery agreement with ARTA that will give effect to the preferred funding and financing option(s);

This investigation will be undertaken by appropriate the NZTA and external specialist resources as required. This process would involve informing ATRA, notifying all tenderers, discussions with bus operators and possible financiers, and negotiations and a due diligence process with the preferred tenderer. We would aim to report back to the 28 August or 25 September 2009 Board meeting but would seek further Board guidance if issues arose during this process.

## **Other changes to the public transport environment**

57 Whilst various environmental factors have changed since the Board's October 2008 decision, these changes have not resulted in a substantive change to the priority or context of this investment. As a local Auckland initiative the AIFS is a key investment to reduce revenue losses arising from inability to collect fares on rail at peak. It will also improve bus boarding efficiency, and facilitate long term efficiencies and growth from fare and service integration reforms. A number of key factors have been considered in this assessment.

58 In a letter to the NZTA Chief Executive dated March 19 2009, Fergus Gammie, Chief Executive of ARTA, confirmed that the AIFS solution is resilient to proposed changes in the Public Transport Management Act (2008), and that there is no material change to the wider AIFS programme approach or business case for the programme, save for some cost escalation due to exchange rate movement, which have been accounted for in the options presented earlier.

## **Part B - Investigations and reviews**

### **Value for money considerations**

59 Considerable investigation on value for money considerations in respect of integrated ticketing and fares has been undertaken, in respect of the AIFS investment and also the national approach. There have been challenges to both AIFS tender processes and also to aspects of the NZTA approach.

60 These have been thoroughly investigated and are reported on as follows.

## **AIFS process investigations**

61 Following a complaint from Snapper Services Limited (Snapper), the NZTA investigated the background to, and ARTA's conduct of, the tender for the AIFS. The key focus of the investigation was to examine whether ARTA is proposing to construct the AIFS to a standard that is excessively high or is unsatisfactory and whether ARTA is in breach of the procurement procedure approved by the NZTA for the construction of the AIFS. The full terms of reference for the investigation are set out in Attachment [a].

62 The report concluded that:

- there was no breach of the procurement procedure for the purchase and implementation of the AIFS; and
- ARTA has not undertaken the procurement of the AIFS contract, nor is it proposing to construct the AIFS, to standards that are excessively high or unsatisfactory.

63 The Chief Executive accepted these findings. Accordingly, there is no basis for the NZTA to take any action under section 36(2) of the LTMA in relation to these matters and the investigation is now regarded as closed. A copy of the letter that was sent to Snapper is attached as Attachment [b].

## **Other reviews**

64 During the course of the investigation, Snapper raised further complaints in respect of the actions of the NZTA (and, previously, LTNZ) in granting the funding approvals for the AIFS under section 20 of the LTMA.

65 NZTA officials have reviewed the funding approvals and concluded that the processes followed, and the nature of the approvals granted, by the NZTA (and, previously, LTNZ) have been appropriate and consistent with the LTMA, with one minor exception – namely, that there was no evidence to prove that the national energy efficiency and conservation strategy (NEECS) had been expressly taken into account.

66 For completeness, officials have now expressly taken NEECS into account (refer attachment [c]), and the Chief Legal Counsel is able to confirm that the processes followed by the NZTA in granting its funding approvals for the AIFS have been appropriate and consistent with the LTMA.

67 A summary of the NZTA process review under section 20 of the LTMA is attached (attachment [d])

## **Clearing house**

68 Another issue that was raised during the course of the investigation related to a requirement in the procurement procedure for the construction phase of the AIFS relating to the clearing house function. A more complete analysis of this issue is contained in Attachment [e], but it is important that the Board confirm NZTA officials correctly interpreted the Board's intentions in the approved integrated ticketing principles.

69 Namely, in regard to the clearing house function, confirmation is sought that it was the ownership and control of the clearing house *function* (rather than ownership and control of the *system*) that the Board wished to see remain with a public organisation. This confirmation will re-assure that the NZTA approved procurement procedure for the AIFS does give appropriate effect to the Board's intentions.

## AIFS Business Case

70 A review of the AIFS business case has been completed and it has been confirmed that;

- A robust AIFS business case exists, and key components have been validated by an independent consultant (Richard Paling Consulting Limited) as well as NZTA Officers;
- Recent changes to the AIFS programme costs do not significantly impact on the BCR. The AIFS base case is in fact more expensive than the proposed solution, and sensitivity analysis suggests that there would need to be massive AIFS cost escalation to result in a negative BCR; and
- RTA confirmed in letter to the NZTA CE dated 16 March 2009 that there are no material changes to benefits

71 Key aspects to consider with regard to the business case include:

- The AIFS BCR has a "base case" that is more expensive than AIFS. This results from the fact that a ticketing system is an unavoidable expense of a fare collection based public transport system and AIFS seeks to minimise procurement and operational costs. The base case is predicated on an automated paper based, non-integrated approach – effectively a continuation of current practice; and
- Some of the Auckland public transport ticketing equipment is imminently in need of replacement.

72 In summary, the AIFS solution has appropriate justification for Auckland alone as a stand-alone solution, and has been procured in a transparent competitive market process. It also enables ~~capital recovery costs, as would be likely with any private investment. It also provides for more open future competitive tendering and savings from the opportunity for ARTA to develop better integrated services.~~ capital recovery costs, as would be likely with any private investment. It also provides for more open future competitive tendering and savings from the opportunity for ARTA to develop better integrated services.

## Risks

73 There are several programme risks that apply to AIFS, depending on which alternatives are taken. These risks will be further investigated and reported. Specific risks related to the current decisions are:

- a. If the current tender process is cancelled or significantly deferred, it is likely that there would be a reduction in vendor willingness to tender for future large NZ ticketing projects, or potentially only with higher (risk inflated) bids;

- b. That the proposed investigations may not be able to reach agreement with the preferred tenderer, and may need to be held with other tenderers which would delay completion of investigations;
- c. The ARTA process is challenged by an unsuccessful tenderer. This is a risk that ARTA is aware of and is actively managing; and
- d. NZTA risks in addition to those above are primarily related to the ability to ensure that NZTA national objectives can be achieved:
  - i That a suitable variation to the MOU cannot be negotiated with ARTA; and
  - ii That the proposed investigations and negotiations take longer than expected and/or do not result in suitable outcomes.

These risks are largely mitigated by the continued commercial tensions that will exist until the Board has approved funding.

### **Proposed central system agreement with ARTA**

74 In light of the proposed funding options and the risks identified above a significant variation to the current NZTA-ARTA MOU (covering access to key design elements) in respect of AIFS rights is required. This revision is proposed to be negotiated in parallel with investigation of options for consideration as part of the report-back. It will provide improved definition of the rights to control the specification of components relating to the configuration and operation the central processing system for national benefit. These lie at the heart of creating an efficient and effective national ticketing system, and for which NZTA may consider 100% funding. This approach will need to be supported by the recommended formalisation of a national ticketing programme (see below). The concept of this agreement has been accepted by ARTA and details of this agreement will be developed for Board consideration, concurrent with the funding options analysis and report-back.

## **Part C – National Ticketing Approach**

### **Leverage of AIFS investment**

75 The rationale for a National Approach to leverage AIFS investment and maximise long term value has already been outlined. Key elements of the national approach were agreed by the Board in July and September 2007 (ref Board Papers 07/07/2018 & 07/10/209c ) and remain appropriate. NZTA Officers have undertaken a review of the overall NZTA ticketing approach and the extent to which the AIFS initiative supports and is consistent with this approach. This has been informed by recent ticketing consultant inputs (Jeremy Meal of MVA Consulting, Mark Ward of Main Robin Consulting) in regard to the core principle of inter-operability through open standards. ARTA have confirmed that the additional costs of AIFS compliance with the NZTA national approach (inter-operability) requirements are negligible.

76 The development of a national integrated ticketing approach with multi-operator and modal deployment in New Zealand is founded on the leverage of the AIFS design. This has been covered by a Memorandum of Understanding between ARTA and NZTA defining all items of design that are agreed to be shared intellectual property. As proposed earlier in this paper this MOU will be reviewed and expanded where required, in parallel with the preferred funding option investigations, and reported back to the Board.

## Support for ticketing futures and technology evolution

- 77 A key component of the national approach is enabling long term flexibility and value for money, including proceeding with design and approaches that provide the greatest ability to respond to changing market and technology factors over time. This includes open standards and approach evolution to permit the following predictable developments, as proves to be cost effective and appropriate over time.
- **New ticketing forms** will emerge – many of which will be acceptable for public transport use (e.g. smartcard embedded in mobile phones and credit cards are a current reality)
  - **New card provider entrants** – allow open entrance to PT payments market – so that it is not a closed shop and barriers for advantageous future choices are reduced.
  - **New usage opportunities** – leverage for other synergies – park and ride, cycle lockers, other lockers, Supergold, total mobility, etc
- 78 The proposed funding options investigations, national ticketing programme formation, and objectives are consistent with achieving this flexibility.

## National Ticketing Programme formalisation

- 79 Establishment of a National Ticketing Programme is now timely and will provide an appropriately resourced and directed means to deliver a national ticketing approach. This programme will operate in concert with AIFS to avoid duplication of effort and ensure local and national considerations are reflected (or shared) in the key work packages of each programme. The national ticketing programme will follow the normal technology programme disciplines (as also proposed for AIFS). Depending on the funding options the Board chooses, this programme may need to commence very quickly, to allow delivery of standards and certification processes for operator supplied ticketing equipment.
- 80 The initial scope of the programme will be the programme initiation activities, including programme scope, approach, governance, and business case approval documentation. It is proposed that this is justified and funded as a NLTP programme.

## In Committee status

- 81 Board paper 09/06/0207 is In-Committee to allow the following:
- a free and frank discussion of the issues highlighted in this paper and any subsequent issues by the Board;
  - b to allow investigations of options to be conducted by ARTA; and
  - c the result to be communicated to the winning and losing consortiums and other stakeholders.
- 82 It is recommended that Board paper 09/06/0207 be kept In-Committee until the final contract for the implementation of an integrated ticketing system has been awarded by ARTA and the - associated communications executed.

## Attachments

- 83 There are five attachments to Board paper 09/06/0207

## Investigation into the conduct of the Auckland Regional Transport Authority's Auckland Integrated Fare System Tender

### Terms of Reference

#### Background

Snapper Services Limited (**Snapper**) raised concerns about the conduct of the Auckland Integrated Fare System Tender (**AIFS Tender**) by the Auckland Regional Transport Authority (**ARTA**) in a letter to the Minister of Transport dated 9 December 2008. The Minister of Transport forwarded Snapper's letter to the New Zealand Transport Agency (**NZTA**) and suggested that the NZTA may wish to look into this matter.

Snapper provided further details about the nature of their concerns in a submission dated 23 December 2008. In summary, these are:

- **System design** – The design of the AIFS is fundamentally flawed and will lead to the selection of a system that does not meet the objectives of either the Land Transport Management Act 2003 (**LTMA**) or the stated policy objectives of the NZTA and it will not deliver a 'best value for money' solution.
- **Probity breaches** – ARTA has not conducted the AIFS Tender appropriately. Specifically, ARTA officials have demonstrated bias and pre-determination against Snapper's proposals.

#### Purpose of the investigation

The NZTA has asked its Chief Legal Counsel to investigate Snapper's complaint in respect of the AIFS Tender. This investigation will involve the examination of the background to, and conduct of, the AIFS Tender and the provision of legal advice to the Chief Executive.

#### Matters to be reviewed

Pursuant to section 36 of the LTMA, the investigation will examine:

1. Whether ARTA is in breach of the procurement procedure approved by the NZTA for the construction of the AIFS;
2. Whether ARTA is proposing to construct the AIFS to a standard that is excessively high or is unsatisfactory; and
3. Any other issues that arise out of the above matters and which are relevant to the NZTA's responsibilities under the LTMA.

### **Investigation team**

The investigation will be led by Dave Whiteridge, the NZTA's Chief Legal Counsel, with assistance from Warren Whelan (a probity expert from McHale Group) and Peter Wright (a contractor to the NZTA, who has expertise in funding and procurement matters). Other specialist assistance may be sought, as required.

### **Investigation process**

The investigation team will determine its own procedures, including who it will interview and what submissions (if any) it will call for, but the procedures it adopts will follow the principles of procedural fairness and best public sector practice.

The investigation team will maintain confidentiality at all times, except to the extent that is necessary for the purposes of the investigation and procedural fairness, and will keep all of its notes, interim conclusions and drafts confidential to itself.

### **Timeframe for investigation**

The investigation will be completed as soon as practicable.

### **Reporting**

The investigation team will report to the Chief Executive on the background to, and conduct of, the AIFS Tender. The Chief Legal Counsel will also provide legal advice to the Chief Executive. The team may also report on such other matters arising from the investigation as the team, at its discretion, thinks fit.

The Chief Executive will then decide what action, if any, should be taken under section 36 of the LTMA.

### **The NZTA's functions and powers**

Section 95 of the LTMA sets out functions of the NZTA. They include the approval of activities and procurement procedures, assisting, advising and co-operating with approved organisations and auditing the performance of approved organisations in relation to activities approved by the NZTA.

Section 36(2) of the LTMA enables the NZTA to reduce, refuse or withhold payments to the extent it considers appropriate if it considers that, in relation to an approved activity, an approved organisation or person:

- is in breach of a procurement procedure; or
- has been or is or will be likely to be in breach of any other provision of this Act relating to payments from a land transport disbursement account; or
- has constructed or undertaken the activity, or is proposing to construct or undertake the activity, to standards that are excessively high or unsatisfactory.

Under section 38 of the LTMA, the NZTA may require an approved organisation to provide any information that the NZTA considers it needs to perform its functions under the LTMA.

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**Letter to Snapper Services Limited – Auckland Integrated Fare System (AIFS)  
Investigation – Final Report**

15 June 2009

Paul Ridley-Smith  
Chairman  
Snapper Services Ltd  
40 Johnson St  
Wellington 6143

Dear Paul

**AUCKLAND INTEGRATED FARE SYSTEM (AIFS) INVESTIGATION – FINAL REPORT**

I am enclosing two copies of the report (**Report**) of the investigation under section 36 of the Land Transport Management Act 2003 (**LTMA**), as finalised by the investigation team.

Please note that the Report is the property of the NZTA, and should be treated as being strictly confidential to the NZTA and the two organisations to which it has been given, namely the Auckland Regional Transport Authority (**ARTA**) and Snapper Services Ltd, until further notice.

The Report concludes that:

- there was no breach of the procurement procedure for the purchase and implementation of the AIFS; and
- ARTA has not undertaken the procurement of the AIFS contract, nor is it proposing to construct the AIFS, to standards that are excessively high or unsatisfactory.

I have accepted the Report and these findings. Accordingly, there is no basis for the NZTA to take any action under section 36(2) of the LTMA in relation to these matters, and the investigation should now be regarded as closed. I am also enclosing a memorandum, prepared by the investigation team, which shows how the comments you made on the draft report were addressed.

As noted above, the Report remains confidential until further notice. I note that the immediate confidentiality need is to ensure that the integrity of the AIFS tender process is not undermined by premature disclosure of the Report or any associated information.

Should the NZTA decide to make the report public in future, or be required to do so under the Official Information Act (OIA), I will let you know in advance of its disclosure. In that regard, it would be helpful if you could identify any material in the Report that you consider should be withheld under the OIA, and the rationale for doing so, in the event that such a request is received.

Finally, I will be writing to you in due course to address the other concerns that you have raised during the course of the investigation in relation to the AIFS project.

Yours faithfully

**Geoff Dangerfield**  
Chief Executive



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**To** Dave Whiteridge  
**From** Peter Wright  
**Date** 20 May 2009  
**Subject** Auckland Integrated Fares System – treatment of comments by Snapper on draft report.

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### **Purpose**

To record the approach taken to address comments provided by Snapper on draft report<sup>1</sup> v10 dated 7 May 2009 and the way in which these have been taken into account in preparing the final report.

### **Background**

The investigating team prepared its draft report and provided this initially to ARTA, as the approved organisation whose actions were the subject of the investigation, for comment on 4 May 2009. ARTA responded with its comments on 6 May 2009. ARTA's comments were taken into account and a subsequent draft (version 10) provided to Snapper on 8 May 2009. Snapper responded with its comments on 18 May 2009. Snapper's comments have been dealt with as discussed in the sections below.

### **Snapper's comments**

A copy of Snapper's comments on draft v.10<sup>2</sup> is attached to this memo. Each comment is addressed in turn below.

- **Paragraph 1 and 2 – page 1.** Snapper records its objection to being given only 6 working days to comment, given that the NZTA has had 3.5 months to consider and prepare. Snapper goes on to state that its comments would have been more substantial had they been given more time. The team notes Snapper's objection and also notes that the draft report was couriered to Snapper in the early afternoon of Friday 8 May 2009 with a request for comment by midday on Monday 18 May 2009. Snapper's comments are dated 15 May 2009 and were couriered to the NZTA Chews Lane office that day but returned because the office had closed. The comments were received by hand at approximately 9am Monday 18 May 2009.

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<sup>1</sup> Auckland Integrated Fare System: Report to the Chief Executive of the New Zealand Transport Agency

<sup>2</sup> Version 8 was amended as a further draft version 9, taking into account ARTA's comments, for editing and quality control purposes. Completion of that process resulted in version 10 which was provided to Snapper.

- **Paragraph 3 and 4 – page 1.** Snapper reiterates its concerns that it has expressed throughout the enquiry. In summary, it considers that the way the procurement designed, structured and run will result in a suboptimal solution that will fail to achieve adequate value for money or the NZTA’s policy objectives for a national scheme. It claims to have provided evidence of the savings that could be achieved if the procurement is better specified and managed and how the NZTA’s national scheme objectives can be achieved. The team notes these comments but has not amended its report as a result.
  
- **Paragraph 5 – page 1.** Snapper states that the team has not dealt with its concerns but acknowledges the limitations on the scope of this investigation. Its concern is that the divided enquiry makes it difficult for Snapper to know exactly what the NZTA has concluded. The team notes Snapper’s comments but has not taken this into account in finalising its report. These will be addressed in the separate full response covering all the issues Snapper has raised.
  
- **Page 1 “Value for Money” and page 2.** Snapper continues to question the NZTA’s decision to fund the construction of the AIFS and whether it will achieve value for money. It does however acknowledge that a review of the funding decision is outside the scope of this review. It suggests that, for the sake of clarity and accuracy, this be explicitly stated in the report. The team acknowledges this comment and has added, as paragraph 29 of the Executive Summary *“Snapper, in its comments on a draft of this report, expressed the view that the report was deficient in that the team did not address the NZTA’s funding decisions or whether the tender process has or will actually achieve value for money. While the former matter is outside the scope of this investigation, and is acknowledged as such by Snapper, the team’s opinion is that the tender process was designed to obtain best value for money and, on the basis of information reviewed in relation to the process to date, is likely to do so once it is concluded.”* The team repeats this statement in Part 1 paragraph 1.1.3.
  
- **Page 2 “section 3.4.** Snapper questions the statement in section 3.4 that, in relation to the AIFS the *“value, in economic, social and environmental terms, to be obtained through constructing or undertaking the activity .... is largely qualitative”* and refers also to Attachment 9<sup>3</sup> of the report. The team accepts Snapper’s comments and has amended the report at paragraph 3.4.2 by clarifying that the assessment of value is both qualitative and quantitative. It also noted that, as a result of a printing error, the section on the economic benefits had been omitted from attachment 9. This has been corrected.
  
- **Pages 2 and 3 “Ownership of the Clearing House”.** Snapper has again raised the issue of ownership of the clearing house in its comments on the draft of this report. It raised this matter initially in a letter to ARTA’s probity auditor on 25 March 2009 and again on 9 April 2009. Snapper expressed concern that the inclusion of clause 3.4.3 relating to ownership and control of the clearing house in the approved procurement procedure was deliberate and intended to prevent ARTA considering the Snapper scheme. It reiterated those concerns in a letter to the NZTA’s Chief Legal Counsel dated 5 May 2009.

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<sup>3</sup> Attachment 9 Extract from Board paper 08/10/0066 describing the benefits of the AIFS, as presented to the Board at the time ARTA sought construction funding.

The team had addressed this matter in paragraphs 6.5.8 to 6.5.12 of version 10 of the draft report. Given Snapper's continued concern the team has further clarify the matter by adding four further paragraphs as follows:

- 6.5.14 The NZTA's intention in setting the principles related to the national approach and in the conditions that it attached to its approvals was to ensure that an appropriate public organisation exercised control over the clearing house functions as described above. This could be achieved through suitable contractual conditions as was intended by the procurement procedure requiring that the AIFS be purchased through a single design, build, maintain and operate contract which included the setting up of a clearing house.
- 6.5.15 The need for ownership and control of function is quite discrete from ownership and control of the physical servers and software providing those clearinghouse functions. The understood intent of the requirement was for a public organisation, in this case ARTA, to unequivocally retain control of the clearinghouse function while allowing for the ownership of the physical infrastructure and any supporting intellectual property (eg. proprietary software solutions) to be 'outsourced' if it were to be offered.
- 6.5.16 Clause 3.4.3 was introduced in response to the condition attached by the Board (resolution b (iv) *control of the smart card ticketing clearing house function, associated with the Auckland Integrated Fares System, remaining in public ownership*) (Board paper 07/08/2047 refers). The interpretation of this clause must be made against the NZTA's clearly stated intentions. These were **not** that ownership of proprietary elements of the clearing house function was to be vested in ARTA.
- 6.5.16 It should also be noted that there is an important distinction between an approved procurement procedure and a RFT. An approved organisation must use an approved procurement procedure if it wishes to spend money from its land transport disbursement account. A tenderer must comply with the conditions set out in the RTF, and in the normal course of tendering, would not be aware on the contents of the procurement procedure. As discussed in paragraph 6.5.11 above the RFT did not include the wording of clause 3.4.3 for the reasons explained. Consequently, the team considers that there is no substance to Snapper's concerns in relation to it (or any other tenderer being disqualified by the effect of the language in the procurement procedure.

- **Pages 4 and 5 “National Scheme and Interoperability”** Snapper has commented that *“Your report should specifically comment that cost of achieving NZTA’s national scheme goals is unknown and there is a substantial risk that once the ARTA selection is made then it will be difficult to control those costs.”* The team accepts this comment and has amended the report by adding as paragraph 3.3.7 *“The team is satisfied that the RFT enables the national approach to be developed. It agrees that the costs are unknown at this time and would need to be assessed as the national approach evolves and as the specific plans for integration and use in other regions is being developed. The evaluation would need to include a full assessment of the options, including a comparison of the costs between a scheme that builds on the AIFS and a separate stand alone scheme for the region being considered. The NZTA will also ensure that measures are in place to manage and mitigate any risks associated with the AIFS and potential extensions to other regions.”*

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## **Investigation into compliance with the National Energy Efficiency and Conservation Strategy (NEECS) (for the Auckland Integrated Fare System Tender)**

Section 20(2)(b) of the LTMA requires the NZTA to take NEECS into account in deciding whether or not to approve an activity for funding. However, during the course of the review of funding decisions, it was noted that there was no evidence to prove that NEECS had been expressly taken into account. It was also noted that, if the project was assessed with reference to NEECS, it is likely to have strengthened the previous recommendation to the Board to approve funding for the AIFS.

A formal evaluation in regard to NEECS has been undertaken and a full report derived from benefits established as part of the AIFS business case evaluation has been received from Booz and Company. It provides a preliminary assessment into the first year of operation of the fuel reduction and likely CO<sub>2</sub> emission savings that will be result from this project through the increase in patronage.

Key findings are that an assumed patronage increase of 2.5% p/a related to the project (as applied in the economic evaluation) would result in:

- A diversion rate estimate that 75% of new transit trips diverted from car travel (refer to economic evaluation);
- An average trip length of 11.8 km – (economic evaluation);
- Average car fuel use 0.14 litres / km – (MoE); and
- CO<sub>2</sub> factor 2.3 kg per litre

This results in estimated fuel and CO<sub>2</sub> reductions (in the first year of AIFS operation) of:

- A fuel saving of 570,000 litres
- A CO<sub>2</sub> emissions reduction of 1,320 tones

Also it should be noted that the figures above reflect the current operation of diesel trains in Auckland. Once the network becomes electrified these benefits would therefore increase.

Consequent to these review findings from the NEECS review, NZTA officials have concluded that the AIFS does contributes strongly towards the achievement of the high level targets for transport sector contained in NEECs and that, had NEECS been expressly taken into account previously, this would have strengthened the previous recommendation to the Board to approve funding for the AIFS.

## **Investigation into the compliance of NZTA Actions with section 20 of the LTMA (funding the Auckland Integrated Fare System)**

During the course of the investigation, Snapper raised further complaints in respect of the actions of the NZTA (and, previously, LTNZ) in granting the funding approvals for the AIFS under section 20 of the LTMA.

This complaint followed on from information provided by NZTA under cover of Snapper's Official Information Request. These complaints were received in a letter from Snapper on 30 March 2009 and in paragraphs 12 to 29 of that letter detailed specific issues regarding the assessment of AIFS value for money in recommending it to the October 2008 NZTA Board meeting for approval, and questioning the NZTA approach used in assessing and evaluating this project.

NZTA Officers initially involved in the assessment have reviewed the key issues raised and developed a detailed commentary and summary memo to the General Manager Regional Partnerships and Planning. Key points made in respect of the views expressed by Snapper in this analysis are as follows:

- ARTA's proposal was assessed under the funding allocation process as detailed in the Programme and Funding Manual and was consistent with this process.
- The normal process was followed by the assessment team which assessed each of the phases, the supporting documentation and also included an independent peer review by a consultant with over thirty years experience of transport planning and evaluation.
- Peer review of patronage growth assumptions of 2.5% per annum formed a key part of the assessment carried out for this project. The peer review determined these growth projections "very conservative" based on international experience and from his knowledge as a transport consultant. These views were reinforced more recently from advice from Jeremy Meal (Director Smart Card and Ticketing Strategies MVA Consultancy UK).
- The increase in the cost of the project was considered in the assessment. From what was received as part of the original OIA it was understood that information was not specifically requested as part of the OIA.
- The project was appropriately assessed and prioritised against other projects submitted to Land Transport NZ at the time (in line with standard procedures);
- It was determined ARTA's integrated fares proposal as an integral component of a package of measures to improve Auckland's public transport system, encapsulated in Auckland's Passenger Transport Network Plan 2006–2016.



- In carrying out the assessment, consideration was given to the relative costs of ARTA's proposal and the delivery of the Snapper solution in Wellington however it was not pursued in detail because Wellington's solution was not an integrated fare system, it was outside of the five principles the Board had agreed to, and it was not possible to reasonably or accurately determine the cost of this system.
- A comparison of Auckland against Canterbury was raised in discussion with Booz and Co as part of this review. It was concluded that, due to the scale and complexity of the Auckland solution, the systems were entirely different and a comparison would be meaningless. Booz and company had already done an AIFS cost benchmarking study.
- The national approach to smartcard ticketing indicated that option B was favoured over option A, partly because it could be achieved incrementally when the costs and benefits of extending the system beyond Auckland could be assessed in detail.
- The ability of people to use public transport in different cities was very much a secondary factor underlying the Board's desire for a national approach, with the main reasons for pursuing this approach were to avoid the costs of repeating design work in developing separate smartcard systems in different cities, but not as an unreasonable extra cost burden on the AIFS solution for Auckland needs
- The national system benefits that might arise from AIFS did not form part of the consideration and recommendation for funding decision under Board paper 08/10/0066.
- There are considered to be several ways to address the dangers of a dominant ticketing system supplier emerging in New Zealand. The approach that has been recommended (based on overseas advice) is to ensure systems sought, selected, and deployed are as "open" as possible in architecture and standards, consistent with there being a sensible focus and cost for such flexibility. As an example, only applying open-standards at levels of technology where there are likely to be future benefits, such as future equipment suppliers or technology changes. Other methodologies that could have been used include tight contractual controls or through fixed price contract arrangements over a 10 year period. These contractual methods are considered to be less effective in effecting supplier controls as they frequently don't anticipate all future circumstances and tend to focus on treating the symptoms rather than the causes.
- It was determined that risks would be best managed if the public sector works collaboratively to specify, procure and govern the systems in accordance with section 25 of the LTMA, and interoperability standards for the systems are specified.
- The above considerations were formed and reviewed at two levels, specific adherence to established procedures, and also at the level of confirmation of the strategic approach to acquisition, value for money, and national leverage of AIFS considerations.

## Investigation into the intentions related to the Clearing House function (for the Auckland Integrated Fare System Tender)

Another issue that was raised during the course of the investigation related to a requirement in the procurement procedure for the construction phase of the AIFS relating to the clearing house function.

For completeness, the aspect is discussed below so that the Board can confirm NZTA officials correctly interpreted the approved procurement procedure to give effect to the Board's intentions in regard to the clearing house function in the approved integrated ticketing principles – namely, that it was the ownership and control of the clearing house *function* (rather than ownership and control of the *system*) that the Board wished to see remain with a public organisation.

In summary, one of the original principles relating to the national approach agreed by the Board stated that the smartcard system operation should not be run by a public transport operator. The Board then delegated the final approval of the procurement procedure, subject to control of the smartcard ticketing clearing house function remaining in public ownership.

These requirements related to the clearing house function were incorporated in the procurement procedure in clause 3.4.3. This clause stated that *“ownership and control of the smart card ticketing clearing house function, associated with the procured system, must be vested in a public organisation as defined in the Land Transport Management Act 2003.”*

The use of the terms 'ownership' and 'control' created some confusion in relation to the Board's intention with respect to the smart card ticketing clearing house. During the preparation of the Request for Tender for the AIFS, ARTA discussed clause 3.4.3 with senior NZTA staff in order to understand the Board's intentions in relation to the clearing house.

It was agreed that it was not the Board's intention to require that the ownership of the clearing house system to be vested in ARTA as such an interpretation could have effectively aborted the project at that point, as it is highly unlikely that any tenderer in this market would have been interested in bidding for such a contract (i.e. a contract that would require them to hand over ownership of their proprietary systems).

Rather, it was the ownership and control of the clearing house *function* that the Board wished to see remain with a public organisation. This was to ensure that the control of the policy settings associated with the clearing house and other matters of public interest were controlled by a responsible public organisation. These would include elements such as:

- Fare policy
- Custody, security and use of data related to patronage and operator revenue
- Revenue distribution