



CÒMHDHAIL ALBA TRANSPORT SCOTLAND

DELIVERY STRATEGY - SMART & INTEGRATED TICKETING

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INTRODUCTION

Transport Scotland has been engaged in the provision of smart ticketing through the national concessionary travel scheme since 2006, and in that time has built up considerable knowledge of the key elements of delivering an ITSO smart ticketing scheme.

Transport Scotland's role is NOT, on our own, to deliver smart ticketing in Scotland. However previous consultations have established that most smaller bus operators, or local authorities and RTPs, are looking to Transport Scotland to take a strong lead to help and support them through any implementation of smart ticketing schemes. The key benefits of smart ticketing are generally held to include:

For Passengers:

- ◆ Ease of use
- ◆ Access to new ticket types
- ◆ Greater choice on how to pay for travel

For Operators

- ◆ Less cash handling
- ◆ Greater information about customers
- ◆ Greater marketing opportunities
- ◆ Revenue protection
- ◆ Potential for increased patronage
- ◆ Quicker boarding times
- ◆ Ability to develop new ticket products

For Society

- ◆ Modal shift to public transport
- ◆ Perception of a more modern public transport network

In March 2011 we published a comprehensive [outline business case](#) that outlined our strategy for smart and integrated ticketing in Scotland. The key conclusions of that work were:

- ◆ Fundamental uncertainties around the achievability of benefits – in a deregulated market – mean that the commercial case for operators for Smart and Integrated ticketing cannot be made at present. Operators have also shown limited appetite for discussions about integrated ticketing while the outcome of the Competition Commission review is pending
- ◆ However, existing planned developments suggest that individual modes will become Smart-enabled within the short- to medium-term horizon regardless, thereby allowing TS to concentrate on making the case for integrating the Smart infrastructure on

these modes. Indeed many of the stated benefits of smart and integrated ticketing can largely be achieved by smart ticketing alone.

- ◆ It is important to note that a phased approach creates the risk that integration ultimately cannot be achieved either for commercial or for technological reasons. To mitigate this risk, it is essential for TS to adopt an oversight role from the outset. This will ensure that it can maintain an awareness of important emerging developments with ITSO and with commercial operators, thereby ensuring that the path to integration can be managed effectively.
- ◆ Assuming this risk can be managed effectively, adopting a phased approach will allow TS to maintain short-term momentum through planned technological developments, while taking time to progress the robust case for integration at a more appropriate and viable point in the future. Building on the Smart technology that is expected to be put in place, TS can then move forward to develop a model for integration in Glasgow that can, in turn, be rolled out to deliver the long-term vision of Smart and Integrated ticketing for the whole of Scotland.

We believe that these conclusions still broadly hold good – and the risks and concerns in the initial paragraph have mainly reduced - and what follows is our initial Phase 1 of a delivery strategy that will eventually take us through to delivery of the long term vision.

1. PURPOSE OF THIS DOCUMENT

In discussions with various stakeholders it has become clear that understanding of the current position in Scotland, and the opportunities that might present themselves, is rather variable. A prime objective is therefore simply to bring all interested parties up to a common level of understanding around smart ticketing, in non-technical language, and to stimulate interest, discussion and feedback as we aim for the longer term vision outlined below.

2. LONG TERM VISION

“That all journeys on Scotland’s bus, rail, ferry, subway and tram networks can be accessed using some form of smart ticketing or payment”.

Where demand exists for integrated products these will be developed, and systems should ultimately be able to accommodate a countrywide bus/rail/ferry/subway/tram product, for example for foreign visitors to Scotland.

For the purposes of this document, an integrated product is a ticket type that, within a single scheme, is available on more than one operator or on more than one mode (eg bus, ferry or rail).

3. ASSUMPTIONS

- That ITSO will be the default ticketing standard across bus, rail and ferry
- That EMV will eventually become a popular payment method for shorter journeys
- That the Transport Scotland HOPS and public sector National Entitlement Card and card management system will provide the default central infrastructure for any operators or other bodies who do not have their own.
- That smart ticketing capability will in future be specified in rail and ferry franchises/contracts affecting Scotland
- That ITSO ticketing equipment – by being the default requirement for bus operators to participate in the national concessionary travel scheme – will de facto continue to be provided across Scotland's bus network

SUMMARY OF CURRENT POSITION (OCTOBER 2012)

4. INFRASTRUCTURE FOR BUS

All Scotland's 7,100 buses are equipped with ITSO smart enabled ticket machines. These were originally installed over a 4 year period from 2006 to 2010, and probably have a credible lifespan of at least 5 years. They are not equipped with dual readers eg will not be able to read EMV (contactless bank cards). Operators have expressed some concerns about quality and speed of repairs by suppliers.

The national concessionary travel scheme works very well on this platform, with 148m transactions per annum across 260 bus operators using the national entitlement card (NEC), and Transport Scotland ISAMs (smart chip within each ticket machine) and HOPS (central back office which securely processes all smart transactions).

In summary, there is no reason why bus across Scotland could not start to embrace certain smart products quickly.

5. INFRASTRUCTURE FOR RAIL

As part of the current ScotRail franchise:

- ◆ ScotRail have implemented an ITSO compliant Smartcard pilot on the main Edinburgh - Glasgow route
- ◆ Customer trials have spread from 7 day season tickets to monthly and longer period season ticket products and, since March 2012, have included on-line retail of these tickets via the ScotRail website.

These are encouraging outputs from the current franchise, and stand comparison with anything that has been achieved thus far with smart on rail franchises anywhere else in the UK.

6. INFRASTRUCTURE FOR FERRY

Previous trials suggest that existing ITSO POSTs eg bus ticket machines will not work well in a marine environment. Orkney Islands Council have implemented a basic smartcard operation on some of their inter-island ferries, but it is non ITSO, which means that it cannot become interoperable with any ITSO systems such as the bus network on the islands.

The business case for developing a new ITSO ticket machine or reader is unlikely to stack up given the small number of non pre-booked ferry services in the UK, so the practical way forward is more likely to be centred on how we can utilise existing kit in a way that meets the requirements of ferry operators and passengers without compromising revenue collection and ticket (or passenger) validation.

SPT are working on a possible solution, shortly to be trialled on the Gourock – Kilcreggan ferry and Transport Scotland hope to learn from this project.

7. BACK OFFICE INFRASTRUCTURE – TRANSPORT SCOTLAND HOPS

A HOPS, in non-technical terms, is the back office system where smart transactions are securely directed, to then be delivered to the Scheme owner. Where more than one HOPS exists (eg the large transport operators in the UK are likely to each have a HOPS, as do SPT already) then transactions will be sent between HOPS to ensure they end up in the correct place.

Access to the HOPS is through the internet and is controlled by rules to provide the necessary access and security. The data privacy is managed in ways that ensure close control can be applied to restrict what data can be seen and what level of detail can be viewed or changed.

Operators can, subject to certain criteria, be provided with access to various data facilities.

During 2011 Transport Scotland procured (from ACT) and delivered a new AMS-HOPS, to the latest (2.1.4) ITSO specification. This successfully went live in late 2011, and has been scoped to provide a HOPS service to any Scottish transport operator or local authority who wishes to use it for smart transactions. Along with the bus ticket machines and NEC (see below), this provides all the basic infrastructure to operate a smartcard ticketing system across Scotland at an affordable cost.

8. BACK OFFICE INFRASTRUCTURE – NEC

Since 2006 Transport Scotland has successfully utilised the local authority owned National Entitlement Card (NEC) to operate its Scotlandwide Concessionary Travel Scheme. The NEC has an ITSO shell on it, and it is capable of carrying a number of ITSO products (ie smart ticket types). It is administered by NECPO (NEC Project Office), based at Dundee City Council, who manage a number of contracts to ensure that the card and card management system remain fit for purpose across a number of applications. The NEC should be capable of functioning as a smart ticket for a number of ITSO products across Scotland and, for smart ticketing purposes, we may adopt the name Saltire Card.

9. SPT

Strathclyde Partnership for Transport, the Regional Transport Partnership serving the Strathclyde area of twelve local authorities, is pursuing a number of smartcard related projects and outputs across subway, bus, rail and ferry. These include an aspiration to transform the current ZoneCard integrated ticket product into a smart ticket in the Strathclyde area.

The subway, Glasgow's underground metro system, is operated directly by SPT and a major modernisation programme is underway that includes the replacement of magnetic-stripe paper media with a wholly smartcard ITSO ticket in 2013.

A number of ferry services operate in the SPT area and some are under the control of SPT, with the potential to introduce smartcard ticket trials on one later this year.

The upgrading of smart infrastructure across 180 stations in the SPT area will ensure that present seamless paper ticketing is maintained using smartcards and with the added functionality that smartcards bring. The facility to issue smartcard tickets is key, including having product renewal loading at station platform validators and smart-enabled ticket machines on platforms and at stations with ticket offices.

The current position is as follows:

- ◆ As part of the ongoing modernisation programme for the subway, SPT is currently replacing its antiquated magnetic stripe system with a new ITSO smartcard system. The new system is due to be operational across all 15 stations by summer 2013, subject to completion of testing in January 2013.
- ◆ SPT have entered into a joint venture agreement with one of the industry leaders on the development of ITSO Smartcard solutions to take the subway system and expand this to be a platform to operate a "scheme" for all public transport operators to join, thereby minimising the cost of launching an area-wide solution.
- ◆ With nearly 80% of public transport trips being delivered by bus it is important that bus operators participate in this scheme. It should be borne in mind however that the operation of bus services is de-regulated and operators will require a compelling argument to join this scheme.
- ◆ As part of its 10 point plan for "better Bus Service" SPT have already suggested to Scottish Government that the current Scottish Transport Act should be changed to require compulsory participation in any regional smartcard scheme.
- ◆ Discussions are currently underway between ScotRail and SPT to ensure that the ScotRail system is compatible with the SPT system, to ensure ZoneCard integration between rail and subway when implemented in 2013. It is obviously necessary that a further roll out of the smartcard readers to other stations continues.

TECHNICAL CAPABILITY

10. ITSO

Outside of London, which has Oyster, the UK, Scottish and Welsh Governments all expect ITSO to be the key platform for smart ticketing in the UK. Oyster is a proprietary system, which means that all aspects of it (cards, ticket readers and back office systems) are provided by or through a single supplier, and that it cannot interface with any other smartcard system.

In contrast, ITSO was developed as an open specification, meaning that any suppliers of ITSO certified cards, ticket machines/readers or back office systems can provide kit which should all be interoperable. ITSO Ltd is the small company, owned by its members, which manages the standard and the security systems which are prerequisites for interoperable smart ticketing.

The Scottish concessionary travel scheme is an example of a large ITSO scheme, operated by Transport Scotland with over 1m cards and 260 bus operators, three different ticket machine suppliers, and a set of business rules managed by Transport Scotland. Although it is a large scheme it is also a simple one, as it involves only one IPE (ITSO product entity – or ticket type) and the business rules are very stable and fairly simple.

ITSO provides a specification rather than a standard and, certainly in the past, certain areas have been open to interpretation by suppliers, thus preventing it from being “plug and play”. However, there has been growing recognition across suppliers, ITSO and Scheme operators of the need for clarity and consistency, and gradually more stability and certainty is emerging as more ITSO schemes are successfully established across the UK.

11. ITSO ON BUS

Transport Scotland are in active discussion with all of the main bus operators in Scotland, as well as several of the smaller ones, and we are confident that bus will feature heavily in the first phase of projects that are being established across Scotland.

To date there have been no ITSO commercial smart ticketing products on Scotland’s buses, despite the entire bus fleet having been fully equipped with ITSO equipment since 2010. In contrast, there are now several examples in England and Wales of bus operators, local authorities and PTEs establishing ITSO smart ticketing schemes offering a range of commercial and concessionary products. As part of our delivery strategy we will maintain close links with these Schemes and learn from their implementation successes.

Some examples of established schemes elsewhere in the UK include:

Wales - The Welsh Government working with local authorities and bus operators also operate concessionary travel on a smart basis. Some bus operators however, have also managed to take forward the use of the smart infrastructure to offer Smart commercial tickets. Cardiff Bus launched the “iff” card in 2010 and Newport Bus have recently launched the “Freedom” card. These are zonal type tickets offering convenient top up methods for passengers. Next steps in Wales are likely to centre on smart schemes with major bus operators and the Welsh Government supporting e-purse smart for smaller operators.

Oxford - the local authority working with Stagecoach and Go-Ahead bus groups introduced a multi-operator Smart zone based ticket in 2011. Bus routes in and around Oxford are part of the 'Oxford SmartZone', where passengers can make outward journeys using one company, and return using a different company. We understand that a majority of journeys on these services are now made using ITSO smartcards.

Liverpool - smart ticketing is being taken forward by the Mersey Travel PTE working with local transport operators. Building on bus infrastructure used for the concession scheme they are introducing a range of Smart multi-modal ticketing products branded as the “Walrus” card. These products on bus, train and river ferries will be introduced from 2012 through to 2014.

West Midlands - smart ticketing is being taken forward by Centro PTE. Using their “Signature” card passengers use an e-purse arrangement for bus travel. They plan to expand this with further products, bus operators and operate across modes of tram and rail.

North East England - the 12 local authorities are providing funding for the North East Smart Ticketing Initiative (NESTI). The NESTI scheme is equipping small bus operators and providing grant funding for large operators to enable the use of concessionary travel on a smart basis. When that activity completes in 2013 they plan to extend smart ticketing for commercial passengers on bus, metro and river ferries.

Yorkshire - the local PTEs have formed a not for profit company “Yorcard” to deliver Smart ticketing. They are pursuing a similar approach to NESTI above, with plans to work with transport operators to launch a range of Smart ticketing products across their area.

Major operators – Independently of their work with English PTE’s the Stagecoach and Go-Ahead bus groups continue to rollout smart commercial ticketing on their own network operations. These commercial offerings encourage take up through discounted fares for passengers moving to the smart ticketing.

The above has been achieved despite there being no comprehensive rollout by Government of smart ticketing equipment in England. The work published by Transport Scotland in 2011 identified substantial benefits to passengers, operators and government from smart ticketing, so some research needs to be done by Transport Scotland to understand what large operators, small operators and the local authorities who financially support some of the bus network in Scotland perceive as the barriers to developing smart ticketing products.

12. ITSO ON RAIL

The rail network in the UK is provided by a number of different Train Operating Companies (TOCs) who operate rail franchises specified and managed by DfT and, in the case of ScotRail, by Transport Scotland. From the passenger's perspective it remains an integrated railway across the UK, with scope to purchase tickets between any two stations in the UK. Through ATOC (the Association of Train Operating Companies), all ticketing revenue is collected and redistributed to the various TOCs through a complex system known as the Rail Settlement Plan. This would, in all probability, have to be replicated to an extent to properly facilitate smart ticketing of all the main ticket types on rail.

Early versions of the ITSO specification were considered as falling short of what was required to make smart ticketing work on rail, and many of these issues have been addressed in the most recent specification, 2.1.4.

DfT have sponsored a significant piece of work to develop a working solution for smart ticketing on rail, focusing on the south east of the country (SEFT – South East Flexible Ticketing). It is hoped that this will provide solutions that can apply throughout rail in the UK, and Transport Scotland will be monitoring closely the emerging outputs from this piece of work.

In the meantime, ScotRail has arguably developed the largest working ITSO scheme on rail as part of their commitments in the current franchise which runs to 2014. The pilot work has been aimed at annual season ticket holders on the Edinburgh to Glasgow route, and will soon be extended to other stations and period ticket types as described earlier.

DfT routinely specify ITSO requirements in their rail franchises, and Transport Scotland are now considering the appropriate form of wording to realise our smart ticketing expectations over the term of the next rail franchise in Scotland, to be let in 2014.

13. ITSO ON FERRY

As discussed in para 6 above, pilots using bus ticket machines in a marine environment as a direct alternative for bespoke non ITSO machines developed for a marine environment have not proved successful. Discussions with suppliers in 2008 suggested at that time that the research and development costs of providing an ITSO solution would be substantial (and by implication time consuming). If we want to see any form of integrated ticketing eg bus or train to ferry then this problem must be resolved.

Whilst further discussions will be held with suppliers, a more affordable and sustainable way forward is likely to be centred on how we can utilise existing kit in a way that meets the requirements of ferry operators and passengers without compromising revenue collection and ticket (or passenger) validation.

14. EMV

EMV is a new bank led payment method (ie not a ticket but a way of paying) which replaces chip and pin with a simple contactless swipe of an EMV credit or debit card for lower value transactions. In the years ahead this is likely to become an increasingly popular way of paying for things like a newspaper, a coffee or a single journey by bus or rail. The current limit for an EMV transaction is £15, so it will not be a suitable payment method for higher price tickets such as a weekly or annual rail season.

For obvious reasons it will not be suitable for the unbanked, but its potential as part of a wider “smart” world is such that we should consider ensuring that all future readers that are procured are also capable of reading an EMV card.

Transport for London (TfL) is looking to move away from the Oyster technology and reach a point where significant volumes of transactions on London Buses and Underground are by EMV. Transport Scotland will carefully monitor the success of this strategy in the months ahead, as well as the EMV elements of large groups like First and Stagecoach’s fares and ticketing strategies.

15. NFC

NFC is the acronym for Near Field Communication. Mobile phones can have an additional aerial (and associated chip) for NFC. In ITSO’s language this means that they are able to act as either as a Customer Media (CM), or as a Point of Service Terminal (POST) communicating with other smartcards. When acting as a Point of Service, the NFC-enabled device can emulate the operation of a ticket machine, gate or validator to retail or validate tickets. An NFC-enabled phone can also allow a customer to purchase a ticket over the air and remotely download it to their phone. Unlike EMV we should not need to make any wholesale changes to readers to facilitate NFC, and the questions are more around:

- When will ITSO certify the relevant application on each brand of smart phone?
- When will such devices be in widespread use in the UK?
- How many people will choose to use their phone in this way?

BUSINESS RULES

16. One of the biggest challenges in establishing any ticketing system (whether smart or not) is not technical, but concerns setting and maintaining the business rules for each set of ticketing products. It is possible that in a lot of potential smartcard schemes it will be the processes of agreeing, implementing and managing business rules that will prove to be the most challenging element, particularly for multi operator schemes. These rules may cover anything from fares to zones to eligibility, or how to operate hotlisting (ie blocking cards that have become invalid). Hotlisting will be a critical element of commercial smart ticketing, given the revenue protection and potential fraud issues involved.

THE CUSTOMER

17. Arguably, the most important element in this is the passenger. Establishing that the most relevant smart ticketing products are being offered – and in a way that appeals to passengers (eg purchasing tickets online at home) – will be a vital ingredient of any pilot project. Any rules for dealing with lost, broken or hotlisted cards will have to be considered from the perspective of the customer as well as within the business rules for the scheme.

DELIVERY STRATEGY – PHASE 1

18. The ITSO smart landscape across the UK is such that there are no mature, well established and high volume schemes. Indeed, Transport Scotland has more knowledge than most through the hands on role we have played in rolling out the infrastructure necessary to establish the smart version of the Scottish concessionary travel scheme.

19. Accordingly, Transport Scotland's approach to the wider rollout of smart ticketing on public transport in Scotland will be to establish and support a manageable number of pilot or demonstration projects with willing partners from the public sector and operating community.

20. It is our intention that the pilots cover a number of different aspects of smart ticketing – from ferries to school transport to rail – and also that they are established in a number of different parts of Scotland. Most importantly, it is our expectation that all these projects are scalable ie capable of being expanded or replicated in other parts of Scotland

21. It is envisaged that each project sets well defined outputs and measures against three main areas of activity:

- Technical – simply put, we will want to know that each ITSO product (ticket type) works reliably from the perspective of the card, the ISAM, the ticket machine and the back office
- Business Rules – each ticketing scheme (whether smart or not) has to conform to a set of agreed rules that establish and then manage what is permissible in the context of that ticket, or ticketing scheme. This may span what the cost of the ticket is, rules for dividing up the revenue, who owns risks, who manages updates, and what happens in the event of a card or ticket machine failure
- Customer Proposition – there is little point in having a scheme that works well in terms of the above two areas if it does not appeal to customers from the perspective of ease of use, attractive price and certainty of what to do at all stages from making the purchase to which number to call if it is lost, stolen or fails to work

- Note that certain aspects of smart ticketing eg card hotlisting (the process where invalid cards are declined) will have technical, business rules and customer elements to them.

DEMONSTRATION PROJECTS – PHASE 1

22. Transport Scotland is now actively working with willing partners (transport operators, local authorities and RTPs) to establish and run a number of smart related demonstrator projects. A brief summary of each project is as follows, noting that this is very much a work in progress, and the programme is being added to on a weekly basis:
23. **Dundee** - A joint project team comprising the bus operator National Express, Dundee City Council, NECPO and Transport Scotland was formed in July 2012 to drive forward a smart ticketing agenda. National Express will manage the project to introduce an initial smart commercial ticket. The project utilises smart infrastructure put in place under the TS concessionary scheme, and the initial phase plans to deliver smart tickets in early 2013. Subsequent phases will develop Dundee City Council aspirations to use the NEC card for further ticketing products, particularly for Council staff and college students. The Dundee smart project also supports wider 7 Cities agenda.
24. **Orkney** – Orkney Islands Council, Hitrans and Transport Scotland have now agreed to commit to a project, or collection of projects, with phase 1 focusing on options to migrate the Orkney ferries smart ticket onto an ITSO platform, looking at trialling new ticketing equipment with small operators in Orkney and looking at trialling commercial (ie non-concession) products also in conjunction with Stagecoach. Thereafter we will look at options and opportunities to develop integrated products between bus and ferry within Orkney, then between Orkney and the mainland. Timescales for these pieces of work are still being discussed.
25. **School Transport** – A project has been proposed by West Lothian and East Lothian Councils to enable smart ticketing for pupils' home to school journeys that they fund. The Councils wish to reduce the current administrative burden, improve security by using the existing smart NEC and bus infrastructure. A project team has been formed with representation from the Councils, NECPO and Transport Scotland. The outcome will be a smart product suitable for both the demonstrator study and at national level for Councils who wish to use it. The ticketing product is being designed now with anticipated pilot start early in 2013.
26. **Young Persons Bus Concession Scheme** – This will be a largely technical project, with Transport Scotland working with suppliers, NECPO and ITSO to migrate the current "show and go" concession scheme for 16-18 year olds onto smart. Given the

technical nature of the project it is difficult to put timescales onto this project, but the work will help to inform many other areas of smart.

27. **Supporting Employability for Young People (SEYP)** – A pathfinder group has been formed with the Improvement Service, Young Scot, North Lanarkshire Council, Glasgow City Council, Renfrewshire Council, NECPO and Transport Scotland. The remit is to remove travel barriers preventing young people accessing employability support. The project aims to deliver a smart ticketing product using the existing NEC, on-bus and back office infrastructure whilst greatly reducing administrative burdens on the Councils. The project aims to deliver a pilot product in late 2012.
28. **SPT** – have ambitious plans outlined in para 9. Transport Scotland is endeavouring to work with SPT, although there is no formal partnership or project links in the context of the smart ticketing agenda.
29. **ScotRail current franchise** – Transport Scotland continues to working closely and constructively with First ScotRail on a number of smart related activities as part of the current franchise

GOVERNANCE

30. Each of the above projects will have appropriate governance arrangements of its own. However, as each pilot is intended to be a pathfinder for wider rollout – and there will be overlaps between projects – then it is vital that there is some overarching governance in place. Not only does there need to be ongoing steering of the smart ticketing work in Scotland, reviewing the outputs from the above collection of projects, but there will be several linkages with other initiatives in Scotland, and with ongoing work in other parts of the UK on the smart ticketing agenda.
31. Within Scotland, for example there is the work of the Improvement Service and their role in delivering the Customer First programme which embraces the NEC. This in turn meshes with the Government's Digital Public Services Strategy for Scotland. Separately, there is the Seven Cities Initiative, with a focus on economic development but wishing to see an output of smart ticketing in and between Scotland's cities. Each of these is large activities in their own right, with their own governance arrangements, but there needs to be communication and synergy between these and smart ticketing work. The same applies to the significant programme of smart ticketing work being pursued by SPT.
32. It is therefore proposed that, in addition to Transport Scotland being directly involved in the above projects as a Programme of work, there needs to be a high level Steering Group chaired by Transport Scotland and meeting regularly to direct future work and strategic priorities, and ensure there is consistency with other key initiatives such as those listed above.

COMMUNICATIONS

33. Finally, a key element of a phased delivery strategy will be good and ongoing communication with stakeholders, including:

- ◆ Passengers, and passenger groups
- ◆ Bus operators across Scotland
- ◆ Train Operating Companies with a presence in Scotland
- ◆ Passenger ferry operators across Scotland
- ◆ Local Authorities
- ◆ Regional Transport Partnerships
- ◆ Improvement Service
- ◆ Seven Cities Alliance
- ◆ Relevant officials across Scottish Government
- ◆ Key bodies external to Scotland eg ITSO Ltd, DfT, Welsh Assembly, English PTE's

34. It is intended that a comprehensive Communications Plan will be developed and implemented, providing progress updates on the increasing number of demonstrator projects now being established.

GLOSSARY – List of Smart Ticketing Acronyms

Acronym/ Term	What Acronym 'stands for'	What it means
ACT	Applied Card Technologies Ltd	specialist ticketing systems provider and supplier of the current HOPS system
AMS	Asset Management System	ITSO Asset and security 'tracker' which keeps track of individual ISAMs.
Card Production Bureau		A company which produces smartcards.
CMD	Customer Media Device	The media, usually a Smartcard, used to access Smart services. This could also be a mobile phone or other such device.
CMS / CAS	Card Management System Citizen Account System	The CAS is the core customer relationship management system used to hold person and property details for Scotland. This is hosted by local authorities and is used to update the card management system. The CMS is the card management system. The CMS will use data from the CAS to drive concessionary card production. They are interrelated systems.
CPT	Confederation of Passenger Transport	The 'voice' of the coach and bus industry; Body representing bus operators who subscribe to them, includes the major bus operators
DfT	Department for Transport	Responsible for transport policy issues in England
ecebs		Software firm owned by 'Trainline' who provide much of the software platform for ITSO security, as well as a supplier of HOPS and smartcards. Also involved in a joint venture with SPT, under the name of Nevis Technologies
ETM	Electronic Ticketing Machines	Ticketing equipment used by buses to record fare paying and concession passengers
Handheld ETM	Electronic Ticketing Machines	A smaller version of an ETM
HOPS	Host Operator Processing System	Repository of smart data which is taken from ETMs, consolidated and refined.
Hops to Hops		A technical process to send ITSO transactions between Smart ticketing scheme to the product owner
Hotlisting		A process to block a product or smartcard
IPE	ITSO Product Entity.	A ticketing product registered with ITSO.
IS	Improvement Service	

ISAM	ITSO Secure Application Module	The 'chip' in the ticket machines that ensures that all tickets can be read and validated; and that the information gathered is securely relayed for settlement.
ITSO	<i>Not an acronym!</i>	Member owned organisation (TS is a member) that sets specification for SMART card security and operational protocols
LAs	Local Authorities	32 Local authorities or 'councils' in Scotland
NEC / NECPO	National Entitlement Card National Entitlement Card Programme Office	The NEC is a local authority multi application smartcard and is the platform used to deliver concessionary travel in Scotland. Some local authorities use the card to deliver other council services such as access to libraries, leisure and cashless catering (in schools). In future we envisage a significant role for NEC in commercial ticketing. NECPO is the programme office responsible for the NEC development across all Scottish local authorities and represent interests of the 32 local authorities. NECPO is currently based in Dundee City Council, the lead local authority for the NEC.
POST	Point of Sale. Service Terminal	Can be an Electronic Ticket Machine, rail ticket gate, card issue unit or card loading unit
SPT	Strathclyde Partnership for Transport	Regional Transport Partnership providing transport services for several local authorities in the west of Scotland. SPT operate the Glasgow underground and local concessionary travel schemes
TfL	Transport for London	The local government body responsible for most aspects of the transport system in Greater London .
Traveline		Traveline Scotland is the provider of up to date, impartial public transport journey planning, timetables and the latest public transport news across Scotland.
TS	Transport Scotland	

Further copies of this document are available, on request, in audio and large print formats and in community languages (Urdu; Bengali; Gaelic; Hindi; Punjabi; Cantonese; Arabic; Polish).

اس دستاویز کی مزید کاپیاں آڈیو کیسیٹ پر اور بڑے حروف کی چھپائی میں اور کیوئی کی زبانوں میں طلب کیے جانے پر دستیاب ہیں، برائے مہربانی اس پتے پر رابطہ کریں:

এই ডকুমেন্ট-এর (দলিল) অতিরিক্ত কপি, অডিও এবং বড়ো ছাপার অক্ষর আকারে এবং সম্প্রদায়ের ভাষায় অনুরোধের মাধ্যমে পাওয়া যাবে, অনুগ্রহ করে যোগাযোগ করুন:

Gheibhear lethbhreacan a bharrachd ann an cruth ris an èistear, ann an clò mòr agus ann an cànan coimhearsnachd. Cuir fios gu:

इस दस्तावेज़/कागज़ात की और प्रतियाँ, माँगे जाने पर, ऑडियो टैप पर और बड़े अक्षरों में तथा कम्प्यूनिटी भाषाओं में मिल सकती हैं, कृपया संपर्क करें:

ਇਸ ਦਸਤਾਵੇਜ਼/ਕਾਗਜ਼ਾਤ ਦੀਆਂ ਹੋਰ ਕਾਪੀਆਂ, ਮੰਗੇ ਜਾਣ 'ਤੇ, ਆੱਡਿਓ ਟੇਪ ਉੱਪਰ ਅਤੇ ਵੱਡੇ ਅੱਖਰਾਂ ਵਿਚ ਅਤੇ ਕੰਮਿਊਨਿਟੀ ਭਾਸ਼ਾਵਾਂ ਦੇ ਵਿਚ ਮਿਲ ਸਕਦੀਆਂ ਹਨ, ਕ੍ਰਿਪਾ ਕਰਕੇ ਸੰਪਰਕ ਕਰੋ:

此文件有更多備份，如果需要，語音版本和大字體版本及少數種族語言版本也可提供，請聯絡：

يمكن أن تطلب النسخ الأخرى من هذا المستند كالتسجيل الصوتي والخط المكبر ونسخ بلغات أخرى، يرجى الإتصال على:

Aby otrzymać niniejszy dokument w innej wersji językowej, na kasecie lub w wersji z powiększonym drukiem, prosimy o kontakt:

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