

Getting smarter

ITSO CEO Michael Leach provides an update on the intelligent ticketing system that is benefiting passengers and saving money...

The Department for Transport (DfT) has published a new white paper that outlines intent to support the development of local transport through a new sustainable transport fund.

This fund can be utilised for a number of different strategies, including supporting the roll-out of infrastructure to encourage nationwide, interoperable smart ticketing.

Central to this plan is the national, open specification known as ITSO. The ITSO concept was developed in 1998 after a group of Passenger Transport Executives (PTEs) got together and created a vision for nationwide, smart and integrated transport ticketing.

By 2000, ITSO Ltd was established as a not-for-profit organisation to lead the development of the specification and act as its guardian on behalf of the ITSO membership (consisting of national and local government bodies, transport operators and suppliers of ITSO technology or consultancy advice).

The white paper 'Creating Growth, Cutting Carbon: Making Sustainable Transport Happen' sets out an ambitious plan to have the infrastructure in place to support the delivery of smart ticketing: 'The government is committed to delivering, with operators and public sector bodies, the infrastructure to enable most public transport journeys to be undertaken using smart ticketing by December 2014.'

But the question must now be, is significant roll-out across bus operators and local authorities achievable in the current economic environment?

Over the last five years, there has been a significant amount of work and various incentives put in place by national and local governments to enable transport operators and infrastructure suppliers to make this vision a reality. All buses in Scotland (7,000) and Wales (2,500) have now been equipped with ITSO-compliant smart ticketing machines, with cost savings through reduction in inaccurate recording and fraud for concessionary travel in Scotland alone nearing £20m in 2010/11, the first full year following completion of their roll-out of ticketing machines.

In England, the DfT has supported the roll-out of ITSO-compliant technologies through:

- An uplift in the Bus Service Operator Grant (BSOG);
- Mandating ITSO into newly-awarded rail franchises since 2007;
- Making all English National Concessionary Travel Scheme (ENCTS) passes ITSO-compliant in the same year; and
- Providing £20m to support the nine largest urban areas outside of London to implement ITSO-compliant ticketing infrastructure in the 2009/10 and 2010/11 financial years.

The key to ITSO is the ability for scheme operators to manage 'local' schemes, which can operate with each other through the common language of the ITSO specification and thereby create a national network.

We have the right technology and key ingredients to make the national vision a reality, and are constantly seeking to improve the value and services available through using smart ticketing.

We see this as a critical role for us to play, and it is no coincidence that our mission includes helping current and potential scheme operators by making the process of understanding, implementing and operating ITSO schemes as easy, simple and cost effective as possible.

We fully appreciate that no local authority or bus operator would invest in smart ticketing systems if they could not clearly see the benefits of doing so. We need to ensure the ITSO solutions meet the needs of the scheme operators and the public at the same time, without the significant costs of large-scale IT implementations. That's why we're building ITSO's internal capability to support the needs of our current and future operators – effectively helping to demystify what can seem quite a complex concept.

An added benefit to the ITSO system, which is not available through bank card schemes, is that the secure information gathered on journey patterns can be used as a tool by local authorities to ensure transport routes are planned appropriately. The operator can also encourage greater use of public transport through targeted marketing, where the individual customer opts into this.

The ITSO specification allows customers to opt in to schemes similar to supermarket loyalty awards like Nectar. Operators can then encourage them to save



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money through buying multiple or off-peak tickets, encouraging them out of their cars and on to public transport. ITSO-certified technologies also include the ability to link a ticketing terminal with real-time information, giving the ability to build a stronger relationship with customers such as travel updates being sent directly mobile phones – a major bonus if there are weather or breakdown problems. Cardiff Bus, which has been operating a commercial ITSO scheme since October 2010, is already looking at this.

ITSO is not just about transport, with the technology already being used for much more. In Scotland and Wales it is seen as a critical enabler for citizens' access and entitlement cards (including library and leisure services) and we have the very real possibility of introducing stored value or micropayments to these existing uses in the very near future. This will open the door for using ITSO to provide secure ways of providing any number of local authority benefits and payments, which are often only available in paper form and subject to potential fraud.

The national transport vision is that a passenger need only use one 'media' device (smartcard, mobile phone or other contactless solution) no matter what bus, train or route they are using, to travel around Great Britain. That device can be 'loaded' with money or tickets so travellers can pay as they go, or buy prepaid tickets for particular routes or operators. It can currently be loaded online, at ticket vending machines or at staffed pay points.

That means the electronic ticket, or smartcard, talks to the ticket barriers/machines, which then talk to a back office computer system that ensures cards are valid, and the right people get charged and paid for journeys.

Added to this is the need for an efficient scheme to ensure the right local authorities are charged for 'free' journeys made by the elderly and disabled under the national concessionary scheme. Non-smart systems are open to misuse and fraudulent abuse, and Cheshire alone has seen savings of more than £200,000 since 'going smart'.

And, of course, any data concerning personal details or money needs to be highly secure.

No wonder, then, that it has taken 10 years since ITSO started to develop its specification to get to where we are now. That said, ITSO-compliant schemes are now beginning to flourish:

- The first inter-operator schemes working across different bus operators were established in Scotland, Wales, Cheshire and the West Midlands last year. Further developments are planned to include rail interoperability;
- A scheme to ensure Transport for London's Oyster system joins up with ITSO-compliant systems is scheduled to be in place by June 2013. As 80% of rail journeys start, finish, or go through London, this is key to rail operators developing smart ticketing systems further.

On buses

Commercial schemes are now becoming widespread on buses, with the 'big five' (First, Arriva, Stagecoach, Go-Ahead and National Express) all introducing smartcard systems. For example:

- The Cheshire Travelcard, which has been issued to 200,000 people, can be used on 500 buses belonging to six different operators and covering 140 routes;
- In Oxford, Go-Ahead's Oxford Bus Company introduced a full ITSO scheme last year, and there are now more than 30,000 active smartcards in use. Oxford Bus is now working with Stagecoach and smaller local operator Thames Travel to introduce an interoperable smartcard so that passengers can load an ITSO-compliant product onto either a Go-Ahead or Stagecoach smartcard and travel between the three different operators' services;
- Five further Go-Ahead bus schemes are due to be implemented this year – by Go North East, Go South Coast, Brighton and Hove, Metrobus in the South East, and Plymouth CityBus;
- Stagecoach was the first major UK bus company to complete the installation of ITSO-enabled smartcard machines on its entire UK bus fleet outside London, enabling the ongoing roll-out of both concessionary travel and commercial smartcard schemes on its buses across the country. Currently, more than 53 million smartcard transactions are made every year on Stagecoach vehicles.

On rail

All newly-let rail franchises since 2007 have incorporated a requirement to include an element of ITSO-compliant ticketing. It is expected that upcoming new rail franchises will include similar requirements.

Rail operators are gradually introducing schemes. For example:

- Stagecoach led the way by introducing smart ticketing in its South West Trains franchise. It now operates on seven routes. The East Midlands franchise is also on board between Derby and St Pancras and there are plans to roll the scheme out progressively across that network this year;
- Go-Ahead's ITSO-compliant system on rail is called The Key. To date, The Key has been piloted in its London-Midland rail operation, initially trialling in the West Midlands, and now rolling-out across 30 additional stations on the Snow Hill lines into Birmingham city centre;
- In Brighton and Hove, Go-Ahead's Southern Railway is working with Brighton and Hove Buses and Metrobus to introduce pay-as-you-go ITSO smartcard ticketing, which will enable passengers to easily switch between bus and rail modes. A pilot will be launched later this year between Brighton and Seaford.



Metrolink tram in Manchester

The ITSO Specification has had to evolve to keep up with the rapid advances in technology over the last few years. Last year saw a new version that enhanced rail functionality. This year has so far seen an update to allow new and increasingly cost-effective ways to retail ITSO products, including using upcoming mobile phone technology that could either serve as the smart 'device', or provide the ability to read existing smartcards, making it easier for the customer to see what tickets or stored value they have on their card, wherever they are.

We will be undertaking a comprehensive review later this year to future-proof the ITSO Specification, including developing a roadmap for the next 10 years. At the same time we will need to make sure we retain compatibility with existing systems, so that these implemented solutions can be used effectively for a longer period.

Individual authorities and transport operators need to look at what works for them. They have to consider who bears the cost of administering the system. What happens when someone loses a card, for example? Who takes on the job of stopping that card to protect the owner's money, and providing a reloaded replacement? It may be that having two cards or devices works better – one citizen card and a mobile phone that acts as a transport smartcard.

We have to put the customer first and make the technology work for them. Gizmos are fine for those who have access to, and are happy using, technology. We have to remember that 20% of the population either does not have a bank account or uses it only once a month.

Combined with the fact that these are the very people who are currently most likely to get on a bus, you realise that there may always have to be options for the person who wants to pay cash for their journey when they make it.



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