



A *smarter* way of doing things

How do we take smart ticketing technology out of self-contained city environments like London out into the nation at large? Rail poses specific challenges, says **Michael Leach**, chief executive of ITSO.



Everyone seems to accept we are on the cusp of a ticketing revolution that could soon spell the end of paper tickets for the majority of rail journeys. But will a single technology and form of payment dominate 21st century rail ticketing, or is it choice that passengers will demand?

Michael Leach is chief executive of ITSO, the government-backed, not-for-profit company that develops and maintains the ITSO Specification to ensure a seamless passenger experience regardless of the specific ticketing technology used.

The specification has been refined over the last ten years and now enables integrated ticketing across transport modes and over multiple journeys.

Leach told RTM: "The biggest change with smart ticketing is going from →

a very static, one-transaction activity, to something that allows you to use a multitude of products in a far easier and more accessible way.

"I spoke to somebody yesterday who had a family of four who travelled to London for the day; they had 18 tickets. If they were travelling by smart card, they would have had four smart cards.

"This will create flexibility for the passenger or customer over the decisions they can make. The evidence from schemes like Octopus in Hong Kong or Oyster in London is that it's made it easier and faster for people to do things, particularly obtaining monthly season tickets.

"But then there's the idea of moving smart ticketing away from a card, or buying a ticket with a set price, to more flexible products.

"A season ticket at the moment doesn't change, whether you're getting on at 2pm, or if you happen to be getting on at 7.35am in the middle of peak traffic. But an operator will be able to look at a season ticket holder and use travel data to discover they are taking four off-peak trains a week.

"They could then choose to give them credits towards their next season ticket, or loyalty points, or other vouchers, and incentivise them to change behaviour in a way today's market doesn't allow you to do."

There are other clear advantages for both the passenger and operator, Leach explains: "I would argue that most rail franchises in the country know very little about their customers, apart from their season ticket holders, and even then they don't have a lot of information.

"Smart ticketing offers the opportunity for the first time to build that relationship with the customer.

"The Tesco Clubcard or Nectar points schemes recognise you as a valued customer. If you think about the value of transactions for a season ticket on National Rail, when the average is £3,500 now for a season ticket into London, that's a significant investment. Wouldn't it be great if you had a better relationship with that customer?"

"You could allow those who opt in to build up everything ranging from loyalty points to discounts on their next season ticket through to a monthly analysis of what they are doing and how best they can get value from their use of public transport."



Image of passengers heading through ticket gates at Snow Hill station, Birmingham



Norman Baker, Transport Minister

White Paper wants less paper

Transport minister Norman Baker released a White Paper on January 19, 'Creating growth, cutting carbon: Making sustainable transport happen', that included a commitment to get most public transport journeys using smart ticketing instead of paper by December 2014.

That is both a sign of the Government's confidence that the new technologies are ripe for mass roll-out, but also a big challenge for operators and ITSO.

Leach said: "As a user of public transport; that is definitely the right way to go. It is what I was hoping for and was pleased when it came out.

"As the chief executive of ITSO; it's the right challenge. ITSO spent a long time in its infancy and now needs to mature very rapidly into a stable, well-used, easily-understood, cost-effective solution if it's going to support the minister's vision.

"Sometimes it takes somebody making that kind of bold announcement to make the difference, but we must recognise that if you take out concessionary bus travel, less than 1% of all commercial ticketing

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outside of London uses smart ticketing. That's a very small number.

"It's effectively going to require a leap, outside London, from 1% to 50% in three years. We are expecting to be closer to 10% by the end of this calendar year. It's achievable, but it's going to require some very fast and effective work from us and the operators to achieve."

Since 2007, all newly-let rail franchises have included the requirement to move towards ITSO-compliant ticketing schemes. Schemes are underway with Go-Ahead, through London Midland, and with Stagecoach through South West Trains.

Leach had praise for the attitudes of both, saying: "Go-Ahead and Stagecoach are two of the pioneers when it comes to smart ticketing using ITSO. They will build up their own plans on how they will use it to differentiate themselves from the market, and also to make sure they are providing a service to their customers.

"Smart ticketing through ITSO has to be one of a range of ways to get people to use public transport more effectively. The biggest part of that for both of them is getting ITSO working in London; the 'ITSO on Prestige' project.

"Prestige is the original name for the TfL ticketing estate, including all the main line stations. Getting ITSO enabled on those stations and throughout the TfL estate will, for the first time, allow season ticket holders or through London travellers to come into London with their entire journey on a smart card, or a smart phone or any number of combinations of those.

"That's what they need to achieve and we need to help them with that."

Contactless bank cards

The Oyster card is not the only game in town in London, as TfL proved with a recent announcement on making the capital the first city in the world whose entire transport network will be accessible by contactless bank card or credit card. By the end of 2012, card readers across the Tube, DLR, bus, tram and Overground networks will have been upgraded to allow it.

Leach said: "It's interesting; there are a number of people who will absolutely benefit from doing that. My view is that we need to provide choice to get people to use public transport. What drives me personally is not a particular technology; I want more people using public transport,



technology and don't allow you to use a single back office system. There are multiple variants to understand and to read.

"The benefits of smart ticketing are primarily for people who have multiple-modal journeys, so if you're getting on bus and rail, it's useful to have both a season ticket and a stored-value solution that allows you to get straight on the bus when you get to the station, or the hired cycle as Norman Baker might like.

"It's going to take some time for people to feel comfortable with it all – it did in London, and took a lot of incentives. One size doesn't fit all for the rail network."

ITSO has come a long way since 1998, and the gradual roll-out of smart ticketing has given it a much more central role than back then.

Its core role will not change, Leach said, but he added: "ITSO was designed so there was an open environment to encourage competition among suppliers and choice among operators, but ultimately interoperability across all of them. ITSO is moving to do far more assurance of interoperability than we've done before. Our job over the next 12-24 months is to do what we've always done, but far better and more efficiently. That's the only way we're going to reach the minister's vision of 51% of all journeys being by smart tickets by 2015.

"If our members want it, we'll be looking at creating a standard interface for near field communication mobile phones. That's using your smart phone as a smart card, meaning when you get to a gate, you're able to touch your phone down rather than your card.

"There will be those who want to use their phone for that, and others who want instead to 'link' their phone to their card, so they can use their phone to top up their card, so phones become 'readers', as well as 'writers'. With that technology, you can purchase a ticket over the air, and touch your phone to your card to finish the transaction.

"Whether they are developed by the supplier community, or whether ITSO goes out to do it for everybody; we'll have to see."



Michael Leach

FOR MORE INFORMATION

T: 0121 634 3700

W: www.itso.org.uk

I want to make using public transport more simple, and one of the ways of doing is through smart technologies. EMV (the common contactless standard agreed between Europay, MasterCard and Visa) is a good way of doing it, but I'm not sure it's going to appeal to everybody.

"Personally, I've already got three EMV or EMV-compatible cards. I'm not going to take one out of my wallet to tap it down on a gate the way I would a transport card. Some people, particularly tourists, may find it better, but there are complications with that technology.

"You tend not to have multiple Oyster cards, but you do have multiple debit and credit cards. If they're all EMV enabled and can 'go off' at the same time – that's a pretty significant risk.

"It limits it to £15 a transaction, and £50 a day before you have to put your PIN in. That will discourage people using it.

"People won't want to take a card out going through a ticket gate where they may drop it or lose it, whereas an Oyster card, if you lose it and if it's registered, you know where it's gone.

"But, that said, there's room for any technology, including cash, that gets people onto buses and onto rail. I don't ever see contactless bank cards being suitable for long-distance rail journeys, or season tickets, or being desirable for a number of the operating companies.

"They want to own the relationship with the customer. Allowing HSBC or Barclays to do that takes away that ability. There's that cultural clash, and I'd be interested in hearing what Passenger Focus' view is,

to see what passengers think of that approach.

"ITSO will not dominate the market; but neither will contactless bank cards."

No dominant technology

So will any individual technology come to dominate? Not according to Leach, who said: "The smart card as an actual piece of plastic doesn't do enough to cover all of rail.

"It's not just about cards, but barcodes, mobile phones and print-at-home tickets. ITSO is working to enable 2-D barcodes and NFC mobile phones so that the existing ITSO back office infrastructure can be used for all these types of transactions, thereby reducing the cost of supporting these technologies."

He said smart cards were "fantastically useful" for season ticket holders and enable the development of benefits like 'holidays', with the potential that users who do not use the smart card while they are away would have an obvious data record, which could make them eligible for discounts on future tickets.

Leach added: "Smart cards are also really useful for pay-as-you-go type journeys. Contactless bank cards have that £15 limit, so they're only going to be applicable, in the next five years-plus, for shorter journeys. For one-off journeys, you have print-at-home tickets and even temporary smart cards, which are pretty cost-effective now compared to five years ago. You use these for your journey or a couple of times then throw it away.

"Magnetic stripe tickets are an ageing