

A blurred photograph of an airport terminal. In the foreground, a person in a green shirt and blue jeans is walking away from the camera. To the left, a person in a dark jacket is pushing a black suitcase with a red strap. In the background, a departure board is visible with a clock and some text. A blue circle with the white text 'ITSO' is overlaid on the left side of the image.

ITSO

Our journey...

ITSO Ltd Review

1 April 2010 - 30 September 2011

Our focus

ITSO technology is at the heart of delivering the national visions for smart ticketing. During the 18 months from April 2010 to September 2011 our focus has been on:

- Supporting completion of the rollout of ITSO-compliant ticketing across the bus network in Scotland and Wales for concessionary passes.
- Supporting accelerated take-up of ITSO in England in line with the Government's strategy of delivering the infrastructure to enable most public transport journeys to be undertaken using smart ticketing technology by December 2014.

To guide our activities, we have had the following vision and mission statements.

Our vision

"To support, facilitate and enable the delivery of the national visions for smart, integrated and interoperable ticketing across Great Britain."

Our mission statements

For our Licensed Operators and Licensed Members:

- "To make understanding, procuring, implementing and operating ITSO schemes simple, easy and cost effective."

For the public:

- "To assure that the customer experience is quick, easy and consistent."

For the supplier community, including consultancies:

- "To work in partnership with ITSO suppliers to improve the quality, consistency and performance of ITSO products."

For ITSO Ltd:

- "To be self-sustaining and self-funding no later than 1 April 2014."

About this Review

- This Review describes our progress towards achieving our goals and mission statements.
- Our aim is to provide an insight into the transformation of our organisation, our major achievements and our commitment to serving the needs of our members.
- We have only printed a small quantity of this Review to minimise the cost and environmental impact. You can also find a copy online at www.itso.org.uk.

15 million ITSO
cards issued

17,000 ticket
machines on
board buses

300 million
smart ITSO
journeys
recorded

The view from the Chair

I'm delighted to present the ITSO Ltd Review of the last 18 months. As you'll read in more detail in the document, ITSO has made real progress towards achieving its goals and improving the delivery of key services to its members during this time.

We are still moving through the ITSO journey, and we need to be ready to meet the challenge of more ITSO-compliant smart ticketing schemes rolling out into the future. I am heartened and encouraged by the tangible successes that we have achieved and I am confident that there is a solid platform from which we can build our support to customers.

Thank you all for your continuing support. I look forward to meeting many more of you over the coming months.



**Mike Fuhr, Chair
ITSO Ltd Board**

About ITSO

Who we are

ITSO Ltd is a member-owned service organisation that supports, facilitates and enables seamless smart ticketing in Great Britain. Licensed by the Government, we set the common technical standard and provide the security systems that make it possible for:

- Transport operators throughout Britain to link up so that passengers only have to use one secure smart card to pay for their journey, no matter which bus, train or route they are using.
- The same smart card to be used for a number of different services, including those provided by other transport operators and by local councils, such as leisure centres or libraries.

What we do

ITSO Ltd aims to meet the needs of current and future members by:

- Acting as the guardian of the common technical standard for smart ticketing - the ITSO Specification. This means supporting and maintaining the Specification for the present while having a long-term focus to ensure success for the ITSO concept and our members in the future.
- Looking after the ITSO environment. This includes testing scheme components to ensure that they comply with ITSO standards and providing the ITSO security management system (ISMS).
- Being an important port of call for Members, potential Members, suppliers and the media for all questions about ITSO.



CEO's report



**Michael Leach, CEO
ITSO Ltd**

“A number of significant milestones have been achieved over the last 18 months by both the ITSO concept and ITSO Ltd as an organisation.”

In March 2010, the reputation of ITSO Ltd was letting the ITSO brand down – our services simply weren't good enough.

This position was compounded by the poor performance of the ISMS, difficulties for Members in effectively and quickly implementing schemes, and limited capability within ITSO Ltd to provide even the most basic forms of help and guidance that Members and prospective Members were asking for. Among the operating community there was little appetite for anything more than basic concessionary travel. A number of suppliers were ready to leave.

Something had to change, and the result of that change is the refocused organisation, increased capability and significantly enhanced reputation that ITSO Ltd has today.

A number of significant milestones have been achieved over the last 18 months by both the ITSO concept and ITSO Ltd as an organisation. From the completion of the nationwide bus implementations in Scotland and Wales, through to the first, large-scale commercial ITSO schemes. From the stabilisation of the core systems that underpin the ITSO concept through to building a capability and levels of service that effectively and efficiently support the needs of our Members. We have seen ITSO emerge from a fledgling concept to a stable, increasingly mature and now widespread solution.

The focus throughout this period has been on addressing the ITSO mission statements, an approach underpinned by the four key areas that were approved by the ITSO Ltd Board in May 2010:

- Building internal capability
- Standardising the ITSO solutions
- Meeting Licensed Member needs
- Ensuring the technology is fit for purpose

Building internal capability

The first, and in many ways most critical, task for ITSO was to develop the internal capability necessary to support the growing demand for ITSO services and to build solid foundations for the future. With, for the first time, the benefit of certainty of funding, resulting from the confirmation of support from the Department for Transport (DfT), we restructured the organisation during the last quarter of 2010 and relocated our offices to Milton Keynes. The restructure allowed ITSO Ltd to move from a largely reactive and administrative organisation to an increasingly customer-centric and service-orientated business.

These changes enabled us to achieve the challenging objectives of upgrading the ISMS and bringing Testing and Certification in house, whilst at the same time meeting the more than three-fold increase in demand for access to the ISMS and for ITSO services in general. We now have a fit-for-purpose Head Office and strength and depth of capability in our staff, and we have seen real improvements around our core services - the ISMS and the Testing and Certification facility.

We are now in a financially stable position, for the first time, after posting a profit for the 2010/11 financial year and securing Government support for key projects.

CEO's report

Standardising the ITSO solutions

In May 2010 we laid down a challenge to the ITSO supplier community to upgrade all products intended for sale after July 2011 to meet the requirements of v2.1.4, in return for 'freezing' the Specification until at least June 2013. This move was met with widespread support and an acknowledgement that this would extend the usable life of their products in the field.

We set a target for 80% of existing ITSO products to have completed and passed v2.1.4 certification by the end of July 2011, and are pleased that this figure was exceeded.

Meeting Licensed Member needs

The biggest issues facing ITSO and our Licensed Members were the performance of the ISMS and the availability of ISAMs. To eliminate the demand issue, we purchased an additional 75,000 ISAMs. And we introduced a number of new processes and extended the support arrangements to maximise the throughput of the existing ISMS before upgrading it to v1.5 in May 2011.

V1.5 has proved a resounding success, with the ability to comfortably meet demand that has exceeded 90,000 messages in a single day and more than 1.2 million messages in a single month - a dramatic increase of more than 300% compared with the throughput of the original system. We can also now monitor the performance of the ISMS in real time and react to any issues quickly and efficiently.

We have supported a number of schemes in developing their implementation strategies or in understanding how best to use ITSO solutions, leading to a significant increase in ITSO Licensed Members and ITSO schemes.

Ensuring the technology is fit for purpose

By upgrading the ISMS and bringing Testing and Certification in house, we are significantly reducing the time it takes for Suppliers to obtain certification and for our Licensed Members to profile or update their ISAMs. The ability to quickly and efficiently meet the needs of these communities is essential and these actions have underpinned the focus for the organisation throughout this period.

Conclusion

These successes could not have been achieved without the hard work and dedication of the ITSO Ltd staff, the Board and the financial and strategic support of the DfT and Transport Scotland. We are very grateful for the support of the Board and wish to make particular mention of the valuable contribution of those Board members who stepped down from their Director posts during this period. I would like to take this opportunity to personally thank Neil Scales, Brian Collins and Jack Paine for their commitment, leadership and support to me and the rest of the ITSO team.

I'd also like to thank our Members for their continuing support and belief in the ITSO concept. The next 12 months will, in different ways, be just as challenging for us all. However, we are confident that we now have the strong foundations and capability necessary to meet these challenges head-on and to continue to increase our value-add to our members.

“V1.5 has proved a resounding success, with the ability to comfortably meet demand that has exceeded 90,000 messages in a single day.”

“I'd also like to thank our Members for their continuing support and belief in the ITSO concept.”

Our journey - 2010

ISAMs
connected

23041

March

- The Board decides that ITSO Ltd needs to do much more to support the implementation of schemes and to stabilise the critical infrastructure to assure the future of the ITSO concept

April

- The Board appoints Michael Leach as permanent CEO following three months as interim

May

- The Board agrees for ITSO Ltd to focus on addressing four priority areas:
 - Building internal capability
 - Standardising the ITSO solutions
 - Meeting Licensed Member needs
 - Ensuring the technology is fit for purpose

June

- Paper 'New Organisational Design and Medium-Term (six-year) Financial Plan' presented to and approved by the Board - ITSO's first business plan in four and a half years

July

- The DfT produces Ministerial Submission seeking a funding commitment in line with ITSO's organisational design and financial plan

August

- The ITSO Ltd Board Chair confirms a commitment to funding for 2010/11, and approval in principle for three years from April 2011

25380

September

- The Board approves ITSO Ltd's plans to restructure the organisation and relocate

October

- The Board unanimously agrees that ITSO Ltd should proceed with lease arrangements for Milton Keynes offices

November

- Lease signed for Milton Keynes offices
- New contract signed for hosting of the ITSO Security Management System (ISMS) providing better service with improved contractual terms

32872

December

- Draft Business Plan 2011/12 – 2015/16 created
- ITSO Ltd moves to Milton Keynes



Our journey - 2011

January

- Temporary provision of 24/7 support for the ISMS during this critical period

February

- Board approves part 11 of the Specification which will enable over-the-air transactions with ITSO for the first time

March

- Lindsay Robertson appointed Director of Member Services
- David Moran appointed Director of Finance & Commercial
- Board approves migration to ISMS v1.5
- v1.5 starts to run in parallel with the old system to ensure no disruption to ISMS
- Building work completed in Testing & Demonstration suite

April

- HOPS providers testing against upgraded ISMS v1.5

May

- Mike Fuhr takes over from Jack Paine as Board Chair
- Following DfT commitment to fund the completion of the Testing and Certification migration, addressing of internal legacy issues, and a review of the Specification, the revised Business Plan 2011/12 - 2015/16 is presented to the Board
- Upgraded ISMS goes live and processes 400,000 messages in the first two weeks
- ITSO Service Management standard support hours for ISMS issues increase to 7am to 7pm seven days a week, as part of the package to better support Member activities

June

- Caroline Carruthers joins as Chief Technical Officer

July

- Testing and Certification moves in house for the first time
- Board signs off the Business Plan for 2011/12 - 2015/16
- The DfT decides to close ITSO Services Ltd
- The ISMS processes more than 1 million messages in a month for the first time

August

- The number of ISAMs connected to the ISMS reaches 60,000

September

- Michael Hallisey joins as Company Secretary and Legal Advisor
- On 30 September, the ISMS processes over 93,000 messages in one day - more than the entire throughput of June 2010

ISAMs
connected

45708

55144

60274

The ITSO Ltd
Leadership
team



Moving testing in house

In July 2011 we moved our Testing and Certification facility in house for the first time and now have direct control over the end-to-end testing process. This new set-up fosters collaboration and continuous improvement and will help us to add increased value for our members.

Our goals

- Testing in house and under ITSO Ltd's control by July 2011.
- Improved control of test tools and equipment to provide end-to-end testing.
- For the majority of ITSO point of service terminals (POSTs) and HOPS (back office systems) currently for sale to be certified to version 2.1.4 of the Specification by July 2011.

Our achievements

- Testing moved to Milton Keynes on schedule and within budget.
- In a short space of time ITSO's in-house team has become self-sufficient in testing and has achieved a 20% reduction in testing times.
- By the end of July 2011, 85% of all POSTs and HOPS had v2.1.4 certification.

The benefits

- In line with our mission statement, we are now able to work directly with suppliers for the first time.
- We now control the whole Technical process from Architecture to Governance to Testing. It's easier for the Technical team to work collaboratively on improvements and to understand their impact across the ITSO environment - minimising risk and maximising the likelihood of success.

The challenges

- Recruiting the right people with specific technical skills and providing appropriate training to support commercial operation from launch.
- Maintaining people at the previous supplier's location up to the switchover date and having the ITSO team immediately available on-site in Milton Keynes so there was no interruption to testing availability. This was compounded by the need to remain within budget.
- The distance between Milton Keynes and the existing supplier in Belgium complicated the build-up on site at ITSO. However the provider actively and positively supported the move which was completed successfully.

**Testing times
reduced by 20%**

**86 days' testing
completed**

**85% HOPS and
POSTs v2.1.4
certified**

Upgrading the ITSO Security Management System

During 2011 we upgraded ITSO's Security Management System (ISMS) to v1.5, making it faster and more reliable for our members. We replaced old operating systems and now have more robust contracts that ensure the responsibilities of ITSO Ltd and our respective suppliers are clearer. The upgraded system brings increased capacity, faster processing times and a fit-for-purpose solution giving confidence to our members.

Our goals


- To provide a stable, resilient and scalable ISMS.
- To strengthen ITSO's contractual relationship with our suppliers.

Our achievements

- ISMS v1.5 went live on 18 May 2011.
- We replaced old operating systems and servers with state-of-the art technology.
- V1.5 is much more stable and reliable, leading to a huge increase in throughput with more than 99% system availability.
- We have formalised a service promise with organisations that use the ISMS so they know what to expect from ITSO and when.
- We have extended the hours during which people can report a problem with the system (from 9am - 5pm to 7am - 7pm), with support available at weekends by prior arrangement.

The benefits

- ITSO Ltd now has a window into the ISMS system. This means that for the first time we can interrogate and analyse performance in real time, compared with the previous eight-hour turnaround, and react to issues more efficiently and effectively.
- These improvements have helped to build Members' trust in ITSO.
- ITSO Ltd now has service level agreements (SLAs) for all the services we receive in respect of the ISMS, with clear responsibilities set out for each party.
- The new system is scalable. If we need to process a greater number of ISAMs in the future, we can add more capacity.



More than
99%
system
availability

Support
now
available
7am to
7pm

93,000
messages
processed
in one day

Upgrading the ITSO Security Management System

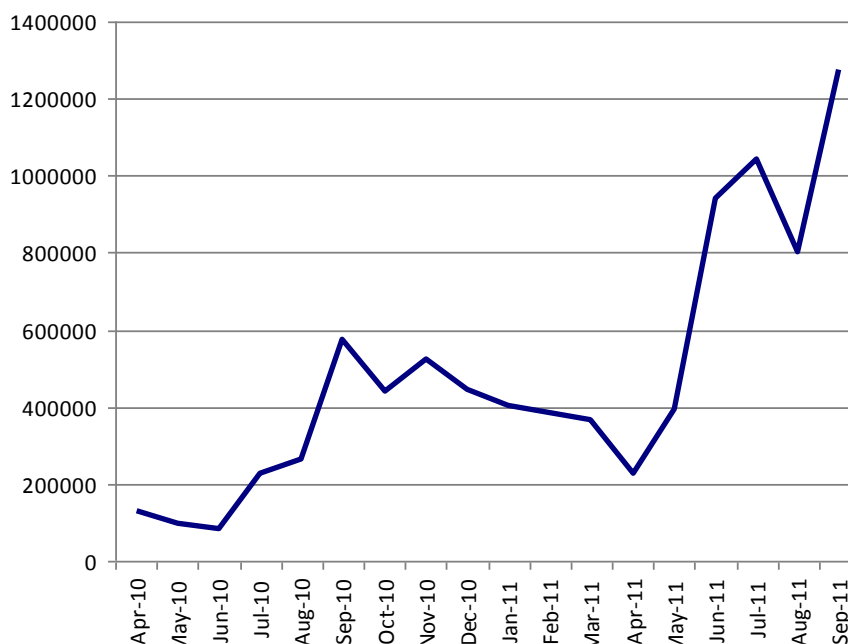
The challenges

- Historically, the majority of knowledge and experience of the ISMS was outside ITSO. It was critical, as we progressed towards a new business model, that skills and knowledge were built up in house and that control of the environment was returned to ITSO.
- The existing commercial contracts were very poor. We invested significant effort into renegotiating the contracts for ongoing maintenance of the applications and for their day-to-day management and hosting.
- The need for change, and the timing, was driven by crisis more than a positively scheduled plan. At the end of 2010, the performance of the ISMS had deteriorated to such an extent that it became critical for the upgraded application and fresh platform to be brought in as quickly as possible.

Disappointments

- Service deteriorated rapidly with the old system before we were able to implement the upgrade.
- Contract negotiations took much longer than anticipated due to ITSO's specific security requirements, delaying migration for four months.
- Ultimate delivery of the upgrade was delayed by a further two months from the target date to ensure robust testing could be undertaken by each HOPS provider. Due to the critical nature of the ISMS and the inability to go back to the old system after the migration, more testing was required than was originally planned. There were no shortcuts we could take without compromising security and credibility.

Messages processed per month



Building our capability

Over the past 18 months ITSO has transformed itself from a technology-led, inward-looking company to a customer-focused service organisation. We have increased our in-house knowledge and expertise to support the national visions for smart ticketing and our mission statements. This has enabled us to engage more effectively with our Members and become one of the first ports of call for questions about the ITSO environment. Our new Testing & Demonstration Suite provides the facilities to support schemes and benefit the entire ITSO community.

Our goals

- To build the capability within ITSO Ltd to support:
 - The delivery of the national visions for smart ticketing.
 - Expansion of the use of ITSO beyond concessionary travel and into increasingly widespread commercial and multi-application use.
- To build the capability to deliver on our mission statement to make understanding, procuring, implementing and operating ITSO simple, easy and cost effective.
- To be actively involved in the delivery of the ITSO concept through engaging more effectively with our Members in order to better understand their needs.
- To take ownership of Testing and Certification and management of the ISMS.
- To develop the necessary technical and customer service capabilities to address known challenges for the ITSO concept.

How have we done this?

1. Building in-house knowledge and expertise to support the national visions

- We increased our Technical resource from one person with knowledge of the Specification to a Technical team of five. This addresses a critical resilience risk and provides the capability to plan future developments. As a result, we have been able to work with ITSO Members to identify a number of areas for improvement in guidance, user tools and the Specification.
- We have recruited expertise from comparable fields such as banking security, which has enabled us to identify ways to use ITSO as a “token” – thereby expanding its usability.
- We now have in-house testing capability which has led to a 20% reduction in testing time.
- We have brought in commercial and contract management capability which has enabled us to remove risk and cost from our major contracts.

The benefits:

These achievements support our mission statements by:

- Making ITSO easier to understand and ultimately cheaper to implement by removing barriers.
- Enabling faster transaction times and enhanced compatibility with EMV-based solutions.
- Reducing suppliers' testing costs through reducing testing time by an average of 20%.
- Delivering more resilient and flexible contracts in ITSO's favour.

Building our capability

2. Customer-facing engagement

- Our increased in-house expertise enables us to engage more effectively with stakeholders. This includes regular participation in working groups and steering groups as well as ongoing meetings with major operators to understand how their worlds operate.
- We have substantially increased support to users of the ISMS.

The benefits:

- We are able to be more proactive and are supporting Members in resolving issues previously outside our knowledge base, such as preparing procurement and technical documentation.
- ITSO is now among the first ports of call for queries and concerns about the ITSO environment.

3. Ability to support schemes effectively

- By relocating to Milton Keynes we were able to accommodate our enhanced capability at below market rent.
- Until the office move, we had no onsite access to ITSO-compliant equipment. Now, the interoperability warehouse has more than 20 certified devices and we have the capacity to create a virtual end-to-end ITSO environment. Everything is in place to complete the demonstration facility, which, along with our in-house testing facility, will enable us to provide direct support to Members without risking the live environment.

The benefits:

- We have the facilities to act as the focal point for delivery of the national visions and to be able to help the entire ITSO community from suppliers through to potential and mature operators.
- We can begin to address concerns around scheme compliance and broader interoperability.

4. Technical and customer service

- We have recruited an experienced, highly-capable Testing team to lead day-to-day certification testing and develop the concept of scheme compliance. They will also support backwards compatibility testing for any changes to the Specification.
- The Registrar function has been refocused into a Service Management team dedicated to providing a customer-centric service for the ISMS.

The benefits:

- ITSO Ltd is no longer as reliant on external expertise.
- Management of our commercial contracts is greatly improved, ultimately leading to improved service around the ISMS, with direct benefits to our Members.

Challenges

- Many key developments ended up being staggered due to the fragile nature of ITSO Ltd's finances at the start of the 2010/11 financial year and the protracted process of releasing Government funding over the 18-month period.

Finance and commercial

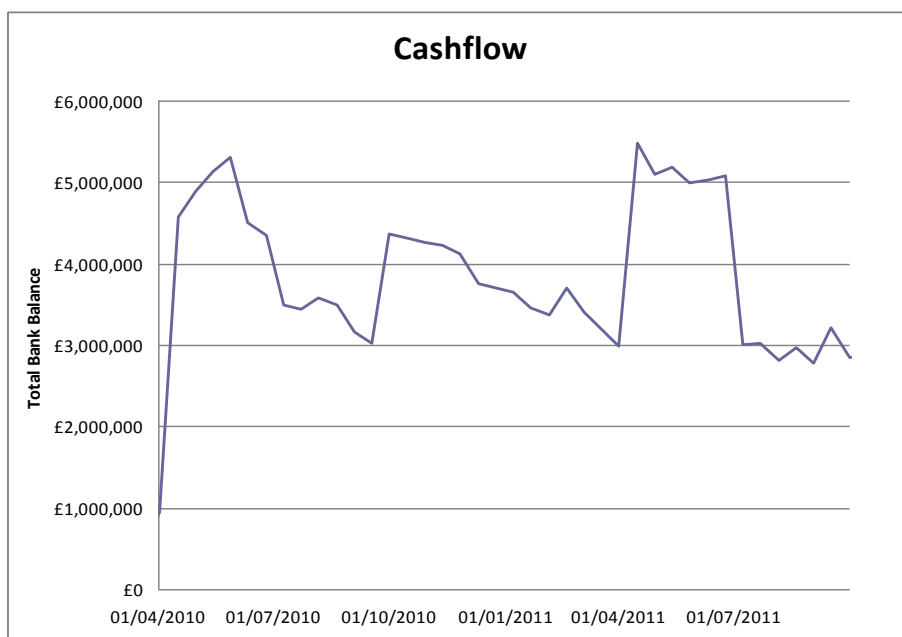
Our focus during this period has been on financial solvency and stability. In the 2010/11 financial year we secured enough funding through revenue and grants to deliver a real surplus for the first time. We were able to invest in the necessary activities to stabilise and grow the organisation and we renegotiated key contracts, increasing control and reducing risk.

Our goals

- To turn around the company's finances and deliver a surplus.
- To address the significant risks and additional costs of legacy contracts.

Our achievements

- We achieved a surplus of income over expenditure for the first time, through increased revenue and careful cost management. The surplus for 2010/11 was £508,000 compared with a deficit of £173,000 in 2009/10. Our total income increased to £3.7m in 2010/11, up 42% compared with the previous year.
- We obtained a long-term loan facility of £3.6m from the DfT. We also secured further grant funding of £3m (of which £1.4m was directly allocated to improvements in 2010/11).
- The resulting improved financial position enabled us to invest in:
 - Moving testing in house.
 - Stabilising the ISMS, by upgrading to v1.5, and enhancing our Service Management capability.
 - Purchasing sufficient stocks of ISAMs to meet growing demand from new schemes.
- We also paid back loans totalling £850,000 from Merseytravel and GMPTE (now Transport for Greater Manchester).
- ITSO Ltd had a legacy of weak commercial contracts. We have successfully renegotiated our major contracts, including those for testing, hosting of the ISMS, office accommodation and telephony. The new contracts provide increased influence and control, plus reduced risk and cost.
- We now have detailed financial models which allow us to understand the core costs of ITSO and to identify the total cost of supporting the ITSO concept over five and ten-year lifecycles, a development that will help us to meet our target of being fully self-funding by 1 April 2014.



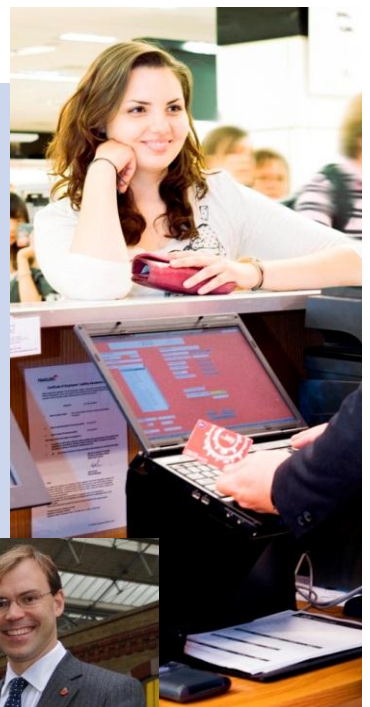
Achieving the national visions for smart ticketing

Over the last 18 months, a number of operators have continued to derive benefits from ITSO-based ticketing schemes, whilst more than 60 new schemes have been registered.

- Scotland was the first national government to comprehensively adopt ITSO. In 2010/11, as in previous years, smart ticketing has enabled Transport Scotland to record a substantial and on-going saving by reducing fraudulent use of concessionary bus passes.
- In Wales, Newport Bus launched Passport, the first commercial ITSO scheme, followed by its university student card, Unigo. This was followed by Cardiff Bus's iff card and, in December 2010, Passport and iff card became interoperable. Nationwide coverage for concessionary travel in Wales was completed in quarter two 2010/11.
- South West Smart Applications Ltd was launched. Owned by 32 public bodies, this approach aims to save operators and local authorities money by exploiting economies of scale.
- Work has continued on the ITSO on Prestige (IoP) project for Transport for London and the 20,000 ISAMs required have been profiled.
- Go-Ahead introduced its commercial scheme, The Key, on a phased basis for travel on its buses and trains throughout England.
- Stagecoach expanded the scope of its StagecoachSmart card to cover Bus and Rail in Cambridge, Oxford and the East Midlands railway with more commercial implementations to follow.
- Go-Ahead and Stagecoach launched an integrated, interoperable service in Oxford where card and products from either operator can be used on both companies' buses.
- Centro and National Express signed a £25m deal for West Midlands bus network improvement including building on the existing smart ticketing scheme.
- Cambridge Busway opened, with Stagecoach and Whippet agreeing to fully ITSO-compliant multi-operator smart ticketing.
- Cheshire introduced pay-as-you-go with their Travelcard.
- Merseytravel launched their Walrus-branded smart card.

Momentum continues to build, including the following activity:

- The five main bus operators (Arriva, First, Go-Ahead, National Express and Stagecoach) are now committed to installing, or have already installed, ITSO-compliant ticketing systems on their entire bus fleets.
- In rail, East Midlands Trains, Scotrail, London Midland, South West Trains and Southern Railway are all running ITSO-based ticketing schemes on parts of their networks.
- Transport Minister Norman Baker continues to actively support the rollout of ITSO schemes and regularly attends launch events, such as for the StagecoachSmart card in Manchester and Go-Ahead's "The key" on Southern Railway services in Lewes.
- Over 60 new schemes have been registered with ITSO during the last 18 months



“We need a transport system that is simple, seamlessly linking the beginning and end of one’s journey. I believe that smartcard ticketing moves us towards this.”

Norman Baker, Transport Minister, Liberal Democrat Voice website, April 2011

“In our view, the considerable public and private sector investment in smart technology that has already been undertaken or is underway creates an important opportunity for increased competition (by reducing the barriers to entry that we have identified), and for delivering increased benefits to passengers through convenient and interoperable tickets.”

**Competition Commission Local Bus Services Market Investigation,
Provisional decision on remedies, October 2011**

“ITSO has emerged as the only practical way to achieve a secure and interoperable (e.g. between modes, operators or scheme owners) smart ticketing system, particularly in the UK, where the bus deregulation outside London presents particular requirements for interoperability.”

PWC report for Transport Scotland, March 2011

“The ITSO-backed system offers much wider possibilities than just ticketing. Cardiff Bus will be able to use the information collected to give its customers a better service.”

**Viv Collins, Welsh Assembly Project Manager,
case study on Cardiff Bus implementation for ITSO website, March 2011**

“We have already proved the business case for concessionary smart ticketing. With a one-off investment of £40m we are recouping around £20m a year just in benefits from accurate recording and implementation of concessionary travel on our 7,000 buses that participate in the £180m per annum Scottish free concessionary travel scheme. This investment not only gives us a two-year payback, but also provides a platform for commercial smart ticketing.”

**Gordon Hanning, Head of Concessionary Travel and Integrated Ticketing,
Transport Scotland, 2011**



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