



Benefits of ITSO and Implementation of ITSO-Compliant Smart Ticketing

Round table discussions

Euro Bus Expo 2010, 2 – 4 November 2010, Birmingham

What is ITSO?

ITSO is the **UK Standard for integrated and interoperable smart ticketing**, owned under Crown Copyright by the UK Government. The standard is supported and maintained by ITSO Ltd, a non-profit distributing organisation licensed by the UK Department for Transport.

ITSO Ltd is a member organisation that includes:

- **Central government, regional and local authorities**
- **Bus operating companies**
- **Train operating companies** and
- **Suppliers** to the industry.

ITSO complies with and supports the development of **international standards**.



ITSO & National Strategy

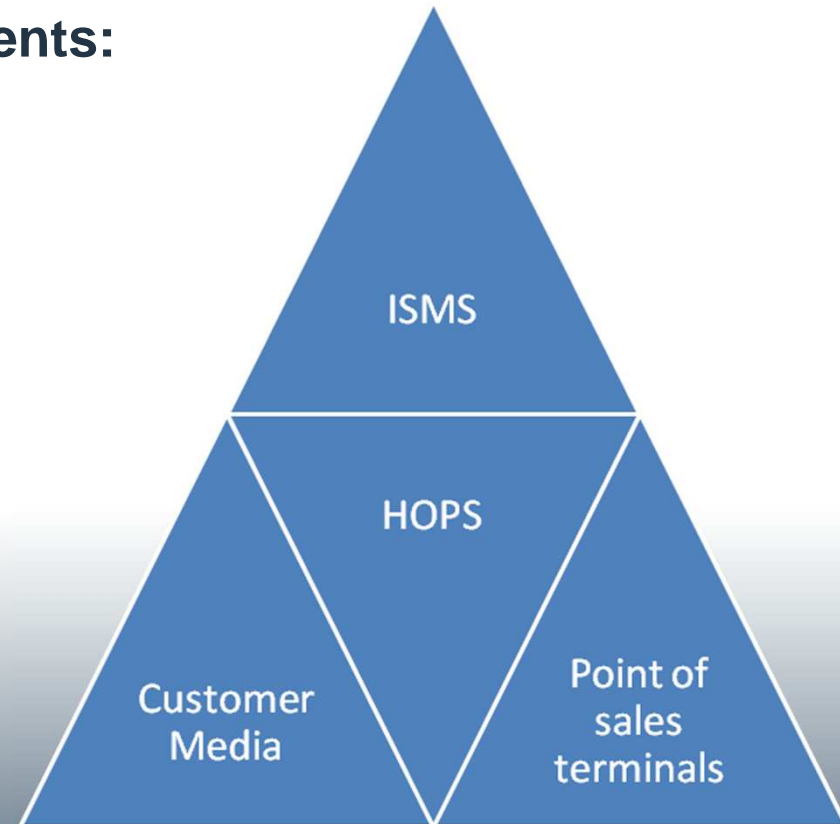
- **ITSO** is the specification **chosen for the national concessionary travel schemes in England, Scotland and Wales**
- ITSO compliance is **specified in rail franchise agreements** with the intention of **nationwide coverage by 2020**
- The DfT have allocated **£20m in funding to the nine largest urban areas in England** (outside London) to encourage the **development of smart, interoperable and, ultimately, integrated ticketing**
- ITSO will be **available on the Transport for London estate from 2012**
- Scotland and Wales see the ITSO solution as part of **national entitlement cards for their citizens**
- The new Government have indicated a strong preference for the continuation of the DfT's 2009 Smart and Integrated Ticketing Strategy – which has ITSO at the heart of the delivery

How it Works

ITSO provides the environment for interoperable smart ticketing to flourish across the UK and beyond.

ITSO Environment Core Components:

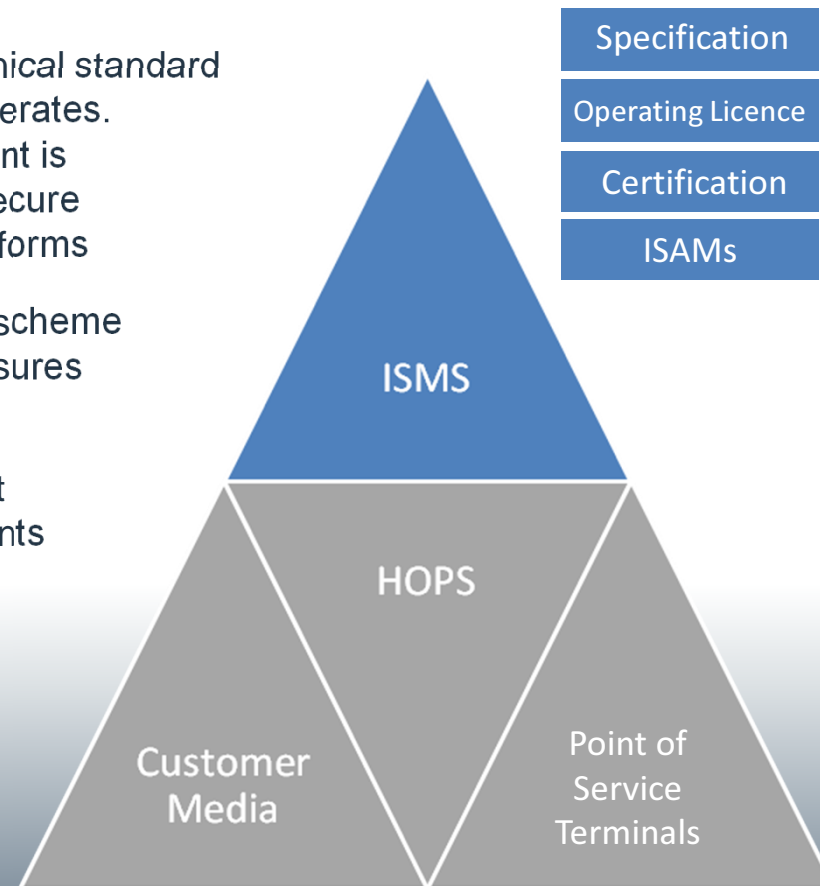
- **ISMS**
- **HOPS**
- **Customer Media**
- **Point of Sales Terminal**



How it Works: Role of ITSO Ltd

ITSO provides the environment with the **ITSO Specification, Operating Licence, Testing & Certification and ISAMs**

- The ITSO Specification provides the technical standard within which smart ticketing equipment operates. This ensures that smart ticketing equipment is interoperable (as opposed to bespoke), secure and open to multiple applications and platforms
- ITSO Operating Licence allows transport scheme operators to use ITSO technology and ensures levelled playing field for implementers
- ITSO Certification ensures that equipment provided by suppliers meet the requirements of the ITSO Specification. This allows schemes to invest in the right equipment to realise their smart ticketing goals
- ITSO provides schemes with ISAM stocks to personalise and distribute across their own equipment within the ITSO environment

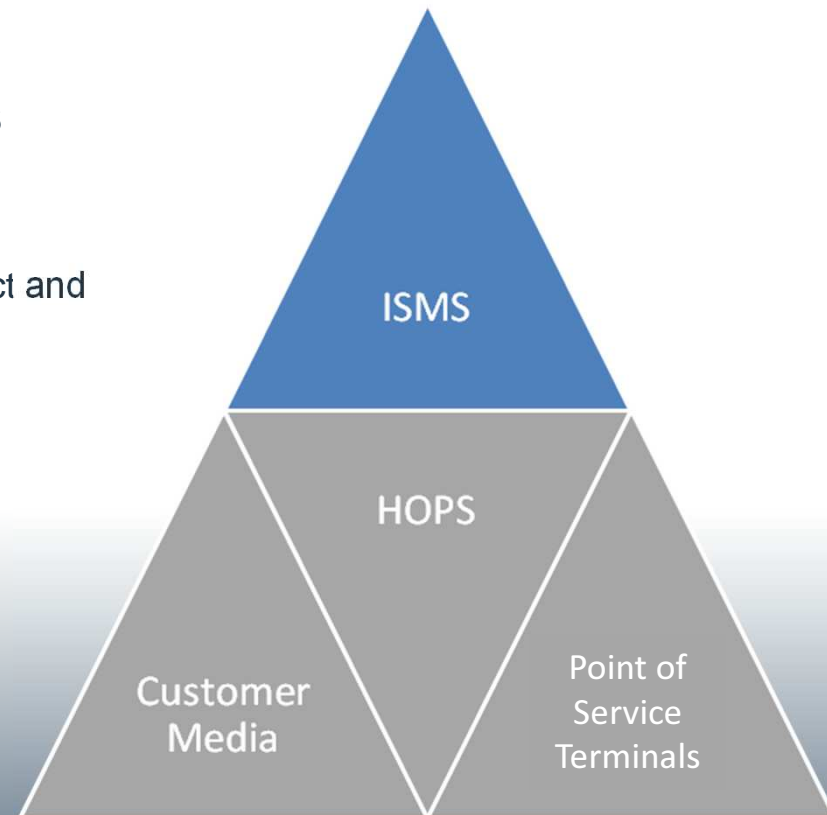


ITSO – How it Works: ISMS

- ISMS manages all products for application across the ITSO Environment

Key functions:

- Stores all products (i.e. ticket or service) , shell details (i.e. types of card) and HOPS details (i.e. back office) for all schemes within the ITSO environment.
- Provides scheme HOPS access to product and shell details for profiling ISAMs
- Acts as the ‘focal point’ for the ITSO environment, the basis for all types of ticketing products to be utilised by one or more scheme operators

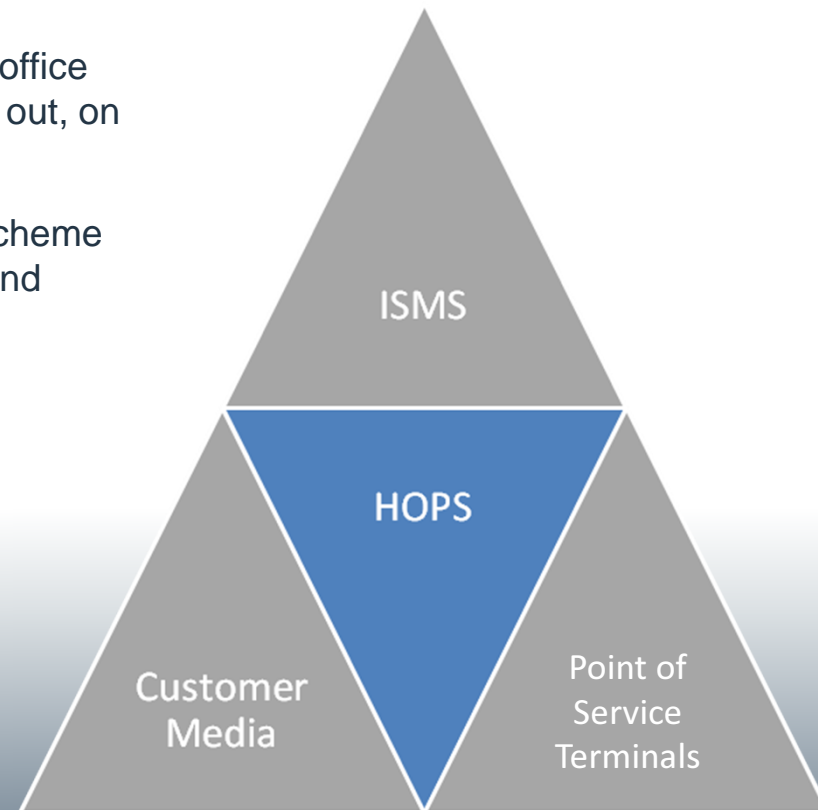


ITSO – How it Works: HOPS

- HOPS is the back office data repository which stores a scheme's card data, transaction data & manages ISAMs.

Key functions:

- The 'focal point' for the scheme, the back office is integral to all data coming in, and going out, on a regular basis
- Stores all scheme data for analysis (i.e. scheme reports and accurate settlement figures) and strategy modelling
- Profiles ISAMs for distribution to scheme equipment, such as Point of Service Terminals (i.e. ticketing machines or card printing equipment) to ensure every scheme component can communicate to/from the HOPS

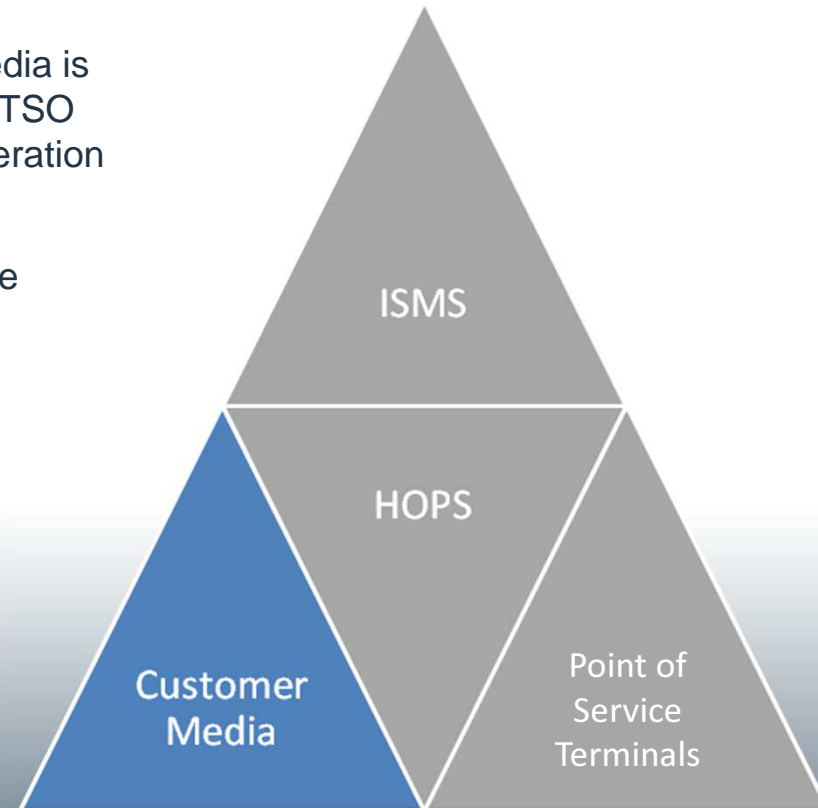


ITSO – How it Works: Customer Media

- Customer Media is the user interface (currently smart cards) which scheme products are based on

Key functions:

- The ‘focal point’ for the user, customer media is currently smart card based, although the ITSO Specification is adaptable to the next generation of media, such as mobile phone ticketing
- Tailored to the needs of the user, this is the platform for one or more schemes to offer their services to customers
- Interoperability ensures that multiple products for multiple schemes can be offered on one platform – for the benefit of user and service provider

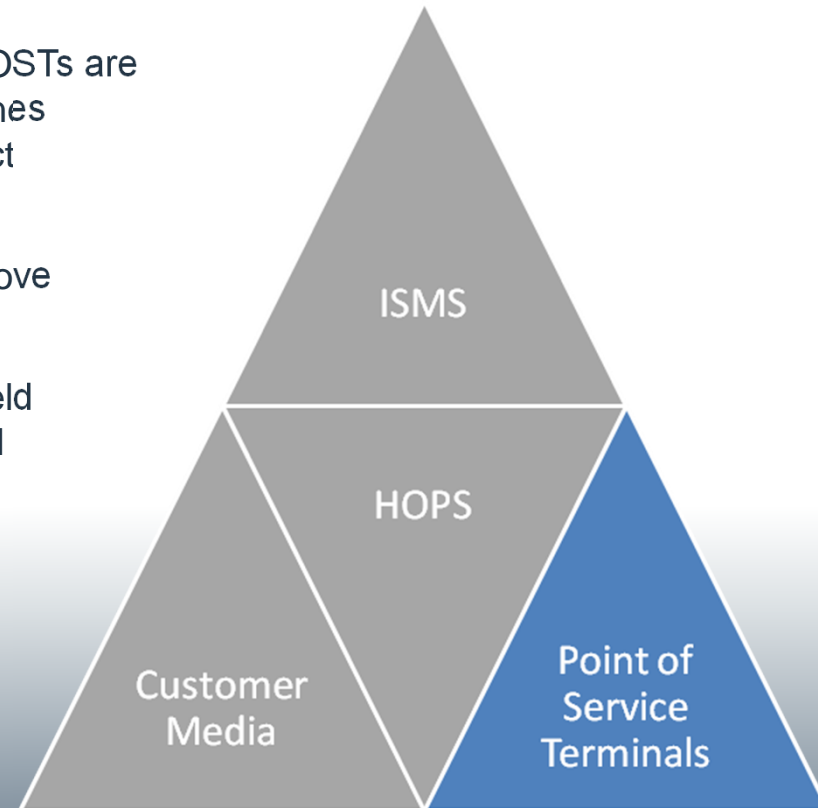


ITSO – How it Works: POST

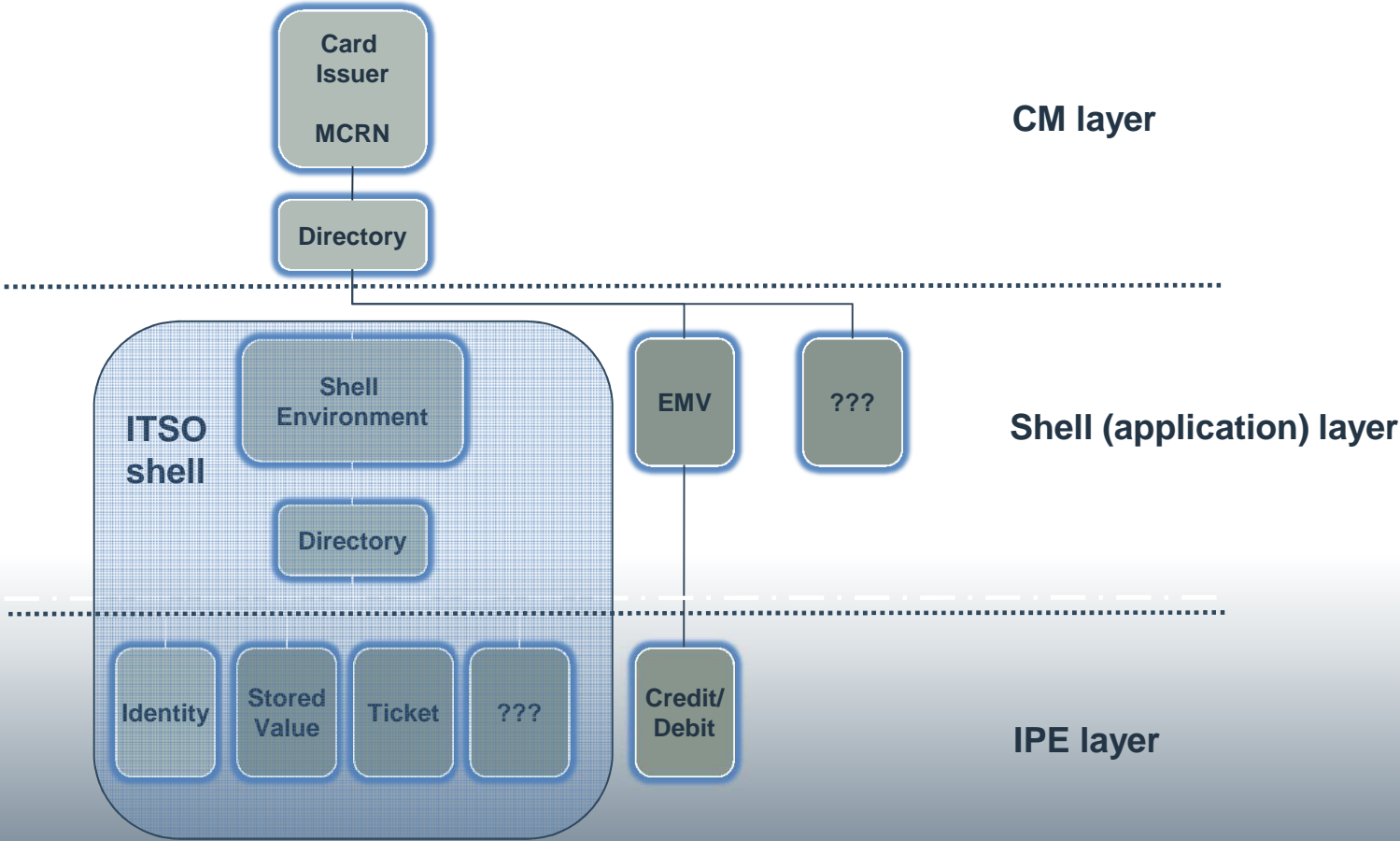
- Point of Service Terminal (POSTs) equipment conducts transactions to link the customer to the scheme

Key functions:

- The ‘focal point’ for transaction activity, POSTs are predominantly Electronic Ticketing Machines capable of reading and processing product transactions from customer media
- Some POSTs may also add, block or remove products from customer media
- Other examples of POSTs include handheld verifiers, ticket barriers (i.e. rail gates) and card production equipment used to print and encode customer media
- All POSTs are fitted with an ISAM, to ensure communication with a scheme HOPS



The ITSO smartcard solution supports Multi-Application use, can exist alongside EMV Payment or NFC Applications and has the option for its own **ITSO Stored Value** proposition



The Benefits of ITSO

- ITSO smart ticketing allows you to acquire a more **comprehensive understanding of your customer needs**
- This comprehensive understanding can be applied to **service strategies**, not only to **increase service take-up** but to **enhance service reputation**
- Generating greater confidence and convenience in services for the user has been proven in leading to more customer journeys – this in turn **boosts service revenue**
- The efficiency of smart ticketing, particularly in terms of service administration, can **reduce running costs**; it can also allow better controls in the **fight against service misuse or fraud**
- Indirect benefits include wider adoption of sustainable transport, to support **reductions in both congestion and CO² emissions**



Fears, Concerns & Misconceptions

- *ITSO is expensive and difficult to implement and operate.*
- *ITSO is only a partial solution – more work is required.*
- *Does ITSO / integrated ticketing mean implementation of a national product?*
- *ITSO will surely become irrelevant and replaced by EMV.*
- *Integrated ticketing can only be achieved through commercial agreements between operators and local authorities.*
- *Can't we just use Oyster?*
- *Implementing smart card solutions is expensive and slow.*
- *Customer Service issues on ITSO will be a complex nightmare – who owns the customer – the operator / card issuer / ITSO?*
- *There is no benefit to the Bus Companies in going smart – why should they pay for it?*

What does the future hold?

- ITSO is **compatible with NFC**, remote downloading using secure messaging and is capable of residing alongside other applications such as entitlement and EMV
- The **ITSO Stored Value Product** supports:
 - Multiple Stored Value Products on same Media (national and local)
 - Auto top-up
 - Journey legs and cumulative fare
 - Receipt printing (when available)
 - Pay as you go
 - Different currencies and currency change



Our Objectives

ITSO will ensure the successful and timely **delivery of the national smart and integrated ticketing vision** and will confirm its position as the preferred smart technology solution.

- For our Licensed Members: *To support understanding, procuring, implementing and operating ITS0 simple, easy and cost effective*
- For the supplier community: *To work in partnership with ITS0 suppliers to improve the quality, consistency and performance of ITS0 certified products*
- For the public: *To ensure the end-user (customer) experience is quick, hassle free and consistent*

