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Department for Transport  
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Dear Ms West

**"Developing a strategy for smart and integrated ticketing" – consultation response**

Thank you for the opportunity to review and respond to the Government's consultation paper at reference. This response collects the view of the industry body RTIG-INFORM, a collaborative group of some 80 subscribers including UK local authorities, transport operators, and the system industry whose scope is the effective use of technology in public transport.

RTIG-INFORM held a workshop in Edinburgh on 9 September 2009 around the "Smart Ticketing" theme. The contributions to this were diverse from operators, consultants, LAs and others, and covered both short and long term themes. In summary, we concluded that the involvement of technology in ticketing was likely to diversify greatly over coming years, and the challenges lie principally in fitting these into the business processes and market structures of (public) transport services.

We fully agree with the principle that current and emerging technology will have a major impact on how ticketing could and should be made more effective over the next 5-10 years, and many of our member organisations are actively engaged in determining how this might be delivered locally (within their municipal area, their transport operations, or their product set). Mobile (personal) devices and NFC-enabled technologies are clearly an important part of this. So are card-based tickets, where there are doubtless further innovations, ranging from vicinity cards (charge while travelling) to facial recognition matched with card-based biometrics.

In the short term and on a UK-wide basis, clearly managing the Oyster-ITSO "divide" is one of the most significant issues, as it relates to major extant systems. It is reasonable for Government to continue to be involved with those discussions. RTIG-INFORM does not particularly have a view on the technical resolution of this, except that it should lead to full card interoperability while minimising the impact on established management systems.

However there are many other pertinent issues, including:

- how to ensure that rollout around the UK is suitably coordinated (which will be challenging given that ITSO and other specifications will evolve over time);
- how to mitigate the explosion of different ticketing technologies to make it workable for both operators and passengers;

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- how far and how fast to aim for integration over multimodal products (including private vehicles – car parks, tolls, even VED).

The consultation document does not propose an approach to these areas.

It is our strong belief that ticketing technologies must be seen as fully integrated into other business systems, including service planning and monitoring, service control, travel information, journey personalisation etc.

We acknowledge and support the implications of the “Vision” in Section 7, both for this technical integration and also for the wider use of ticketing – that is, bundling (public) travel along with leisure and other purchases. However the “Way Ahead” (section 9) seems very largely to revolve around the activities of ITSO. It is not clear from this whether it is DfT’s intention that ITSO should begin to take a more strategic stance, rather than an operational one.

We support the general approach behind the “Possible Further Workstreams” – though we note that there is a difficult line to tread between providing incentives to move to an optimal solution, and tilting the playing-field towards a favoured solution. How much flexibility the market has to respond will be a critical area to watch.

In terms of the mechanisms for Government engagement, we fully support the conclusion at clause 9.25:

- In outline, the emerging strategy is for the Department to:*
- 1. Set a clear vision of future ticketing and provide strategic leadership and support to stakeholders to deliver it.*
  - 2. Support ITSO to ensure a high quality and affordable specification which adapts to accommodate new and future technology developments.*
  - 3. Address the market failure to provide smart ticketing infrastructure by providing an incentive to bus operators through BSOG and including smart ticketing requirements in all future rail franchises.*
  - 4. Encourage local authorities to use the existing tools to develop integrated ticketing schemes for local networks and for operators to develop commercial smart products.*
  - 5. Work with TfL to make the London Oyster Estate compatible with ITSO.*

In light of comments above, we would strongly recommend that this approach of strategic leadership, engagement, support of specifications, future technology research etc is extended to *all* information and communication technologies in the transport environment.

At Annex is our point by point response to the Questions raised in the consultation paper.

I trust this is useful. RTIG-INFORM remains committed to delivering benefit to UK plc and will be happy to discuss any of its comments above.

Yours sincerely

Mark Cartwright  
General Manager

## **Annex to RTIG-c036-mc: Specific questions answered**

### ***Q1. Is the proposed scope of the strategy the right one?***

Ticketing is at the heart of public transport, and with an increasing focus on the economics of private travel, similar considerations will arise in that context too. Given this, we suspect that the strategy is overly restricted to smartcard and ticketing technology as a “standalone”, without either business or technology context. While we support the vision, we think it will require a wider initiative than simply strengthening ITSO to achieve.

### ***Q2. Do you agree that integrated ticketing can improve the offer to the public and encourage modal shift?***

Yes, undoubtedly.

### ***Q3. Do you see any benefits to integrated ticketing that have not been covered?***

Yes. Some of the greatest benefits from integrated ticketing will arise from integration with non-transport contexts. Other benefits arise from modal agnosticism, as evidenced by the use of Oyster across the TfL modes.

We note that price and validity is a complex area even within a mode, and many of us will have been caught out on a train which we find out too late is “peak tickets only”. Care will need to be taken that fares are transparent to users. The benefits of flexibility will be lost if the validity or pricing conditions get so complex (or so skewed) that travellers are deterred.

### ***Q4. Do you agree that smart ticketing can improve the offer to the public and encourage modal shift?***

Yes. Smart ticketing will be especially beneficial to those with variable or complex journeys, which is disproportionately those who are normally car drivers.

### ***Q5. Are there any benefits to smart ticketing that have not been listed in the document?***

See answer to Q3.

### ***Q6. Are there any issues around smart ticketing and privacy that you would like to bring to our attention?***

Not specifically, but we welcome the Department’s concern in this area. Privacy, and security more generally, is a systemic issue and while technical tools (such as encryption) or legislation (such as the Data Protection Acts) are necessary, they are not sufficient. By extension, a Privacy Impact Assessment is not sufficient. There is an ongoing need to assure the UK’s information architecture in this area, and we suggest that DfT work with other Government Departments and the Information Commissioner to achieve a suitable oversight.

### ***Q7. Do you agree that EMV will play an important role in the future of ticketing?***

Yes, so long as EMV is global and backed by the major financial card providers.

### ***Q8. Are there any barriers to EMV cards becoming widely used for ticketing?***

We suspect that the principal barrier is the cost of an EMV reader and the associated banking charges.

***Q9. Do you agree that NFC will play an important role in the future of ticketing?***

Yes, probably, although that depends to an extent on developments within the mobile telephony industry. Micropayments by phone have been technically possible for a long while but have yet to be taken up seriously.

***Q10. Are there any barriers to NFC mobile phones becoming widely used for ticketing?***

The principal barrier is a lack of clarity in market structures, ie what role the mobile companies wish to take (infrastructure, guarantor, settlement service, retailer/reseller etc).

***Q11. Are there any other ticketing technologies that you think will play an important part in future ticketing?***

"Semi-smart" systems such as printed magstripe cards with extra personal information, acting in either single journey or stored value ways, may provide cheaper (though less functional) alternatives in some areas.

Vicinity cards, readable from several metres, give the option of charging while the traveller is on the vehicle, so avoiding the need to trap on-and-off movements. However these are not without their problems.

***Q12. Do you agree with this analysis of current arrangements?***

Yes.

***Q13. Are there other problems with current arrangements not included here?***

We think these capture the most significant problems.

***Q14. Why do you think smart ticketing is not already more widespread?***

In a word: deregulation. It is no accident that smart ticketing emerged soonest and most effectively in London, where the transport authority has much closer control of all public transport operations; and that, more recently, it has been reinvigorated via the rail franchising mechanism and the national concessionary schemes. With a few exceptions (metropolitan, local or operator specific), it has been difficult to make a business case for smart cards elsewhere.

A specific aspect of this is the confusion, in a deregulated environment, between the retailer, the service/product provider and the settlement authority.

***Q15. Are there issues we have not identified regarding the introduction of integrated tickets?***

The most difficult issue (cf previous) is who holds and issues an integrated ticket, and how the contract with the second-tier suppliers works. This is true whether the ticket provider is one operator subcontracting to others, or an independent ticket provider (including the National Concessionary Scheme). Negotiating terms, in a multiparty or even open environment, can be very time-consuming and get very commercial.

***Q16. Do you agree the proposed vision is the right aspiration for public transport in England?***

Yes.

**Q17. Is the vision deliverable?**

It will be challenging, and is certainly not a short term prospect on a UK-wide basis (barring very dramatic intervention).

**Q18. Do you think the current ITSO specification and organisation can deliver this vision? If not, what needs to change?**

As we understand it, the current ITSO specification is capable of supporting the great majority of this vision. There will, doubtless, be specific changes required in specific areas as the market continues to develop. Furthermore, the environment provided by ITSO will be necessary for streamlining card-based systems.

ITSO will, however, not provide a unique or global answer to the future of ticketing, nor will the ITSO organisation be able to control a marketplace which may involve banks, telecoms operators and even supermarkets as transport retailers. ITSO-based ticketing will only ever be one of the options available.

**Q19. Should DfT play a role in shaping the system architecture for smart ticketing in England and if so, what should that role be?**

Yes. DfT should, through leadership and guidance to schemes and (where appropriate) investment and/or regulatory control, clarify the framework by:

- Keeping the marketplace under review
- Developing and maintaining national specifications
- Providing guidance on the use of national specifications

DfT should also ensure that national specifications and guidance on ticketing technology are aligned with developing regulation (especially LTA2008 instruments and BSOG), as well as with other national/international specifications and guidance (including in the road charging environment).

We agree that it is not DfT's role to deliver transport ticketing solutions or services.

**Q20. Do you agree that the existing tools are sufficient to allow the creation of integrated ticketing products?**

Technically, yes.

**Q21. Do you agree with the outline strategy?**

Yes, subject to the comments above that it must reflect the need to integrate with traveller devices, operator business and public sector monitoring systems.

**Q22. Do you think that the successful delivery of the Department's existing policy commitments will be sufficient to deliver the vision?**

No. With the arguable exception of BSOG reform, these existing commitments are all linked to encouraging the uptake of ITSO. The principal interoperability/multifunctionality benefit would seem to be from the retrofitting of ITSO capability into the Oyster estate. (The national concessionary scheme will also deliver interoperability benefit but only, at present, on the local bus network.) Otherwise, there is little to prevent local ITSO implementations operating as "silos".

**Q23. Would the suggested workstreams help deliver the vision? If yes, which ones?**

All of these workstreams would be valuable. However, as each addresses a different issue, it is difficult to put them in priority order.

Very roughly, the easiest and cheapest would be enabling best practice sharing: this could be done through ITSO now. Establishing frameworks for LA smartcard schemes would provide an excellent pole around which local implementations could cohere, especially if coupled with a pump-priming investment competition; this would of course cost considerably more. New technologies (and the likely development of marketplaces) should be under continual review – which is cheap but passive; the extent to which engagement is possible depends a lot on third parties, national and international.

For evidence of this, we would paint the picture of how RTI has developed. RTIG-INFORM has provided standards and advice and best-practice sharing for a number of years, at low cost. The market would not have had products or projects without the £20M intervention from DfT in 2002-2004. And the current challenges on disseminating RTI involve both national projects such as Transport Direct, and international companies such as Google and Microsoft.

**Q24. Short of direct funding (beyond current and planned incentives and provisions), is there anything else Central Government should do to encourage the roll out of integrated smart ticketing?**

Probably not, though see answer to Q25.

**Q25. Do you agree with the roles for the key stakeholders? If not, indicate which you disagree with, explain why and what you think the roles should be.**

In the main, yes. However there are limitations with the roles as described. Specifically there is a mismatch between the national project scope for local authorities (geographically limited but functionally diverse) and large operators (geographically diverse and functionally limited).

- LAs will struggle to establish a framework that facilitates regional or long distance services. The London experience with stretching Oyster into the Home Counties is germane: even with the “pulling power” of the capital, it hasn’t happened.
- It is not clear how the business model works. Presumably operators will want to see benefit for accepting smartcard payments, but the cost reduction on non-smart tickets is small per ticket. So, at least for buses, there is limited headroom for a local authority to raise revenue funding for a scheme.
- In the view outlined, no stakeholder is responsible for ensuring a coherent rollout of specific services across the UK. There is a risk of a “postcode lottery” arising in which area A has excellent and rich services, but neighbouring area B has few.