Written submissions received for the Transport Committee's investigation into the future of ticketing

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Caroline Pidgeon AM
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8th August 2011

Dear Caroline,

Transport Committee's investigation into the future of ticketing

Thank you for your letter of 18 July regarding the Transport Committee's investigation into the future of ticketing in London.

I can confirm that Shashi Verma, Director of Fares and Ticketing, will attend the Committee's meeting on Tuesday 6 September.

In advance of the meeting, you also requested specific information on this subject, which is attached as an appendix to this letter.

Yours sincerely

Peter Hendy

Appendix

1. A brief summary of how the new ticketing technology will work

Customers will need a contactless payment card (CPC) from their bank or payment card provider. Customers will not have to apply for a CPC and will receive their new upgraded cards from their issuers as part of the card renewal process. All the major payment schemes (Visa, MasterCard and American Express) have their own brand of contactless card (PayWave, PayPass and Express Pay respectively), issued by the banks as credit, debit and prepaid cards.

The initial phase of the TfL project in 2012 will deliver CPC acceptance on buses only. A flat fare will be charged when a customer presents their CPC to the yellow reader on the bus. No ticket will be issued.

In this initial phase, each validation will represent a separate contactless payment transaction, akin to presenting the card for payment in the normal retail environment. Price capping will not apply until the software has been developed for the multi-modal phase. Each bus validation will therefore appear as a separate item on the customer's card statement.

The multi-modal phase of the project will commence in 2013 and will enable CPCs to be used on all TfL modes of transport and National Rail. Customers will touch in (and touch out on Tube, DLR and rail services) on the yellow readers, as they do today with Oyster. Customers' journeys over a day will be charged to their card accounts at the end of each day, and the price cap will apply.

Customers will not need to pre-register for the service or pre-load funds so they will literally be able to turn up and go.

Customers will be able to create online accounts with TfL for their CPC travel. They will be able to view their journey history, see how the charges for travel on any day have been calculated, query charges, pay any unsettled charges and generally manage their account.

Customers who do not have an on-line account will be able to see the daily charges from TfL on their card statements. TfL will also provide an online facility for these customers to check how a specific transaction value has been calculated.

2. Details of the main benefits and risks arising from the new ticketing technology for: a) passengers; and b) TfL, and any TfL actions to address these risks

Passenger benefits

By accepting CPCs, TfL will provide the following benefits for passengers:

Simplified fare payment - Enabling customers to travel without obtaining a ticket or special card beforehand.

More convenient travel – customers will not need to make a special journey to a Ticket Stop or station to add value to their card before travelling.

Improved customer service - the online account will enable customers to review their journey history and query charges etc.

More transparent charging - customers will not need to have value physically added back onto their cards when journeys are disrupted.

The TfL website will be established as the primary channel for customer service and will provide general information on how to use CPCs on TfL services.

TfL benefits

It is expected that the new technology will:

- reduce commission costs paid to the Oyster Ticket Network and Cubic Transportation System Ltd by £6m per year by 2013/14;
- reduce the number of Oyster cards issued by 20 per cent per year by 2014/15;
- deliver increased revenue through an overall increase in customer travel of £10m per year from 2014/15.

Risks

The main risk to the project is a low level of issuance and use of CPCs. However, it should be noted that by May 2011, 14.5 million CPCs had been issued. This is expected to rise to 20 million by the end of 2011. In addition to Barclaycard issuing most credit and debit cards as CPCs, Lloyds Banking Group has started to issue CPCs to their debit card holders. HSBC is issuing 1m cards and RBS is developing its plans for a roll-out.

TfL continues to monitor the issuance and growth of contactless cards through its established relationships with the payment schemes and issuing banks and recognises this as critical to the success of FTP. TfL plans to work with the card issuers to educate customers on how to use their cards on TfL services, including a large scale pan-London marketing campaign to generate awareness of the ability to use contactless payment cards on TfL services.

3. An update on the progress to date with rolling-out this new ticketing technology and the future key milestones for this project

The table below sets out the future key milestones for the project. The later dates are indicative and subject to approval by the TfL Finance and Policy Committee. All development and preparation work for the first two phases of implementation is on track to meet the earlier milestone dates shown.

Deliverable	Date	Notes
Initial Bus Launch for Contactless Payment Cards (CPCs)	March 2012	Payment of bus single fares (uncapped)
Multi-modal acceptance of CPCs, with daily and weekly fare capping	Autumn 2012 to Spring 2013	Launch likely to be phased

Deliverable	Date	Notes
Travelcard Season travel and Bus Passes available through CPCs	Autumn 2013	**Subject to funding approval**
Phased adoption of a technology platform resembling that for CPCs for Oystercards, to deliver a second generation version of Oyster for customers who do not wish to use CPCs	2014	**Subject to funding approval**
Decommissioning of current Oyster technology platform, once migration to second generation Oystercard platform is complete	2015	**Subject to funding approval**

4. A list of the TfL services which will allow for the use of contactless bank cards as tickets and the proposed dates by when each of these services will allow for this payment option

The initial phase of the project will apply on buses only. The scope of the multi-modal phase of the project to be implemented in 2013 comprises:

- Docklands Light Railway (DLR)
- London Buses
- London Overground
- London Trams
- London Underground
- London services provided by Train Operating Companies (currently C2C, Chiltern Railways, First Capital Connect, First Great Western, London Midland, National Express East Anglia, Southern Railway, South East Trains, South West Trains)

Contractual agreements to enable the Train Operating Companies to accept CPCs are being developed and reviewed with the Companies.

The scope of the service may be increased to enable CPCs to be used for travel on other modes e.g. river services and the London Cable Car; and transport operators outside London.

5. A copy of the business case for introducing this new ticketing technology

The business case is commercially sensitive and we are unable to supply it. However, outline answers to the specific requests related to the business case are set out below. Section 2 above also outlines the key benefits.

6. Details of the forecast numbers of passengers who will use this new form of ticketing in 2012 and each year thereafter on each transport mode alongside details of the total forecast numbers of passengers

In the initial bus only phase, without capping, it is envisaged that around one per cent of all bus journeys will be made using CPCs, with many of these users transferring from cash ticket purchase.

Take up is expected to accelerate in 2013 with the launch of the multi-modal phase, including capping, with approximately a quarter of TfL passengers travelling with CPCs by 2014/15.

7. The capital cost for introducing this new ticketing technology broken down by mode

These details are commercially sensitive. However, TfL's Business Plan includes provision for some £75m of capital spending related to the project.

8. The operating costs for running this new ticketing technology in 2012 and each year thereafter including the costs for dual running this new technology alongside the existing Oyster card system

TfL is confident that the incremental costs of operating the new CPC system will be fully offset by the identified savings. See TfL benefits under (2) above.

9. Details of the savings anticipated from this new ticketing technology including the amount of savings forecast and by when these are expected to be delivered

See TfL benefits under (2) above.

10. A brief summary of: any trials/testing of this new ticketing technology which TfL has undertaken; the main lessons learned from these trials; and how these lessons are now being applied to the roll-out of the new ticketing technology

The back office software that will support the new technology is intensively tested as it is developed to ensure it replicates the current PAYG system fares.

Testing of the bank card transactions model to ensure that CPC billing will work correctly is being carried out in conjunction with TfL's Merchant Acquirer (Barclays). A prototype of the new card reader which has been designed to accept Oyster, CPC and ITSO format smartcards has been built and used to verify that transaction speeds are acceptable.

In addition, all new equipment and software is extensively trialled and tested in the field, for example on single bus route or in a limited area, prior to being rolled out across the whole of the TfL network.

11. Details of TfL's plans for any changes to the Oyster card system in the short-term and in the long-term in light of the introduction of this new ticketing technology

TfL does not envisage any changes to the Oyster card system in the short term. In the longer term these are likely to be major benefits from migrating the Oyster card to a technology similar to that for CPCs.

12. Details of TfL's proposals for changes to ticketing products and fares policy in light of this new ticketing technology

At launch, the fare structure for CPCs is expected to mirror that for Oyster.

A new product, the Weekly Cap, will be launched, probably at or soon after the principal multi-modal launch. The cap will start on a Monday and run to the following Sunday. When customers use the same card throughout this seven day period, they will pay no more than the cost of a 7 Day Travelcard or Bus Pass covering their journeys.

13. Details of any TfL consultation with passengers on this new ticketing technology and the results for this, and any plans for further consultation

TfL has commissioned a series of market research exercises to explore customers' interest in using CPCs for public transport travel in London and to assess the level of interest and desired format of the proposed customer account. The results from this research have been positive, indicating that the potential benefits are evident to many of TfL's passengers.

TfL's other plans for ticketing

14. An update on progress to date with TfL's project to allow the use of ITSO compliant smart cards on the Oyster system and the future key milestones for this project

The scope of this project is currently under review with the DfT and is expected to be implemented in phases over the course of 2013.

15. A list of the TfL services which will allow for the use of ITSO compliant smart cards on the Oyster system and the proposed date by when each of these services will allow for this payment option

The scope for ITSO acceptance after implementation will be as under (4) above.

16. Details of any other TfL proposals to change ticketing technology and ticketing products including providing for payment by mobile phones and any barriers to this

TfL has no short term plans to make other changes to ticketing technology than those already described but is continuing to monitor developments relating to mobile phone payment systems and other technologies.

Transport for London

Our Ref: TFL115160

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1 September 2011

Dear Caroline,

Transport Committee's investigation into the future of ticketing

Thank you for your letter of 22 August requesting additional information for the Transport Committee's investigation into the future of ticketing in London.

Enclosed with this letter is a version of the business case for phases one and two of TfL's Future Ticketing project, which has had commercially sensitive information removed. I have also supplied a summary of the market research.

Yours sincerely

Peter Hendy

FTP Business Case Phases 1 & 2

1.1 TfL's fares and revenue collection system covers ticket issue, income collection and associated processes for buses, Underground, Docklands Light Railway, and Croydon Tramlink. There are interfaces with the National Rail ticketing system and some river boat operators, a network of 3,900 agents each with a retail device, and the supporting back office processing system.

1.2 The Future Ticketing Programme (FTP) seeks to reduce the overall cost of revenue collection to TfL. The TfL Business Plan as approved by the Board in October 2009 provided new funding for the Future Ticketing Programme from 2012/13 onwards, taking into account TfL's overall financial position. In addition to the £70m funding available in the Business Plan, through internally generated savings, increased revenue and the debt/advertising deal with TranSys signed in February 2010, further funding for 2010/11 to 2012/13 has been found. Fares and Ticketing have reviewed delivery options and revised the implementation plan accordingly by dividing the programme into five distinct phases.

1.3 This business case covers Phases 1 and 2 of the Programme. Phase 1 is the initial bus launch (acceptance of contactless bank cards for payment of the bus single fare). Phase 2 is the extension to multi-modal daily travel (acceptance also for rail and Underground travel) and the introduction of a daily and a weekly cap.

1.4 The Future Ticketing Programme's vision is enabled principally by the acceptance, as payment for travel, of contactless cards issued on an EMV platform both by banks and (later by TfL in Phase 4 of the FTP). To enable the cost savings and acceptance of contactless cards, changes to the ticketing system, including the move to back office processing, will be made.

1.5 Subject to funding being available, the intention is that after the introduction of Phases 1 and 2, there will be further phases delivered to realise the full benefits of the Future Ticketing Programme, as follows:

- Phase 3 – Online retailing of all season tickets with acceptance via contactless bank cards
- Phase 4 - Issue of a TfL contactless card (for use on all ticketing products)
- Phase 5 - Decommissioning of Oyster.

1.6 Phases 3 to 5 will be the subject of a separate business case. Phases 1 and 2 can be implemented independently of any commitment to Phases 3 to 5.

Transport for London

2. Programme Objectives

2.1 The Programme objectives for Phases 1 and 2[1] are:

- Reduce commission costs - Reduce commission costs paid to the Oyster Ticket Network and Cubic by £6m per year by 2014/15.
- Reduce card issuance - Reduce the number of Oyster cards issued by 20 per cent per year by 2014/15
- Increase ticketing revenue - Deliver revenue uplift through an increase in paid journeys on buses, royalty payments and an overall increase in customer demand of £9m per year from 2015/16.
- Improve customer experience - Improve customer experience by 2014/15 by reducing the average journey time:
  - by an average of 5 minutes for every 6th journey for bus customers using a contactless payment card; and
  - by diverting 24 per cent of sales from rail stations to achieve a reduction in queues for all TfL customers.

2.2 This business case covers Phases 1 and 2 alone. Whilst it is the intention to continue with Phases 3 to 5 after the completion of Phase 2, they will be treated as a separate business case. Phases 1 and 2 will be implemented in a way such that it 'future proofs' the later stages, to minimise the costs of the later phases.

2.3 There have been the following material assumptions made in the cost and benefits calculations:

- Programme Key Dates - Phase 1 and 2
  - March 2012 - Initial Bus Launch (Phase 1) - payment of bus single fare with contactless bank card
  - October 2012 - Multi- modal daily travel (Phase 2) - daily and weekly capping with contactless bank card (although weekly capping not launched until April 2013).
- The availability and product range for Oyster cards does not change as a result of Phases 1 and 2 and the deposit of £5 per newly issued retail card will continue.
- Future Product and Ticket mix by April 2014

[1] All reductions are based on a base year of 2010/11

- Ticket media (percentage of trips) – 56% adult Oyster card, 23.3% credit/debit card, 9.6% TfL concessions, 7.5% Freedom Pass, 2% magnetic tickets and 1.6% staff
- Product mix (percentage of purchases by type) – 57.1% Oyster card Pay as You Go, 28.4% credit/debit card Pay by Ride, 4.5% magnetic tickets, 9.0% Oyster Travel card or bus pass, 1% others

- Customer uptake and use of contactless cards will rise to 33 per cent of journeys by 2014/15 as demonstrated in Table 3 below.

Table 3; Journeys with Contactless Payment Card

Journeys (m)	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Bus Journeys	23	122	467	509	516	519	518
All Other Modes	0	182	465	536	553	561	558
Total contactless[2]	6	302	804	1,145	1,164	1,181	1,192
Total Journeys[3]	3,221	3,304	3,372	3,453	3,520	3,578	3,621
Contactless %	**.2**	**9**	**24**	**33**	**33**	**33**	**33**

Source: Deloitte Payment Model July 2011

- Other material assumptions

  - Agents' retail commission rates are unchanged under Phases 1 and 2
  - Interchange rates reduces over time
  - Fares for travel using a contactless payment card are harmonised with Oyster
  - 2/3 of adult customers have a contactless payment card by April 2015
  - London Rail Train Operating Companies will be included as part of the Phase 2 roll-out
  - Incremental Merchant Service Fees have been calculated assuming that payment settlements for a proportion of CPC customers will be aggregated weekly (not daily as the current transaction model requires). This has not been agreed with the payment industry.

[2] Contactless journeys are those journeys made using a bank-issued contactless payment card, not an Oyster card

[3] Excluding free travel

2.4 Costs have been estimated from suppliers, benchmarking, estimated figures obtained from potential suppliers and the experience of costs of the Ticketing Services Contract and the Future Ticketing Agreement. Staff costs have been estimated based on current salary rates, plus inflation of Fares and Ticketing staff and other identified internal and external resource.

2.5 The incremental number of contracting and TfL staff employed to deliver the programme is 67. For those TfL FTEs, the increase in staffing, NI and pension contributions is reflected in the FTP budget, although other resource costs (including accommodation, Your IM and Season ticket contribution) are not.

Cost Savings

2.6 Cost savings come largely from reduced commission payments to retail agents, fewer contacts received by Oyster customer services and Oyster card production cost savings.

2.7 The number of Oyster retail cards issued is estimated to reduce by 20 per cent or 1.2 million cards per year by 2015/16.

2.8 Reduced commission payments for Phases 1 and 2 come from a mix of fewer magnetic tickets and Pay as You Go top ups at the Oyster Ticket Stop Network. Ticket stop transactions reduce from 33.6% of all transactions in 2010/11 to 24.9% by 2015/16, and contactless cards increase from nil to 29.7% by 2015/16.

Costs Avoided

2.9 Costs avoided by the implementation of the FTP include the full upgrade of the last mile communications to all London Underground, DLR and London Overground stations and devices will be required by 2015 at a cost of £19m (base year prices). This is also required for FTP, but only in part for Phases 1 & 2.

Revenue Increases

2.10 Revenue increases from reduced overall journey time have been estimated at £75.2m over the period to 2022/23.

Other Revenue

2.11 The Fares and Aggregation Engine could be a revenue generating asset, and therefore an opportunity to defray development costs and operating costs. TfL are in advanced negotiations with two major UK operators who wish to introduce contactless payment card acceptance and will pay TfL a fee for processing each transaction. No benefit from this has yet been included in the business case as heads of terms are not yet finalised.

Revenue Loss/Fraud Avoidance

2.12 Hot listing of cards will be able to be communicated to readers across the ticketing estate during the traffic day (estimated every 20 minutes), not once every 24 hours as at present.

2.13 Some other possible cost savings and/or benefits are not in the Programme scope, and have therefore been excluded from the business case:

- Any cost savings from changes to ticket office staffing levels
- Impacts if cashless bus operation were to be introduced
- Costs of any equipment required for Crossrail, any other service extensions, station modernisation or other projects – these costs will be borne by the projects concerned
- Extension to taxi, private hire or river services
- Any value of easier or quicker implementation of new travel products or changes to fares
- Any value to improved ticketing system reliability, as the main step-change comes with the new ticketing services contract from August 2010.
- Any advertising or customer information opportunities from the implementation of fast local area network communications at all rail stations
- Benefits from improved ticketing system security, based on banking and payment industry standards
- Reputational and image benefits – TfL perceived to be leading edge
- Improvements in personal security – no need to carry cash.

3. Explanation of Non-Financial Benefits, and Other Impacts

Monetised Benefits

3.1 The principal monetised non-financial customer benefit is journey time savings, from easier payment for travel, shorter queues and a quicker entrance to stations.

3.2 Total customer benefit from the implementation of FTP to 2022/23 is valued at £254.366 million in base year prices. Table 7 below, details the customer benefit by operating business.

Operating Business	Total Customer Benefit to 2022/23 (£'000)	Annual Customer Benefit 2015/15
Bus	£20,205	£1,958
London Underground	£171,542	£17,807
DLR	£1,644	£174
London Rail	£60,974	£7,060
Total	**£254,366**	**£26,999**

3.3 Tram benefits have been quantified at £244,000 to 2022/23, however are not included in the appraisal. This section explains how the customer benefit has been calculated from each operating business and for each an example fiscal year of 2015/16 is shown for the annual benefit as this is the first full year of benefits.

Bus Benefits

3.4 Bus benefits come from being able to top-up or purchase without the extra journey to an Oyster Ticket Stop (OTS). It has been estimated that this would apply to one journey in six, based on the average top up value for PAYG users at a Ticket Stop. The social benefit from a reduced queuing time for all other TfL customers using an Oyster Ticket Stop has not been included in the appraisal.

London Underground Benefits

3.5 For London Underground benefits, the scale of benefits is linked to the volume of station sales diverted to other sales channels (for example through payment by contactless payment card). An estimated 24 per cent of sales at stations will be diverted. The resulting estimated future sales at ticket windows and passenger operated machines affect queue times at those retail outlets.

DLR Benefits

3.6 DLR benefits are based on the number of transactions at ticket offices and passenger operated machines that are no longer required as customers can use their card to pay for travel. Benefits have been calculated using the same methodology as for London Underground.

London Rail Benefits

3.7 London Rail benefits have been calculated on the basis that following the implementation of FTP and the proposed customer migration, there will be a reduction in the volume of London Rail ticket office and passenger operated machine transactions.

Impacts on Target Groups

3.8 Freedom passes, concessions for children and students, and those for other defined groups[4] will remain unchanged, meaning no change to the journey and a marginal one to the ticket issuing process for these customers.

3.9 An Equality Impact Assessment has been produced and shows that from an equalities perspective the impact is low rather than high. Impact for some groups, such as those who pay cash could be high if they use a contactless bank card and therefore pay lower fares. Adult Oyster customers could benefit from the migration to contactless debit/credit cards by not needing to top-up for PAYG travel.

Environmental Benefits

3.10 Environmental benefits will be in two main areas. Firstly, a reduced number of cards and paper tickets will be issued. Secondly the greater range, convenience and quicker options for payment for travel are expected to increase demand for public transport, some of which may be modal shift from car travel or walking.

3.11 All risks for Phases 1 and 2 will be managed based on the bespoke procedures outlined in the Risk Management Plan, which encompasses the principles and guidelines of TfL's Risk Management Policy and the Future Ticketing Programme Risk Management Strategy. The plan stipulates the processes for risk to be identified and responses to the risk events to be formulated, justified, planned, initiated, progressed, monitored, measured for success, reviewed, adjusted and closed. The objectives of the plan are to:

- Define the process for management of risks and issues for the FTP

[4] Currently those in receipt of specific war veterans' benefits, job-seekers allowance or New Deal

- Ensure risks are escalated where necessary to allow for senior management awareness and intervention
- Ensure risks are identified as early as possible within the project lifecycle and the trade-off against return is optimised
- Ensure the level of uncertainty on the programme outcome is actively managed, mitigated and reduced as the lifecycle progresses
- Provide guidelines on the process, tools and techniques for implementation of risk and opportunity management

3.12 An initial cycle of the risk management process has been followed and quantified risks have been fed into the business case appraisal. The probability of each risk has been estimated, together with the best, most likely and worst timescale and the cost if the risk materialised (both pre and post mitigation). The top two risks are:

- Banks issuance of contactless cards is slower than expected
- Train Operating Companies not supportive and not accepting contactless cards on their services

3.13 The total risk exposure to the FTP both pre and post mitigation, has at a P50 confidence level been estimated at £16.9m (pre-mitigation) and £14.8m (post mitigation). The application for project authority in September 2010 included this risk amount although Fares and Ticketing remain confident that the programme can be delivered within budget. The record of delivery over the past three years demonstrates this, especially the following:

- The extension of Oyster to National Rail was delivered over 20 per cent under budget and operationally successfully
- The termination of the Prestige contract and its replacement by the Future Ticketing Agreement has already brought over £20m greater savings than projected at the time the go-ahead was given in July 2008
- The management of the ticketing contractor to deliver day-to-day service and projects within budget and consistently above contract performance levels.

4. Overall Assessment

4.1 The Future Ticketing Programme Phases 1 and 2 enables TfL to deliver cost savings by reducing the cost of revenue collection, with a business case that is financially positive to TfL in 12 years. Sensitivity tests have been carried out which show benefit: cost ratios of between 2:1 and 12.4:1 for a range of scenarios in which costs increase or revenue benefits from increased demand are halved (see Table 9 above for details). The business case also includes risk provision and management contingency which have been included in the project authority as requested by the Finance and Policy Committee.

4.2 Adapting the system capability to allow contactless payment card acceptance enables TfL to use the widespread introduction of contactless bank cards planned in the UK and abroad to enable customers to pay for travel, and this results in fewer Oyster cards being issued. FTP will also dramatically re-design the current card-based ticketing system architecture, moving the ticketing system to a back-office, account based architecture. This new architecture will deliver cost savings through improved transaction processing, lower commission costs, fewer contacts to the Oyster customer service helpdesk and better disruption handling.

Future Ticketing Project Customer Research Summary

INTRODUCTION

The customer research findings were based on fieldwork carried out in April and May 2009.

This was conducted via interviewer administered computer-aided interviewing at carefully selected test locations in London.

The survey was designed to be broadly representative of Londoners and UK visitors to London who use public transport. A total of 460 interviews were completed. The data has been re-weighted post-survey in order that the final sample remains representative of users of London's public transport system (excluding non-UK residents and concessionary pass holders).

FUTURE TICKETING OPTIONS

Using show cards and a short video, customers were provided with information describing the future ticketing proposition. They were reminded how they can currently pay for travel in London, were given a description of contactless card technology and then presented with three different 'future ticketing' options:

1. TfL card, similar to an Oyster card

- The TfL card can only be used for travel on public transport in London by 'touching-in' and 'touching-out' at the point of entry and exit
- The TfL card can be registered with TfL, which will:
    - let customers use their card as a Travelcard or Bus & Tram Pass e.g. 7 day, monthly and annual or flexibly allowing you to choose the Travelcard or Bus Pass period of between a month and a year
    - protect against loss or theft of card
    - allow customers to receive service messages about improvements and/or any disruption to your regular journey
- The TfL card can be topped up with credit for pay as you go travel:
    - at a ticket office
    - using your mobile phone
    - over the internet using your mobile phone or computer

2. Bank Debit or Credit Card

- Customers can use their contactless debit or credit card to pay for public transport by 'touching-in' and 'touching-out' on entry and exit. The same card could be used to pay for everyday items under £10 without entering a PIN.
- The card can be registered with TfL which will:
    - let customers use their card as a Travelcard or Bus & Tram Pass e.g. 7 day, monthly and annual or flexibly allowing you to choose the Travelcard or Bus Pass period of between a month and a year

    - let customers transfer their Travelcard or Bus & Tram Pass to another card by accessing their TfL account on-line or by phone if the card is lost
    - allow customers to receive service messages about improvements and/or disruption to your regular journey
- Customers would not need to top-up their bank card:
    - **Pay As You Go:** The bank or credit card account would be charged automatically by TfL at the end of each day for any pay as you go trips
    - **Travelcard or Bus Pass:** The bank or credit card account would be charged automatically by TfL when a Travelcard or Bus Pass is added

3. Paper Ticket

- Customers can buy a paper ticket using cash or a bank card at Tube and London Overground ticket offices and at ticket machines.
- They can also be purchased on buses, and at bus, DLR and tram stops.
- Paper tickets will be more expensive than using a TfL card or bank card

SUMMARY OF QUESTIONS AND RESPONSES

Current travel and ticket choices

- Oyster PAYG is the most common choice of ticket type, particularly for 'unbanked' customers, ie those without access to debit or credit cards.
- The longer the validity of the ticket, the more likely that a credit or debit card has been used to pay for it. Season tickets are more likely to be bought with debit cards, but customers are more likely to pay by cash for single, return or 1 Day Travelcards, Oyster PAYG and 7 Day Travelcards.
- Season ticket holders and customers using single, return or 1 Day Travelcards are most likely to purchase their tickets at a ticket office. Oyster PAYG and 7 Day Travelcards are most likely to be bought at an Oyster ticket shop.

Current purchasing experience

- 65 per cent of customers queue for two minutes or less, 30 per cent queue between three and ten minutes and 3 per cent for more than ten minutes.
- Most customers use a ticket office or an Oyster ticket shop to buy, renew or top-up. More season tickets and single, return or 1 Day Travelcards are bought at ticket offices, while more Oyster PAYG and 7 Day Travelcards are purchased at Oyster ticket shops. A larger proportion of single, return or 1 Day Travelcards, compared to other tickets types, are purchased at other locations (including self-service machines, National Rail and London Overground station ticket offices).

Customers' reactions to the concept of contactless bank card

- Overall, 55 per cent of customers expressed a preference for the TfL card, 31 per cent for a contactless bank card and 14 per cent for paper tickets.
- Customers who most frequently use a season ticket or Oyster PAYG are more likely to prefer the bank card, compared to those who most frequently use other ticket types.
- Those preferring the TfL card cited the following reasons:
    - More convenient
    - Easier to use

    - I'm familiar with Oyster and don't want to change
    - Safer/more secure
    - Don't have to carry cash.
- Those preferring the contactless bank card cited:
    - More convenient
    - Easier to use
    - Fewer cards to carry around
    - Don't have to carry cash.
- Those preferring paper tickets cited:
    - Easier to use
    - Safer/more secure
    - More convenient.
- 17 per cent of customers who preferred the TfL card option or paper tickets said that they could not be persuaded to use a bank card to travel. Others did not want to show their card in public, were concerned about being overcharged or did not want to give their bank details to TfL.
- 57 per cent of customers who chose the TfL card option would use it immediately, with a further third waiting "to see how it goes". Similar figures were recorded for those choosing the bank card option – 56 and 32 per cent respectively.

How TfL has incorporated this research finding:

Excluding paper ticket use, 35 per cent of those surveyed stated that they would use a bank card. This figure, which is higher than expected for what, at the time, was an unfamiliar technology to customers, has been used as the baseline on which the business case is predicated. This acknowledges that there are customer groups for whom bank cards will not be the most appropriate ticketing medium. The largest segment of this group is those customers who wish to ringfence their travel budget from their general available funds.

Paper ticket usage and continued preference was strongest amongst National Rail customers. As the survey predated Oyster PAYG acceptance on National Rail services, it has been assumed that customer preference for this group will mirror that for established Oyster users since PAYG could be accepted.

Since the survey, it has become apparent that more exposure to contactless payment is encouraging greater use of the new payment mechanism. TfL is also working with the Schemes and its Merchant Acquirer on a consistent messaging campaign to inform and reassure customers.

The new back office system being developed as part of this ticketing system will allow TfL to provided greater depth of information relating to charges, to make it easier for customers to see how their charge has been constructed.

Registering customers' cards

- Customers were asked about registering their cards with TfL. 41 per cent of those who have not already registered their Oyster card would do so, but 31 per cent were "not happy" with the idea of registering. 5 per cent did not want TfL to have access to their card details.

How TfL has incorporated this research finding:

Registration will not be mandatory in order for customers to use a bank card. In fact the opposite is true – customers will be able to turn up and travel with no prior action necessary.

Registered customers will benefit from being able to access their travel history online to see how their bill was constructed. They will be able to extract statements in order, for example, to claim travel expenses. This service will be available to all customers, not just those who have previously used the online service.

Unregistered customers will be able to access limited journey history. Data and services will be limited to protect privacy and to comply with payment industry security requirements.

Purchasing Travelcards and season tickets online

- Customers were asked how they would purchase their Travelcards and season tickets. 60 per cent would use the TfL website, but 29 per cent would not purchase Travelcards or season tickets online.
- 45 per cent of season ticket holders would purchase or renew online, but 30 per cent would not. 27 per cent of 7 Day Travelcard users would use a different ticket if this idea were introduced.

How TfL has incorporated this research finding:

The proposition for bank card acceptance includes a weekly cap which, like daily capping, will guarantee the customer will not be overcharged for a week's travel. For many customers, this will remove the need to purchase season tickets at all.

Checking journey history

- Customers were asked how often they checked their journey history. Approximately half of those buying tickets at ticket offices or Oyster ticket shops will check their journey history once a week or more. Other customers checked less frequently, with approximately 60 per cent checking every few weeks or less.
- 48 per cent of customers check their history online and 39 per cent via a ticket machine. Few customers used the Oyster helpline or SMS service.

How TfL has incorporated this research finding:

As described above, access to data online will be made easier and open to all customers. The data available will be more extensive, and customers will be able to initiate queries and in some instances instigate issue resolution automatically, through the online service.

A later phase of the project will allow customers to access information at stations.

TfL is also considering pushing messages to registered customers at key points, e.g. when they have reached a weekly cap.

Resolving charging issues and queries

- 64 per cent of customers think TfL should be responsible for resolving daily charging queries, with 22 per cent thinking either TfL or their bank should be responsible. Only 6 per cent believed it would be their bank's sole responsibility.

How TfL has incorporated this research finding:

TfL is working with its frontline management and with the card issuers so that, in the event that something goes wrong, frontline staff on buses and at stations can direct customers to the right place to have their issue resolved. TfL staff will therefore be able to direct customers to either the TfL website/contact centre, or to their card issuer.

When customers access their travel history online, if there is an issue related to the charges made by TfL, it will be possible to initiate a query/resolution automatically in certain circumstances without further recourse to the contact centre.

RESEARCH CONCLUSIONS

Customers readily understood the future ticketing proposition and the options that would be available. Both TfL and bank card options have a wide appeal to overlapping, but identifiably different, market segments, however the TfL card is currently more often preferred.

Convenience factors are a big part of contactless bank cards' appeal, but the extent and rate of take-up depends on customers' confidence in:

- the technology
- protection against overcharging
- data security
- market acceptance.

It is clear that a significant minority may never use bank cards for transport.

Summary from Corporate Gate Review
Future Ticketing Project (PRG: 10 June 2010)

1 Introduction

1.1 The review of this project was undertaken against the lines of inquiry for Corporate Gate D for Phase 1 and Corporate Gate B for Phase 2. The project was requesting approval to proceed to the Finance and Policy Committee to request additional implementation funding

2 Highlights of Review Findings

2.1 The majority of cost saving is a result of lower retail commission. This is one of the main reasons for undertaking the project and undertaking it as soon as possible. The quicker the project can be undertaken, the quicker the financial benefits can be obtained.

2.2 There are also a number of other benefits of undertaking the project now rather than later. It sends a message to the banking industry that TfL is implementing this technology – and the roll out to buses will encourage other banks to commit to development. There are also significant advantages of getting this developed in advance of Oyster re-let in 2013, so the technology has bedded in and is more certain. The downside of progressing both Phase 1 and 2 now is that there are phasing issues with the budget (funds would need to be brought forward) and there are limited opportunities to learn any lessons from phase 1 before phase 2 commences. There are also risks associated with a speedier roll out, such as trying to implement a new technology with an evolving industry standard, although this is mitigated somewhat as the software can continue to be developed and new versions uploaded over time.

2.3 In terms of the business case, the project virtually breaks even financially, taking into account funds which would have to be spent anyway in the Do Minimum scenario. The project will deliver cost savings as a result of improved transaction processing, lower commission costs, and fewer calls to the Oyster helpdesk.

2.4 There is inevitably some uncertainty around these various cost savings as well as costs. A sensitivity test was reported involving 20% and 10% increases in capital and operating costs respectively. (This is broadly equivalent to an 18% decrease in cost savings and revenues.) The result was a benefit:cost ratio of 9.8:1. When an additional 50% reduction in the estimated time savings from avoiding the need for top-ups was applied, the benefit:cost ratio fell to 2.3:1.

2.5 Thus the business case is very robust to worsening of costs and benefits. In addition, various other possible cost savings have been excluded, for example revenue from TfL possibly charging another city a licence to use the Fares and Aggregation engine.

3 Conclusion

3.1 The IPMO recommended that the project should be progressed at the faster timeline, if funding could be provided to meet the revised phasing.

Ms Caroline Pidgeon
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Policy Department
Response by: Nisha Schumann, Policy Research Assistant
Direct Tel: 020 7770 7371
Email: nisha.schumann@which.co.uk

31 August 2011

Dear Ms Pidgeon,

Re: London Assembly Transport Committee investigation into the future of ticketing

Which? is a consumer champion. We work to make things better for consumers. Our advice helps them make informed decisions. Our campaigns make people's lives fairer, simpler and safer. Our services and products put consumers' needs first to bring them better value.

We welcome this opportunity to comment on the future of ticketing on London's transport network. We will specifically focus on representing the consumer view and consumer concerns in relation to the introduction of contactless payment cards to pay for transport services.

A) Which? Position

Which? supports the roll-out of contactless cards to London's transport network in principle. However, there are some conditions that need to be fulfilled until this can happen without triggering a backlash for consumers. We want

- The Oyster card to remain in place until a feasible solution is found for tourists, those that are unbanked and those who cannot use the internet - this solution must provide the same benefits as contactless cards and not penalise those that choose to use it
- The benefits of contactless cards to be better communicated to consumers and to be balanced against the disadvantages.

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- Industry to better communicate how consumers are protected against theft and loss, and what recourse is available to them to seek redress when something goes wrong.
- Security features to be strengthened to make contactless cards as secure as possible and make electronic pick pocketing less likely.
- Personal information stored on cards to be limited and encrypted - data should not be shared with third parties unless explicit consent is given.
- Technical difficulties that could undermine the convenience factor (such as interference between cards and double-charging) to be resolved before the system is rolled out
- Receipts to be issued by default (not applicable to transport) and records of journeys to be stored separately from other purchases to allow expenses claims to be made without compromising other personal data

B) Key findings from our research

Summary

- 11 per cent of consumers have a contactless card but 70 per cent of them don't use it at all.
- Half of the respondents in our survey were more concerned about accidentally slipping into their overdraft compared to other payment methods - the figure was 62 per cent for Londoners.
- Only 21 per cent would be happy not to be given a receipt when paying with a contactless card.
- Consumers are more concerned about sharing information stored on their card with the transport authority than sharing travel information with their bank.
- 54 per cent of Londoners would only use contactless cards for transport provided it gave the same benefits as Oyster.
- Only 39 per cent of the overall population would consider using contactless cards on transport.

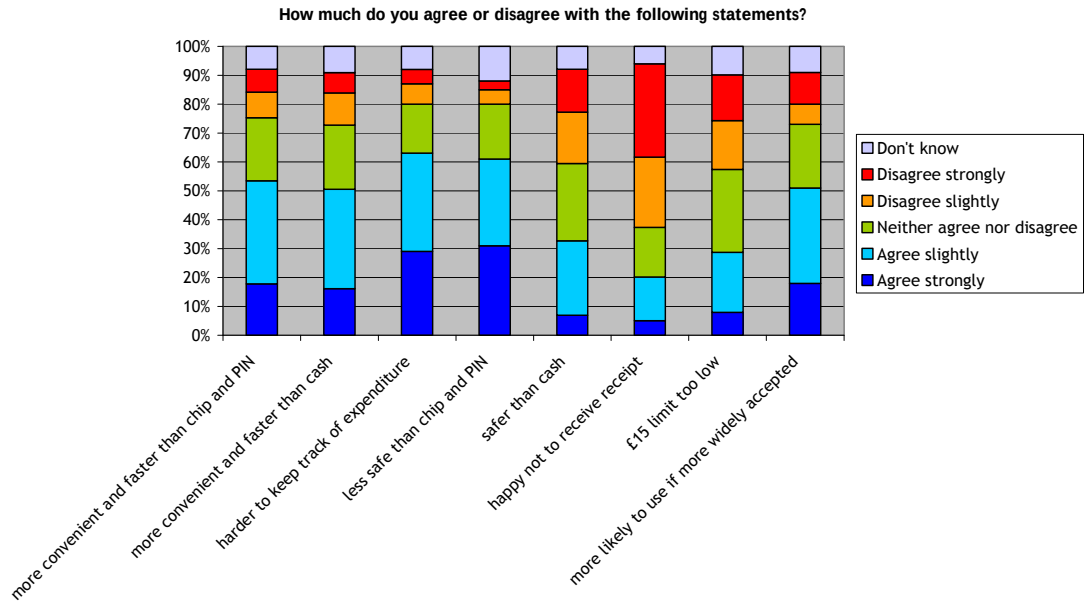
Consumer attitudes to contactless payments

We have commissioned consumer research on contactless payment cards. This general population survey covers consumer attitudes to contactless cards and specific attitudes on using it for transport. We surveyed 1,335 people above the age of 16, of which 158 were from the Greater London area.

Attitudes to usage

Our research showed that about one in ten people in Britain own a contactless card[1]. Of those who say they own one, 70 per cent claim to never use it. About 12 per cent can be qualified as savvy users - they use the contactless functionality on their card on a daily basis. A further 9 per cent use it sometimes, i.e. once or twice a week and the rest (8 per cent) only use it once a month or less. Half of all respondents argued they'd be more likely to use a contactless card if it was more widely accepted (graph 1).

Graph 1: Attitudes to contactless payments in general



We found that over half of all people agreed that contactless cards were more convenient and faster than chip and PIN and cash payments (graph 1). However, when it comes to security, many still see chip and PIN as being safer. Respondents were evenly split across those that believed it was safer than cash and those who disagreed with this (33 per cent each).

[1] There are about 15 million contactless cards in circulation in the UK according to Visa Europe. See: http://www.telegraph.co.uk/technology/news/8731693/Contactless-cards-could-replace-cash-for-1-in-2.html

Table 1: Main concerns[2] with regard to contactless cards

Security/safety (of personal/bank details)	23%
Losing track of expenditure/control	12%
Could easily be used by someone else if lost	10%
Fraud/ cloning/ identity theft	8%
Don't know enough about them [contactless cards]	6%
Loss of card	5%
Would not use it/ not interested	5%
Theft	5%

Our research also showed that there are still some concerns regarding the safety and security of contactless cards (table 1). Almost a quarter of respondents said that this was their main concern. In addition, loss and theft and the ensuing consequences such as the card being used by an illegitimate person, fraud and identity theft, were mentioned by others as their main worry. A minority cited the lack of knowledge about contactless card as their main concern.

Control over expenditure

We also found that people were concerned about their ability to control expenditure. The absence of receipts was perceived to be a problem by 56 per cent of respondents. Overall, we found that a significant number of people neither disagreed nor agreed with many of the statements about contactless cards, which probably reflects a lack of experience in using them.

Controlling expenditure is also an issue when using contactless cards for transport. More than half of all respondents were more concerned about accidentally slipping into overdraft when using their card for transport compared to using other payment methods. A similar amount of people (54 per cent) said they were more worried

[2] This question was open-ended and featured at the end of the survey. The main concerns are those that were mentioned by at least 5 per cent of respondents.

about being overcharged for travel. Londoners were particularly wary of going overdrawn (62 per cent).

Which? believes that this is an important consideration in the roll-out of contactless cards to public transport as overdraft charges can be quite high. Halifax for instance charges £1 per day for authorised overdrafts and an eye-watering £5 per day for an unauthorised overdraft. Similarly, HSBC and Nationwide charge a one-off fee for going overdrawn which is up to £25 and £20 respectively[3]. We are concerned that the lack of control over expenditure could expose consumers to potentially high charges for going overdrawn by just a minute amount. The new system could therefore turn out to be very costly for some consumers.

Londoners were particularly concerned about the implications of using contactless cards for transport on their ability to reclaim expenses from their employer. 44 per cent of Londoners worry about this compared to 30 per cent amongst the general population. This could reflect a concern over having to share bank statements with the employer but is also shows that there's a lack of information on how a record of travel expenditure is kept on the new system. There should be a possibility for contactless card users to get a receipt of their travel without requiring them to expose all transactions that they have made on their card.

Privacy

Concerns about privacy were less predominant amongst the respondents. 35 per cent said they weren't concerned about sharing their travel information with their bank, compared to 29 per cent who disagreed. However, trust in data handling was lower for the transport authority when it comes to handling information stored on cards (including name and card details). Almost half of all respondents said they were concerned about sharing this information with the transport authority. The proportion is similar for Londoners, though they show a greater concern over sharing travel information with their bank compared to the overall population (39 per cent of Londoners are concerned about this).

Using contactless cards for transport

We noted differences between Londoners and the general population in their likelihood to use contactless cards for transport resonates better with Londoners than the general population. 48 per cent of all respondents said that they were unlikely use a contactless card to pay for transport - only 39 per cent said they

[3] Nationwide always charge £20 when you go overdrawn whereas HSBC charge the exact amount of your overdraft up to a maximum of £25. So if you go overdrawn by £5, a £5 charge applies. These figures are taken from the banks' website and are publicly available.

would consider using it. However, about 29 per cent prefer to use existing payment methods.

By contrast, 54 per cent of Londoners would be willing to only use contactless payment cards provided it gave them the same benefits as currently offered under the Oyster system. Whilst this shows that many are happy using the proposed system, there are some (29 per cent) who would not be happy with only having this option. We believe that this proportion of people is significant enough to warrant the continued use of alternatives, such as Oyster, until acceptance of contactless cards has improved. We believe that the attitudes of Londoners are generally positive but that some people still don't know enough about contactless cards to make an informed decision about whether to use them or not.

C) Key issues

Barriers to mass adoption

We have some comments on issues that could affect consumers' likelihood to take up this payment method. These are:

> A low understanding of contactless cards and their benefits.

> A low level of consumer trust in this payment method.

Understanding of contactless cards and their benefits

Trust is essential in getting consumers to adopt contactless cards. In order to build trust in contactless cards, consumers have to be aware of how these cards can be used and where they are accepted. Consumers also need to know what the spending limits are. Most importantly, consumers need to understand the benefits of this payment method compared to cash and debit/credit cards.

We believe that the latter point has not been made sufficiently clear by industry stakeholders who would like to encourage the use of contactless cards. We found that a significant proportion of respondents in our survey (39 per cent) had never heard of contactless cards until we mentioned it to them in our survey. But even those that have heard of contactless cards are often ill-informed. Crucially, the industry has so far failed to make people sufficiently aware of the potential risks, the levels of security they can expect and the laws governing the operation of contactless cards. The card industry, retailers and service industry benefiting from the use of contactless cards need to ensure that consumers are aware of the

protections they can expect in case of security breaches. Consumers must also know how to recover losses when a card is stolen or lost.

Which? believes that this payment method has certain merits, such as the ease of use and convenience. The card doesn't have to be taken out of the wallet to make a payment, which makes it potentially more secure. Increased speed of transaction might be a benefit where people are likely to use chip and PIN and have to queue (for instance a fast food outlet). The impact of speeding up transactions is however minimal on London's public transport where most people already use the contactless functionality of the Oyster card. It could however reduce the occurrence of queues in front of ticketing machines used to reload Oyster cards.

We also think that carrying less cash is beneficial as it reduces the risk of accidentally losing money or it being stolen. These losses are often unrecoverable. Cards in general offer better protection against loss and theft than cash. However, we believe that the level of consumer protection with contactless cards is lower than with credit/debit cards as payments aren't PIN protected. 60 per cent of respondents in our survey told us they think that contactless cards are less safe than chip and PIN cards. Without this additional layer of protection, it is more likely that the card can be used by an unauthorised person. Despite the benefits, we think that consumers may be hesitant in using contactless cards if they come at the cost of weaker security standards.

It is important that the transport authority takes these concerns into account when rolling out the new system. Consumers need to know exactly what the advantages of the new method are compared to the Oyster card. It is not enough to assume that consumers prefer speedier transactions or find them slow in the first place. There needs to be evidence to show that consumers favour paying directly out of their account rather than topping up their Oyster cards at a machine or online. Even so, there are ways of reducing queues at ticket machines with the existing system, for instance by topping up online or using automatic top-ups. At present, our impression is that the new system will mainly benefit card issuers and the transport authority by reducing costs with limited benefits to consumers.

Consumer trust and perception of security

For consumers to reap the benefits of contactless payment cards, they need reassurance that this payment method offers the same or greater protections than existing methods. We do not think that this is the case at present as payments can be made without verification of the card user. A PIN will only be required after a

monetary limit has been reached or the card has been used several times in quick succession. As a result, the customer becomes potentially liable for the loss of at least some of his money when a card is stolen or lost. This is not the case with regular chip and PIN cards where the thief has to know the PIN to use the card at points of sale. Whilst the chip and PIN system is not infallible, it nevertheless offers superior protection for those making low value payments.

Losing a payment card can involve a lot of hassle and distress for the owner. Some consumers are unlikely to consider the hassle of blocking a stolen or lost card and getting a refund a worthwhile price for convenience and speed. For others, the loss of even a small amount of money can make a big difference to their ability to pay their bills or make essential purchases.

A contactless card will be used for more than just transport. Losing it can have wider implications on people' ability to go about their daily lives. The Oyster card, by contrast, can be easily replaced although consumers will lose the £5 deposit on the card. Its attractiveness to thieves is limited given that the money on the card can only be used for travel. We note that the existing reassurances regarding potential loss and theft of contactless cards are insufficient to fully engender consumer trust. As a result, the transport authority and card industry need to be aware that they might not reach the level of consumer take-up they envisage.

Disadvantages for certain sections of society

People with no access to bank accounts

The use of contactless cards presumes access to a bank account. Around 1 million people in Britain are unbanked[4] meaning that they do not have access to a basic bank account. As a result, they will not receive contactless cards once these are rolled out. We are concerned that being excluded from the use of contactless cards could mean that people without access to bank accounts lose out on cheaper fares. The impact is greatest on those on lower incomes who are more likely to be unbanked and more likely to use public transport.

By contrast, Oyster is available to anyone - whether banked or unbanked - and offers users the cheapest available fare. If Oyster were to be completely replaced by contactless cards, those with no access to bank accounts would have to resort to more expensive paper tickets. We would like to see measures put in place to ensure that the unbanked do not lose out by the advance of contactless cards. This

[4] Consumer Focus (June 2010). *On the margins: Society's most vulnerable people and banking exclusion,* p.7. Retrieved from: http://www.consumerfocus.org.uk/files/2010/10/On-the-margins.pdf

includes making sure that people are not disadvantaged when choosing to continue using Oyster, for instance by not having access to the same benefits as users of contactless cards.

Oyster needs to be retained or a similar process put in place that is accessible, at no additional cost, to those without bank accounts. We think that consumers should have a choice of payment methods and not be forced to take up a method that they are not comfortable with. Pre-paid cards with a contactless functionality could be one possibility but they are unsuitable for this purpose at the moment. Pre-paid cards remain a very expensive payment option due to the large array of fees and charges that apply to their use.

Our research has shown that a majority of pre-paid cards levy extortionate fees for a variety of functions such as taken out money at a cash machine, issuing the card, cancelling the card, going overdrawn, monthly management fees, transaction fees, top-up fees, etc. These fees can range from 99p for a simple transaction to £10 for cancelling a card or going overdrawn. Pre-paid cards like CashPlus MasterCard even charge monthly fees of up to £4.95 after four months of inactivity. Therefore, pre-paid cards are at present not a feasible replacement for the Oyster card.

The elderly and disabled

Older and disabled people are a further group that could be disadvantaged by a move to enable the use of contactless payment cards on London's public transport. Generally, the elderly and disabled people have lower computer literacy levels and might therefore not be able to check their balances online. They would have to rely on paper statements to monitor their expenditure. This has important implications for their ability to spot when they've been overcharged and apply for a refund.

We believe that the Oyster card is better placed to meet the needs of these people. It does not require online access as cards can be used without requiring online registration. Balances can be viewed at ticketing machines and at the displays on exit gates. Manned ticket offices offer these customers the possibility to ask for a record of their journeys or to make a complaint. Those that do not have access to computers or are not sufficiently proficient at using computers are therefore at no disadvantage when using the Oyster card but could be worse off if required to go online to check how much they've spent on transport.

Tourists

We note that tourists are another group of consumers that might be disadvantaged by the use of contactless cards. The use of contactless cards has not grown as fast in some parts of Europe as in the UK. In fact, of the 30 million cards that are

expected to be in circulation by 2012 across Europe, 20 million will be issued in the UK[5]. The slow take-up means that many tourists coming to London are unlikely to own a contactless card and there is no indication whether take-up is going to be widespread in the coming years.

The Oyster card is a very practical solution for tourists at the moment. It can easily be acquired at machines or manned ticket offices and doesn't require registration to be used. If Oyster was to be replaced entirely, tourists will potentially have to resort to expensive paper tickets.

Even if the use of contactless cards would catch on abroad, we believe that tourists would be disinclined to use them as transactions with foreign cards might incur charges. Many banks, including UK banks, charge either a flat fee or a percentage fee for transactions or ATM withdrawals made abroad. Given that tourists are likely to use public transport heavily whilst staying in London, contactless cards are unlikely to prove popular as the costs of the transactions would be prohibitive.

General security and privacy concerns

Security

We do not know enough about the technical details of the proposed open-loop contactless card system to make a fully informed comment about possible privacy and security implications. However, consumers have voiced concerns about the possibility of incurring losses when their card is stolen or lost. About a quarter of respondents in our survey said that security and safety of their personal details was their main concern with regard to contactless cards. A further one in ten mentioned the possibility of another person using a stolen or lost card as their main worry. People are also concerned about 'electronic pick pocketing' where money is swiped by illegitimate card scanners or a card is cloned.

This doesn't only reflect a lack of trust in the technology but also shows that consumers are not well informed about the security features of contactless cards. Whilst we believe that electronic pick pocketing is unlikely to happen, consumers need to be assured that contactless cards have the highest security standards. We believe all cards should include strong user authentication and dynamic code verification values (CVVs). It also important that the information stored on contactless cards is kept to a minimum to reduce any potential harm resulting from the loss of a card.

[5] http://www.telegraph.co.uk/technology/news/8731693/Contactless-cards-could-replace-cash-for-1-in-2.html

Privacy

We do not think that privacy is an issue with contactless cards at the moment. However, we do not know the details of what kind of information Transport for London (TfL) plans to share with the card issuers or other third parties. We would be concerned if there were plans to share details of journeys such as starting points and destinations with any third party unless consumers give their explicit and unambiguous consent. We would also argue that consumers should not be required to register their contactless cards with the transport authority as our research shows that people feel uncomfortable sharing this information with them. As a result, special offers or benefits should not be linked to the condition of having your contactless card registered with the transport authority.

If consent is sought for the sharing of personal information, consumers must be made aware of how this information is being used, how and for how long it is stored and whom it is shared with. It should not be available to third parties by default as it could be used to build profiles of customers and potentially target them with unsolicited marketing messages. Generally, we would like personal information stored on contactless cards to be minimal. The data should also be encrypted to ensure that *if* a card is scanned by an illegitimate reader, the information is rendered useless.

Other consumer issues

There are some further issues that we've identified that might be of concern to consumers and discourage them from the use of contactless cards. These are:

> choice

> compatibility and interference by different cards

> the absence of receipts and implications for consumer redress

Choice

Which? believes that consumers should always be offered the choice of using contactless payment methods. This choice is not given when contactless functionalities are activated by default as is the case with Barclaycard's One Pulse. This could impact on consumers' attitudes because they feel that they are being forced into using a particular payment method. By contrast, American Express requires consumers to enter their PIN during the first contactless transaction. The consumer thereby can make an active choice of enabling the contactless

functionality. We think that all cards should have one system of activation, potentially similar to American Express, which gives consumers the choice of activating the contactless functionality on their card.

The issue of choice has also been mentioned on Which?'s commenting platform Which? Conversation, where one consumer states: *"I just want the ability to make a choice if I want contactless payment cards using all the available data. I don't want this to be forced on me."*[6]

Choice is a central feature of any well-functioning market. Not only should consumers be able to choose to activate their card, they should also be free to choose whether to use it on transport. We therefore believe that the Oyster payment system, for the moment, should be retained to give people a choice of using Oyster over contactless cards if they prefer. Under no circumstances should consumers be coerced into using contactless cards only until viable alternatives are available to tourists, those that are unbanked and those unable to use online banking. As previously stated, if Oyster were to be discontinued, we would be concerned that consumers without bank accounts or with basic accounts would be forced to resort to more expensive paper tickets.

Compatibility and interference

The convenience aspect of contactless cards might be undermined by technical short-comings. If several contactless cards are held in the same wallet, there is a chance that the cards will interfere with each other causing delays in paying for goods or on transport. It would undermine the convenience factor in as far as consumers would be required to take the card out of the wallet to make a payment or have separate card holders. It also exposes them to higher security risks and hassle as cards taken out of the wallet could get lost or misplaced.

We would like to get greater clarification by the card industry and transport authority on how they plan to deal with possible interference caused by holding multiple cards in a wallet. We are also concerned that cards could get charged multiple times or that charges are taken off the wrong card if consumer have more than one card. As one commentator on Which? Conversation pointed out: *"Quite enthused by the contactless card convenience, until I found it stops you getting through the gates on the Underground if it's in your wallet with your Oyster card.*

[6] http://conversation.which.co.uk/money/forced-to-use-contactless-card/

Also wondering, if you have two, say a Barclays and a Lloyds contactless card in [the] wallet, will both get charged per swipe?"[7].

Another user bemoaned: *"I have [an] Oyster and a door card for the office both NFC in my wallet as well as my bank cards. I have other contactless cards I don't put in the wallet as they interfere with each other when "activated". [W]hich means if I keep them together I have to stop and take cards out each time [I] want to use one. [V]ery inconvenient and time consuming".*[8]

The industry still has some way to go to convince consumers to use contactless cards and ensure they fulfil the promise of convenience and ease of use. It also raises the question of whether TfL will have separate terminals for Oyster and contactless payment cards, and if so, where and how they will be placed to prevent accidental penalty charges[9].

Absence of receipts by default

A further concern we've identified relates to consumers' ability to get redress. When paying with contactless cards, consumers will not receive a receipt by default but will have to ask for it. Whilst this might not be an issue where perishable goods such as sandwiches are bought, it can affect a person's ability to exchange a good or seek redress where non-perishable goods are bought. If customers are unable to prove that they've purchased a particular good or service at a certain point of sale, they will find it hard to get redress. As a result, customers are arguably less protected when using contactless cards compared to cash or debit/credit card payments.

Although this might be less of a concern to the transport industry, it is important that it is taken into account as it can affect the level of trust consumers place into this payment method. If consumers experience a lack of protection by not being given a receipt by default, they might decide to revert to the use of traditional payment methods which offer such protection. There is a possibility that consumers simply fail to ask for a receipt because they are not in the habit of actively asking for it and do not notice when they aren't given one.

[7] http://conversation.which.co.uk/money/forced-to-use-contactless-card/

[8] http://conversation.which.co.uk/money/forced-to-use-contactless-card/

[9] Penalty charges could for instance be incurred if the user holds an Oyster card and another contactless card in the same wallet. He/she taps in with a contactless card at an Underground station but inadvertently swipes his Oyster when leaving the Underground, thereby incurring a penalty charge.

Response to London Assembly Transport Committee's investigation into the future of ticketing

Michael Leach
Chief Executive Officer
ITSO Ltd

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1. BACKGROUND TO ITSO

ITSO is the UK national specification for interoperable smart ticketing. ITSO Ltd is the non-profit-distributing, member-owned company responsible for the stewardship and development of the ITSO Specification and the related security environment.

Since 2007 ITSO smart ticketing has been:

- mandated in rail franchises in England;
- defined as the specification for the English National Concessionary Travel Scheme and equivalents in Scotland and Wales; and
- encouraged through an 8% uplift in the Bus Service Operator Grant (BSOG) across England.

The Department for Transport (DfT) has signalled support for ITSO through the above actions and in the 2009 Smart and Integrated Ticketing Strategy[1] and the 2011 Local Transport White Paper – Creating Growth, Cutting Carbon: Making Sustainable Transport Happen[2], both of which made financial support available to local authorities and Passenger Transport Executives (PTEs) across England to implement ITSO compliant smart ticketing schemes.

A key part of the DfT strategy is to enable ITSO compliant infrastructure across the entire country, including London. In London, this is being delivered through the £50m+ ITSO on Prestige (IoP) project, currently targeted for completion in 2013. IoP will enable ITSO-compliant smart tickets (issued by parties other than TfL onto either smart cards or NFC mobile devices) to be used across the Transport for London (TfL) estate.

To date, four rail franchises servicing London have implemented partial ITSO smart ticketing schemes, namely: South Western, Southern, London Midland and East Midland. Given that nearly 80% of journeys on these services begin, pass through or end in London, comprehensive roll-out of ITSO-compliant smart cards on these services will not be possible until the IoP project is successfully completed.

On the Bus front, over the last two years there has been a significant increase in ITSO compliant smart ticketing schemes across England, with Centro (West Midlands PTE), Merseytravel, the North-West of England PTE, South Yorkshire PTE and the North-East of England having largely completed roll-out on bus services. Transport for Great Manchester and the South-West of England are also planning commercial operations during 2012, as are a number of smaller local authorities such as Kent, Southampton and Hampshire. Stagecoach, Go-Ahead and National Express have all completed nationwide implementations on bus, and Arriva and First Group are expected to follow over the coming year.
There are currently more than 15million ITSO cards in use (4.5m commercial) and some 23,000 buses in England, Scotland and Wales are equipped with ITSO-compliant ticket machines.

[1] No longer publicly available
[2] http://www2.dft.gov.uk/pgr/regional/sustainabletransport/pdf/whitepaper.pdf

2. IMPLICATIONS FOR PASSENGERS

It is our view that the introduction of contactless bank cards (those meeting the Europay Mastercard and Visa (EMV) specification) as a form of payment into the TfL estate will suit a portion of the travelling public very well. This group will include those financially able to pay off credit cards in full each month or to use a debit card meeting the EMV specification.

However, we have concerns about the impact of a system centred on contactless bank cards on those unable to keep accounts in credit or to pay using a debit card, opening the potential for increasing levels of interest and / or fees payable to the banking sector.

There is also a sizeable proportion (c20%)[3] of the population that either do not have a bank account or do not use their existing account more than once a month. The option available to this segment of society would be to purchase a 'prepay contactless bank card' which has the ability to be 'topped-up', similar to the Pay-As-You-Go Oyster offering today. We believe the current cost of purchasing non-registered EMV cards will prove a significant barrier to take up by the travelling public. Furthermore, such a solution will be the only available option for the unbanked, potentially excluding this significant part of the travelling public from accessing TfL's services.

It is also important to note that, whilst banks such as Barclays have completed nationwide roll-out of EMV compliant contactless bank cards, not all major UK banks have followed suit. With an average 3-year card replacement cycle it is likely that a significant portion of the travelling public will be without EMV compliant cards at the time of launch in 2012.

Further afield, the roll-out of EMV-compliant contactless bank cards is still a number of years away across the majority of the world, including some of London's key tourist markets such as Europe, North America, Australia and New Zealand. The slow global take up of this technology is likely to extend the need for an alternative to contactless bank cards for a considerable period of time, regardless of whether other issues are resolved in the course of time.

We believe it important to note the distinction that EMV is not a ticketing solution, rather a retail payment solution and, as such, is not suitable for use in a rail or more complex fare environments. The current TfL flat fare and capped fare solutions lend themselves well to the proposed EMV solution, however should this environment change in the future, i.e. to distance based or more complex fares on buses, then such a solution will likely be inadequate or require a far more complex back-office solution.

3. ACTIONS FOR THE MAYOR AND TFL TO PROVIDE MAXIMUM BENEFIT TO PASSENGERS

We are firmly of the view that the travelling public will want a choice of payment options for accessing public transport, including an evolution of the existing Oyster branded offering alongside the intended contactless bank card offering.

[3] Source http://www.hm-treasury.gov.uk/d/stats_briefing_101210.pdf

This view is supported by the inability of the EMV contactless solution to support a complex fare system in a deregulated environment, such as that outside of TfL's control and incorporating all rail operations in Great Britain and the clear use by many passengers of the Oyster card as an effective budgeting tool which would potentially be negated through a move to EMV.

3.1. SUGGESTED ACTION – OFFER TFL PRODUCTS (TICKETS) THROUGH OTHER ITSO OPERATORS

The pending implementation of ITSO compliant readers across the TfL estate presents the opportunity for effective integration of the TfL environment with the national strategy and for other ITSO operators, such as the TOCs, to retail a range of TfL products. This would enable other ITSO Operators to retail TfL tickets onto cards issued directly by them or for passengers to download TfL tickets directly to their own NFC mobile phone.

Such a move would provide a direct benefit to the commuting and rail using public by integrating their season tickets or single journeys with a wider range of through tickets in London. Such an approach would also fit with TfL's publicly stated intent to move out of ticket sales as per the traditional model of public transport ticketing since the mid-19th century and into a mirror of the current retail environment.

We applaud TfL's stated intention of reducing the cost of retail from the existing high of 14p for every £1 and believe that the flexible framework offered by the ITSO Specification and operator network presents a further way to keep some of these costs down without having to provide the full service as currently provided through Oyster.

An example of this is that, through acting as a 'card issuer', TfL is carrying significant overheads in card production, on-going card management and off-station retail. Through the ITSO network it is entirely possible that TfL could make a large proportion of the projected savings from these three areas through allowing other ITSO operators to retail TfL products onto their issued cards and also allow for the introduction of other ITSO Pay-As-You-Go offerings into the London environment at lower rates than those currently paid by TfL through increased competition and availability.

3.2. SUGGESTED ACTION – MIGRATE THE OYSTER OFFERING ONTO AN ITSO PLATFORM

Should TfL determine that it wishes to continue in the 'card issuing business' then migration to an ITSO platform once the current Oyster operating system reaches end of life would leverage the existing investment by the DfT whilst allowing for the continuation of the Oyster brand at a low cost.

As part of the IoP project, the majority of the major components necessary to run a smart ticketing scheme using ITSO have already been funded and put in place. TfL is a member of ITSO and holds a seat on the ITSO Board, currently held by Shashi Verma, and as such is well placed to push for the necessary developments in ITSO to make such a move a reality.

4. OTHER CHANGES TO TICKETING TECHNOLOGY

We do not have a view on this issue, other than to say that ITSO is undertaking the first major business-usage orientated review of our specification and solutions over the next three months. We are happy to share the findings of this review with the committee once they are published in February 2012, particularly where they indicate possible alternatives or improvements to ticketing in London.

Michael Leach
Chief Executive Officer
ITSO Ltd
Milton Keynes

31 August 2011

London Assembly Transport Committee: Investigation into the future of ticketing

Response from Visa Europe
August 2011

This memorandum offers responses to the questions directly posed to 'bank card operators' in a letter from Caroline Pidgeon, Chair of the Transport Committee, dated 29 July 2011.

Summary

- Visa Europe (VE) welcomes the introduction of contactless technology into the London transport network. In this response we have focused our comments on areas where we have expertise and knowledge, particularly drawing upon our experience to date in the roll out and enabling of contactless technology in the UK and Europe.
- **In order to encourage the use of contactless cards across London's transport system, it is essential that TfL's pricing structure is kept simple, transparent and in line with consumer expectations for electronic payments, especially given the public knowledge that TfL will make cost and efficiency savings as a result. Disparate pricing models between Oyster and Visa contactless may lead to unnecessary accusations of surcharging, or could create consumer confusion and distrust in the system.**

Background – About Visa Europe

Visa Europe is a not-for-profit membership association of over 4,000 European banks. We are a payments business, and provide the brand, systems, services and rules that help make electronic payments between millions of European consumers, retailers and businesses and governments happen. In Europe, there are 427 million Visa debit, credit and commercial cards, of which 110 million are in the UK. In the 12 months ending December 2010 those cards were used to make purchases and cash withdrawals to the value of €1.6 trillion. 12.5% of consumer spending at point of sale in Europe is with a Visa card (€1 in every €8), and more than 70% of that is on Visa debit cards.

Response to investigation

1. **How many of your customers are using contactless bank cards to pay for goods and services?**
   1.1. Visa Europe does not issue cards; our member banks do. There are currently more than 23 million contactless Visa cards across Europe, distributed by 50 different issuing banks, with over 150,000 contactless terminals. 15.6 million of these cards and 70,000 of these terminals are in the UK. By the end of 2011, some 20 million contactless cards will have been distributed in the UK.
   1.2. In the UK, an increasing number of major retailers, such as McDonald's, Prêt A Manger, Caffe Nero, EAT, Subway and selected Boots, Burger King and Clinton Cards, are rolling out facilities for customers' use of contactless cards. Monthly contactless spend in the UK has tripled since the start of 2011, with total contactless spend across Europe almost quadrupling in the same period. By the end of 2011, we predict that there will be 100,000 contactless terminals in the UK.

2. What feedback have customers provided about using contactless bank cards? If they have raised any concerns, how have you responded to these concerns?

2.1. Visa Europe has been conducting consumer awareness research, which we have been using to inform and shape the ongoing roll out of contactless technology. The overwhelming response from consumers has been positive, as the research shows that consumers are increasingly persuaded of the benefits of contactless payments due to their speed, convenience and alternative as a cash replacement. Indeed, our research[i] has shown that consumers in the UK see public transport as one of the areas where they would most prefer to use contactless payments over cash.

2.2. The feedback amongst those in the UK who have used contactless technology found that 85 per cent would recommend it to their friends and family, and 82 per cent think it makes life simpler. Users like the speed of contactless with 27 per cent of users saying they like using their contactless card when they are in a rush whilst 25 per cent said they use their card when they have a queue behind them. Encouragingly, 93 per cent of users said they are satisfied with the process of making contactless payments, with 58 per cent of users stating that they are either very satisfied or extremely satisfied.

2.3. As more and more major retailers across the UK introduce acceptance of contactless payments, the contactless infrastructure is increasing in size and availability. Our research shows that consumers are most likely to want to use their contactless cards in fast moving retail outlets where the benefits of the technology (speed and simplicity first and foremost) are most obvious. By the end of this year we anticipate that there will be 100,000 contactless terminals in the UK, therefore increasing consumers' opportunities to make contactless payments. Indeed with 20 million contactless cards due to be in circulation by the end of 2011, banks are playing a leading role to inform their customers about how to use their contactless cards.

2.4. Card fraud is currently at a ten year low and there has been no significant increase in European card fraud since the introduction of contactless cards. There are many layers of technology which make contactless cards secure.

2.5. Security concerns – contactless payments without the need for a PIN or signature can only be made for low-value purchases, and counters in the Chip ensure that it is not possible to spend a significant amount on the card without having to confirm your identity through PIN.

3. What, if any, lessons could TfL learn from your roll-out of contactless bank cards so far?

3.1. Based on our experience of the roll out of contactless technology and the feedback we have received through consumer awareness research and what our member banks tell us, there are a number of lessons that TfL could learn. These are:

3.1.1. Pricing simplicity – the creation of multiple ticket prices for different methods of payment (ie. Oyster vs Visa contactless) should be avoided as this will lead to consumer confusion and distrust in the system. Every effort needs to be made to ensure that pricing is kept simple, consistent and transparent. Disparate pricing models may lead to unnecessary accusations of surcharging, especially as contactless technology should lead to increased efficiencies and cost reductions for TfL.

3.1.2. Effective and simple communications – it is essential that TfL has a clear and simple communications programme to explain how customers can use contactless technology throughout the TfL network, including reassurance about security.

3.1.3. Staff training – customers often look to the staff assisting them to help them make payments. It is therefore essential that TfL staff are well trained and comfortable with

explaining and assisting customers to make contactless payments. McDonald's experience of investing in staff training for contactless payments has seen a direct increase in the number of contactless payments made across its restaurants.

3.1.4. Critical mass – in order to ensure that customers feel most comfortable with the technology, it needs to be implemented on a scale that impels and enables them to use it as part of their normal payments experience.

4. What consultation did you undertake with customers prior to introducing contactless bank cards? What were the results?

4.1. Visa Europe continually innovates to develop payment technologies that improve the speed, safety and convenience of electronic payments for consumers. We continue to test these developments with consumers as they evolve.

4.2. In the case of contactless payments, Visa Europe has run a number of trials in order to ascertain customer feedback on the use and awareness of the technology. The details of our most recent consumer awareness research have been outlined throughout this memorandum.

4.3. Visa Europe does not issue cards; our member banks do. To date, almost 20 per cent of UK cardholders have been issued with a contactless card. In order to ensure that there is a critical mass driving the use of contactless cards, densely populated areas have been prioritised for contactless card issuance, of which London is one. For the most part, issuer banks have been instrumental and the leaders in communicating the introduction of contactless technology with their customers.

5. What actions, if any, did you take to encourage take-up when launching contactless bank cards?

5.1. Visa Europe's member banks have been at the forefront of communicating the details of new products, such as contactless, with their customers. It is therefore more appropriate for issuing banks to respond to this question.

5.2. However, we have observed that a clear and simple pricing structure has been instrumental in cardholders understanding and using contactless. The upper limit of £15 is consistent across the market and there is no extra charge for cardholders to pay with contactless than other electronic payment methods.

-ENDS-

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i April 2011, Visa Europe consumer awareness research into contactless payments, first wave.

The future of ticketing; London TravelWatch's submission to the London Assembly Transport Committee scrutiny

August 2011

London TravelWatch is the official body set up by Parliament to provide a voice for London's travelling public.

Our role is to:

- Speak up for transport users in discussions with policy-makers and the media
- Consult with the transport industry, its regulators and funders on matters affecting users
- Investigate complaints users have been unable to resolve with service providers, and
- Monitor trends in service quality.

Our aim is to press in all that we do for a better travel experience for all those living, working or visiting London and its surrounding region.

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1 Introduction

We welcome the opportunity to submit evidence to the London Assembly Transport Committee scrutiny meeting on the future of ticketing. This is subject which has been of considerable interest to London TravelWatch for many years.

This paper sets out London TravelWatch's view of how it sees the potential to change or improve ticketing both now in and in the future

In considering the future of transport ticketing from the standpoint of the passenger it is important that the system is:-

- Simple
- Easy to use and understand
- Value for money for the consumer
- Does not transfer the onus of responsibility for errors solely or substantially from the provider to the user

Unsurprisingly given the small scale of trials to date of alternative technologies for delivering ticketing system London TravelWatch has had very little appeal casework in many of the areas under review. However, the views of casework staff in predicting the problems that might arise from any future changes to the system have helped shape this evidence.

2 Executive Summary

London TravelWatch believes that before further changes to ticketing technology are introduced by Transport for London (TfL), the existing system needs to be put right, so as to give passengers better value for money for the journeys that they make, backed up by a simple and easy to use system, and where they are not unduly penalised if they make a genuine mistake.

London TravelWatch urges the full adoption by Transport for London and train operators of the recommendations of London TravelWatch's research into 'Incomplete Oyster Pay As You Go journeys'.

London TravelWatch recommends the abolition of the central London pay before you board area, and the removal of roadside ticket vending machines or their replacement by ones capable of issuing or topping up Oystercards in the interests of reduced boarding times and delays to buses, and to give a better overall customer service.

London TravelWatch has concerns about the potential involvement of banks in the ticketing system, particularly where this will require access to personal information by transport operators from these institutions and also the transfer of data regarding personal travel patterns.

It also believes that before the widespread adoption of this technology, clear protocols about the transfer of such information between transport operators and banks need to be established, particularly in relation to Penalty Fares and Maximum Fares.

London TravelWatch recommends the introduction of an off-peak only Oystercard, but with the facility for passengers to disable the bar on peak time travel on a journey by journey basis.

London TravelWatch recommends the adoption of a common fare scale and conditions for all rail based journeys in the Greater London area regardless of whether they are operated by National Rail or Transport for London.

3 What are fares for?

Fares and ticketing are commonly considered together, and sometimes treated as being interchangeable, because of the close interaction of the two. But there are some important distinctions:

- *Fare levels* are concerned with the overall cost of travel to the passengers.
- *Fares structures* are concerned with how this cost is assigned to different types of journey and different categories of passenger.
- *Ticketing* is concerned with the forms in which fares are sold and with the evidence of sale needed to authorise travel on the system.

Fares serve two functions. The main one is to raise revenue and the other is to send price signals. If the aim is to maximise revenue, then fares will be set at the highest levels the market (in its different segments) will bear. If there are other social or economic policy aims (e.g. maximising ridership, encouraging people to use environmentally friendly means of transport, or changing journey patterns within a mode), then fares will be set in ways designed to promote those aims. This will usually involve reducing some fares, thus requiring subsidy**{**xe "Funding: relationship between fares and subsidy"**}** from the taxpayer, or cross-subsidy from other users, or both. Determining the right balance between fares and subsidies, and/or between one type of passenger and another, requires an assessment of who gains, who pays, how effective this is as a means of promoting the chosen policy goals, what the wider effect on travel patterns is (for example encouraging or discouraging long-distance commuting), and what the 'opportunity cost's would be as against other policy options.

Unfortunately, these questions above are seldom systematically addressed, because fares have tended to evolve in a piecemeal manner in response to political priorities (such as free travel for under-18s), short term financial imperatives (such as the annual budget balancing exercise), and technical influences (for example the desire to discourage payments in cash). London TravelWatch believes that a thorough review is needed of what fares are meant to achieve, of the correct balance between fares and subsidy**{**xe "Funding: relationship between fares and subsidy"**}**, and thus of how fares policy can best contribute to the government's (and the Mayor**{**xe "Mayor of London (*see also* GLA *or* Transport for London): Transport Strategy: fares policy"**}**'s) objectives. Without this it is difficult to assess fares proposals in a holistic way. It is disappointing that no funding authority has seemed willing to support such a first-principles review.

The recent change in Transport for London's (TfL) fares policy to have average fare increases at 2% above inflation is an example of a change in fares policy where

external political and economic pressures have resulted in an increased proportion of income being sought from users in order to fund investment in the transport infrastructure and reduce overall levels of public subsidy.

4 How should a ticketing system be delivered?

Passengers tell us that they want a system that is easy to use and understand , and which gives them value for money for the product that they wish to purchase i.e. the ability to travel from one place to another, with confidence that they have paid the appropriate price for that journey.

Traditionally, this has been provided by either means of a token or a paper ticket that allows entry and exit to the transport system.

This has developed over time such that paper tickets used by the National Rail companies and TfL on its rail based modes, have additional information included on them by means of a magnetic strip upon which encoded information is added and is then read by devices such as ticket gates.

However paper and token based systems can be expensive to operate, as transaction costs can form a significant proportion of the cost of issuing individual tickets, particularly in urban areas where fare levels tend to be lower. Therefore, other alternatives have been developed which are much cheaper to operate relative to the fare paid.

4.1 Smartcards

The most widely used alternative to paper tickets is the Smartcard. In London the system is known as Oyster, and it enables the passenger to have a variety of tickets or products on one card, such as a Travelcard Season Ticket and Pay As You Go. Other versions of the product such as Freedom Passes and Zip cards provide passengers with discounted or free travel requirements.

The introduction of Oyster has made a considerable difference to the cost effectiveness of providing ticketing, especially against a background of high and increasing demand. The reduction in the number of transactions has enabled the reduction in ticket office hours and reductions in staffing levels at booking offices to go ahead. The increased use of Oyster has also significantly reduced the number of passengers paying cash fares on buses which has led to significantly improved boarding times and speeded up bus journeys. Similarly, ticket gates can accept Oyster more quickly than paper tickets leading to better control of crowding particularly at Underground stations, and speeding up passage through those stations giving a journey time saving to passengers.

However, because Oyster is effectively a ‘bespoke’ system the costs and operational dynamics of it, require TfL to have to run their own ‘back office’ functions. Combining this with another function is therefore attractive to TfL because of the ability to share running costs and reduce the costs of each transaction.

4.2 Mobile phone ticketing

The advent of smart phones has also opened up a new way of delivering tickets. Users of these systems typically use barcodes and download them to their mobile phones. The applications of these have included local bus services outside of London operated by Arriva buses or long distance rail and bus journeys operated by Chiltern Railways, Megabus and Megatrain.

4.3 Contactless payment card technology

The Transport Committee has rightly asked the question 'What are the potential benefits and/or risks for passengers of TfL's plans for future ticketing including its plans to allow the use of contactless bank cards as tickets from next year?'

A further development in recent years has been the diversification of bank card technology into other applications. This has been done to enhance the security of such cards, but also to find additional uses which could offset or share the costs involved. One of these uses has been that of using bank cards to hold details of tickets or other entitlements to goods or services.

Up to now transport operators have largely limited the use of bank card details to print tickets that have been ordered over the internet or from a call centre at ticket vending machines. In such cases the card is effectively used as identification as the card that has been used to purchase the ticket is put in the ticket machine to print the tickets and seat reservations that have been ordered.

There have also been some experiments whereby Oyster cards have been embedded in bank cards (such as Barclays One Pulse Account), or even in mobile phones (there was a trial with TfL staff). However, these have relied on a separate 'Oyster chip' being included in these devices, as well other microchips that perform different functions. Whilst these developments have shown that it is technically feasible to operate in this way – no mobile phone products are currently available and the Barclays One Pulse Account is now closed to new customers. One Pulse cards included the ability to use 'wave and pay' contactless bank card technology for transactions of less than £15. It should be noted that the presence of two chips on the One Pulse card meant that there was no need to transfer data between the bank and TfL as they both handled the transactions being made by the different parts of the card independently.

TfL are proposing however to move towards the use of 'wave and pay' contactless bank card technology on a wider scale than a simple commercial arrangement with one bank. Unlike the One Pulse arrangement, it is envisaged that only one chip would be included in the card that would handle both bank and ticket transactions.

4.4 Transfer of personal data

One of the significant challenges of the use of contactless cards will be the issue of data sharing between different organisations involved in the transaction, which raises concerns about how passengers' personal data will be used.

It is important that in order to deal with the enforcement of Penalty Fares or in the case of the current Oyster arrangements that of claims of overcharging or maximum fares where a passenger has made an incomplete journey, that access to journey data and transactions is available to a number of bodies.

Following intervention from London TravelWatch a number of conventions / protocols / systems have been put in place to allow for information to be transferrable between TfL, train operators and penalty fare appeal bodies, but with substantial safeguards on what data is transferred and to whom. This was done because all these bodies have contractual relationships as transport providers it was not considered unreasonable that the data should be shared, and because passengers were being disadvantaged because of the inability to share relevant data.

The inclusion of banks and other financial institutions into this mix of contractual transport relationships poses other substantial questions about the transfer of personal information if the use of 'wave and pay' technology increasingly replaces other ticketing systems such as Oyster.

We believe that when something goes wrong with a card or where there is a dispute over a transaction, or a card was lost or stolen, the transport ticketing element would become subject to the laws and regulations of the Financial Services Authority (FSA), as the ticket effectively becomes a financial product. A further complication would be that organisations such as London TravelWatch that are currently not accredited to the FSA's standards may have to gain such accreditation in order to gain access to information so as to assist passengers with any appeal that they may make – either against a Penalty Fare or any other matter where proof of purchase or travel was required. This change would give access to TfL, train operators, London TravelWatch, Passenger Focus and Penalty Fare appeal services to a significant amount of passengers' sensitive personal data including their name, address and individual bank or credit card account details.[1]

Similarly, banks and financial institutions would then also gain access to information on the origin and destination of train journeys, and bus routes used

[1] If this were the case, the costs to London TravelWatch would be considerable, and outside of our current financial or resource capabilities In this event in order to ensure that a statutory appeals system continued to exist we would therefore expect to submit a supplementary budget requirement to the to fund this change at the appropriate time.

by their customers as institutions (we assume) would have to display this information on the passengers bank (financial service) statements. Banks already hold significant detail on their customers purchasing and payment habits, and this would add personal information on their customers travel habits and preferences. Potentially, this information might then be used as background information for credit or mortgage references or life insurance cover. This would be particularly important in the case of Penalty Fares as it might be held that the presence of a Penalty Fare on a bank statement would indicate an intention to defraud. In the case of appeals against Penalty Fares or maximum fares for an incomplete journey this could also require the sharing of information with the bank.

From our casework with individual appeals, we note that even under the current arrangements there are often problems with the recording of data and the difficulty of resolving disputes between the banks and operators (both TfL and train operators), if a passenger has been overcharged for some reason e.g. top up of Pay As You Go not applied to an Oyster card.

It is essential that clear protocols are established on the sharing of personal account data between transport and consumer bodies, and financial institutions such as banks, prior to the introduction of any contactless technology.

We have reservations, therefore on the desirability of the involvement of financial institutions in future ticketing solutions.

4.5 Social Inclusion issues

There is also the question of how ticketing would be provided for those passengers who do not have access to a bank account either due to their age, social deprivation or mobility or for other reasons.

For this reason we would ask whether proper consideration has been given to the alternatives such as providing ticketing to mobile phone / or smart phone devices which might be a more promising or better solution. A number of bus and rail companies already offer such facilities for journeys made outside of London, and the greater penetration of these devices into groups that do not have access to bank accounts may make this is of greater utility. It would also resolve any problems with any sharing of data between transport operators and financial institutions.

4.6 Practical considerations

We are unsure what would happen if a wallet containing both a ‘wave and pay’ bank card and an Oystercard was placed on a reader – which would take precedence?

5 Other issues

5.1 Improving the current system

Passengers find that the existing system is complex, and very often have very little idea what the correct fare for their journey is. Our research into 'Incomplete journeys on Oyster' (http://www.londontravelwatch.org.uk/document/13964) revealed that most people had only a vague idea of the approximate costs of journeys. There was no recognition at all that on the rail and Underground network fares are subject to three different scales – TfL, TfL and National Rail, and National Rail network. This is cause for confusion. We believe that this underlines the case for a single fare scale covering all rail modes in London.

Other areas where the fares system is confusing include the issue of peak and off-peak pricing, and the inconsistency between different rail modes as to when and where Freedom Passes can be used on Mondays to Fridays. In the case of peak and off-peak pricing the 'Incomplete journeys on Oyster' research found that passengers only had a very vague idea of the concept of peak and off-peak travel or when different fares applied at different times, or about the actual cost of individual journeys. This result implied that passengers were not varying their times of travel in order to receive a cheaper fare. This is a very worrying finding as a substantial part of transport policy in London has been based on the concept that passengers would respond to price signals, which in turn would help spread demand, and therefore reduce potential and current overcrowding.

The current Oyster system does not help with this situation because on entry to the transport system (except on buses and trams) there is no indication as to what the final fare charged is going to be. At the end of the journey passengers are presented with two figures on a reader with no explanation as to what they are. It is therefore no surprise that passengers have only a vague understanding of how much journeys were actually costing them.

We recommend that consideration should be made of offering an off-peak only Oyster card, but with the facility for the passenger to positively disable this feature on a journey by journey basis if they wish to travel at a peak time. This could reuse the redundant Oyster Extension Permit feature.

The issue of Freedom Pass not being valid before 0930 on Mondays to Fridays on the National Rail network is another source of confusion. This is because on some lines which parallel Transport for London services they are valid before 0930, and so let holders through gatelines, only for them to arrive at a station where it is not valid and find that they then are liable for a Penalty Fare. A particular oddity occurs between West Croydon, Crystal Palace and New Cross

Gate where the Freedom Pass is valid on London Overground trains on this route but NOT on ones operated by Southern, even though both operators trains use the same platforms and tracks.

The resolution of this problem could be solved either by the Mayor agreeing to fund the extension of Freedom Pass validity with National Rail operators or by allowing Freedom Pass holders to add Oyster Pay As You Go to their Freedom Pass to pay for any peak time travel that they incur.

We also note that over the years there have been a number of campaigns to alter the boundaries of the current Travelcard zones, where passengers from one area have felt particularly disadvantaged compared to others by virtue of their transport geography, such as requiring an addition tube journey (and therefore additional cost) into central London. Examples of this have included requests to move Surbiton and Kingston to zone 5 from zone 6, and Maze Hill and Westcombe Park to zone 2 from zone 3. Having a single rail fare scale for all modes would address this issue at least in part.

The London Travelcard zones have not been subject to much change in recent years largely because changes require the agreement of train operators, because these will have a major effect on the amount of revenue received. Changes can be promoted by the Mayor, but with the proviso that the Mayor agrees to fund any deficit in income as a result. To date the Mayor has not exercised this power.

We recognise that, in order to reduce fare evasion, TfL and the rail operators introduced ‘maximum fares’ for ‘incomplete journeys’ whilst using Pay As You Go on Oyster i.e. where there is a failure of the passenger to touch in or touch out. It is clear that many passengers are being caught up through error and we believe this is undermining the association of Oyster with providing the best value fare.

Bus fares, although relatively straight forward compared to the rail network, could by the altering of the ‘capping’ mechanism in Oyster for example, be used to encourage passengers to switch from congested parts of the tube network for relatively short journeys, in central London. For example, TfL could consider introducing a central London ‘cap’ at a level below the zone 1 tube fare where two bus journeys are registered within a 20 minute duration.

The other area where we believe that substantial improvements could be made is that of the Roadside Ticket Machines used by London Buses, which are largely located in the Central London Pay Before You Board area.

At present these machines are only capable of selling one ticket – the adult cash fare of £2.20. (Previously they also used to sell One Day Bus Passes but this product has now been withdrawn).

These machines were introduced from 2001 to 2004 as part of the programme to introduce articulated (bendy) buses where no cash was taken on the bus, and to reduce boarding times on all services at busy stops. (There was also an experimental route - where the machines and the concept were trialled before their widespread introduction elsewhere (Bus route W7 (Finsbury Park – Muswell Hill) and which is still in force today)). The latter scheme involved the introduction of an area in central London where tickets were required to be purchased before boarding the bus. This at the time was regarded as a precursor to a wider scheme to make all London buses operate on a cashless basis.

Since the introduction of these machines (which are essentially the same design as those often used in car parks), a number of other changes have occurred which have had an impact on the usage and need for these machines. These include:-

- The Mayor's decision to replace articulated buses with conventional ones, which with the exception of central London routes 507 and 521 has included the reintroduction of the ability to pay cash to the driver.

- The widespread take up of Oyster that has led to a greater than expected reduction in the use of cash fares.

- Acceptance of national concessionary bus passes for free travel on London Buses and other changes to concessionary fares in London.

The machines themselves have also not been as reliable in service as might have been hoped. Some of this has been due to vandalism and robbery attempts. The design also requires the exact coinage to be put in the machine, but with a wait until each coin has been deposited and recognised in the safe. This is quite a fiddly process especially when passengers are put under pressure to buy the ticket quickly because the bus driver is waiting for them to finish the process. As a result often the machines reject the coins because they have been put in too quickly, and so the process is then aborted.

Observations by London TravelWatch staff at bus stops in Paddington and Kings Cross showed that in many cases buses were actually delayed because of problems with these machines, and/or arguments between bus drivers and passengers over whether the machine is working or not. Officially, London Buses procedure in such circumstances is that the passenger should be carried to the next stop where there is a working machine, and the passenger should then purchase a ticket there. In practice, many passengers are simply refused travel: in a minority of cases bus drivers ignore London Buses procedure and simply issue a ticket on their own ticker machine, but risk disciplinary proceedings if the passenger has their ticket later inspected by a revenue protection officer.

The types of passengers using these machines are by their very nature casual users – either those without access to Oystercards (such as tourists or visitors) or those who cannot use their Oystercards for some reason (such as failure to carry their card or insufficient credit for Pay As You Go). Those in the former category are far less likely to make complaints or know how to make one, because they are either non Londoners making a one off trip to the capital or other infrequent users who would not necessarily see the need to acquire an Oystercard.

In summary, we believe that these machines make no contribution to their original objective of reducing boarding times or delays to buses, and give a very poor customer service image of London Buses when they are either out of service or unable to be used by passengers. As an alternative method of collecting fares is available – that of paying the driver, we recommend that these machines are removed. Routes which are currently cashless (507, 521 and W7) and where there are no current plans to reinstate payment to the driver, should have this facility restored and that the central London pay before you board area should be abolished. We believe that this would provide a more consistent service for bus users across London and that removing the ticket machines would also contribute to reducing street clutter.

Alternatively, if the Mayor feels that some roadside ticket machines are still needed, we recommend that new machines are installed which are capable of issuing new Oystercards and/or capable of topping up existing Oystercards.

5.2 What actions should the Mayor and TfL be taking to ensure future ticketing technology and ticketing products are of maximum benefit to passengers?

London TravelWatch argues that in order to answer this question a number of tests should be applied and these should include:-

1. Is it a simple and easy to understand system?
2. Does it provide value for money for the user?
3. Is it 'forgiving' in its interpretation and application when things go wrong?

5.3 What, if any, other changes to ticketing technology and ticketing products could TfL make to improve its services for passengers?

London TravelWatch has made extensive recommendations to improve the delivery and usability of the Oystercard system in its recent report on incomplete journeys. This may be found at:-

http://www.londontravelwatch.org.uk/document/13964

The principal recommendations of this research include:-

- Increasing the visibility and presence of card readers at stations
- Giving clearer signage and instruction on when and where passengers need to touch in and out.
- Improving the signposting and accessibility of readers
- Enabling all rail station ticket offices to be able to retail and resolve problems relating to Oystercards.
- Upgrading and / or replacing ticket vending machines so as to allow balances and statements to be viewed or obtained, and to give the ability to add Oyster products or topping up Pay As You Go credit – a particular priority should be the replacement of Tramlink stop machines.

In addition, as noted in 5.1 above we would recommend the withdrawal of roadside ticket machines operated by London Buses or their replacement with machines that are capable of issuing and/or topping up Oystercards..

6 Conclusions

London TravelWatch believes that passengers want substantial improvements to be made to the existing fares and ticketing arrangements on London's public transport both on the rail (Underground, DLR, National Rail and Tramlink) modes and the bus network.

In particular progress must be made on implementing the recommendations of London TravelWatch's research into 'Incomplete Journeys' on Oyster: and also the removal of London Buses' roadside ticket machines for cash fares.

London TravelWatch also has substantial concerns about the introduction of contactless bank payment cards ('pay wave') into the ticketing system particularly where this relies on the ability of transport operators and financial institutions to share information on passengers' personal information such as details of bank and credit card accounts.

TfL must learn the lessons of Oyster before moving to new forms of ticketing. Specifically, there must be more robust systems to ensure that the correct fare is paid for the journey and that mistakes can be easily corrected in real time, without the passenger having to incur large phone bills.

Andrew Chivers, MD NXEA
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Caroline Pidgeon AM
Chair of the Transport Committee
London Assembly
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31st August 2011

Dear Caroline

London Assembly Transport Committee's investigation into the future of ticketing

You have kindly invited us to share the work we are doing to support TfL's future ticketing plans, and to share our plans for other new ticketing solutions.

National Express operates two franchises within Greater London: National Express East Anglia which serves north and east London from Liverpool Street; and c2c which serves key centres in East London from Fenchurch Street. We have played a leading role in the development of smart ticketing on National Rail in London to date, having adopted Oyster PAYG on parts of our network in 2007 prior to the major roll out of January 2010. Over the next two years our franchises reach the end of their respective terms; but we continue to work with industry partners on a number of retail and ticketing projects, the benefits of which will last well into the future.

Our work, as is the case with other Train Companies in general, falls mainly into three areas. The first is wholly related to the future of ticketing within London. The second and third areas reflect the fact that a very significant proportion of our business originates from outside Greater London, and we have to ensure that the ticketing systems in London take the needs of such customers into account.

Firstly, we are working closely with other TOCs and TfL to develop plans for EMV ("Wave and Pay") technology within Greater London. This will enable passengers to travel (initially on a PAYG basis) using contactless bank cards throughout the current Oyster PAYG area from late 2012. Discussions with TfL have been constructive and, although our East Anglia franchise comes to an end in February 2012, we are working towards a common introduction on all rail services in London, whether sponsored by the DfT or TfL.

Looking slightly further ahead, we are also taking part in discussions collectively with TfL on potential future developments of "Wave & Pay", for example their "Travel Plan" proposition which would enable regular commuters to travel using a contactless bank card, effectively replicating an Oyster Travelcard Season ticket. While we are starting to consider how this will work, we note that