

The Future of Ticketing

November 2011



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At its meeting on 14 July 2011, the Committee agreed to undertake an investigation into Transport for London's future ticketing plans with the following terms of reference:

- To examine TfL's plans for ticketing; and, in light of the findings
- To identify any further actions that should be taken by the Mayor and TfL to develop future ticketing that is of maximum benefit to passengers and mitigates any risks.

The Committee welcomes feedback on its report. For further information, contact Ian O' Sullivan in the Scrutiny Team by: letter c/o City Hall, More London, SE1 2AA; email Ian O Sullivan on ian.osullivan@london.gov.uk; or telephone: 020 7983 6540. For press enquiries contact Dana Rothenberg by telephone: 020 7983 4603 or email dana.rothenberg@london.gov.uk

Contents

Chair’s foreword	7
Executive Summary	8
Introduction	10
Putting the passenger first	12
How TfL may benefit from contactless payments	20
Conclusion	26
Appendix 1 - Future Ticketing Project: Phase 1 and 2 Business Case Review	27
Appendix 2 - How Contactless Payments Work	34
Appendix 3 – Recommendations	36
Appendix 4 - Orders and translations	38

Chair's foreword

It is not difficult to see why Transport for London (TfL) wants to allow “wave and pay” contactless bank cards on the network. The current Oyster system, though very popular, is expensive and complex to administer. Contactless bank cards use existing technology, responsibility for issuing cards would lie with the banks rather than TfL, and the operating costs should be lower.



But where is the passenger in all of this? While contactless bank cards will be an attractive option to some, many passengers are sceptical about using bank cards as tickets and others will simply not be able to.

The aim of this report is therefore to ensure that the needs of all passengers are central to TfL's Future Ticketing project and that changes take into account passengers' concerns and expectations. We are grateful to Which? for the support it has been able to offer. The findings of its survey have informed our conclusions and recommendations, including a set of principles which, if adopted, should protect passengers' interests.

Also, while it's only right that TfL is looking to new technologies to enhance its ticketing offer, it needs to demonstrate that there is a compelling case for their introduction. Based on the information made available to us in this investigation, we are unconvinced that the claims made about potential savings are backed up by the evidence. This is just the sort of issue where the new Independent Investment Programme Advisory Group can demonstrate its independence and we call on it to examine the finances of TfL's plans with a view to reassuring us, and Londoners, that this is an investment worth making.

So, in our view, there is still some way to go before “wave and pay” can be seen as a win-win for TfL and passengers. The plans will no doubt develop over the coming years. As they do so, this Committee will return to examine any proposals and continue to press for the best deal for London's passengers and taxpayers.

Caroline Pidgeon AM

Chair of the Transport Committee

Executive Summary

This report examines Transport for London's (TfL) plans to introduce contactless bank card payments across London's transport network in 2012/13. In our investigation we examined the extent to which the potential advantages of this new payment technology for passengers and TfL are likely to be realised in practice. This report sets out our conclusions and makes recommendations intended to ensure, in particular, that all passengers are at the centre of reforms to ticketing.

Putting the Passenger First

The Committee recognises that contactless bank cards will make travel easier and faster for some passengers. These advantages are though dependent on pre-approval from a bank and research by this Committee suggests some passengers have reservations about the new technology. To safeguard the interests of all passengers throughout this process, we have established five principles which we consider should underpin TfL's Future Ticketing Project over the next five years:

- Any new ticketing system must provide the highest possible security for passengers' personal information.
- Passengers should be supported to use any new system by trained staff and an adequately staffed customer service centre.
- Passengers should have access to detailed breakdowns of their transport expenditure, and information provided to TfL should be kept confidential unless otherwise agreed to by customers.
- Those on low incomes should not miss out on the lowest fares because they do not have a bank card.
- Any new ticketing system should, as far as possible, be compatible with those provided by other transport operators.

The Committee calls on TfL to guarantee these criteria as a minimum standard for future ticketing development. We also ask that TfL report back by September 2012 on how it plans to embed these principles in its future ticketing programme; and how the adoption of contactless cards will fit in with a revised Oyster system, the new technology being introduced nationally on the transport network, and emerging technology particularly in the potential use of mobile phones.

How TfL may benefit from contactless payments

TfL expects to break even on its £75 million investment in contactless payment technology within 12 years. Having examined the business case, the Committee is unconvinced that the system will deliver the level of savings needed to reach that target. In particular, we are concerned about: the lack of evidence within the business case to support TfL's assumptions about revenue increases and passenger take-up; and the lack of a figure for total direct savings attributable to contactless bank cards.

There are also wider implications of the adoption of contactless bank cards for TfL and others. For example, the business case presents no wider economic analysis, such as how the reduction in Oyster revenue might affect small shops. Also, changes to the way passengers pay for fares have implications for the management of staff and services at stations. While these have been acknowledged publicly by TfL, there is little detail available of what the changes will mean in practice and how, if at all, they are expected to contribute to savings at TfL. We have therefore asked TfL to consult the Committee and passengers before any changes to station management are approved.

The Committee recommends that the Independent Investment Programme Advisory Group (IIPAG) undertake a review of the rationale behind TfL's decision to roll out contactless payments across its network, taking into account the issues raised in the body of this report as well as any updated information on the growth of the contactless bank card market. We ask that IIPAG report back to the Committee before the launch of contactless payments on buses in Spring 2012.

TfL's development of new ticketing systems presents a unique opportunity to improve the experience of public transport for Londoners. This report seeks to support this by ensuring that TfL maintain exacting standards when evaluating future ticketing solutions, and that potential benefits are shared amongst all passengers.

Introduction

Oyster – a London success story

Since its launch in 2003, Oyster has become the default ticket choice for Londoners. 85 per cent of all fare transactions are now made through Oyster, with Pay As You Go the most popular choice for passengers amongst a range of fare and travelcard options. 14 million transactions a day are now made through Oyster.¹ Most importantly, all potential passengers have access to an Oyster card, and thus the benefits of lower fares and convenience.

Despite this success, there are several issues with the current system. These include:

- A proprietary set of standards and technology which are unique to TfL. This creates significant barriers to making it operable with other transport systems in the UK and globally.
- The high cost of operating the system in conjunction with traditional cash and paper tickets. TfL estimates this cost at 14p out of every pound collected in fares,² an almost identical figure to New York's Metrocard system which spends 15 cents in each dollar.³
- Confusion amongst some passengers as to how Oyster operates.
- A complex refund structure that requires TfL to have physical access to the card before correcting any over-charging.⁴

The Future Ticketing Project

In 2006, TfL set up the Future Ticketing Project (FTP) with two main aims: the first was to investigate how much it cost the organisation to collect fares; and the second was to evaluate emerging payment technologies to see if they could help to reduce those costs. TfL undertook a scoping exercise in partnership with the Massachusetts Institute of Technology (MIT) to evaluate future payment options. During this period, it also piloted a mobile phone payment system.

TfL judged that contactless debit and credit card technology offered the best opportunity to reduce the cost of ticketing. Though mainly driven by cost concerns, TfL also considered there would be

¹ TfL written submission to the Transport Committee, August 2011 page 6

² Shashi Verma, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 2

³ Concept of operations for MTA new fare payment system and NYCT deployment phase, Metro Transport System (NYC), April 2011, page 12

⁴ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 6

“substantial benefits” in terms of convenience for some passengers, ie those who have access to contactless payments and who used Oyster Pas As You Go.⁵

A business case was presented to the TfL Board in 2009 which proposed a five stage development process (outlined in Appendix 2). The first two phases cover the introduction of contactless bank card payments on buses in 2012, then across the DLR, the Overground and the Tube in 2012/13. Daily and weekly capping of fares would also be brought in during the multi-modal launch sometime in 2013. Phases 1 and 2 were funded with an allocation of £75 million. The final three phases, which include making travelcards available on contactless bank cards, developing a new pre-paid Oyster system and the final decommissioning of the current Oyster platform, will take place between 2013 and 2015. These phases are not currently funded: business cases will be developed for each before funding will be sought over the next two years.⁶

This report will explore the progress of the Future Ticketing Project as it stands on the cusp of launching Phases 1 and 2 early next year. In particular, we look at TfL’s proposals from the perspective of passengers, drawing on research on what consumers’ views are of contactless bank cards and their potential. We investigate: how the introduction of contactless bank cards will affect passengers’ experience of public transport; and to what degree the proposals offer improvements to access and convenience for all passengers. In Chapter 1 the Committee outlines five criteria which we conclude will help to ensure the best deal for passengers during the entire Future Ticketing Project. These criteria have been established based on research undertaken in conjunction with consumer group *Which?*. The next chapter will look at the Future Ticketing business case and examine the assumptions underlying TfL’s assertions about the effect of contactless payments on reducing the cost of collecting fares.

Using contactless bank cards on London’s transport network represents a significant revolution in TfL’s relationship with passengers, but one which has yet to undergo external scrutiny. With this report, we hope to provide a basis on which the Future Ticketing Project can be evaluated, as well as helping to place the needs of passengers at the forefront of any future development.

⁵ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, page 2

⁶ FTP Phases 1 & 2 Business Case, Transport for London, September 2011, page 1

Putting the passenger first

Contactless bank cards have the potential to make life simpler for many people: passengers will not need to worry about checking their balance or topping-up before travelling, while visitors to London who have access to contactless cards should also find it easier to get about. In terms of speed, TfL estimates the main benefit will be a 24 per cent fall in queues at ticket offices.⁷ Also, unlike the current Oyster system, TfL will be able to process refunds directly on to bank cards through their back office.⁸

For those interested in using this new system, TfL will have to guarantee a level of support and security which will help to maintain passenger confidence and ensure repeat use. In addition, as most of these benefits will only accrue to passengers who meet a bank's approval, the Committee considers that it is essential that TfL also continues to guarantee that public transport ticketing is accessible and fair to all Londoners, regardless of their credit status.

To ensure these principles are realised, the Committee has set out a set of criteria which we deem necessary to ensure the Future Ticketing Project meets the needs of passengers. These criteria were shaped by research undertaken by *Which?*, who surveyed 1,335 UK residents in August 2011 on their attitude to contactless payments and their potential use for transport.

Principle 1: Any new ticketing system must provide the highest possible security for passengers' personal information.

As with any new technology, unease about security of personal information, and protection against fraud and identity theft, were key concerns highlighted by the *Which?* survey. Almost a quarter of those surveyed listed the safety of their personal data contained on the 'smart chip' as their main concern.⁹ These concerns have been fed by news reports that claimed it would be possible to use a radio frequency transmitter to steal information stored on a smart chip while the card was still in a customer's pocket.¹⁰

The Committee has sought assurances in this area from card issuers such as Visa, and TfL. We have been told that, as well as featuring the same level of card security as Chip and Pin devices, there is an extra

⁷ FTP Phases 1 & 2 Business Case, Transport for London, September 2011, page 2

⁸ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, page 2

⁹ *Which?* written submission to the Transport Committee, October 2011 page 4

¹⁰ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, page 30

layer of encryption within the card which makes it impossible for enough information to be stolen through the smart chip to be of any use.¹¹ Visa Europe said that card fraud is currently at a 10 year low and there has been no noticeable increase as the number of contactless payments throughout Europe has increased.¹² TfL's Head of Future Ticketing assured us that the cards were 100 per cent safe against any kind of electronic theft.¹³

The Committee welcomes these assurances from TfL and Visa Europe. In light of the likely expanded opportunities for potential theft and fraud on the transport network, we would welcome TfL and card companies continued monitoring and reporting of contactless security to ensure that these assurances can continue to be supported by the evidence.

Recommendation 1

By September 2012, TfL should report back to the Committee on fraud levels or other security matters detected due to increased use of contactless cards on the transport system; and highlight, if necessary, steps it is taking to tackle any security issues before the multi-modal roll-out occurs.

Principle 2: Passengers should be supported to use any new system by trained staff and an adequately staffed customer service centre

In describing some of the lessons learned in roll-outs in other industries, Visa Europe said staff support was essential to success: TfL would have to ensure staff were well-trained and comfortable with explaining contactless payments. This burden will fall heavily on TfL if banks fail to launch the type of mass public information campaign last seen during the switch-over to Chip and PIN in 2006.

Bus drivers will be at the front line of the first roll-out in Spring 2012. To maintain good driver/passenger relations, bus companies must give drivers clear, concise information about how the system works, and what passengers should do in the event their card is denied at the reader. The Committee has noted in previous investigations into

¹¹ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, page 30

¹² Visa Europe written submission to the Transport Committee, August 2011, page 2

¹³ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, page 31

accessibility on the transport network, that the level of information given to drivers can be variable, both in detail and accuracy.¹⁴ Confusion and misinformation will lead to delays during boarding and therefore erase any gains to passengers from speed and convenience.

TfL must also ensure that it has the back-office resources to support passengers. The Committee's previous work on the launch of the Cycle Hire Scheme highlighted the frustration that many users felt at the poor customer service offered by the helpline, particularly in cases where money had been incorrectly taken from their bank account.¹⁵ For passengers on tight budgets, this could mean becoming subject to overdraft fees.

TfL must ensure that staff are provided with the information necessary to answer enquiries and the authority to authorise refunds, particularly when a customer's account has been debited automatically. It should also continue to work with banks to ensure that they support the wider adoption of contactless payments with a high profile, general information campaign.

Recommendation 2

By September 2012, TfL should report to the Committee with: an analysis of the issues raised with the customer call centre related to contactless payments; any work carried out to examine bus driver difficulties with the system; and any agreement with banks for promotion campaigns in London.

Principle 3: Passengers should have access to detailed breakdowns of their transport expenditure, and information provided to TfL should be kept confidential unless otherwise agreed to by customers.

Tickets and Oyster receipts help passengers in two distinct ways: they are used to track and control expenditure; and, they act as proof that a particular journey was taken, for example in claiming expenses. 62 per cent of Londoners surveyed by *Which?* said losing control of their

¹⁴ *Accessibility on the transport network*, London Assembly Transport Committee, November 2010, page 33

¹⁵ *Pedal Power: the cycle hire scheme and cycling superhighways*, London Assembly Transport Committee, September 2010, page 20

expenditure and becoming overdrawn was a concern, while 56 per cent were worried about losing proof of travel or purchase.¹⁶

During the multi-modal launch, a single payment covering an entire day's travel will be deducted from a passenger's bank account. As passengers could be charged for travelling several times and across several modes each day, a single payment may make it more difficult to detect over-charges. To help passengers, TfL will develop a detailed online portal for passengers who register their card with TfL. This will provide information on each journey made and allow general enquiries and refund requests.

There are some problems with this approach, including:

- Information from banks and TfL will need to be reconciled accurately;
- Passengers without regular internet access will be disadvantaged;
- Passengers will be required to register their debit or credit card with TfL;¹⁷ and
- The portal will not be available to passengers during the initial bus launch.

Which?'s Director of Policy said TfL should increase passengers' ability to know in real time when there is a problem with their account and allow them to make an informed response. A series of alerts using text, email and station readers could help to facilitate this.¹⁸ TfL said it will continue to work on the support offered to contactless customers.

The survey also revealed a more general worry for between one third and one half of respondents about the level of information that banks and TfL would gather on customers' spending habits, and how this might be used both internally and through third parties.¹⁹ We

¹⁶ *Which?* written submission to the Transport Committee, October 2011 page 4

¹⁷ In TfL's survey from 2009, 31 per cent of respondents were unhappy about registering their bank card with TfL. This rose to almost half of respondents within *Which?*'s survey, which was carried out in August 2011.

¹⁸ Pula Houghton, *Which?*, speaking at the Transport Committee, 6 September 2011, page 31

¹⁹ The range is dependent on whether people were asked if their concerns rested with banks or transport operators - *Which?* written response to the Transport Committee, August 2011, page 5

welcome TfL's assurances that travel information will not be shared with banks or third parties.²⁰

Passengers should expect to be able to track travel expenditure as easily as they do for other payments. As well as the more comprehensive information offered by the online service, TfL should continue to investigate how passengers can receive real-time information on their expenditure, such as using phone or text messaging. It should also maintain the same levels of privacy as Oyster card holders receive.

Recommendation 3

By September 2012, TfL should report back to the Committee with the full list of support being offered to those who wish to use contactless payments, including any additional support over and above the website.

Principle 4: Those on low incomes should not miss out on the lowest fares because they do not have a bank card

Accessibility is a vital ingredient in the Oyster success story. For the price of £5, anyone has access to the Oyster system, and thus to the lowest prices. Contactless payments will change this: the 'right' to travel using this system will be based on approval by a third party, ie a bank or financial institution. This has the potential to adversely affect those who do not have access to credit or debit cards, a group which encompasses up to 20 per cent of the population (ie those who do not have a bank account, or those who only have access to Electron and not debit or credit cards),²¹ and is weighted heavily towards poorer households.²² The various levels of contactless availability amongst banks will also make it easier for some customers to take advantage of the new system than others. Barclays is the only bank to have fully committed to rolling out contactless cards to all customers. Lloyds and HSBC are waiting to see the results of limited trials.

As long as the benefits for those using contactless payments are exclusively on speed and convenience, the Committee can see the value in using advances in technology to offer more choice to passengers. The difficulty comes if growth is slower than TfL currently

²⁰ Shashi Verma, TfL, speaking at the Transport Committee, 6 September 2011, page 35

²¹ ITSO written submission to the Transport Committee, August 2011, page 2

²² *Which?* written response to the Transport Committee, October 2011 page 8

anticipates before it introduces its revamped Oyster card as part of phase 4.²³ The business case for the first two phases rests on ambitious targets which are subject to many factors outside of TfL's control.²⁴ If take-up is lower than expected, TfL may be pressurised to use more aggressive financial incentives. The Committee heard that these incentives made a "big difference" in consumer acceptance of new technology. Analysys Mason cited the example of Japan, which not only gave out cards with money loaded on to them, but also set up loyalty schemes to encourage higher use in the early stages.²⁵

TfL has already indicated that it plans to introduce a price incentive sometime in 2013. A weekly 'cap' on contactless payments is funded within Phase 2 of the launch. The Committee is concerned that the weekly cap, if not available on Oyster, will make it more difficult for those who are not able to qualify for a debit or credit card, or who do not wish to use one due to budgeting or other financial pressures, to access the cheapest fare for their travel.

While the Committee understands the potential for long-term savings to TfL from contactless payments, this should not be at the expense of those who can least afford it. If TfL introduces the weekly cap, it should ensure that an equivalent option is available during any re-development of the Oyster scheme before 2014.

Recommendation 4

By September 2012, TfL should report back to the Committee on how it will ensure all customers, regardless of bank status, will have access to the cheapest fares for their journey.

²³ In phase 4 of its Future Ticketing plans, subject to approval of the business case, TfL plans to introduce a TfL card, available to all, which works to a bank card standard (Director of Fares and Ticketing, 6 September 2011, transcript, page 27).

²⁴ These include security concerns, a failure by banks to rapidly roll out availability, or the continued popularity of Oyster due to budgeting reasons.

²⁵ Ed Hamilton, Analysys Mason, speaking at the Transport Committee, 6 September 2011, transcript page 17

5. Any new ticketing system should, as far as possible, be compatible with those provided by other transport operators

Interoperability, ie, giving passengers the freedom to use the same ticketing product across several regions, is an increasingly important part of ticketing. Contactless bank cards offer some improvement on the current status quo, as a Visa card from Newcastle or Paris will operate with the same set of standards as one from London.

This advantage is lessened in two ways: the pace of distribution is likely to be significantly slower outside of London; and Train Operating Companies have yet to commit to making their systems compatible with TfL's plans. This latter issue is particularly important as estimates in TfL's business case assume contactless inter-operability on suburban rail routes. In addition, consumer research from both TfL and *Which?* acknowledges that there is a "large minority" of people who are happy with the current system and who do not wish to use a bank card.²⁶ This group will be looking to the re-development of Oyster in phase 4 of the Future Ticketing Project to increase their freedom to travel nationally.

ITSO may offer a solution. ITSO is a common set of technical standards that will allow freer travel between different transport providers. Unlike Oyster, it is not a ticket product itself, merely the agreed foundation which allows travel cards issued by other organisations to be used across transport regions.

The Department for Transport (DfT) is mandating the adoption of ITSO as a way to achieve a measure of national inter-operability.²⁷ Londoners who have a Freedom Pass already have a dual ITSO/Oyster card which allows them to travel to areas outside of London. All national rail franchises will stipulate adoption of ITSO and TfL has received funding from the DfT to ensure Oyster readers accept cards with ITSO specifications by 2013.²⁸ Evidence submitted to the Committee by ITSO, local authorities and Train Operating Companies has suggested that any future pre-paid card from TfL should use ITSO as its standard technical specification.

Passengers may benefit from competition amongst retailers to offer different additional functions on these cards, such as the option to use

²⁶ TfL written submission to the Transport Committee. August 2011, page 16

²⁷ ITSO written submission to the Transport Committee, August 2011, page 1

²⁸ ITSO written submission to the Transport Committee, August 2011, page 1

money loaded on to the card for small retail purchases (otherwise known as an 'e-wallet'), or to build up loyalty points in exchange for special offers. For example, 95 per cent of Hong Kong residents between 16 and 65 have the city's Octopus card which is accepted at thousands of retailers, turning the card from a solely transport product into one which is used extensively for general payments.²⁹

We acknowledge that there are still issues. ITSO has suffered delays due to technological reasons, and has been working with TfL for the last 18 months to solve these.³⁰ In 2005, TfL examined in detail the option of extending Oyster on similar lines to the Hong Kong Octopus card. The main conclusion of this work was that the regulatory requirements of the electronic regime in Europe, mainly governed by the E-Money Directive, were likely to make the costs of a UK scheme too expensive for retailers. In addition, others pointed out over-loading cards with too many features could slow down their acceptance at ticket gates.³¹

Passengers who cannot, or choose not to, use a bank card will look to the re-developed Oyster system to increase their flexibility of travel. Adopting the ITSO standard for the re-development of Oyster would allow TfL to continue to offer a freely available pre-paid card which could combine national inter-operability with the ability to add additional functions which passengers may find attractive.

Recommendation 5

By September 2012, TfL should report back to the Committee with an update on the development of plans for phases 3 to 5 of the Future Ticketing Project. This should include how it is planning to re-develop Oyster and how it will use the ITSO standard to ensure increased inter-operability and flexibility for passengers.

²⁹ <http://www.octopus.com.hk/octopus-for-businesses/benefits-for-your-business/en/index.html>

³⁰ Shashi Verma, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 7

³¹ Michael Leach, ITSO, speaking at the Transport Committee, 6 September 2011, transcript page 28

How TfL may benefit from contactless payments

As described by the Independent Investment Programme Advisory Group (IIPAG), the acceptance of contactless bank cards across the transport network is “not an elementary expansion of the Oyster card but is a step change” for both passengers and TfL.³² Though we acknowledge there will be benefits for some passengers, contactless bank card payments are still largely untested as a ticketing technology. Therefore, a clear and rigorous appraisal of various competing options, and the costs and benefits of the chosen system is important.

We would expect the Future Ticketing business case to have provided a level of detail that would allow the Committee to assess the merits of contactless payments. During the course of our investigation, the Committee requested a copy of the original business case presented to the TfL Board in 2009. TfL submitted an updated case with numbers more reflective of their current expectations.

Having analysed the business case provided to us and assessing it against best practice in the public sector, we conclude that the document does not provide a compelling case for either the choice to develop contactless bank card payments, or for the expected return on the £75 million investment in Phases 1 and 2. Our detailed findings and methodology are set out in more detail in Appendix 1 of this report. This chapter summarises our main concerns. These include:

- No figure for total direct savings attributable to contactless bank cards. TfL told us in September that all five phases of the Future Ticketing Project would eventually produce savings of about £120 million a year.³³ According to the business case, contactless bank cards are only expected to be financially positive to TfL after 12 years, calling into question how much of the overall savings will actually come from TfL’s current funded programme.³⁴
- No net cost savings provided for phases 1 and 2. TfL states that the overall goal of the Future Ticketing Project is to reduce the cost of fare collection from 14 per cent to 10 per cent of revenue. The full reduction will only come when all five phases of the FTP

³² IIPAG Annual Report, September 2011, page 19

³³ Shashi Verma, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 3

³⁴ TfL has a business plan to 2017/18 and is required to make savings of £7.6 billion in this period.

are in place. There is no indication of how much Phases 1 and 2 are expected to contribute, increasing the difficulty in evaluating its success before Phases 3 to 5 are approved.

- A lack of evidence to support assumptions for both revenue increases and passenger take-up. TfL's Director of Fares and Ticketing told the Committee that many expected savings and revenue streams were not included in the business case. He suggested that contactless payments alone will generate between £10 million and £20 million of benefits a year, making it break even within three to four years.³⁵ TfL has produced no evidence to support this, and its business case is based on questionable assumptions about passenger take-up and card availability with no analysis of different scenarios should these assumptions not materialise. The business case does not provide evidence for how TfL can directly attribute an estimated £10 million increase in fare revenue to contactless payments.
- No description of alternatives to contactless bank cards – this is important as it is important to examine the opportunity cost of TfL's considerable investment in time, resources and money in the complex development of this technology. For example, could TfL have developed a second generation Oyster within the same time period which delivered comparable savings and efficiencies? The business case provides no context, but focuses only on making the case for one system.

The business case also does not give any details on the likely effect on retail outlets of reducing the number of Oyster transactions. There are roughly 4,000 Oyster retailers in London, many of them small shops around stations. They earn between two and nine per cent commission on each transaction. TfL's Director of Fares and Ticketing said "there is no doubt that there will be fewer transactions" as a result of contactless payments. He said that this issue would be addressed during Phase 4 of the Future Ticketing Project, which would outline plans for a replacement Oyster card offering "an even better proposition" for those businesses.

In its annual report, the Independent Investment Programme Advisory Group (IIPAG), which is tasked with examining how TfL invests and

³⁵ Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 11

delivers on new projects, praised the delivery of the Future Ticketing Project. It has not at this stage examined the original rationale of the project, or the savings that the projects sponsors suggest will result. IIPAG's chief concern was "the lack of sufficient separation between sponsorship and delivery".³⁶ On the evidence of the business case submitted by TfL, the Committee would share those concerns and considers that a broader assessment of the estimates and assumptions provided to us in this investigation is necessary to ensure this investment has been spent wisely.

We conclude that the business case provided to the Committee raises a number of questions about the assumptions underlying TfL's decision to support contactless payment cards. While we recognise that parts of the business case were by necessity redacted for reasons of commercial confidentiality, what has been provided suggests the business case process has not met best practice in the public sector. We therefore seek further independent reassurance that the plans represent value for money and that a full appraisal of it has been carried out. We call on IIPAG to examine the evidence submitted to the Committee, and any other relevant information made available to it by TfL, to reassure us, and by association, London's farepayers, that TfL's assumptions are robust and the costs and benefits carefully and accurately assessed. This work could then be used to monitor the system if there is a case for it to expand, while also informing any future work on Phases 3 to 5.

Recommendation 6

IIPAG should examine the business case for Phase 1 and 2 of the Future Ticketing Project, taking into account the issues raised in Appendix 1 of this report and report back to the Committee by March 2012 on its conclusions and recommendations.

During our investigation, the Committee heard that the timetable put forward by TfL was very "aggressive". A representative from Analysys Mason, a consultant in the contactless payment industry, said the timetable gave little opportunity to learn from the initial bus launch in Spring 2012 before the far more complicated multi-modal roll-out in

³⁶ IIPAG Annual Report, September 2011, page 19

2012/13. This concern was also raised during a review carried out by TfL into the project in June 2010.³⁷ Unlike bus journeys, which are based on a single tap on an Oyster reader and one fare, the DLR, tube and Overground require passengers to tap in and out of a journey to calculate the right fare.³⁸

Ensuring this system is accurate will be essential to maintaining passenger confidence and trust: if passengers feel they are being consistently over-charged for travel then it will damage TfL's immediate hopes for cost savings. This is particularly important as the business case requires TfL to build and maintain high levels of contactless usage in just three years.³⁹

Recent experience with the Barclay's Cycle Hire scheme in July 2010, demonstrates the difficulty of launching a complicated new computer system. Despite claims that the system had been tested before launch, there were persistent difficulties with its operation. The casual user launch was delayed almost six months, resulting in a drop in planned income. It took almost a year for a Critical Improvement Plan to be implemented, and for the larger system issues to be ironed out.

TfL's business case necessitates a rapid adoption of contactless payment amongst passengers in the first three years of operation. The need to drive through the required expansion must be balanced against the need for thorough evaluation of each stage, and particularly in the more technologically demanding multi-modal roll-out.

Recommendation 7

TfL should report back to the Committee on the initial bus launch by September 2012. This report should highlight: experience of passengers and drivers to the new technology; any technical changes to the software as a result of initial testing; and a full timetable for the multi-modal launch on DLR, the Tube and the Overground.

³⁷ 'Summary from Corporate Gate Review Future Ticketing Project (PRG: 10 June 2010)', Transport for London, November 2011

³⁸ Shashi Verma and Will Judge, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 6

³⁹ From 1 per cent of bus passenger journeys to a third of all transport fares between 2012 and 2015 – please see Appendix 1 for further discussion on TfL's usage estimates.

Future proofing the system

Mobile Phone Technology

Guests at our 6 September meeting unanimously declared that mobile phone payments were likely to be the next major advancement in payment technology.⁴⁰ Indeed, TfL had already run a successful trial in 2007 using smart chip enabled mobile phones to pay for transport.⁴¹

Arguments between handset manufacturers and network providers about where the chip should sit in the phone (ie in the handset or on the SIM card) have delayed the wider adoption of mobile phone payments in the UK.⁴² Although agreement has recently been reached in favour of the SIM card, there remain some barriers to wider adoption, including: uncertainty surrounding the intentions of Apple and Google to include payment processing in their operating systems; the technological challenges of a dual SIM and smart chip; and the cost barrier in obtaining a smart phone.⁴³

As the smart chip technology on both bank cards and mobile payments is the same, TfL's work to prepare Oyster readers for the current bank card roll-out can be easily adapted to mobile phone payments in the future, once the issues highlighted above have been addressed. The Committee thus supports TfL's position to monitor developments in the market before committing to any further development.

Future Business Case Development

The Future Ticketing Project is likely to have a major effect on how stations are managed in the next decade. TfL has acknowledged that there will be changes to how staff are deployed across stations as a

⁴⁰ Transcript of the Transport Committee meeting, 6 September 2011, pages 39 & 40

⁴¹ TfL conducted the trial in partnership with O2. 1,000 passengers tested mobile phones which had an Oyster card loaded on to a smart chip. Despite some technical difficulties with the user interface, particularly when trying to top up, passengers who participated in the trial were enthusiastic: TfL told the Committee that its marketing department had never seen such high satisfaction levels from a trial.

⁴² Countries such as Japan and South Korea which have already achieved widespread adoption of mobile payments have much closer relationships between manufacturers and network providers – Transcript of the Transport Committee, 6 September 2011, page 39

⁴³ Transcript of the Transport Committee meeting, 6 September 2011, pages 39 and 40

result of the introduction of new technology,⁴⁴ although it has maintained a commitment “to keep all stations staffed during opening hours”.⁴⁵

It is unfortunate that TfL did not examine the wider implications of its adoption of contactless payments within the initial business case in 2009. This has introduced a level of uncertainty, both about the robustness of the business case development, but also for staff and passengers about the future provision of station services. The development of the final three Phases of the Future Ticketing Project thus offers TfL an opportunity to correct this, and to involve staff and passengers at an earlier stage of the planning process.

In order to accurately assess the range of effects of the Future Ticketing Project, TfL must include estimated costs and benefits derived from changes to service provision at stations. It should also consult with the Committee and passengers before any changes are finalised.

Recommendation 8

By September 2012, TfL should report back to the Committee on: any proposed organisational changes resulting from preliminary scoping work on Phases 3 to 5 of the Future Ticketing Project, including looking at ticket offices, staff structures and any other changes arising; and plans for how it will consult with the Committee and passengers on this issue.

⁴⁴ ‘London Underground’s Operational Vision – Technology Enables Change’, Report to the TfL Board, November 2011, paragraph 3.1

⁴⁵ Shashi Verma, TfL, speaking at the Transport Committee, 6 September 2011, transcript page 39

Conclusion

It is clear that in a transport network as large and complex as London's, a balance will have to be struck in the way ticketing operates between ensuring fast and open access, providing value for money and seeking to make public transport a more attractive option for all passengers. We welcome TfL's commitment to innovation in ticketing and to cutting costs. This is an important element as we look for investment to go further in our transport network.

We conclude that contactless bank cards can only ever be one part of the solution to making ticketing more convenient for passengers and cheaper for TfL. As it requires approval from a bank or financial institution, there will always be a significant minority within London who either cannot access those cards, or who do not wish to use them. This makes the final two phases of the Future Ticketing Project, where a new Oyster card is developed, vital to TfL's longer-term aims.

The experience of Phases 1 and 2 should offer lessons to TfL about the later development of the Project. For example, it is essential that future ticketing systems are developed with a clear and realistic vision of how costs and benefits are balanced. A rigorous appraisal is particularly important when implementing untried technology on such a large scale. An analysis from IIPAG of the business case for contactless bank cards will help TfL to ensure a more thorough and open process as it begins work on Phases 3 to 5.

Change can be disruptive, particularly if it takes place within an essential service like public transport. Maintaining passengers' trust and satisfaction with our network should be of paramount importance. This includes: providing robust support to those who use contactless bank cards; ensuring equal access to the cheapest fares for all passengers; and increasing passengers' freedom to travel using the same card across the UK. The criteria outlined in Chapter 3 of this report will help TfL to meet both objectives, as well as promote overall confidence in the transport network.

The Future Ticketing Project offers a tantalising opportunity to prepare TfL and passengers for the future, and ensure the continuing popularity of public transport. These opportunities are not without risk and we aim through this report to ensure that the potential benefits for TfL and passengers are fully realised.

Appendix 1 - Future Ticketing Project: Phase 1 and 2 Business Case Review

Introduction

The terms of reference for the Committee's investigation into the future of ticketing are to assess how passengers can gain maximum benefit from TfL's current programme. As part of this work the Committee has reviewed the project's business case with reference to an example of guidance on best practice and an international comparison.

The aim of the review was to make a judgement on how TfL decided the project was affordable, met its objectives and offered value for money. In forming this judgement we wanted to consider the balance of risks associated with the project.⁴⁶ We drew on the following documents in our assessment of the business case:

- New York Metropolitan Transportation Authority (NYMTA) business case for a 'New fare payment system'
- HM Treasury Guidance *Assessing Business Cases 'A short plain English guide'*

The results of our review are summarised under four main headings:

- Option appraisal;
- Costs and benefits;
- Management of risk and uncertainty; and
- Monitoring the achievement of the objective

Option Appraisal

The Committee has assumed that the business case that was provided was the basis upon which the decision to proceed was made. The initial questions are therefore around setting out the need for change, given the success of the Oyster system, and the range of alternatives considered in meeting this need.

The Future Ticketing Programme (FTP) business case does not adequately establish the strategic case for change. By comparison, the business case for the NYMTA fare system sets out the drawbacks of the current revenue collection system, as well as the objective of the new system and how this fits with the organisation's wider strategic

⁴⁶ Assessing Business cases 'A short plain English guide', http://www.hm-treasury.gov.uk/data_greenbook_index.htm

plans.⁴⁷ The FTP business case provides no information on the existing Oyster system, its costs or perceived weaknesses. At the Committee's meeting on 6 September, TfL discussed some of the problems with the current system but we would have expected these to be set out at the start of the business case and form part of the case for change.⁴⁸

Establishing the need for change is important given that TfL has only recently renegotiated the Oyster management contract, and the contactless card system will not contribute to its current savings requirement. TfL began a new contract for the management of the Oyster card system with Cubic in August 2010, which will deliver savings of £10 million per annum for three years.⁴⁹ The FTP Business case overall assessment indicates that the contactless card project will be "financially positive within 12 years".⁵⁰ TfL's current savings programme requires £7.6 billion of savings by 2017/18. The contactless cards system will therefore not deliver net savings until after this date.

Once the need has been demonstrated, best practice states that the next stage should be "a sufficiently wide consideration of alternative options for achieving the desired objective".⁵¹ TfL's stated objectives for the FTP are to:

- Reduce commissioning costs paid to the Oyster Ticket Network and Cubic by £6 million per year by 2014/15
- Reduce Oyster card issuance by 20 per cent per year by 2014/15
- Increase ticketing revenue by £9 million per year from 2015/16
- Improve the customer experience by 2014/15 by reducing journey time

The FTP business case does not assess alternative ways of achieving these objectives. The focus instead is on demonstrating the viability of just one option: introducing contactless card infrastructure across all TfL modes: "The FTP's vision is enabled principally by the acceptance,

⁴⁷ Concept of operations for MTA new fare payment system and NYCT deployment phase, Metropolitan Transportation Authority, 21/4/11, p12

⁴⁸ Transcript, Transport Committee meeting, Future of Ticketing, 6/9/11, p2

⁴⁹ <http://www.tfl.gov.uk/corporate/media/newscentre/archive/16505.aspx>

⁵⁰ FTP Business Case, p9

⁵¹ Assessing Business cases 'A short plain English guide', HM Treasury, p5

as payment for travel, of contactless cards issued on an EMV platform both by banks and later by TfL.”⁵²

Best practice suggests that an option appraisal should be included in all cases, but recognises that in the latter stages of developing a business case the alternatives may have been reduced to a shortlist of main options. The NYMTA fares system business case compares relative benefits of three main options.⁵³

Establishing that the contactless cards proposal offers maximum benefit requires details of its anticipated benefits relative to the alternatives. These alternatives should include a ‘do nothing’ option, and also the cost of correcting the weaknesses with the current system so that it meets future needs.

Costs and Benefits

A full financial appraisal has clearly been done for the contactless cards proposal but details have not been provided for reasons of commercial sensitivity.

We can, however, piece together some information on the likely costs and benefits. When project authority was sought, in September 2010, the estimated final cost was £74.5 million.⁵⁴ In terms of financial benefits these are estimated, based on available information, to be at least £129.2 million over the period to 2022/23. This is broken down into £54 million savings from reduced Oyster commissioning costs⁵⁵, and “revenue increases from reduced overall journey time of £75.2 million”.⁵⁶

There are likely to be other financial benefits, for example in terms of the costs avoided on the upgrade of communications to stations but this is not quantified in the business case.⁵⁷

⁵² FTP Business Case, p 1 EMV is the global standard for credit and debit payment cards based on chip card technology.

⁵³ Concept of operations for MTA new fare payment system and NYCT deployment phase, Metropolitan Transportation Authority, 21/4/11, p17

⁵⁴ TfL Finance & Policy Committee, item 6, p7, 16/9/10

⁵⁵ This assumes the target of achieving £6 million annual savings in Oyster commissioning costs are achieved from 2014/15, FTP Business Case, p2

⁵⁶ FTP Business Case, p4

⁵⁷ FTP Business Case, p4, para 2.9

In addition to this, the following examples are areas excluded from the appraisal altogether. The Committee considers that these could have key financial implications and should have formed part of the appraisal:

- Savings from ticket office staffing are ‘beyond the scope’, despite the admission that contactless technology will lead to a significant redirection of station ticket sales to online.
- The potential for additional revenue to be generated from allowing third parties to use the contactless technology. This does not include selling information from passengers, but merely using the back office expertise gained by TfL.
- The implications of cashless bus operation.
- The potential for a shift to mobile phone payments.

Based solely on the known savings and revenues, the net financial benefit can be estimated to be at least £54.7 million over the period to 2022/23, although this is far from certain. This relies heavily on the ability of the contactless card system to stimulate additional passenger demand and revenue for TfL. It is not clear from the business case how this additional revenue will be generated, and what assumptions have been made.

In addition to the financial benefits there are also monetised non-financial benefits including “£254.366 million” from reduced journey times in the period to 2022/23.⁵⁸ There is no detail on the methodology used to calculate the travel time savings and the result displays a spurious degree of accuracy.

Management of risk and uncertainty within the decision making process

Key assumptions and estimates are made throughout the business case but the risk that these assumptions prove to be incorrect is not adequately addressed.

There are questions over the robustness of the management of the risk of cost overruns. A contingency of £14.8 million has been included in the overall project authority of £74.5 million. This was estimated on the basis of the net cost of key risks materialising. The business case lists two of the risks the project is exposed to, providing

⁵⁸ FTP Business Case, p6

little reassurance that “all appropriate risks have been considered”, and includes no detail on the mitigations planned.⁵⁹ Furthermore, TfL states that there is only a 50 per cent level of confidence that the risk exposure calculated is sufficient. This indicates that there remains a risk that additional costs will exceed the total funding available. We would expect to see a contingency for risks being set at a level that was much more likely to be adequate to cover the risk exposure.

One of the project’s key risks is likely to be demand but this risk is not addressed in the business case. The level of take-up is estimated at 33 per cent of all journeys (excluding free travel) by 2014/15. This figure is based on a survey TfL conducted of 460 people. *Which?* has recently conducted a similar survey of 1,335 people, which found that 39 per cent of respondents would consider using a contactless card to pay for transport.⁶⁰ It is reassuring that both surveys suggest similar levels of potential demand, but caution needs to be taken when making assumptions about the behaviour of all public transport users in London on the basis of surveys which ask people how they might behave in the future.

The case is made for contactless cards on the basis of benefits accruing at an assumed level of take-up. Given that the take-up assumptions are exposed to a degree of risk, the impact of different scenarios around take-up levels is an important part of assessing the strength of the business case. Sensitivity analysis was carried out as part of the original business case, but the Committee was given insufficient information to determine how robust this testing was.⁶¹ It is therefore not clear whether allowance has been made for ‘optimism bias’, which is the tendency to over-estimate benefits such as the level of demand. There is also no indication of the ‘switching point’, ie the level of demand at which the benefit values change enough to affect the decision to go ahead with the proposal.

Further to this there appears to be a methodological issue in the one take-up scenario that has been provided. Table 3 sets out the projected demand levels increasing up to 33 per cent of total journeys in 2014/15 – a total of 1,145 million journeys made with a contactless card. However, the business case also estimates that by the end of

⁵⁹ Assessing Business cases ‘A short plain English guide’, HM Treasury, p6

⁶⁰ *Which?* response to the transport committee, August 2011, p5

⁶¹ ‘Summary from Corporate Gate Review Future Ticketing Project (PRG: 10 June 2010)’, Transport for London, November 2011

2014/15 only two-thirds of all adult customers will have a contactless payment card. The total journeys figure used to estimate the take-up of contactless cards is not factored down to account for the proportion of the Londoners who will not have a contactless card. Applying the 33 per cent take-up estimate (based on the survey results) to this revised total journeys figure results in just 760 million journeys made with a contactless card in 2014/15.

Monitoring outcomes

The FTP project is split into five phases with the existing business case applicable to the first two phases only. The business case states that it is the “intention to continue with phases 3 to 5 after the completion of phase 2”, but that this will be treated as a separate business case.⁶² The Committee would expect the decision to proceed to phases 3 to 5 to be dependent on performance against the objectives in the first two phases.

It is unclear how performance in the first two phases will be monitored as this is not set out in the business case. Best practice states that all business cases should include plans for monitoring the project against the original objectives, including reporting timescales and managerial responsibility.⁶³ In this case it seems more important than ever to monitor performance because it will inform the decision whether to proceed or not with later phases.

Setting out monitoring arrangements is also made more important by the fact that in some cases the objectives would appear to be difficult to monitor. One of the FTP objectives is to increase ticketing revenue through overall increases in demand. It would be difficult to distinguish between increases in demand caused by the new payment system and those resulting from other factors linked to London’s economy.

If the first two phases of the implementation of contactless cards are not a success TfL should be free to pull out of phases 3 to 5. The business case states that “phases 1 and 2 will be implemented in such a way that it ‘future proofs’ the later stages, to minimise the costs of the later phases”.⁶⁴ It does not, however, include details of whether this involves additional cost in the first two phases. If additional costs

⁶² FTP Business Case, p2

⁶³ Assessing Business cases ‘A short plain English guide’, HM Treasury, p7

⁶⁴ *ibid*

were involved it could strengthen the business case for proceeding to Phases 3 to 5. This could indicate that TfL has taken decisions which commit them to implementing all five phases of the project before the initial implementation has been reviewed.

Conclusion

We are not reassured by the information submitted that Transport for London's Future Ticketing Project demonstrates good value for money or that other options for achieving the same objectives have been thoroughly considered.

Given the exclusion of some key pieces of information from the appraisal and the lack of alternatives proposed we conclude it would not be reasonable to commit to spending over £70 million of public funding on the basis of this document alone. In some cases we accept the lack of information is due to commercial sensitivity but in other cases the reasons for not providing it are less clear.

Given the concerns of the Independent Investment Programme Advisory Group over the "independence (or lack of)" of project sponsors this raises outstanding questions about whether a sufficiently robust assessment of the project's viability was carried out prior to choosing to proceed with the contactless card proposal.⁶⁵

⁶⁵ IIPAG Annual Report, 25/7/2011, TfL Board 21/9/11, item 6, p8

Appendix 2 - How Contactless Payments Work

Contactless bank cards differ from traditional credit and debit cards in that the information required by the bank for each transaction is not held on a magnetic strip, but on 'smart chip' held in the card. Dubbed 'Wave and Pay' by the industry, the chip is activated using a radio frequency when waved over a contactless reader. The reader then records the information and checks it against a 'deny list' provided by the banks. If approved, a message is sent to debit the customer's account.

Banks are introducing these cards as a way to reduce the need to carry money by making it quicker and more convenient for customers to use cards for small purchases, particularly in places where there are intense 'rush' periods such as coffee shops or fast food restaurants.⁶⁶ Eat, Caffè Nero and McDonalds have thus been early adopters. As part of their agreement with Visa and Mastercard, all banks have agreed to a cap of £15 on any single purchase using contactless bank cards, while many will also take the additional step of requiring a pin number if more than £45 is spent in a day.⁶⁷

Phased development of the Future Ticketing Project

TfL has split the Future Ticketing Project into five development phases, as outlined in Figure 1. Phases 1 and 2 are currently funded, while Phases 3 to 5 are subject to separate business cases and await approval from the TfL Board.

Fig 1 – Proposed five phases of the Future Ticketing Project⁶⁸

Deliverable	Date	Notes
Phase 1 Initial bus launch for contactless bank cards	March 2012	Payment of bus single fares – no capping
Phase 2 Multi-modal acceptance of contactless bank cards with daily and	Autumn 2012/ Spring 2013	Launch likely to be phased

⁶⁶ Visa Europe submission to the Transport Committee, August 2011, page 1

⁶⁷ Visa Europe submission to the Transport Committee, August 2011, page 3

⁶⁸ Source: TfL written submission to the Committee, pages 2 and 3

weekly capping		
Phase 3 Travelcard season and bus passes available through contactless bank cards	Autumn 2013	Subject to funding approval
Phase 4 Phased adoption of technology platform resembling contactless payment to deliver 2 nd generation Oyster	2014	Subject to funding approval
Phase 5 Decommissioning of current Oyster platform, once migration to 2 nd generation is complete	2015	Subject to funding approval

Appendix 3 – Recommendations

Recommendation 1

By September 2012, TfL should report back to the Committee on fraud levels or other security matters detected due to increased use of contactless cards on the transport system; and highlight, if necessary, steps it is taking to tackle any security issues before the multi-modal roll-out occurs.

Recommendation 2

By September 2012, TfL should report to the Committee with: an analysis of the issues raised with the customer call centre related to contactless payments; any work carried out to examine bus driver difficulties with the system; and any agreement with banks for promotion campaigns in London.

Recommendation 3

By September 2012, TfL should report back to the Committee with the full list of support being offered to those who wish to use contactless payments, including any additional support over and above the website.

Recommendation 4

By September 2012, TfL should report back to the Committee on how it will ensure all customers, regardless of bank status, will have access to the cheapest fares for their journey.

Recommendation 5

By September 2012, TfL should report back to the Committee with an update on the development of plans for phases 3 to 5 of the Future Ticketing Project. This should include how it is planning to re-develop Oyster and how it will use the ITSO standard to ensure increased inter-operability and flexibility for passengers.

Recommendation 6

IIPAG should examine the business case for Phase 1 and 2 of the Future Ticketing Project, taking into account the issues raised in Appendix 1 of this report and report back to the Committee by March 2012 on its conclusions and recommendations.

Recommendation 7

TfL should report back to the Committee on the initial bus launch by September 2012. This report should highlight: experience of passengers and drivers to the new technology; any technical changes to the software as a result of initial testing; and a full timetable for the multi-modal launch on DLR, the Tube and the Overground.

Recommendation 8

By September 2012, TfL should report back to the Committee on: any proposed organisational changes resulting from preliminary scoping work on Phases 3 to 5 of the Future Ticketing Project, including looking at ticket offices, staff structures and any other changes arising; and plans for how it will consult with the Committee and passengers on this issue.

Appendix 4 - Orders and translations

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Vietnamese

Nếu ông (bà) muốn nội dung văn bản này được dịch sang tiếng Việt, xin vui lòng liên hệ với chúng tôi bằng điện thoại, thư hoặc thư điện tử theo địa chỉ ở trên.

Greek

Εάν επιθυμείτε περίληψη αυτού του κειμένου στην γλώσσα σας, παρακαλώ καλέστε τον αριθμό ή επικοινωνήστε μαζί μας στην ανωτέρω ταχυδρομική ή την ηλεκτρονική διεύθυνση.

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Bu belgenin kendi dilinize çevrilmiş bir özetini okumak isterseniz, lütfen yukarıdaki telefon numarasını arayın, veya posta ya da e-posta adresi aracılığıyla bizimle temasa geçin.

Punjabi

ਜੇ ਤੁਸੀਂ ਇਸ ਦਸਤਾਵੇਜ਼ ਦਾ ਸੰਖੇਪ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਲੈਣਾ ਚਾਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਇਸ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਉਪਰ ਦਿੱਤੇ ਡਾਕ ਜਾਂ ਈਮੇਲ ਪਤੇ 'ਤੇ ਸਾਨੂੰ ਸੰਪਰਕ ਕਰੋ।

Hindi

यदि आपको इस दस्तावेज़ का सारांश अपनी भाषा में चाहिए तो उपर दिये हुए नंबर पर फोन करें या उपर दिये गये डाक पते या ई मेल पते पर हम से संपर्क करें।

Bengali

আপনি যদি এই দলিলের একটা সারাংশ নিজের ভাষায় পেতে চান, তাহলে দয়া করে ফোন করবেন অথবা উল্লেখিত ডাক ঠিকানায় বা ই-মেইল ঠিকানায় আমাদের সাথে যোগাযোগ করবেন।

Urdu

اگر آپ کو اس دستاویز کا خلاصہ اپنی زبان میں درکار ہو تو، براہ کرم نمبر پر فون کریں یا مذکورہ بالا ڈاک کے پتے یا ای میل پتے پر ہم سے رابطہ کریں۔

Arabic

الوصول على ملخص لهذا المستند بلغة،
فرجاء الاتصال برقم الهاتف أو الاتصال على
العنوان البريدي أو عنوان البريد
الإلكتروني أعلاه.

Gujarati

જો તમારે આ દસ્તાવેજનો સાર તમારી ભાષામાં જોઈતો હોય તો ઉપર આપેલ નંબર પર ફોન કરો અથવા ઉપર આપેલ ટપાલ અથવા ઇ-મેઇલ સરનામા પર અમારો સંપર્ક કરો.

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