



# SEFT Smartcard Research

Debrief prepared for: transportfocus 

# Background

# Background, method and sample

## Objectives

The overall aim of the research was to explore passenger needs with regards to smart ticketing.

Specifically the research explored:

- Understand expectations of the smart ticketing proposition
- Explore passenger reactions to details regarding the offer/ how smart ticketing will work

## Design

Design of discussion guide and stimulus developed by one SEFT workshop and one DfT staff mini-group:

- Testing stimulus and discussion guide flow
- Generated areas for further exploration with passengers
- Identified potential reactions to ensure functionality areas explained and fully explored

## Qualitative research approach

- 10 x mini-groups each lasting 2 hours
- 8 x depth interviews including accompanied online task each lasting 1 hour

Spread of locations:

- London
- Oxford
- Cambridge
- Havant
- Brighton

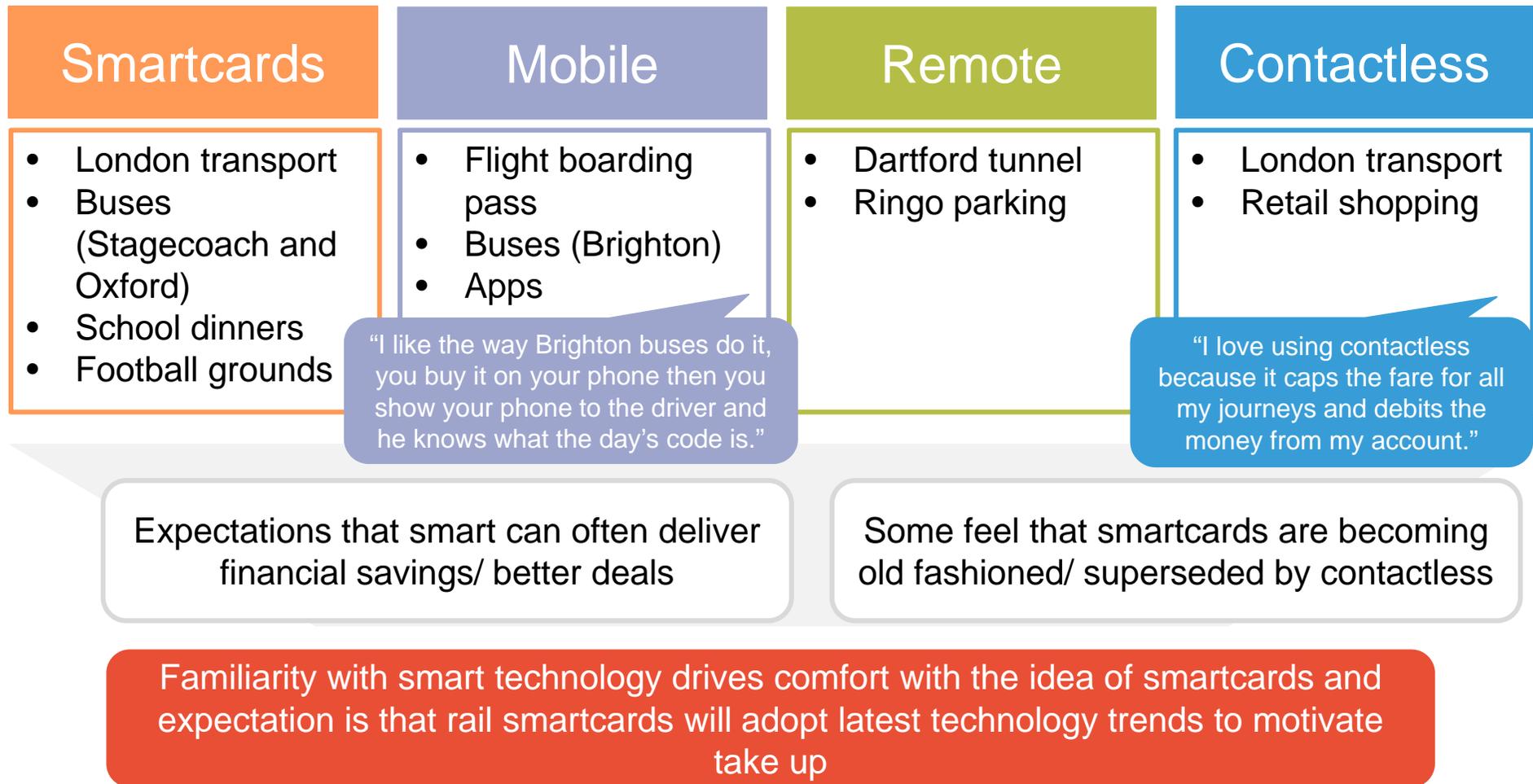


- All commuters
- Mix of:
  - Gender, age and SEG
  - Number of days commuting per week
  - TOC (Cambridge all had a choice of TOC)
  - Oyster use
  - Tech confidence

# Context

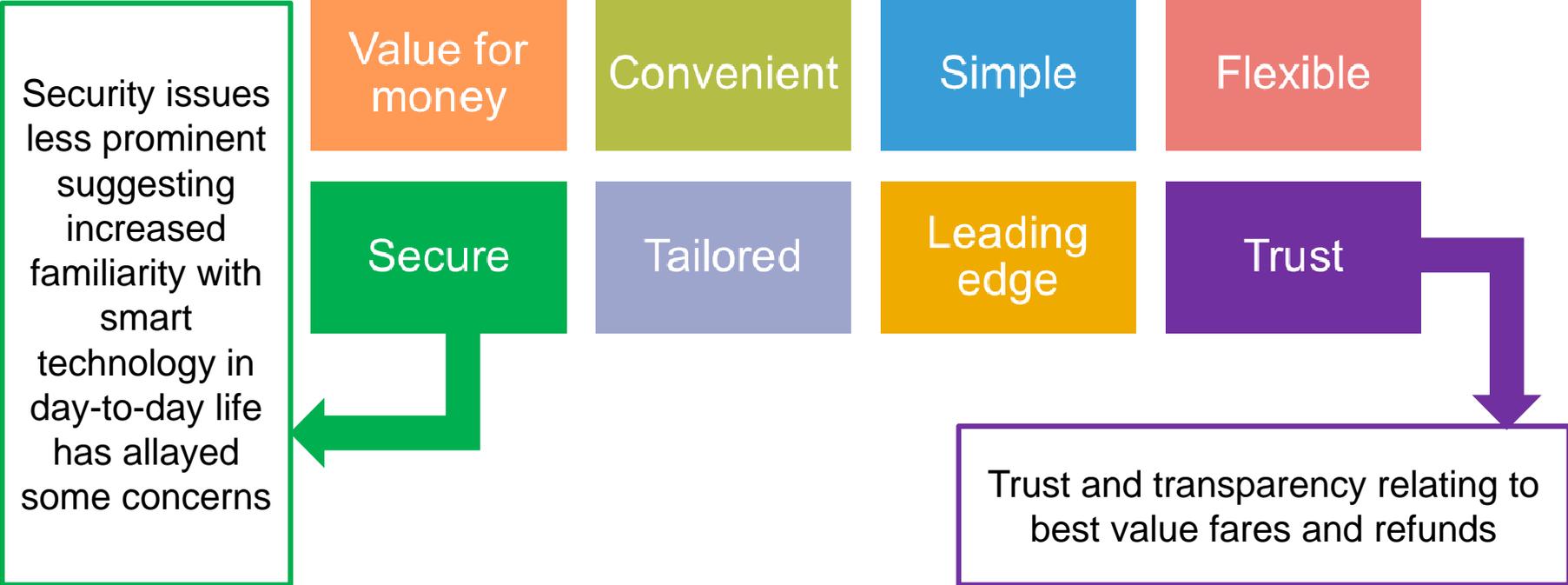
# Context

Familiarity with smart technologies (especially amongst tech savvy) in a range of day-to-day activities



# Building on previous findings

Seven core principles reflected with some additional nuances and additions



# Overall needs and expectations

Overall suggestions for smartcard functionality are based on current ticketing function, Oyster or contactless

However, open to ideas for functionality as long as they reflect key needs

“To have any stress taken out of your journey, for a commuter, is a great thing”

Value for money

Convenient

Simple

Flexible

Secure

Tailored

Leading edge

Trust

Key deal breakers and deterrents involve:

**Additional cost**

**Additional complexity**

**Additional time**

As long as functionality makes sense then passengers are open to options for how smartcard will work. Clear communications will be needed to:

- Reassure passengers that it will be simple and sensible
- Provide rationale for any aspects of functionality that may be different/ new to how things work now

“I think the word smart means it works with your life and works with everybody's situations. It shouldn't be holding us back.”

# Current ticketing

# Commuter ticket decision making

## Range of tickets chosen for commute

### Seasons chosen because

- Cheapest option
- Loan available via employer
- Office-based
- Fear of losing expensive ticket (younger passengers)

“I lost a lot of journeys worth of tickets once and there was nothing I could do. It’s silly that a piece of paper could cost £200.”

Secure

### Returns chosen because

- Flexible working
- Out and about
- Stability of job/ short-term contract/ probation period
- Season tickets unaffordable
- Employer pays some journeys
- Can be flexible with start times (e.g. get off-peak services)

“If I know I’m going to be there for more than 3 days I’ll get a weekly, if it’s less I’ll get a return”

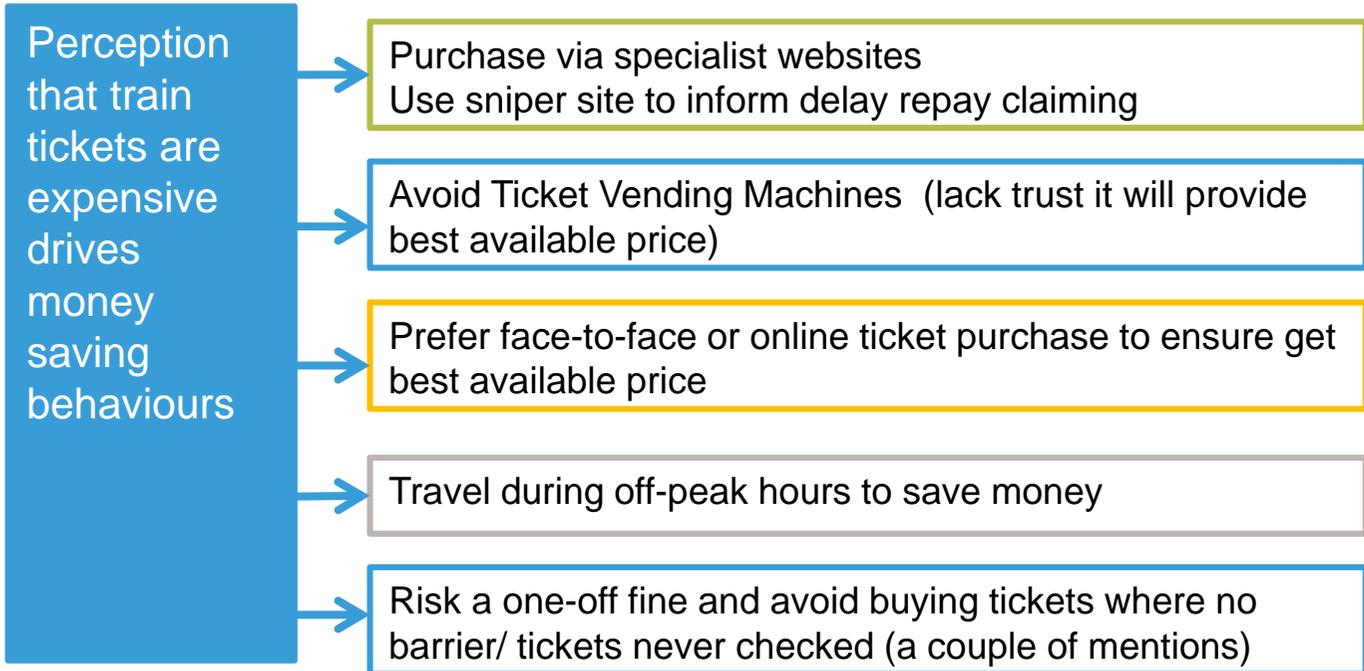
Flexible

Many are carefully calculating which is the cheapest option with a key focus on value for money for modern working patterns

Value for money

# Context (2)

Current ticket choices have a strong focus on the importance of value for money

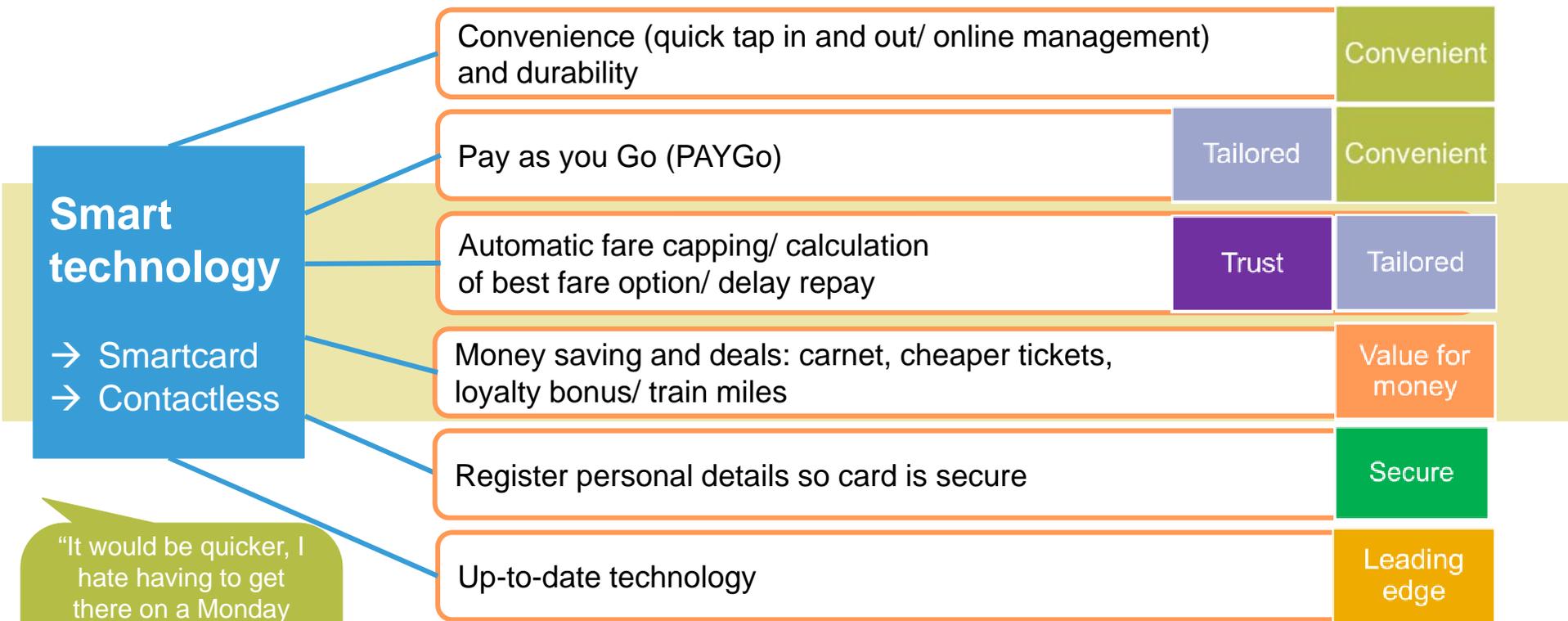


Existing money saving behaviours result in many participants expecting smart technology to deliver financial savings

Value for money

# Expected benefits

## Suggested improvements to ticketing focussed on smart technology to deliver value for money

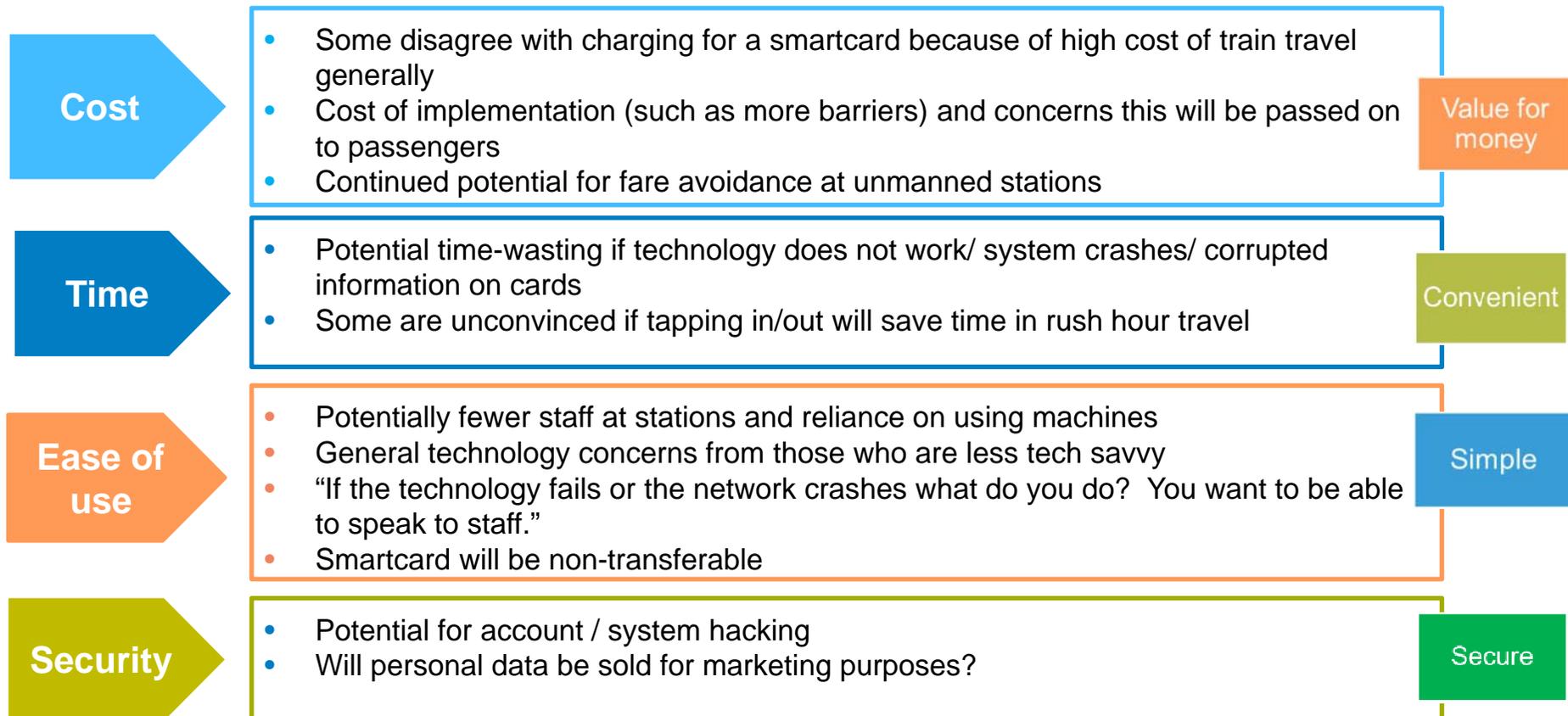


“It would be quicker, I hate having to get there on a Monday morning extra early and stand there to get a ticket...you would just do it online or on your phone.”

**Smart has potential to significantly improve passenger experience**

# Expected drawbacks

## Range of perceived potential drawbacks cited



Overall there are concerns that smartcard ticketing fails to keep up with speed of technology change

# SMARTCARD FUNCTIONALITY

1. Smartcard design
2. Getting a new rail smartcard
3. Online account
4. Getting a ticket
5. Using the smartcard
6. Smartcard interoperability
7. Queries, refunds and amendments

# 1. Smartcard design

# Smartcard design (1)

Clarification may be required for those unfamiliar with smartcards

## One use

- Those less familiar with smartcards initially envisaged they were 'one use' for one product
- But react positively to wallet style storage for multiple products

"Hopefully it would be similar to the Oyster. You load up the card, you get the best deal when you use the card. You can use it anywhere."

## Wallet

- Those familiar with smartcards assume a 'wallet' style card and ability to upload multiple products
- Would like flexible payment system e.g. Pay as you Go/ top up
- Would like to use on multiple modes of transport

Focus on smartcard offering greater flexibility and simplicity

Flexible

Simple

# Smartcard design (2)

Overall participants happy for smartcard to include photograph and/ or name. Many are used to providing these as standard for other services

## Photograph

- Removes need for additional photo card (although not always asked for this)
- Can automatically incorporate entitlement/ discount cards
- Helps ensure card cannot be used by someone else or if lost/ stolen
- Suggestion for 10 yearly update



## Name

- Helps ensure card cannot be used by someone else or if lost/ stolen
- Unsure whether both name and unique number required.

Firstname Surname

## Unique number

- Envisage will be used when purchase tickets remotely
- Preferred by those who push back on photo/ name

1234 5678 9876 5432

Small number push back on photograph and name  
→ Dislike sharing personal details  
→ Unclear on rationale for why this is needed (especially for those infrequently purchasing season tickets)  
→ BUT could be reassured by further information especially if rationale focuses on non-transferability of discounted tickets

"I would imagine it would look like my student Oyster. A passport size photo of your face on it"

Few likely to consider name and photograph provision as a deal-breaker although some may require reassurance about security 

# Smartcard design (3)

Expect that their photo can be provided online and offline

## Online

- Upload function
- Webcam
- Selfie

"You could upload the photo on the internet"



## Offline

- Photo taken at ticket office
- Similar to process for work passes

"I did it at the ticket hall on London Underground for my railcard"

Keen to ensure flexibility of having both options available

Simple

Convenient

## 2. Getting a new rail smartcard



# Getting a new rail smartcard (1)

Getting a new rail smartcard must be convenient and simple

Simple

Convenient

Strong preference for **online** (could include app)

- Easy and convenient: keen to avoid queues
- Reflects application processes in general
- Would like live chat function if any queries
- Some suggest signposting via relevant websites e.g. National Rail and thetrainline.com

**Most consider online to be the convenient option**

"I think if you could have a user app that is linked to your account details so you can top it up, you can upload your photo and fill out the application, just to have a full servicing app would be good"

**Ticket office** also seen as important option as offers **face-to-face** interaction

- Preferred by those with good relationship with station staff
- For those without online access
- Back-up option if had problems or have questions
- Envisage this is only option for swapping ticket

Trust

**Keen to maintain choice with a ticket office option**

**Other options** met with mixed views

- Unlikely to have time to stop at a pop up stall (though suggested as place to collect smartcard)
- Ticket vending machine only appealing to those who have acquired an Oyster card in this way/ often aligned with a 'Pay as you Go' card – considered slow, fear of holding others up/ generating a queue and lacks privacy
- Email and telephone not spontaneously suggested or considered important

**Not crucial to provide these options**

Majority expect to provide name, address, DOB, and possible bank card details if PAYGo/ automatic renewals/ automatic refund an option

**Most envisage that they would get a new rail smartcard online with face-to-face support expected as back-up**

# Getting a new rail smartcard (2)

Most expect to receive their smartcard via post

## Post

- Spontaneous expectation
- Convenient; delivered to home address
- Strong preference if local station is unmanned
- Expect secure post if includes personal information (e.g. photo) or is loaded with products



Simple

Secure

Convenient

## Station collection

- Preferred if lack trust in post
- Would need to be a convenient option:
  - Limited queues at local station
  - Choice of station
- Would need reassurances that would be kept securely and safely at ticket office



Some surprise that smartcard cannot be printed automatically at local station

Expect card to be received in the post/ ready to collect within 5 working days

# Getting a new rail smartcard (3)

Mixed views on whether smartcard comes loaded with products; no strong consensus, but keen for process to be sensible

## WITH PRODUCTS

### Part of usual purchase pattern

- Smartcard comes loaded with usual ticket
- Provided as an option when purchasing ticket/ renewing season ticket
- Swap paper season ticket to smartcard
- But requires planning/ purchase within required window or immediate provision of smartcard
- Expect activation code

### New products?

- Option to pre-load PAYGo money
- Option to pre-pay for a block of journeys at a reduced rate

## WITHOUT PRODUCTS

### At any time without purchase

- Can begin using smartcard at own convenience
- Easier than working out timings for getting tickets and smartcard to arrive at right time unless smartcard can be provided there and then

### Provided with the smartcard

- Nothing spontaneously suggested but could include 'how to use' leaflet and plastic wallet

"I think it would come with a leaflet and explain the next steps, how to activate it and how to top it up. I would expect a blank card that I would need to top up"

If getting smartcard at point of purchase, process needs to be simple and timely

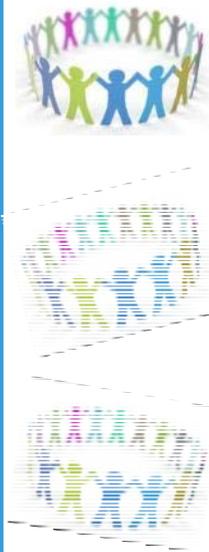
Simple

# Cards for friends and family

Participants (particularly parents) wanted the option to get and manage smartcards for friends and family however there were concerns regarding how/ if family and Group Save tickets would work

## Family

- Minority appeal for parents who regularly buy older children tickets
- Preference for linking smartcard to own account over 'remember me' – perceived to be easier and prefer greater functionality (journey history)
- Simple process expected
  - enter unique smartcard number when linking to your account
  - tick box option when want to unlink



## Friends

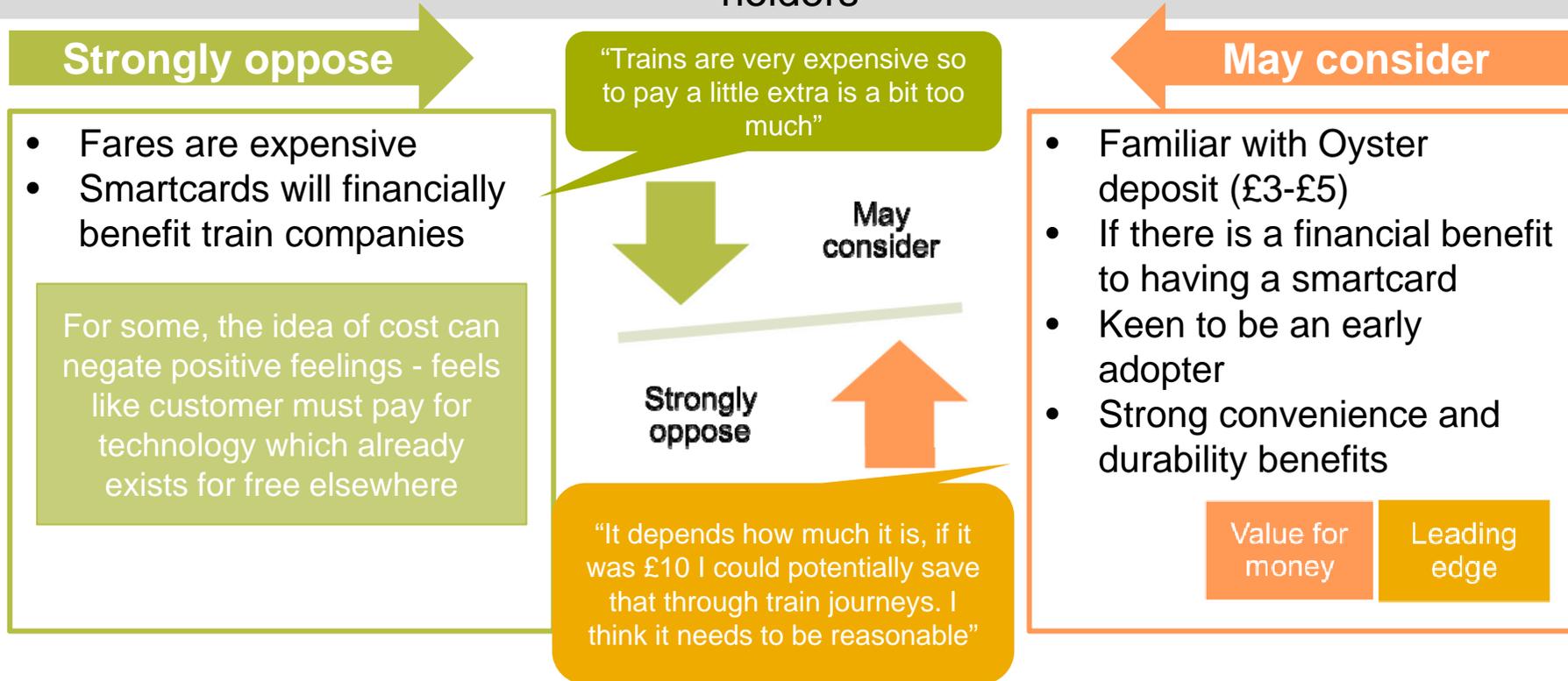
- Assume need unique smartcard number to purchase ticket for friends' smartcard
- Queries spontaneously raised by those buying Group Save tickets regularly
- Unsure how this would work if friends do not have smartcard
  - How to load tickets?
  - What if some of you have a smartcard and some do not?
  - What happens if tickets inspected

Need for simplicity and clarity otherwise some likely to revert to paper ticketing

Simple

# Getting a new rail smartcard (4)

Push back on idea of paying for a smartcard especially amongst annual season ticket holders



Without clear benefits, paying for a smartcard may disengage some



# Getting a new rail smartcard (5)

Participants tasked with getting a smartcard online typically started their search on google because unsure where to apply especially if multiple TOCs operate at local station

Variety of search terms used

- Network rail smartcard
- smartcards rail travel
- rail smartcard UK
- 'TOC' smartcard
- train smartcard



- TOC site and other sites also assumed to hold relevant information



Want to land on a dedicated smartcard page without need for additional navigation to find key information

# Getting a new rail smartcard (6)

## Key information needs for website...

### Up-to-date

- Seek confirmation that information is **current**
- Terms like 'over the coming months' can cause confusion/ reduce confidence

### Clear

- **Language** must be simple and avoid jargon
- Process must be clear (e.g. do you have to have an online account?)
- Clarify which stations are smartcard enabled without using jargon

### Explanatory

- Clear **navigation**
- Information regarding: what a smartcard is; benefits; boundary; how to get and use a smartcard
- Avoiding repetition
- FAQs to follow a standard/ logical format
- **Rationale** for how it works (e.g. why smartcard is not pre-loaded)
- Video format easy to digest especially for those less tech-confident

### Usable

- **Map** must be clear and usable
- Key/ legend must be clear and use everyday language
- Desire for search function with start/ destination and system clarifies if journey covered
- Suggestions for interactive map (hover over station for more detail)

Clarity and transparency are needed otherwise confidence in product is reduced

Simple



# Getting a new rail smartcard (7)

Require a simple and straightforward application process

Simple

- Ability to opt out of newsletters
- Ability not to provide mobile number
- Clarify why photo is or is not needed
- 'What happens next' message at end of process
- Use clear systems recognised for functions such as 'address lookup'
- If asterisks or symbols are used - explain why they are used
- Recognise where someone is creating a new account with 'create password' instead of 'enter password'
- Ensure it is easy to get support/ help if needed



Lack of clarity and functions not working as expected makes the process complex when participants intuitively expect this to be simple and easy

## 3. Online account

# Opening an online account

Majority do not have online accounts with TOC but open to the idea if eases smartcard processing and use. Those most tech savvy assume there will be an online account

## Expected benefits

- Many are familiar with and already using online accounts for online train travel and other retailers e.g. ebay/ Amazon
- Ease of buying/ cancelling/ tickets/ claiming compensation for delays/ no queues
- Ease of automatically knowing your usual journeys

Value for money

## Concerns and questions

- Some push back from Tech Novices / Older consumers who are resistant to reliance on technology
- Query whether personal data be sold on for marketing purposes

Secure

## EXPECTED PROCESS

- Apply for smartcard first
- Be offered opportunity to open online account as part of process
- Some are unfamiliar with 'online account' terminology so may need to explain

Convenient

Simple

"I would be confused on how to use it and top it up if it didn't come with an online account"

Whilst most expect an online account, benefits and reassurances must be clearly demonstrated to the less motivated to encourage take-up

# Online account management

Key question especially for those with a choice of TOCs is who manages the online account

## Expectation

- Many assume an overarching body such as Network Rail controls all TOCs therefore a central /single point of contact there would manage all the online accounts

## Benefits of single point of contact

- Logical for those using multiple TOCs
- Would enable accurate management of purchasing/ refunds if using multiple TOCs on journeys

## Concerns

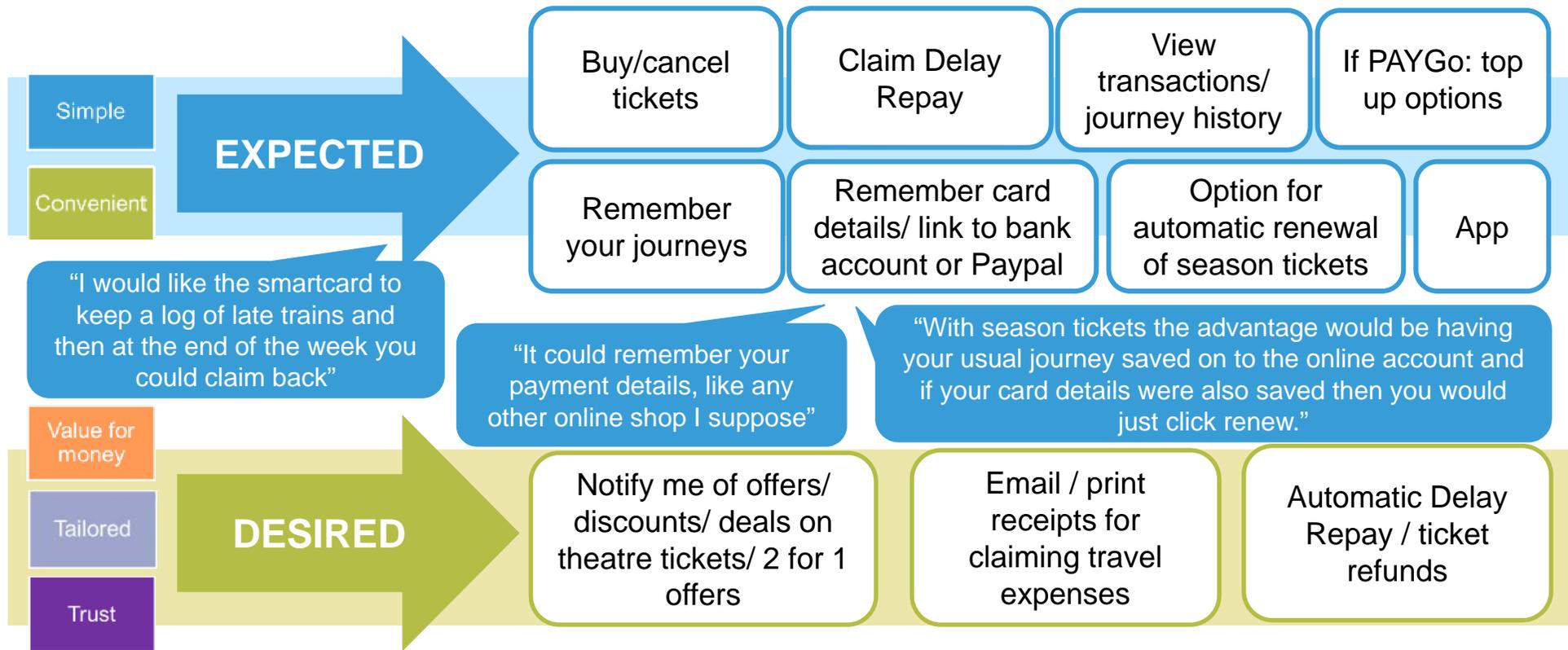
- Need to reassure that any queries/ refunds etc. will be dealt with efficiently
- Need clear communication channels / phone numbers available:
  - Freephone and extended (not office) hours
  - Live Chat appeals to some but expectation that will avoid usual frustrations e.g. slow responses and automated responses

Focus is on simplicity – resolving queries across TOCs must be simple

Simple

# Online account functionality

Expectation is for an easy to use online account with multiple functionality



Transaction history on its own is unlikely to motivate regular use of online account

## 4. Getting a ticket

# Products

Expectation is to be able to load all existing products on a smartcard but also to get **new** products and make financial savings

**Carnet** spontaneously suggested

- Particularly amongst those who do not commute 5 days a week
- In line with expectation for financial savings
- Smartcard removes risk of losing tickets associated with paper tickets
- Some concerns that initial outlay will be expensive – some suggest option to spread payment

Products that are tailored to the number of journeys made

PAYGo with capping/ calculation of best value tickets

“I haven’t seen any incentive for using this apart from saving the train company paper. The reason why Oyster works is because it’s cheaper.”

## Focus on...

### Journeys

Tailored

Value for money

Secure

Flexible

New products likely to motivate uptake of smartcards

# Getting a ticket

Online/ app and ticket office have highest appeal for ticket purchase

## Online

- In advance
- On the day/ when at station (expect can buy and load in quick succession)



Convenient and time saving

Convenient

## Ticket office

- Where good relationship with staff
- For renewals



Avoid queues

Convenient

## TVM

- Limited use
- Distrust that get best value tickets
- Some seem outdated
- More appeal for pre-pay products

Comfortable and familiar

Trust

## Other

- Buy on train
- Post office/ shop/ PayPoint lacks convenience for most

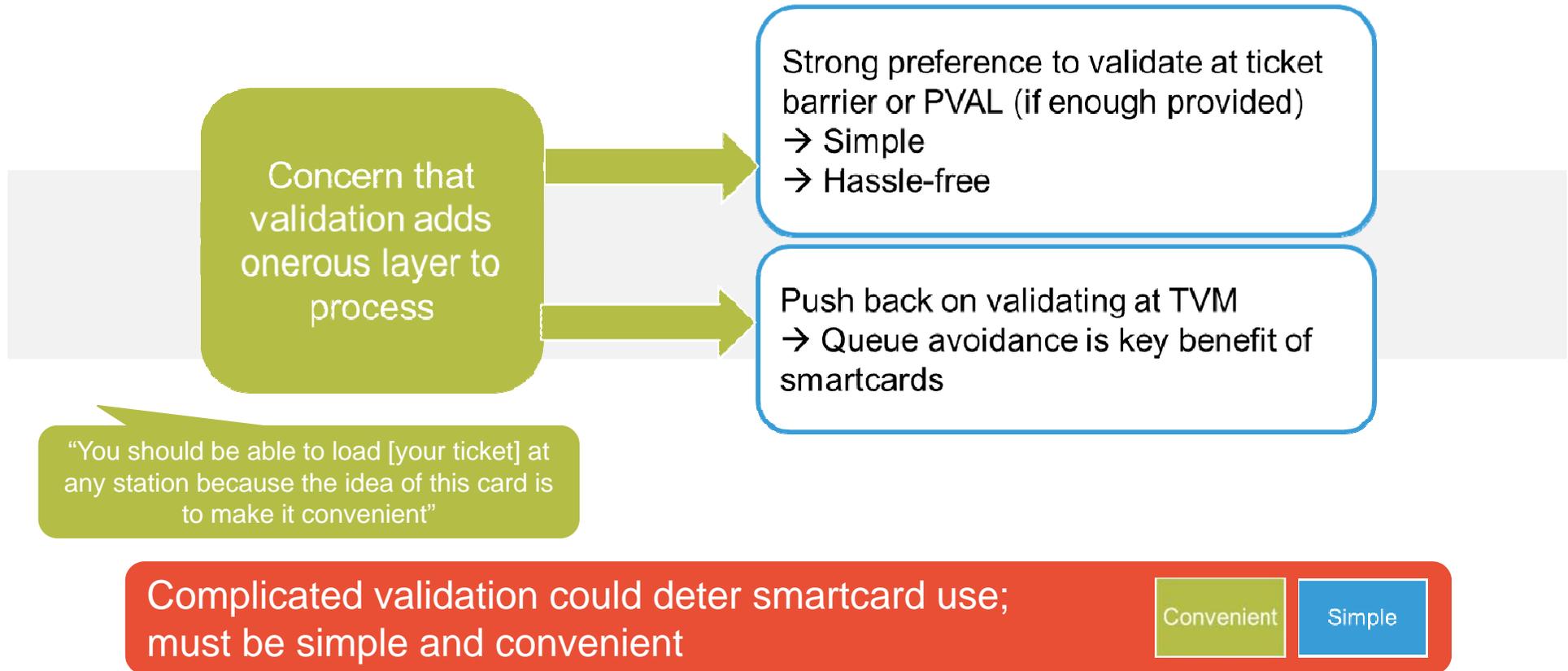
Ask questions/ get best value tickets

Value for money

Many likely to move to online purchase

# Validating ticket/ loading smartcard

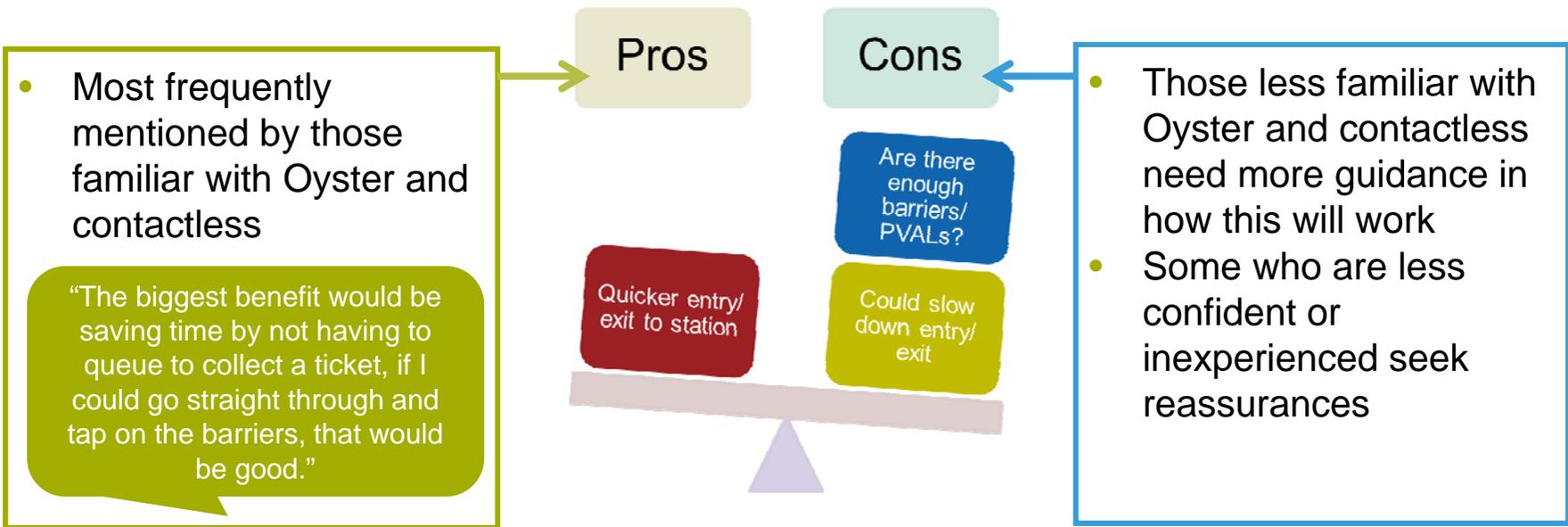
Spontaneous expectation is that products are automatically/ remotely loaded.  
Validation at ticket barrier or platform validator (PVAL) not at ticket vending machine



## 5. Using the smartcard

# Everyday use

Participants envisage they will need to tap in and tap out using barriers or platform validators



Some debate about whether need to tap in and out once the smartcard is validated and there are no barriers/ barriers are open

Need for staff to help educate new smartcard users and for communications to emphasise benefit of tapping in/out in terms of proof of journeys made

Convenient

Simple

# Interchanges and breaking journeys

Majority want system to offer flexibility where necessary

## Interchanges

- Do not expect to use smartcard if changing trains at a station as do not currently show paper tickets
- If need to exit station then expect tapping in / out at all barriers/validators

“I don't think you need to tap in (at an interchange station.) You just use it when someone checks the card or using it at the closed barriers”

## Breaking journeys

- Expect to tap in and out at all barriers/validators and that smartcard will understand and accept processes

### Suggestions:

- If passenger accidentally deviates from ticket validity want smartcard to charge any excess fare using bank card details
- If no online account want to load cash on to card in advance or pay excess fare at end of journey

Expectation that processes will involve minimal impact for passengers and the design will avoid introduction of new onerous processes  
Need to ensure transparency in processes and people are informed of any payments taken from their smartcard

Flexible

# Non-routine use

## Majority agree on expectations and preferences

### Seat reservations

- Expect to receive proof of seat via email to print off or show on smartphone if challenged
- If buy ticket at ticket vending machine, they expect a coupon to be printed out

### Disruptions

- Expect process to mirror current practices
- If using other transport mode then any ticket inspections need to have card readers
- Do not expect to provide any further proof

### Inspections

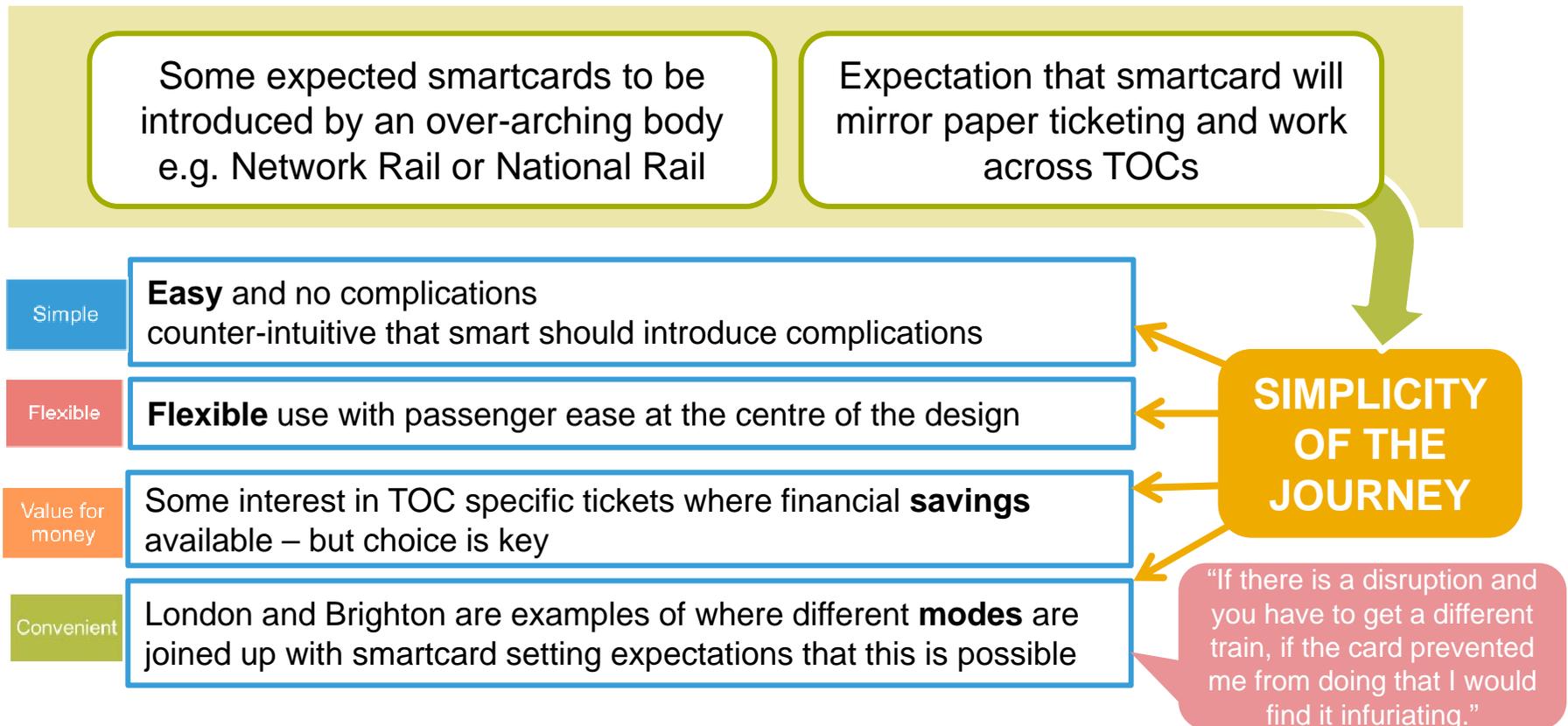
- All expect inspector to have card reader
- If name and number (and photo) on card then do not expect to provide any further information
- If card reader cannot read card or there is another problem, then expect sympathetic protocol, such as the inspector noting card number for further checks if needed

Expectation that processes will be simpler with a smartcard and there will not be additional complications Simple

## 6. Smartcard interoperability

# TOC interoperability

## Expect smartcards to work across TOCs



Working across TOCs is core to simplicity of the smartcard proposition; where this is not the case many are likely to disengage with smartcards

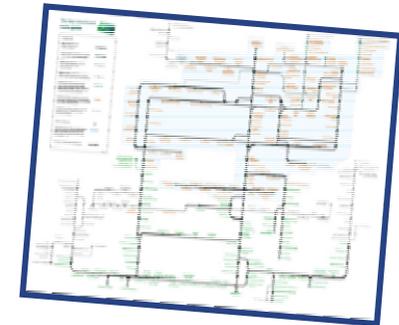
# SEFT boundary

Whilst there is a desire for smartcards across all TOCs/ the country participants understand that it has to start somewhere and that there will be a boundary



Communications must clearly detail the boundary  
Current boundary details considered confusing (e.g. Oyster)

Simple



Commuter Card

For some feels more like a 'commuter card' as will be unable to use smartcard for wider journeys  
Concerns regarding complication of using smartcard for journeys that start within boundary but go outside of boundary (envisage using paper for these journeys will be easier and preferable)

Clear information regarding boundaries will be crucial

# Central London interoperability

Main concern for London commuters is how the smartcard will work in central London



One card would be ideal (combining Oyster and new rail smartcard)



Assume that can continue to add London zones with smartcard

- Important that new system mirrors existing ticketing
- Need reassurances for how tapping in/ out will work
- Assume they will be able to use the card across modes

Simple

&

Convenient

- If Pay as you Go product is available - they would like this to work within central London



Some conclude that contactless would be a good way of ensuring full interoperability

Leading edge

## 7. Queries, refunds and amendments

# Refund-related queries

Simplicity and ease of processing is desired across all processes where any refund is required

## Claiming refund for ticket bought

- Assume process can be enabled in online account or online account could automatically calculate refund using payment details originally provided.
- BUT mixed views on who you go to:

Go back to who/  
online account  
ticket purchased  
from

Go to TOC/ online  
account for  
smartcard

- Being redirected to another TOC is acceptable providing clear communication about how/ when refund will be dealt with
- Live chat could provide support

## Claiming Delay Repay

- Many non-season ticket holders are unaware of Delay Repay
- Preference for automatic calculation of compensation with choice of:
  - refund deducted from next season ticket
  - or refund paid to bank card
- If need to provide information should just be smartcard number and then system calculates refund
- More tech savvy would like to be able to do this via app

"If this type of system could do a quick delay repay and that would be good"

Automatic processing of refunds/ delay repay is likely to encourage take-up of smartcard

Simple

Leading  
edge

Trust

# Refund/ Payment-related queries

Simplicity and ease of processing desired

## Changing start/ destination e.g. moving home/ employment

- Assume log in to smartcard online account/ app to update details
- Want the account to then automatically calculate fare differences and pay/ refund adjustments using bank card details (once they have confirmed)
- Want process to be least hassle possible so give options
  - keep same smartcard even if now in different TOC area
  - or change smartcard to new TOC if desired
- Ideally keeping same unique number whichever option chosen

Simple

Automatic processing would motivate take-up of online account

# Non-refund related queries (1)

Speedy processing is more important where card lost/ stolen/ not working

Convenient

Simple

Card does not work

Card lost or stolen

- Some expect new card immediately via ticket office (similar to hotel key cards)
- Others want temporary card whilst new one sent (paper or plastic)
- Want several options for reporting card
  - online / ticket office / telephone/ app
- Assumption that may need to report stolen card to police (in line with how this works now)

- Expect new card to be provided next day either via post or collection at ticket office
- Activate card via TVM or freephone number (similar to bank cards)
- Preference to keep same smartcard number where possible

“If it was lost or stolen you would want to do something pretty quickly. If there was an app you could do it very quickly with the phone. Or if you were at the station you could speak to somebody and get it cancelled straight away.”

Envisage no cost for replacement where due to a fault but in other situations a limited number are provided free before a charge is introduced

# Non-refund related queries (1)

## Straightforward processes desired

Card works but needs to be replaced

- Request new card via online/ app/ ticket office/ telephone
- Mixed views on whether a charge is reasonable

- New card arrives within 5 working days
- Activation process (similar to bank card) deactivates old card

Card no longer needed

- Request refund
- Many envisage would do this online but keen to have option to do this via app/ ticket office/ telephone

- Refund automatically credited to payment card registered with online account
- Card automatically deactivated so no need to return it

Simplicity of these types of queries and changes is key

Simple

# Conclusions

# Expectations and appeal

<ul style="list-style-type: none"> <li>• Overall passengers expect simple and convenient functionality</li> <li>• They expect existing processes that work well to be mirrored</li> <li>• Adding complexity of functionality is considered counter-intuitive to the introduction of smart technology – smart is expected to be simpler</li> <li>• Clear communications will be required where functionality challenges expectations of smart</li> </ul>	<div style="display: flex; justify-content: space-around;"> <div style="background-color: #4a90e2; color: white; padding: 5px; border-radius: 3px;">Simple</div> <div style="background-color: #8bc34a; color: white; padding: 5px; border-radius: 3px;">Convenient</div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="background-color: #8bc34a; color: white; padding: 5px; border-radius: 3px;">Additional cost</div> <div style="background-color: #8bc34a; color: white; padding: 5px; border-radius: 3px;">Additional complexity</div> <div style="background-color: #8bc34a; color: white; padding: 5px; border-radius: 3px;">Additional time</div> </div>
<ul style="list-style-type: none"> <li>• Passengers expect and seek reassurances regarding the security of personal data</li> </ul>	<div style="background-color: #27ae60; color: white; padding: 5px; border-radius: 3px; text-align: center;">Secure</div>
<ul style="list-style-type: none"> <li>• For many the envisaged increased convenience is the current core benefit of smartcards</li> <li>• Clear communications will be needed where functionality is more complex than expected</li> </ul>	<div style="background-color: #8bc34a; color: white; padding: 5px; border-radius: 3px; text-align: center;">Convenient</div>
<ul style="list-style-type: none"> <li>• Those who are tech savvy are also keen to see the introduction of smart</li> </ul>	<div style="background-color: #ffc107; color: white; padding: 5px; border-radius: 3px; text-align: center;">Leading edge</div>
<ul style="list-style-type: none"> <li>• Many expect there will be new products offering greater value for money providing a tailored approach to fares calculation that reflects the flexible way in which passengers use rail services</li> <li>• There is also an expectation that leading edge smart technology will enable greater value for money, tailored and flexible products and services such as automatic capping of fares, automatic delay repay and automatic refund for cancelled trains</li> </ul>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="background-color: #ff9800; color: white; padding: 5px; border-radius: 3px;">Value for money</div> <div style="background-color: #64b5f6; color: white; padding: 5px; border-radius: 3px;">Tailored</div> </div> <div style="display: flex; justify-content: space-around; width: 100%; margin-top: 10px;"> <div style="background-color: #ffc107; color: white; padding: 5px; border-radius: 3px;">Leading edge</div> <div style="background-color: #e57373; color: white; padding: 5px; border-radius: 3px;">Flexible</div> </div> </div>
<ul style="list-style-type: none"> <li>• Passengers are keen to maintain positive relationships with staff</li> <li>• There is potential for TOCs to build trust by aligning smart with value for money</li> </ul>	<div style="background-color: #673ab7; color: white; padding: 5px; border-radius: 3px; text-align: center;">Trust</div>

# Expectations for hygiene factors

Factors relating to convenience, trust, simplicity and security are hygiene factors; these are expected by passengers and they must be confident that they are in place before they will consider/ be comfortable with the idea of using a smartcard

	Convenient	Simple	Secure	Trust
Likes and expectations	<ul style="list-style-type: none"> <li>Durability</li> <li>Faster journey (tap in, tap out)</li> <li>Buy/ renew tickets online (avoid queues)</li> <li>Online and offline options for getting smartcard/ providing photo</li> <li>Option for smartcard to be posted/ collected from station</li> <li>Option to move to smartcard at next ticket purchase/ renewal</li> <li>Online account functionality to include ticket purchase and cancellation, travel history, remember journeys and payment details, refund and compensation application</li> <li>Validation as part of journey at barrier or PVAL</li> <li>Option to request replacement card online or offline.</li> <li>Quick replacement process including temporary card immediately provided</li> </ul>	<ul style="list-style-type: none"> <li>Ability to load multiple products on one card</li> <li>Online and offline options for getting smartcard/ providing photo</li> <li>Option for smartcard to be posted/ collected from station</li> <li>Option to move to smartcard at next ticket purchase/ renewal</li> <li>Option for smartcard to come loaded with products</li> <li>Ability to link child's card to own account</li> <li>Ability to 'remember' friend and family smartcard details</li> <li>Simple key card application process</li> <li>Option to open online account at point of requesting smartcard</li> <li>Online account functionality to include ticket purchase and cancellation, travel history, remember journeys and payment details, refund and compensation application</li> <li>Validation as part of journey at barrier or PVAL</li> <li>Ability to use smartcard on alternative services during disruption</li> <li>Inspectors use handheld devices</li> <li>Compatible for use across all TOCs and central London</li> <li>Automatic refunds and compensation</li> <li>No need to change smartcard if journey moves to different TOC</li> <li>Quick replacement process including temporary card immediately provided</li> </ul>	<ul style="list-style-type: none"> <li>Fewer concerns that will lose expensive/ pre-booked ticket</li> <li>Ability to register smartcard with personal details making it secure if lost/ stolen</li> <li>Photo and name helps with security of the smartcard</li> <li>Smartcard posted to home address is secure</li> </ul>	<ul style="list-style-type: none"> <li>Smart will work well/ be well implemented</li> <li>Roll-out will be simple and well managed</li> <li>Ability to maintain positive relationship with staff</li> <li>Automatic refunds and compensation</li> </ul>
Concerns and deterrents	<ul style="list-style-type: none"> <li>It technology fails</li> <li>Tap in, tap out may be slow during rush hour</li> <li>Validation at TVM or any other place that adds time to journey</li> </ul>	<ul style="list-style-type: none"> <li>Greater reliance on technology; less reliance on staff</li> <li>How card will work in central London</li> <li>Complex timings if want smartcard to come loaded with products</li> <li>How group save and children's tickets will work</li> <li>Complex Key card website navigation</li> <li>Lack of information on Key card website/ at point of application</li> <li>Validation at TVM or any other place that adds time to journey</li> <li>Required to tap in and out once product is validated?</li> <li>Required to do something to smartcard to enable use on alternative services during disruption</li> <li>What happens if smartcard cannot be read when inspected?</li> <li>Lack of ability to use across TOCs and central London</li> </ul>	<ul style="list-style-type: none"> <li>Potential of system to be hacked</li> <li>Potential for details to be sold for marketing purposes</li> <li>Some dislike sharing personal details</li> <li>Smartcard could go missing if sent to station for collection</li> </ul>	<ul style="list-style-type: none"> <li>Loss of staff</li> <li>Lack of support when things go wrong</li> <li>Lack of face-to-face support</li> </ul>
Suggestions	<ul style="list-style-type: none"> <li>PAYGo</li> <li>App for online management</li> <li>Station with facility to immediately print smartcard</li> </ul>	<ul style="list-style-type: none"> <li>Card used across modes</li> <li>Live chat and freephone telephone number for queries</li> <li>Online account provides clear routes for queries</li> <li>Seat reservation email/ print-out available</li> <li>Receipt print-out for work expenses</li> <li>Clear boundary information</li> <li>One card to capture Oyster and TOC use</li> <li>Keep unique smartcard number for life</li> <li>Clear information about how smartcard works in Central London</li> </ul>		<ul style="list-style-type: none"> <li>Overall, opportunity to build trust with passengers by aligning smart with value for money</li> </ul>

# Pull factors

Leading edge and convenience factors are currently those most likely to attract passengers to a smartcard

	Convenient	Leading edge
Likes and expectations	<ul style="list-style-type: none"> <li>• Durability</li> <li>• Faster journey (tap in, tap out)</li> <li>• Buy/ renew tickets online (avoid queues)</li> <li>• Online and offline options for getting smartcard/ providing photo</li> <li>• Option for smartcard to be posted/ collected from station</li> <li>• Option to move to smartcard at next ticket purchase/ renewal</li> <li>• Online account functionality to include ticket purchase and cancellation, travel history, remember journeys and payment details, refund and compensation application</li> <li>• Validation as part of journey at barrier or PVAL</li> <li>• Option to request replacement card online or offline.</li> <li>• Quick replacement process including temporary card immediately provided</li> </ul>	<ul style="list-style-type: none"> <li>• Moving to smart technology</li> <li>• Welcomed by tech savvy</li> </ul>
Concerns and deterrents	<ul style="list-style-type: none"> <li>• It technology fails</li> <li>• Tap in, tap out may be slow during rush hour</li> <li>• Validation at TVM or any other place that adds time to journey</li> </ul>	<ul style="list-style-type: none"> <li>• General technology concerns amongst those less tech confident</li> </ul>
Suggestions	<ul style="list-style-type: none"> <li>• PAYGo</li> <li>• App for online management</li> <li>• Station with facility to immediately print smartcard</li> </ul>	<ul style="list-style-type: none"> <li>• Contactless</li> <li>• Full interoperability across all TOCs and Oyster</li> <li>• Ability to be truly smart by automatic fare calculations, capping, determining fares by journeys (not pre-defined tickets), calculation and payment of refunds and compensation</li> </ul>

Suggestions for how leading edge could be developed are potential pull factors



# Push factors

Those not convinced by convenience or current leading edge factors could potentially be pushed towards smartcards through value for money, tailored and flexible functions as well as potential ways in which leading edge and customer relationship and trust could be developed

	Value for money	Flexible	Tailored	Leading edge	Trust
Likes and expectations	<ul style="list-style-type: none"> <li>• New products</li> <li>• Automatic delay repay</li> </ul>	<ul style="list-style-type: none"> <li>• New products</li> <li>• Ability to use card across TOCs</li> <li>• Automatic delay repay</li> </ul>			<ul style="list-style-type: none"> <li>• Maintain face-to-face relationship with staff</li> </ul>
Concerns and deterrents	<ul style="list-style-type: none"> <li>• Deposit cost</li> <li>• Getting best fare at TVM</li> <li>• Cost of technology passed on to passengers</li> </ul>				<ul style="list-style-type: none"> <li>• Loss of face-to-face relationship with staff</li> </ul>
Suggestions	<ul style="list-style-type: none"> <li>• Automatic refunds for cancelled tickets</li> <li>• Deals/ loyalty scheme</li> <li>• Fares that are structured by number of journeys made</li> <li>• PAYGo option</li> <li>• Automatic calculation/ capping for best fares</li> </ul>	<ul style="list-style-type: none"> <li>• PAYGo</li> <li>• Automatic calculation/ capping for best fares</li> <li>• Fares structured by number of journeys made</li> <li>• Automatic calculation and payment of changes to journey</li> <li>• Deals/ loyalty scheme</li> <li>• Automatic refunds for cancelled tickets</li> </ul>		<ul style="list-style-type: none"> <li>• Contactless</li> <li>• Full interoperability across all TOCs and Oyster</li> <li>• Ability to be truly smart by automatic fare calculations, capping, determining fares by journeys (not pre-defined tickets), calculation and payment of refunds and compensation</li> </ul>	<ul style="list-style-type: none"> <li>• Potential to build more positive relationship with TOC by:</li> <li>• Aligning smart with best value for money</li> <li>• Offering rewards/ loyalty schemes</li> <li>• Offering tailored information based on journey patterns/ tickets purchased e.g. delays to usual route</li> </ul>

Thank you