



Contactless Research

Claire Vernon, Danica Minic and Joceline Jones

Define Insight

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Agenda

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Project context, research objectives, overview of method and sample

2. Key findings

3. Customer views and experiences regarding contactless payment in general

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1. INTRODUCTION

Project Context

- Since contactless bank cards were launched in 2007, this technology has been adopted by retailers inside and outside of London and a number of national retailers have started a UK-wide rollout. Other methods of contactless payment have also become available, in particular Apple Pay and the other mobile offerings.
- Contactless payment also appears to be gaining particular traction in travel. For example, contactless transactions account for around one fifth of all pay as you go journeys on London transport. With the payment limit having increased to £30 per transaction in September 2015, this provides further scope for longer, more expensive journeys to be considered.

Overall Research Objectives

Overall, this research project aims:

- To understand customer views towards the use of contactless payment in general, and in transport in particular

Method: Overview

- **Mixed methodology including 15 pre-tasked, face-to-face depth interviews and 9 group discussions, split across 3 respondent types as follows:**
 - 5 depth interviews and 3 group discussions with Users – Respondents who have a contactless payment method and have used it before
 - 5 depth interviews and 3 group discussions with Non-users – Respondents who have a contactless payment method but haven't used it
 - 5 depth interviews and 3 group discussions with Potential users – Respondents who don't have a contactless payment method currently
- **Pre-tasks:**
 - Users completed a 'Timeline exercise' to outline key moments in using CP and their experience with it
 - Non-users did 'accompanied shops' where researchers observed them using CP for the first time, followed by additional short interview to capture the experience

Qualitative fieldwork was completed between 22nd and 30th March. Fieldwork took place across four locations including: Oxford, Birmingham, Bristol and York.



Qualitative Sample: Overview

Users	Non-users	Potential users
Depths	Depths	Depths
3 female, 2 male	3 female, 2 male	2 female, 3 male
2 x 18-30yrs old 1 x 31-50yrs old 2 x 51+yrs old	1 x 18-30yrs old 4 x 30-50yrs old	1 x 31-50yrs old 4 x 51+yrs old
Groups	Groups	Groups
Mixed gender	Mixed gender	Mixed gender
1 x 18-30yrs old 1 x 31-50yrs old 1 x 51+yrs old	1 x 18-30yrs old 2 x 51+yrs old	1 x 18-30yrs old 2 x 31-50yrs old

Across the sample and respondent groups

Good spread in terms of ticket types, frequency of travel and reasons for travel

2. KEY FINDINGS

Key Findings 1

- **Contactless payment in general:**

- **Awareness of using bank cards for CP has increased** since the previous research but there is low awareness of mobile CP → CP through bank cards is seen as widely spread so normalised to some extent
- However, **customers remain split with regard to usage** – key benefits of speed and cash replacement still drive usage, whereas security and budgeting concerns remain barriers to usage for Non-users and some Potential users
- **Other factors influence how and where CP is used too** – Trust in companies offering CP, environment-related risks and awareness of details of how it works

- **Contactless payment in transport:**

- **Benefits of CP become greater and more obvious** in the context of transport across respondent groups but interest in usage depends on broader attitudes to CP and technology, as well as travel behaviour
- **Greater speed** is seen as an important benefit across different modes of travel whereas **cash replacement** function is seen as beneficial for bus travel
- Overall, CP is seen as well suited for **local/cheaper travel** whereas longer train journeys tend to be pre-planned so cost can be controlled

Key Findings 2

- **Contactless travel propositions:**

- **Models 1 and 2** held more appeal because of their simplicity and flexibility respectively, whereas **Model 3** had more limited appeal
- Still, Model 1 and 2 raised issues too – it was unclear how Model 1 would work where ticket price depended on **journey length**, whereas Model 2 seemed less relevant to smaller cities with **limited variation in possible journeys**

- **Contactless travel procedures:**

- Research highlights areas where more **information and reassurance** is needed for customers outside of London with less exposure to smartcards/CP in travel
- Specifically, there are some questions around **tapping out, the concept of ‘capping’** which isn’t clear and **ticket checking** that need careful explaining
- It also confirms that mechanisms that allow for **budgeting** remain a priority, but compared to previous research there is some shift in preferences concerning **ways of paying** as security concerns reduced over time among those open to CP

Key Findings 3

- **Comparisons across locations:**

- Research highlights how differences in **size of the cities and therefore public transport options available** which inform travel patterns, as well as **proximity to London**, influence responses to CP in travel
- It also shows that **exposure to smartcards** primes some respondents to be more open to using CP in travel, however, their broader attitudes to CP are a more decisive influence so can be a barrier even where smartcard experience is positive
- Customers in **Oxford** had somewhat higher levels of familiarity with smartcards, although it's by no means universal, due to the local key smartcard and closer proximity to London than other locations. This helps inspire interest in CP among some but other factors inform their response too, most notably customer travel patterns and their broader attitudes to CP as mentioned above

3. CUSTOMER VIEWS AND EXPERIENCES REGARDING CONTACTLESS PAYMENT IN GENERAL

Knowledge and awareness of contactless payment 1

- Two years on from the initial Transport Focus research into contactless payment, there is greater awareness of it across respondent groups
 - Although there is a minority of potential users who don't know what it is at all
 - And some only recognised what it was after detailed explanation/descriptions

Increased awareness

- More of a sense CP is **widespread** and more awareness of **where it can be used** across types
- **More awareness of a £30 limit** among Non-users and how the card is used
- More Non-users knew they had contactless cards

It's for low cost items because the limit is £30. [Non-User, Female, 37, Bristol]

Low awareness

- However, **vague awareness of mobile CP** and low awareness of any details across respondent groups
- Most Non-users and Potential users **unaware of security safeguards** with contactless bank cards, e.g. Prompting to use PIN/other security measures and some are still unaware of other features too (e.g. £30 limit)
- **Potential users have lowest awareness** so a few even think CP is paying with no contact with people*

I'd say it's to do with using phone apps and the internet to pay and not having any contact with anyone. [Potential User, Female, 36-50, Bristol]

Some Non-users and Potential users will still need more information on specific CP features (e.g. security safeguards) to consider usage

Knowledge and awareness of contactless payment 2 – Bank cards

- In line with previous research, main sources of awareness appear the same, however, with the wider roll-out shops and retailers have particularly been important for educating customers

Staff at outlets with CP

- Appear **key as external prompt** for usage and **education** on how CP works
- Can cause problems if staff lack knowledge or take the card to do CP themselves

WOM & seeing others use CP

- This is how some across respondent groups become **aware** of CP initially
- Positive views of others can provide **reassurance**

Bank comms & customer support

- **Low impact** as most don't read bank communications but those few who do find it reassuring to hear about security features from their bank

Media

- Media generally cited in the context of **negative stories** about CP, e.g. hacking

I didn't have any cash so the person behind the counter asked if I have contactless and she showed me how to use it. [User, Female, 51-60+, York]

I've read a lot of horror stories on Facebook about people having money stolen and stuff. [Non-User, Female, 18-30, Birmingham]

Staff supporting and educating customers is likely to be hugely important wherever CP is newly introduced, e.g. in CP pilots in transport. There may be also need for communications to counter 'scare stories' from the media by reassuring customers about security

Knowledge and awareness of contactless payment 3 – Mobile CP

- With mobile CP specifically, most Users and some Non-users and Potential users have vaguely heard about Apple Pay but know very little about it



When I got my new phone a few months ago it prompted me to set up ApplePay automatically. I was so excited because of the speed and ease. But I love everything to do with technology. [User, Female, 51-60+, York]

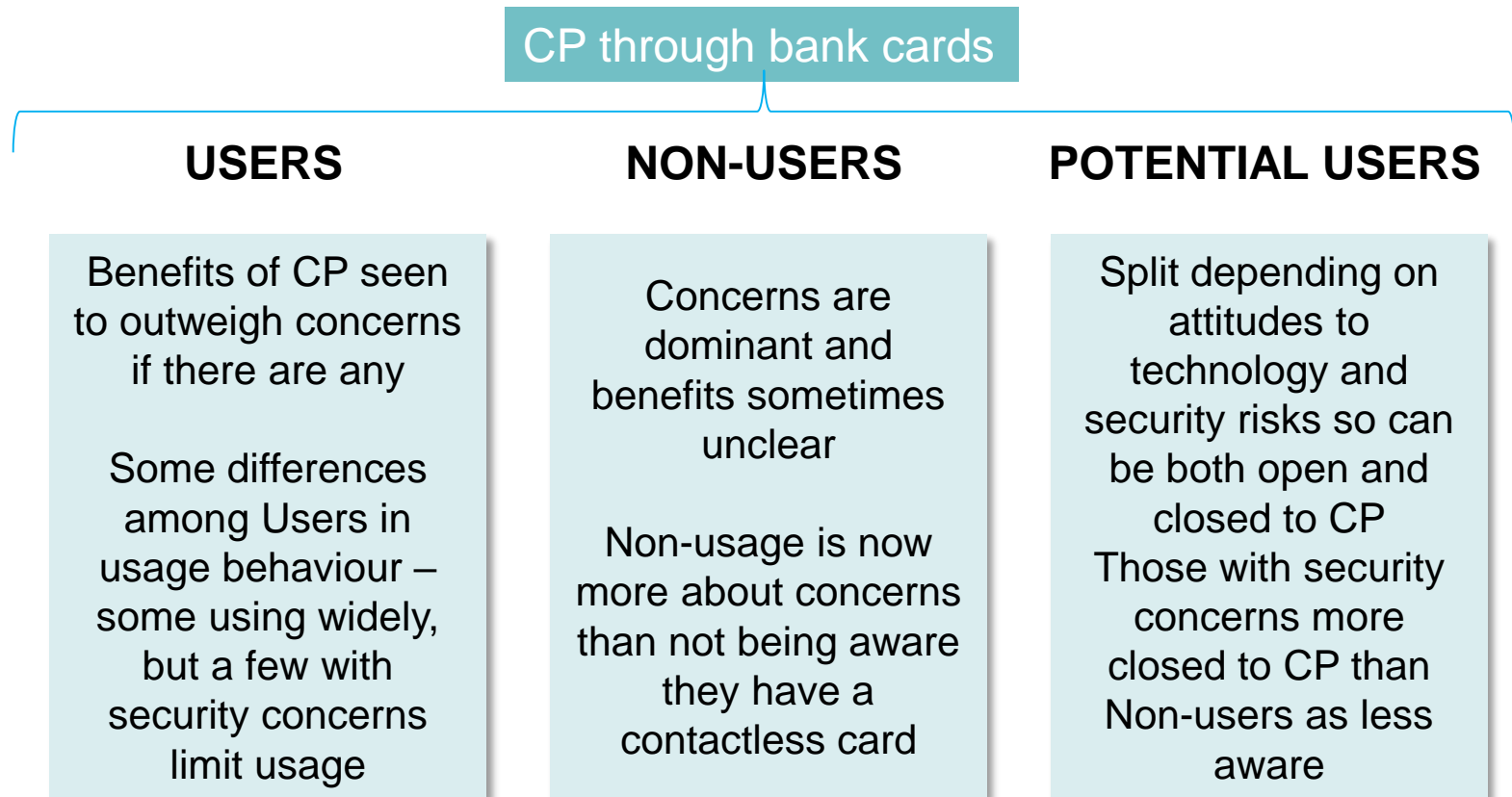
- Very few using mobile CP (Apple Pay) and those few are early adopters very keen on new technology
 - 1 other respondent using a Starbucks and Pingit apps for payments
- Most others generally lacking any detail about it
- A few heard about some features though, e.g. needing to use fingerprint for security
- There is also a lack of clarity of who can use mobile CP → questions such as ‘Does my bank do that?’, ‘Can you do it if you don’t have an iPhone?’ etc.

I only have a smartphone, I can't afford an iPhone, so could I even set up a thumbprint on my phone? I don't know. [Non-User, Female, 50, York]

Data suggests mobile payment in our sample is in the early stages of the adoption curve – exciting to early adopters but with low awareness among other customers

Interest in using contactless payment

- Overall, the audience is still split in terms of their interest in using CP through bank cards, whereas there is very low consideration of mobile CP at all



Barriers to usage still persist for some despite a sense that CP through bank cards is now more established and widely used so normalised to some extent



Attitudes to CP through bank cards – benefits/drivers

- Research confirms that **speed and cash replacement** are felt to be the main benefits of CP



General interest in new technologies is another reason for liking CP for some, although it doesn't feel particularly novel anymore → so less of a sense of being early adopters among Users

Speed

Cash replacement

It's easier than having cash, the journey I usually make is £6.50 and it's difficult to get that in cash. [Non-User, Female, 37, Bristol]

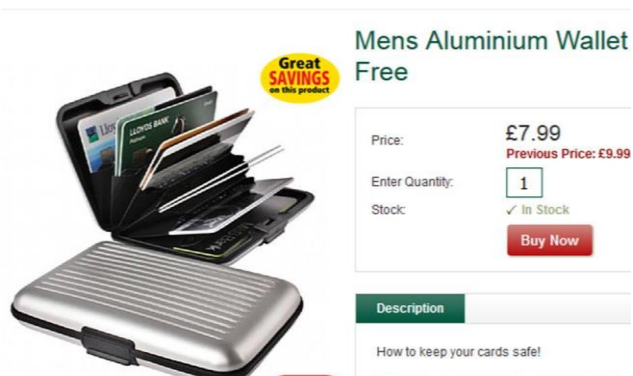
- Time saving with CP valued especially in venues/situations where queues are common, e.g. fast food outlets and cafes
- Not having to carry cash for small purchases welcomed too, particularly by younger respondents who (unlike many older respondents) are used to using cards for small purchases

It's good for those smaller purchases like coffee, it means you don't need change, so much easier and quicker [Non-User, Female, 18-30, Birmingham]

Contactless payment is seen as most appealing in those situations where it can help avoid/significantly reduce queuing time and remove the need to pay by cash

Attitudes to CP through bank cards – barriers/concerns 1

- As with previous research, concerns over **security** of CP were often cited by Non-users and some Potential Users as reasons against usage



I wouldn't get contactless because of the security. When that guy said the banks aren't paying the money back to you and you might need an aluminium case that really put me off. [Potential User, Female, 31-50, Oxford]

Main security concerns include:

- Perceived lack of protection against theft should they lose/drop the card because PIN is not needed
- Perceived ease of fraudulent activity CP allows, e.g. criminals using readers to take money by 'scanning' contactless cards in vicinity
- Perceived risk of wrong payment, e.g. paying for someone else, double payment
- Attracting attention from thieves by showing you have a contactless card

What if it charged your card twice? There are a lot of flaws to this. [Potential User, Female, 51-60+, Oxford]

Awareness of security features of CP needs to be increased through information and communications countering 'scare stories' to reduce barriers stemming from security concerns

Attitudes to CP through bank cards – barriers/concerns 2

- For other Non-users though, budgeting is a bigger concern than security



B U D G E T I N G

You lose control with a contactless card to a certain extent, it'd be very easy to make a number of purchases very quickly and not even think about it. [Non-User, Male, 50-60, Bristol]

I think you might forget what you would use it for and might end up spending a lot. [Potential User, Female, 18-30, Oxford]

If money came out straight away I'd feel better, I need to know for budgeting, I'm quite good at keeping up with that. [Non-User, Female, 18-30, Birmingham]

- Budgeting concerns include:
 - Worry they won't see how much they paid → lack of control over how much they pay
 - Worry they'll pay less attention to amounts so they'll spend more
 - Concerns over delayed payment with contactless making it difficult to know how much money there is in their accounts

Ensuring customers can see what they're paying for and get a receipt/proof of payment if they want to is critical for reducing barriers linked to budgeting

Attitudes to CP through bank cards – barriers/concerns 3

- Lack of clear benefits is another reason against using CP for some

Speed?

- Some Non-users and Potential users feel the difference in speed between CP and using their card with PIN is negligible so irrelevant to them

I've never thought it's particularly easier than putting a pin in. That really doesn't take that long [Non-User, Female, 18-30, Birmingham]

Cash replacement?

- Some older Non-users and Potential users in particular can feel attached to cash so don't want cash replacement
 - They feel cash helps with budgeting, see it as 'reality check'
 - They are also less likely to use their cards at all for small purchases and find that idea strange

I bought a coffee and the lady asked if I wanted to pay contactless and I looked at her baffled, it's only £2, why would I want to pay by card? [Non-User, Male, 50-60, Bristol]

Lack of awareness of where or how to use it was less of a barrier for Non-users now than two years ago

These attitudinal barriers are hard to reduce through information but they may lessen in time as using CP becomes more of a norm

Perceived benefits and drawbacks of mobile CP

- Most inclined to compare it to contactless bank cards and when they do so mobile payment appears to have few advantages and more disadvantages



- Some Non-users like the added security of needing your fingerprint to use mobile CP
- A few respondents liked the idea of carrying fewer things around as phone replaced wallet



...when compared to contactless bank cards...

- Most see it as more complicated than using contactless bank cards, e.g. needing to set something up on your phone, not knowing how to set it up, using fingerprint seems fiddly
- It can also raise security concerns for some, e.g. if phone hacked during CP could data be stolen too?
- Some feel they're more likely to lose phone than card or imagine crisis scenarios where battery runs out

If the ticket is on your phone you have less cards to carry around in your wallet. [User, Male, 60, York]

If you had it on your phone and it ran out of battery, how would you pay? [Potential User, Female, 36-50, Bristol]

There appeared to be little interest in mobile CP at this moment in our sample, as it's seen to be less convenient than CP through bank cards, although this response is based on very little knowledge about mobile CP

Current usage – initial experience

I felt a bit stupid, not knowing what part of the card to move across so the payment goes through. [Non-User, Female, 50, York]

- Research confirms that for most, barriers reduce with actual usage both based on Users' 'customer journeys' and pre-task 'accompanied shop' exercise

Before using CP	First CP	Subsequent CP
<ul style="list-style-type: none">• Some thinking whether it will work• Some feeling don't want to look silly if they do something wrong	<ul style="list-style-type: none">• Many enthusiastic about how quick and easy it is (although this ease also raised security concerns for a couple of Non-users during pre-task exercise)• Some unsure whether the payment was taken/what they paid• Receipts an issue for some – some didn't get them but wanted them, others not sure if they want them as it seems to defeat the purpose, i.e. speed• A few had negative experience with staff, e.g. took their card away which raises security concerns	<ul style="list-style-type: none">• Cautious at first where they use it and checking their bank statement• Once they relax there were no problems, they expand usage and stop checking as much• A few still limit CP to certain places

It was almost too simple. It made me question the security of it. [Non-User, Female, 37, Bristol]

Research highlights that the customer journey with contactless payment is generally positive as Users' initial concerns diminish when they are not borne out by experience and Users discover the benefits of contactless payment



Current usage – how it is used 1

- Contactless payment tends to be used on occasions led by convenience and time



- Typically, CP used for paying in/for:
 - Fast food outlets
 - Coffee shops
 - Supermarkets
 - Corner shops (local ones which are trusted rather than unknown ones)
 - Petrol

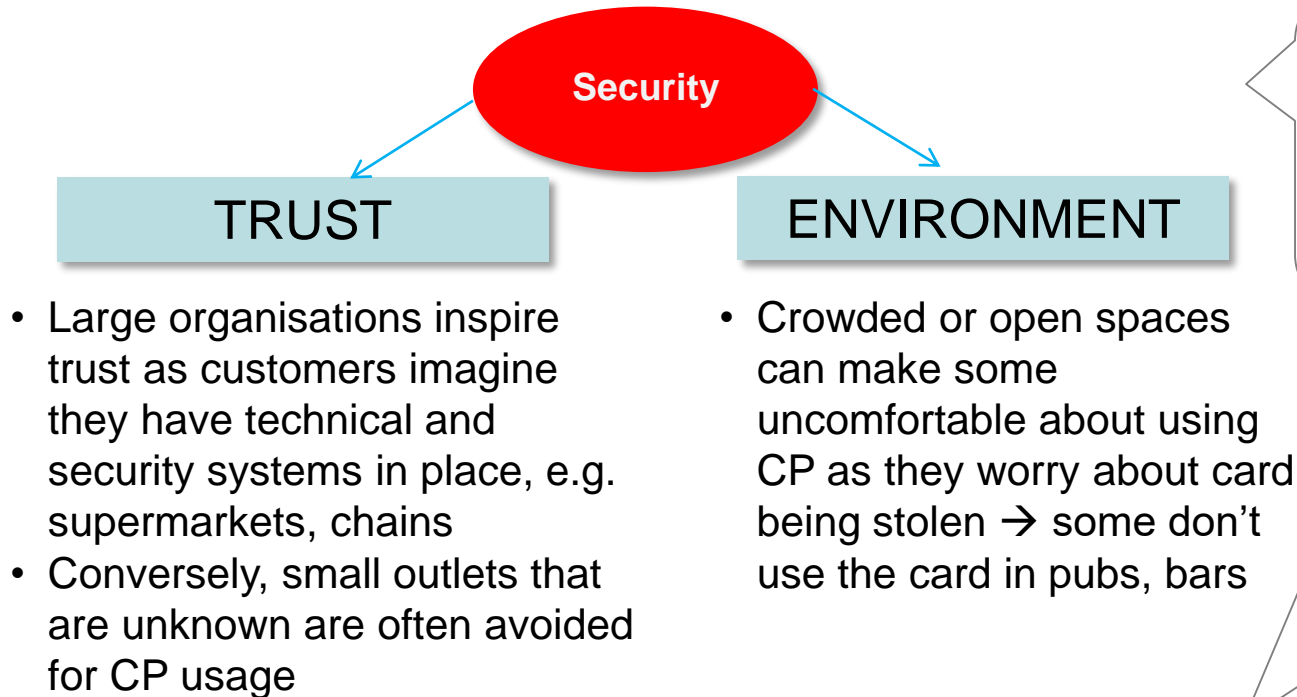
I use it in coffee shops or at Marks and Spencer's.
[User, Female, 51-60+, York]

I use it for things like food and petrol routinely.
[User, Male, 18-30, Oxford]

Situations where there's queuing or where change is needed prompt usage. Both are highly relevant for transport as will be discussed later

Current usage – how it is used 2

- Awareness of where CP is available is less of an issue now, although there are still places where customers can be unsure
- However, security concerns remain at play for some Users so trust and environment can be important factors for deciding whether to use CP



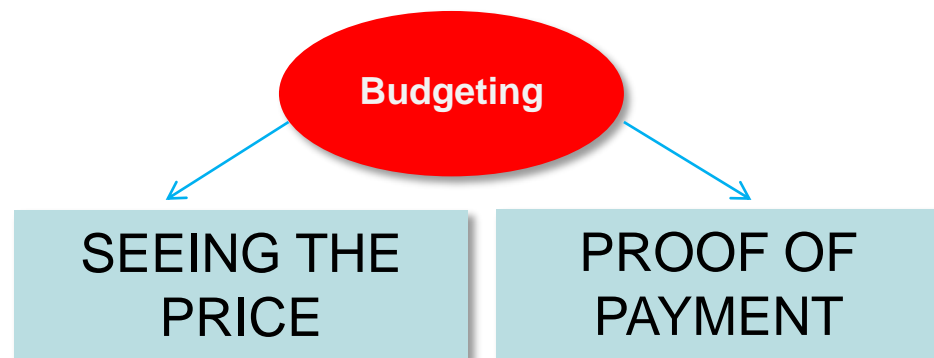
I'd be worried about using it in pubs and clubs. Someone could see you do it and nick your card. [User, Male, 51, Bristol]

I wouldn't use it at the corner shop. With the supermarkets, I've been going there for years and I feel confident using them. [User, Female, 60+, Birmingham]

Inspiring trust in technical capability and providing reassurance over any environment-related concerns may also be needed when introducing CP in transport

Current usage – how it is used 3

- Budgeting issues also play role for some users as they seek to retain control over their payments; these are sometimes due to a lack of awareness of details of how CP works



- Some avoid places where staff take their card away for CP, e.g. pubs, bars

- Lack of certainty over receipts can lead some to avoid purchases where they may want to return them, e.g. Clothes → greater awareness is needed of being able to ask for receipt

In bars I am more sceptical, I do ask to see the amount rather than letting them take my card to tap it themselves [User, Female, 31-40, Birmingham]

I pay with cash or card for clothing and shoes but I use contactless for things I can't return like food. [User, Female, 18-30, Birmingham]

The need for being in control over payment at all times – before and after purchase – is a strong requirement that can limit usage if not met. CP in transport will need to allow this control as much as possible

4. CUSTOMER VIEWS REGARDING CONTACTLESS PAYMENT IN TRANSPORT

Travel behaviour in our sample: the context 1

- Except in Birmingham, most respondents used mainly buses on a regular basis and very rarely made multi-leg journeys



- Oxford, Bristol and York seemed to share similar travel patterns based on more limited range of travel options than in Birmingham:
 - Regular journeys tend to be largely the same and bus is the main mode of public transport
 - Typical journey is into the city centre and many need to use only one bus for this
 - Multi-leg journeys are rare (sometimes involve 2 buses)
 - Train used for inter-city/longer journeys on an ad hoc basis

I make the same bus journeys every week. [Non-User, Male, 50-60, Bristol]

Most people only use one bus to get around. [User, Female, 51-60+, York]

I only go into town about once a week. [Potential User, Male, 31-50, Oxford]

Travel behaviour in our sample: the context 2



- There are more variations in how people travel in Birmingham due to more available transport options
 - More likely to make more varied journeys across the city
 - Use buses but also local trains too
- Most respondents travel to London from time to time, with those from Oxford and Bristol going there more frequently

It would be good to use the same thing for the bus and the train because sometimes I use both in a trip. [User, Female, 41-50, Birmingham]

I get the train regularly, almost daily. [User, Female, 60+, Birmingham]

Sometimes I get the train to London to play cards with my friends. [User, Male, 18-30, Oxford]

Differences in travel behaviour lead to differences in needs from CP in transport, both in terms of benefits and models

Travel behaviour in our sample: the context 3

- As could be expected, ticket choices and payment behaviour depend on frequency of travel and cost of tickets

Ticket choices & Payment

On the bus I just get a cheap day rider, paper ticket, off peak. [Non-User, Male, 50-60, Bristol]

- Less frequent bus users tend to buy day tickets / return tickets on the bus with cash
 - Most know the price of their regular journey
- More frequent bus users tend to buy season tickets or carnets/saver tickets generally from the driver with cash, unless there is a smartcard as in Oxford where tickets are topped up at designated points in the city
- As train journeys are generally ad hoc, longer and more expensive, they are planned and passengers are shopping for best fare:
 - Most common tickets bought are advance tickets
 - They are often bought online to get the best price

My wife and I always book in advance online to get the best price. [User, Female, 51-60+, York]

Frequency of travel can play a part in terms of how much need for smartcards or CP customers see, with less frequent passengers thinking they don't need this as much as frequent ones do. Ways of paying seem to influence response to CP less, with the exception of general preference for paying by cash that a few respondents had

Travel behaviour in our sample: the context 4

- As previous research, there is low recognition of the term 'smartcard' but a widespread familiarity with the concept mainly through Oyster but also other experiences

I'm not sure what a smartcard is. It sounds like something to do with your smartphone. [Non-User, Female, 50-60, Oxford]



- Many have either used or at least heard about Oyster when they visited London
 - Most had positive experiences but a few experienced difficulties making them less positive about this way of paying in general
- Some have used smartcards abroad which normalises usage
- No awareness of the Swift smartcard in Birmingham in our sample and mixed levels of awareness in Oxford
 - A few key users in Oxford and some knew about it from other users; but a number of regular customers were unaware of it
 - Main reasons for not using the card seemed to be lack of awareness and perception they didn't travel frequently enough to need it

Positive experiences of smartcards prime some to be more open to CP on travel – as they appreciate its similar benefits and also have awareness of some aspects of how it works. However, broader attitudes to CP usage remain a decisive factor that can pose barriers even when smartcard experience is positive

Travel behaviour in our sample: Oxford-specific context

- Oxford shares certain features with York and Bristol in terms of travel behaviour in 'smaller' cities but has somewhat higher level of exposure to smartcards



It's good to be able to use a smartcard because who carries change?
[Potential User, Male, 31-50, Oxford]

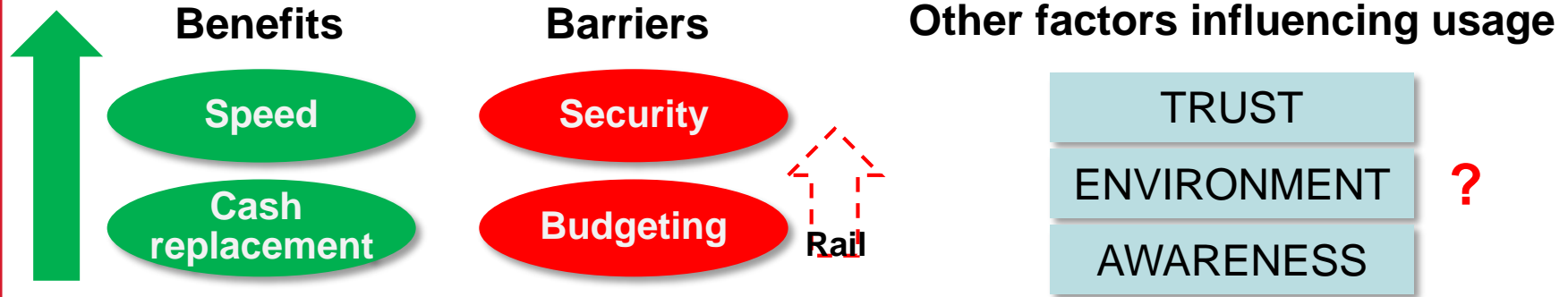
You have to go to Debenhams to top up and I'd like to be able to do it online instead.
[Potential User, Female, 18-30, Oxford]

- Travel patterns fit those described earlier for 'smaller' cities, which has implications for relevance of particular models and benefits of CP (as will be discussed later)
- There is slightly higher level of exposure to smartcards due to proximity to London and some (although limited) experience/awareness of using the key smartcard
 - Experiences of the key are largely positive as customers appreciated being able to use it across bus operators as well as having a cash replacement
 - Some suggestions for improvement concerned topping up and activating*

Greater exposure to smartcards in Oxford creates fertile ground for the introduction of CP in travel, however, those closed to CP are still likely to have barriers and need reassurance

Interest in contactless payment in transport – Overview

- Benefits of CP become greater in the context of transport across different respondent groups but interest also depends on travel behaviour



- In particular, the speed of payment is seen as beneficial when buying tickets for travel, as well as the role of CP as replacement for cash on buses



- As in previous research, respondents have questioned the use of CP on trains for longer journeys as it seems to go against the way they tend to buy tickets for these journeys



- Bus and train companies generally trusted either because they're local/known or because they're large
- Busy/crowded environments such as rail stations can increase security concerns for some Non-users and Potential users
- If CP was to be used across operators, there's need for awareness on CP availability for different operators

Benefits of CP in transport when compared to other ways of paying 1

- When CP is compared to other ways of paying for travel, it shares some advantages of the smartcard



Vs.



- Both **CP** and **smartcards** are seen as **faster** than buying at the **ticket office/ticket machine/from bus driver** as no or less time will be spent on queuing
- They are also both seen as **more convenient** than paying by **cash** on buses as many struggle with having to have the right change
- Both are seen as allowing for more **flexible travel** products than those enabled by ticket types such as single and return tickets and even than day tickets where CP and smartcards allow use on different modes of transport and different operators to a greater extent
 - However, flexibility is not as relevant where multi-leg journeys are rare

I can imagine it'd speed things up on the bus, because if there's a queue of people getting on all needing change then that takes a while. [Potential User, Female, 36-50, Bristol]

If you could use one type of card for every mode of transport in one city that would be great, not having to bother booking all different types of transport. [Non-User, Male, 50-60, Bristol]

Benefits of CP in transport when compared to other ways of paying 2

- In addition, CP is seen to have additional benefits when compared to smartcards with one exception for some Non-users



Vs.



No particular difference in attitudes to mobile CP when it's considered in the context of travel as opposed to in general

It's seen as **more convenient** than the smartcard as paying by CP there is:

- No need to top up
- No worries over balance
- No need to tie your money somewhere
- No need for additional card – just one card for all your shopping/travel (ideally)

Smartcards are however seen as **safer** so preferred by some Non-users and Potential users

Users and those Non-users and Potential users who are less concerned about security prefer CP over smartcards due to its greater convenience. However, for other Non-users and Potential users concerns about CP outweigh the benefits so they demonstrate a preference for smartcards over CP

Barriers to CP in transport - Detail

- Security concerns remain the same as with general CP usage but budgeting brings specific issues in the context of travel

Budgeting

I would want to know before I paid, you can't budget for it otherwise. [Non-User, Female, 37, Bristol]

- Many are unsure how they would be able to see the price of the ticket before paying and this raises alarm of unforeseen cost
- The longer and more expensive the journey is the more of a barrier this becomes
 - In particular, with longer train journeys needs are even bigger – not only seeing the price before paying but being able to choose the best fare in advance
 - The huge variations in rail ticket prices also contribute to being very cautious
- Conversely, the shorter/cheaper/fixed price journey is, the less cautious customers are → they are more open to CP in bus and local train travel

You don't know how much you're parting with. You're like – "oh I didn't realise that ticket to Manchester was 90 quid". [User, Male, 20-30, Oxford]

There is more appetite for introducing CP on bus travel than on rail travel, although if concerns over budgeting with rail fares are alleviated benefits might prevail there too

Audience differences regarding interest in CP in transport

- Levels of interest in CP in transport vary depending on broader attitudes to CP as well as passenger needs stemming from their specific travel behaviour

CP attitudes & usage

- As could be expected, Users of CP are generally keen to extend usage to transport
- Benefits of CP on transport make some Non-users and Potential users consider it → but whether they do depends on the extent of their concerns and perceived need

*Marvellous; it's easy and you don't need cash and you can use it for both shop and the bus.
[User, Female, 51-60+, York]*

Travel behaviour

- Benefits appear to outweigh concerns for those Non- and Potential users who:
- Travel more frequently so they see more need
- Make the same journey so they know the price → don't have to worry over budgeting
- Conversely, those travelling less frequently can't see the need to 'put themselves at risk' for low benefit; also, if journeys vary/unknown, many more cautious over budgeting

For me budgeting be a piece of cake because I'd be doing the same journey I always do. [Non-User, Male, 50-60, Bristol]

Strong security concerns that some Non-users and Potential users have are likely to be more difficult to overcome as a barrier as they are largely irrational, but budgeting concerns can be reduced through adequate information about fares

5. AUDIENCE RESPONSE TO CONTACTLESS TRAVEL PROPOSITIONS

CP Propositions / Models explored in the research

Model One:

- Use your contactless card or mobile to make a single journey
- Pay your fare at the start of your journey with your contactless card or mobile by touching in
- As you are charged the fare at the start of your journey you don't need to touch out at the end of your journey
- You can view the amount you were charged on your bank statement

Model Two:

- Use your contactless card or mobile to make multi-leg or several journeys
- Touch in and out with your contactless card or mobile at the start and end of each journey or each leg of your journey
- You can use different modes of transport (i.e. bus, train, tram etc)
- All your journeys that day (or other defined period) will be combined into one charge
- Your fare is therefore typically processed at the end of the day
- Daily or weekly caps can be applied
- You can view the amount you were charged on your bank statement

Model Three:

- Purchase your travel ticket online and associate it with your contactless card or mobile (can be any ticket e.g. a concession return train ticket or a season ticket)
- You can view the amount you were charged on your bank statement
- Then you use your contactless card or mobile as your ticket to travel

Contactless Transit Models

1. SINGLE PAY AS YOU GO MODEL

- Replaces cash
- Fare charged at start of each journey

Suited to low to medium value
single operator services (e.g. bus)



1. Customer uses their contactless card or device to make a single journey. Touch in only.
2. Customer can view charge on their bank statement.

2. AGGREGATED PAY AS YOU GO MODEL

- Replaces cash
- Can combine several journeys into one charge
- Charge typically collected at end of each day
- Fare capping possible

Suited to low to medium value multi-operator,
multi-mode services (e.g. city centre travel)



1. Customer makes a multi-leg journey or multiple journeys using their contactless card or device. Touch in and touch out.
2. End of day processing settles customer's daily charge.
3. Customer can view charge on their bank statement.

3. PRE-PURCHASE MODEL

- Replaces paper tickets
- Fare charged at point of purchase
- Card permits travel
- Can include season tickets

Suited to higher value services
(e.g. long distance travel)



1. Customer purchases their ticket online and associates it with their contactless card or device.
2. Customer can view their journey on their bank statement.
3. Customer uses their contactless card as their ticket to travel.

Response to Model One

- Liked for its simplicity and ease but suited to some travel behaviours more than others



- Simple and easy – just one tap, one price
- Don't have to remember to tap out



- Questions over how it would work since bus fares varied in our locations depending on the journey length: how would the system know where you're going?
- Many would still want to see/know the amount they're going to be charged before paying

Who is it for?

- Those using 1 bus only on a regular basis so they also know their ticket price → many respondents in our sample fit this category
- Reassures those uneasy about new technologies

You don't need to tap out when you finish your journey. You just go so it's faster.
[User, Female, 51-60+, York]

I don't understand how it would know what to charge you.
[Potential User, Female, 36-50, Bristol]

If the model could account for different prices for different lengths of journeys, as well as provide information on journey cost, then it's likely it would appeal to many bus users in smaller cities, including Oxford

Response to Model Two 1

- Clearer in terms of understanding how the system would know where you travel and how much to charge you but raises other questions



- Gives reassurance there is a record of your journeys you can check / use as proof if you need to claim money back
- Allows flexibility for multi-leg journeys

But with tapping out at least there would be a record for how far you had gone so you won't be overcharged. [User, Female, 51-60+, York]



- Seen as less relevant to many customers in cities with fewer travel options so who rarely make multi-leg journeys
- Some ask about practicality of tapping out on buses – Where would you tap out? Would it cause crowding?
- Need to see the price before paying
- The term 'capping' isn't always understood and some want to know if and how this is different/better than day tickets'

What if the bus is really busy and I can't get to the reader. Then what happens? [User, Female, 51-60+, York]

Where travel is very predictable/always the same, passengers tend to know what ticket they need in advance so there is less need for managing the cost of unforeseen and variable journeys through capping

Response to Model Two 2

- The model, as operates currently in London, unsurprisingly seems better suited to travel in bigger cities with more multi-leg journeys and more potential variation in routes taken

Who is it for?

- Very few respondents in our sample felt they made enough multi-leg journeys for this model to be very relevant to them (even in Birmingham this applied to most)
- But most could see it useful for their leisure travel where they thought they'd be more likely to make multi-leg journeys, in particular if they went to London
- Flexibility as a benefit of this model held more appeal in Birmingham where potential for variation in travel was much greater than in other places

I'd describe it as London-centric. This is capital city travel for the non-car dependent traveller. I'm not convinced it'd be appropriate for Bristol, it's not big enough. [Non-User, Male, 50-60, Bristol]

I do like it for when I go into London and I don't know how many routes I'm going to be taking and I just keep tapping in and out. [User, Female, 20-30, Oxford]

With this one you can change your mind about where you're going. It's extremely flexible. [User, Female, 18-30, Birmingham]

Obviously, this model holds more appeal for certain locations based on greater size and higher number of transport options, modes and possible journeys

Response to Model Two – Comparison to previous research

- Model Two is the closest to the proposition explored in the previous research
- Comparison highlights differences between London (plus suburbia around it) and cities included in this research

Key benefits of this model identified in previous research

Flexibility

- Allows for change of plans during the day of travel rather than being constrained by the ticket bought in advance

Less planning

- No need to decide in advance which ticket to buy so saves time and effort that goes into planning travel and choosing a ticket

Saving money

- Could help some to save money on unnecessary tickets, e.g. no need to buy a travelcard

As variation reduces with size of place, flexibility becomes less relevant

If journeys are roughly the same, there isn't much planning to do in the first place

If multi-leg journeys are rare, it's difficult for 'capping' to be a meaningful way of saving money in case day ticket isn't needed

Response to Model Three

- Somewhat difficult to understand and many could not see immediate benefits



- Some can see the advantage of not having to pick up the tickets as when buying them online but appears as small benefit
- Some like they can see the prices before paying
- Security concerns over CP diminish so this is appealing to some
- Some interested in paying for their children's travel in this way, if children could have bank cards where parents could load tickets



- 'Online account fatigue' main reason against it
- Advantages of not having to pick up tickets
- Seems to remove flexibility which is associated with CP

Who is it for?

- Potentially, some season ticket holders where payments are less frequent so less onerous
- Some current Non-users who would consider using CP in travel but have security and budgeting concerns which this model alleviates

I don't see the point of having a contactless card if you don't have that flexibility. [Non-User, Male, 50-60, Oxford]

For this model to become appealing, ease of setting up and using the online account will be important if benefits are to outweigh the effort

6. HOW SHOULD CONTACTLESS PAYMENT ON TRAVEL WORK: SPECIFIC PROCEDURES

Tapping in and out

- With the wider roll-out of CP, customers from outside London get familiar with the action of 'card tapping' not just through occasional use of Oyster but through using or observing people using CP in shops



If you forget to tap off when you leave the bus, you've been on all day! [Potential User, Female, 36-50, Bristol]

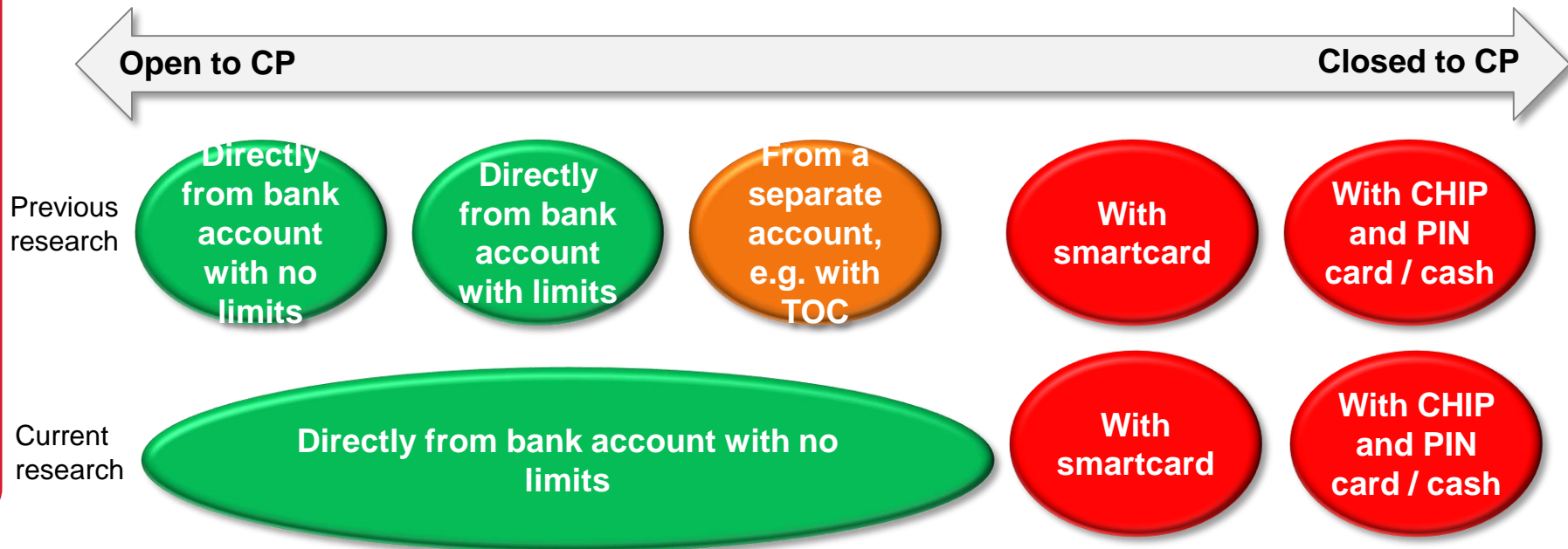
- Most know how to 'tap the card' although there are a few Non-users and Potential users who think you'd swipe it rather than tap it
- They also generally understand that this is how the system tracks your journey and charges you
- Still, 'tapping in' seems easier to imagine (e.g. when you board the bus, at the barrier) whereas tapping out sometimes raises questions:
 - Where would you tap out on a bus?
 - Could you pay a lot if you forgot to tap out?

I would assume there would be a reader on trains and buses where you tap your card. [Non-User, Male, 50-60, Bristol]

If 'tapping in only' model could ensure bus customers knew the ticket price and were able to pay for different tickets depending on journey length, this may be the preferred model for many who only use one bus rather than make multi-leg journeys

Ways of paying

- Compared to previous research, there was less caution about money being taken directly from the account and more need to retain convenience



Change in attitude likely to stem from greater familiarity with CP through wider roll-out and time customers had to get used to it

'Best fare guaranteed'

- There were mixed feelings about the promise of 'best fare'

Best Fare

I would like to see the fare online so you could check back as well and make sure it was correct what you were being charged. [User, Male, 60, York]

- There was general trust in local bus companies and/or large operators, an assumption 'they wouldn't lie to you'
- However, some still feel uneasy about not being able to see fare options beforehand but having to trust someone else to work that out for them → they want to have at least a general idea about cost of fares for different zones
- As mentioned regarding capping, some want to understand if and how this is different/better than day ticket

I'd want to know what it was before I paid. I know they say they'll work it out but that's very trusting. [Non-User, Female, 37, Bristol]

I'd be pretty confident I'd be getting the best price, I don't think they could say it otherwise. [User, Male, 18-30, Oxford]

Customers feel it is counterintuitive to be expected to pay without knowing the price. Information about the cost of fares by different zones needs to be available through various channels to act as a rough guide and set expectations around cost

Proof of payment / ticket checking

- Customers want to have proof of payment with CP as with any other way of paying

Why it's needed?

- Most need it for their own record should something go wrong so they can prove what they paid
- Some want it in case of ticket checking, although very few thought this spontaneously but rather when asked about ticket checking

How it's needed?

- Respondents generally expect to get proof of payment at the point of purchase, e.g. a text, email or information at the gate/on the reader
- Respondents also want to be able to access their full record of transactions in multiple ways – through an online account, app, at the ticket office and using station machines

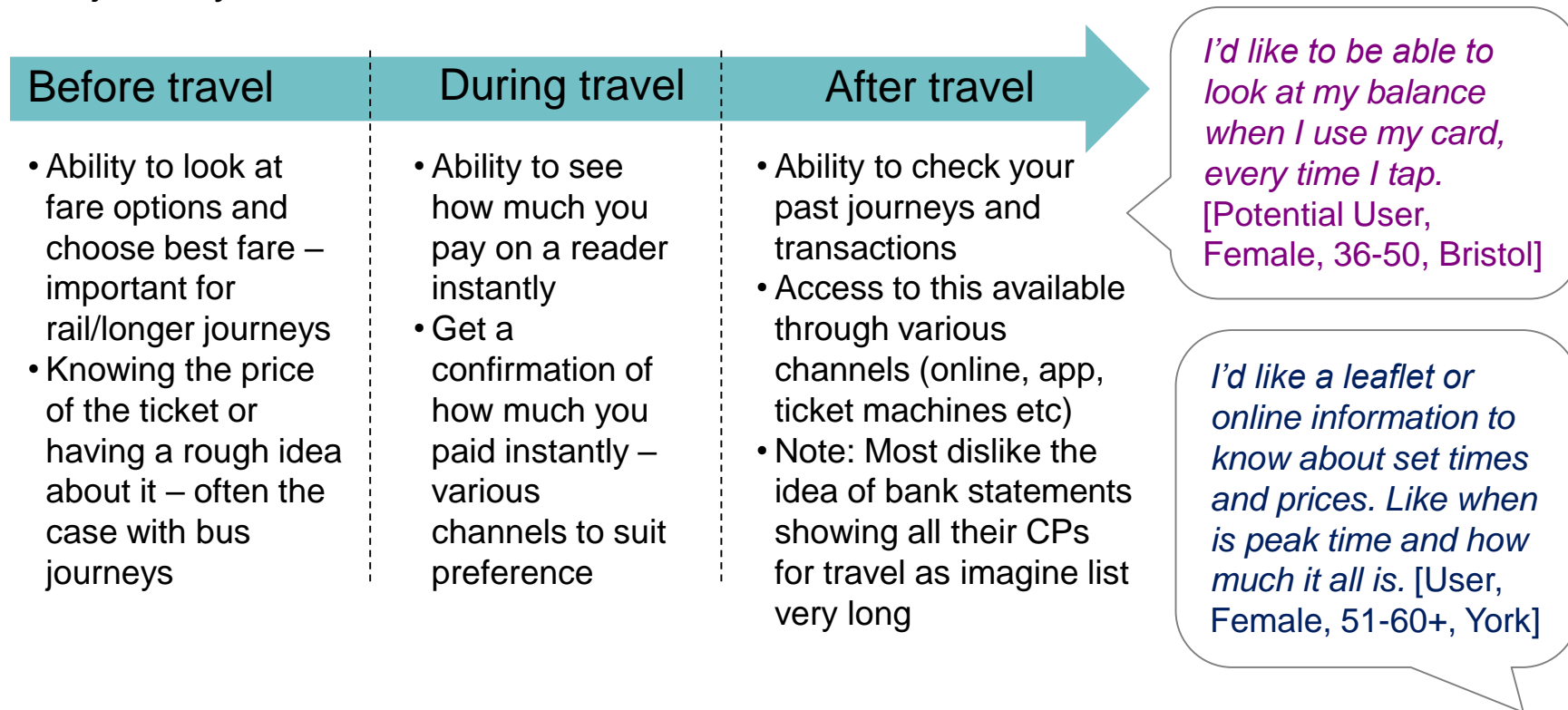
I'd want something like an email saying they have charged me for any type of ticket. [User, Male, 60, York]

I think an online account would be good to keep track of what you are paying. [Potential User, Female, 18-30, Oxford]

Variety of options for proof of payment important to reassure regarding proof of payment and suit different customers depending on their preferred channels

Budgeting for travel

- Budgeting for travel with CP is important in different ways at different points in the journey



Providing information on fare prices / rough guidance on likely cost as well as allowing customers to monitor their spending during and after journey is key to alleviating any concerns over budgeting

Customer service when there's a problem/query

- Many feel confident they'd know who to go for customer service although some are not sure

Whose customer service?

- Most claim it would depend on the nature of the problem/query
- For example, they would go to the operator if the fare they were charged was wrong and they would go to the bank if there is a problem with the card or the account
- A few unsure who to contact first
- Customer service at outlets with CP appears decisive for educating customers on CP, prompting usage or alternatively, in case of negative experience, inhibiting usage

Importance of customer service

I think there would be different numbers for different people, for example if it's about your bus itself you'd need the travel company, but I think there should be one main phone number for contactless payments. [Potential User, Female, 36-50, Bristol]

I like to be able to have contact with staff because I like to be able to ask questions if I need to. [Potential User, Female, 36-50, Bristol]

With greater extension of CP to transport, customers are likely to need help explaining how it works in that context as well as prompting to use it

7. CONCLUSIONS

Conclusions 1

CP is accepted as particularly well suited to the travel context although mainly for local/cheaper bus and train travel rather than more expensive, longer train journeys

- Paying for travel is seen as a situation where CP is beneficial, i.e. where it can cut down on queuing, where speed is important and where it can remove the need for having petty cash
- Those more familiar with smartcards can see additional **benefits** such as flexibility and potential savings through avoiding buying tickets in advance that may prove unnecessary
- Greater availability of CP in general and exposure to smartcards also normalise these ways of paying and so prime some to be interested in CP in travel
- However, **barriers** around CP usage remain for others – some Non-users and Potential users remain too concerned over security and budgeting *in general* to consider CP in transport, despite acknowledging benefits
- But even when CP is welcomed, budgeting concerns lead many to question CP for longer train travel as CP is seen in terms of spontaneous payment and travel rather than pre-planned which they need for expensive journeys.

Conclusions 2

Preferences for particular contactless travel models depend on travel patterns, broader attitudes to new technology and CP, as well as how particular models are seen to perform with regard to key benefits of CP in travel

- **Model 1** fits well with the travel patterns of many of the sample in Oxford, Bristol and York where single journeys predominate. It also appealed to those less familiar with smartcards and anxious about new technologies because of its simplicity. Ideally, it would need to allow customers to see the price of their ticket before paying and also allow payment for different tickets depending on journey length
- **Model 2** was generally preferred by Users and those familiar with smartcards, as they appreciated it allowed more flexibility in travel than Model 1, as well as potential savings. It was seen as predominantly relevant to those passengers making multi-leg journeys, which many respondents linked to bigger cities or to their leisure travel. In addition, customers need to understand how, if at all, capping/'best fare guaranteed' is any different/better/same from savings they make through current day/weekly tickets
- **Model 3** held lower appeal overall but some Non-users and Potential users concerned over security were reassured about using CP in this way.

Conclusions 3

Mixed levels of exposure to smartcards mean that information and staff support on how to use CP in travel will be extremely important, as well as allowing customers control over their payments and inspiring confidence in technical capability

- There is some anxiety over forgetting to **tap out** so minimising the risk of this will be important. Customers were also unsure how tapping out would work on buses and whether it would cause crowding so this concern needs to be considered
- As outlined, the benefits of **capping** need greater explanation. Customers also need to know they can get the same savings they currently do with their day ticket with CP. If there is potential for any further benefits with CP over day tickets – e.g. not having to decide in advance whether a day ticket is needed so potentially saving on unnecessary tickets – this is likely to add further benefits to CP
- **Ticket checking** wasn't spontaneously questioned but when prompted some struggled to imagine how it would work so information on this will be helpful
- **Ability to budget and be in control of your payments** is critical for CP usage and travel poses certain challenges in this regard as customers are unsure how they would see the price of the ticket in advance. Allowing customers to see the price before paying and then have proof of payment during and after travel was therefore seen as important
- For those with **security concerns**, inspiring confidence in technical capability will be important to reassure them that security systems are in place.

Conclusions 4

Oxford's proximity to London and somewhat greater exposure to smartcards make it a fertile ground for introducing CP. Having said that, security and budgeting concerns around CP in general will be key to address to broaden usage from current CP Users to 'warmer' Non-users (and Potential users)

- Greater **exposure to smartcards** meant there was somewhat more awareness of how smartcards worked – and therefore understanding CP would work in similar ways – and appreciation for the benefits of speed, ease, convenience, flexibility
- Having said that, a number of regular customers in the sample were unaware of the smartcard offering even though it has been available for many years which highlights the **challenge in changing ingrained behaviour** amongst some passengers
- Other factors influencing interest in CP in travel – most notably **travel patterns** and **attitudes to CP in general** – broader findings apply that were not Oxford specific
- Overall, current **Users** of CP are likely to welcome the introduction of CP in travel on buses in Oxford and there is potential to attract some **Non-users** too as they also recognise the benefits of cash replacement. In addition, barriers are lower as tickets are cheaper and customers tend to know the price of their journey
- There was a split in terms of preference for **CP models** – while Model 1 was felt to fit well with travel patterns of many bus users in Oxford, some Users preferred Model 2 because of its flexibility and potential savings

APPENDIX

Procedures explored in the research

Research explored passenger views regarding the following procedures related to contactless payment in transport:

- Tapping in and out
- Multi-modal use (would it differ by mode)
- Paper ticket issued / proof of payment / ticket checking?
- Debit from account directly (PAYG) versus use as a token from a pre-registered account where ticket bought already
- Attitudes to price capping / guaranteed best price
- Issues around budgeting for travel, access to account
- Security concerns
- How do you check what you were charged
- What happens in the case of a problem or query (would they expect to contact bank or transport operator)

Propositions / Models explored in the research 1

Model 1:

- Use your contactless card or mobile to make a single journey
- Pay your fare at the start of your journey with your contactless card or mobile by touching in
- As you are charged the fare at the start of your journey you don't need to touch out at the end of your journey
- You can view the amount you were charged on your bank statement

Propositions / Models explored in the research 2

Model 2:

- Use your contactless card or mobile to make multi-leg or several journeys
- Touch in and out with your contactless card or mobile at the start and end of each journey or each leg of your journey
- You can use different modes of transport (i.e. bus, train, tram etc)
- All your journeys that day (or other defined period) will be combined into one charge
- Your fare is therefore typically processed at the end of the day
- Daily or weekly caps can be applied
- You can view the amount you were charged on your bank statement

Propositions / Models explored in the research 3

Model 3:

- Purchase your travel ticket online and associate it with your contactless card or mobile (can be any ticket e.g. a concession return train ticket or a season ticket)
- You can view the amount you were charged on your bank statement
- Then you use your contactless card or mobile as your ticket to travel