

# Mobility as a Service – Acceptability Research

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# Executive summary

The Department for Transport (DfT) commissioned Ipsos MORI to use qualitative research to explore the perceived potential enablers, opportunities, barriers and risks to members of the public associated with using a Mobility as a Service (MaaS) platform. MaaS is one of the workstreams within the Department for Transport's (DfT) Future of Transport Regulatory Review Programme Throughout the research and report, the following definition of MaaS has been used:

“The integration of various modes of transport along with information and payment functions into a single mobility service.”<sup>1</sup>

A series of focus group discussions and in-depth interviews were conducted with people in urban and rural locations as well as those with a visual impairment and/or a physical impairment. The sample also included quotas to ensure a spread of age, gender, ethnicity, social grade, users of different transport modes and users/non-users of subscription services. MaaS was introduced to participants using stimulus material showing examples of MaaS platforms being used around the world, but this was a new concept to participants and findings reflect this. Owing to the small sample size and the purposive nature with which it was drawn, findings from this research cannot be considered quantifiable conclusions from a statistically representative sample.

Key findings are summarised here, grouped by research question:

## What could influence people's acceptance of, and decision to, use a MaaS platform? Why might people choose to use a MaaS platform rather than traditional mobility services?

Two key factors emerged as important when participants compared the appeal of a MaaS platform with traditional mobility services.

1. **Cost and affordability:** cost was frequently cited as a key driver in making transport use decisions (e.g. buying advanced tickets) and was therefore a key consideration in shaping acceptance of, and interest in, the MaaS platform. There was a strong desire for good value, tailored and flexible payment options which offer integration with existing railcards and concessionary fares. Participants thought that some kind of financial incentive (e.g. greater value for money for transport use or a free trial) would be likely to be a key motivation to use a MaaS platform.
2. **Convenience:** participants sought convenient and reliable journey planning and payment. Perceptions about whether MaaS could provide this were influenced by the following:

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<sup>1</sup> Page 10 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/846593/future-of-mobility-strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf)

- a. **Views towards transport infrastructure:** those with experiences of unreliability and lack of service provision of transport services tended towards the view that a MaaS platform could provide useful information during delays but could not overcome existing infrastructure issues.
- b. **Current information/payment services used:** participants often queried whether a MaaS platform could offer greater accuracy of information when compared to other services they were already comfortable with.
- c. **Transport familiarity and use:** participants questioned how useful a MaaS platform would be for familiar or 'turn-up-and-go' (very frequent service) journeys. It was anticipated that MaaS would be most useful for unfamiliar journeys and for those new to using public transport in the local area.

Across the research, there were some indications that demographic and geographical factors had some influence in shaping attitudes towards MaaS. The workshops were split by **age** (18-44/45+) and **location** (urban/rural) allowing us to observe the following:

- Concerns regarding the accessibility of a MaaS platform typically came from older participants who considered themselves less technically confident and proficient.
- Older participants believed that 'younger people' would be more concerned about MaaS' potential for modal shift, though these views were in fact mixed across all age groups.
- Similarly, participants in more rural locations with fewer public transport modes (Inverness and Telford) were more enthusiastic about the potential of MaaS to encourage more sustainable travel.
- Participants from rural areas welcomed the integrated payment function within MaaS platforms to replace current cash-based systems. However, rural participants expressed concerns around MaaS' ability in areas with poor signal/data coverage.
- Participants felt that a potential location-tracking function could be valuable for those with caring responsibilities of children, 'vulnerable' adults such as those with learning disabilities or visual/physical impairments.

### What are the benefits and opportunities of using a MaaS platform in comparison to traditional journey planning and/or using a private vehicle?

We found the following potential **benefits** and **opportunities** of using a MaaS platform as described by participants:

- Potential improved **value for money** for transport use such as cheaper fares and information to support cost-efficient transport choices.
- Providing information in the following **situations**: when planning unfamiliar journeys, experiencing service disruptions, and when new modes of transport are introduced to the local area.

- Supporting convenient journey planning and payment by bringing together different modes of transport and payment into one platform; offering a service that is **time-saving, cost-effective**, and provides **accurate real-time information**.
- The potential for information that supports users in **staying safe** when making journeys. For example, through a location-tracking feature (although the appeal of this was mixed).

### What are the disadvantages and risks of using a MaaS platform?

Participants identified the following potential **disadvantages** and **risks** of using a MaaS platform:

- Concern that there may be **limited access** to best value fares, deals or promotions on a MaaS platform.
- Queries around whether MaaS was offering something **significantly different** compared to existing journey planning and payment platforms.
- **Scepticism** that bringing together all the information required to facilitate a MaaS platform would be possible without it becoming too complex. There were questions about whether it would be likely that a range of operators would share the data required.
- Queries regarding the **governance** of MaaS with a private and commercial governance considered to be at odds with a platform aiming to promote and support more sustainable and active travel at typically lower costs.
- Concern regarding the use and collection of **personal data**. Whilst many noted that they would feel reassured by transparent information regarding data use (e.g. GDPR adherence), others were more concerned and felt that there should be clear opt-in processes for data sharing and use.

### How could MaaS platforms be made inclusive and accessible? What actions could help to ensure all sectors of the population can access MaaS applications?

Two aspects of accessibility were evident.

- 1. MaaS could improve accessibility of public transport:** Participants with an impairment/disability cited current frustrations with using public transport such as lack of lifts, lack of audio guidance at bus stops and lack of access to priority seats. Whilst there was scepticism that a MaaS platform could positively impact on these issues, there were some suggestions about how MaaS could support and enable accessible travel:
  - Include **information about the accessibility of journey routes** and options to personalise the platform so that it could flag accessibility information.
  - **Request a priority seat:** some queried whether a MaaS platform could make direct links to specific services, flagging that they would need a priority seat.
  - **Integration with booking systems for travel assistance.**

- **Information to support personal safety and security** such as identifying walking routes with good lighting (where this would be helpful for someone with a visual impairment). There was some interest in the potential for location-tracking amongst those keen to share this type of information with their family and carers.

## 2. MaaS platforms need to be accessible

- Those who are **less technically confident** noted that it would be reassuring to have a telephone option for MaaS.
- Those with a **visual impairment** highlighted the importance of online platforms being compatible with voice-over software and customisable (e.g. large print).
- Concerns were raised by those who travelled or lived in more rural or remote areas regarding **limited mobile coverage**.

### Is there anything that could be incorporated into MaaS platforms to encourage consumers to choose more active travel and sustainable modes?

Some participants noted that information could be provided on a MaaS platform to help encourage more **sustainable modes** including public transport, alternative forms of private car use (e.g. electric vehicles and car clubs) and 'active travel' (e.g. walking, cycling and wheelchair).<sup>2</sup> However, a range of potential barriers to modal shift were also noted such as the comfort with current travel habits and underlying infrastructure constraints. Additionally, data including carbon footprint information or calorie counting, was also suggested for encouraging **more sustainable** and **healthier** travel.

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<sup>2</sup> Page 10 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/846593/future-of-mobility-strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf)



# 1 Background & methodology

## 1.1 Background

The UK Government's Industrial Strategy<sup>3</sup> sets out Grand Challenges to put the UK at the forefront of the industries of the future, ensuring that the UK takes advantage of major global changes, improving people's lives and the country's productivity. The Future of Transport Grand Challenge aims to look for opportunities to improve customers' experience, drive efficiency and enable people to move around more freely. Mobility as a Service (MaaS) is one of eight workstreams within the Department for Transport's (DfT) Future of Transport Regulatory Review Programme,<sup>4</sup> part of DfT's Future of Transport programme.

### Mobility as a Service (MaaS)

With increasing availability of data and digital capability in the mobility sector, DfT are seeing the emergence of new business models that package different modes and services together into one application to make planning and payment of trips easier for consumers. Such innovation has been termed 'Mobility as a Service' (MaaS), which DfT defines as 'The integration of various modes of transport along with information and payment functions into a single mobility service.'<sup>5</sup> This has the potential, through innovative approaches, to integrate a variety of transport modes, promote the use of mass transit and more sustainable travel, and improve the journey experience for consumers. MaaS is still in its infancy worldwide, with testing and trialling taking place alongside small-scale deployments.

## 1.2 Research objectives

DfT commissioned Ipsos MORI to conduct qualitative research to help understand general public attitudes towards MaaS.

The aims of the research were to:

- Inform the development of the Government's strategy and regulations in relation to MaaS including: consumer protection; consumer rights; personal data; accessibility; and safety and inclusion concerns.
- Help to understand any perceived benefits of MaaS to the consumer as well as highlight any potential challenges and risks.
- Identify gaps in DfT knowledge of social attitudes towards MaaS that need to be explored further.

<sup>3</sup> <https://www.gov.uk/government/topical-events/the-uks-industrial-strategy>

<sup>4</sup> <https://www.gov.uk/government/consultations/future-of-mobility-call-for-evidence/future-of-mobility-call-for-evidence>

<sup>5</sup> Page 10 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/846593/future-of-mobility-strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf)

The specific research questions for exploration were:

- What could influence people's acceptance of, and decision to, use a MaaS platform? Why might people choose to use a MaaS platform rather than traditional mobility services (e.g. journey planners and ticket purchasing systems)?
- What are the benefits and opportunities of using a MaaS platform in comparison to traditional journey planning and/or using a private vehicle? What are the disadvantages and risks of using a MaaS platform?
- How could MaaS platforms be made inclusive and accessible? What actions could help to ensure all sectors of the population can access MaaS applications?
- Is there anything that could be incorporated into MaaS platforms to encourage consumers to choose more active travel and sustainable modes?

### 1.3 Methodology and sample

The research methodology involved a mix of two qualitative techniques – discussion groups and depth interviews. A qualitative approach was identified as the most appropriate method for this research as it provides an open and discursive forum, ideal for bringing together people to discuss and debate views on new ideas and services - such as MaaS. Depth interviews were carried out with people with a visual or physical impairment enabling the research to reach this audience and providing an individualised setting for participants to speak openly about their transport-related experiences and views.



Fieldwork was conducted between the 14th of January and the 4th of February 2020<sup>6</sup>. During this period, Ipsos MORI carried out ten 90-minute-long focus groups with the general public, across five locations in the UK: Cardiff, Inverness, London, Manchester, and Telford (see diagram, right). Locations were chosen to include urban locations and rural locations reflecting different transport infrastructure and provision.

In addition, eight 60-minute-long telephone depth interviews were carried out with participants with physical and/or visual disabilities from across the country, to explore in detail attitudes towards the concept of MaaS and how it could be made accessible.

Participants were recruited from the general public, working to a matrix that ensured that the research included a mix of public transport users (high/medium/low) and subscription service users, with a spread of ethnicity, age and socio-economic group (class).

<sup>6</sup> All fieldwork took place before the first transmission of Covid-19 within the United Kingdom on the 28th February 2020.

Group discussions were stratified on the basis of location and age, with younger and older groups convened. This stratification ensured some homogeneity within each group to encourage positive group dynamics and facilitate discussion. Each group included a mix of local transport use, gender, ethnicity, social-economic group and subscription service use to bring together a range of views and experiences when discussing views towards MaaS.

### Sample structure

An overview of the sample structure is provided below, with a full breakdown in Appendix 1.

Method	Location and sampling criteria	
<b>10 x focus groups in a range of locations (8-10 participants per group)</b>	<b>Cardiff</b> <ul style="list-style-type: none"> <li>▪ Urban, suburban</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 18-44 years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>	<b>Cardiff</b> <ul style="list-style-type: none"> <li>▪ Urban, suburban</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 45+ years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>
	<b>Inverness</b> <ul style="list-style-type: none"> <li>▪ Rural</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 45+ years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>	<b>Inverness</b> <ul style="list-style-type: none"> <li>▪ Rural</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 18-44 years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>
	<b>London</b> <ul style="list-style-type: none"> <li>▪ Urban, suburban</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 18-44 years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>	<b>London</b> <ul style="list-style-type: none"> <li>▪ Urban, suburban</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 45+ years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>
	<b>Manchester</b>	<b>Manchester</b>

	<ul style="list-style-type: none"> <li>▪ Urban, suburban</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 18-44 years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>	<ul style="list-style-type: none"> <li>▪ Urban, suburban</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 45+ years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>
	<p><b>Telford</b></p> <ul style="list-style-type: none"> <li>▪ Rural</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 18-44 years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>	<p><b>Telford</b></p> <ul style="list-style-type: none"> <li>▪ Rural</li> <li>▪ Users of mixed transport modes</li> <li>▪ Mix of subscription service users/non-users</li> <li>▪ Age: 45+ years</li> <li>▪ Spread of gender, ethnicity and social grade</li> </ul>
<b>8 x telephone depth interviews</b>	<p><b>Physical impairment</b></p> <ul style="list-style-type: none"> <li>▪ 4 x depth interviews</li> <li>▪ Uses mixed transport modes</li> <li>▪ Spread of age, gender, ethnicity and social grade</li> </ul>	<p><b>Visual impairment</b></p> <ul style="list-style-type: none"> <li>▪ 4 x depth interviews</li> <li>▪ Uses mixed transport modes</li> <li>▪ Spread of age, gender, ethnicity and social grade</li> </ul>

## 1.4 The research materials

Discussion guides to shape the conversations in groups and depth interviews were designed by Ipsos MORI in collaboration with the Department for Transport. These guides were intended to be flexible documents, allowing the moderator to follow up interesting lines of inquiry as they emerged, but also ensuring that there was commonality of themes discussed across the research sessions.

During the group discussions,<sup>7</sup> participants were presented with stimulus materials designed to support discussions and help inform participants about various aspects of MaaS.<sup>8</sup>

## 1.5 Interpreting qualitative findings

Qualitative research is illustrative, detailed, and exploratory. It offers insight into the perceptions, feelings, and behaviours of people. Owing to the small sample size and the purposive nature with which

<sup>7</sup> For a detailed overview of the discussion, please see appendix 2, for the focus group discussion guide, and appendix 4, for the depth interview guide.

<sup>8</sup> A full set of the stimulus materials are provided in appendix 3

it was drawn, findings from this research cannot be considered quantifiable conclusions from a statistically representative sample. Evidence in this report is based on participants' perceptions. It is important to remember that even though some perceptions may not be factually accurate, they represent "the truth" to the participants and as such, are vital in understanding their attitudes and views.

In summary, **qualitative** research:

- Explores the **range of attitudes and opinions** of participants in detail.
- Provides an insight into the key **reasons underlying** participants' views.
- Leads to findings that are **descriptive** and **illustrative**, not statistically representative.
- Involves participants often holding **contradictory views**.
- Provides with detailed information and can become **more informed** than the general public.

### [How to read the report](#)

Throughout, we have referred to "participants" and provided evidence through verbatim quotes where these illustrate findings. To protect participant anonymity, quotations have been attributed to key characteristics including the method they participated in, location, and age band (18-44 year or 45+ years).

## 2 An overview of factors influencing views towards MaaS

Across the research a range of factors emerged as important in influencing views towards MaaS; these have been grouped into four themes as shown in the diagram below.

Figure 1: Themes influencing views on MaaS



### 2.1 Cost and convenience of using MaaS

Essential factors when reflecting on the appeal and potential use of MaaS were those related to **cost**, **convenience** and views towards the **current transport infrastructure** in participants' local area. These were current considerations when planning and making journeys and participants sought to understand how these would be reflected and addressed to create an appealing MaaS platform.

### 2.2 Accessibility needs and preferences

Research participants described two factors focussing on accessibility needs and preferences. The first of these was **accessibility of public transport**, with participants reflecting on how accessible current journeys are and the extent to which MaaS could support accessible journeys. The second related to the **accessibility of a MaaS platform** in general, with suggestions for a simple interface that is compatible with voice-over software.

### 2.3 Potential for MaaS to drive modal shift

Participants were able to identify a range of features that a MaaS platform could offer that could potentially encourage more **sustainable transport choices**. However, these held differing appeal amongst participants. Those most engaged in making these types of choices felt that these features could be a motivating reason to use MaaS. Those less engaged felt that these features were 'nice to have' but did not hold strong appeal.

### 2.4 Privacy, safety and trust

Whilst not always top of mind, **personal safety and security** were also considered important and likely to be queried once there is a clear motivation to use MaaS. Participants sought reassurances that any MaaS platform would adhere to data protection rules and regulations and be transparent in data use.

This was often linked to whether the platform would be provided by a public or private organisation; there were mixed opinions regarding this.

The following four chapters explore each of these themes in detail.

## 3 Cost and convenience of using MaaS

Both the affordability of travel and the convenience of journey planning and payment were key influences on participants' opinions of MaaS as shown in the diagram below. These mirrored current considerations when planning and making journeys; participants were keen to understand how MaaS would reflect and address these.

Figure 2: Two key aspects of planning and making journeys influencing participant reaction to MaaS



### 3.1 Cost and affordability

Cost was frequently cited as a key driver in making transport use decisions. Participants considered the cost of different transport modes without MaaS, and how to maximise value for money when deciding which transport options to use. This included seeking out and taking advantage of advanced tickets, promotions and loyalty points (e.g. credit card points when using contactless payments) for public transport and purchasing ticket types that were perceived to offer best value.

Participants were presented with information<sup>9</sup> showing that a MaaS platform would include a payment function, with existing models (e.g. Whim) offering subscription and pay as you go options. With cost and affordability of travel a key decision-making factor, participants were keen to think about how these payment options would work in practice.

#### Subscriptions

Participants with experiences of having subscriptions (e.g. television, mobile phone, gym) often drew on this to consider how a subscription could work for a MaaS platform, particularly in relation to the **value** of a subscription; whether it could be **tailored**; and how **flexible** it would be.

Participants queried whether subscriptions would be **tailored**, reflecting the modes of transport that individuals wanted to use rather than giving blanket access to all modes of transport available. The

<sup>9</sup> See appendix 3 for stimulus materials shown to participants.



preference for a tailored subscription was driven by cost concerns, with participants reflecting that they did not want to pay for transport services that they ultimately would not use.

*“How do you know whether you’d be better off? If you’re going to pay £20 a month or something, what if you only use £3 worth of tubes that month? That’d be my worry. It’s like subscribing to the gym and never going.”* **Group, Cardiff, 45+ years**

There was an assumption that subscriptions would be tailored to the local area, and therefore subscription costs would differ between cities. For example, those in Inverness anticipated that the cost of a subscription would be higher in somewhere like Glasgow.

Queries were also raised regarding the **flexibility** of subscriptions, and whether signing up to a MaaS subscription would necessitate an annual subscription or would offer flexibility to sign up on a month-by-month basis. The latter was cited as useful by those whose public transport use was not the same every month and therefore a subscription might be useful one month, but not the next.

Integration of existing season tickets was queried, with participants holding these (e.g. annual Metrolink ticket in Manchester) questioning whether these could be added to an individuals’ MaaS account.

### Pay as you go (PAYG)

PAYG was considered a useful option for those who used public transport infrequently, those planning unfamiliar journeys and for tourists. These were all considered situations where it would be valuable to plan and pay for a one-off journey on a single platform.

PAYG was also viewed as a more affordable way to pay for transport, allowing people to spread the cost of transport instead of paying a larger amount of money upfront, which could be difficult. There were queries regarding how a PAYG system would work; some anticipated that the platform would link directly to a bank account (similarly to a contactless transaction), whilst others anticipated that the platform would hold a ‘wallet’ of money topped up by the user (similarly to a PAYG Oyster card payment model).

### What role could cost and affordability play in encouraging uptake of MaaS?

With cost playing a crucial role in transport decision making, it was clear that uptake of MaaS could be encouraged if linked to a **financial incentive**.

*“At the moment I say why change what I’ve got? But if this would knock a discount off it that might change it.”* **Group, Cardiff, 45+ years**

This was particularly the case where participants anticipated that the other features of MaaS (e.g. information provision) would not offer anything different when compared to other information services they used; cost would need to be the key motivator to use a MaaS platform.

Cheaper travel (when compared to the cost of tickets purchased from ticket vending machines which were perceived to be expensive) and loyalty schemes were all cited as financial incentives that could make MaaS an appealing platform. Financially beneficial introductory offers such as a free trial, free taxi ride, or reduced prices for new customers/referred customers were frequently suggested as good ways to generate interest and uptake.

There were mixed views on whether transport prices could be cheaper on a MaaS platform. Whilst some queried how a MaaS platform would make money, expecting that it might charge higher prices or a handling fee, others felt that there may be a cost saving because MaaS would be providing the administrative role for transport providers.

Flexibility around **integration** with existing railcards, bus passes and tickets, was suggested as an important aspect of a MaaS platform. Participants with railcards (e.g. disabled person's bus pass or student railcard) and those with concessionary fares (such as 'Club 50' in Inverness and the Freedom pass in London) noted that it would be essential that these could be integrated with the MaaS platform to ensure they continued to receive free or discounted travel; if this was not possible they would be very unlikely to consider using the payment function of MaaS. There was also suggestion that MaaS could integrate with other transport schemes such as the London Taxicard.

Ideas for ways in which MaaS could **support with making cost efficient transport choices** were generated by participants. These focused on the platform providing more information about the cost of journey options. Suggestions included:

- Clear identification of the cheapest option for completing your journey and tips and guidance for how to help save money (e.g. peak vs. off-peak travel and avoiding extending journeys into additional zones of travel).
- Providing a monthly summary of transport used and cost comparisons to support people in reflecting on their transport costs (e.g. financial sum spent on taxis during the past month, and potential saving if public transport had been used instead).
- Sending the MaaS user a notification once they had used transport to the value of their subscription (to help the user understand the value of their subscription).
- Automatically applying delay repay (rather than a manual form completed by users).

### What role could cost and affordability play in discouraging uptake of MaaS?

**Lack of financial incentive** to use MaaS emerged as a clear barrier to uptake. This was particularly the case where participants felt that other aspects of MaaS (e.g. information provision) was not offering something different or additional when compared to how they already managed journeys. In these instances, participants were looking for MaaS to offer something financially different and appealing.

*“For commuting, there’s only one bus that I use. I don’t understand why I would use a different app, unless it was cheaper, which I doubt.”* **Group, Manchester, 18-44 years**

There were also concerns that using MaaS could **limit choice and access** to the most cost-efficient fares. For example, participants queried whether promotions and deals (particularly for longer journeys) would still be available via a MaaS platform, and how they could be sure that they were accessing these.

Participants queried whether a MaaS platform might align to taxi companies with more expensive fare structures than other companies available. Concerns regarding choice and access to cost-efficient fares were linked to participant views on what type of organisation would be running the platform, with concerns that a privately-backed platform would be particularly focused on making money which could be financially detrimental to users.

### 3.2 Convenient and reliable journey planning and payment

Convenience and reliability of journey planning and payment emerged as important when considering the potential use and appeal of a MaaS platform. Views regarding the extent to which a MaaS platform could support convenient and reliable journey planning and payment was influenced by three factors:

Figure 3: Three factors impacting view towards MaaS journey planning and payment



The three factors are discussed in turn below.

#### 1. Views on transport infrastructure

Whilst participants felt that a MaaS platform could provide information regarding delays and alternative transport routes, they were keen to note that this would not overcome existing infrastructure issues. These included frustrations related to a perceived **lack of service provision** with comments around infrequent services, lack of services during the evening in more rural areas, limited reach of public transport (for those who worked in locations not served by public transport), and lack of dedicated cycle lanes.

The **diversity of local transport options** also emerged as an important factor influencing participant views towards the usefulness of a MaaS platform. In locations where public transport infrastructure was often based on one or two modes (typically more rural locations), participants queried how useful a platform integrating information and payment would be, when compared to existing platforms that they currently used. There was a perception amongst those in areas with a small number of transport modes

available that a MaaS platform would be particularly beneficial in areas with multiple modes of transport such as major cities.

*“I don’t think it would be as popular in Cardiff [compared to London] because you either get the bus or the train.”* **Group, Cardiff, 18-44 years**

Poor experiences regarding the **reliability** of public transport leading to delays and overcrowding were also cited as a frustration and barrier to using public transport. Reliability of services were noted as particularly difficult where they impacted on routine and familiar journeys for people with a disability/impairment. Where services were delayed or changed they could limit the extent to which people were able to use public transport services particularly where individuals felt uncomfortable navigating changed routes.

Reflecting on current transport infrastructure, there was **scepticism** regarding the feasibility of bringing together information from multiple operators. This was based on the perception that transport infrastructure was fragmented with different companies providing different local services. This led participants to query how data-sharing from different companies would work, and how realistic it would be to ensure that all local transport options would be included on a MaaS platform. Whilst participants in London noted that gathering all data needed could be difficult they felt that much of this was already managed by Transport for London. London participants already had access to multi-modal journey information via existing platforms (e.g. Transport for London, Citymapper).

## 2. Current information/payment services used

Participants queried whether a MaaS platform would offer something different or more convenient. Across the research, participants cited using a range of online and offline platforms when planning and making journeys. This included different platforms used to plan journeys, checking the status of services prior to, or during journeys, and for purchasing tickets. Participants were typically comfortable with the way in which they accessed information to plan and make their journeys, most often through mobile apps (e.g. Google Maps, Waze etc.) for shorter journeys and online booking platforms (e.g. Trainline) for longer-distance travel.

*“I think it’s no different to now, though. I have my Metrolink ticket on my phone.”* **Group, Manchester, 18-44 years**

Some participants had experienced issues with the reliability of transport information platforms and noted the importance of a MaaS platform providing **accurate, real-time information**. There was strong appeal for this particularly amongst participants in areas with infrequent transport services where there would be a considerable wait for the next service.

*“The larger cities have not just the first bus that’s coming but multiple, so you know the next one is coming. That isn’t available here. Just on the street, something interactive there so you know if you’ve missed one there’s another one I can take.”* **Group, Inverness, 45+ years**

Other real-time information that was suggested as useful included:

- Details regarding how many carriages formed trains (to help users anticipate how busy the service would be).
- Details of where to locate the lift at a platform/station.
- Information about arrival/departure platforms, especially for those making an interchange within a short time-frame.

### 3. Transport familiarity and use

Perceived usefulness of a MaaS platform was influenced by **familiarity of public transport**. Participants who took regular journeys (e.g. commute) using the same mode/s of transport each time queried how useful a MaaS platform would be in these instances. In particular, they queried the value of the journey planning element of the platform on these occasions.

*“I normally don’t [plan my journey], because I do the same journey day in, day out.”* **Group, Telford, 45+ years**

This view was particularly strong where participants felt that they already knew their journey and were comfortable with using an existing information and payment platform for the mode/s used for these regular journeys. With this in mind, MaaS was considered a more appealing platform when planning an unfamiliar journey or when someone was unfamiliar with public transport provision in the local area.

**Frequency** of services was also cited as a factor influencing the perceived usefulness of a MaaS platform. Those whose usual journey involved using transport with a frequent service wondered how useful MaaS would be for these types of ‘turn up and go’ journeys.

Overall, as described above, participants were keen to understand whether a MaaS platform could offer them greater convenience of journey planning and payment and whether this would be different compared to the services they currently used to perform these tasks. Views towards this were typically based on specific journey scenarios with participants expressing differing needs based on familiarity of journey and transport provision.

### In which situations could convenience play a role in enabling MaaS take-up?

Participants identified a range of **situations** when a MaaS platform could offer to support users with journey planning and payment.

### When planning unfamiliar journeys

Participants often felt that a MaaS platform would be useful when planning an unfamiliar journey for example, a journey they did not typically make, or a journey in a different city or area. Reflecting on information needs and decision-making priorities when planning for and making journeys, participants identified key information that a MaaS platform would need to provide to support users in making transport choices including information on:

- **Cost** of journeys.
- Accurate **speed** of journeys. Participants noted that journey times on current journey planning platforms did not always build in enough time for interchanges, any 'buffer' time for service delays, or additional time that might be needed based on individual needs.
- **Simplicity** of journeys (e.g. number of interchanges).

Aligned with the idea that MaaS would be useful for unfamiliar journeys, participants suggested that it would be particularly helpful for tourists who were unfamiliar with local transport.

Those who most often used private car to make their journeys and were not regular users of public transport reflected that having all the information in one place to plan unfamiliar journeys would be useful.

### When experiencing delays/ diversions/ cancellations

Participants anticipated that MaaS could be useful when faced with unexpected changes to a journey such as delays, diversions or cancellations. As the platform would bring together different modes of transport, they noted that it would be able to provide journey alternatives. Participants felt that a MaaS platform should automatically take into account any delays/diversions/cancellations when providing journey options. There was a suggestion that if the MaaS platform knew that a user was taking a particular journey, then it could provide real-time notifications of problems with transport to support the user in deciding whether to take a different route to complete their journey.

*“Would the app - should a train be too full or break down - send you a notification to say your train is no longer stopping at this station, you now need to go A-B-C?”* **Group, Cardiff, 45+ years**

There was also a suggestion that the MaaS platform could allow the user to select to avoid certain stations for example, stations that the user knew were likely to be busy.

### When new modes of transport are introduced to the local area

Whilst frequent public transport users felt confident in their knowledge regarding the modal options available locally and for their usual journeys, there was recognition that a MaaS platform could disseminate information about changes to infrastructure and show users new modes or options for travel as they were introduced to the local area.

### How can a MaaS platform improve convenience and enable take-up?

Across the research participants also identified a number of **features** of a MaaS platform that could be particularly useful in supporting convenient journey planning and payment.

### Bringing together transport modes in one platform

Participants felt that bringing together different modes of transport, accurate real-time information and payment into one platform would be convenient and time-saving when planning journeys as well as enable users to make cost-effective travel choices.

Some noted that using one consolidated app rather than several could have environmental benefits by reducing the amount of carbon used for cloud data storage for multiple applications.<sup>10</sup> Across the research however, there were some concerns that bringing together a range of functions would be difficult and was ambitious, and there were some high expectations for the efficacy of a single platform. Participants anticipated that to provide information from across modes, and to provide a range of information and features, a MaaS platform would be handling an extensive amount of data.

### Integrated payment function

The inclusion of a payment function was considered especially beneficial for participants who currently used cash to pay for transport. This was highlighted in particular by those from more rural locations who currently used paper tickets or cash, although some participants from these locations felt comfortable with the familiarity of using cash. Participants identified some potential risks with storing electronic tickets on a mobile phone (loss of phone or battery power), overall, they felt that it would be convenient and ameliorate risks of losing physical tickets. Some noted that removing the need for paper tickets would also have environmental benefits. There was suggestion that a MaaS platform should also enable the user to access an electronic version of railcards (e.g. disabled person's bus pass or student railcard).

<sup>10</sup> "Compared with your personal hard disk, which requires about 0.000005 kWh per gigabyte to save your data, this is a huge amount of energy. Saving and storing 100 gigabytes of data in the cloud per year would result in a carbon footprint of about 0.2 tons of CO<sub>2</sub>, based on the usual U.S. electric mix." <https://stanfordmag.org/contents/carbon-and-the-cloud>

In locations where public services were run by multiple operators (i.e. outside of London), the idea of an integrated payment function was appealing. Participants who currently used multiple services to plan and pay for journeys reflected that it would be useful to have everything in one place, noting that it would make it easier for the user, especially where individual platforms could show conflicting information.

*“A more integrated transport system as well. In Scotland there’s Lothian Buses, Stagecoach, there’s loads. Even if the systems were more integrated, jumping from a train onto a bus with the same ticket.”*  
**Group, Inverness, 18-44 years**

### Where could views towards the potential convenience of MaaS discourage take-up?

Whilst participants could identify ways in which a MaaS platform could help support convenient and reliable journey planning and payment there was scepticism regarding the usefulness of this information based on two viewpoints:

1. Participants reflected that whilst information about services (e.g. timetables, delays and cancellations) would be helpful, it would not impact the reliability or provision of public transport.
2. Not all participants were convinced that a MaaS platform would offer them something different or more beneficial compared to how they currently plan and pay for journeys. This was particularly the view amongst those who were comfortable with how they currently planned and paid for journeys.

*“I think, I am still scratching my head thinking what is the meaning of it? 90% of the travel you do you know where you’re going, you know where you’re starting, where you’re going, what you’re looking for.”*

**Group, Cardiff, 18-44 years**

Overall, whilst participants could see the potential features that a MaaS platform could offer that would make planning for and making journeys more convenient, this was not always considered motivational enough to use MaaS. Across the research it was clear a combination of both **appealing cost and convenient journey planning and payment** would be most likely to positively influence potential uptake of MaaS.



## 4 Accessibility needs and preferences

Two factors focusing on accessibility needs and preferences influenced views towards MaaS:

Figure 4: Accessibility needs and preference factors influencing views towards MaaS



### 4.1 Accessibility of public transport

When thinking about current journey planning and payment, participants with a disability/impairment described planning their travel based on transport options available in their local area and the accessibility of these options. For example, participants described choosing to travel on public transport outside peak hours or driving instead of taking public transport. Frustrations with accessibility of public transport emerged including:

- Lack of lifts.
- Lack of audio guidance (e.g. information about service arrival times) at bus stops.
- Lack of toilet facilities at stations.
- Lack of maintenance of information (e.g. signage unclear and difficult to read).
- Limited access to priority seats (when these were being used by others who did not need them).

Participants were interested to consider, but sometimes sceptical about any impact that a MaaS platform could have on these. Participants also reflected on the ways in which they currently planned and paid for journeys. Some noted that a friend or family member would help with planning journeys. Overall there were positive views towards ways in which they currently booked and received travel assistance. There were also mentions of useful accessibility information provided by existing journey planning services including information about steps, lifts, slopes and identifying which platform at a station services would leave from. These participants were keen to consider how MaaS would incorporate travel assistance booking and accessibility information.

## How can MaaS support and enable accessible travel?

Participants identified a range of features that MaaS could include to support accessible and inclusive journeys:

- **Include information about the accessibility of different journey routes and options:** this included suggestions for a profile personalisation option that would allow participants to search for journey itineraries taking into account specific accessibility needs. This would mean that the MaaS app would have the built-in capacity to flag the accessibility of stations and stops, including information regarding lifts, ramps, and low platforms. Participants sought detailed and tailored information, reflecting that accessibility needs were different for different people.

*“Maybe if the bus company joined up with them and they said which buses have the drop steps, so it’s easier to get on and off. You know that you’re not going to have a problem getting on and off. Telling you where the platform is, or if you need assistance, sorting that out for you.” **Depth interview, physical impairment***

- **Request a priority seat:** some queried whether a MaaS platform could make direct links to specific services, flagging that they would need a priority seat. This comment was made specifically in relation to bus services, and whether it would be possible for the bus driver to be made aware that a priority seat/low level access to the bus would be needed so that these needs were met.
- **Audio features:** participants with a visual impairment suggested the audio features would be useful. This included audio descriptions of suggested journey routes, audio directions for walking routes, and audio information when waiting at bus stops.
- **Integration with booking systems for travel assistance:** there was desire for MaaS to include a sophisticated booking system for various modes of transport, that would allow for advance booking of seats and assistance requests, where needed.

*“I also use an app and a telephone line to book assistance, like train assistance or assistance for the Metrolink. If that was in MaaS, or you built it in MaaS, you could book assistance through MaaS as well. That could put it to say, you could book assistance for a certain time. When you’re heading for your train, the person who is going to assist you could be waiting for you.” **Depth interview, visual impairment***

- **Provide information to support personal safety and security:** participants with mobility and visual impairments were particularly positive about the potential for MaaS to improve the user’s personal safety and security. A range of suggestions were made based on individual needs and preferences. These included:

- Providing information about the specific location of lifts at stations.
- Identifying routes with good lighting (where this would be helpful for someone with a visual impairment).
- Providing landmarks as well as road names for walking routes to support people with visual impairments in navigating local areas.

There was also interest in the potential for a location-tracking function via the MaaS platform. This was particularly noted by participants who were keen to share this type of information with their family and carers; they felt that this would provide greater peace of mind.

## 4.2 Inclusivity of a MaaS platform

Views regarding accessibility of a MaaS platform focused on three factors:

### 1. For those who are less technically confident

Concerns regarding the accessibility of a MaaS platform typically came from those who were themselves less technically confident. Whilst these were typically older participants, this was not true of all older participants. Participants also thought about how family members who were less technically savvy would use a MaaS platform. Concerns cited by these participants included not using a smartphone and struggling with using apps.

*“I hate doing the apps. It always tells me my password is incorrect, then I get fed up and go to the station to buy a ticket at the counter.” Group, Inverness, 45+ years*

Some noted that it would be reassuring to have a telephone option in case people were confused by an app. It was also suggested that offering a telephone number could be appealing as the trend was for services (across a range of industries) to avoid providing telephone support to users.

Whilst there was interest to know that MaaS may be offered via an offline telephone platform, those who were currently able to conveniently access face-to-face assistance with journey planning and payment (i.e. at a local ticket office), queried whether they would use a telephone service.

### 2. For those with a visual impairment

Accessibility concerns were also raised by participants with a visual impairment who noted the importance of the MaaS platform being designed from the outset to be compatible with voiceover software, and provide options allowing the user to tailor the content (e.g. large print, zoom options, colour choice).

*“Voiceover... That’s what I rely on to use apps. For other visually impaired people, having the zoom text. Make it bigger. Maybe colour contrast, as well. Some people might only have a slight visual impairment but can rely on a dark background with white light. Maybe a Braille option.”* **Depth interview, visual impairment**

Participants anticipated that to provide information from across modes, and to provide a range of information and features, a MaaS platform would be handling an extensive amount of data. Participants were keen to know that this would not result in an over-complicated platform, especially where used with voiceover software.

Whilst there was interest in an online MaaS platform, the provision of an offline platform was also considered important for people with a visual impairment recognising not all used technology with voice software.

### **3. In areas with limited mobile coverage**

Digital accessibility issues related to mobile coverage also emerged as a concern amongst participants, particularly when thinking about travelling in more remote or rural areas. Participants felt that poor coverage would negatively impact the operability of a MaaS platform (both online and telephone based). Coverage was a particular concern when participants reflected that they might be reliant on MaaS to both access information about their journey and pay for their journey. Taking this into account it was suggested that the platform could include a function that enabled the user to download information that they could then access if they were without mobile coverage.

## 5 Potential for MaaS to drive modal shift

Across the research there were mixed views on the potential for MaaS to encourage modal shift towards transport modes that could **reduce carbon emissions** and **improve public health**. Sustainable travel includes public transport, more sustainable forms of private car use (e.g. electric vehicles and car clubs) and 'active travel' (e.g. walking and cycling).<sup>11</sup>

Current journey-making decisions were not typically influenced by more sustainable options although there was some interest in knowing more about this. Participants in some of the 45+ year-old focus groups believed that 'younger people' would be more concerned about environment-friendly options. However, views on the environmental potential of MaaS were mixed within all age groups. Participants in more rural locations with fewer public transport modes (Inverness and Telford) were slightly more vocal regarding the potential for modal shift to more sustainable travel.

*"I don't really get taxis any way, all I get is public transport which is green. I always walk or get a public transport."* **Group, London, 18-44 years**

Some participants suggested that the integrated nature of MaaS could provide travellers with more sustainable and/or healthier alternatives to routes currently taken by private car. However, participants also highlighted potential barriers to modal shift, such as the comfort of current travel habits and underlying infrastructure constraints.

### 5.1 Enablers for modal shift

Participants felt that a MaaS platform could **increase awareness of sustainable journey options** and that this could demonstrate and encourage people to consider using public transport instead of private vehicles. Participants often highlighted pre-existing low carbon options in their area, including electric or hybrid buses and taxis and suggested that MaaS could identify routes that used these options to support modal shift.

Suggestions for **information** that MaaS could help encourage more sustainable and/or healthier travel included displaying options for hire bike schemes, ride-sharing, showing electric charging points and clearly displaying where walking could be feasible or even quicker than other modes.

Showing **carbon footprint information** for different journey options/ modes was seen as a way in which a MaaS platform could nudge users to adopt travel with less emissions. There was also enthusiasm for information that calculated off-setting your carbon footprint within a single journey, and over time (e.g. during a week or a month of using MaaS). Some noted that information about low carbon transport

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<sup>11</sup> Page 10 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/846593/future-of-mobility-strategy.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf)

options complemented their work policies regarding sustainable travel, and therefore, this type of information could help individuals meet their employer requirements for taking low carbon transport for work journeys.

**Information** regarding **steps and calories** appealed to some who felt that this type of information could support MaaS users in making decisions regarding how to complete their journey; and whether to use active options. Some participants thought that a MaaS platform could be linked with existing health apps (e.g. Fitbit), while others thought that these functions could be embedded within the platform itself, through counting steps and/or calories. Specifically, regarding urban areas, some participants suggested that MaaS could benefit health through route planning tailored to avoid air pollution.

*“It could look at the air pollution of London and link to that. It could link when I’m cycling around London to avoid pollution.” Group, London, 18-44 years*

Participants who felt that information alone would not be sufficient, suggested that people using MaaS could further be encouraged to adopt sustainable travel if it was **incentivised** with some form of rewards system, for example, offering free or discounted travel as a reward for walking or cycling a route.

## 5.2 Barriers to modal shift

Some participants expressed scepticism that MaaS could encourage modal shift towards lower carbon travel. Modal shift was often a contentious point within focus groups, with disagreements on how much importance should be assigned to environmental issues and whose responsibility it should be to act on it. Key barriers included:

- **Habitual current transport behaviours.** This was typically driven by a familiarity with car use, with this modal use entrenched in routines. These participants believed that they would be too comfortable with their current travel arrangements to consider behaviour change.
- **Poor provision of public transport.** The perception that current public transport provision was insufficient to enable modal shift emerged as a key barrier to considering moving away from private car use, even amongst those who were open to the idea of switching mode for environmental reasons.
- **Cost** was a core concern, with participants noting that it was cheaper for them to use their car to complete journeys when compared to public transport. With this in mind, participants felt that cost would continue to be a key barrier to public transport use.
- **Convenience.** Participants reflected on the provision and availability of public transport to complete their journeys. In some instances, participants noted that public transport was not available for their journeys. In others, participants noted that completing journeys by public transport would take considerably longer than driving which put them off using public transport.

- **Reliability** of public transport. Participants noted that they would prefer to use their car where they were concerned about public transport running on time or without overcrowding.
- **User interface complexity.** Participants expressed concern that including features such as step and calorie counting could ‘overload’ the platform and lessen the accessibility of its core payment and information functions. There was scepticism that combining a range of features in a single platform was ambitious and could result in a platform that did not work well or used a lot of mobile data. Participants expressed concern that including additional features such as step counting would be duplicating effort or creating a lower quality alternative to existing health technology products.

*“If this is a travel app, it’s not an exercise app, so, why are you trying to reinvent the wheel for something that’s already been done?”* **Depth interview, physical impairment**

- The **governance** of a MaaS platform. Participants expressed concern that a MaaS platform built around a profit-driven model would encourage unsustainable transport modes. This was particularly cited in relation to private companies; participants expected that to be commercially viable, a MaaS platform would encourage use of paid private transport (e.g. taxis) instead of low-cost sustainable modes such as walking or cycling.

## 6 Privacy, safety and trust

Participants highlighted both the potential positive and negative effects that MaaS could have upon individuals' data privacy, personal safety and security. These views were often linked to whether the platform would be provided by a public or private organisation.

### 6.1 Data privacy

Views on the impact of MaaS on data privacy were varied across the research locations and demographic profile of participants. Opinions ranged from recognising the potential benefits of data sharing, a general acceptance of data sharing (assuming that standard regulations would be adhered to), through to fears around potential violation of data privacy. The latter concern emerged as a sticking point for some.

Thinking about data sharing in MaaS, participants queried the potential for location tracking to improve personal safety (as described in section 6.3 below). Participants also suggested that a potential benefit of a MaaS platform could be remembering a user's previous routes and using algorithms to predict or advise journeys (e.g. calculating travel time based on the users' average walking speed).

*"I think it's useful to share your data. Google is really clever. It's predicting what I'm going to do. I'll put my phone in the car and it will predict where I'm going to."* **Group, Manchester, 18-44 years**

Those more neutral opinions in relation to MaaS' impact upon data privacy voiced a general acceptance that data sharing may be required as standard and anticipated that the same procedures and protocols could be taken from existing navigation apps and smartcards. Some questioned how location tracking data could be exploited and how likely this would be.

In contrast, other participants highlighted concerns around the potential misuse of locating tracking data gathered from a MaaS platform. The target of these concerns varied: public authorities potentially tracking participants taking part in political activism; private companies using the data to place targeted advertising; and, private individuals hacking into the data for stalking others or investigating infidelity.

*"Everyone knows everything about everybody. On the app, you could follow me from my house, know where I live, what I'm doing. I don't think that's something I'd like."* **Depth interview, physical impairment**

Participants who expressed concern as well as those who did not sought reassurances that their data would be held securely on a MaaS platform. These included: clear and transparent descriptions around how their data would be used (e.g. disclaimers, terms and conditions); adherence to General Data Protection Regulation (GDPR); recognised secure payment platforms (e.g. PayPal, Knox); and, secure Hypertext Transfer Protocol (websites beginning with https along with a padlock symbol).



## 6.2 Governance

**Trust** was a recurrent factor when participants were asked whether they thought a platform should be run by a public or private operator. For some, participants felt that their data would be in safer hands under a public sector organisation as they are accountable, transparent and there would be less chance of it being used for commercial gain.

In relation to modal shift (see Chapter 5 above), some participants believed that a public sector organisation would also be in a better position to encourage healthier and more sustainable journeys when not so constrained by the need for profit. They argued that making money would be inherently at odds with encouraging healthier journeys, given that walking and cycling are low or no cost.

*“It would have to be completely transparent and state owned in order to know it’s not about trying to earn people profit. It’s hard to see how encouraging people to walk would be beneficial to the app.”*

**Group, London, 18-44 years**

There was scepticism that private companies would be willing or able to share data with each other to enable the platform to operate effectively. Additionally, some thought that private companies could try and look for ways around data protection regulations, referencing their own experiences of websites that they felt had ‘forced’ them to opt in to cookies in order to access information and services.

Conversely, other participants believed that the commercial pressure and competition of a private operator would benefit innovation and quality for a potential MaaS platform. They believed that, in the current socio-political context, public sectors would not have enough funding to adequately run and maintain a platform.

*“The public sector doesn’t have a lot of money. With the private sector, they’re going to invest in it and want it to be really good.”* **Group, Manchester, 18-44 years**

Participants often cited the relative quality of public and private operators in their areas when reflecting on the potential governance of a MaaS platform. For example, there were mentions of recent buy-outs of rail franchises following poor performance. Overall, there was no clear consensus on the public or private governance of MaaS.

## 6.3 Personal safety and security

Personal safety was automatically considered but not top of mind when planning and making journeys as participants initially struggled to relate this to MaaS. However, once considered, participants generated suggestions for the types of information or functions that could feature on a MaaS platform. These included route recommendations such as alternative diversion routes during major incidents such as gas leaks or terrorist attacks, or routes with the best lighting (to avoid being a target of theft or violent crime). In relation to crime, participants also suggested including a ‘panic button’ within the app that could alert

the authorities (e.g. The British Transport Police) and send them details of their location. However, there was a concern that this could overload 999 operators.

*“I know they’re trying to remove the guards off the train. Some people might get rowdy, so on the app that should have an icon where you can tap. It will go straight to the next station and transport police will be there waiting.” **Group, Telford, 45+ years***

Other participant suggestions focused on minimising waiting time outside at night: providing clear information on the opening and closing times of stations; and, sending updates via the MaaS platform to let users know when their transport would be arriving (enabling them to stay somewhere inside whilst waiting for their transport).

More broadly, participants across the research felt that a location-tracking function could be valuable for those with caring responsibilities of children and others seen as ‘vulnerable’. However, as described above at section 6.1, there were concerns around data privacy and the potential for this tracking technology to be exploited.

*“I should imagine the safety issue, as you’re saying, having a tracker on it, would be good for vulnerable adults or children.” **Depth interview, physical impairment***

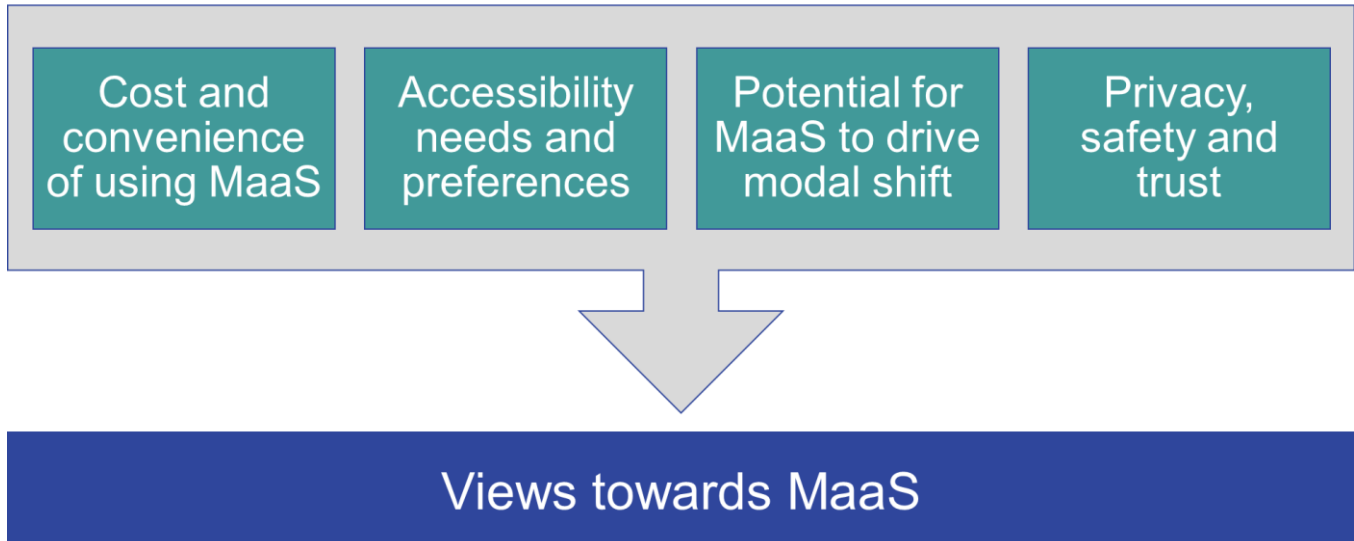
Participants highlighted the importance of location tracking **accuracy** in order for personal safety functions to be effective. Concerns regarding availability of mobile signal were also cited for rural areas and queries around whether this type of tracking would be possible in more remote locations.

When thinking about safety on public transport, participants cited a number of existing concerns such as overcrowding on public transport, lack of seatbelts or pram/wheelchair straps on buses and the lack of policing of anti-social behaviour by other travellers. Participants reflected that whilst important to personal safety, these issues could not be solved by a MaaS platform.

## 7 Conclusions

The research has identified four themes that influence views towards MaaS.

Figure 5: Four themes influencing views towards MaaS



A range of **enablers**, **barriers**, **opportunity** and **risks** of using a MaaS platform are evident as working across these themes.

### 7.1 Enablers to using a MaaS platform

Key **enablers** to using a MaaS platform include the **confidence** in the way in which MaaS will work, and what it will provide. To feel confident in using a MaaS platform, potential users need to be reassured that the platform will:

- Ensure that users have access to promotional and best value fares.
- Provide payment options that are tailored and flexible, designed to reflect the modes that users want to use for time periods that suit their transport use.
- Provide electronic tickets and passes, integrating existing discount rail cards and passes as well as considering existing season tickets already held by potential users.
- Be able to bring together different modes of transport, especially where these involve multiple operators, and integrate payment across multiple providers.
- Provide accurate real-time information with users able to rely on the platform to provide accurate information that can provide alternative routes during times of travel disruption.

- Provide accessible journey planning by including accessibility information (e.g. step-free routes), audio features and integration with travel assistance services.
- Provide an offline option for those less confident in using technology.
- Be accessible and easy to use for example, with a simple interface that is compatible with voiceover software.
- Follow GDPR rules and regulations, treating personal data securely and not sharing this with third parties.

## 7.2 Barriers to using a MaaS platform

Key **barriers** to using a MaaS platform include broad barriers towards using public transport in general, and barriers related specifically to MaaS features and functionality.

**General barriers** to using public transport focus on negative perceptions of transport infrastructure. This includes perceptions that public transport is: expensive; has limited reach (does not always link to areas where participants travelled); can be infrequent and/or unreliable; can be overcrowded and; is not always accessible (e.g. lack of lifts, access to priority seating). Whilst there is a general openness to using public transport and a MaaS platform, issues with transport infrastructure remain a key barrier to doing so.

Barriers related specifically to **MaaS features and functionality** include:

- Concerns that using a MaaS platform will limit access to and choice of best fares.
- Scepticism that the data-sharing required across multiple operators will be achievable.
- Concerns that MaaS will not be operational in areas with poor mobile phone coverage.

Perceptions that MaaS does not offer something significantly different when compared to existing journey planning and payment platforms. This view is particularly common where there is limited diversity of local transport options or people use a limited number of modes (and therefore a joined up service has limited appeal), where people feel that they know their journey options and routes and where there are 'turn-up-and-go' services (with limited perceived need for journey planning).

There are questions around the aims of a MaaS platform and how these balance with the type of organisation providing the service. Private - and therefore commercial - governance of MaaS is felt to be at odds with a platform aiming to promote and support more sustainable and active travel which are typically lower cost.

### 7.3 Opportunities in using a MaaS platform

Whilst there are clear **opportunities** in using a MaaS platform, these are likely to have limited appeal to potential users if they lack confidence in the way in which MaaS will work and what it will provide (enablers as detailed in 7.1 above).

The exception to this is the potential opportunity for MaaS to provide **cheaper travel** to users. Cheaper and/or a financial incentive to use a MaaS platform could act as a motivating factor to take-up and try MaaS.

Other opportunities for MaaS users are met with mixed reactions depending on individuals' interest in, and appetite, for this information. These opportunities include:

- Providing information that supports users with making cost-efficient transport choices including costed journey options and tips for saving money (e.g. times of the day to travel). Summary reports detailing the cost of transport used in a given timeframe against the cost of a subscription and alternative modes of transport could aid cost-driven decision making.
- Providing information that supports users in making more sustainable travel choices including environmentally-friendly journey options and carbon footprint related information.
- Providing information that supports users in making active travel choices including active journey options and step and calorie information.
- Providing information that supports users in staying safe when making journeys such as details regarding well-lit routes. The opportunity of a location tracking feature which could further support personal safety (although it should be noted that this raised concerns for some).
- Providing information about new modes of transport as they are introduced to the local area.

### 7.4 Risks of using a MaaS platform

The **risks** of using a MaaS platform relate to the perceived **trustworthiness** of the organisation providing the platform and **data security**.

Whilst there is an expectation that **data security** will be carefully considered through use of standard rules and regulations in line with GDPR, this is a clear area of potential risk. There are concerns that if poorly managed, personal and location specific data could fall into the wrong hands and be misused. There is also some concern that personal data could be used by the platform itself to profile or track users. Whilst there is clear benefit to personal safety in these activities, this is considered a risk if users are not aware of this and not given opportunity to opt-in to this data use.

More broadly there is a risk that governance of a MaaS platform could attract criticism and engender **distrust** if not transparent about its' aim and any commercial activity.

## 7.5 Summary of success factors

Based on this research, MaaS is likely to be more successful if shaped to provide a platform that offers cost-efficiency and convenience to users. Value for money of travel, bringing modes together in one platform and accurate real-time information will be key features sought by potential users. Information regarding cost-efficient travel options, alternative routes to use during travel disruption and sustainable travel options will demonstrate how a MaaS platform can support travel decision-making and potential modal shift. Reassurances will be needed regarding data security of personal information, that governance reflects the aim of the platform, and that the platform itself will be tailored to reflect accessibility needs and preferences.

# Appendix 1: Achieved sample breakdown

## Achieved sample breakdown

Method	Location	Target sample	Achieved sample
10 x focus groups in a range of locations	Cardiff	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 18-44 years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 9</li> <li>Age: 19-36 years</li> <li>Gender split: 5 F, 4 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Cardiff	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 45+ years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 8</li> <li>Age: 50-64 years</li> <li>Gender split: 4 F, 4 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Inverness	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 45+ years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Rural</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 9</li> <li>Age: 45-64 years</li> <li>Gender split: 5 F, 4 M</li> <li>Spread of ethnicity and social grade</li> <li>Rural</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Inverness	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 18-44 years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Rural</li> <li>Users of mixed transport modes</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 10</li> <li>Age: 23-42 years</li> <li>Gender split: 5 F, 5 M</li> <li>Spread of ethnicity and social grade</li> <li>Rural</li> <li>Users of mixed transport modes</li> </ul>

Method	Location	Target sample	Achieved sample
		<ul style="list-style-type: none"> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>Mix of subscription service users/non-users</li> </ul>
	London	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 18-44 years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 9</li> <li>Age: 19-44 years</li> <li>Gender split: 4 F, 5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	London	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 45+ years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 10</li> <li>Age: 50-64 years</li> <li>Gender split: 5 F, 5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Manchester	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 18-44 years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 8</li> <li>Age: 18-42 years</li> <li>Gender split: 5 F, 3 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Manchester	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 45+ years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 8</li> <li>Age: 45-69 years</li> <li>Gender split: 3 F, 5 M</li> <li>Spread of ethnicity and social grade</li> <li>Urban, suburban</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Telford	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 18-44 years</li> <li>Gender split: 4-5 F, 4-5 M</li> <li>Spread of ethnicity and social grade</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 8</li> <li>Age: 26-34 years</li> <li>Gender split: 5 F, 3 M</li> <li>Spread of ethnicity and social grade</li> </ul>



Method	Location	Target sample	Achieved sample
		<ul style="list-style-type: none"> <li>Rural</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>Rural</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
	Telford	<ul style="list-style-type: none"> <li>No. of participants: 8-10</li> <li>Age: 45+ years</li> <li>Gender split: 4-5 F, 4-5 M Spread of ethnicity and social grade</li> <li>Rural</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>	<ul style="list-style-type: none"> <li>No. of participants: 8</li> <li>Age: 45-72 years</li> <li>Gender split: 4 F, 4 M</li> <li>Spread of ethnicity and social grade</li> <li>Rural</li> <li>Users of mixed transport modes</li> <li>Mix of subscription service users/non-users</li> </ul>
8 x telephone depth interviews	GB	<b>8 x Physical and/or visual impairment</b> <ul style="list-style-type: none"> <li>Uses mixed transport modes</li> <li>Spread of age, gender, ethnicity and social grade</li> </ul>	<ul style="list-style-type: none"> <li>4 x physical impairment</li> <li>4 x visual impairment</li> <li>Uses mixed transport modes</li> <li>Spread of age, gender, ethnicity and social grade</li> </ul>

# Appendix 2 Discussion guide – focus groups



## Mobility as a Service: Focus groups DISCUSSION GUIDE

### Research questions:

- What could influence people's acceptance of, and decision to, use a MaaS platform?
- Why might people choose to use a MaaS platform rather than traditional mobility services?
- What are the benefits and opportunities of using a MaaS platform in comparison to traditional journey planning and/or using a private vehicle?
- What are the disadvantages and risks of using a MaaS platform in comparison to traditional journey planning and/or using a private vehicle?
- How could MaaS platforms be made inclusive and accessible?
- What actions could help to ensure all sectors of the population can access MaaS applications?
- Is there anything that could be incorporated into MaaS platforms to encourage consumers to choose more active travel and sustainable modes?

### Purpose:

To understand any perceived benefits of MaaS to the consumer as well as highlight any potential challenges and risks to inform the Government's strategy and regulations.

### Materials required:

- Flipchart
- Marker pens, ballpoint pens
- Handouts / stimulus - SEE ATTACHED PPT DOCUMENT
  - Slides 1 & 2: explanation of MaaS
  - Slides 3-6: examples of MaaS
  - Slide 7-10: examples of MaaS journeys
  - Slide 11: acceptability tracker

- Slide 12: enabler/ barrier cards
- Slides 13-17: mobility scenarios
- Blue tack / White tack

**Discussion guide key:**

**Bold lower case** = key questions

Non-bold lower case = follow up questions and prompts

*CAPITALISED ITALICS, NON-BOLD* = instructions for moderators

**Please note:** this document is intended to guide the discussion and will be used flexibly as the discussion develops to ensure that the research objectives are explored. Not all questions may be asked in every group and it should be noted that questions may not be asked in the exact order or with exact wording shown.

**Also note:**

- If participants give undue focus to the **taxi allowance** element of MaaS, please emphasise that this would likely not be an element of a public sector-led scheme.
- If participants have a **freedom pass**, emphasise MaaS' information capacity.
- If participants mention that they do not have mobile phones,
- Please focus on modal shift with participants who are private car users

5 mins	1. Introduction and background
	<p>Introduce self, Ipsos MORI, independent research organisation, here to gather your opinions for the Department of Transport. Purpose of discussion:</p> <p><b>The topic of our conversation this evening is transport. We are going to be talking about Mobility as a Service, a new business model that aims to provide the user a more seamless travel experience.</b></p> <ul style="list-style-type: none"> <li>● Doing groups like this around the country, and interviewing other participants over the phone</li> <li>● You'll find out more as the discussion progresses</li> </ul> <p>Explain tone and nature of discussion:</p> <ul style="list-style-type: none"> <li>● Relaxed and informal</li> <li>● No right or wrong answers</li> </ul>

	<ul style="list-style-type: none"> <li>• We are keen to hear about everyone’s views and experiences; we are after a range of opinions, not seeking consensus</li> <li>• Please feel free to disagree with one another; just keep it polite</li> <li>• We will make sure everyone gets a chance to share their opinion</li> <li>• Please try to avoid talking over one another – means the recorder does not work so well / note taker may not be able to hear</li> <li>• Everything you say is confidential – MRS code of conduct</li> <li>• Get permission to record</li> <li>• Plenty to get through, so the moderator may have to move people on from time to time – not that we’re not interested in what you have to say</li> <li>• Mentions any observers / video / viewing facility</li> <li>• Clarify length of group (90 minutes)</li> <li>• Any other housekeeping – fire alarms, facilities, etc.</li> </ul>
<b>5 mins</b>	<b>2. Ice-breaker</b>
	<p><b>In pairs, introduce yourselves to each other...your first name, whereabouts you live, and what type of transport you used to travel here today.</b></p> <p><b>Then introduce your partner to the rest of the table.</b></p>
<b>15 mins</b>	<b>3. Views on current transport options</b>
	<p><i>MODES</i></p> <p><i>FLIPCHART DIFFERENT MODES OF TRANSPORT FROM ICE-BREAKER</i></p> <ul style="list-style-type: none"> <li>• <b>Are there any other types of transport that you use that you would add to this list?</b></li> <li>• <b>Are there any other types of transport in the area that you don’t use to be added to this list?</b> (Check for inclusion of: train, bus, underground/ metro, tram, taxi, private car, hire car, private bike, hire bike, walking, ferry, riverboat and on foot)</li> </ul> <p><i>JOURNEY PLANNING</i></p>

	<ul style="list-style-type: none"> <li>• <b>How do you currently plan your journeys?</b> (prompts: online/ offline/ on the day/ in advance)</li> <li>• <b>Is this different for familiar/unfamiliar journeys?</b> (prompts: commuting/ school run/ shopping/ visiting friends and relatives/ holidays/ day trips)</li> <li>• <b>Is this different for journeys where you use different types of transport?</b> (prompts: are these changes easy or difficult? why?)</li> <li>• <b>Do you find journey planning easy or difficult right now? Why?</b> (prompts: old or up to date information/ easy or difficult to understand timetables)             <ul style="list-style-type: none"> <li>○ What would make it easier to plan journeys?</li> </ul> </li> </ul> <p><i>TICKETS FOR TRAVEL</i></p> <ul style="list-style-type: none"> <li>• <b>What format of ticket do you currently use for your journeys?</b> (paper/digital/phone/single/return/season tickets)</li> <li>• <b>Do you find that format easy or difficult right now? Why?</b> (prompts: risk of damage/loss of tickets/accessibility/value for money)</li> </ul> <p><i>PAYING FOR TRAVEL</i></p> <ul style="list-style-type: none"> <li>• <b>How do you currently pay for your journeys?</b> (prompts: cash/ card/ contactless/online)</li> <li>• <b>Do you find paying for travel easy or difficult right now? Why?</b> (prompts: different for different modes? value for money, time taken to pay)</li> <li>• <b>What would make it easier to pay and use tickets or fares?</b></li> </ul>
<p><b>20 mins</b></p>	<p><b>4. Introducing MaaS and initial thoughts</b></p>
	<p><b>As I mentioned earlier, we’re going to talk to you today about ‘Mobility as a Service’.</b></p> <p><i>SHOW ‘WHAT IS MAAS?’ SLIDES (Slides 1 and 2)</i></p> <p><b>Mobility as a Service, or MaaS, is “The integration of various modes of transport along with information and payment functions into a single mobility</b></p>

**service.” ‘This can all be accessed on one platform, usually on an app, but it could also be on a telephone switchboard.’**

- Any initial thoughts?

**Please note that MaaS is at a very early stage of development. I’ve now got some examples of where MaaS has been used. These examples are all private sector led but it could also be enabled by the public sector in the future...**

*RUN THROUGH INTERNATIONAL AND BRITISH EXAMPLES (Slides 3-6)*

- Thoughts?
- What do you think about this type of service?

**Now let’s look at an example of how MaaS could work.**

*SHOW SAM’S ‘BEFORE’ AND ‘AFTER’ ONLINE AND OFFLINE SCENARIOS (Slides 7-10).*

**Does this all make sense? What are your first impressions of Mobility as a Service?**

*GATHER ONLY INITIAL SPONTANEOUS REACTIONS AND AVOID GOING STRAIGHT INTO A FULL GROUP DISCUSSION. HANDOUT ‘ACCEPTABILITY TRACKER’ (Slide 11).*

**From what you’ve heard so far, how likely or unlikely are you to sign up to use a Mobility as a Service platform?**

*PARTICIPANTS SELECT AN OPTION SILENTLY AND INDIVIDUALLY. OPEN UP TO A GROUP DISCUSSION AND FLIPCHART IDEAS.*

**What answer did you give? Why?**

**What might encourage or discourage you to use MaaS?**

- What might the benefits be?
- What might the drawbacks be?

	<p><i>FOR THE NEXT QUESTIONS, USE FLIPCHARTS OF MODES, JOURNEY PLANNING AND PAYING FOR TRAVEL CREATED EARLIER AS STIMULUS.</i></p> <p><b>Thinking about planning for journeys at the moment, how would this be different for you if you used Maas?</b></p> <ul style="list-style-type: none"> <li>- What would be better?</li> <li>- What would be worse?</li> </ul> <p><b>Thinking about paying for tickets and fares to complete journeys at the moment, how would this be different for you if you used Maas?</b></p> <ul style="list-style-type: none"> <li>- What would be better?</li> <li>- What would be worse?</li> </ul>
20 mins	<p><b>5. Enablers and barriers</b></p>
	<p><b>Now we're going to talk about the different things which could encourage or discourage us to sign up to a MaaS platform.</b></p> <p><i>SPLIT GROUP UP INTO FOUR GROUPS OF 2-3 AND HAND THEM AN ENABLER/BARRIER CARD (Slide 12) EACH:</i></p> <p>Each group are going to be given a topic to consider. Think about how you travel now and how you might travel with MaaS:</p> <ul style="list-style-type: none"> <li>- Will MaaS make [topic] better or worse? <ul style="list-style-type: none"> <li>o Who for?</li> </ul> </li> </ul> <p><b>ROUND 1</b></p> <ul style="list-style-type: none"> <li>• Affordability</li> <li>• Convenience</li> <li>• Choice</li> <li>• Accessibility</li> </ul> <p><i>USE THE A3 PROMPT CARDS AS AN AID</i></p>

**Prompts: How could MaaS affect the affordability of travel? Will it make it better or worse? What, if anything can MaaS offer that could make affordability of travel better?**

**How could MaaS affect the convenience of travel? Will it make it better or worse? What, if anything, can MaaS offer that could make convenience of travel better?**

**How could MaaS affect choice of travel? Will it make it better or worse? What, if anything, can MaaS offer that could make choice of travel better?**

**How could MaaS affect the accessibility of travel? Will it make it better or worse? What, if anything, can MaaS offer that could make accessibility of travel better?**

*FEEDBACK IN PLENARY AND CHECK AGREEMENT/DISAGREEMENT WITH OTHER GROUPS.*

*REPEAT WITH SECOND ROUND OF CARDS:*

*ROUND 2*

- Health and fitness
- Environment
- Personal data privacy
- Personal safety

*USE THE A3 PROMPT CARDS AS AN AID.*

**Prompts: How could using MaaS affect peoples' personal safety? What, if anything, could it offer to help improve peoples' personal safety? (e.g. public lighting, location tracking)**

**How could using MaaS affect peoples' health and fitness? What, if anything could it offer to help improve peoples' health and fitness? Would you want information about calories?**



	<p><b>How could using MaaS affect the environment? What, if anything, could it offer to help improve the environment? Would you want information about your carbon footprint?</b></p> <p><b>How will MaaS affect people’s personal data privacy? What will MaaS users want to know about this?</b></p> <p><i>PLENARY FEEDBACK. CHECK AGREEMENT/DISAGREEMENT WITH OTHER GROUPS.</i></p> <p><b>Thinking about everything that we have discussed so far: would you be more or less willing to use a MaaS platform if it was provided by the public sector?</b></p> <p><b>Outside of the themes we’ve just talked about, is there anything else about MaaS that might affect what types of transport you use such as car, bus, taxi etc.?</b></p>
20 mins	<b>6. Mobility personas</b>
	<p><b>We are going to talk about people with different travel habits and how they might respond to Mobility as a Service.</b></p> <p><i>RUN THROUGH EACH PERSONA (Slides 13-17) (TIME-PERMITTING) SHUFFLE THE ORDER TO ENSURE A GOOD SPREAD ACROSS FOCUS GROUPS.</i></p> <p><b>Jessica (parent with young child)</b></p> <ul style="list-style-type: none"> <li>- <b>How likely do you think it is that Jessica would sign up to MaaS? What would she find appealing about MaaS? What might put her off using MaaS?</b></li> <li>- <b>What, if anything, could MaaS provide to help people like Jessica with young children travel on public transport?</b></li> <li>- <b>Jessica would prefer to make greener journeys. How could using MaaS help her do this?</b></li> <li>- <b>What would be the benefits and drawbacks of PAYG versus subscription options for Jessica?</b></li> </ul> <p><b>Oliver (wheelchair user)</b></p>

- **How likely do you think it is that Oliver would sign up to MaaS? What, if anything, would he find appealing about MaaS? What might put him off using MaaS?**
- **How could using MaaS help people like Oliver with accessibility needs travel on public transport? What, if anything, could MaaS provide that would be helpful for people with accessibility needs?**
- **Oliver would like to be more active, and less reliant on private transport (car and taxi). How could using MaaS help him do this?**

**Amelia (non-driver in rural area)**

- **How likely do you think it is that Amelia would sign up to MaaS?**
- **What might she find appealing about MaaS? What might put her off using MaaS?**
- **How could using MaaS help people who live in isolated rural areas? What, if anything, could MaaS provide that would be helpful for people living in rural areas?**
- **How might MaaS help Amelia to feel safe when she travels?**
- **What would be the benefits and drawbacks of helpline versus mobile app options for Amelia?**

**Hamad (committed driver)**

- **How likely do you think it is that Hamad would sign up to MaaS? What might he find appealing about MaaS? What might put him off using MaaS?**
- **How could using MaaS help Hamad to be more active and be less reliant on private transport? What, if anything, could MaaS provide to help Hamad do this?**

**Margaret (bus user on complicated journey)**

- **How likely do you think it is that Margaret would sign up to MaaS? What might she find appealing about MaaS? What might put her off using MaaS?**
- **How could using MaaS help people who take journeys across different transport operators?**
- **What would be the benefits and drawbacks of a helpline versus mobile app options for Margaret?**

	<p><b>Now that you've had more of a chance to think about it, how likely or unlikely are <u>you</u> to sign up to a Mobility as a Service platform?</b></p> <p><i>PARTICIPANTS SELECT AN OPTION ON THEIR 'ACCEPTABILITY TRACKER' SILENTLY AND INDIVIDUALLY. OPEN UP TO A GROUP DISCUSSION AND FLIPCHART IDEAS.</i></p> <p><b>Have you changed your mind? Why/why not?</b></p> <p><i>REFER BACK TO FLIPCHARTED TRAVEL MODES FROM THE START OF THE SESSION.</i></p> <p><b>To what extent do you think that MaaS would encourage you to change the type(s) of transport you use?</b></p> <p>-</p> <p><i>FOCUS IN PARTICULAR ON ANY MENTIONS OF MODAL SHIFT AWAY FROM CARS AND TOWARDS ACTIVE AND SUSTAINABLE TRAVEL.</i></p>
5 mins	<b>7. Wrap-up</b>
	<p>Thank you for your input and opinions – it's been really helpful.</p> <p><i>CHECK NAMES ARE WRITTEN ON ACCEPTABILITY TRACKERS HAND OUT AND COLLECT FEEDBACK FORMS ON EXIT AND SIGN OUT, HAND OUT INCENTIVE PAYMENTS</i></p>

## Appendix 3: Stimulus materials

1

### What is Mobility as a Service (MaaS)?

*"The integration of various modes of transport along with information and payment functions into a single mobility service."*



One platform (online app and/ or switchboard)

2

## MaaS brings the following things together in one service:







**MaaS is at a very early stage of development. 'The following examples are all private sector led but MaaS can also be enabled by the public sector.**

3

## Examples around the world



### Find your plan

 <p><b>Whim Urban 30</b></p> <p>30-day HSL ticket, City bike, and €10 taxis.</p> <p><a href="#">read more</a></p>	 <p><b>Whim Weekend</b></p> <p>Weekend rental car, 30-day HSL ticket, city bike, and discounted taxis.</p> <p><a href="#">read more</a></p>	 <p><b>Whim Unlimited</b></p> <p>Unlimited access to car, taxi, public transport, and city bike.</p> <p><a href="#">read more</a></p>	 <p><b>Whim to Go</b></p> <p>Each trip is paid separately with no subscription fee.</p> <p><a href="#">read more</a></p>
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## Finland

Whim is a mobile app that has been operating in Helsinki since 2016.

Whim users can:

- Use the app to plan journeys and routes, book digital tickets and pay for their journeys.
- Choose between 4 different payment plans integrating public and private transport modes.

Around 60,000 customers use Whim every month in Helsinki and over 1,000,000 trips have been made in total.

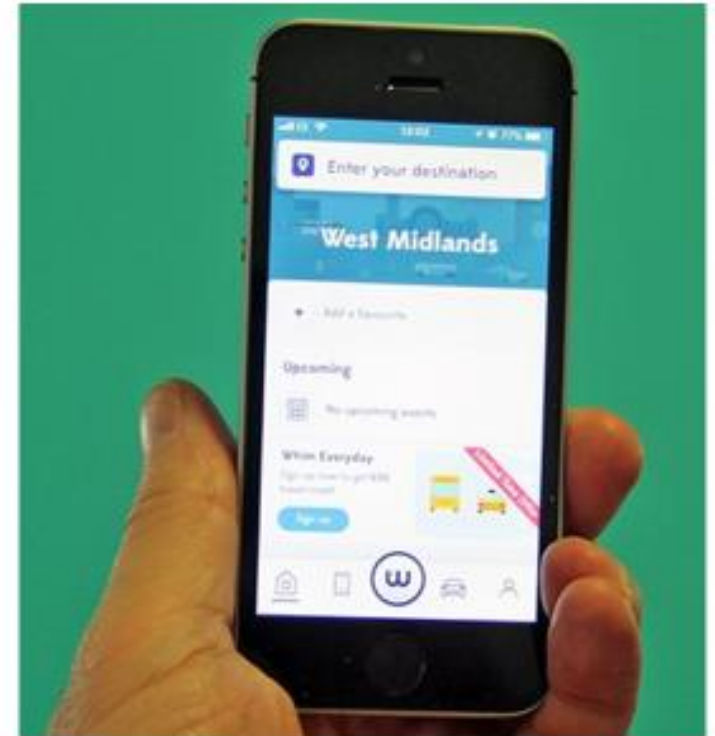
4 **Examples around the world**



Whim piloted their app (subscription only) around Birmingham with Transport for West Midlands from April 2018 to April 2019. It is now available as a pay as you go only.



**Finland & United Kingdom**



5 Examples around the world



Smart travel card



or Apple Pay



United Kingdom

Citymapper Pass launched in London in February 2019. The app offers customers unlimited travel on TfL's network from the centre out to Zone 4 in addition to public bike hire and taxi credit.

**Super Pass**

Tube, DLR, O2 + Bus + Rail

**Unlimited public transport**

Pay as you go in other zones across London

**Super Duper Pass**

Tube, DLR, O2 + Bus + Rail

**Unlimited public transport**

Pay as you go in other zones across London

**Unlimited Santander Cycles**

As many 30 minute trips as you want

**£10 weekly credit**

**Black Cabs** by Gett | **Minicabs** by Kapten

Spend it on either or on both



6 **Examples around the world**

MaaS platforms are being trialled in many other places across the world, including...



**The Netherlands**



**Singapore**

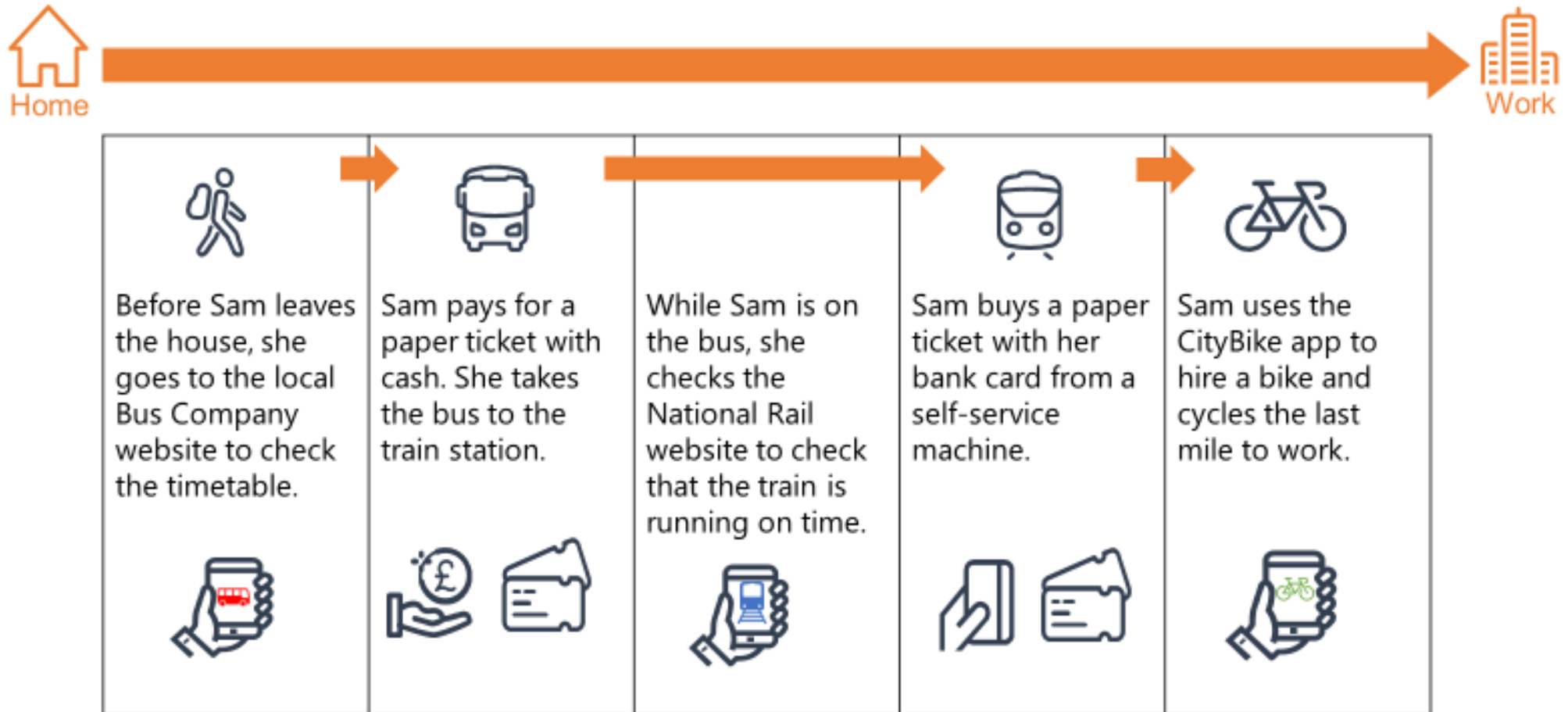


**France**

As well as apps, telephone centres are being trialled in some places

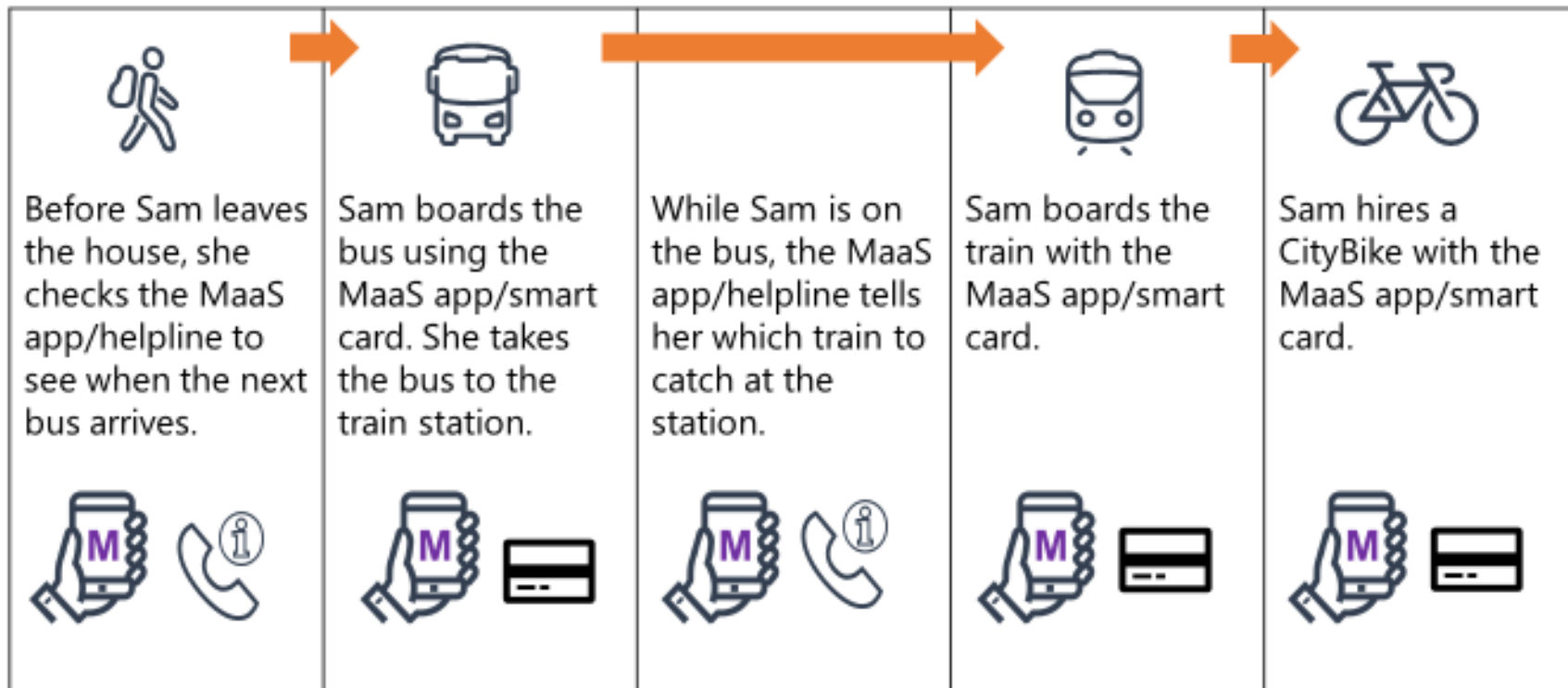
7

## SAM'S JOURNEY TO WORK NOW



8

## SAM'S JOURNEY TO WORK WITH MAAS



9

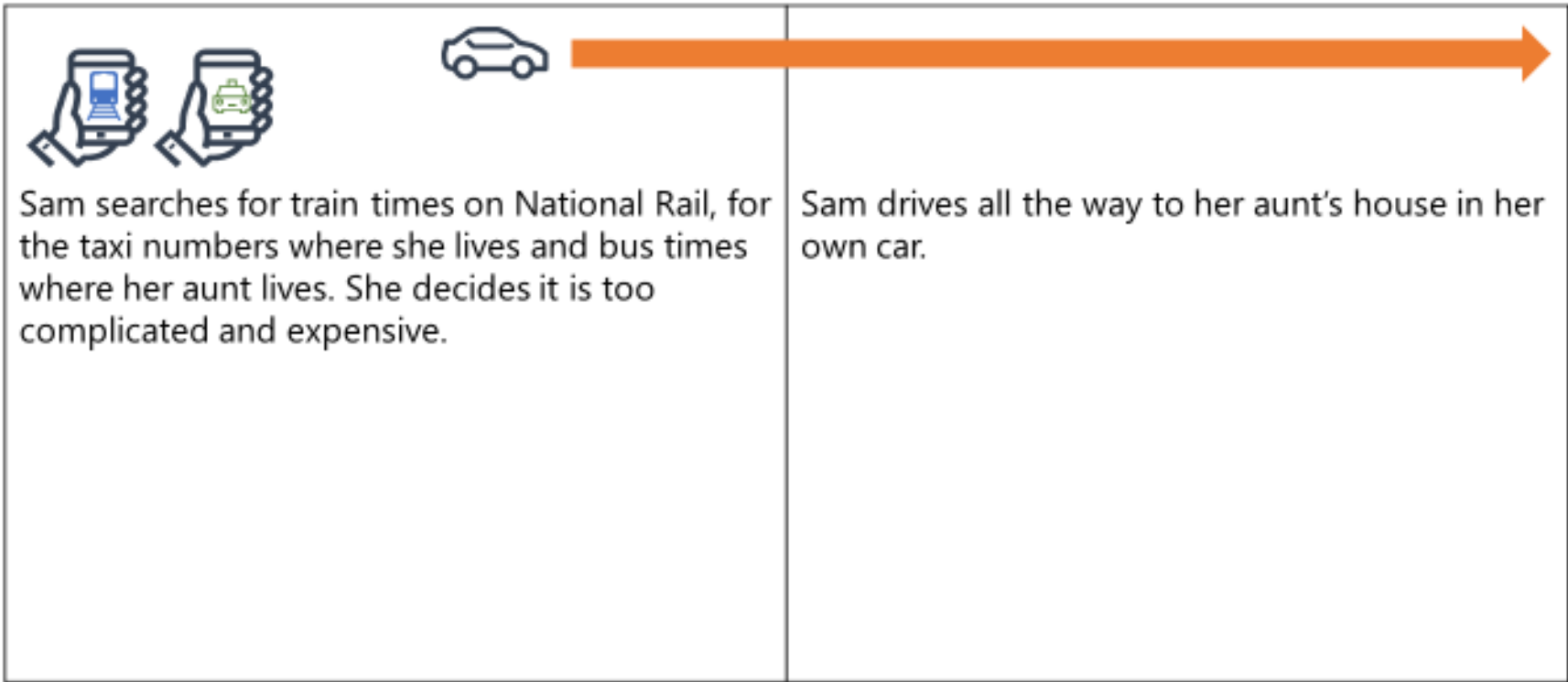
### SAM'S JOURNEY TO HER AUNT'S NOW



Home

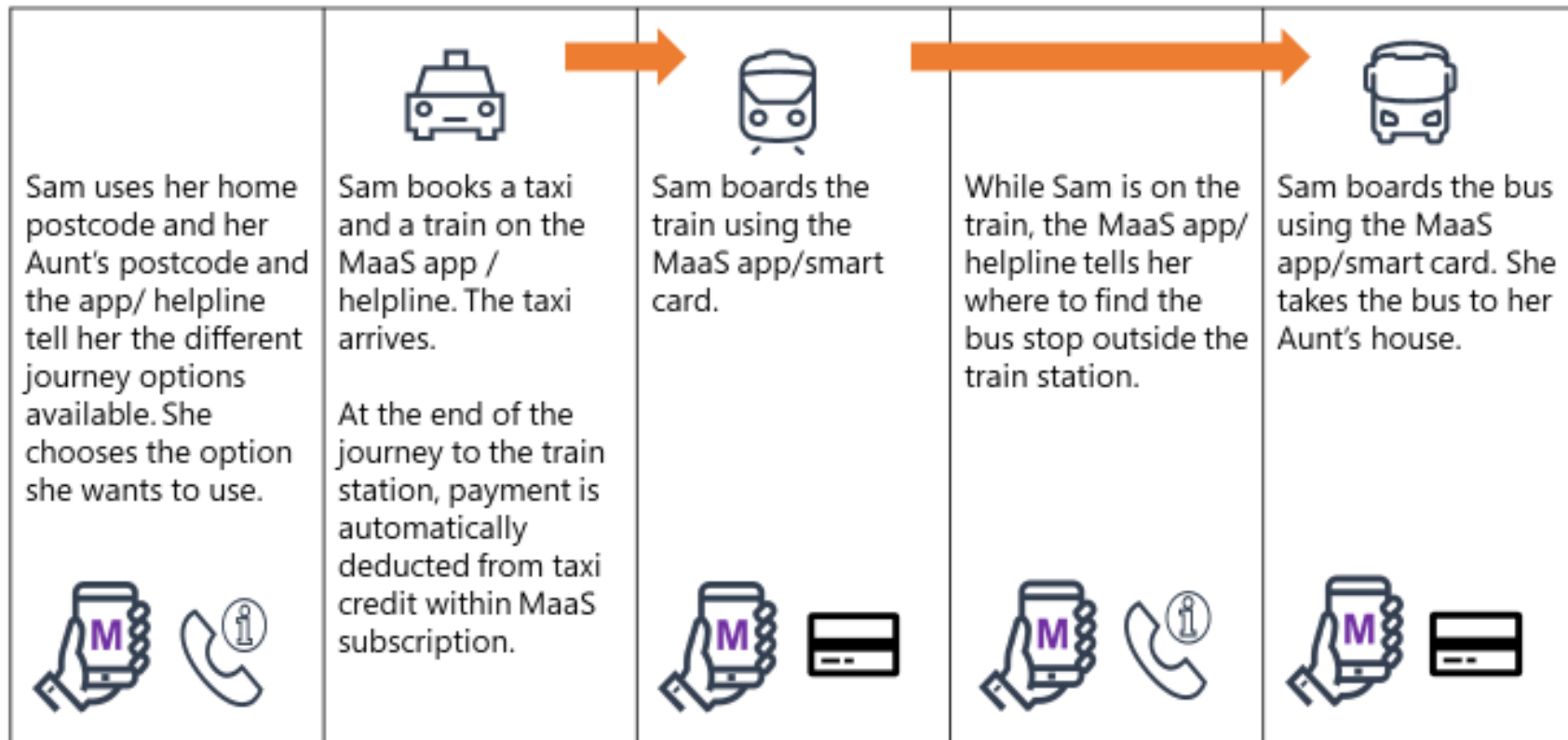


Aunt's house



10

## SAM'S JOURNEY TO HER AUNT'S WITH MAAS



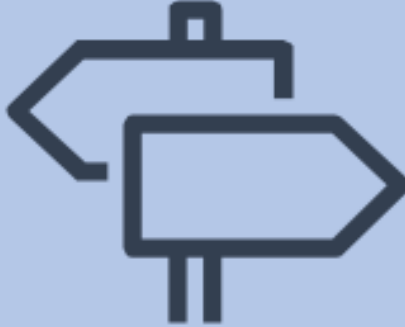







11

How likely or unlikely are you to sign up to use a Mobility as a Service platform?

	Very likely	Quite likely	Neither likely nor unlikely	Quite unlikely	Very unlikely
First vote					
Second vote					

Name:

12 Affordability 	Convenience 	Choice 	Accessibility 
Health & fitness 	Environment 	Personal data privacy 	Personal safety 

## Mobility Personas

13



Jessica is a working mum. She drives a car so that she has space for her child and can get to and from the creche quickly.

Childcare and fuel are expensive and she only drives because she feels like she has no choice.

Jessica also worries about the impact of pollution from traffic on her child and likes the idea of greener travel if it was affordable and convenient enough.



14



Oliver is a university student. At the moment he spends a lot of money on taxis because he knows they will have space for his wheelchair.

He cannot tell whether public transport has space or the right facilities until the bus or train turns up.

Oliver also enjoys being active and would like to take pedestrian routes for some of his journeys instead of getting driven everywhere.

15



Amelia lives in a small village and depends on the bus service to go to work because she can't drive. She pays for these with cash but the nearest cashpoint is in the next town.

Because she lives in a valley, her phone's signal and data connection are really poor and it's hard to look up bus times and directions.

She would like to go to more plays, films and concerts but the bus service stops in the early evening.

16



Hamad drives his car to and from work each day. There's a train service along the same route but he enjoys the independence of driving and doesn't trust the reliability of the service.

He would like to cycle to work but the distance is too far. Instead, he goes for rides on the weekend around a local nature reserve.

For nights out, Hamad has to leave his car at work and get a taxi home and back in the next morning.

17



Margaret splits her time between caring for her mother and working part-time in town.

To get to work she has to take two buses. Because they are run by different operators she has to pay separately for both. Also, their timetables do not line up which can make her journey longer and unpredictable.

She is sceptical of new and online technology because some of her friends have been the victims of identify theft and fraud.





## Stimulus used in the London groups (amended for the following 8 groups)

### A1 Examples around the world




**Finland**

## Find your plan

 <p><b>Whim Urban 30</b></p> <p><b>€59,7</b> / 30 days</p> <p>30-day HSL ticket, City bike, and €10 taxis.</p> <p><a href="#">read more</a></p>	 <p><b>Whim Weekend</b></p> <p><b>€249</b> / 30 days</p> <p>Weekend rental car, 30-day HSL ticket, city bike, and discounted taxis.</p> <p><a href="#">read more</a></p>	 <p><b>Whim Unlimited</b></p> <p><b>€499</b> / month</p> <p>Unlimited access to car, taxi, public transport, and city bike.</p> <p><a href="#">read more</a></p>	 <p><b>Whim to Go</b></p> <p><b>Pay as you go</b></p> <p>Each trip is paid separately with no subscription fee.</p> <p><a href="#">read more</a></p>
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Whim is a mobile app that has been operating in Helsinki since 2016.

Whim users can:

- Use the app to plan journeys and routes, book digital tickets and pay for their journeys.
- Choose between 4 different payment plans integrating public and private transport modes.

Around 60,000 customers use Whim every month in Helsinki and over 1,000,000 trips have been made in total.

## A2 Examples around the world



Whim piloted their app (subscription only) around Birmingham with Transport for West Midlands from April 2018 to April 2019. It offered two options:

- Whim Everyday for £99 per month which includes unlimited public transport with taxis and best-price car hire;
- Whim Unlimited for £349 per month which includes unlimited public transport, all taxi rides within a three-mile radius of your location and up to 30 days car hire per month



It is now available as a pay as you go only.

## Finland & United Kingdom



**A3** Examples around the world



**Smart travel card**



**or Apple Pay**



**United Kingdom**

**Citymapper Pass** launched in London in February 2019. The app offers customers unlimited travel on TfL's network from the centre out to Zone 4 in addition to public bike hire and taxi credit.

# Appendix 4: Discussion guide – depth interviews



## MaaS acceptability: Teledepths Discussion Guide

### Research questions:

- What could influence people's acceptance of, and decision to, use a MaaS platform?
- Why might people choose to use a MaaS platform rather than traditional mobility services?
- What are the benefits and opportunities of using a MaaS platform in comparison to traditional journey planning and/or using a private vehicle?
- What are the disadvantages and risks of using a MaaS platform?
- How could MaaS platforms be made inclusive and accessible?
- What actions could help to ensure all sectors of the population can access MaaS applications?
- Is there anything that could be incorporated into MaaS platforms to encourage consumers to choose more active travel and sustainable modes?

### Purpose:

To understand any perceived benefits of MaaS to the consumer as well as highlight any potential challenges and risks to inform the Government's strategy and regulations.

### Discussion guide key:

**Bold lower case** = key questions

Non-bold lower case = follow up questions and prompts

*CAPITALISED ITALICS*, *NON-BOLD* = instructions for moderators

### Please note:

- If participants give undue focus to the **taxi allowance** element of MaaS, please emphasise that this would likely not be an element of a public sector-led scheme.
- If participants have a **bus/freedom pass**, emphasise MaaS' information capacity.
- Please focus on modal shift with participants who are private car users



5 mins	1. Introduction and background
	<p>Introduce self, Ipsos MORI, independent research organisation, here to gather your opinions for the Department of Transport</p> <p>The topic of our conversation this evening is transport. We are going to be talking about Mobility as a Service, a new business model that aims to provide the user a more seamless travel experience.</p> <p><i>EXPLAIN TONE AND NATURE OF DISCUSSION:</i></p> <ul style="list-style-type: none"> <li>• Relaxed and informal</li> <li>• No right or wrong answers</li> <li>• Plenty to get through, so the I may have to move the conversation on from time to time – not that we're not interested in what you have to say</li> <li>• Clarify length of interview - 60 minutes</li> <li>• Participation is entirely voluntary, and you are free to pause or end the interview at any time.</li> <li>• I will be recording this call so that we can accurately report of has been said.</li> <li>• All answers will be confidential and anonymous, in line with the MRS code of conduct, and you will not be individually identified in the report; our client (DfT) will not know you took part</li> <li>• Get permission to record and explain that we may get the recording transcribed</li> </ul> <p><b>PRESS RECORD</b></p> <p><b>Do you have any questions about the research?</b></p> <p>Run through consent questions:</p> <ol style="list-style-type: none"> <li>1. <i>I understand that I do not have to take part. I understand that I can withdraw from the study at any time, and I do not have to provide a reason.</i></li> <li>2. <i>I agree that the discussion can be digitally recorded. I understand that data concerning me will be stored and accessed in accordance with current laws, such as the General Data Protection Regulations (GDPR). All the data will be destroyed one year after the research study ends (in 2021).</i></li> <li>3. <i>I understand that anything I say will be private, following the rules of the 2018 General Data Protection Regulation (GDPR). My information will only be used for research purposes. The only time this may not happen is if I talk about:</i></li> </ol>

	<p><i>Undisclosed illegal acts (this means offences that no one else knows about); Behaviour that is harmful to myself or someone else.</i></p> <p>4. <i>I confirm that I have had any questions about the research answered to my satisfaction</i></p> <p>5. <i>I understand that at the end of the interview I will receive £40 as a thank you for my time</i></p> <p>6. <i>I agree to take part in this interview</i></p>
15 mins	<b>2. Views on current transport use</b>
	<p><i>OVERALL TRANSPORT USE</i></p> <p><b>What typical journeys do you make in a normal week?</b> e.g. work, family, shopping, errands</p> <ul style="list-style-type: none"> <li>• What are the transport types you use to do this? Car, bus, train, taxi, bike, other?</li> <li>• Why do you use these types of transport for these journeys and not others?</li> <li>• Do you always make the same transport choice, or do you switch between /combine types of transport?</li> <li>• Which do you do most often, and which less often?</li> </ul> <p><b>Are there many transport options for you around your local area?</b></p> <p><b>Is there anything that makes your transport journeys easier? Can you describe a recent example of a journey that you felt was an easy to make? What made it easy?</b> (prompts: information, accessibility)</p> <p><b>Is there anything that makes your transport journeys harder? Can you describe a recent example of a journey that you felt was hard to make? What made it hard?</b> (prompts: information, accessibility)</p> <p><i>JOURNEY PLANNING</i></p>

	<ul style="list-style-type: none"> <li>• <b>How do you currently plan your journeys?</b> (prompts: online/ offline / on the day/ in advance)</li> <li>• <b>Is this different for familiar/unfamiliar journeys?</b> (prompts: commuting/ school run /shopping / visiting friends and relatives/ holidays/ day trips)</li> <li>• <b>Is this different for journeys where you use different types of transport?</b> (prompts: are these changes easy or difficult? why?)</li> <li>• <b>Do you find journey planning easy or difficult right now? Why?</b> (prompts: old or up to date information / easy or difficult to understand timetables/ any other information you need to help you plan your journey e.g. step free access?)</li> </ul> <p><i>TICKETS FOR TRAVEL</i></p> <ul style="list-style-type: none"> <li>• <b>What format of ticket do you currently use for your journeys?</b> (paper/digital/phone/single/return/season tickets)</li> <li>• <b>Do you find that format easy or difficult right now? Why?</b> (prompts: risk of damage/loss of tickets/accessibility/value for money)</li> </ul> <p><i>PAYING FOR TRAVEL</i></p> <ul style="list-style-type: none"> <li>• <b>How do you currently pay for tickets for your journeys?</b> (prompts: cash/ card/ contactless/ online, single/ return tickets, season tickets, PAYGo, bike/ car hires for set period, per gallon for fuel)</li> <li>• <b>Do you find paying for tickets and fares easy or difficult right now? Why?</b> (prompts: different for different modes? value for money, time taken to pay)</li> </ul> <p><b>How do you find out about the transport options in your area?</b></p> <ul style="list-style-type: none"> <li>• PROBE: see them/used them before, word of mouth, advert etc.</li> </ul>
<p><b>20 mins</b></p>	<p><b>3. Introducing MaaS and initial thoughts</b></p>
	<p>As I mentioned earlier, what we’re going to talk about today is a new mobility model called ‘Mobility as a Service’. Mobility as a Service, or MaaS, is “The integration of various modes of transport along with information and payment functions into a single mobility service.” This platform could be accessed online, as a phone app, or offline, as a telephone switchboard which you can call for information and for booking.</p> <p><b>Does this make sense so far? Do you have any questions?</b></p>

I would like to give you a few examples of MaaS to help develop your understanding.

In Finland, a MaaS service called Whim has been operating commercially since 2016. People who use Whim in Helsinki can choose between 4 different payment plans integrating public and private transport modes, from a lower cost with only some modes of transport to a higher cost with every mode of transport.

In the UK, there have been trials in Dundee and the West Midlands. In London, CityMapper have launched an app called CityMapper pass. There are different types of subscriptions available such as subscriptions that include unlimited public transport, bike hire and £10 of taxi credit.

**How does that sound to you?**

Now we're going to go through a made-up example of how a journey might change with MaaS.

Right now, Sam goes to work by bus, train and hire bike. Before she leaves the house, she goes to the local bus company website to check the timetable. She walks to the bus stop and pays for a ticket with cash. While Sam is on the bus, she checks the National Rail website to check that the train is running on time. When she gets to the train station she buys a paper ticket with her bank card from a self-service machine. Finally, she uses a mobile app to hire a bike and cycles to her office.

Now we're going to see how that journey might be with a MaaS platform. Before Sam leaves the house, she checks the MaaS app or helpline to see when the next bus arrives. She boards the bus using the MaaS app/smart card. She doesn't need a paper ticket. She takes the bus to the train station and the MaaS app or helpline tells her which train to catch at the station. She then uses the app or smart card to board the train and to hire the bike for her cycle to the office.

**Does this make sense? Do you have any questions about Sam's journey?**

**What do you think about the difference between Sam's journey with and without MaaS?**

	<p><b>From what you've heard so far, how likely or unlikely are you to sign up to a Mobility as a Service platform? Very likely, quite likely, neither likely nor unlikely, quite unlikely, or very unlikely?</b></p> <p><b>Why?</b></p> <p><b>What might be the benefits of using MaaS?</b></p> <p><b>What might be the drawbacks of using MaaS?</b></p> <p><b>Would you prefer MaaS based on a mobile app or a call centre platform? Why?</b></p> <p><b>Thinking about planning for journeys at the moment, how would this be different for you if you used MaaS? What would be better? What would be worse?</b></p> <p><b>Thinking about paying for journeys at the moment, how would this be different for you if you used MaaS? What would be better? What would be worse?</b></p>
<p><b>15 mins</b></p>	<p><b>4. Enablers and barriers</b></p>
	<p><b>Now we're going to talk about the different things which could encourage or discourage us to sign up to a MaaS platform.</b></p> <p><b>Off the top of your head, what do you think would encourage people to use a MaaS platform?</b></p> <p><b>Thinking about yourself and the people you know, what do you think would discourage people to use a MaaS platform?</b></p> <p><b>What could MaaS offer that would help you:</b></p> <ul style="list-style-type: none"> <li>• <b>Make your journeys easier?</b></li> <li>• <b>Make your journeys safer?</b></li> <li>• <b>Make your journeys healthier?</b></li> <li>• <b>Make your journeys better for the environment?</b></li> </ul> <p><i>PROMPT/DETAILED QUESTIONS IF THESE THEMES DID NOT COME UP IN THE PREVIOUS QUESTIONS.</i></p> <p><b>How could MaaS affect the accessibility of travel? Will it make it better or worse?</b></p> <p><b>What, if anything, can MaaS offer that could make accessibility of travel better?</b></p>

**How could MaaS affect the affordability of travel? Will it make it better or worse? What, if anything can MaaS offer that could make affordability of travel better?**

**How could MaaS affect the convenience of travel? Will it make it better or worse? What, if anything, can MaaS offer that could make convenience of travel better?**

**How could MaaS affect choice of travel? Will it make it better or worse? What, if anything, can MaaS offer that could make choice of travel better?**

**How could using MaaS affect peoples' personal safety? What, if anything, could it offer to help improve peoples' personal safety? (e.g. public lighting, location tracking)**

**How could using MaaS affect peoples' health and fitness? What, if anything could it offer to help improve peoples' health and fitness? Would you want information about calories?**

**How could using MaaS affect the environment? What, if anything, could it offer to help improve the environment? Would you want information about your carbon footprint?**

**How will MaaS affect people's personal data privacy? What will MaaS users want to know about this?**

**Thinking about everything that we have discussed so far: would you be more or less willing to use a MaaS platform if it was provided by the public sector?**

**Outside of the themes we've just talked about, is there anything else about MaaS that might affect what types of transport you use such as car, bus, taxi etc.?**

**Now that you've had more of a chance to think about it, how likely or unlikely are you to sign up to a Mobility as a Service platform? Very likely, quite likely, neither likely nor unlikely, quite unlikely, or very unlikely?**

**Why did/didn't you change your mind?**

**5 mins**

**5. Reflections and wrap up**

**We are coming to the end of our session now, thanks for all of your opinions and views during this conversation.**

**Do you have anything else that you would like to add?**

*THANK AND CLOSE*

## Appendix 5: Additional quotes

Section	Quote
Subscriptions	<p><i>"It depends how much it is for this area. In Glasgow it might be double the price."</i> <b>Group, Inverness, 45+ years</b></p>
PAYG	<p><i>"I would use it as a one-off. I don't want to subscribe to something that I'm not going to use daily."</i> <b>Group, Manchester, 45+ years</b></p> <p><i>"People use day tickets because they can't afford to pay for a week or a month ticket. It sounds like you're getting a week ticket on the bus to get access to everything else, but how much more would that cost?"</i> <b>Group, Inverness, 18-44 years</b></p>
Cost enablers	<p><i>"If it wasn't cheaper, what's the point of it?"</i> <b>Group, Cardiff, 18-44 years</b></p> <p><i>"Maybe if you spend this much, you get this much free. A reward programme or something. These reward programmes, they have to be tailored to individual needs because they'll suit some people and not another. I don't care if I'm going to get a free hamburger or money off going to the gym, that doesn't attract me, but it would a lot of people. It'd have to be tailored to the individual's needs, a choice, basically."</i> <b>Depth interview, physical impairment</b></p> <p><i>"You also get credits for taxis by way of local council. If there's a way to incorporate that, but this is a user experience for a disabled individual. They [currently] have to book their taxis through a special app. If you could integrate that, so, you put your credits and you've got your Freedom Pass already, and then it calculates discounts. If you're eligible, it would make life a lot easier."</i> <b>Depth interview, physical impairment</b></p>
Current information / payment services used	<p><i>"This just looks like what we have already, if you were to ask me if this already existed, I would say yes. It is just like topping up your Oyster."</i> <b>Group, London, 45+ years</b></p>



Section	Quote
	<p><i>"I don't know what's different to what we've already got. The fares being in one place and everything being in one place, but I can already do all of this now. I've already got Apple Pay and I've already got my Oyster card. It's just something else."</i> <b>Depth interview, physical impairment</b></p> <p><i>"Sometimes it's [transport app] not accurate...the journey time may be quicker or slower than what it really says."</i> <b>Depth interview, visual impairment</b></p>
<b>Transport familiarity and use</b>	<p><i>"I would only use it for unusual journeys. I wouldn't use it every day. For me, I don't see any point. I drive to the station and it's an 8-minute train."</i> <b>Group, Manchester, 18-44 years</b></p> <p><i>"I'll plan more for a train journey than I will for a tram journey. Trams are more frequent. To me, trains are quite infrequent and unreliable. I'll always plan that one. With a tram, you just turn up and there's one within 10 minutes."</i> <b>Group, Manchester, 45+ years</b></p> <p><i>"For my bus, I know it's 5 and 25 past the hour, but I rang up my local bus place for that. The trams, they're every 9 to 12 minutes, so I don't plan those."</i> <b>Depth interview, visual impairment</b></p> <p><i>"We have two buses an hour. That's going in both directions sort of thing. But they tend to be a bit unreliable because we've waited for buses before and they just don't turn up sometimes, which makes it a little bit awkward. And also, if the road's shut in [location] I'm very limited because I can cross the village road alright, but the main [road] I can't cross on my own because it's far too busy in the morning. So, if the buses are stopped [not running] through the village which happens now and then, I'm virtually housebound unless the wife's with me."</i> <b>Depth interview, visual impairment</b></p>
<b>Planning unfamiliar journeys</b>	<p><i>"I think it would be useful for visiting parents outside London. I could plan the route and get the ticket on the same app, but only as long as it is as accurate and reliable."</i> <b>Group, London, 18-44 years</b></p> <p><i>"Cost might be important to me, but speed might be important to her. I think it's good if it shows you the options."</i> <b>Group, Manchester, 18-44 years</b></p>

Section	Quote
	<p><i>“It’s the time factor. If you’re getting off one train and getting into another, you’ve got to add that into your time factor for catching the other train, so it’s also got to give you reasonable time to get from one platform to another platform. Because it’s alright for somebody who’s fit and able. You could have somebody in a wheelchair even. How are you going to make allowances for them?”</i> <b>Depth Interview, visual impairment</b></p> <p><i>“That’s good. If I pay for it all on one app, all of the information on one app, all of the details on one app, that’s better. That’s what I was saying earlier. It would make it a lot easier and easier and save [smartphone] memory space.”</i> <b>Depth interview, visual impairment</b></p> <p><i>“It makes my life a lot easier, they can plan your journey and find the easiest option and obviously tell you the time of the next transport. So, that’s really good, you don’t have to go on individual websites to get the information, because if you need a train you have to get on one website and then another website for the buses. So, it saves a lot of planning.”</i> <b>Depth interview, physical impairment</b></p>
<b>Convenience - enablers</b>	<p><i>“Usually I’d go on different apps to compare ticket prices. It would be much handier if I can see it all in one place and can know how much in total it costs.”</i> <b>Group, Telford, 18-44 years</b></p> <p><i>“It’s great that it’s all in one place, and even if you forgot your purse you can still get to where you need.”</i> <b>Group, Telford, 18-44 years</b></p> <p><i>“It’ll just give easier access, won’t it, for what you want to do and you won’t have to pay on different transports.”</i> <b>Depth interview, physical impairment</b></p> <p><i>“It depends how good it is going to be...if it reduces the effectiveness compared to a single app it won’t be any good. It has to be the best at all of them [journey planning, information provision and payment] otherwise you might as well use singular apps.”</i> <b>Group, London, 18-44 years</b></p> <p><i>“I use Trainline, and the transfer time between trains is very narrow. If you are familiar with the station it is okay, but if I am going somewhere I am not familiar with, I won’t find the platform.”</i> <b>Group, London, 18-44 years</b></p>

Section	Quote
	<p><i>“The only thing possibly is having a digital version of my card. My pass on my phone, that’s the only thing that could be useful. The amount of times I go out and forget my pass.”</i> <b>Depth interview, visual impairment</b></p>
<p><b>Convenience - barriers</b></p>	<p><i>“I don’t think it makes a difference, because it can’t provide more transport. I live in a rural area, so the best way is to just drive.”</i> <b>Group, Telford, 18-44 years</b></p> <p><i>“I think for cities it’s great, but not for Inverness. The buses are run by difference companies. It’s not a commuter city. There’s not the infrastructure or services here.”</i> <b>Group, Inverness, 18-44 years</b></p> <p><i>“In London it would work because it is all TfL, but in Birmingham with different companies it may be a logistical issue.”</i> <b>Group, London, 18-44 years</b></p> <p><i>“Just for the way I work right now, I take my car to the station, I couldn’t get a bus to the station, I have a season ticket. I don’t see the need to have this app. I just pay for one season ticket for one train.”</i> <b>Group, Cardiff, 45+ years</b></p> <p><i>“I would rather stick to the Oyster card. Because it’s only in the last few years I’ve really gotten the Oyster card and how it works. I really don’t want to switch to something else where it’s new and I’ve got to relearn it again, and I’ve got to learn how it works. Don’t forget, I only use the Oyster card like I said, I could use it for multiple journeys within an hour, etc. So, I don’t want to have to learn something new again.”</i> <b>Depth interview, visual impairment</b></p> <p><i>“Obviously I don’t travel on my own at the moment, but I would like to, I’m a grown woman and I like my independence. If there’s a tracking device that shows how I was getting on, because I did do one journey...the whole time, poor [family member], when I’m out of Internet range, or mobile, she got agitated, she couldn’t find out where I’d got to. If she could see where I’d got to that would be great, she’d feel better.”</i> <b>Depth Interview, physical impairment</b></p>
<p><b>Accessibility</b></p>	<p><i>I use the bus, but I have to go when few people are going to be on the bus, because whilst there are designated seats, people don’t get up and I can’t stand...”</i> <b>Depth interview, physical impairment</b></p>

Section	Quote
	<p><i>“What would be very handy, because most of the time they will say ‘disability access’, but their sort of disability access is as different as it can be. If I go to something that says ‘disabled access’, nine times out of ten it’s because it’s got a slope. Like I said, a slope for a wheelchair user going up is no good. Going down is good. Really, it has to have a lift. For me, slopes going down are bad, up is good, so it’s not really disabled access. It would be good if they added simple things as in stair or slope access to the information.”</i> <b>Depth interview, physical impairment</b></p> <p><i>Availability of priority seats: participants felt that it would be useful to know whether priority seats were provided on services, and the location of these. “It would be handy for me to know there is a priority seat available and where it is, because I can’t see signs. I can’t read notices or things like that, or signs, so I do have to rely upon word of mouth, asking questions and this and that to find out things. Which, if you are in a bit of a hurry, is very awkward. To find somebody to ask, if you know what I mean. Half the time they don’t know anyway. If you’ve got it there coming to you, sort of thing, then I can say, ‘Ah, I know so and so.’”</i> <b>Depth interview, visual impairment</b></p> <p><i>“I would type in where I’m leaving from and I’d put in my destination, and then it could say, take the train to such and such station, and then change to this line, and then you get off, and then you get the bus. They could tell you in audio.”</i> <b>Depth interview, visual impairment</b></p> <p><i>“Maybe you’re walking, it could do with directions. For example, ‘Walk 100 yards, and then turn left.’ Or ‘Walk 50 yards and turn right.’ Because the maps, you know the address maps that tells you where to go? I always do that. so maybe that could do that also.”</i> <b>Depth interview, visual impairment</b></p>

Section	Quote
	<p><i>“When you’re disabled you don’t want to wear a great big sign around your neck saying, ‘Look at me, I’m disabled,’ so if it’s in the app then it’d flag up that that person has mobility issues or is blind and will need assistance somewhere along the journey. As I’ve got older, I don’t want to be reminded that I’m disabled every day, I just want somebody to treat me as a normal person but know that I have mobility issues. On a normal day, if I’ve not got my walking stick with me, telling the driver, ‘Can you lower the bus down?’ saying that every day would drive me mad. To wear a badge saying, ‘I’m disabled,’ is not something I find attractive.”</i> <b>Depth interview, physical impairment</b></p> <p><i>“They should make it so you can hear when the bus is coming, what number bus, how long it will take.”</i> <b>Depth interview, visual impairment</b></p> <p><i>“It can, but in this day and age it’s so much easier to have a mobile app. Having said that, the benefit of a call centre, if you get a bit confused, agitated, or if you think you’re not doing things right, a call centre will put you right. One of the things I’ve found recently, even if you have a mobile phone, the call centre has been reduced so much you can’t get hold of anybody, you can’t find a number to call. I would definitely say the call centre would be...very popular in this day and age because nobody allows them anymore.”</i> <b>Depth interview, physical impairment</b></p> <p><i>Yes, it would be convenient, wouldn’t it? It would definitely be convenient. It would be good if it was accessible for voice-only users, because I use speech on the phone. Most apps now, they are accessible.</i> <b>Depth interview, visual impairment</b></p> <p><i>I’d rather have the helpline. Myself, I have a limited...phone... and the apps are limited that I can get...I have to read them out because I can’t see what comes up on the screen.”</i> <b>Depth interview, visual impairment</b></p> <p><i>“There will be too much going on. From an accessibility point of view, things don’t work very well as it is ...if something’s got a lot of things going on like chart, graphs, pictures, it’s not going to work. Too much on an app isn’t going to work for me, unless they’re working with developers that that is their job.”</i> <b>Depth interview, visual impairment</b></p>
<b>Modal shift</b>	<i>“Your car is your bubble.”</i> <b>Group, Cardiff, 45+ years</b>

Section	Quote
	<p><i>“It sounds as though it is encouraging people to use cabs more. Where there is some sort of partnership with cab companies, in order to make it worth the cab companies’ while, they would have to prioritise that partnership.”</i> <b>Group, London, 18-44 years</b></p>
<b>Data privacy</b>	<p><i>“I don’t think it is different to what is happening already, with banks and with Google. Wherever you go it is out there. What is somebody going to do with how you plan your day? They are more likely to go into your bank account.”</i> <b>Group, London, 45+ years</b></p>
<b>Governance</b>	<p><i>“You constantly see data leaks. I think part of it is a natural part of being in a digital age. It’s not good, but it’s something that just happens. When it happens it’s bad, but I would rather have a data leak from a publicly owned transport system, at least it’s accountable to people whereas a private company really isn’t.”</i> <b>Group, Inverness, 18-44 years</b></p>
<b>Personal safety</b>	<p><i>“I think it would be good to have something to tell you how long do you have to wait so you’re not somewhere in the dark waiting.”</i> <b>Group, Cardiff, 18-44 years</b></p> <p><i>“It could be good to track your children to know that they’re on their bus or train home. With personal data privacy, my concern is that somebody could access your route, and how that would affect your safety.”</i> <b>Group, Inverness, 18-44 years</b></p>

# Appendix 6: Ipsos MORI's standards and accreditations

Ipsos MORI's standards and accreditations provide our clients with the peace of mind that they can always depend on us to deliver reliable, sustainable findings. Our focus on quality and continuous improvement means we have embedded a 'right first time' approach throughout our organisation.



## ISO 20252

This is the international market research specific standard that supersedes BS 7911/MRQSA and incorporates IQCS (Interviewer Quality Control Scheme). It covers the five stages of a Market Research project. Ipsos MORI was the first company in the world to gain this accreditation.



## ISO 27001

This is the international standard for information security designed to ensure the selection of adequate and proportionate security controls. Ipsos MORI was the first research company in the UK to be awarded this in August 2008.



## ISO 9001

This is the international general company standard with a focus on continual improvement through quality management systems. In 1994, we became one of the early adopters of the ISO 9001 business standard.



## Market Research Society (MRS) Company Partnership

By being an MRS Company Partner, Ipsos MORI endorses and supports the core MRS brand values of professionalism, research excellence and business effectiveness, and commits to comply with the MRS Code of Conduct throughout the organisation.

## Data Protection Act 2018

Ipsos MORI is required to comply with the Data Protection Act 2018. It covers the processing of personal data and the protection of privacy.



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## About Ipsos MORI Public Affairs

Ipsos MORI Public Affairs works closely with national governments, local public services and the not-for-profit sector. Its c.200 research staff focus on public service and policy issues. Each has expertise in a particular part of the public sector, ensuring we have a detailed understanding of specific sectors and policy challenges. Combined with our methods and communications expertise, this helps ensure that our research makes a difference for decision makers and communities.

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