

# SMART MAINTENANCE AND THE RAIL TRAVELLER EXPERIENCE

## Deliverable 3.3 - Factors affecting train use

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## REPORT CONTRIBUTORS

Name	Company	Details of Contribution
Daniel Johnson	UNIVLEEDS	Data analysis and interpretation
Katharine Pangbourne	UNIVLEEDS	Reviewing, editing/proof-reading

## EXECUTIVE SUMMARY

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This deliverable reports on work from Task 3.3 of SMaRTE based on surveys of a representative number of transport users, including non-rail users, to define the influence of key factors behind the choice, or otherwise, of rail. Inputs to the survey design are taken from Tasks 3.1 (Literature review) and 3.2 (Passenger Experience Map).

Three European partner countries have been chosen as the basis of catchment areas, to allow the customisation of surveys and to enable partners to translate the surveys. It is also in line with other related activities in Work Package 3.

Using the large dataset we are able to cross compare results across different areas and user types. Therefore our findings enable us to make robust conclusions as to the key gaps in provision for rail passengers and barriers for non-rail passengers, having considered a large number of attributes to capture journey experience.

The survey investigates the perceived usability of each activity (i.e. the cognitive and physical effort) associated with pre-during-post travel phases both when rail is chosen and when a competing transport mode has been chosen. To that end, data has been collected on rail and non-rail journeys.

The findings here will form the basis of recommendations to feed into Task 3.4 (The Smart Journey Vision) and associated deliverable D3.4

## TABLE OF CONTENTS

<b>REPORT CONTRIBUTORS .....</b>	<b>2</b>
<b>EXECUTIVE SUMMARY.....</b>	<b>3</b>
<b>TABLE OF CONTENTS.....</b>	<b>4</b>
<b>LIST OF FIGURES.....</b>	<b>5</b>
<b>LIST OF TABLES .....</b>	<b>5</b>
<b>1. INTRODUCTION: SCOPE OF DOCUMENT .....</b>	<b>6</b>
<b>2. SURVEY DESIGN .....</b>	<b>6</b>
SCOPE OF SURVEY .....	6
BACKGROUND QUESTIONS.....	7
RECENT JOURNEYS.....	7
RAIL JOURNEY EXPERIENCE .....	7
JOURNEYS NOT MADE BY RAIL.....	9
<b>3. DATA COLLECTION .....</b>	<b>9</b>
RECRUITED SAMPLE.....	9
<b>4. RESULTS.....</b>	<b>12</b>
MOST RECENT RAIL JOURNEY .....	12
TRAVEL CHARACTERISTICS BY COUNTRY .....	12
IMPORTANCE FACTORS .....	16
SATISFACTION FACTORS .....	19
MOST RECENT NON-RAIL JOURNEY.....	24
<b>CONCLUSIONS.....</b>	<b>26</b>
<b>APPENDIX: TEXT AND SCHEMA FOR UK SURVEY .....</b>	<b>28</b>

## LIST OF FIGURES

Figure 1: Most recent short rail journey (rail type share %: N=945) .....	12
Figure 2: Most recent longer rail journey (rail type share %: N=900) .....	13
Figure 3: Travel by time of day started journey (% of all journeys: N=1845). ....	13
Figure 4: Journey purpose (% of all short journeys: N=945). ....	14
Figure 5: Journey purpose (% of all longer journeys: N=900). ....	14
Figure 6: Alternative arrangements (% of all short journeys: N=945). ....	15
Figure 7: Alternative arrangements (% of all longer journeys: N=900). ....	15
Figure 8: Necessary considerations for undertaking a short rail journey (%: N=945). ....	16
Figure 9: Necessary considerations for undertaking a longer rail journey (% N=900). ....	17
Figure 10: Necessary considerations for undertaking a rail journey (%) by area.....	18
Figure 11: Necessary considerations for undertaking a rail journey (%) by traveller type.....	19
Figure 12: Overall levels of satisfaction with short rail journeys (% N=945). ....	20
Figure 13: Overall levels of satisfaction with longer rail journeys (% N=900). ....	20
Figure 14: Levels of dissatisfaction by country (% N=1845).....	21
Figure 15: Overall levels of satisfaction by traveller type (% N=1845). ....	22
Figure 16: Levels of dissatisfaction by traveller type (% N=1845). ....	23
Figure 17: Necessary improvements to consider use of train in future (% of non-rail travellers) .	24
Figure 18: Attrition factors for journey-stages (% of non-rail travellers: N=413) .....	25

## LIST OF TABLES

Table 1: Likert Scale Rankings .....	7
Table 2: Journey Phases and Factors .....	8
Table 3 Gender by Location crosstabulation.....	9
Table 4 Age by Location crosstabulation .....	10
Table 5 Journeys by traveller type .....	10
Table 6: What journey do you travel the most?.....	10
Table 7 Journeys by location and gender .....	11
Table 8 Journeys by location and age .....	11

## 1. INTRODUCTION: SCOPE OF DOCUMENT

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Work Package 3 of SMARTE aims to understand current and future needs of railway passengers. As part of this suite of the work, the study reported here investigates aspects of the rail traveller's experience which could be improved and simplified through information and mobility support. As part of this study we conducted surveys on representative transport users, to define and measure the influence of key factors on the choice, or otherwise, of rail. Another key question addressed is understanding the parts of the perceived or actual experience which result in a non-rail journey being taken where rail could have been the choice made.

Through a quantitative and qualitative analysis of the passenger survey responses, we identify the relative levels of importance and satisfaction with quality of service attributes for rail vis-a-vis other modes. We identify travel satisfaction with recent rail experiences (last 3 months) and the relative importance that users place on various aspects of the journey experience and the associated levels of satisfaction with these aspects. We also analyse the ratings given to the identified reasons why rail wasn't chosen for particular journeys.

## 2. SURVEY DESIGN

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### SCOPE OF SURVEY

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We chose to conduct the survey in 4 metropolitan areas: Rome (Italy), Brussels (Belgium) and Manchester/Leeds (UK). These areas were chosen to be reflective of dense urban areas and rail networks across Europe and had variants of rail mode from tram to high speed rail. It was felt Leeds and Manchester were similar enough areas to be treated as one, given the close linkages via the travel network. The Leeds/Manchester data is referred to as UK for convenience but is not meant to be representative of UK.

The case study areas also largely match the areas where we had conducted the passenger focus groups and stakeholder workshops (the only difference is that we did not hold a stakeholder workshop in Brussels – for pragmatic reasons this was held in Dublin as a side event of a UITP meeting). The locational overlap provides us with the opportunity to assess whether our large scale passenger survey corroborates some of the findings from Task 3.2.

The survey design for Task 3.3, as with the earlier workshops and focus groups for Task 3.2, takes inputs from the literature review in Task 3.1. The earlier findings indicated that three passenger 'types' have particular journey characteristics of interest to the objectives of SMARTE. (retirees, commuters and students). Therefore we present the results separately for these different groups.

Respondents (cf 400 in each of the three areas) were asked to consider a number of recent journeys, by train and other modes.

The need to survey views of both rail users and non-users meant that we needed to achieve a survey sample population of 400 in each of the three areas (i.e. a total sample size of 1,200), that would broadly

reflect the underlying population in terms of gender and age profile, rather than being representative of rail passengers per se. In order to achieve the correct proportions, we clearly over-sampled rail users as the survey design was not based on a dichotomous demarcation of people as rail users or non-users: rather we were interested in reflections based on specific journey based *experiences* rather than broad perceptions which would have been too general as a basis for recommendations required in Task 3.4.

Where possible we have collected information on more than one journey per individual, although these journeys had to be distinct – i.e. where two journeys were reported these had to be either of different distances ('short' distances of 30km or less or 'longer' distances above that) or by rail and non-rail based modes. This approach enabled us to achieve not only insight into non-rail journey choices, but also a large enough sample to segment results by the different passenger groups, i.e. students, commuters and retired passengers in line with our earlier work, as well as by area.

The content and presentation of the survey was agreed between the Task partners through a series of face to face and virtual meetings and email exchanges. A number of iterations culminated in a final draft for each country which featured localised contextual information or examples where appropriate. These final versions went to translation by the survey company. Translated versions were checked over by the partners again to ensure they made sense to native speakers and corrected where necessary before going live on-line.

## BACKGROUND QUESTIONS

Standard questions were asked on gender, age, income, economic status, car availability, household characteristics, educational status and typical trip-making behaviour. Attitudinal questions were also asked to unlock 'cultural' aspects and personality traits, e.g. "I value rail as it's an environmentally friendly mode"; "I never travel by rail"; etc.

## RECENT JOURNEYS

For a maximum of up to 2 types of journeys, we collect information for each respondent on a rail or non-rail journey taken in the last 3 months. Because of differences in available modes in each of the areas, careful consideration had to be given to wording of all questions involving travel options (for example, there is no Metro option in Leeds or Manchester but it exists for Rome and Brussels).

### Rail Journey experience

For each of rail journey specified, we asked people to use a Likert scale to rate the importance and (for non-zero important rated aspects) satisfaction with journey factors. The Likert scale was used as demonstrated in Table 1 below.

*Table 1: Likert Scale Rankings*

Satisfaction ratings	Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
Importance ratings	Very important	Important	Neutral	Low importance	No importance

These factors were chosen and linked with the 'journey phase' categories which reflected the considerations and discussions from Tasks 3.1 and 3.2. The full set of factors are shown in Table 2 below:

*Table 2: Journey Phases and Factors*

<b>Journey phases</b>	<b>Associated factors</b>
[1] Planning, booking and purchasing the ticket	<ul style="list-style-type: none"> <li>The ability to use one or more tools to plan the journey (online and offline)</li> <li>The ability to book the journey in advance (using on-line or off-line purchase methods)</li> <li>Cost of ticket</li> <li>Integrated ticketing</li> <li>Available information on accessibility (e.g. support for elderly or those with visual/mental/physical impairments)</li> <li>Ability to buy ticket from station staff (as opposed to a ticket machine)</li> </ul>
[2] Journey to the station	<ul style="list-style-type: none"> <li>Journey time from origin to the departure station</li> <li>Options to access the station by different means of transport</li> <li>Car parking availability</li> <li>Car parking cost</li> </ul>
[3] Station Environment and waiting experience	<ul style="list-style-type: none"> <li>Waiting time at the station</li> <li>The provision of facilities in waiting areas (e.g. seating, heating, refreshments, shopping outlets, toilets)</li> <li>Accessibility experience at the station (proximity of platforms, stairs, elevators etc.)</li> <li>Wi-Fi and power connectivity</li> <li>Security and safety around the station (e.g. CCTV, security staff, good visibility in all areas)</li> <li>Cleanliness and maintenance of the station</li> <li>Station ambience (e.g. lighting and level of intrusive advertising)</li> <li>Station staff (e.g. for information, help with access)</li> <li>Information communications and signage</li> </ul>
[4] Rail in-vehicle experience	<ul style="list-style-type: none"> <li>Connectivity on the vehicles (Wi-Fi, mobile signal and power)</li> <li>Cleanliness and maintenance of the vehicles</li> <li>On board security and safety</li> <li>Facilities in the vehicles (e.g. catering facilities, toilets)</li> <li>Comfort (e.g. ergonomic seats, illumination, noise, standing space )</li> <li>Ability to find a seat</li> <li>Rail journey time</li> <li>Directness of service (ie whether interchanges between trains were required)</li> <li>Information (e.g. announcements, display screens, timetables, route-maps)</li> <li>Delay management (Information on any delays/disruptions, causes/extent/other options)</li> </ul>
[5] Onward journey to your destination	<ul style="list-style-type: none"> <li>Journey time from the arrival station to your final destination</li> <li>Options to travel onwards from the station by different means of transport</li> <li>Presence of information points at the arrival rail station</li> <li>Accessibility at the station to your onward journey (e.g. stairs, escalators etc...)</li> </ul>
[6] Quality of Rail Service	<ul style="list-style-type: none"> <li>Availability and frequency of train services at night times, weekends and holidays</li> <li>Interconnectivity between rail and other types of transport</li> <li>Environmentally friendly aspect of rail</li> <li>Reliability of rail service</li> <li>Network coverage</li> </ul>



Phase 6 is not a phase as such but catches aspects of generic rail provision which may be pertinent to traveller decision making. For any attributes rated ‘very important’ we also established whether these are deemed as ‘necessary’ to use rail.

### **Journeys not made by rail**

The aim of this part of the survey is to understand why people didn’t travel by rail and what aspects of the rail journey experience would need to be improved. A featured non-rail journey must have been feasible to be undertaken by rail to be in scope.

As well as establishing journey purpose and mode, respondents were asked to indicate which improvements in element of the rail journey would be important (using the five point Likert scale shown in Table 1) for them to consider use of rail for this journey in the future. For any elements deemed ‘very important’ we further established whether these were deemed as ‘necessary’.

## **3. DATA COLLECTION**

In total 1,200 respondents (400 in each case study area) were successfully recruited through an on-line panel of individuals in each country through the market research company QA Research. The English version was piloted in March 2019 and the full-scale survey successfully concluded in March. Following the successful pilot, the surveys were translated into Italian (Rome) and Flemish and French (Brussels). Surveying in these areas continued throughout April into early May 2019. The English version of the survey is included as an appendix and full versions of the surveys are submitted as ancillary documents.

### **RECRUITED SAMPLE**

Table 3 and

Table 4 show a breakdown of the recruited sample by age and gender. It shows the target sample was met with an approximately even split between male and female respondents and a good representation throughout the age categories.

*Table 3 Gender by Location crosstabulation*

		Location				Total
		Leeds	Greater Manchester	Rome	Brussels	
11. What is your gender?	Male	123	81	182	218	604
	Female	104	92	218	180	594
	Prefer not to say	0	0	0	2	2
Total		227	173	400	400	1200

Table 4 Age by Location crosstabulation

		Location				Total
		Leeds	Greater Manchester	Rome	Brussels	
I2. What is your age category?	18-19	6	3	20	34	63
	20-29	22	16	95	75	208
	30-39	39	34	71	69	213
	40-49	28	41	84	58	211
	50-59	36	41	45	45	167
	60-64	28	12	17	29	86
	65-69	35	13	36	49	133
	70 or older	33	13	32	41	119
Total		227	173	400	400	1200

For subsequent analysis, we assigned each of the recorded 1845 rail journeys to a travel type category as shown in Table 5. Commuters were those who described their journey purpose as commuting and recorded an economic status of full-time, part-time or self employed; students were those in full time or part time study and retired passengers were those who described their economic status as retired. Remaining recorded journeys were assigned to the 'other' category.

Table 5 Journeys by traveller type

Commuter	Retired	Student	Other	All
321	248	156	1120	1845

Table 6: What journey do you travel the most?

	Frequency	Percent
Urban	871	72.6
Regional	181	15.1
National	123	10.3
International	25	2.1
Total	1200	100.0

We found that most (over 70%) travellers make urban journeys most frequently, as shown in Table 6.

Table 7 and Table 8 break down the actual reported rail journeys by gender and age respectively. Overall we have 945 short journeys reported and 900 longer rail journeys reported with an even balance across the case study areas. The tables show a good spread across the age range and overall a balanced gender sample although we have more females reporting journeys in Rome and fewer in Brussels.

*Table 7 Journeys by location and gender*

Location		I2. What is your gender category?			
		Male	Female	Prefer not to say	Total
Short Journeys	UK	151	153	0	<b>304</b>
	Rome	150	179	0	<b>329</b>
	Brussels	170	141	1	<b>312</b>
	<b>Total</b>	<b>471</b>	<b>473</b>	<b>1</b>	<b>945</b>
Longer Journeys	UK	148	138	0	<b>286</b>
	Rome	145	175	0	<b>320</b>
	Brussels	169	124	1	<b>294</b>
	<b>Total</b>	<b>462</b>	<b>437</b>	<b>1</b>	<b>900</b>
All journeys	UK	299	291	0	<b>590</b>
	Rome	295	354	0	<b>649</b>
	Brussels	339	265	2	<b>606</b>
	<b>Total</b>	<b>933</b>	<b>910</b>	<b>2</b>	<b>1845</b>

*Table 8 Journeys by location and age*

Location		I2. What is your age category?								Total
		18-19	20-29	30-39	40-49	50-59	60-64	65-69	70 or older	
Short Journeys	UK	7	33	63	57	57	28	31	28	<b>304</b>
	Rome	19	91	63	65	33	11	28	19	<b>329</b>
	Brussels	30	68	58	46	35	20	29	26	<b>312</b>
	<b>Total</b>	<b>56</b>	<b>192</b>	<b>184</b>	<b>168</b>	<b>125</b>	<b>59</b>	<b>88</b>	<b>73</b>	<b>945</b>
Longer Journeys	UK	7	28	59	52	58	29	32	21	<b>286</b>
	Rome	17	82	59	62	36	14	28	22	<b>320</b>
	Brussels	22	55	59	42	34	21	34	27	<b>294</b>
	<b>Total</b>	<b>46</b>	<b>165</b>	<b>177</b>	<b>156</b>	<b>128</b>	<b>64</b>	<b>94</b>	<b>70</b>	<b>900</b>
All journeys	UK	14	61	122	109	115	57	63	49	<b>590</b>
	Rome	36	173	122	127	69	25	56	41	<b>649</b>
	Brussels	52	123	117	88	69	41	63	53	<b>606</b>
	<b>Total</b>	<b>102</b>	<b>357</b>	<b>361</b>	<b>324</b>	<b>253</b>	<b>123</b>	<b>182</b>	<b>143</b>	<b>1845</b>

## 4. RESULTS

### MOST RECENT RAIL JOURNEY

#### Travel characteristics by country

Figure 1 and Figure 2 show the different modes used for the most recent short and longer distance rail journeys. We can see from Figure 1, the largest share of most recent journeys are by conventional rail, but considerable variation exists within the survey areas. Clearly this represents the different profiles of urban networks within these cities and does not really reflect preferences or behaviour.

Figure 1: Most recent short rail journey (rail type share %: N=945)

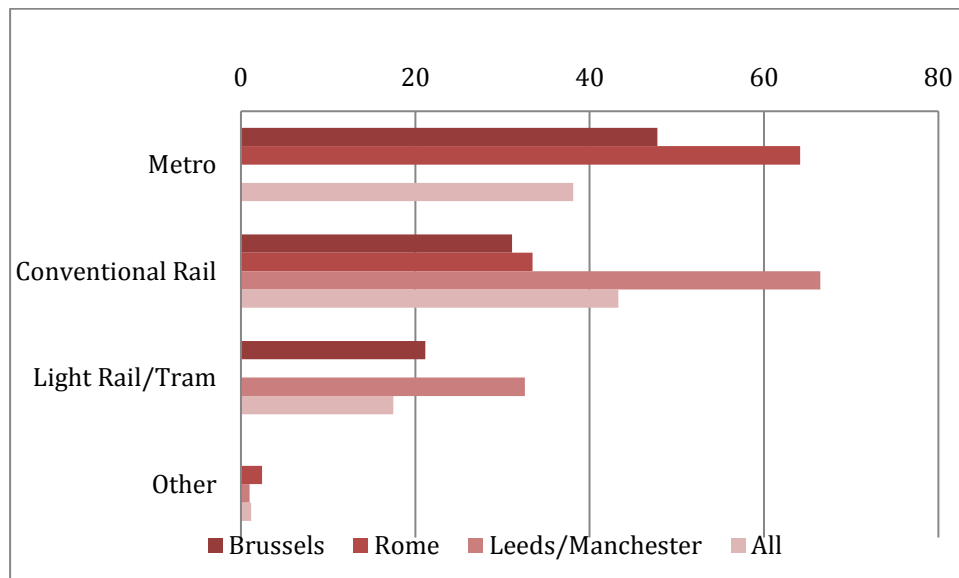
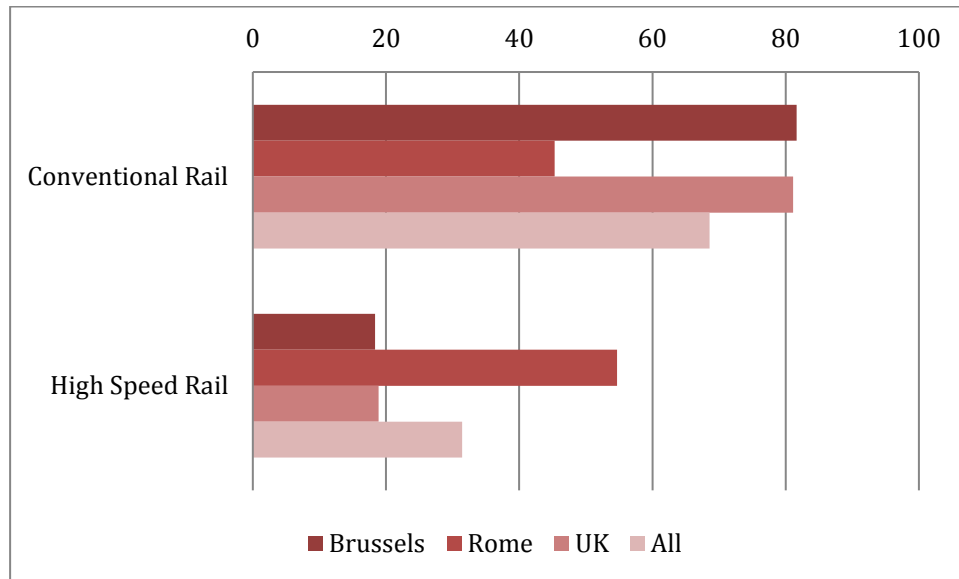


Figure 2: Most recent longer rail journey (rail type share %: N=900)



We can see from Figure 2, the largest share of most recent longer journeys are by conventional rail, however over half of journeys in the Rome survey are on high speed rail. Clearly this reflects the scale and availability of HSR development in Italy compared to UK and Belgium.

Figure 3 pools together the short and longer distance journeys to understand the typical time of day in which respondents start their rail journey. The figure shows an equal number of the featured journeys start in the morning and inter-peak periods. This seems to be driven by a greater spread of journeys in the UK throughout the day time compared to the other areas. There is a much smaller share of journeys starting in the night-time and morning pre-peak times.

Figure 3: Travel by time of day started journey (% of all journeys: N=1845).

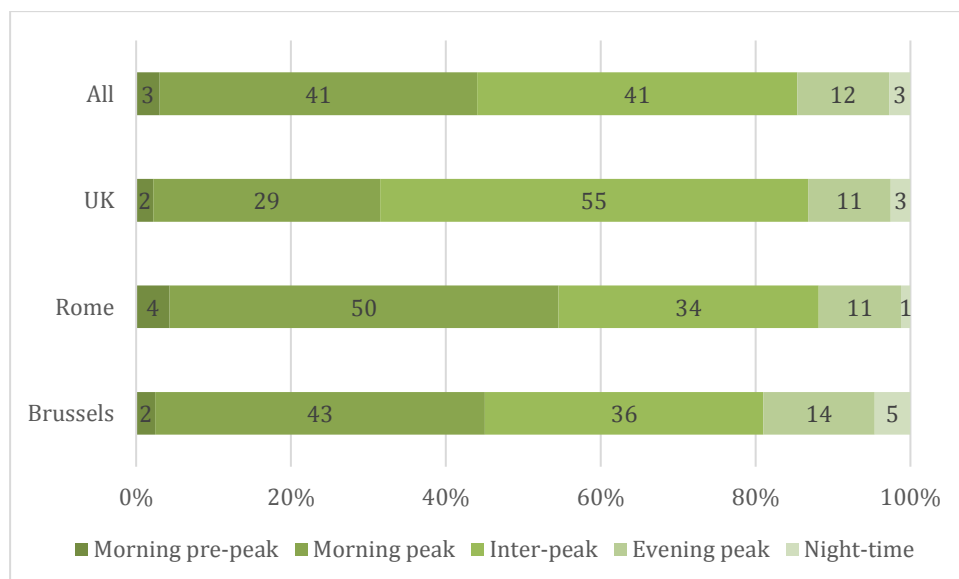


Figure 4 and Figure 5 show the breakdown of journey purposes from the recorded short and longer distance journeys by country (with just the figures for all areas presented for clarity). It is clear from Figure 4 that the highest share of overall short journeys is for travelling to work (28%) although there were more recorded shopping journeys than commutes for UK. Figure 5 shows that longer journeys are predominantly for leisure or visiting friends and family.

Figure 4: Journey purpose (% of all short journeys: N=945).

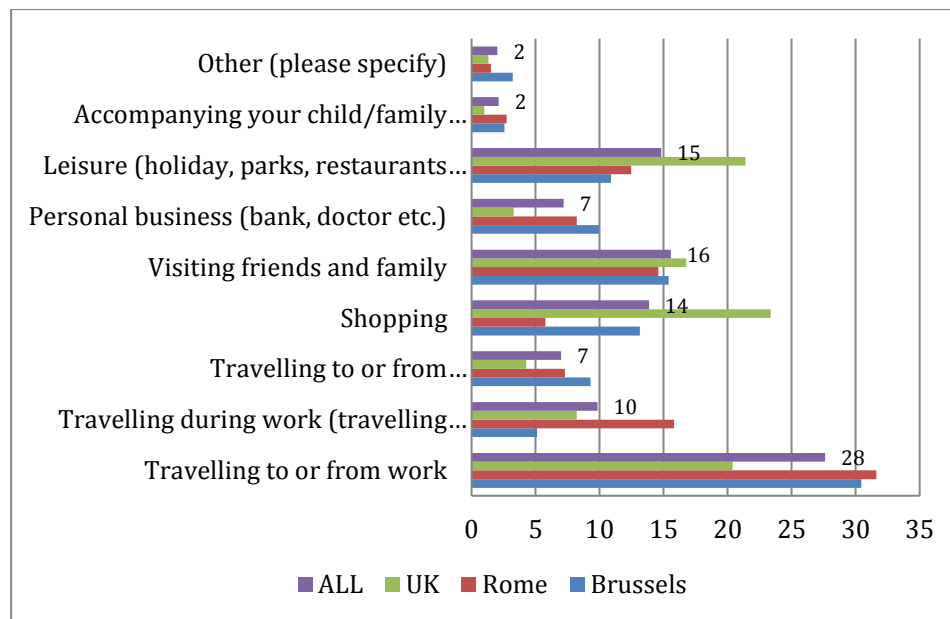


Figure 5: Journey purpose (% of all longer journeys: N=900).

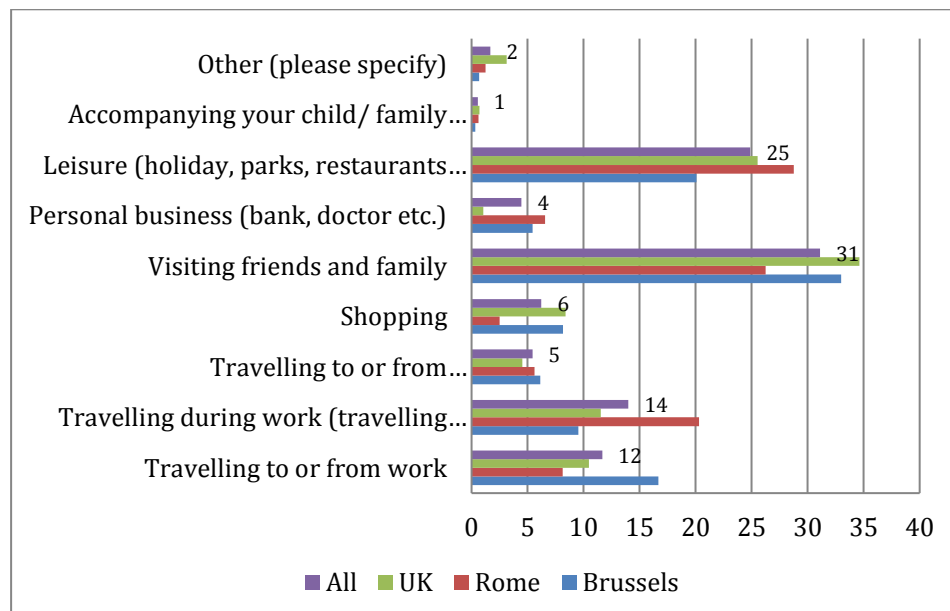


Figure 6 and

Figure 7 show what people report they would do if they hadn't been able to make their reported journey by rail. It is clear that car is the main substitute for both short and longer journeys, accounting for around 50% of any re-planned journeys. It is interesting to note that more longer distance journeys would not be conducted, perhaps due to the higher proportion of leisure journeys in this category, but that conducting activities on-line does not seem to be an acceptable alternative for most journeys. Active travel either by bike or foot seems to be a more viable alternative in Brussels than other areas with 17% of these respondents citing these modes as the primary alternative option compared to 8% overall.

Figure 6: Alternative arrangements (% of all short journeys: N=945).

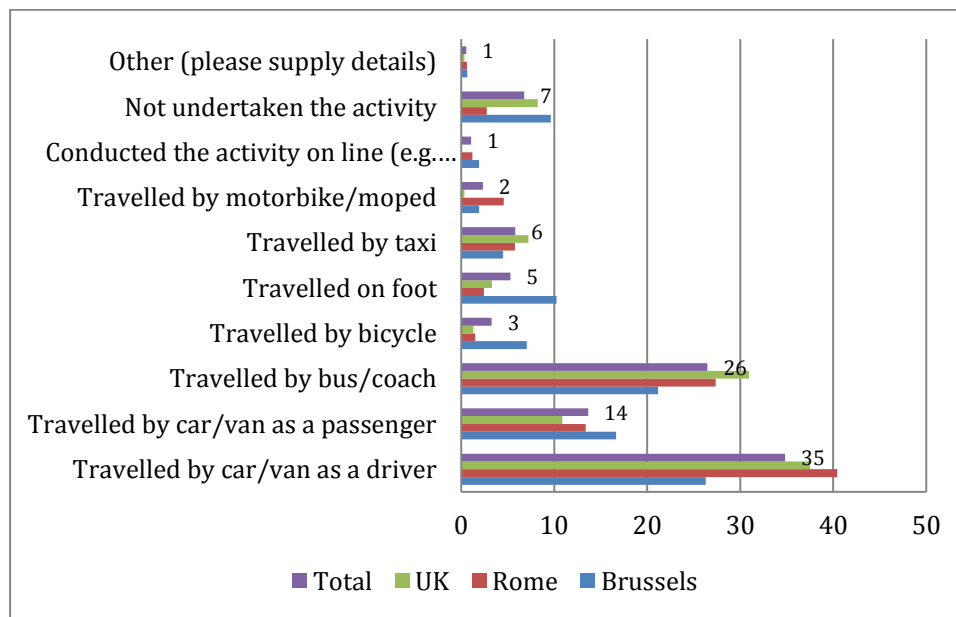
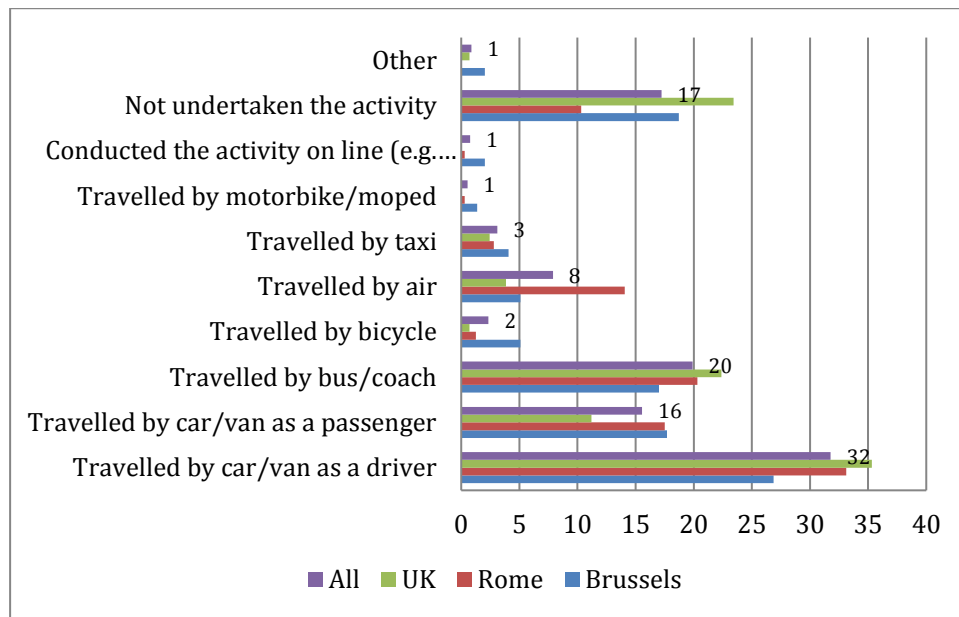


Figure 7: Alternative arrangements (% of all longer journeys: N=900).





## Importance factors

Figure 8 and Figure 9 show the most cited 'necessary' factors when considering a rail journey alongside the relevant journey phase (see Table 2). It is clear that cost of ticket is the principle consideration for all types of journeys. However, it is interesting that ability to book journey in advance, ability to find a seat and security and safety are more frequently cited as necessary factors than the more traditional considerations of journey time, reliability, access time and wait time. Journey planning tools also emerge as important facilitators of journeys but at the same time it is still considered important by some to be able to buy tickets from station staff.

Figure 8: Necessary considerations for undertaking a short rail journey (%: N=945).

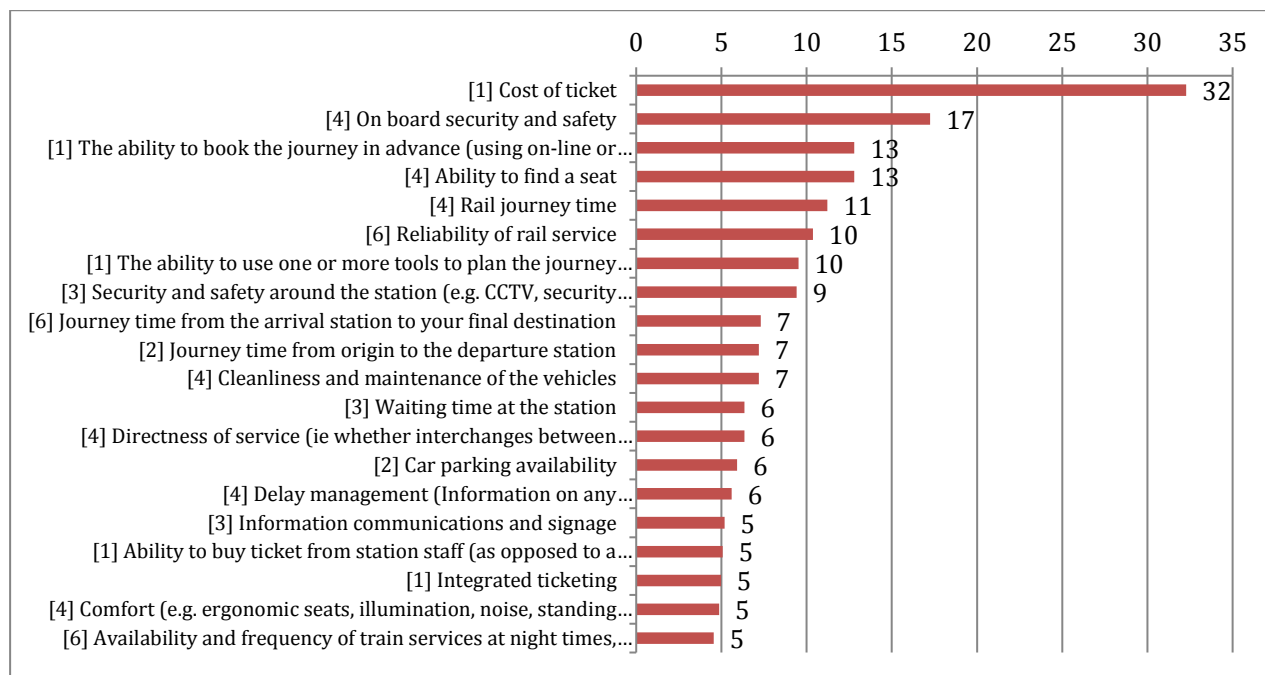


Figure 9: Necessary considerations for undertaking a longer rail journey (% N=900).

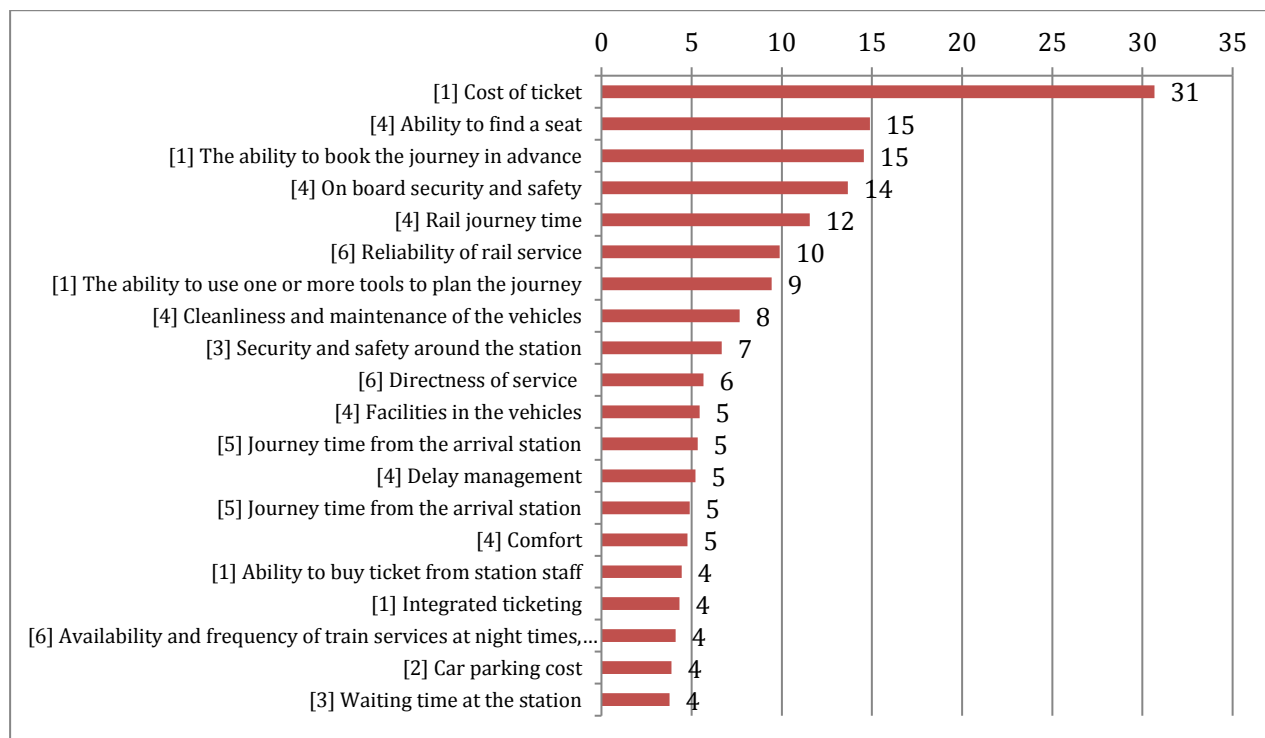


Figure 10 breaks down the key considerations emerging from Figure 8 and Figure 9 above by country. Here we find cost is a principle concern for all our survey locations (31% citing as a necessary consideration), but particularly in UK (35%). On board security and safety is a particular consideration in Rome (22%), whereas seat availability and reliability are principle considerations in UK.

Figure 10: Necessary considerations for undertaking a rail journey (%) by area.

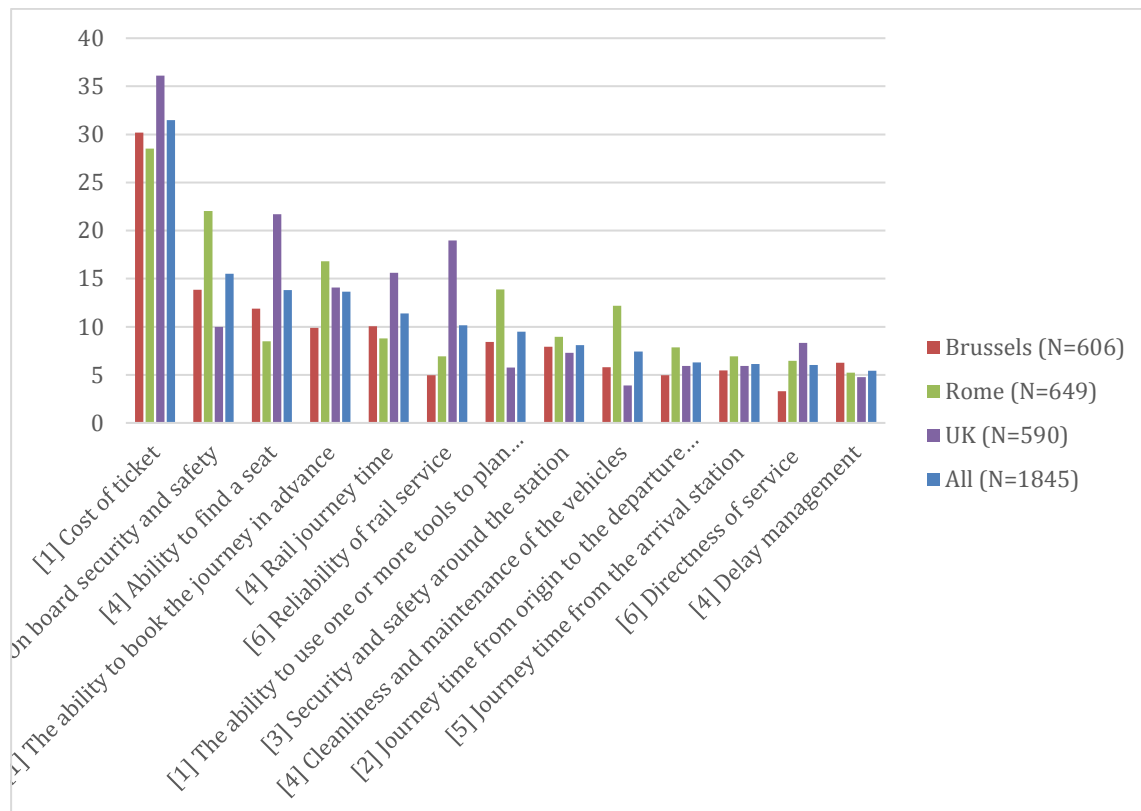
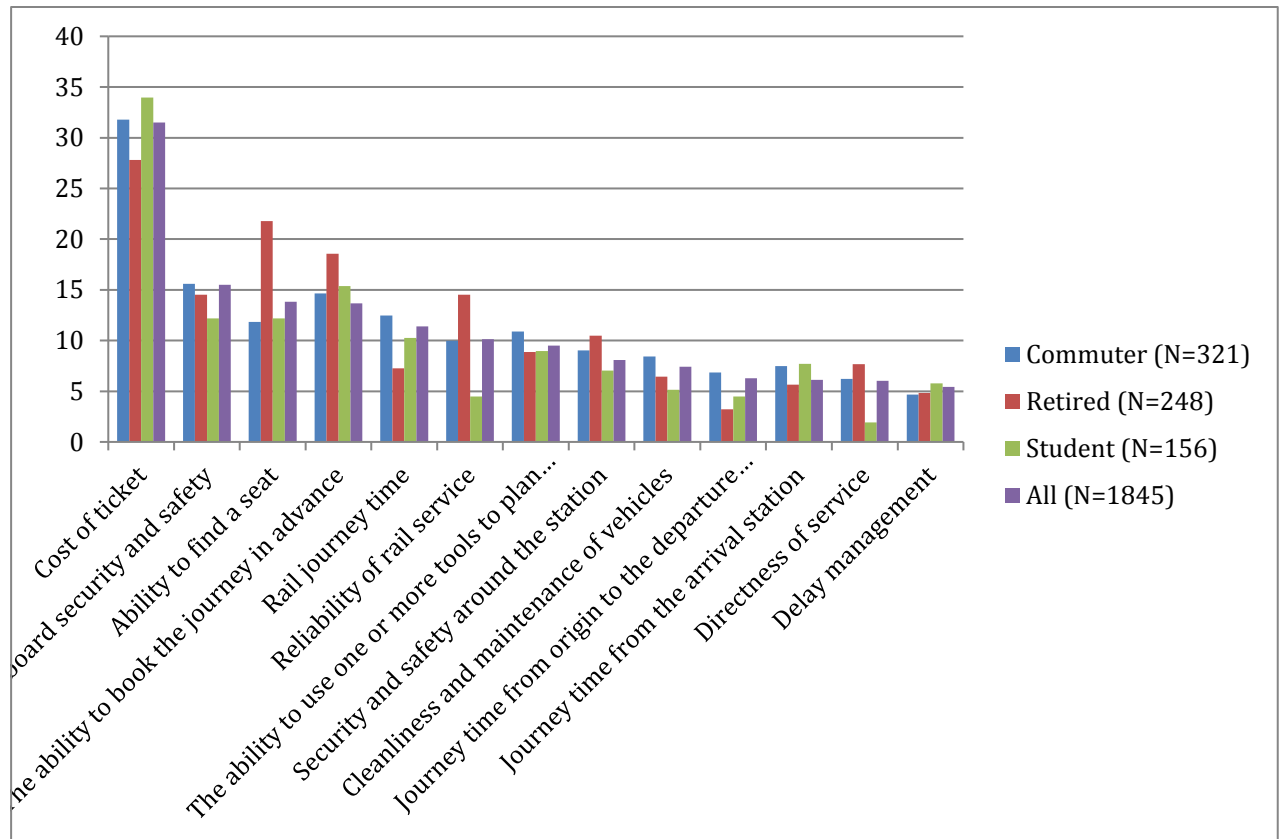


Figure 11 shows the key factors considered as necessary in the decision to take the rail journey broken down by traveller type. Cost is the principle concern across all groups but particularly amongst students (34%). Retired passengers particularly rate ability to find a seat (22%), ability to book in advance (19%), and reliability (15%) more highly than the other groups. More commuters consider journey time (12%) as a necessary consideration than for other groups.

Figure 11: Necessary considerations for undertaking a rail journey (%) by traveller type.



### Satisfaction factors

Figure 12 and Figure 13 present overall levels of satisfaction by area for the two journey distance types. We find that there is broadly little difference in patterns of satisfaction by distance type except with higher levels of 'very satisfied' longer distance travellers. The UK has a higher proportion of 'very satisfied' travellers in both distance categories than the other countries.

Figure 12: Overall levels of satisfaction with short rail journeys (% N=945).

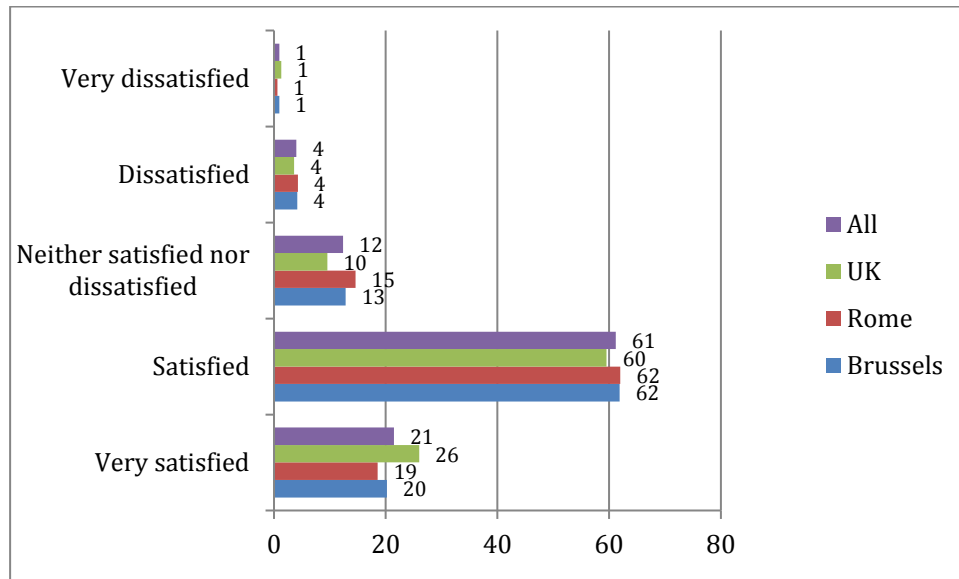
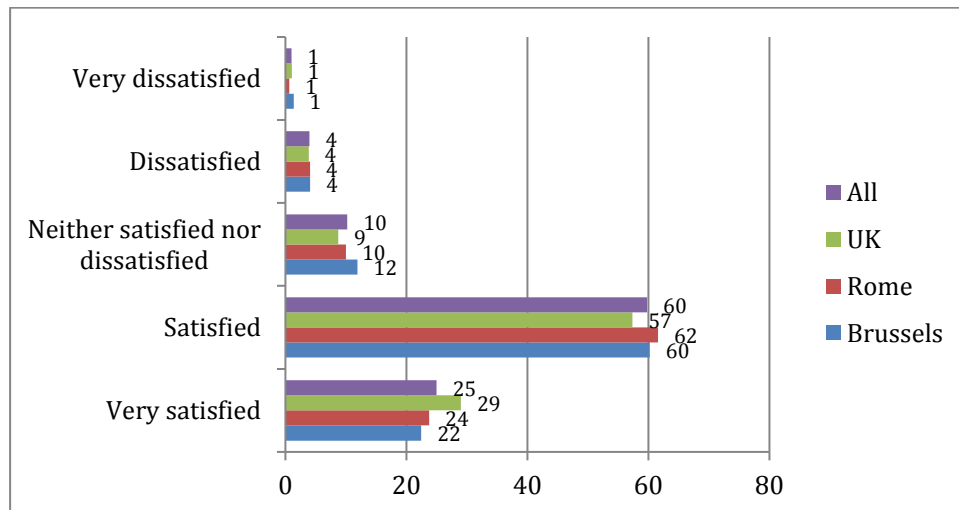


Figure 13: Overall levels of satisfaction with longer rail journeys (% N=900).



Focusing on areas for improvement, Figure 14 features the highest dissatisfaction levels (where someone is 'dissatisfied' if they express themselves as dissatisfied or very dissatisfied) with the different aspects of the journey experience. These have been labelled to correspond with the six identified journey stages shown in Table 2. Overall, respondents expressed most dissatisfaction with the car parking cost (19% of our sample), car parking availability (16%) and cleanliness and maintenance of the station (16%). High levels of dissatisfaction were also expressed with ticket costs, wi-fi and power connectivity on board and at the station and the availability/frequency services of out of peak times (all 15%).

It is interesting to note that car parking cost and service availability was a particular issue for Brussels respondents. Cost of a ticket did not seem to be a particular concern for Rome respondents. UK passengers show lower levels of dissatisfaction across the board except with ticket cost, car parking availability and reliability. UK passengers show lower levels of dissatisfaction across the board except with ticket cost, car parking availability and reliability.

Figure 14: Levels of dissatisfaction by country (% N=1845).

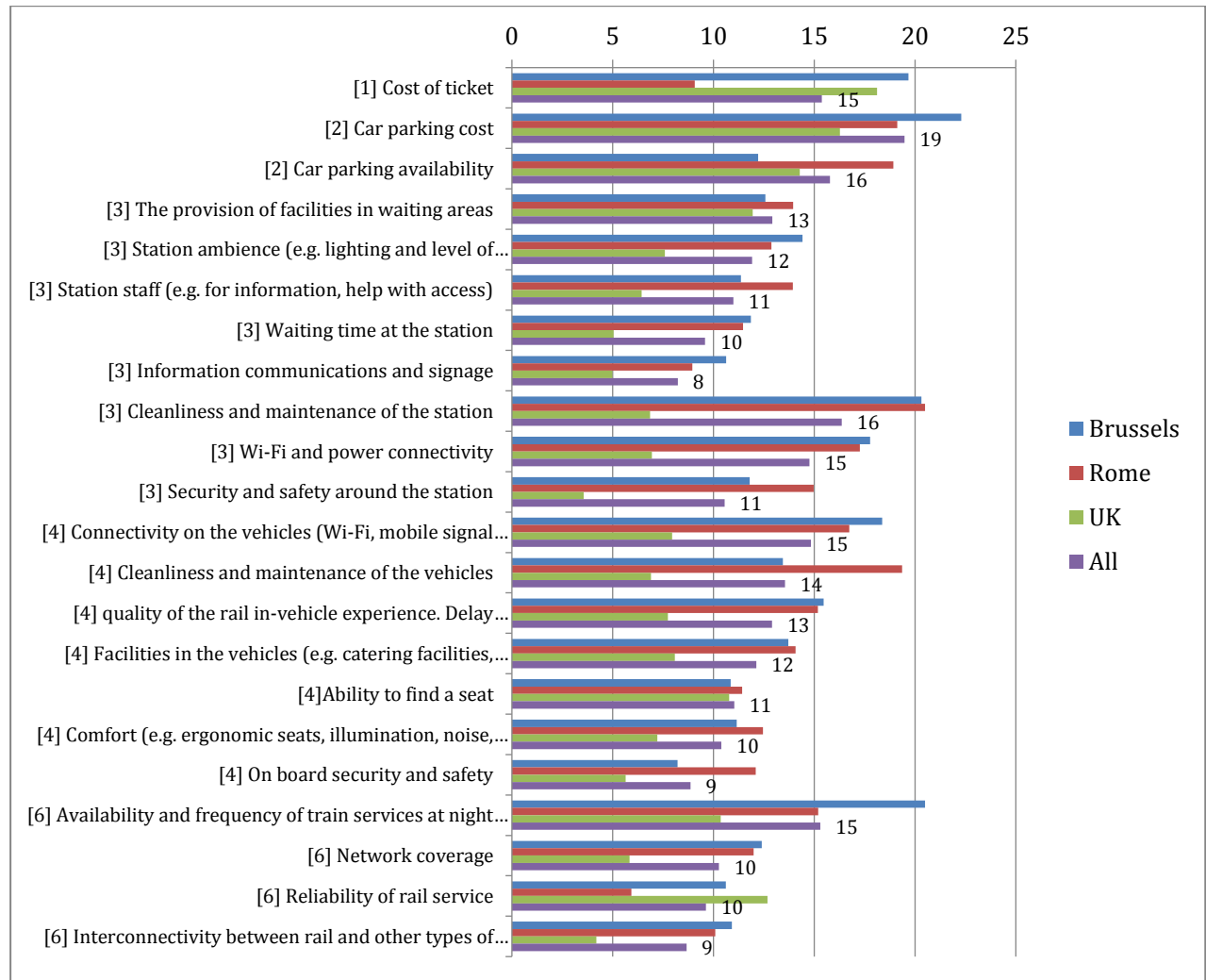


Figure 15 shows overall levels of satisfaction with journeys by traveller category type. We find retired passengers most likely to be 'very satisfied' with their experience (31%) whilst commuters have higher levels of dissatisfaction (9% either 'dissatisfied' or 'very dissatisfied'). Perhaps these passenger types experience the services at different times, but also perhaps they have different expectations.

Figure 15: Overall levels of satisfaction by traveller type (% N=1845).

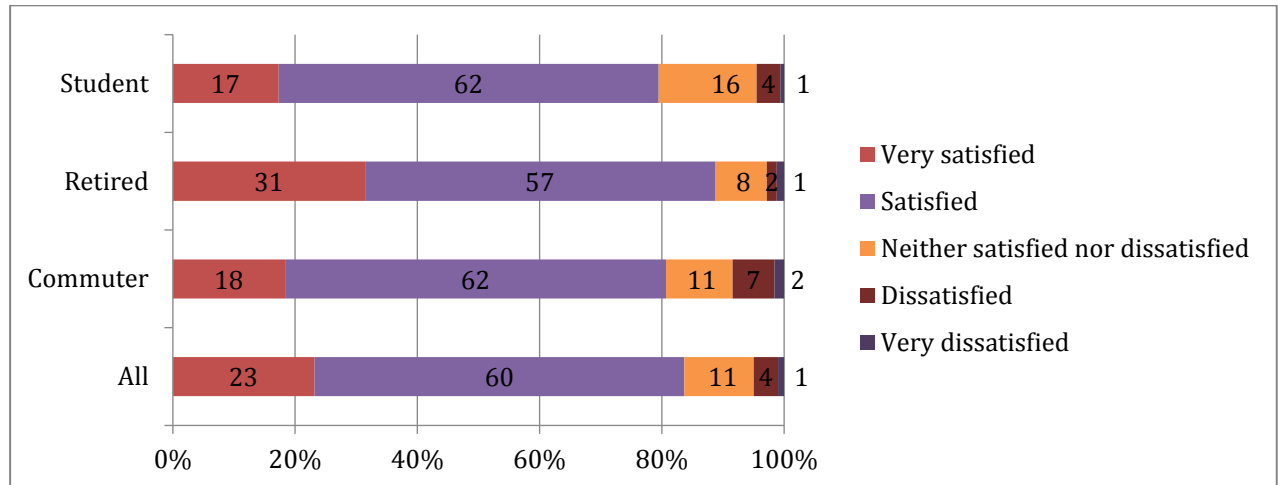
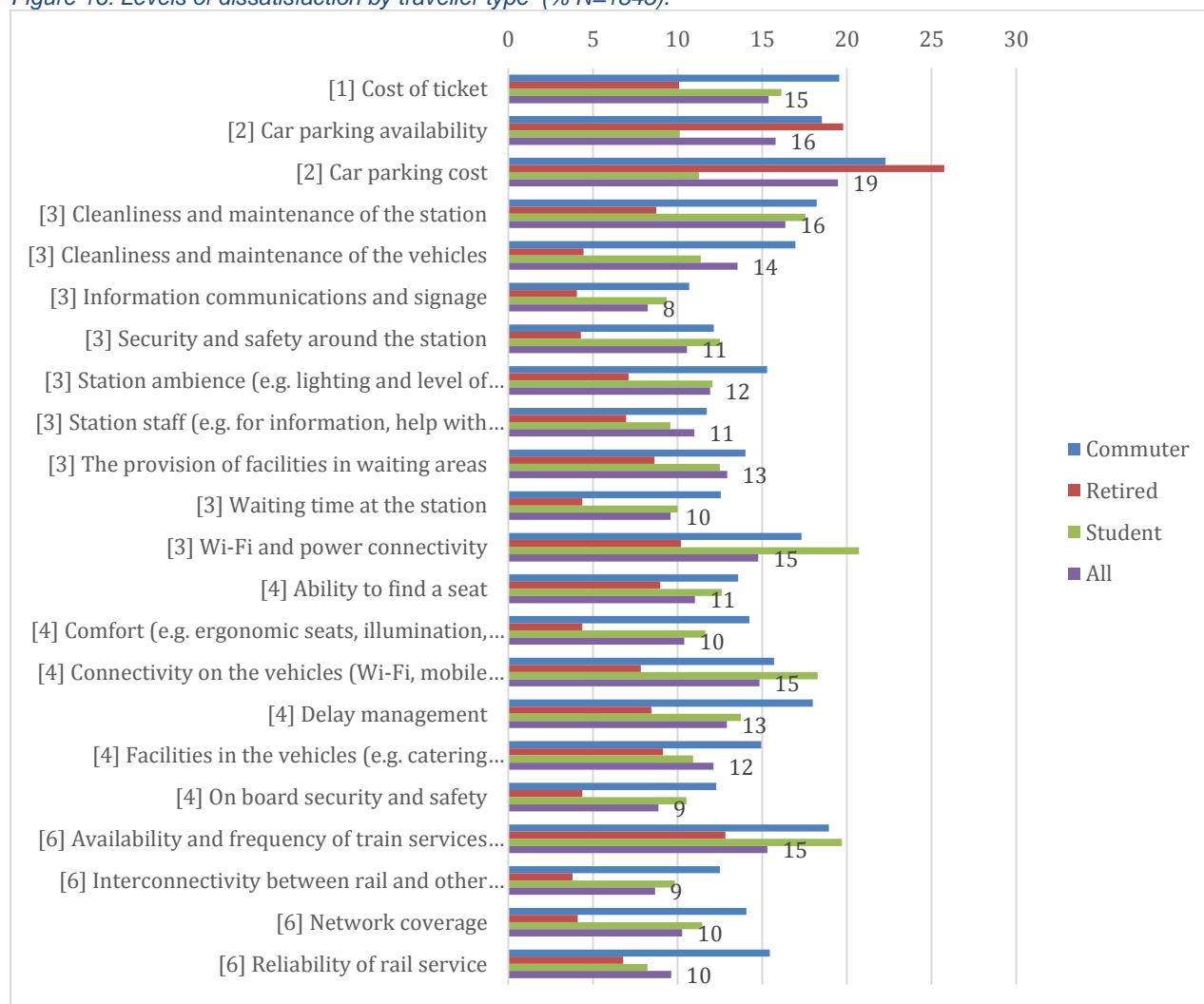


Figure 16 shows level of dissatisfaction with the subset of the various aspects of the journey by the different traveller categories. We find car parking cost (26%) and availability (20%) to be a particular concern for retired passengers. Cost of a ticket is a principle source of dissatisfaction for commuters (20%) who are the most likely to face higher peak fares. For students, connectivity in vehicles (18%) and at stations (21%) emerges as a concern.

Interestingly we find retired passengers to be less dissatisfied with security and safety in station and vehicle than other groups, and likewise not as dissatisfied with levels of station staffing, communications and lighting and cleanliness and maintenance issues.

Figure 16: Levels of dissatisfaction by traveller type (% N=1845).

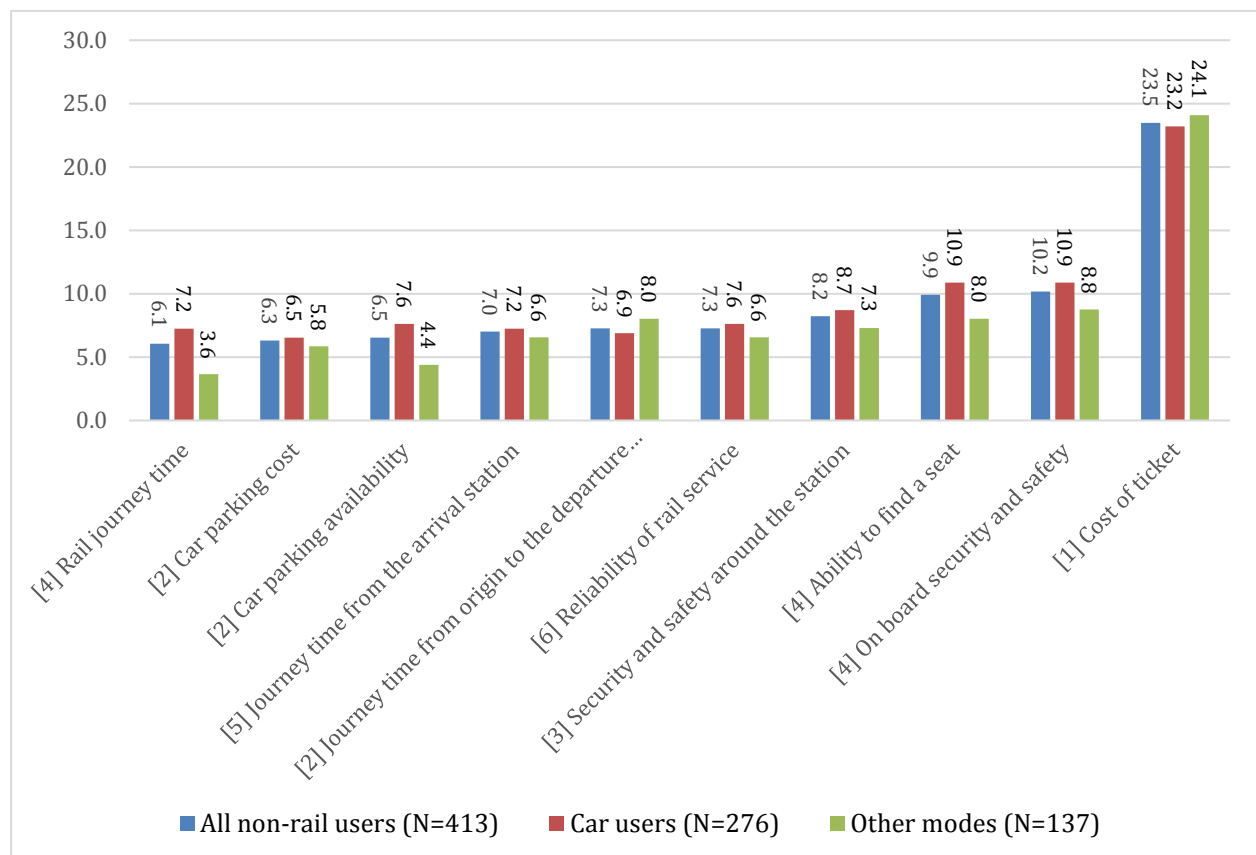




## MOST RECENT NON-RAIL JOURNEY

Amongst those using modes other than rail for their journeys, respondents were asked to consider what factors, if any, would require improvement before switching to rail for this journey in the future. Singling out the most important 10 factors, as shown in Figure 17, we see cost again emerges as the primary factor requiring 'improvement' with 24% of respondents on non-rail journeys citing it as requiring improvement. Other key considerations include non-service level related factors such as on board security and safety (10.2%), ability to find a seat (9.9%) and security and safety around the station (8.2%). Interestingly when split by mode, car drivers appear more sensitive to the non-fare cost factors than those from other modes.

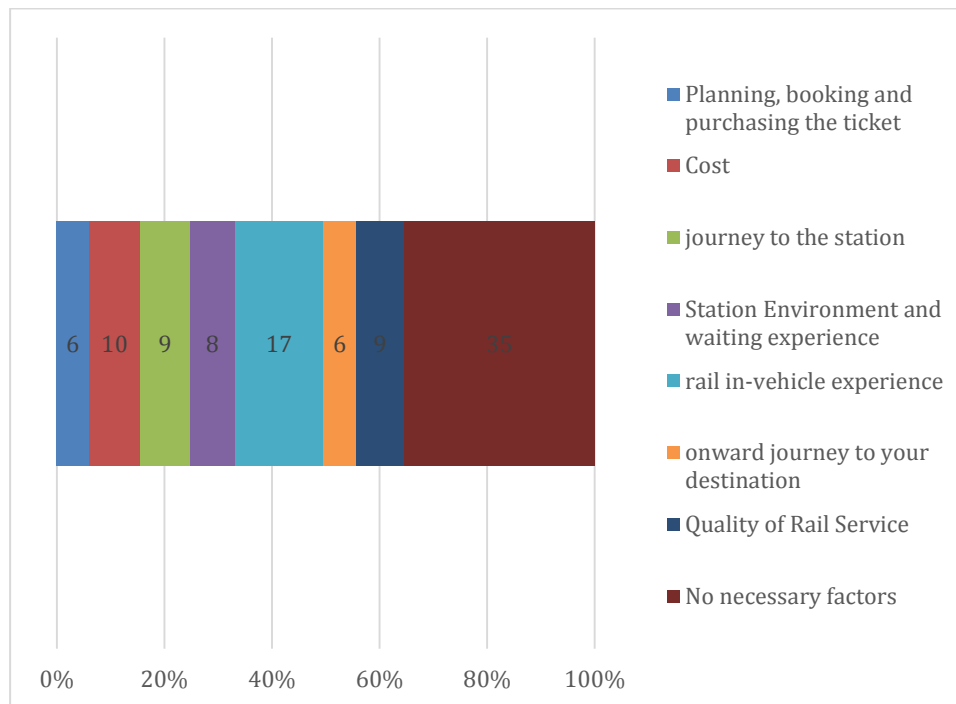
Figure 17: Necessary improvements to consider use of train in future (% of non-rail travellers)



We were then interested to calculate attrition factors to see 'where' in the rail journey potential passengers are currently being lost. We firstly re-weighted all the factors cited as requiring improvement given by each individual for each non-rail journey to sum to 1 (e.g. where 2 factors were cited as necessary by an individual these received a weighting on 0.5). We then aggregated up the attrition factors for each of the 6 phases of the journey, but also separating out cost given its importance. The result is as shown below in Figure 18. The interpretation is the percentage of possible passengers lost at each stage of the journey. We can interpret this as 10% of potential passengers being 'lost' due to prices being too high and 17% being 'lost' through deficiencies in the rail in-vehicle experience. Aspects regarding access to the station accounts for 9% of 'lost' journeys and a further 9% are lost through aspects regarding the overall quality of

the rail service. For 35% of the journeys, no factors were cited as 'necessary' to facilitate consideration of rail.

Figure 18: Attrition factors for journey-stages (% of non-rail travellers: N=413)



## CONCLUSIONS

This deliverable reports on work from Task 3.3 based on surveys on a number of representative transport users, including non-rail users, to define the influence of key factors behind the choice, or otherwise, of rail in 3 European case study areas.

Using the large dataset we are able to cross compare results across different areas and user types and make robust findings as to the key gaps in provision for rail passengers and barriers for non-rail passengers, having considered a large number of attributes to capture journey experience. Our results have been broken down by distance type, by traveller category and by case study area to identify emerging similarities and differences in our findings.

In terms of the types of recent journeys reported, we find more HSR Journeys undertaken in Rome than elsewhere. The highest share of overall rail short journeys is for travelling to work and longer journeys are predominantly for leisure or visiting friends and family.

Car is the main substitute for both short and longer journeys if rail was not available, and despite the increase in on-line shopping and meetings, very few rail journeys in our sample would be replaced by on-line activities. Active travel either by bike or foot seems to be a more viable alternative in Brussels which may reflect both a better local infrastructure and underlying culture for such modes.

Whilst cost of ticket is the principle consideration for all types of rail journeys, the ability to book journeys in advance, ability to find a seat and security and safety emerge as more important factors than the traditional considerations of journey time, reliability, access time and wait time. Journey planning tools also emerge as important facilitators of journeys.

In terms of differences by case study areas, security and safety emerges as a key consideration for rail journeys in Rome whereas seating availability and reliability are more important factors in UK.

In terms of our featured traveller groups, retired passengers particularly rate ability to find a seat, ability to book in advance, and reliability more highly than the other groups. More commuters consider journey time as a necessary consideration than for other groups reflecting a higher time sensitivity observed in the literature for these travellers than other groups (excepting business travel).

In terms of overall satisfaction, over 80% of our sample report their journeys as satisfactory or very satisfactory. We find retired passengers most likely to be 'very satisfied' with their rail experience whilst commuters have higher levels of dissatisfaction. Perhaps these traveller types experience the services at different times, but also perhaps they have different expectations. The UK has a higher proportion of 'very satisfied' and fewer 'dissatisfied' travellers than the other countries. Perhaps contrary to expectations, retired passengers were generally less dissatisfied than other groups with security and safety staffing, lighting, cleanliness and maintenance issues.

However there are clearly areas where experiences could be improved. Respondents expressed most dissatisfaction with the car parking cost and availability, cleanliness and maintenance of the station, ticket costs, wi-fi and power connectivity and the availability/frequency of services of out of peak times.

We found car parking cost and service availability a particular issue for Brussels respondents. UK passengers had particular issues with ticket cost, car parking availability and reliability.

We found car parking cost and availability also to be a particular concern for retired passengers. Cost of a ticket is a principle source of dissatisfaction for commuters who are the most likely to face higher peak fares. For students, lack of connectivity in vehicles and at stations emerges as a key source of dissatisfaction.

In terms of findings from people not using rail for their reported journeys, cost again emerges as the primary factor requiring 'improvement'. Other key considerations include non-service level related factors such as on board security and safety, ability to find a seat and security and safety around the station. That these are not the key sources of dissatisfaction reported from actual journeys perhaps indicates a 'gap' between perceptions of rail and actual experiences of passengers.

We finally report 'attrition factors' by which we attempt to show the parts of the rail journey where necessary improvements are required to entice those using other modes to switch to rail. We find 10% of potential passengers being 'lost' due to prices being too high and 17% being 'lost' through deficiencies in the rail in-vehicle experience. Aspects regarding access to the station accounts for 9% of 'lost' journeys and a further 9% are lost through aspects regarding the overall quality of the rail service. For the 35% of journeys where no improvements were cited as 'necessary' to facilitate consideration of rail, these potential passengers might not be reached by improvements in specific aspects of the rail service.

These findings will form part of the basis of our recommendations to be presented subsequently in D3.4, the Smart Journey Vision. This will quantify factors identified here as influencing rail usability and make recommendations on how to decrease the cognitive effort and improve onward mobility through a series of measures..

## APPENDIX: TEXT AND SCHEMA FOR UK SURVEY



Rail Passenger



Survey

This survey is a key element of the "SMaRTE" project undertaken by the Institute for Transport Studies at the University of Leeds in conjunction with other European partners. The survey aims to understand the needs of rail passengers (and other transport modes) to identify aspects of the customer experience which could be improved and simplified.

By 'rail' we are referring to any rail based transport such as conventional rail, high speed rail, light rail, tram and metro/underground services

Thank you for agreeing to join this survey. Your answers are very important for this research.

Please answer the questions below based on your perceptions and experiences relating to recent travel experiences.

Informed consent (perhaps you have something on this?)

We provide you, as required by Regulation (EU) 2016/679 of the European Parliament, the information concerning the processing of personal data relating to the activities specified above. The collected data will be treated confidentially in compliance with current legislation and will be managed and kept by the company \*Name of the organisation\* These data will be used exclusively for the purposes of the project and will not be used for marketing activities and / or transferred to third parties.

☐ I consent to the use of my data in the form and manner specified above.

### Section 0: Screener Questions

Please consider 'rail' as any rail based mode (eg conventional rail, high speed rail, light rail/ tram).

Journeys by Rail



In the last 3 months:

S 1 Have you undertaken a short distance journey by rail (<20 miles/30km) starting or ending in Leeds or Greater Manchester with rail as the main travel mode in?

- ☐ Yes.  
☐ No

S 2 Have you undertaken a longer journey by rail (>20 miles/30km) starting or ending in Leeds or Greater Manchester with rail as the main travel mode?

- ☐ Yes.  
☐ No

Journeys NOT by Rail

**In the last 3 months:**

S 3 Have you made a short distance journey (<20 miles/30km) in the Leeds or Greater Manchester where rail was a realistic option but instead used another mode?

- ☐ Yes  
☐ No

S 4 Have you made a longer journey (>20 miles/30km), starting or ending in Leeds or Greater Manchester where rail was a realistic option but instead used another mode?

- ☐ Yes  
☐ No

If not answered yes to any of the above then end and discard.

Need to ensure max of 2 sections from D,E,F,G are routed to. Prioritise D first, E second etc.

## Section A: Your Attitudes to Travel

A 1 Please tick your agreement to each statement, even if you don't currently use Rail

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Using rail is convenient					
Using rail is time efficient					
There is good information about rail transport					
Most of my friends and relatives use some form of rail regularly					
Travelling by rail is a satisfying experience					
Rail is affordable and good value					
Using rail is the safest travel choice					
Rail is reliable					
It is easy to organise a rail journey					
I do not worry about crime when travelling by rail					
Railway stations are convenient to access					
A short wait (e.g. up to 10 minutes) at the railway station is acceptable					

## Section B: Your Current Travel Behaviour

B 1 In the previous 7 days what type of transport have you used for any journeys more than half a mile/1km? (Tick all that apply)

- ☐ Airplane
- ☐ Car/Van as a driver
- ☐ Car/Van as a passenger
- ☐ Bus/Coach
- ☐ Tram/Light Rail (eg Manchester Metrolink)
- ☐ Metro (eg London Underground)
- ☐ Rail
- ☐ Bicycle
- ☐ Motorcycle/Moped
- ☐ Walk
- ☐ Taxi
- ☐ Other – please supply details \_\_\_\_\_

**FOR THOSE MODES TICKED IN B 1 ASK FOLLOWING QUESTION**

Frequency of Travel in the previous 7 days by [insert transport mode from B 1].

**B 2.x Can you now please indicate how often you travelled by [insert transport mode from B 1] and for what purpose? (Tick 1 box per row) – REPEAT FOR EACH MODE SELECTED IN B 1**

Purpose of Journey	No journeys made	Travelled 1-2 days	Travelled >2 days
Travelling to or from work			
During work (travelling to a business meeting)			
Other			

B 3 On which time slot/s do you travel the most? (Tick all that apply)

- ☐ Morning pre-peak (3:00-6:00 AM)
- ☐ Morning peak (6:00-9:30 AM)
- ☐ Inter-peak (9:30AM-4:00 PM)
- ☐ Evening peak (4:00 - 7:00 PM)
- ☐ Night-time (7:00 PM -3:00 AM)

B 4 What journey do you travel the most? (Tick one)

- ☐ Urban (eg. within Leeds or Manchester)
- ☐ Regional (eg. Leeds to Manchester )
- ☐ National (eg. Leeds to London or Manchester to London)



#### Section D: Your recent trips

[If answer to Journeys by Rail

In the last 3 months:

#### S 1 **no skip to Section D: Longer Distance Trips]**

##### Short Distance Trip by Rail

Now consider the most recent short distance rail journey (<20 miles/30 km) you have undertaken starting or ending in Leeds or Greater Manchester in the last 3 months

The questions that follow relate to the OUTWARD leg of this journey

##### D 1 What kind of rail was this?

- ☐ Manchester Metrolink
- ☐ Conventional Rail (eg Northern or Transpennine services)
- ☐ Heritage Rail (eg Keighley and Worth Valley, East Lancashire Railway)

##### D 2 During which time slot did you start this journey?

- ☐ Morning pre-peak (3:00-6:00 AM)
- ☐ Morning peak (6:00-9:30 AM)
- ☐ Inter-peak (9:30AM-4:00 PM)
- ☐ Evening peak (4:00 - 7:00 PM)
- ☐ Night-time (7:00 PM -3:00 AM)

##### D 3 What was the main purpose of this trip? (tick one)

- ☐ Travelling to or from work
- ☐ Travelling during work (travelling to a business meeting)
- ☐ Travelling to or from education/training
- ☐ Shopping
- ☐ Visiting friends and family
- ☐ Personal business (bank, doctor etc)
- ☐ Leisure (holiday, parks, restaurants etc)
- ☐ Accompanying your child, family member, friend, etc. on a shopping trip, to the doctor, etc.
- ☐ Other please specify \_\_\_\_\_

##### D 4 Approximately how long was the door-to-door journey (to the nearest 5 minutes)

\_\_\_\_\_ minutes

##### D 4a Approximately how long was the rail part of this journey, including any time changing between trains (to the nearest 5 minutes)

\_\_\_\_\_ minutes

##### D 5 If you hadn't been able to make this journey by rail what would you have done? (tick one)

- ☐ Travelled by car/van as a driver
- ☐ Travelled by car/van as a passenger

- ☐ Travelled by bus/coach
- ☐ Travelled by bicycle
- ☐ Travelled on foot
- ☐ Travelled by taxi
- ☐ Travelled by motorbike/moped
- ☐ Conducted the activity on line (eg meeting/shopping/banking)
- ☐ Not undertaken the activity

Other – please supply details \_\_\_\_\_

**If ticked taxi, car/van as a driver, car/van as a passenger or bicycle follow up with**

**D5a Would this alternative means of transport involve use of a ride or vehicle sharing service (eg Uber, Mobike, Zipcar)**

- ☐ Yes
- ☐ No

**D 6 What was the class of the rail service you used?**

- ☐ Standard Class.
- ☐ First Class
- ☐ N/A

Other – please supply details \_\_\_\_\_

**[If answer to S 2no skip to Section E]**

**Longer Distance Trip by Rail**

Now consider the most recent longer rail journey (>20 miles/30km) you have undertaken starting or ending in Leeds or Greater Manchester in the last 3 months

The questions that follow relate to the OUTWARD leg of this journey

D 7 What kind of rail was this?

- ☐ Conventional Rail
- ☐ High Speed Rail

D 8 During which time slot did you start this journey? (Tick one)

- ☐ Morning pre-peak (3:00-6:00 AM)
- ☐ Morning peak (6:00-9:30 AM)
- ☐ Inter-peak (9:30AM-4:00 PM)
- ☐ Evening peak (4:00 - 7:00 PM)
- ☐ Night-time (7:00 PM -3:00 AM)

D 9 What was the main purpose of this trip? (tick one)

- ☐ Travelling to or from work
- ☐ Travelling during work (travelling to a business meeting)
- ☐ Travelling to or from education/training
- ☐ Shopping
- ☐ Visiting friends and family
- ☐ Personal business (bank, doctor etc)
- ☐ Leisure (holiday, parks, restaurants etc)
- ☐ Accompanying your child, family member, friend, etc. on a shopping trip, to the doctor, etc.
- ☐ Other please specify\_\_\_\_\_

D 10 Approximately how long was the door-to-door journey (to the nearest 10 minutes)  
\_\_\_\_\_ minutes

D 10a Approximately how long was the rail part of this journey, including any time changing between trains (to the nearest 5 minutes)  
\_\_\_\_\_ minutes

D 11 If you hadn't been able to make this journey by rail what would you have done? (tick one)

- ☐ Travelled by car/van as a driver
- ☐ Travelled by car/van as a passenger
- ☐ Travelled by bus/coach
- ☐ Travelled by bicycle
- ☐ Travelled by air
- ☐ Travelled by taxi
- ☐ Travelled by motorbike/moped
- ☐ Conducted the activity on line (eg meeting/shopping/banking)

☐ Not undertaken the activity

Other – please supply details \_\_\_\_\_

**If ticked taxi, car/van as a driver, car/van as a passenger or bicycle follow up with**

**D11a Would this alternative means of transport involve use of a ride or vehicle sharing service (eg Uber, Mobike, Zipcar)**

☐ Yes

☐ No

D 12 What was the class of the rail service you used?

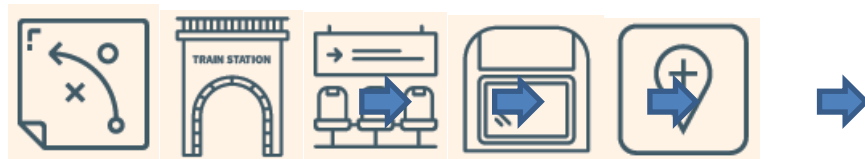
☐ Standard Class.

☐ First Class

☐ N/A

Other – please supply details \_\_\_\_\_

We are now going to ask you some questions relating to the different phases of rail journey(s).



These phases include:



Planning, booking and purchasing the ticket



*Journey to the station*



*Station Environment and waiting experience*



*Rail in-vehicle experience*



*Onward journey from the station to your destination*

We will then ask you about *the overall quality of the rail services*

## Section E: Short Journey made by rail

### Importance ratings

[If answer to Journeys by Rail

In the last 3 months:

**S 1 no skip to Section F]**

Now consider your most recent short distance rail journey (<20 miles/30km) starting or ending in Leeds or Greater Manchester that you told us about earlier.

We would like to know more about why you chose rail for this journey.



E 1: In your decision to undertake this journey by rail please rate the importance of the factors below relating to *planning, booking and purchasing the ticket*

	Very important	Important	Neutral	Low importance	No importance
The ability to use one or more tools to plan the journey (online and offline)					
The ability to book the journey in advance (using on-line or off-line purchase methods)					
Cost of ticket					
Integrated ticketing (ability to have a single ticket for all rail trip segments and any other modes needed for the journey)					
Available information on accessibility (eg support for elderly or those with visual/mental/physical impairments)					
Ability to buy ticket from station staff (as opposed to a ticket machine)					



E 2 In your decision to undertake this journey by rail please rate the importance of the factors below relating to *the journey to the station*

	Very important	Important	Neutral	Low importance	No importance
Journey time from origin to the departure station					
Options to access to the station by different means of transport					
Car parking availability					
Car parking cost					



E 3 In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *Station Environment and waiting experience*

	Very important	Important	Neutral	Low importance	No importance
Waiting time at the station					
The provision of facilities in waiting areas (eg seating, heating, refreshments, shopping outlets, toilets)					
Accessibility experience at the station (proximity of platforms, stairs, elevators etc)					
Wifi and power connectivity					
Security and safety around the station (eg CCTV, security staff, good visibility in all areas)					
Cleanliness and maintenance of the stations					
Station ambience (eg lighting and level of intrusive advertising)					
Station staff (eg for information, help with access)					
Information communications and signage (eg times, delays, platforms, connections with other modes, navigation around station)					





E 4In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *rail in-vehicle experience*

	Very important	Important	Neutral	Low importance	No importance
Connectivity on the vehicles ( <i>wifi, mobile signal and power</i> )					
Cleanliness and maintenance of the vehicles					
On board security and safety					
Facilities in the vehicles ( <i>e.g catering facilities, toilets</i> )					
Comfort ( <i>e.g. ergonomic seats, illumination, noise, standing space</i> )					
Ability to find a seat					
Rail journey time					
Directness of service ( <i>ie whether interchanges between trains were required</i> )					
Information ( <i>eg announcements, display screens, timetables, route-maps</i> )					
Delay management ( <i>Information on any delays/disruptions, causes/extent/other options</i> )					



E 5 In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *onward journey to your destination*

	Very important	Important	Neutral	Low importance	No importance
Journey time from the arrival station to your final destination					
Options to travel onwards from the station by different means of transport					
Presence of information points at the arrival rail station					
Accessibility at the station to your onward journey (e.g. stairs, escalators etc...)					

E 6 In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *quality of the rail service*

	Very important	Important	Neutral	Low importance	No importance
Availability and frequency of train services at night times, weekends, holidays					
Interconnectivity between rail and other types of transport					
Environmentally friendly aspect of rail					
Reliability of rail service					
Network coverage					

**[If any factors chosen as very important from E 1 to E 6]**

**[For all factors chosen as very important from E 1 to E 6]**

E 7 For the following factors that you rated as 'very important' please select which factors were NECESSARY for your choice of rail (select a maximum of 3)

.....

Necessary

Factor 1

Factor 2

Need to add a tickbox 'no factors were necessary'

### Satisfaction ratings

Now again considering the short distance journey (<20 miles/30km) that you have recently undertaken by rail, we would like to understand your satisfaction with this journey.



E 8 What was your overall satisfaction with this journey?

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied

Please rate your level of satisfaction for the aspects of this journey which you rated as important to some extent

**[display all factors above selected as > neutral in E 1 to E 6 within each of the following categories]**



E 9 Planning, booking and purchasing the ticket

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied



E 10 The journey to the station

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied



### E 11 Station Environment and waiting experience

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied

xxx

...



### E 12 Quality of the rail in-vehicle experience

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied

Xxx

...



E 13 The onward journey to your destination

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied

Xxx

...

E 14 The quality of the rail service

Very  
satisfied

Satisfied

Neither  
satisfied nor  
dissatisfied

Dissatisfied

Very  
dissatisfied

Xxx

...

## Section F: Longer Journey made by rail

### Importance ratings

**[If answer S 2no skip to Section G]**

Now consider your most recent longer distance rail journey (>20 miles/30km) starting or ending in Leeds or Greater Manchester that you told us about earlier.



F 1: In your decision to undertake this journey by rail please rate the importance of the factors below relating to *planning, booking and purchasing the ticket*

	Very important	Important	Neutral	Low importance	No importance
The ability to use one or more tools to plan the journey (online and offline)					
The ability to book the journey in advance (using on-line or off-line purchase methods)					
Cost of ticket					
Integrated ticketing (ability to have a single ticket for all rail trip segments and any other modes needed for the journey)					
Available information on accessibility (eg support for elderly or those with visual/mental/physical impairments)					
Ability to buy ticket from station staff (as opposed to a ticket machine)					



F 2 In your decision to undertake this journey by rail please rate the importance of the factors below relating to *the journey to the station*

	Very important	Important	Neutral	Low importance	No importance
Journey time from origin to the departure station					
Options to access to the station by different means of transport					
Car parking availability					
Car parking cost					





F 3 In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *Station Environment and waiting experience*

	Very important	Important	Neutral	Low importance	No importance
Waiting time at the station					
The provision of facilities in waiting areas (eg seating, heating, refreshments, shopping outlets, toilets)					
Accessibility experience at the station (proximity of platforms, stairs, elevators etc)					
Wifi and power connectivity					
Security and safety around the station (eg CCTV, security staff, good visibility in all areas)					
Cleanliness and maintenance of the stations					
Station ambience (eg lighting and level of intrusive advertising)					
Station staff (eg for information, help with access)					
Information communications and signage (eg times, delays, platforms, connections with other modes, navigation around station)					



F 4In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *rail in-vehicle experience*

	Very important	Important	Neutral	Low importance	No importance
Connectivity on the vehicles ( <i>wifi, mobile signal and power</i> )					
Cleanliness and maintenance of the vehicles					
On board security and safety					
Facilities in the vehicles ( <i>e.g catering facilities, toilets</i> )					
Comfort ( <i>e.g. ergonomic seats, illumination, noise, standing space</i> )					
Ability to find a seat					
Rail journey time					
Directness of service ( <i>ie whether interchanges between trains were required</i> )					
Information ( <i>eg announcements, display screens, timetables, route-maps</i> )					
Delay management ( <i>Information on any delays/disruptions, causes/extent/other options</i> )					



F 5 In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *onward journey to your destination*

	Very important	Important	Neutral	Low importance	No importance
Journey time from the arrival station to your final destination					
Options to travel onwards from the station by different means of transport					
Presence of information points at the arrival rail station					
Accessibility at the station to your onward journey  (e.g. stairs, escalators etc...)					

F 6 In your decision to undertake this journey by rail please rate the importance of the factors below relating to the *quality of the rail service*

	Very important	Important	Neutral	Low importance	No importance
Availability and frequency of train services at night times, weekends, holidays					
Interconnectivity between rail and other types of transport					
Environmentally friendly aspect of rail					
Reliability of rail service					
Network coverage					



**[IF any factors chosen as very important from F 1 to F 6]**



**[For all factors chosen as very important from F 1 to F 6]**

F 7 For the following factors that you rated as 'very important' please select which factors were NECESSARY for your choice of rail (select a maximum of 3)

Necessary

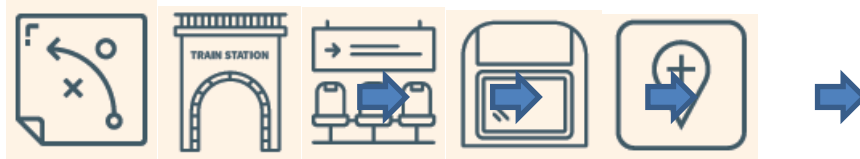
Factor 1

Factor 2

Need to add a tickbox 'no factors were necessary'

## Satisfaction ratings

Now again considering the longer distance journey (>20 miles/30km) that you have recently undertaken by rail, we would like to understand your satisfaction with this journey.



F 8 What was your overall satisfaction with this journey?

Very satisfied      Satisfied      Neither satisfied nor dissatisfied      Dissatisfied      Very dissatisfied

Please rate your level of satisfaction for the aspects of this journey which you rated as important to some extent



[display all factors above selected as > neutral in F 1 to F 6 within each of the following categories]



F 9 Planning, booking and purchasing the ticket

Very satisfied      Satisfied      Neither satisfied nor dissatisfied      Dissatisfied      Very dissatisfied



F 10 The journey to the station

Very satisfied      Satisfied      Neither satisfied nor dissatisfied      Dissatisfied      Very dissatisfied



#### F 11 Station Environment and waiting experience

Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
-------------------	-----------	--	--------------	----------------------

xxx

...



#### F 12 Quality of the rail in-vehicle experience

Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
-------------------	-----------	--	--------------	----------------------

Xxx

...



#### F 13 The onward journey to your destination

Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
-------------------	-----------	--	--------------	----------------------

Xxx

...

#### F 14 The quality of the rail service

Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
-------------------	-----------	--	--------------	----------------------

Xxx

...

Section G: Short Journey NOT made by rail

**[If answer to S 3 no skip to Section H]**

Journey details

**We would now like you to consider the most recent short journey (<20 miles/30km), starting or ending in Leeds or Greater Manchester, which you could have made by rail but undertook by another mode, in the last 3 months.**

The questions that follow relate to the OUTWARD leg of this journey

G 1 What was the main purpose of this trip? (tick one)

- ☐ Travelling to or from work
- ☐ Travelling during work (travelling to a business meeting)
- ☐ Travelling to or from education/training
- ☐ Shopping
- ☐ Visiting friends and family
- ☐ Personal business (bank, doctor etc)
- ☐ Leisure (holiday, parks, restaurants etc)
- ☐ Accompanying your child, family member, friend, etc. on a shopping trip, to the doctor, etc.
- ☐ Other please specify \_\_\_\_\_

G 2 Which was the main mode you used for this trip (tick one):

- ☐ Car/van as a driver
- ☐ Car/van as a passenger
- ☐ Bus/Coach
- ☐ Bicycle
- ☐ Motorcycle/Moped
- ☐ Walk
- ☐ Taxi
- ☐ Other – please supply details

**If ticked taxi, car/van as a driver, car/van as a passenger or bicycle follow up with**

**G2a Did this mode of transport involve use of a ride or vehicle sharing service (eg Uber, Mobike, Zipcar)**

- ☐ Yes
- ☐ No

G 3 Why did you choose a mode other than rail for this journey?

[ Free text box ]





## Importance ratings

G 4 Which improvements would be important in encouraging you to use train for this journey in the future? Please rate the importance of the journey phases below:

Very      Important      Neutral      Low      No  
important      importance      importance



**Planning,  
booking and  
purchasing  
the ticket**



**The journey  
to the  
station**



**Station  
Environment  
and waiting  
experience**



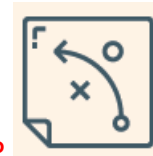
**Quality of  
the rail in-  
vehicle  
experience**



**The onward  
journey to your  
destination**

## The quality of the rail service

[For all factors rated higher than of 'neutral', break them down in the following way":]  
[if no factors chosen as > neutral skip to section H]



[If G 4. planning, booking and purchasing the ticket <'important' SKIP  
G 5]



G 5 Which improvements in planning, booking and purchasing the ticket would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
The ability to use one or more tools to plan the journey (online and offline)					
The ability to book the journey in advance (using on-line or off-line purchase methods)					
Cost of ticket					
Integrated ticketing (ability to have a single ticket for all rail trip segments and any other modes needed for the journey)					
Available information on accessibility (eg support for elderly or those with visual/mental/physical impairments)					
Ability to buy ticket from station staff (as opposed to a ticket machine)					

[If G 4. journey to the station < important SKIP



G 6]



G 6 Which improvements in the journey to the station would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

Very important	Important	Neutral	Low importance	No importance
-------------------	-----------	---------	-------------------	------------------

- Journey time from origin to the departure station
- Options to access to the station by different means of transport
- Car parking availability
- Car parking cost



[If G 4. **Station Environment and waiting experience** < important SKIP

G 7]



G 7 Which improvements in the station environment and waiting experience would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

Very important	Important	Neutral	Low importance	No importance
-------------------	-----------	---------	-------------------	------------------

- Waiting time at the station
- The provision of facilities in waiting areas  
(eg seating, heating, refreshments, shopping outlets, toilets)
- Accessibility experience at the station  
(proximity of platforms, stairs, elevators etc)
- Wifi and power connectivity
- Security and safety around the station  
(eg CCTV, security staff, good visibility in all areas)

Cleanliness and maintenance of the stations

Station ambience  
(eg lighting and level of intrusive advertising)

Station staff  
(eg for information, help with access)

Information communications and signage  
(eg times, delays, platforms, connections with other modes, navigation around station)



**[If G 4. quality of the rail in-vehicle experience < important SKIP G 8]**



G 8 Which improvements in the quality of the rail in-vehicle experience would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
Connectivity on the vehicles (wifi, mobile signal and power)					
Cleanliness and maintenance of the vehicles					
On board security and safety					
Facilities in the vehicles (e.g catering facilities, toilets)					
Comfort (e.g. ergonomic seats, illumination, noise, standing space )					
Ability to find a seat					
Rail journey time					
Directness of service (ie whether interchanges between trains were required)					
Information					

(eg announcements, display screens,  
timetables, route-maps)  
Delay management  
(Information on any delays/disruptions,  
causes/extent/other options)



**[[If G 4. the onward journey to your destination< important SKIP**  
**G 9]**



G 9 Which improvements in the onward journey to your destination would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
Journey time from the arrival station to your final destination					
Options to travel onwards from the station by different means of transport					
Presence of information points at the arrival rail station					
Accessibility at the station to your onward journey (e.g. stairs, escalators etc...)					

**[[If G 4. Quality of the rail service< important SKIP****G 10]**

G 10 Which improvements in the quality of the rail service would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
Availability and frequency of train services at night times, weekends, holidays					
Interconnectivity between rail and other types of transport					

Environmentally friendly aspect of rail

Reliability of rail service

Network coverage



**[IF no factors chosen as very important from G 5 to G 10 skip to SECTION H]**



**[For all factors chosen as very important from G 5 to G 10]**

G 11 For the following factors that you selected as 'very important please select which factors would be NECESSARY to improve in order for you to choose rail for this journey in the future (select a maximum of 3)

Necessary

Factor 1

Factor 2

**Need to add a textbox**

G11a 'there are no improvements which would necessarily make me choose rail'

Section H: Longer journey NOT made by rail

**[If answer to S 4 no skip to End]**

**We would now like you to consider the most recent longer journey (>20 miles/30km), starting or ending in Leeds or Greater Manchester, which you could have made by rail but undertook by another mode, in the last 3 months.**

The questions that follow relate to the OUTWARD leg of this journey

H 1 What was the main purpose of this trip? (tick one)

- ☐ Travelling to or from work
- ☐ Travelling during work (travelling to a business meeting)
- ☐ Travelling to or from education/training
- ☐ Shopping
- ☐ Visiting friends and family
- ☐ Personal business (bank, doctor etc)

- ☐ Leisure (holiday, parks, restaurants etc)  
☐ Accompanying your child, family member, friend, etc. on a shopping trip, to the doctor, etc.  
☐ Other please specify\_\_\_\_\_

H 2 Which was the main mode you used for this trip (*tick one*):

- ☐ Airplane  
☐ Car as a driver  
☐ Car as a passenger  
☐ Bus/Coach  
☐ Bicycle  
☐ Motorcycle/Moped  
☐ Taxi  
☐ Other – please supply details

**If ticked taxi, car/van as a driver, car/van as a passenger or bicycle follow up with**

**H2a Did this mode of transport involve use of a ride or vehicle sharing service (eg Uber, Mobike, Zipcar)**

- ☐ Yes  
☐ No

H 3 Why did you choose a mode other than rail for this journey?

[ Free text box ]



## Importance ratings

H 4 Which improvements would be important in encouraging you to use train for this journey in the future? Please rate the importance of the journey phases below:

Very Important Neutral Low No  
important importance importance



**Planning,  
booking and  
purchasing  
the ticket**



**The journey  
to the  
station**



**Station  
Environment  
and waiting  
experience**



**Quality of  
the rail in-  
vehicle  
experience**



**The onward  
journey to your  
destination**

**The quality of  
the rail service**

[For all factors rated higher than of 'neutral', break them down in the following way":]

[If

## Importance ratings



H 4. planning, booking and purchasing the ticket = not important SKIP  
H 5]



H 5 Which improvements in planning, booking and purchasing the ticket would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
The ability to use one or more tools to plan the journey (online and offline)					
The ability to book the journey in advance (using on-line or off-line purchase methods)					
Cost of ticket					
Integrated ticketing (ability to have a single ticket for all rail trip segments and any other modes needed for the journey)					
Available information on accessibility (eg support for elderly or those with visual/mental/physical impairments)					
Ability to buy ticket from station staff (as opposed to a ticket machine)					

[If



## Importance ratings



H 4. journey to the station = not important SKIP  
H 6]



H 6 Which improvements in the journey to the station would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

Very important	Important	Neutral	Low importance	No importance
-------------------	-----------	---------	-------------------	------------------

Journey time from origin to the  
departure station

Options to access to the station by  
different means of transport

Car parking availability

Car parking cost

[If

## Importance ratings



H 4. Station Environment and waiting experience = not important SKIP

H 7]



H 7 Which improvements in the station environment and waiting experience would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
Waiting time at the station					
The provision of facilities in waiting areas (eg seating, heating, refreshments, shopping outlets, toilets)					
Accessibility experience at the station (proximity of platforms, stairs, elevators etc)					
Wifi and power connectivity					
Security and safety around the station (eg CCTV, security staff, good visibility in all areas)					
Cleanliness and maintenance of the stations					
Station ambience (eg lighting and level of intrusive advertising)					
Station staff (eg for information, help with access)					
Information communications and signage (eg times, delays, platforms, connections with other modes, navigation around station)					

[If

## Importance ratings



H 4. Quality of the rail in vehicle-experience = not important SKIP  
H 8]



H 8 Which improvements in the quality of the rail in-vehicle experience would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
Connectivity on the vehicles (wifi, mobile signal and power)					
Cleanliness and maintenance of the vehicles					
On board security and safety					
Facilities in the vehicles (e.g catering facilities, toilets)					
Comfort (e.g. ergonomic seats, illumination, noise, standing space )					
Ability to find a seat					
Rail journey time					
Directness of service (ie whether interchanges between trains were required)					
Information (eg announcements, display screens, timetables, route-maps)					
Delay management (Information on any delays/disruptions, causes/extent/other options)					

[If

## Importance ratings



H 4. The onward journey to your destination = not important SKIP

H 9]



H 9 Which improvements in the onward journey would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

	Very important	Important	Neutral	Low importance	No importance
Journey time from the arrival station to your final destination					
Options to travel onwards from the station by different means of transport					
Presence of information points at the arrival rail station					
Accessibility at the station to your onward journey (e.g. stairs, escalators etc...)					

[If



### Importance ratings

H 4. The quality of the rail service = not important SKIPH 10]

H 10 Which improvements in the rail service quality would be important in encouraging you to use train for this journey in the future? Please rate the importance of the factors below:

Very Important Neutral Low No  
important importance importance

Availability and frequency of train  
services at night times, weekends,  
holidays

Interconnectivity between rail and other  
types of transport  
Environmentally friendly aspect of rail

Reliability of rail service

Network coverage



[IF no factors chosen as very important from  
H 5to H 10 skip to SECTION H]



[For all factors chosen as very important from  
H 5to H 10]

H 11For the following factors that you rated as 'very important' please select which factors would be NECESSARY to improve in order for you to choose rail for this journey in the future (select a maximum of 3)

Necessary

Factor 1  
Factor 2

Need to add a textbox

H11a. 'there are no improvements which would necessarily make me choose rail'

## Section I: About You

Any personal information you provide will be treated as confidential, will only be used by the research team for this project and cannot be used to identify you.

### I 1 What is your gender?

- ☐ Male  
☐ Female  
☐ Prefer not to say

### I 2 What is your age category?

- ☐ 18-19  
☐ 20-29  
☐ 30-39  
☐ 40-49  
☐ 50-59  
☐ 60-69  
☐ 70 or older

### I 3 To which of these ethnic groups do you consider you belong? (*Tick one*)

- ☐ White  
☐ Mixed  
☐ Asian or Asian British  
☐ Black / African / Caribbean / Black British  
☐ Chinese  
☐ Other ethnic group  
☐ Prefer not to say

### I 4 Within which group does your gross household annual income lie (excluding unearned income, savings, pensions etc) before tax is deducted) ?

- ☐ £15,000 or less  
☐ £15,001 - £30,000  
☐ £30,001 - £45,000  
☐ £45,001 - £60,000  
☐ £60,001 to £75k  
☐ Above £75,000

**[euros for other countries]**

### I 5 What is your employment status? Please tick one box only.

- |   |                                     |  |
|---|-------------------------------------|--|
| Employed full time <input type="checkbox"/> | Unemployed <input type="checkbox"/> | Full time education <input type="checkbox"/> |
| Employed part time <input type="checkbox"/> | Carer <input type="checkbox"/>      | Part time education <input type="checkbox"/> |
| Self-employed <input type="checkbox"/>      | Retired <input type="checkbox"/>    | Homemaker <input type="checkbox"/>           |
| Other <input type="checkbox"/>              |                                     |  |

I 6 Where do you live?

Please give name of town, village or city: \_\_\_\_\_

Postcode \_\_\_\_\_

I 7 Who normally lives with you? [Tick all that apply]

- ☐ Live alone (Single )
- ☐ Partner/spouse, including same-sex partner
- ☐ Dependent child/children under 18                      How many? \_\_\_\_\_
- ☐ Dependent child/children 18 or over.                      How many? \_\_\_\_\_
- ☐ Parent(s)
- ☐ Dependent adult (someone you are carer for)
- ☐ Housemates/friends
- ☐ Other                      Please specify \_\_\_\_\_

I 8 What is the highest educational qualification you have? [Tick one]

**If your qualification is not listed, tick the box the contains its nearest equivalent**

**If your highest qualification was gained outside the UK, tick the nearest UK equivalents**

- ☐ Advanced Professional qualifications (eg teaching, nursing, accountancy)
- ☐ Degree level qualification, or higher
- ☐ Other higher education qualification
- ☐ A levels or equivalent further education
- ☐ Apprenticeship
- ☐ O levels/GCSEs or equivalent/school leaving certificate
- ☐ Other work-related or professional qualification
- ☐ None
- ☐ Other (Please specify)

I 9 Do you hold a valid driving licence for a car?

- ☐ No
- ☐ Yes

I 10 Do you hold a valid driving licence for a motorbike?

- ☐ No
- ☐ Yes

I 11 Have you a car/van or motorbike/moped available for YOUR personal use as a driver OR passenger (eg for attending work or shopping trips) [Tick one]

- ☐ Yes always.
- ☐ Yes almost always have access to a car/van/motorbike
- ☐ Yes but only infrequently (e.g. in the evenings)
- ☐ No, never

