# Text, logo Description automatically generated**iDREAMS Car Trial Questionnaire Guide**

**Instructions for Data Entry**

This guide, and the accompanying Excel template, have been prepared by Loughborough University to ensure consistency of questionnaire data upload between partners. This guide also provides a complete data dictionary of questions asked to car drivers at each phase of the trial, along with possible response options.

As you scroll across you will in turn see questions relating to:

* SQ (Screening Questionnaire)
* STC (Screening Telephone Call)
* EQ (Entry Questionnaire)
* WQ (Wearable Questionnaire)
* AP (App Questionnaire)
* UX (User Experience Questionnaire)
* EX (Exit Questionnaire)
* *Additional LOUGH-specific questions*

**IMPORTANT:**

* If a participant did not answer a question, e.g., it was not applicable to them, or the answer was unknown, or you did not ask a particular question to your participants, please put ‘9999’ as the response.

## Screening Questionnaire (SC)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| A | SQ\_Participant\_ID | n/a | *This is the participant ID generated using the on-boarding system* | [5-character string], e.g. ABCDE |
| B | SQ\_Gender | 5 | Participant gender | Male  Female  Other |
| C | SQ\_Nationality | 6 | Participant nationality | Free text |
| D | SQ\_Year\_of\_birth | 7 | Participant year of birth (year only, not full DOB for data protection) | [YYYY] |
| E | SQ\_Age | - | Participant age at time entered study.  If you did not ask this, please calculate using start date and DOB. | [number] |
| F | SQ\_ Age\_got\_driving\_license | 9 | At what age did you receive your driver's license (i.e., when did you drive legally by yourself)? | [number] |
| G | SQ\_Years\_driving | - | Number of years license held for.  If you did not ask this, please calculate from other data. | [number] |
| H | SQ\_Vehicle\_brand | 3-1 | Vehicle brand (e.g., Renault) | Free text |
| I | SQ\_Vehicle\_model | 3-2 | Vehicle model (e.g., Clio |
| J | SQ\_Vehicle\_age | 3-3 | How old is your vehicle in years? | [number] |

## Screening Telephone Call (STC)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| K | STC\_Second\_Nat | 1 | Participant second nationality (if applicable) | Free text |
| L | STC\_Highest\_lev\_education | 2 | Participant highest level of education | *Dependent on country* |
| M | STC\_Current\_occupation | 3 | Participant current (main) occupation | *Dependent on country* |
| N | STC\_Employment\_stat | 4 | Participant current employment status | Employed full time  Employed part time  Retired  Volunteer  Student  Unemployed |
| O | STC\_Net\_income | 5 | What is the monthly net income for your household? | Less than €1.000  €1.000 - €2.000  €2000 - €3.000  €3000 - €4.000  €4000 - €5.000  More than €5.000  I would rather not say |
| P | STC\_Med\_condition\_decleration | 6 | Can you declare that you are not suffering from a medical condition that would be considered a legal exclusion to drive? | Yes  No |
| Q | STC\_First\_registered | 7 | Vehicle date of first registration (include year only) | [year] YYYY |
| R | STC\_Fuel\_type | 8 | Vehicle fuel type | Petrol  Diesel  Electric  Hybrid electric  Hydrogen  Biofuel  CNG  LPG |
| S | STC\_ Engine\_CC | 9 | Vehicle engine size/cylinder capacity (cc) (eg 1,5 liter/1500cc): | [number] |
| T | STC\_Engine\_HP | 10 | Vehicle engine power (horsepower) (eg 105 HP): | [number] |
| U | STC\_Vin\_No | 11 | Vehicle vin/Chassis/Frame no.: | Free text |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| V | STC\_Gearbox | 12 | Vehicle gearbox type | Manual  Automatic |
| W | STC\_Disability\_mod | 13 | Has this vehicle been modified to cope with physical limitations of the driver? | Yes  No |
| X | STC\_Veh\_modification\_description | 14 | If yes, briefly describe which modifications took place? | Free text  If ‘no’ to Q13, put 9999 |
| Y | STC\_Number\_other\_drivers | 15 | How many other drivers use the above vehicle in an average week? | 0  1  2  >2 |
| Z | STC\_Drvr\_1\_split | 16 | How is the use of this car split between all of the drivers who use it?  (Note the total usage should add up to 100%). In the example below, Driver 3 uses the vehicle for twice as much time as Driver 4.  e.g. Driver 1: 50 Driver 2: 35 Driver 3: 10 Driver 4: 5 | [number] |
| AA | STC\_Drvr\_2\_split |
| AB | STC\_Drvr\_3\_split |
| AC | STC\_Drvr\_4\_split |
| AD | STC\_Weekly\_km | 17 | How many kilometres (make an estimate) do you travel on average per week with this car (during COVID-19)? | up to 50 km  50 to 100 km  100 to 500 km  500 to 1000 km  more than 1000 km |
| AE | STC\_Urban | 18a | How much do you drive on urban roads (e.g. roads with a maximum speed limit of 30 km/h or 50 km/h)?...............% | [number] |
| AF | STC\_Rural | 18b | How much do you drive on rural roads (e.g. roads with a maximum speed limit of 70 km/h or 90 km/h)? ...............% | [number] |
| AG | STC\_Motorway | 18c | How much do you drive on motorways e.g. roads with a maximum speed limit 120 km/h)? ...............% | [number] |

## Entry Questionnaire (EQ)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| AH - AQ | EQ1a\_Adaptive\_cruise\_control  EQ1b\_Forward\_collision\_warning  EQ1c\_NV\_PD  EQ1d\_Traffic\_sign\_recognition  EQ1e\_Lane\_keeping\_Assistance  EQ1f\_Blind\_spot\_warning  EQ1g\_Drowsiness\_alert  EQ1h\_Parking\_assist  EQ1i\_High\_speed\_alert  EQ1j\_Automatic\_emergency\_braking  EQ1k\_Other  EQ1l\_other\_please\_specify | 1 | Which Advanced Driving Assistance Systems are present in your car?   * Multiple answers possible, therefore separate column for yes/no for each type of ADAS * EQ1c\_NV\_PD = night vision and pedestrian detection | Not equipped  Equipped  Not sure  Equipped and using  Equipped but ignore  Equipped but turned off  (Free text for EQ1l\_other\_please\_specify) |
| AT - BD | EQ2a\_Adaptive\_cruise\_control  EQ2b\_Forward\_collision\_warning  EQ2c\_NV\_PD  EQ2d\_Traffic\_sign\_recognition  EQ2e\_Lane\_keeping\_Assistance  EQ2f\_Blind\_spot\_warning  EQ2g\_Drowsiness\_alert  EQ2h\_Parking\_assist  EQ2i\_High\_speed\_alert  EQ2j\_Automatic\_emergency\_braking  EQ2k\_Other | 2 | How often do you use the following Advanced Driving Assistance Systems that are present in your car?   * Separate column for each type of ADAS * EQ2c\_NV\_PD = night vision and pedestrian detection | Almost never  Sometimes  Often  Almost always  Not applicable |
| BE – BO | EQ3a\_Useful  EQ3b\_Increase\_perform  EQ3c\_Understandable  EQ3d\_Easy  EQ3e\_Good\_idea  EQ3f\_Maintain\_safe  EQ3g\_Comfortable  EQ3h\_Attention  EQ3i\_Accident\_risk  EQ3j\_Trust  EQ3k\_Distract | 3 | Indicate to what extent you agree with the following statements about ADAS in general.   1. ADAS are useful while driving 2. Using ADAS increases my driving performance 3. My interaction with ADAS is clear and understandable 4. I find ADAS easy to use 5. Using ADAS is a good idea 6. I can maintain safe driving behaviour while using ADAS 7. I will feel more comfortable doing other things (e.g., adjusting the radio) with ADAS 8. Using ADAS information requires increased attention 9. Using ADAS information decreases the accident risk 10. I trust the information I receive from ADAS 11. ADAS distract me while driving | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| BP – BX  **VIO1 until VIO9** | EQ4a\_Speed\_limit\_built\_up  EQ4b\_Speed\_limit  EQ4c\_Sleepy  EQ4d\_Tired  EQ4e\_Mobile\_phone  EQ4f\_VRU\_close  EQ4g\_Illegal\_overtake  EQ4h\_Safe\_distance  EQ4i\_Driving\_lane | 4 | Please estimate: over the last year, how often did you as a car driver…   1. drive faster than the speed limit inside built-up areas? 2. drive faster than the speed limit? 3. drive when you were so sleepy that you had trouble keeping your eyes open? 4. realize that you were actually too tired to drive? 5. used a hand-held mobile phone while driving? 6. drive to close to a vulnerable road user (pedestrian, moped, cyclist, etc.)? 7. illegally overtake another vehicle? 8. drive without respecting a safe distance to the vehicle in front? 9. cross the outer edges of the driving lane? | Never  Seldom  About half the time  Usually  (almost) Always |
| BY | EQ5\_Driving\_style | 5 | Please select with which of the following driving styles you identify the most. | Discrete average driver  Less experienced hesitant driver  Sportive ambitioned driver  Risk-taking offensive driver |
| BZ | EQ6\_Driving\_confidence | 6 | How confident you are concerning your own driving skills? | Very confident  Confident  Neutral  Insecure  Very insecure |
| CA | EQ7\_Driving\_is | 7 | Driving is…. | Very dangerous  Quite dangerous  Neither dangerous nor safe  Quite safe  Very safe |
| CB - CD | EQ8a\_Skill  EQ8b\_Hazards  EQ8c\_Crash\_risk | 8 | How do you think you compare to the average driver?   1. Regarding general driving skills, I am: 2. Regarding the ability to cope with hazards in traffic, I am: 3. Regarding your risk of being involved in a crash, I am: | Much worse  Worse  Not better nor worse  Better  Much better |
| CE - CN | EQ9a\_Police\_close\_following  EQ9b\_Overtake  EQ9c\_Fast  EQ9d\_Small\_gap  EQ9e\_Faster\_speed\_limit  EQ9f\_Risky\_overtake  EQ9g\_Speed\_drive\_careful  EQ9h\_Know\_risks  EQ9i\_Closer\_recommended  EQ9j\_Closer\_flow | 9 | Please indicate to which extent you agree with the following statements.   1. People stopped by the police for close-following are unlucky because lots of people do it 2. It is quite acceptable to take a slight risk when overtaking 3. I know exactly how fast I can drive and still drive safely 4. Some people can drive safely even though they only leave a small gap behind the vehicle in front 5. Even driving slightly faster than the speed limit makes you less safe as a driver 6. I think it is okay to overtake in risky circumstances as long as you drive within your own capabilities 7. It’s okay to drive faster than the speed limit as long as you drive carefully 8. I know exactly what risks I can take when I overtake. 9. It is quite acceptable to drive closer to the vehicle in front than is recommended 10. Sometimes you have to drive in excess of the speed limit in order to keep up with the traffic flow | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| CO - CR | EQ10a\_Attention  EQ10b\_Keeping\_distance  EQ10c\_Adjusting\_speed  EQ10d\_Conforming\_speed\_limit | 10 | Please rate your own driving skills in regard to the following situations or manoeuvres.   1. Paying attention to other road-users 2. Keeping sufficient following distance 3. Adjusting the speed to the conditions 4. Conforming to the speed limits | Very weak  Weak  Not weak nor strong  Strong  Very strong |
| CS – DD  **ATT1 until ATT12** | EQ11a\_Benefits  EQ11b\_Needed\_safe  EQ11c\_Skills  EQ11d\_Competent  EQ11e\_Important  EQ11f\_Comfortable  EQ11g\_Personally\_important  EQ11h\_Obligation  EQ11i\_Friends\_safe  EQ11j\_Colleagues\_safe  EQ11k\_I\_control  EQ11l\_Safe\_easy | 11 | Please indicate to which extent you agree with the following statements.   1. I know the benefits of safe driving 2. I know what is needed to drive safely 3. I have the skills to drive safely 4. I feel competent enough to drive safely 5. Safe driving is important to avoid crashes 6. Safe driving makes me feel comfortable 7. For me personally, safe driving is important 8. Safe driving should be a personal obligation 9. My friends think safe driving is important 10. My colleagues find it important to drive safely 11. I control whether I drive safely or not 12. For me, safe driving is easy to do | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| DE | EQ12\_Accident\_three\_years | 12 | Within the last three years, have you been involved in an accident with your car, which was self-inflicted? | Never  Yes once  Yes two times  Yes three or more times |
| DF - DI | EQ13a\_accident\_1  EQ13b\_accident\_2  EQ13c\_accident\_3  EQ13d\_accident\_4 | 13 | If yes, how severe was this accident / were these accidents?   1. Accident 1 2. Accident 2 3. Accident 3 4. Accident 4 | Material damage only  At least one person was mildly injured (no   hospitalisation)  At least one person was severely injured  At least one person was killed |
| DJ | EQ14\_Traffic\_offence | 14 | Within the last three years, have you been fined for a traffic offence while driving with your car? | Yes  No |
| DK - DV | EQ15a\_Speeding\_offence  EQ15b\_DUI\_offence  EQ15c\_Tailgating\_offence  EQ15d\_Phone\_offence  EQ15e\_Parking\_offence  EQ15f\_\_Illegal\_overtaking  EQ15g\_Running\_light  EQ15h\_Running\_stop  EQ15i\_Running\_yield  EQ15j\_Not\_stop\_ped  EQ15k\_Other | 15 | If yes, for which offence have you been fined within the last three years? (Multiple answers are possible therefore column for each answer).   1. Speeding 2. Driving under the influence 3. Tailgating (unsafe following distance) 4. Using handheld phone while driving 5. Parking offence 6. Illegal overtaking 7. Running a traffic light 8. Running a stop sign 9. Running a yielding sign 10. Not stopping at a pedestrian crossing 11. Other (please specify) | Yes  No  (Free text for ‘Other’)  (If answered ‘no’ to Q14, this is not applicable so put 9999) |
| DW - ED | EQ16a\_Sit\_read  EQ16b\_Watching\_TV  EQ16c\_Sitting\_inactive  EQ16d\_Car\_passenger  EQ16e\_Lying\_down  EQ16f\_Sitting\_talking  EQ16g\_Sitting\_lunch\_alcohol  EQ16h\_Car\_stopped | 16 | How likely are you to doze off or fall asleep in the following situations, in contrast to feeling just tired?   1. Sitting and reading 2. Watching TV 3. Sitting, inactive in a public place (e.g., a theatre or a meeting) 4. As a passenger in a car for an hour without a break 5. Lying down to rest in the afternoon when circumstances permit 6. Sitting and talking to someone 7. Sitting quietly after a lunch without alcohol 8. In a car, while stopped for a few minutes in the traffic | Would never doze  Slight chance of dozing  Moderate chance of dozing  High chance of dozing |
| EE | EQ17\_General\_sleep\_rating | 17 | In general, how would you rate your sleep in the last 3 months? | Very good  Quite good  Neither good nor bad  Quite bad  Very bad |
| EF - EG | EQ18\_Diagnosed\_sleep\_disorder  EQ18a\_Yes\_what | 18 | Have you ever been diagnosed with a disorder or condition which affects your sleep, e.g. obstructive sleep apnoea?   1. If yes, which condition or disorder? | Yes  No  EQ18a: free text  (Please remove commas) |
| EH | EQ19\_Fight\_sleep\_in\_car | 19 | How often do you have to fight sleepiness in order to stay awake while driving the car? | Never  Occasionally  2-4 times a month  2-3 times a week  4 or more times a week |
| EI | EQ20\_Stop\_because\_sleepiness | 20 | In the past 12 months, have you had to stop the car due to sleepiness? | Never  Once  Twice  Three times  More than three times |
| EJ | EQ21\_Sleepiness\_Wanted\_to\_stop | 21 | In the past 12 months, have you wanted to stop the car due to sleepiness, but been unable to? | Never  Once  Twice  Three times  More than three times |
| EK | EQ22\_Asleep\_while\_driving | 22 | In the past 12 months, have you fallen asleep whilst driving the car? | Never  Once  Twice  Three times  More than three times |
| EL | EQ23\_Crash\_blame\_sleep | 23 | In the last 10 years have you experienced an incident or crash with your car where sleepiness was partly or solely to blame? | No  Yes once  Yes several times  Do not remember |
| EM - FO | EQ24\_n1\_Epilepsy  EQ24\_n2\_Parkinsons\_Disease  EQ24\_n3\_Multiple\_Sclerosis  EQ24\_n4\_Stroke  EQ24\_n5\_Migraines  EQ24\_n6\_Dizziness  EQ24\_n7\_Other  EQ24\_m1\_Limited\_flexibility  EQ24\_m2\_Arthritis  EQ24\_m3\_Artificial\_limbs  EQ24\_m4\_Paralysis  EQ24\_m5\_MMD  EQ24\_m6\_Other  EQ24\_c1\_High\_blood\_pressure  EQ24\_c2\_Low\_blood\_pressure  EQ24\_c3\_Heart\_attack  EQ24\_c4\_Pacemaker  EQ24\_c5\_Bypass\_surgery  EQ24\_c6\_Other  EQ24\_h1\_Difficulty\_hearing  EQ24\_h2\_Deafness  EQ24\_h3\_Hearing\_aid  EQ24\_v1\_Near\_sighted  EQ24\_v2\_Farsighted  EQ24\_v3\_Reading\_glasses  EQ24\_v4\_Colour\_blindness  EQ24\_v5\_Blind\_one\_eye  EQ24\_v6\_Poor\_night\_vision  EQ24\_v7\_Other | 24 | Do you have any diseases of the following categories that you are aware of? If yes, which ones?  N = Neurological  1 – Epilepsy, 2 – Parkinson’s disease, 3 – Multiple sclerosis,  4 – Stroke, 5 – Migraines, 6 – Dizziness, 7 – Other  M = Muscles, skeletal  1 – Limited flexibility, 2 – Arthritis, 3 – Artificial limbs,  4 – Paralysis, 5 – Muscle and movement disorders, 6 – Other  C = Cardio-vascular  1 – High blood pressure, 2 – Low blood pressure,  3 – Heart attack, 4 – Pacemaker, 5 – Bypass surgery, 6 – Other  H = Hearing  1 – Difficulty hearing, 2 – Deafness, 3 – Hearing aid  V = Vision  1 – Objects far aware are blurry, 2 – Objects close up are blurry,  3 – Reading glasses needed, 4 – Colour blindness,  5 – Blind in one eye, 6 – Poor night vision, 7 – Other | Yes  No  Free text for ‘other’ |

## Wearable Questionnaire (WQ)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| FP - FQ | WQ1a\_Bracelet\_working  WQ1b\_When\_stopped\_working | 1 | Is your bracelet currently working?   * If no, since when has the bracelet stopped working? | 1a: Yes, No  1b: [date] |
| FR | WQ2\_Often\_wear | 2 | How often do you wear the bracelet? | I wear the bracelet all the time even when not driving the car  I try to wear the bracelet whenever I drive the car  (Hardly) ever |
| FS | WQ3\_Percentage\_wear | 3 | Can you express in percentages in how many rides you wear the bracelet? | [number] |
| FT - GA | WQ4a\_Forget  WQ4b\_Battery  WQ4c\_Charge\_forget  WQ4d\_Short\_trips  WQ4e\_Turn\_on  WQ4f\_Uncomfortable  WQ4g\_Heart\_rate  WQ4h\_Other\_specify | 4 | For what reason do you not (always) wear the bracelet?   1. I usually forget to wear the bracelet 2. The battery runs out quickly and I forget to charge it 3. After charging, I often forget to put it back on / to put it back in the car 4. I do a lot of short trips and find it a burden to put the bracelet on and take it off every time 5. I often can't get the bracelet to turn on 6. I don’t find the bracelet comfortable to wear 7. I don't want you to measure my heart rate 8. Other (please specify) | Yes  No  Free text for ‘other’ |
| GB | WQ5\_Charge\_bracelet | 5 | How often do you need to charge the bracelet? | Once a day  Several times a day  Once a week  Several times a week |
| GC | WQ6\_Easy\_turn\_on | 6 | How easily do you manage to turn on and switch off the bracelet? | I've never had any problems with this  It often happens to me that I can't get the bracelet to turn on  I can't get the bracelet to turn on at all |
| GD | WQ7\_Auto\_activation | 7 | If you are wearing the bracelet, does it AUTOMATICALLY go into active mode after you turn the car on? You will feel a short vibration, the arrow will appear next to the heart and your heart rate will be visible a few seconds later | No that never happens  Yes this (usually) happens |
| GE | WQ8\_\_Percent\_auto\_activation | 8 | If your answer to the previous question was 'Yes', please express (in percent) how often the bracelet goes AUTOMATICALLY into active mode: | [number]  (If answered ‘no’ to Q7, this is not applicable so put 9999) |
| GF - GK | WQ9a\_Difficult\_remove\_ strap  WQ9b\_Difficult\_replace\_strap  WQ9c\_Falls\_out  WQ9d\_Slips\_off  WQ9e\_Charge\_issue  WQ9f\_Other\_specify | 9 | What other problems do you experience with the bracelet?   1. I find it difficult to remove the device from the wrist strap for charging 2. I find it difficult to place the device back into the wrist strap after charging 3. The device frequently falls out of the wrist strap when worn 4. The wrist strap frequently slips off 5. I cannot charge the device with the smartphone adapter, I can only charge it with a PC 6. Other (please specify) | Yes  No  Free text for ‘other’ |
| GL | WQ10\_Other\_concerns | 10 | If there are any other remarks or concerns regarding the bracelet that you would like to add, you can do so here: | Free text |

## App Use Questionnaire (AQ)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| GM | AQ1\_Often\_consult\_app | 1 | How often do you consult the app? | I've never looked at the app  Very rarely (less than once a week)  1 time per week  Between 1 and 3 times per week  Between 3 and 5 times per week  Almost daily (> 5 times per week) |
| GN | AQ2\_Why\_never\_rarely | 2 | If you answered 'Never' or 'Very rarely' to the previous question, could you please indicate why you do not or rarely consult the app? | Free text |
| GO - HB | AQ3a\_App\_install\_easy  AQ3b\_Language\_easy  AQ3c\_App\_update\_easy  AQ3d\_App\_overview\_easy  AQ3e\_App\_filter\_easy  AQ3f\_Trip\_info\_clear  AQ3g\_Visualise\_trip\_easy  AQ3h\_Specific\_events\_easy  AQ3i\_Detailed\_info\_clear  AQ3j\_Scores\_clear  AQ3k\_Period\_scores\_easy  AQ3l\_Message\_useful  AQ3m\_Respond\_message\_easy  AQ3n\_Settings\_useful | 3 | Give your opinion on the following statements   1. Installing the app on my mobile via the link I received by email was easy for me 2. Making a language selection in the app was easy for me 3. Updating the app is easy for me 4. I can easily find the overview of my trips in the app 5. I find it easy to filter trips according to a certain period 6. The trip information (start and end point, duration, distance and scores) shown per trip is clear to me 7. Visualizing my completed trips on a map in the app is easy 8. Viewing specific events identified during a trip is easy for me 9. The detailed information (e.g., dashcam videos) shown per event on a trip is clear to me 10. The information shown via the 'scores' button is clear to me 11. Selecting a period of which I want to see 'scores' is easy for me 12. I find the 'messages' button a useful addition in the app 13. I find responding to posted messages in the app easy 14. I find the information behind the 'settings' button useful | Totally disagree  Disagree  No opinion  Agree  Totally agree |
| HC | AQ4\_Most\_interesting | 4 | What do you find MOST interesting about the iDREAMS app so far? | Free text |
| HD | AQ5\_Least\_interesting | 5 | What do you find LEAST interesting about the iDREAMS app so far? | Free text |
| HE | AQ6\_Other\_concerns | 6 | If there are any other comments or concerns regarding the iDREAMS app that you would like to add, please add them here: | Free text |

## User Experience Questionnaire (UX)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| HF | UX1\_Identify\_easy | 1 | Identifying myself in the vehicle is easy | Totally disagree  Disagree  No opinion  Agree  Totally agree |
| HG | UX2\_Display\_works | 2 | The display in the car works as it should (e.g. turns on when the car is turned on, closes when the car is turned off, does not freeze while driving ...) |
| HH | UX3\_Warnings\_clear | 3 | The warnings are clear, I understand the meaning of all the symbols and sounds |
| HU | UX4\_Alerts\_correct | 4 | The alerts are correct. They correctly reflect the situation around my vehicle (e.g. speed indications, road markings, other road users in the vicinity ...) |
| HJ | UX5\_Alerts\_timely | 5 | The alerts are always given in a timely manner allowing me to adjust my actions in a timely manner |
| HK | UX6\_Warnings\_distracting | 6 | The warnings are sometimes distracting |
| HL | UX7\_alerts\_aware | 7 | The alerts make me more aware of my actions while driving |
| HM | UX8\_Additional\_comments | 8 | If you would like to add something regarding the statements above or if you would like to share additional experiences, comments or suggestions with us, you can do so here | Free text |
| HN | UX9\_Alerts\_missing | 9 | Are there any particular alerts that you think might be useful but are currently missing? | Free text |
| HO | UX10\_App\_install\_easy | 10 | Installing the app on my mobile via the link I received by email was easy for me | Totally disagree  Disagree  No opinion  Agree  Totally agree |
| HP | UX11\_App\_update\_easy | 11 | Updating the app is easy for me |
| HQ | UX12\_App\_overview\_easy | 12 | I can easily find the overview of my trips in the app |
| HR | UX13\_App\_filter\_easy | 13 | I find it easy to filter trips according to a certain period |
| HS | UX14\_Trip\_info\_clear | 14 | The trip information (start and end point, duration, distance and scores) shown per trip is clear to me |
| HT | UX15\_Visualise\_trip\_easy | 15 | Visualizing my completed trips on a map in the app is easy |
| HU | UX16\_Specific\_events\_easy | 16 | I find viewing specific events identified during a ride easy. |
| HV | UX17\_Detailed\_info\_clear | 17 | The detailed information (e.g., dashcam videos) shown per event on a trip is clear to me |
| HW | UX18\_Scores\_clear | 18 | The information shown via the 'scores' button is clear to me |
| HX | UX19\_Period\_scores\_easy | 19 | Selecting a period of which I want to see 'scores' is easy for me |
| HY | UX20\_Message\_useful | 20 | I find the 'messages' button a useful addition in the app |
| HZ | UX21\_Respond\_message\_easy | 21 | I find responding to posted messages in the app easy |
| IA | UX22\_Settings\_useful | 22 | I find the information behind the 'settings' button useful |
| IB | UX23\_Info\_tile\_useful | 23 | The 'Info' tile in the middle of the screen shows new pros, cons and facts about safe driving every day. This information is useful to me. | Totally disagree  Disagree  No opinion  Agree  Totally agree |
| IC | UX24\_Thumbs\_up\_useful | 24 | I can rate the information I get from the 'Info' tile with a [thumbs up] or a [thumbs down]. I find this option useful. |
| ID | UX25\_Tips\_useful | 25 | The 'Tips' tile in the middle of the screen offers new practical tips on safe driving every day. This information is useful to me. |
| IE | UX26\_Tile\_thumbs\_up | 26 | I can rate the information I receive via the 'Tips' tile with a [thumbs up] or a [thumbs down]. I find this option useful. |
| IF | UX27\_Goals\_Useful | 27 | The 'Goals and badges' tile in the middle of the screen offers me challenges for different parameters to improve my own driving performance. I find this interesting. |
| IG | UX28\_New\_goals\_motivating | 28 | Achieved goals regarding a specific parameter are made more challenging through new goals. I enjoy these new goals because they motivate me to do even better. |
| IH | UX29\_Badges\_interesting | 29 | By completing enough goals on a specific parameter, I can collect badges. I find this interesting. |
| II | UX30\_Scoreboard\_useful | 30 | The 'Scoreboard' tile in the centre of the screen gives me the chance to compare my own driving performance with that of my colleagues. I find this interesting. |
| IJ | UX31\_additional\_statements | 31 | If you would like to add additions regarding statements above or if you would like to share additional experiences, comments or suggestions with us, you can do so here: | Free text |
| IK | UX32\_Useful\_info\_missing | 32 | Is there any information that might be useful to you but is currently missing from the app? | Free text |

## Exit Questionnaire (EX)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| IL - JE | EX1a\_Increase\_performance  EX1b\_Destination\_safely  EX1c\_Easy\_understand  EX1d\_Annoying  EX1e\_Good\_idea  EX1f\_More\_interesting  EX1g\_Proud  EX1h\_People\_Like\_use  EX1i\_Maintain\_safe  EX1j\_Knowledge  EX1k\_Do\_not\_understand  EX1l\_Affect\_negative\_way  EX1m\_Increased\_attention  EX1n\_Distracts  EX1o\_Safer  EX1p\_More\_aware  EX1q\_Depend  EX1r\_Comfortable\_other\_things  EX1s\_Continue\_use  EX1t\_Recommend | 1 | Indicate to what extent you agree with the following statements about the i-DREAMS system.  Performance expectancy   1. Using the system increases my driving performance 2. If I use the system, I will reach my destination safely   Ease of use / effort expectancy   1. I think the i-DREAMS system is easy to understand 2. I think the i-DREAMS system is annoying   Attitude towards using technology   1. Using the system is a good idea 2. The system makes driving more interesting   Social influence   1. I would be proud to show the system to people who are close to me 2. In general, people who I like would encourage me to use the system   Facilitating conditions   1. While using the system I can maintain safe driving behaviour 2. I have the knowledge necessary to use the system   Anxiety   1. I am afraid that I do not understand the system 2. I am confident that the system does not affect my driving in a negative way   Perceived Safety   1. Using the system information requires increased attention 2. The system distracts me from driving   Perceived Usefulness   1. I think using the i-DREAMS system makes me a safer driver 2. I think using the i-DREAMS system makes me more aware of my surroundings (other vehicles, lane position, etc.)   Trust   1. I think I can depend on the i-DREAMS system 2. I will feel more comfortable doing other things (e.g., adjusting the radio) with the i-DREAMS system   Behavioural Intention to Use   1. If I had a choice, I would continue to use the i-DREAMS system 2. I would recommend the i-DREAMS system to other drivers | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| JF - JN | EX2a\_Clear\_in\_general  EX2ai\_Why  EX2aii\_Suggestions\_improve  EX2b\_Visual\_symbols  EX2bi\_Why  EX2bii\_Suggestions\_improve  EX2c\_Sounds  EX2ci\_Why  EX2cii\_Suggestions\_improve | 2 | Indicate to what extent you find the i-DREAMS system clear in general   1. How clear do you find the i-DREAMS system in general?    1. Why?    2. Suggestions to improve? 2. How clear do you find the visual symbols of the system in general?    1. Why?    2. Suggestions to improve? 3. How clear do you find the sounds of the system in general?    1. Why?    2. Suggestions to improve? | a/b/c:  Very unclear  Unclear  Neutral  Clear  Very clear  i/ii – free text |
| JO - JZ | EX3a\_Know\_benefits  EX3b\_Know\_safely  EX3c\_Skills\_safely  EX3d\_Competent  EX3e\_Safe\_important  EX3f\_Safe\_comfortable  EX3g\_Personally\_important  EX3h\_Personal\_obligation  EX3i\_Friends\_safe\_important  EX3j\_Colleagues\_safe\_important  EX3k\_Control\_safety  EX3l\_Safe\_easy | 3 | Please indicate to which extent you agree with the following statements   1. I know the benefits of safe driving 2. I know what is needed to drive safely 3. I have the skills to drive safely 4. I feel competent enough to drive safely 5. Safe driving is important to avoid crashes 6. Safe driving makes me feel comfortable 7. For me personally, safe driving is important 8. Safe driving should be a personal obligation 9. My friends think safe driving is important 10. My colleagues find it important to drive safely 11. I control whether I drive safely or not 12. For me, safe driving is easy to do | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| KA – KJ | EX4a\_Power  EX4b\_Achievement  EX4c\_Hedonism  EX4d\_Stimulation  EX4e\_Self\_direction  EX4f\_Universalism  EX4g\_Benevolence  EX4h\_Tradition  EX4i\_Conformity  EX4j\_Security | 4 | Please rate the importance of the following values as a life-guiding principle for you. Use the 8-point scale in which:   * 0 indicates that the value is opposed to your principles and * 1 indicates that the value is not important for you, * 4 indicates that the value is important * 8 indicates that the value is of supreme importance for you.  1. Power (social power, authority, wealth) 2. Achievement (success, capability, ambition, influence on people and events) 3. Hedonism (gratification of desires, enjoyment in life, self- indulgence) 4. Stimulation (daring, a varied and challenging life, an exciting life) 5. Self-direction (creativity, freedom, curiosity, independence, choosing one's own goals) 6. Universalism (broad-mindedness, beauty of nature and arts, social justice, a world at peace, equality, wisdom, unity with nature, environmental protection) 7. Benevolence (helpfulness, honesty, forgiveness, loyalty, responsibility) 8. Tradition (respect for tradition, humbleness, accepting one's portion in life, devotion, modesty) 9. Conformity (obedience, honouring parents and elders, self- discipline, politeness) 10. Security (national security, family security, social order, cleanliness, reciprocation of favours) | 0  1  2  3  4  5  6  7  8 |
| KK - KZ | EX5a\_Queue\_turn\_left  EX5b\_Fail\_notice  EX5c\_Fail\_check  EX5d\_Brake\_too\_quckly  EX5e\_On\_turning\_left\_cyclist  EX5f\_Miss\_give\_way  EX5g\_Attempt\_overtake  EX5h\_Underestimate\_speed  EX5i\_Hit\_something  EX5j\_Intend\_drive\_A  EX5k\_Get\_wrong\_lane  EX5l\_Switch\_one\_thing  EX5m\_Attempt\_drive\_third\_gear  EX5n\_Forget\_carpark  EX5o\_Misread\_sign  EX5p\_Realise\_no\_recollection | 5 | Please estimate, how often do you…   1. … queue to turn left onto a main road, you pay such close attention to the main stream of traffic that you nearly hit the vehicle in front of you 2. … fail to notice that pedestrians are crossing when turning into a side street from a main road 3. … fail to check your rear-view mirror before pulling out, changing lanes, etc. 4. … brake too quickly on a slippery road or steer the wrong way in a skid 5. … on turning left nearly hit a cyclist who has come up on your inside 6. … miss “Give Way” signs and narrowly avoid colliding with traffic having right of way 7. … attempt to overtake someone that you had not noticed to be signalling a right turn 8. … underestimate the speed of an oncoming vehicle when overtaking 9. … hit something when reversing that you had not previously seen 10. … intending to drive to destination A, you “wake up” to find yourself on the road to destination B 11. … get into the wrong lane approaching a roundabout or a junction 12. … switch one thing, such as the headlights, when you meant to switch on something else, such as the wipers 13. … attempt to drive away from the traffic lights in third gear 14. … forget where you left your vehicle in a car park 15. … misread the signs and exit from a roundabout on the wrong road. 16. … realize that you have no clear recollection of the road along which you have just been traveling | Never  Hardly ever  Occasionally  Quite often  Frequently  Nearly all the time |
| LA - LD | EX6a\_Avoid\_dark  EX6b\_Avoid\_Urban  EX6c\_Avoid\_Motorway  EX6d\_Avoid\_bad\_weather | 6 | Please indicate to which extent you agree with the following statements.   1. I try to avoid driving in the dark 2. I try to avoid driving in urban areas 3. I try to avoid using highways / motorways 4. I try to avoid driving in bad weather | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| LE – LL | EX7a\_Explore\_strange  EX7b\_Restless\_at\_home  EX7c\_Frightening\_things  EX7d\_Wild\_parties  EX7e\_Pre\_planned\_trips  EX7f\_Unpredictable\_friends  EX7g\_Bungee\_jump  EX7h\_Exciting\_experiences | 7 | Please indicate to which extent you agree with the following statements.   1. I would like to explore strange places 2. I get restless when I spend too much time at home 3. I like to do frightening things 4. I like wild parties 5. I would like to take off on a trip with no pre-planned routes or timetables 6. I prefer friends who are excitingly unpredictable 7. I would like to try bungee jumping 8. I would love to have new and exciting experiences, even if they are illegal | Strongly disagree  Disagree  Neutral  Agree  Strongly agree |
| LM – LZ | EX8a\_Driving\_too\_slow  EX8b\_Weaving\_traffic  EX8c\_Slower\_than\_reasonable  EX8d\_Slow\_vehicle  EX8e\_Run\_red\_light  EX8f\_Towards\_at\_night  EX8g\_Right\_behind\_lights\_on  EX8h\_Speeds\_up\_pass  EX8i\_Slow\_in\_parking  EX8j\_Pulls\_in\_front  EX8k\_Obscene\_gesture  EX8l\_Someone\_way\_over\_limit  EX8m\_Someone\_yells  EX8n\_Truck\_kicks\_up | 8 | Please indicate how angry you would feel if you came across the following situations while driving.   1. Someone is driving too slowly in the passing lane holding up traffic 2. Someone is weaving in and out of traffic 3. Someone is driving slower than reasonable for the traffic flow 4. A slow vehicle on a mountain road will not pull over and let people by 5. Someone runs a red light or stop sign 6. Someone coming toward you at night does not dim their headlights 7. At night someone is driving right behind you with bright lights on 8. Someone speeds up when you try to pass them 9. Someone is slow in parking and holding up traffic 10. Someone pulls right in front of you when there is no one behind you 11. Someone makes an obscene gesture toward you about your driving 12. Someone is driving way over the speed limit 13. Someone yells at you about your driving 14. A truck kicks up sand or gravel on the vehicle you are driving | Not angry  Slightly angry  Angry  Very angry  Extremely angry |
| MA | EX9\_Rate\_experience\_participating | 9 | How would you rate your experiences participating in this study? Please choose only one of the following | Very favourable  Somewhat favourable  Neither favourable nor   unfavourable  Somewhat unfavourable  Very unfavourable |
| MB | EX10\_Bring\_to\_our\_attention | 10 | Is there anything in particular that you would like to bring to our attention or any suggestion that can help improving the i-DREAMS project or future projects of the same nature? Please write your answer here: | Free text |

## Technology Acceptance Questionnaire (TAQ)

Instructions to participants: Questions in this section ask for your opinion on a scale of 1 to 7. Please read the scales carefully as the numbers remain the same but the labels at either end of the scale may vary. Labels are only given at the extreme of each scale (1 and 7), but please choose the number that best represents your opinion on that scale.

* TAQE – Completed prior to attending trial briefing, after being given a brief written description of the i-DREAMS technology
* TAQMD – Completed during the trial (emailed to participants when remind them app is about to activate; just prior to entering Phase 3 at Week 12)
* TAQEX – Completed after trial during de-installation appointment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Ref Q #** | **Reference Question** | **Response Options** |
| MC | TAQE1\_Useful | 1 | The use of the system when I am driving would be:  1 = Useless, 7 = Useful | 1  2  3  4  5  6  7 |
| MD | TAQE2\_Desire | 2 | The use of the system when I am driving would be:  1 = Desirable, 7 = Undesirable |
| ME | TAQE3\_Effective | 3 | The use of the system when I am driving would be:  1 = Ineffective, 7 = Effective |
| MF | TAQE4\_Sleep\_inducing | 4 | The use of the system when I am driving would be:  1 = Sleep inducing, 7 = Alerting |
| MG | TAQE5\_Pleasant | 5 | The use of the system when I am driving would be:  1 = Unpleasant, 7 = Pleasant |
| MH | TAQE6\_Annoying | 6 | The use of the system when I am driving would be:  1 = Extremely annoying, 7 = Not at all annoying |
| MI | TAQE7\_Improved\_performance | 7 | Using the system would improve my driving performance.  1 = Strongly disagree, 7 = Strongly agree |
| MJ | TAQE8\_Increased\_safety | 8 | Using the system in driving would increase my safety.  1 = Strongly disagree, 7 = Strongly agree |
| MK | TAQE9\_Enhanced\_effectiveness | 9 | Using the system would enhance the effectiveness of my driving.  1 = Strongly disagree, 7 = Strongly agree |
| ML | TAQE10\_Useful | 10 | I would find the system useful in my driving.  1 = Strongly disagree, 7 = Strongly agree |
| MM | TAQE11\_React\_quickly | 11 | Using the system would enable me to react to unsafe driving conditions more quickly.  1 = Strongly disagree, 7 = Strongly agree |
| MN | TAQE12\_Decreased\_accident\_risk | 12 | If I use the system, I will decrease my risk of being involved in an accident.  1 = Strongly disagree, 7 = Strongly agree |
| MO | TAQE13\_Easy\_operate | 13 | Learning to operate the system would be easy for me.  1 = Strongly disagree, 7 = Strongly agree |
| MP - NE | TAQMD1\_Useful  TAQMD2\_Desire  TAQMD3\_Effective  TAQMD4\_Sleep\_inducing  TAQMD5\_Pleasant  TAQMD6\_Annoying  TAQMD7\_Improved\_performance  TAQMD8\_Increased\_safety  TAQMD9\_Enhanced\_effectiveness  TAQMD10\_Useful  TAQMD11\_React\_quickly  TAQMD12\_Decreased\_accident\_risk  TAQMD13\_Easy\_operate  TAQMD14\_Afford\_buy  TAQMD15\_Equipped\_use  TAQMD16\_Expand | - | Repeat questions 1-13 from first TAQ (wording changed to present tense not future tense). Additional questions:   * 14. If the system was available in the market at an affordable price, I would intend to purchase the system. 1 = Strongly disagree, 7 = Strongly agree * 15. If I bought a new car which came equipped with a similar system, I predict that I would use the system when driving. 1 = Strongly disagree, 7 = Strongly agree * 16. Please feel free to expand on any of your opinions/answers here: | 1  2  3  4  5  6  7  Free text for Q16 |
| NF - NU | TAQEX1\_Useful  TAQEX2\_Desire  TAQEX3\_Effective  TAQEX4\_Sleep\_inducing  TAQEX5\_Pleasant  TAQEX6\_Annoying  TAQEX7\_Improved\_performance  TAQEX8\_Increased\_safety  TAQEX9\_Enhanced\_effectiveness  TAQEX10\_Useful  TAQEX11\_React\_quickly  TAQEX12\_Decreased\_accident\_risk  TAQEX13\_Easy\_operate  TAQEX14\_Afford\_buy  TAQEX15\_Equipped\_use  TAQEX16\_Expand | - | Repeat questions 1-13 from first TAQ (wording changed to past tense not future tense). Additional questions:   * 14. If the system was available in the market at an affordable price, I would intend to purchase the system. 1 = Strongly disagree, 7 = Strongly agree * 15. If I bought a new car which came equipped with a similar system, I predict that I would use the system when driving. 1 = Strongly disagree, 7 = Strongly agree * 16. Please feel free to expand on any of your opinions/answers here: | 1  2  3  4  5  6  7  Free text for Q16 |

## Additional

Additional questions asked by Lough for extra analysis.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Excel Column(s)** | **Excel Heading(s)** | **Asked During** | **Question** | **Response Options** |
| NV | SL\_Take\_break | Entry Q | If you were undertaking a long journey, on average how long would you feel happy to drive before you take a break? | [time] HH:MM |
| NW | SL\_Sleepy\_police\_trouble | Entry Q | If you drive when you are sleepy how likely is it this will lead to you being in trouble with the police? Please rate using the 1-5 scale,  1 = Not at all likely, 5 = Very likely | 1  2  3  4  5 |
| NX | SL\_Sleepy\_crash | Entry Q | If you drive when sleepy how likely are you to have a crash? Please rate using the 1-5 scale,  1 = Not at all likely, 5 = Very likely | 1  2  3  4  5 |
| NY | SL\_Shifts | Entry Q | Do you work shifts? | No  Yes, fixed roster day shifts  Yes, fixed roster night shifts  Yes, rotating roster  Other |
| NZ | DQ1\_Enjoy\_driving | Entry Q | How much do you enjoy driving? Please rate using the 1-5 scale,  1 = no enjoyment (driving is a chore)  5 = high enjoyment (driving is fun) | 1  2  3  4  5 |
| OA | DQ2\_Probability\_injured\_crash | Entry Q | How probable do you think it is that you will be injured in a traffic accident while driving? Please rate using the 1-5 scale,  1 = Very unlikely, 5 = Very likely | 1  2  3  4  5 |