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# IN-CITU: Interactions between Cognitive Impairment & Transport in Urban Environments

*A Data Management Plan created using DMPonline*

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**Funder:** Wellcome Trust

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## **Project abstract:**

New social and cognitive scientific approaches are recognising that people and places as indivisible assemblages which manifest cognition. These understandings challenge dementia research's traditional humanism (treating people as exceptional entities) and neuroreductionism (treating brains as cognitive supercomputers). However, these traditional ideas, though undermined by new insights, still permeate current "dementia-friendly" strategies. Dementia-friendly environments are a popular public health response to dementia, adapting infrastructures like public transport to minimise disabilities, but they commonly assume that agentic persons inhabit inactive spaces. Resulting initiatives presume that architectural refinement will maximise individuals' intrinsic cognitive capacities, overlooking the complex distribution of cognition throughout evolving atmospheric spaces. They also often lack user perspectives and sophisticated theoretical grounding. In response, I will combine cutting-edge social and cognitive scholarships to explore cognition-environment relations through a sensory ethnography of Greater Manchester's public transport, a key

target for local government's programme of dementia-friendly initiatives. I will accompany 25 passengers with dementia, documenting the journeys through interviewing, fieldnotes, photography and mapping. Participants will be encouraged to capture photographs and videos for an exhibition across the transport network if they wish to. An exceptionally rich interactive dataset will be generated, comprised of audio-visual media, sensory ethnographic data and maps, and this will be made available to future researchers. The project will challenge outdated assumptions in dementia research and policy, developing proposals for improving each. It aligns with policy priorities and will propose service improvements in collaboration with key stakeholders. It will generate an unprecedented open-access dataset for analysing dementia-friendliness and cognition-environment relations, and pioneer methods for inclusive ecological dementia research.

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## Manchester Data Management Outline

**1. Will this project be reviewed by any of the following bodies (please select all that apply)?**

- Ethics
- Funder

**2. Is The University of Manchester collaborating with other institutions on this project?**

- No - only institution involved

**3. What data will you use in this project (please select all that apply)?**

- Acquire new data

**4. Where will the data be stored and backed-up during the project lifetime?**

- Other storage system (please list below)

Encrypted drive dedicated to the project

**5. If you will be using Research Data Storage, how much storage will you require?**

- Not applicable

**6. Are you going to be receiving data from, or sharing data with an external third party?**

- Yes

Media generated during the project will feature in an exhibition in collaboration with Transport for Greater Manchester.

**7. How long do you intend to keep your data for after the end of your project (in years)?**

- 21+ years

I will not personally keep the data but it will be made available via a data repository. Consent forms will be stored for 5 years after the end of the project before being destroyed.

***Guidance for questions 8 to 13***

Highly restricted information defined in the [Information security classification, ownership and secure information handling SOP](#) is information that requires enhanced security as unauthorised disclosure could cause significant harm to individuals or to the University and its ambitions in respect of its purpose, vision and values. This could be: information that is subject to export controls; valuable intellectual property; security sensitive material or research in key industrial fields at particular risk of being targeted by foreign states. See more [examples of highly restricted information](#).

Personal information, also known as personal data, relates to identifiable living individuals. Personal data is classed as special category personal data if it includes any of the following types of information about an identifiable living individual: racial or ethnic origin; political opinions; religious or similar philosophical beliefs; trade union membership; genetic data; biometric data; health data; sexual life; sexual orientation.

Please note that in line with [data protection law](#) (the UK General Data Protection Regulation and Data Protection Act 2018), personal information should only be stored in an identifiable form for as long as is necessary for the project; it should be pseudonymised (partially de-identified) and/or anonymised (completely de-identified) as soon as practically possible. You must obtain the appropriate [ethical approval](#) in order to use identifiable personal data.

**8. What type of information will you be processing (please select all that apply)?**

- Audio and/or video recordings
- Pseudonymised personal data
- Anonymised personal data
- Personal information, including signed consent forms

Project data will include interview transcripts, audio recordings, photographs, videos and geolocation data.

**9. How do you plan to store, protect and ensure confidentiality of any highly restricted data or personal data (please select all that apply)?**

- Pseudonymise data and apply secure key management procedures
- Store data in encrypted files, folders, computers or devices
- Store data in buildings, rooms or filing cabinets with controlled access

**10. If you are storing personal information (including contact details) will you need to keep it beyond the end of the project?**

- Yes - Other

The University of Manchester requires that consent forms should be kept for 5 years after the end of the project. These forms will be destroyed in August 2029. All other personal information will be destroyed in 2024 when the data is deposited with ReShare.

**11. Will the participants' information (personal and/or sensitive) be shared with or accessed by anyone outside of the University of Manchester?**

- No

The University of Manchester reserves the right to audit any project data.

**12. If you will be sharing personal information outside of the University of Manchester will the individual or organisation you are sharing with be outside the EEA?**

- Not applicable

**13. Are you planning to use the personal information for future purposes such as research?**

- No

**14. Will this project use innovative technologies to collect or process data?**

- No

**15. Who will act as the data custodian for this study, and so be responsible for the information involved?**

James Fletcher

**16. Please provide the date on which this plan was last reviewed (dd/mm/yyyy).**

2021-12-07

## **Data and software outputs**

### **The data and software outputs your research will generate and/or re-use**

The dataset will be made available in its full interactive format as a project bundle via an '.atlproj' file. More familiar file formats containing component content will also be shared, each accessible in isolation. These will include .docx interview transcripts (~2MB) , .png photographs (~2GB), .mp3 audio (~12GB), .mp4 videos (~60GB) and geolocation GPX files (~200MB), all of which are in common public use. Component files will be classified numerically, including longitude-latitude, to indicate their relatedness to maps which will also be uploaded as accessible .png files.

### **The metadata and documentation that will accompany the outputs**

Metadata will be produced using a README file text file listing project file names, descriptors of the data (e.g. data type, length, content), data collection and upload data, file formats, recording method, amendment logs and abbreviations used.

### **When you intend to share your data and software**

Project files will be deposited with ReShare in August 2024, the final month of the project. I will not reserve any exclusive use of the data after this time.

### **Where your data and software will be made available**

### **How your data and software will be accessible to others**

The dataset will be made available in its full interactive format as a project bundle via an '.atproj' file uploaded to the ReShare data repository. Users will need ATLAS.ti to use this file's associated features, somewhat limiting accessibility. To address this, more familiar file formats containing component content will also be shared, each accessible in isolation. These will include .docx interview transcripts, .png photographs, .mp3 audio, .mp4 videos and geolocation GPX files, all of which are in common public use. Component files will be classified numerically, including longitude-latitude, to indicate their relatedness to maps which will also be uploaded as accessible .png files. This disassembled dataset will forfeit some usability of the comprehensive .atproj file, but will ensure accessibility. Adopting both strategies will maximise the dataset's value for future research. The data will be openly licensed and available without managed access procedures. Users will be directed to the data via the ReShare website's search function. The indexing of the data in search engines will be aided with by the extensive accompanying metadata file.

### **Whether limits to data and software sharing are required**

Limits will not be placed on sharing the anonymised data uploaded to ReShare. This will be specified in the participant consent forms.

### **How datasets and software will be preserved**

Data will be made available via the ReShare repository

## **Research materials**

### **What materials your research will produce and how these will be made available**

Select media generated during data collection will feature in a public exhibition in collaboration with Transport for Greater Manchester. Media productions for the exhibition will not be uploaded to ReShare, as the raw data upon which they are based will already be available.

## **Resources required**

**You should consider what resources you may need to deliver your plan and outline where dedicated resources are required.**

The Wellcome Trust grant has costed in the relevant technologies required to deliver this plan.

## **Intellectual property**

### **What IP your research will generate**

All media for public exhibition will be distributed under non-commercial creative commons (CC BY-NC) as per section 14.2 of the University of Manchester's Intellectual Property Policy, available at: <https://documents.manchester.ac.uk/display.aspx?DocID=24420>

### **How IP will be protected**

N/A

### **How IP will be used to achieve health benefits**

N/A