

Mobility21 UTC DMP

As of 2/1/17

The use of the word Faculty in this document shall mean the PI of the project.

Data description

The Mobility21 UTC will require each individual researcher to submit to the Center detailed data descriptions for their individual research projects per this plan as outlined in the guidance.

1. Name the data, data collection project, or data producing program. A template will be provided for the information to be entered to satisfy both repository and Center reporting requirements.
2. Describe the purpose of the research.
3. Describe the data that will be generated in terms of nature and scale (e.g., numerical data, image data, text sequences, video, audio, database, modeling data, source code, etc.).
4. Describe methods for creating the data (e.g., simulated; observed; experimental; software; physical collections; sensors; satellite; enforcement activities; researcher-generated databases, tables, and/or spreadsheets; instrument generated digital data output such as images and video; etc).
5. Discuss the period of time data will be collected and frequency of update.
6. If using existing data, describe the relationship between the data you are collecting and existing data.
7. List potential users of the data.
8. Discuss the potential value of the data have over the long-term for not only your institution, but also for the public.
9. If you request permission not to make data publicly accessible, explain rationale for lack of public access.
10. Indicate the party responsible for managing the data.
11. Describe how you will check for adherence to this data management plan.

Data format and metadata standards

1. For preservation purposes, the Center will require all Faculty whenever possible to submit final datasets that are not proprietary, open in standard and easily re-usable formats such as csv, txt.
2. If faculty are using proprietary data formats, they will be required to discuss their rationale and provide open data source if possible. They will be required to discuss rationale and software to read the data format.
3. Faculty be required to describe the data process log to clarify the final version of data shared to the public.
4. Faculty will be required to describe how they will document the alternative formats they are using and why.
5. Faculty will list what documentation they will be creating in order to make the data understandable by other researchers. Faculty will use standard document template to create a data dictionary in order to make the data understandable by other researchers.
6. Faculty will indicate what metadata schema they are using to describe the data. If the metadata schema is not one standard for their field, and discuss their rationale for using that scheme. The minimum metadata is author, contributors, title, abstract, keywords. For reporting purposes, researchers will also be required to supply. Name the data, data collection project, or data producing program. A template will be provided for the information to be entered to satisfy both repository and Center reporting requirements
7. Faculty will have to describe how the metadata be managed and stored.
8. Faculty will indicate what tools or software is required to read or view the data.
9. Faculty will describe their quality control measures.

Policies for access and sharing

Faculty will be required to address any access restrictions in the project DMP they submit to the Mobility21 Center DMP.

For project DMPs, Faculty will address issues and outline the efforts they will take to provide informed consent statements to participants, the steps they will take to protect privacy and confidentiality prior to archiving their data, and any additional concerns (e.g., embargo periods for your data). If necessary, they will describe any division of responsibilities for stewarding and protecting the data among other project staff.

If faculty will not be able to identify the data in a manner that protects privacy and confidentiality while maintaining the utility of the dataset, faculty will describe the necessary restrictions on access and use.

If an individual research project includes human subject research, faculty will be required to go through Carnegie Mellon IRB or their home institutions IRB, if they have one.

Faculty will be required to address the following in their project DMP when they submit to the Center:

1. Describe what data will be shared, how data files will be shared, and how others will access them.
2. Indicate whether the data contain private or confidential information. If so
 1. Discuss how you will guard against disclosure of identities and/or confidential business information
 2. State the party responsible for protecting the data.
 3. List what processes you will follow to provide informed consent to participants.
3. Describe what, if any, privacy, ethical, or confidentiality concerns are raised due to data sharing.
4. If applicable, describe how you will de-identify your data before sharing. If not:
 - a. Identify what restrictions on access and use you will place on the data.
 - b. Discuss additional steps, if any, you will use to protect privacy and confidentiality.

Policies for re-use, redistribution, derivatives

The faculty will be required to submit a copy of all data created by the project to the Center to be deposited to Zenodo for access and data sharing. For additional details and requirements for the plans see plans for archiving and preservation, below. All Carnegie Mellon University or the home institution of the faculty or staff will hold the IP and copyright for data and other materials created by the project.

Faculty will be required upon deposit of their data to agree with the non-exclusive licensing agreement of Zenodo and the CMU data archive.

Faculty will be required to cite the data source and license under which they used the data of others in their project DMPs. Faculty will be required to release their data in an open license for reuse, redistribution and derivative products which will be based upon the open licenses and provided by Zenodo and the CMU data archive.

Plans for archiving and preservation

1. The Mobility21 UTC will archive all data on Zenodo, <https://zenodo.org/>, which is an approved site of the USDOT.
2. When a project submits a final report, the faculty will have 60 days to archive their data on Zenodo.

3. Faculty will maintain the data until it is uploaded to Zenodo.

Zenodo is an approved data repository by USDOT.

4. Describe how back-up, disaster recovery, off-site data storage, and other redundant storage strategies will be used to ensure the data's security and integrity.

5. Describe how data will be protected from accidental or malicious modification or deletion prior to receipt by the archive.

6. Discuss your chosen data archive's policies and practices for back-up, disaster recovery, off-site data storage, and other redundant storage strategies to ensure the data's security and integrity for the long-term.

7. Indicate how long the chosen archive will retain the data.

8. Indicate if the chosen archive employs, or allows for the recording of, persistent identifiers linked to the data.

9. Discuss how your chosen data repository meets the criteria outlined on the **Guidelines for Evaluating Repositories for Conformance with the DOT Public Access Plan page**.

10. Additional plans for archiving and preserving UTC project data within the CMU data archive will become available once the CMU data archive is operational and approved by DOT.