

Rural Equitable and Accessible Transportation (REAT) Center Data Management Plan

Lead Institution

Florida A&M University

Partner Institutions

Florida State University

Cleveland State University

SUNY Stony Brook University

University of Washington Tacoma

Tallahassee Community College

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The Rural Equitable and Accessible Transportation (REAT) Center is a consortium formed by six institutions to address multimodal transportation challenges through research to improve the quality of life in rural America. REAT Center will conduct research focusing on four thrust areas: access and equity, safety of vulnerable users, resilience, and workforce development. The proposed research activities outlined by the center align with the USDOT research priorities. The goal is to improve the mobility of people and goods with a focus on rural transportation by tackling issues related to transportation equity, multimodal system planning, and rural transportation infrastructure.

The Data Management Plan (DMP) provides a framework for individual research projects awarded through the REAT center. For each proposed research project, a project DMP must be provided with sufficient information on how data will be stored and maintained to ensure long-term accessibility. The Principal Investigators (PIs) must follow the USDOT DMP guidelines outlined under the [USDOT's Creating Data Management Plans for Extramural Research webpage](#). REAT researchers will submit a compliance statement including any deviations from the DMP framework outlined under the [USDOT's Creating Data Management Plans for Extramural Research webpage](#). Researchers may reference this REAT Center plan and the [USDOT Public Access Plan](#) in their proposals and project reports. The subsequent sections provide overall information about the DMP and the REAT Center-specific policies, such as a repository to archive the data.

For any questions regarding how to comply, please contact Emmanuel Kidando via email at e.kidando@csuohio.edu.

1. Expected Data and Data Description

The data collected will vary by project. These data can be in the form of textual, numerical data, image, video, audio, source code, etc., produced either through conducting research projects or educational and outreach activities. Collected data should be well described by data dictionaries, README files, codebooks, etc., as appropriate.

2. Data Format and Metadata Standards

The REAT Center researchers will be required to use the standard file and non-proprietary formats such as .csv, .xml, .xlsx, .txt, .mp4, .mpg, .avi, .dat, JPEG, among others, whenever possible for data storage. If using proprietary data formats, researchers must provide and discuss the rationale, including the tools or software that can be used to read or view the data. The metadata is mainly in the form of column headings, and explanatory text (PDF) will be required to make the data understandable by other researchers. A Machine-Readable (JSON) metadata file should be produced for each primary source data. Researchers will use the preferred USDOT Open Data Metadata Schema, DCAT-US <<<https://resources.data.gov/resources/dcat-us/>>>, to develop the metadata. Researchers may also include a machine-readable metadata file standard for their field or the type of data collected as an additional file.

3. Access to Data

To promote transparency and conform to the USDOT Public Access Plan, the REAT Center plans to make data from its funded research projects publicly accessible. However, certain data types will be restricted due to their sensitive nature. Sharing levels depend on the type of data and software tools (issue of intellectual property). For instance, road user and vehicle data will require the removal of personal identifiers. Therefore, researchers working with human subjects' projects must follow their institutions' Institutional Review Board (IRB) policies and obtain approval before collecting and archiving data, ensuring privacy and confidentiality are protected. Researchers working with Indigenous populations or Tribal Nations should also collect data in alignment with the CARE Principals for Indigenous Data Governance <<<https://www.gida-global.org/care>>>.

If anonymizing data is impossible without compromising the dataset's utility, restrictions on access and use should be clearly stated, with informed consent forms outlining how the data will be shared with the research community and any additional steps to protect privacy and confidentiality.

Other data, such as simulated and model-generated, can be shared without restrictions. On the other hand, data obtained from transportation agencies will require approval to share the data in publicly accessible respiratory. Researchers should try to obtain data with the most open re-use license possible and document data re-use agreements in DMP updates.

4. Policies for Re-Use, Redistribution, Derivatives

The researchers will be required to describe if they are transferring rights to the data archive. The researchers must cite the data source and license under which they used the data in their project DMPs. USDOT strongly recommends [CC-BY](#). If CC-BY is inappropriate for the project, the research must provide a rationale.

The PI of the projects and/or their home institutions will generally hold intellectual property rights. However, data transferred to the archive becomes part of the public domain. Copyrights may apply to data from some projects, such as those using copyrighted instruments or proprietary data sources. Any copyrights applying to the data will be identified.

Projects using proprietary data from commercial or public sources will abide by all conditions and requirements imposed on the use of the data. Materials generated under the project will be disseminated in accordance with the University/Participating institutional and USDOT policies. The USDOT also reserves a royalty-free, non-exclusive, and irrevocable license to reproduce, publish, or otherwise use and to authorize others to use the work for government purposes. Research data that documents, supports, and validates research findings will be made available after the main findings from the final research data set have been accepted for publication.

5. Archiving of Data

The PI should include the project DMP in preparing the proposals. The REAT center will use the [Zenodo](#) repository to archive all the data for each project. Codes and models can be stored in other platforms such as GitHub, GitLab, etc., but should be linked to the project in the Zenodo repository. These repository policies conform to the requirements enumerated by the [USDOT Public Access Plan](#).

In the award stage, PIs receive DMP compliance instructions as part of the award letter, and PIs must acknowledge the award letter and commit to all requirements in the letter by signature. Contents included in the DMP compliance instructions are a) Data descriptions as indicated in the first section; b) Data formats and reasons for necessary proprietary formats, if applicable; c) Contextual documentation, such as data dictionaries defining the variables; README.txt files providing the rationale for the project and explaining methodologies; code books defining how data was processed; d) Quality control measures; and e) If applicable, explanations on why certain data sets cannot be shared.

For the project to be considered complete, the researcher will have 45 days to archive their data on the Zenodo repository when a final report is submitted. The Center Director will send the required information to the [National Transportation Library](#) within two months of the completed project. A data package will include the final report, public datasets, the project DMP, machine-readable metadata files, and other documentation.