Mid-America Transportation Center (MATC) Data Management Plan

Upon receiving the US Department of Transportation's Region VII University Transportation Center (UTC) grant, MATC has developed an overarching Data Management Plan (DMP) in fulfillment of the grant requirement. MATC will require Principal Investigators to identify DMPs for individual research projects in accordance with the values and processes outlined in the following DMP.

1. Data Description

Region VII is experiencing a significant increase in the movement of hazardous goods on the surface transportation network, the danger of which is exacerbated by major stressors that affect safety performance such as aging infrastructure, lack of maintenance, a growing and aging population, and both natural and man-made disasters. The data collected from MATC researchers will come from projects designed to reduce the risk related to hazardous material transport, reduce and/or eliminate crashes, improve emergency response to unexpected events, and increase the safety of all transportation system workers and users. The products and processes that result from this research will be adopted for use and practice in federal, state, and local transportation agencies, peer institutions, and the private sector.

MATC research projects and data collection will span the length of the five-year grant period, beginning January 2017. As part of proposal development process, PIs will explicitly define the Data Management Plan for their project according to MATC's overarching Data Management Plan. Projects will generally follow a one-year time frame. At the end of the funding year, researchers will submit their final data to the MATC Program Coordinator. The nature of the final data collected from researchers will primarily be in numerical form.

2. Standards Used

MATC research data will be stored through the University of Nebraska-Lincoln (UNL) Data Repository. The UNL Data Repository (UNLDR), hosted and facilitated by UNL libraries, supports UNL researchers by providing a secure site to store data for long-term use and dissemination. Successful data sharing will occur through the creation of well-formed metadata. The metadata will consist of a project title, project number, identification of the PI(s) and CoPI(s), abstract of the final report, funding year, funding amount, project start and end dates, research sponsors, performing organization, and project status. The established metadata will contribute to the discoverability and accessibility of the research data.

3. Access Policies

The data that is collected and stored by the UNL Data Repository will be publically accessible and free of charge. The MATC website will have a link to the location of the data on the UNL Data Repository. Data will be open for public use unless otherwise determined by the researchers. Confidential data will be appropriately indicated in the database, and only the research team responsible for the data will be granted access. Individual researchers will be held accountable for protecting the identity and privacy of research participants and conducting their experiments according to specific ethical codes pertaining to their procedures and test subjects. Confidential information relating to organizations and national security may also be restricted from public use.

4. Re-Use, Redistribution, and Derivative Products Policies

MATC staff will be responsible for inputting and managing research data. The intellectual property rights will follow the respective institution's policy on ownership of data at the time of deposit. Subawardees will grant UNL the necessary data rights to meet the obligations of this Data Management Plan. The UNL Data Repository will not overtake any rights with the data. Any copyrighted data is owned by the author with rights granted to the respective institution to meet contractual obligations.

5. Archiving and Preservation Plans

All of the MATC research data described in section 1 will be archived and shared with the UNL Data Repository (https://dataregistry.unl.edu/index.html). This repository provides a direct object identifier (DOI) for the purpose of identifying content and providing a permanent link to the location of the dataset on the internet. The DOI will allow the data to be discoverable through the repository and the Libraries' Encore search interface. The repository also provides data integrity checks, secure and replicated storage with multiple copies of data stored both onsite and at a remote server location, accurate and reliable metadata, and international accessibility. The data preserved on UNL's library servers will be backed up locally at regular intervals. The UNL Data Repository ensures data preservation for a minimum of twenty years.

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