

Demand learning and supply optimization for last-mile transportation in disadvantaged neighborhoods

Data Collection

What data will you collect or create?

This project will use two types of data in the following formats: data collected from publicly available sources, such as Heritage Community Transportation websites and Port Authority websites, and data generated from surveys conducted with HCT.

How will the data be collected or created?

HCT already has annual surveys that can provide high-level information about travel demand. Through this project, we will develop additional surveys with HCT to understand travel demand patterns.

Documentation and Metadata

What documentation and metadata will accompany the data?

The data will be stored in the following formats: comma separated values (.csv) and Microsoft Excel files (.xlsx). The types of metadata that will be included are ISO metadata standards, including ISO 19115:2013 "Geographic Information – Metadata" (industry standard for geospatial metadata for characterizing supply chain spatial information).

Ethics and Legal Compliance

How will you manage any ethical issues?

Surveys will be completely anonymous and collected by HCT. Any data to be shared with the research team shall be sanitized by HCT. If the need arise for the research team to store any sensitive information, dedicated data servers will be included in the project development to host and manage data.

How will you manage copyright and Intellectual Property Rights (IP/IPR) issues?

HCT owns the data and the research team will not use the data for other projects without the written permission of HCT.

Storage and Backup

How will the data be stored and backed up during the research?

The survey data results will be stored and managed by HCT. Sanitized and anonymized version will be shared to the research team in a secure and private way.

How will you manage access and security?

Derivatives of the data from HCT's data sets, including any secondary data and output in the format of manuscripts, and figures, will be managed under this project at Carnegie Mellon University Libraries' KiltHub – a comprehensive institutional repository and research collaboration platform for research data and scholarly outputs produced by members of Carnegie Mellon University and their collaborators. KiltHub collects, preserves, and provides stable, long-term global open access to a wide range of research data and scholarly outputs created by faculty, staff, and student members of Carnegie Mellon University in the course of their research and teaching. Potential collaborators on the research will need to individually gain access to the data files after training and permission.

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

The survey data will be of importance for HCT and shall be managed by their own initiative. The derived data will be managed and share via KiltHub, policy reports, and peer-reviewed academic publications.

What is the long-term preservation plan for the dataset?

KiltHub collects, preserves, and provides stable, long-term storage of the datasets.

Data Sharing

How will you share the data?

Survey data will be protected by HCT. Secondary data derived from raw survey results will be shared via KiltHub and publications.

Are any restrictions on data sharing required?

N/A

Responsibilities and Resources

Who will be responsible for data management?

The Principal Investigator is responsible for the management of data transferred from HCT to the research team.

What resources will you require to deliver your plan?

CMU libraries will provide the necessary digital and data infrastructure to store, manage, and share data in a stable and secure way.

