Urban Microtransit Cross-Sectional Study for Service Portfolio Design Dataset

Dataset available at: https://doi.org/10.5281/zenodo.5517983

(This dataset supports report **Urban Microtransit Cross-Sectional Study for Service Portfolio Design**)

This U.S. Department of Transportation-funded dataset is preserved in the Zenodo Repository (https://zenodo.org/), and is available at https://doi.org/10.5281/zenodo.5517983

The related final report **Urban Microtransit Cross-Sectional Study for Service Portfolio Design**, is available from the National Transportation Library's Digital Repository at https://rosap.ntl.bts.gov/view/dot/60555.

Metadata from the Zenodo Repository record:

Title: Urban microtransit cross-sectional study for service portfolio design

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Description: The uploaded set of codes and datasets are for urban microtransit cross-sectional study for service portfolio design. The research team proposes a novel method to upscale the limited microtransit data available using simulation and a scenario generation process which can be further used for decision-support analysis and microtransit modeling. The method is tested in a case study in collaboration with Via Transportation based on data they shared for Salt Lake City, Austin, Cupertino, Sacramento, Columbus, and Jersey City. The implementation includes simulating microtransit performance data (including both first/last mile access trips and direct trips) using a day-to-day adjustment process for a set of cities (with microtransit data availability) calibrated to match occupancy data. This uses a within-day microtransit simulator (developed for the Federal Transit Administration) that is enhanced to be more parametric in design to be calibrated to different cities, and city wise mode choice model data that is estimated and calibrated to match the Via ridership data. For the service portfolio design, ridership and vehicle miles traveled (VMT) forecast models are estimated using surrogate (upscaled) data on multiple scenarios generated from a scenario generation process. This dataset includes population and built-environment characteristics of the scenarios for which the microtransit performances are obtained using the calibrated day-to-day simulation model. The microtransit portfolio forecast models are developed based on the upscaled data using multiple linear regression with second order polynomial (interacting) features and validated based on observed Via data.

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Keywords: microtransit, portfolio management, scenario generation, simulation

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Dataset description:
This dataset contains 1 file collection described below.

urban-microtransit-cross-sectional-study-for-service-portfolio-design.zip:
This file collection contains 369 files, organized in multiple folders.

National Transportation Library (NTL) Curation Note:
As this dataset is preserved in a repository outside U.S. DOT control, as allowed by the U.S. DOT's Public Access Plan (https://ntl.bts.gov/public-access) Section 7.4.2 Data, the NTL staff has performed ***NO*** additional curation actions on this dataset. NTL staff last accessed this dataset at https://doi.org/10.5281/zenodo.5517983 on 2022-05-18. If, in the future, you have trouble accessing this dataset at the host repository, please email NTLDataCurator@dot.gov describing your problem. NTL staff will do its best to assist you at that time.