Transportation Data Exchange Initiative

A USDOT ITS4US Deployment project

This innovative data infrastructure project, with a broad partnership among state departments of transportation, transportation service providers, industry and community partners, seeks to enable travel innovation by **creating an interoperable, shared data infrastructure to fill in gaps in current transportation data** and ultimately, provide travelers needed information they can trust. Detailed, accurate data about pedestrian networks, travel environments (transit facilities, etc.) and on-demand travel services is crucial for any trip planner, trip concierge, wayfinding, or exploratory mobile application, in particular applications and mobile experiences serving traveler needs. The massive breadth of this project will be achieved through an accelerated timeline on currently planned technology innovations led by the DOT's in each state, WA, OR and MD.

Our team of private and public partners will sustainably build and accelerate the future of innovative mobility and transportation data interoperability by achieving three goals:

(1) Create, improve and extend data formats to describe (a) sidewalks and footpaths in the built environment (pedestrian routing graph) (b) travel paths through transportation stations and hubs (from bus stops to multi-level transit hubs) and (c) demand responsive travel services

(2) Publish and maintain for 5 years the full data infrastructure for six U.S. Counties

(3) Deploy **mobility applications, experiences,** and **planner dashboards** consuming standardized data that demonstrate the versatility and scalability of the data infrastructure, including rural and suburban environments

Innovations

- New OpenSidewalks pedestrian transportation network data describes sidewalk graph in a routable, digital manner in all six counties.
- New GTFS-flex data describes demand-responsive transit service across all six counties.
- New GTFS-pathways data describes transit facilities in a routable, digital manner.
- Planner dashboards and software to improve project impact metrics, to assess and comparatively score walksheds accounting for traveler mobility requirements
- National dissemination of shared, standardized, interoperable data ensuring all riders, planners and application developers have access to data and information services

Approach

Coordinated engagement of agencies and riders through:

- DOTs
- Transit Associations
- Private Industry
- Rider Advocacy Groups

Data standardization achieved through:

- Community-Based Participatory Action
- Transit Association Outreach and Trainings
- Key Technology Product Creation

Benefits

- Improved transit experiences through additional data capacity and personalization.
- Improved data about footpaths, indoor transit paths and on-demand transportation in the participating jurisdictions will improve travel efficiency and economic activity.
- Improved planning processes: the availability of routable pedestrian graphs allows planners to perform a wide variety of analyses that require data-driven decision making to prioritize infrastructure investments, determining where they are most needed to support active transportation and connectivity.

Contact:

For further information, email tdei@cs.washington.edu.

Watch our website: https://tdei.cs.washington.edu

Key Partners:

TCAT The Taskar Center for Accessible Technology

Google

hopelink

Gaussian Solutions

WSDOT

MDOT Department of Transportation

Meta

TRAC

Oregon Department of Transportation

AI for Accessibility Microsoft

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MobilityData

Funding & Timeline:

Concept application accepted 2021.

Phase II funding began in 2023, ending March, 2025.

Phases II and III will last into 2026.