Photo by Dennis Schroeder, NREL 27461

Transportation Secure Data Center
Frequently Asked Questions for Data Owners/Contributors

TSDC

What is the Transportation Secure Data Center (TSDC)?

The Transportation Secure Data Center (www.nrel.gov/tsdc) is a centralized repository and archive for detailed transportation data from travel and transit surveys and studies conducted across the nation. It makes vital transportation data broadly available to users while preserving the privacy of survey participants.

The TSDC features two ways for prospective users to access archived datasets:

- **Cleansed data** – Data cleansed of sensitive information may be downloaded via the public-facing website after users consent to a terms-of-use agreement.
- **Spatial data** – Users with legitimate research needs requiring more detailed/sensitive data may, on a case-by-case basis, be granted access to specific datasets through the TSDC's secure portal environment, where they may conduct their analyses but not export raw data.

Who operates the TSDC?

The Center for Integrated Mobility Sciences at the National Renewable Energy Laboratory (NREL) operates the TSDC with funding from the U.S. Department of Energy (DOE) and the U.S. Department of Transportation (DOT). An advisory committee of academic researchers, public agency staff, and private sector representatives oversees its operations.

When was the TSDC first established?

2010.

What types of data are archived in the TSDC?

In addition to datasets from surveys and studies of household travel and transit passenger travel, the TSDC includes datasets from surveys and studies conducted using NREL's Open Platform for Agile Trip Heuristics (NREL OpenPATH™) app (www.nrel.gov/openpath). The NREL OpenPATH app enables users to track their travel modes (e.g., car, bus, bike, walking) and measure their associated energy use and carbon footprint.

Hundreds of datasets are currently archived in the TSDC, including surveys and studies conducted by state departments of transportation, metropolitan planning organizations, transit agencies, cities, and other public agencies. Some of the surveys and studies include detailed spatial data gathered from GPS devices.

Who uses the TSDC?

Academic researchers account for about 60% of cleansed data users and 75% of secure portal users, with private industry and government agencies accounting for the remainder of users. Among the private industry users are automakers, consultants, nonprofits, and software developers.

Why should my organization archive our data in the TSDC?

Detailed data from travel surveys and studies are extremely valuable for research purposes. However, the fine-grained information they contain could potentially be misused to identify individual travelers, so access to these data should only be granted with safeguards in place to protect participant privacy. The TSDC was created to address this challenge and to relieve public agencies from the burden of archiving their data and responding to data requests.

How does the TSDC safeguard data?

When the TSDC receives a new dataset, staff screen the data to remove any explicitly identifying information that may be inadvertently included such as names and contact details for survey participants. Additionally, as a federal research facility, NREL regularly audits physical and computer/cybersecurity protocols, which subsequently protect the archived data. During its 15 years of operation to date, the TSDC has not experienced any data leaks or privacy concerns. Data are further protected by the TSDC's two-tiered approach to data access:

- **Cleansed data** – Most users simply leverage the cleansed data downloadable from the TSDC website after consenting to a terms-of-use agreement specifying they will not attempt to identify individual survey participants. (This should not be possible anyway due to the TSDC's redaction process.)

- **Spatial data** – In consideration of the small fraction of users with research applications that cannot be supported solely via the downloadable cleansed data, the TSDC also maintains a secure portal for providing controlled access to more detailed (and thus sensitive) data through a protected virtual environment.

  To access such data, prospective users must submit a detailed application describing the analysis they wish to conduct, the specific dataset(s) they wish to access, and why the cleansed data are not sufficient to support their desired analysis. The applicant and their supervisor must also sign a legal agreement pledging not to attempt any misuse if access is granted.

  Each application for secure portal access is reviewed by TSDC staff, the TSDC advisory committee, and anyone designated by the provider of the given dataset(s). Users who are granted access conduct their analyses within the secure virtual portal, which prevents importing or exporting of data and blocks internet access. Analysis outputs can only be exported after they are reviewed by TSDC staff to ensure compliance with the TSDC's privacy standards. Generally, analysis outputs cannot be exported at a resolution finer than the ZIP code level.

Can data owners review applications that request access to their data?

Yes, agencies that contribute data to the TSDC can opt in to review applications requesting secure portal access to their data.

If we agree to archive our data at the TSDC, can we have it removed at any time?

Yes.

Are data stored in the TSDC subject to Freedom of Information Act (FOIA) requests?

Personally identifiable information is exempt from FOIA requests. As a result, data archived by the TSDC and contained in the secure portal are not subject to FOIA requests.

How much does it cost?

Thanks to the direct support received from DOE and DOT to operate the TSDC, there are no costs associated with accessing or contributing data.

What is the process for archiving our data in the TSDC?

The archival process begins with the data owner entering into a nonbinding memorandum of understanding with NREL, which establishes the intent to share data in the TSDC. Next, NREL will reach out to the data owner to provide them with instructions for sharing the data with NREL along with any supporting documentation such as data dictionaries and summary reports. To get started, please contact the TSDC at **tsdc@nrel.gov**.

Photo by Dennis Schroeder, NREL 49113

Where can I find out more about the TSDC?

Visit the About webpage on the TSDC website (**www.nrel.gov/tsdc**) for background information about the TSDC and links to other data resources.