

Connecticut Integrated Transit Mobility Project (CT-ITMP)

Project Contact Information

Please provide as much of the the following information as possible:

1. Name of the project;
2. Grant number;
3. Name of the person submitting this DMP;
4. ORCID of the person submitting this DMP (need an ORCID? Register here: <https://orcid.org/>);
5. Email and phone number of the person submitting this DMP;
6. Name of the organization for which the person submitting this DMP is working;
7. Email and phone number for the organization;
8. Link to organization or project website, if applicable; and,
9. Date the DMP was written.

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2) SMARTFY22N1P1G17

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8) <https://portal.ct.gov/dot>

9) December 15, 2023

Data Description

Please provide as much information as possible:

1. Provide a description of the data that you will be gathering in the course of your project or data from a third party that you will re-use, if any;
 1. If there will be no data collected or re-used from another source, state that this is case;
 1. If you answered "No data" above, then you are finished and may skip the most of the steps and sections below, after you:
 1. Save your DMP as it exists;
 2. Submit it to your Grant Manager or the NTL staff for review.
 2. Address the expected nature, scope, and scale of the data that will be collected, as best as you can at this stage;
 3. As best as you can, describe the characteristics of the data, their relationship to other data, and provide sufficient detail so that reviewers will understand any disclosure risks that may apply;
 1. If data might be sensitive, please describe how you will protect privacy and security, if you know that now;
 2. You may need to update your DMP later to add more detail;
 4. Discuss the expected value of the data over the long-term.

1)

Data was collected on the following topics throughout the project and contactless fare payment pilot and in conjunction with the technology vendors and service providers including, but not limited to:

Transaction Data

Card Scheme/Type Data

Form Factor Data

Route ID and Name Data

Fare Capping Data

Settlement Data

Customer Survey Summary Data

2)

Data was primarily collected through administrative reporting systems from fare technology vendors established during the contactless fare payment pilot.

3)

The data will relate to existing transit system operational data and would be anticipated in a typical evaluation of a transit system. Additional data points may be collected where available regarding fare revenue from specific payment sources, but there were not privacy concerns with this data as payment card data in the reporting systems was truncated and all vendors maintained PCI-DSS compliance. Some data collected for this project such as ridership data may relate to other transportation statistics not collected as part of this project, but tracked by other units within CTDOT such as vehicular volumes (AADT). Ridership increases along a specific route may have a direct correlation to daily vehicular volumes along the route, or within a general area as mode-shift occurs.

4)

Some of the data used for planning constraints for this project may be considered as long-term value data sets. Any data that may be useful for future efforts, projects or research will be indexed and stored with the project in the CTDOT project database after the project is completed. For example, Origin-Destination based data collected through the open payments pilot, or through a trip planning/unified mobility application, can be substantial for future service planning or network redesign efforts. Additionally, metrics on transit operations provide a detailed snapshot in time of the operations of a particular system/route and if collected from an automated system can be regularly tracked to assess the overall impact of the transit system.

Data Format and Metadata Standards Employed

Please provide as much information as you can:

- 1. Describe the anticipated file formats of your data and related files;**
- 2. To the maximum extent practicable, your DMP should address how you will use platform-independent and non-proprietary formats to ensure maximum utility of the data in the future;**
 - 1. If you are unable to use platform-independent and non-proprietary formats, you should specify the standards and formats that will be used and the rationale for using those standards and formats.**
- 3. Identify the metadata standards you will use to describe the data.**

1. At least one metadata file should be a DCAT-US v1.1

(<https://resources.data.gov/resources/dcat-us/>) .JSON file, the federal standard for data search and discovery.

1)

The file formats for the project were .pdf, .csv, and .xlsx files.

2)

The project focused on production and usage of data within .csv and geodatabase formats to support non-proprietary and platform-independent practices.

3)

Where a geodatabase is provided, metadata indicating the source, latest update, definitions, descriptions of attributes, and other information pertinent to the description and indexing of the data will be requested. Where tabular data is provided, the team will ensure that information indicating the source, latest update and description of the data is recorded within the data spreadsheet.

Access Policies

In general, data from DOT-funded projects must be made publicly accessible. Exceptions to this policy are: data that contain personally identifiable information (PII) that cannot be anonymized; confidential business information; or classified information. Protecting research participants and guarding against the disclosure of identities and/or confidential business information is an essential norm in scientific research. Your DMP should address these issues and outline the efforts you will take to provide informed consent statements to participants, the steps you will take to protect privacy and confidentiality prior to archiving your data, and any additional concerns. In general, in matters of human subject research, your DMP should describe how your informed consent forms will permit sharing with the research community and whether additional steps, such as an Institutional Review Board (IRB), may be used to protect privacy and confidentiality. Additionally, when working with, or conducting research that includes Indigenous populations or Tribal communities, researcher will adhere to the CARE Principles for Indigenous Data Governance <https://www.gida-global.org/care> and make an explicit statement to that effect in this portion of the DMP.

Please provide as much information as possible:

- 1. Describe any sensitive data that may be collected or used;**
- 2. Describe how you will protect PII or other sensitive data, including IRB review, application of CARE Principles guidelines, or other ethical norms and practices;**
 - 1. If you will not be able to deidentify the data in a manner that protects privacy and confidentiality while maintaining the utility of the dataset, you should describe the necessary restrictions on access and use;**
- 3. Describe any access restrictions that may apply to your data;**
- 4. If necessary, describe any division of responsibilities for stewarding and protecting the data among Principal Investigators or other project staff.**

1)

No sensitive data was collected as part of this project.

2)

Where data is not publicly available, CTDOT will retain ownership of the data collected for the study. It is not anticipated that any proprietary or PII data will be collected or needed for the project. Where data is not classified

or confidential, it will be available as public record pursuant to Connecticut state legislation. Data collection and storage will be done using methods followed by CTDOT which adhere to both state and federal rules and regulations. Where it is anticipated that data be collected directly from members of the public via online surveys, each survey will be provided in adherence to Title VI and ADA requirements. Any data collected for the use in this project will be done so in a way that protects the privacy of users. At no point during the study will a user be requested to provide personal identification information for data collection efforts. General demographics information may be collected, but will not be required to participate in community outreach efforts, focus groups, or user surveys.

3)

No data stored for this project will require secure access. However, data will be accessed by known parties who have access through the CTDOT administrative directory, or have been identified as trusted users to analyze the data after shared through an encrypted file sharing platform.

4)

CTDOT and the project team will be responsible for the management of the data, this including managing requests data or information relating to any data collected or analyzed for this project. The project consultant will assist CTDOT in reviewing data for quality, completeness and accuracy. Stakeholders and technology vendors may be responsible for providing data to CTDOT.

Re-use, Redistribution, and Derivatives Products Policies

Recipients are reminded:

- 1. Data, as a collection of facts, cannot be copyrighted under US copyright law;**
- 2. Projects carried out under a US DOT SMART Grants is federally funded; therefore, as stated in grant language:**
 - 1. Recipients must comply with the US DOT Public Access Plan, meaning, among other requirements, project data must be shared with the public, either by the researchers or by US DOT;**
 - 2. That by accepting US DOT funding through this grant, recipients have granted to US DOT a comprehensive non-exclusive, paid-up, royalty-free copyright license for all project outputs (publications, datasets, software, code, etc.). This includes all rights under copyright, including, but not limited to the rights to copy, distribute, prepare derivative works, and the right to display and/or perform a work in public; and,**
 - 3. In accordance with Chapter 18 of Title 35 of the United States Code, also known as the Bayh-Dole Act, where grant recipients elect to retain title to any invention developed under this grant, US DOT retains a statutory nonexclusive, nontransferrable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any such invention throughout the world.**

Please provide as much information as possible:

- 1. Describe who will hold the intellectual property rights for the data created or used during the project;**
- 2. Describe whether you will transfer those rights to a data archive, if appropriate;**
- 3. Identify whether any licenses apply to the data;**
 - 1. If you will be enforcing terms of use or a requirement for data citation through a license, indicate as much in your DMP;**
- 4. Describe any other legal requirements that might need to be addressed.**

1) Any data created during the project will be considered public property per Connecticut State Legislation. Where data is owned by a vendor, such permissions will be conveyed and the data will not be retained by the project and analysis and summaries will be requested by the project team.

2)

N/A - Public data sets

3)

No data collected will be under a license for this project.

4)

Data collected from members of the public shall be done so under the requirements of federal ADA and Title VI rules.

By receiving USDOT funding, this project has granted the USDOT a comprehensive non-exclusive, paid-up, royalty-free copyright license for all project outputs, including but not limited to publications, datasets, software, code, and other derivative products. This includes all rights under copyright, including but not limited to the rights to copy, distribute, prepare derivative works, and the right to display and/or perform a work in public. In accordance with Chapter 18 of Title 35 of the United States Code, also known as the Bayh-Dole Act, if this project elects to retain title to any invention developed under this grant, USDOT retains a statutory nonexclusive, nontransferrable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any such invention throughout the world. In compliance with the USDOT Public Access Plan, this project will transfer data rights to a public data repository, ensuring the data and project outputs are accessible to the public and other stakeholders.

Archiving and Preservation Plan

Please provide as much information as possible:

- 1. State where you intend to archive your data and why you have chosen that particular option;**
- 2. Provide a link to the repository;**
- 3. You must describe the dataset that is being archived with a minimum amount of metadata that ensures its discoverability;**
 - 1. Whatever archive option you choose, that archive should support the capture and provision of the US Federal Government DCAT-US Metadata Schema**
<https://resources.data.gov/resources/dcat-us/>
- 4. In addition, the archive you choose should support the creation and maintenance of persistent identifiers (e.g., DOIs, handles, etc.) and must provide for maintenance of those identifiers throughout the preservation lifecycle of the data;**
- 5. Your plan should address how your archiving and preservation choices meet these requirements.**

1)

We will deposit the final dataset into the National Transportation Library's Rosa P, which provides persistent identifiers to their published data and supports the capture and provision of the DCAT-US Metadata Schema.

2)

<https://rosap.ntl.bts.gov/>

3)

Where possible, metadata will be stored in the repository for the datasets. Metadata stored with datasets, where necessary or possible, will include necessary data to meet requirements per the US Federal Government DCAT-US Metadata Schema.

The dataset included is in .pdf, .csv, and .xlsx file formats. The type of files will include a report on the CTDOT's Tap & Ride pilot evaluation, data from the fare calculation software and fare validator vendors, and a summary

report on public engagement including survey questions.

4)

The project adopted a standard DOI to assist in the retention, storage, and identification of data sets which indicate version history of the dataset.

5)

All archiving and preservation choices meet the requirements and guidance outlined in https://transportation.libguides.com/SMART_DMP_Guidance/Finalizing_Your_Project#s-lg-box-wrapper-40184686

Rosa P is the preferred repository by the USDOT Data Services Team.

Planned Research Outputs

Dataset - "Connecticut Integrated Transit Mobility Project Stage 1"

CTDOT created this dataset which includes a report on the CTDOT's Tap & Ride pilot evaluation, data from the fare calculation software and fare validator vendors, and a summary report on public engagement.

Planned research output details

Title	Type	Anticipated release date	Initial access level	Intended repository(ies)	Anticipated file size	License	Metadata standard(s)	May contain sensitive data?	May contain PII?
Connecticut Integrated Transit Mobility Project St ...	Dataset	2025-07-10	Open	ROSA P		Creative Commons Attribution 4.0 International	DCAT-US	No	No