

Data Management Plan

Name of Contractor	Small Urban and Rural Livability Center Western Transportation Institute (WTI) Montana State University PO Box 174250 Bozeman, MT 59717-4250, USA
Name of project	Last Mile Commercial Package Delivery as a Revenue Generation Tool for Rural Public Transportation Systems in Wyoming
Project Duration	Start date: 10/28/16 End: 10/31/17
DMP Version	
Date Amended, if any	
Name of all authors, and ORCID number for each author	Karalyn Clouser, Research Associate & Jaydeep Chaudhari, AICP, Research Scientist
WYDOT Project Number	WY 18/02F
Name of all peer reviewed publications which have been generated using data from this project	None
Any Digital Object Identifier (DOI), including any CROSSREF number, which has been assigned to any peer reviewed publication or data generated by this project	None
URLs for all peer reviewed publications which have been generated using data from this project	None
RiP RH Display ID Number	
Dataset URL, if available	

1. Introduction

The purpose of this project is to assess the feasibility of last mile package delivery as a revenue generation tool for rural public transportation systems in Wyoming.

2. Definitions

- a. Code or scripts include code used in the collection, manipulation, processing, analysis or visualization of data, but may also include software developed for other purposes.
- b. Copyright is a set of legal rights extended to copyright owners that govern such activities as reproducing, distributing, adapting, or exhibiting original works fixed in tangible forms.
- c. Data means the recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, communications with colleagues. Recorded material excludes physical objects (e.g. laboratory samples). Research data also does not include trade secrets, commercial information, materials necessary to be held confidential; and personnel and medical information and similar information the disclosure of which would constitute a clearly unwarranted invasion of personal privacy.
- d. Data Archive is a site where machine-readable materials are stored, preserved or possibly redistributed to individuals interested in the materials.
- e. Data Management Plan is a document that specifies your plans for managing your data and files for a research project.
- f. Dataset means collection of data.
- g. Metadata refers to structured data about data that helps define administrative, technical, or structural characteristics of the digital content.

3. Data Types and Storage

This project required various datasets including surveys, freight data, package delivery economics, monthly and annual retail trade data, geographical system maps, census information, and air travel information from sources such as the Bureau of Transportation Statistics, National Transportation Statistics Data, United States Census Bureau, and commercial entities such as Federal Express (FedEx), Amazon, United States Postal Service (USPS), and United Parcel Service (UPS). These datasets were mostly in excel spreadsheets and text files.

For this project, three surveys were conducted (Tasks 2, 3, & 4). The sample size of each survey was around 50 or less and the online survey tool, Survey Monkey, was used extensively. Prior to conducting the surveys, the research team of the Western Transportation Institute obtained approval from the Institutional Research Board at Montana State University—Bozeman. The survey results were

downloaded and analyzed in the excel spreadsheet format.

Moreover, figures for this report were created in ArcGIS and Microsoft PowerPoint and reported as JPEG files in the report. For Figure 1, a Google Map is used as a base map. The Authors have reported Google as the source.

All the collected datasets are reported in the final report in text files format.

4. Data Organization, Documentation and Metadata

Text files and spreadsheets are categorized as “small” databases. To assure quality control and reproducibility the research team ensured that the small-scale databases remain simple to understand, simple to use, and simple to update, edit, change, or append. These datasets are included in the project report.

5. Data and/or Database Access and Intellectual Property

To protect privacy, security, and confidentiality, the datasets do not include any private information. Through the cover letters of the surveys (located in the appendices of the final report), the research assured the privacy of those surveyed. Moreover, this research project’s data are open to the public and can be accessed online via the WTI, MSU, and WYDOT websites. There are not restrictions in using the research data.

6. Data Sharing and Reuse

Access to databases will be available for educational, research, and non-profit purposes upon publication of the project report by WYDOT. Such access will be provided using web-based applications, as appropriate. All data are reported in the final report.

7. Data Preservation and Archiving

The data will be preserved and archived through MSU ScholarWorkss. MSU ScholarWorks’ secure storage servers are backed up locally and off-site. ScholarWorks runs checksums on data every night, and reports are sent to repository administrators for verification. Original files will be preserved for the long-term, and the MSU Library may migrate files to updated formats as needed to maintain the content in a useable and understandable format into the future.

In addition to the above MSU ScholarWork’, WTI will retain all files and datasets for the five years after the completion of the project.

Metadata Schema

Title¹	Last Mile Commercial Package Delivery as a Revenue Generation Tool for Rural Public Transportation Systems in Wyoming
Creator/contact point	<p>Creators: Karalyn Clouser, Research Associate & Jaydeep Chaudhari, AICP, Research Scientist</p> <p>Contact Information:</p> <p>David Kack, Director Small Urban and Rural Livability Center Western Transportation Institute Montana State University PO Box 174250 Bozeman, MT 59717 406-994-7526 (Office) dkack@montana.edu www.surtcom.org</p>
Publication Date(s)	October 31,2017
Description/Abstract	<p>Last mile delivery has emerged as the most important segment in supply chain management of the package deliveries. It is a daunting task to achieve for the manufacturers to sellers at local, regional, state, national, and global level. Many e-commerce giants are creating its own delivery service in order to reduce shipping costs and improve shipping services to customers. It is likely that Amazon and other delivery companies may turn to the urban and rural transit industry to partner in last mile package delivery. Given the growth in the delivery market, it appears to be the right time to investigate how rural transit may have a role in the last mile package delivery system. The goal of this project is to assess the feasibility of last mile package delivery as a revenue generation tool for rural public transportation systems in Wyoming. In an effort to assess the feasibility, the research team conducted an in-depth literature review and surveyed local Wyoming businesses, state department of transportation officials, and transit managers. The survey results, literature review, and demand and potential revenue suggest that the transit agencies have a needed capacity to add a package delivery service, a market for the service, and a facility to house the service. Looking at the number of households in Wyoming, the researchers estimate that on average, each county could see \$215,373 in potential revenue from package delivery via public transportation systems. The following are specific recommendations that, if implemented, would help to initiate package deliveries in rural areas:</p> <ol style="list-style-type: none"> 1) Build a relationship with riders, businesses, and stakeholders; 2) Access potential markets; 3) Develop a level of package delivery services; 4) Develop integration of passenger and package delivery services; 5) Collaborate with Intercity Bus Services and other package delivery companies; and 6) Begin building a package delivery infrastructure.

¹ To include alternate title; conference title; and journal title, if they are different.

	A strong and continuing support of WYDOT to transit services to add last mile package delivery will benefit transit agencies, their parent organizations, local communities, businesses, organizations, and e-commerce and shipping industries.
Subject and Keywords	Rural Transit, Last Mile Package Delivery, Revenue Generation Tool, and Wyoming
Identifier² and/or source	None (Subjected to change)
Collection and Related Documents	All the sources are being cited in the report's reference section.
Edition	First Edition Last date of data change: October 27, 2017
Related Documents	None
Coverage	Wyoming
Language	English
Publisher/Distributor	FHWA and Wyoming Department of Transportation .
Funding agency	FHWA and Wyoming Department of Transportation
Access Restrictions	Data asset is or could be made publicly available to all without restrictions
Intellectual Property and Other Rights	There are no restrictions in publishing contents of the research report.
License	None
Code and software needs	There is no need to have specific software need to run the database or data.
Format	The machine-readable file format: txt. File and PDF.
Choice of Repository	The data will be preserved and archived through MSU ScholarWorks. MSU ScholarWorks' secure storage servers are backed up locally and off-site. ScholarWorks runs checksums on data every night, and reports are sent to repository administrators for verification. Original files will be preserved for the long-term, and the MSU Library may migrate files to updated formats as needed to maintain the content in a useable and understandable format into the future. In addition to the above MSU ScholarWork', WTI will retain all files and datasets for the five years after the completion of the project.