

2019 UDOT RESEARCH PROBLEM STATEMENT

*** Problem statement deadline is Feb. 6, 2019. Submit statements to UTRAC@utah.gov. ***

Title: A synthesis of passive third-party datasets used for transportation planning **No. (Office Use):** 19.06.02

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Select **ONE** Subject Area Materials/Pavements Maintenance Traffic Mgmt/Safety Structures/Geotech
 Planning Perf Mgmt/Data Analytics Public Transportation Other

1. Describe the problem to be addressed:

In the last decade, a number of firms have developed business models centered around aggregating and reselling passively collected data. The data is passive in that it exists as a result of some other process, such as cellular phones connecting to towers, vehicles navigating via GPS, or financial firms monitoring the credit of potential borrowers. Given the proliferation of firms selling passive data, the variety of data on offer, and the relatively opaque data management and consolidation practices of some third-party providers, it is important for UDOT to understand the current state of the market.

The purpose of this project is to review the passive third-party data products available to UDOT and other departments of transportation. This will entail a literature review building off a current TCRP synthesis study (1), as well as interviews with other departments of transportation and related agencies who have used these data products in the past. The resulting report will categorize and catalog available data types and providers. At this point, the anticipated data types include:

- Aggregated origin-destination matrices
- Points of interest (POI) / firm listings data
- Household listings data
- Aggregated speed data
- Microscopic position data

The report will also provide information on the accuracy, usefulness, and comprehensiveness of the data products learned from the interviews.

References

1. Foursquare Integrated Transportation Planning, and Transport Foundry (2018). *Public Transit Rider Origin-Destination Survey Methods and Technologies*. Pre-publication draft of TCRP Synthesis J-07/Topic SH-18, Transportation Research Board, Washington, D.C.

2. Write the project objective (25 words or less):

Understand, categorize, and summarize the third-party transportation data products available for purchase by UDOT for transportation planning and analysis.

3. Explain why this research is important:

(In response, consider addressing specific UDOT goals, applicability in Utah or other states, etc.)

Data available from third parties are used to track system performance and to plan for future investment. Remaining abreast of potential opportunities is an important consideration for UDOT as it seeks to optimize mobility on its system.

4. List the major tasks:

1. Kickoff meeting to develop a project scope of work and detailed cost estimate
2. Conduct a literature review
3. Interview key experts and stakeholders
4. Write synthesis report

5. List the expected deliverables (reports, manual, specification, design method, training, etc.):

1. A preliminary literature review to guide the identification of interviews
2. Completed report including data catalog

6. Describe how the research results will be implemented:

(In response, consider addressing UDOT leader support, process or standard improvement, etc.)

The report will inform future UDOT data acquisitions and provide insight into how previously acquired data might be useful in additional ways.

**7. Requested from UDOT: \$25,000
(or UTA for Public Transportation)**

Other/Matching Funds: \$

Total Cost: \$25,000

8. Outline the proposed schedule, including start and major event dates:

The project will begin in summer 2019 with a scope and detailed cost estimate. A literature review will begin thereafter, leading into agency and stakeholder interviews in the fall. The final report will be complete in the winter of 2020.