Data Sharing in Transit/Shared Mobility Partnerships

Welcome!
We will begin shortly...
Mobility Data Sharing: Issues, Challenges, and Opportunities for Partnerships

David Schneider
Data Scientist
FTA Research Mission & Priorities

To advance public transportation innovation by leading research, development, demonstration, deployment, evaluation, and implementation practices and technologies that enhance effectiveness, increase efficiency, expand quality, promote safety, and ultimately improve the transit rider’s experience.

Consistent focus for almost ten years... and based on industry feedback.
Defining Mobility Data

• “Mobility data” = information about travel that is collected using digitally enabled mobility devices or services.
• May include information about trips (i.e., origins, destinations, trip length, trip route, start and end times, etc)
• May include information about the vehicles used (vehicle location, avg speed, direction, sudden breaking, emissions etc).
• Data typically recorded as series of lat/lon coordinates and collected at regular intervals by smart phones, on-board computers, or app-based navigation system.
• For the purposes of this webinar, we won’t be including in our definition of mobility data:
  – Data collected through traveler surveys
  – Data traditionally reported to the National Transit Database (i.e. unlinked passenger trips, vehicle revenue miles)
Data Sharing: Competing Priorities

• Mobility occurs in the public right of way. Cities and other public entities need travel information in order to improve operations and plan for the future.

• Funding agencies have an interest in mobility data to better understand results of their investment.

• Individual travelers expect that their privacy will be protected.

• Mobility providers have financial interests in protecting proprietary information.
  – Concerns that data shared with public agencies is subject to FOIA

• How to balance these competing priorities?
Mobility Data Sharing Challenges

Additional challenges include:

• Cost of collecting and storing
• Lack of common standards
• High levels of expertise needed for analysis and visualization
Mobility Data Sharing Strategies

• Encourage standardized data specifications. Examples include:
  – The General Transit Feed Specification
  – The General Bikeshare Feed Specification
  – The Mobility Data Specification
• Develop data sharing legal agreements.
• Take advantage of big data repositories managed by third parties.
• Leverage existing transportation planning tools and platforms.
FTA Supported Resources: Secure Data Commons

Secure Data Commons

USDOT Secure Data Commons
A Collaborative Transportation Research and Analytics Platform

Capabilities
Find out what the USDOT Secure Data Commons platform can do and how you can use it to conduct research and analysis.

Datasets
Check out the list of datasets available on the USDOT Secure Data Commons platform and learn how you can access them.

Access
Learn more about the USDOT Secure Data Commons and find out whether your project team can access it.
FTA-Supported Resources: Data Management Planning

• Supports U.S. DOT Public Data Access Policy
• FTA Requested preliminary data management plans of applicants for Innovative Mobility Integration funds.
• Preliminary plans help agencies begin to think about data collection, access, privacy, storage.
• Plans are updated over time.
• [https://ntl.bts.gov/public-access](https://ntl.bts.gov/public-access)
FTA-Supported Resources TCRP reports and related research

Partnerships Between Transit Agencies and Transportation Network Companies (TNCs) (2019)

DETAILS
0 pages | 8.5 x 11 | PAPERBACK

CONTRIBUTORS
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SUGGESTED CITATION

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- Access to free PDF downloads of thousands of scientific reports
LA Metro’s Partnership with Via

- Contract with Via for on-demand, shared, first and last mile rides to select transit stations
- Established 6 goals and related KPIs for measuring success
- Underlying policy goal to share both risk and rewards with a TNC and eventually move towards performance-based model
- All requires data!
Sharing Data

- **Approach**: Identified data variables around goals & KPIs
- **Protections**: NDAs, contract, scope of work, PII, trade secret designations
- **Tools**: Dashboard, warehouse, table of variables and definitions
Considerations

- Ownership versus license
- Public records requests
- Granting access to data warehouse
Abby Chazanow

SOUND TRANSIT
Project Overview

• First and last mile shared ride service connecting with transit

• 12-month pilot

• Project impetus: FTA Mobility on Demand Sandbox Grant

• Project partners: King County Metro, Sound Transit, City of Seattle, Via
How does it work?

• **Get picked up** within 10-15 minutes
• **Walk** up to 5 minutes
• **Take a shared ride**
• **One end of trip must be Link light rail station**
• **Payment options** include ORCA cards, Transit GO mobile ticket, credit/debit cards
• **Integrated fares**, free transfer to buses and light rail
Pilot Goals

• Improve mobility by **expanding access to transit.**

• Test how to develop a **partnership with a private sector mobility company**, integrating TNC services with existing transit services.

• **Broaden TNC access** to a wider audience, including populations without smartphones, those who need wheelchair accessible vehicles, unbanked populations, and populations with limited English proficiency.

• **Inform best-practices** and FTA guidance for public-private partnerships.
Evaluation

Sources
• Trip reports
• User surveys
• Focus groups
• Customer comments

What We’ll Look At
• Effective and efficient service
• Change in travel behavior / complementing fixed-route transit
• Who is benefiting (and who is not)
Jean Paul Velez

KING COUNTY METRO
Via Dashboard for KCM

### Rides
- **53,157** completed rides
- **7.48** minutes per ride
- **1.57** miles per ride

### Drivers
- **4.23** utilization
- **60** active drivers
- **12,581** driver hours

### Quality of Service
- **8.29** minute avg. wait time
- **94%** pick-up on-time
- **77%** requested rides completed

### Graphs
- **Completed Rides**
- **Requests not Booked**

**Graph Details:**
- **Start date:** 6/12/2019
- **End date:** 10/13/2019

**Graph Notes:**
- **Wait Only?**
  - **False**
KCM Via Dashboard
KCM First/Last Mile Dashboard
Accessibility and ridership
Accessibility and ridership (2)
Alfredo Torales

CITY OF SANTA MONICA’S
BIG BLUE BUS
Promising Practices in Data Sharing in Transit/Shared Mobility Partnerships: Mobility On Demand Every Day (MODE)

Santa Monica's Big Blue Bus
October 16, 2019
July 2018: Dial-A-Ride becomes Mobility on Demand Every Day (MODE)

- Contract with Lyft to provide On Demand Transportation
- City of Santa Monica Residents
- 65 years and older, or 18 years or older with a disability
- Weekdays 8am to 6pm, Limited Weekend Hours
- Trips within City Limits and 4 Medical Centers in Los Angeles
MODE: Better, Accessible Service to Riders

- Provides nearly every ride requested
- Twice as many rides, same budget
- City-owned vehicles for members in wheelchairs
- New ways to request rides and pay
- No need for advanced reservation
- Sustainable service - costs less to run
Data Requirements

Data Goal:
• Given known challenges with TNC data sharing, obtain enough data to manage service and meet federal requirements, and city requirements for invoicing

Original Data Agreement:
• Anonymized customer identification numbers
• Origin and destination data at the census tract level
• Day and time, duration, trip distance
Need for Update to Data Agreement

This year, BBB and Lyft updated its data agreement for two primary reasons:

1. To obtain data needed to inform proposed policy changes:
   • September 2019 – Fare and Program Changes
   • Two-Tier Fare System: Regular and Low-Income

2. Better auditing and enforcement of the MODE program
New Data Sharing

- Anonymized customer identification numbers – Now receive a key to identify member trip activity (de-anonymize data)
- Origin and destination data at the census tract level - Same
- Day and time, duration, trip distance - Same

Continued Challenges

- NTD reporting
- Customer complaint investigations
Thank you.

Alfredo Torales
Santa Monica's Big Blue Bus
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National Transit Database

Murtaza Naqvi
Office of Budget and Policy
October 2019
Types of Service

**Directly Operated (DO)**
- Vehicles operated by reporter’s employees

**Purchased Transportation (PT)**
- Vehicles operated by the seller’s employees
- Service branded as the buyer’s
- Buyer provides all funding (public or private)
## New Types of Service

<table>
<thead>
<tr>
<th>Proposed Change</th>
<th>Justification</th>
<th>Reporting Burden Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add a new type of service for transit provided by TNCs</td>
<td>Allows FTA and stakeholders to track the use of TNC providers</td>
<td>Moderate - Reporters will need to separate TNC service from other Demand Response service</td>
</tr>
</tbody>
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<td>Add a new type of service for transit provided by taxi services</td>
<td>Aligns current Demand Response Taxi mode with the new structure for reporting service provided by TNC providers</td>
<td>No impact</td>
</tr>
</tbody>
</table>
In order to report service to the NTD for inclusion in the FTA formula grant programs, the service must meet the statutory definition of public transportation found in 49 U.S.C. § 5302. TNC’s must provide demand responsive service that is:

• Regular and Continuing
  • Not intermittent or tied only to special events
  • Advertised in a manner that allows the public to clearly understand its hours of operation and terms of service

• Shared Ride
  • There must be an attempt to share all rides. Typically, this is accomplished by coordinating all requests through a dispatch service
  • Voucher service that reimburses an individual for a solo TNC ride is NOT eligible.

• Open to the general public (or a segment defined by age, disability or low income)
  • Neither the driver nor first passenger can deny the second passenger’s ride
  • All rides assigned by the dispatcher must be honored
  • Advertised on the agency’s website
### New Types of Service

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<td>Directly Operated (DO)</td>
<td>Service provided directly by the public transportation agency using their own drivers and equipment.</td>
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<tr>
<td>Purchased Transportation (PT)</td>
<td>Service provided from a public or private transportation provider based on a written contract. The provider is obligated in advance to operate service for a specific monetary consideration, using its own employees to operate revenue vehicles.</td>
</tr>
<tr>
<td>Taxi (TX)</td>
<td>Service provided by a private taxi company on behalf of a public transportation agency. Services are directly dispatched by the agency and provided using the taxi company’s drivers and vehicles.</td>
</tr>
<tr>
<td>Transit Network Company (TN)</td>
<td>Service provided by TNC on behalf of a public transportation agency. Services are dispatched by the transportation network company and provided using company or private drivers and company or privately-owned vehicles.</td>
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Questions and Comments

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QUESTIONS AND ANSWERS