MOBILITY DATA SHARING:
How Cities Are Using New Data For Policy and Planning

Eno Center for Transportation Webinar
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SHARED MOBILITY SERVICES HAVE RAPIDLY EXPANDED IN CITIES


[Logos and names of shared mobility services]
WHY DO CITIES WANT DATA FROM MOBILITY OPERATORS?

By working together, cities and private operators are more likely to make progress towards key societal goals:

1. **Safety**: reducing transportation-related injuries and fatalities.

2. **Equitable access**: improving availability and accessibility of transportation services to people of all backgrounds.

3. **Efficiency**: prioritizing efficient use of public space, and reducing transportation energy use/climate impacts.
THE ARRIVAL OF E-SCOOTERS WAS A GAME CHANGER

Dockless mobility was quickly and easily regulated, including notably the requirement to share data.

- Cities had learned from prior experiences with private mobility services.
- The first U.S. cities to experience dockless bikeshare (Seattle and Washington, D.C.) put in place requirements for companies to share data as early as July 2017.
- Dockless mobility is easily regulated because vehicles (typically owned by operators) can be confiscated.
- Scooters seemed to fueled growth faster than dockless bikes; they also seemed more polarizing.
THE ROLE OF DATA STANDARDS

Data standards can facilitate a greater diversity of mobility operators, consumer-facing options, and data analysis alternatives for cities.

General Bikeshare Feed Specification (GBFS)

- APIs report the real-time information about available vehicles.
- GBFS is often required by cities as part of micromobility regulations.
- GBFS data feeds typically report the vehicle location, type (bike/scooter), and battery charge.

Mobility Data Specification (MDS)

- MDS was built for operators to communicate with cities, and for cities to communicate back.
- Vehicle status changes provide updates on vehicles’ state in the system.
- Defines formats for sharing trip data, including “breadcrumb” GPS traces.

THREE TYPICAL APPROACHES TO MOBILITY DATA SHARING

**Aggregated/ Reported By Mobility Operator**
- v1.0 of DDOT’s dockless permit.
- Most carsharing.

**Data Delivered Through A Trusted Third Party**
- Populus reporting in 50+ cities incl. Arlington.

**Cities Directly Receives Raw, Disaggregate Data**
- L.A. Department of Transportation (LADOT)
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<th>Examples</th>
<th>Pros</th>
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**LEAST RISK** Brings the least risk to the city, while **MOST RISK** brings the highest potential risk to the city.

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Privacy and Data Security Concerns Related to Mobility Data

Key issues:

- Trip data, including O-Ds, and “breadcrumb” trace data could be considered personal information.

- Newer privacy policies such as GDPR and CCPA are changing how companies and other organization treat this type of information.

- Many data sharing requirements are moving forward without guidelines on data security, processing, storage or retention.
BALANCING PUBLIC SECTOR DATA NEEDS & PROTECTING PRIVACY

Key solutions:

- Secure access to data.
- Data license agreements.
- Robust, third party solutions.
- Focus on information to guide decision making.

SAE BRINGS TOGETHER PUBLIC AND PRIVATE SECTOR PARTNERS TO DEVELOP BEST PRACTICES FOR MOBILITY DATA SHARING

SAE International® Brings Together Public and Private Partners to Address Mobility Data-Sharing Principles
2019-05-21 WARRENDALE, PA.

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SECURE AND ROBUST MOBILITY DATA REPORTING

Populus Mobility Manager

- Founded by transportation and urban planning PhDs from UC Berkeley and MIT.

- Platform securely hosts data from the world’s largest mobility operators, delivering in 50+ cities.

- We harness and contribute to open-source data specifications (e.g. GBFS, MDS).

- Often more cost efficient than most public agencies (large and small) in-house solutions.
Managing scooter operator compliance with access to data

- Chicago’s scooter pilot launched in July 2019 with 10 operators.
- Evaluating mobility data-sharing compliance.
- Evaluating vehicle counts and trip utilization rates.
Leveraging new mobility to expand equitable access

- Cities can set equitable vehicle utilization and trip targets.
- In Chicago, 50% of total fleet must be deployed in two priority areas.
- Immediate access to data allows one to evaluate incentives and programmatic efforts.
FROM DATA TO ACTION

Identifying and implementing scooter parking in Arlington County

- Arlington County used de-identified GPS data from shared scooters to identify potential parking.

- They designed, communicated, and monitored new parking infrastructure to operators.
FROM DATA TO ACTION

Harnessing data for new protected lane infrastructure

- Cities can use aggregated volumes from millions of scooter trips to identify new protected lanes.
- They can export data and put it in the hands of transportation planners to prioritize safer, cleaner transport.
DATA-DRIVEN EVALUATION OF MOBILITY PROGRAMS AND PILOTS

Mobility data sharing helps cities make data-driven decisions about how to prioritize use of public space.

Takeaways and recommendations from Arlington pilot:

- Both deployment and rider response have increased over the course of the pilot.
- Accelerate infrastructure investments for protected bike lanes with notably high traffic from micromobility.
- Create and refine equity expectations.

KEY OPPORTUNITIES AHEAD

As we look to the future, many cities are exploring strategies for more efficient curbside utilization, including:

● Shift on-street parking into pick-up/drop-off zones for fleet vehicles.

● Pricing and incentivizing public space for shared fleets, including curbs and sidewalks.

● Using data to identify mobility hubs, where transit and shared modes can be designed to be complementary.

Lime and Populus announced a new partnership to validate use of on-street parking for their free-floating car-sharing vehicles, the LimePod, for a city.
THANK YOU

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