Harnessing Shared Mobility Data to Help Cities Redesign Streets of the Future

Urbanism Next, PDX
Wed, May 8, 2019

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SHARED MOBILITY SERVICES HAVE RAPIDLY EVOLVED IN CITIES
ADOPTION OF NEW MOBILITY SERVICES IS ACCELERATING

KEY FACTORS HAVE LED TO RAPID GROWTH

1. **GPS:** smartphone adoption has risen from 35% in 2011 to 77% in 2018

2. **Traffic:** in multiple major cities, it is likely faster to bike or scooter trips that are 3 miles or less

3. **Venture capital:** these companies have raised more money faster than prior mobility service providers

Source: The Micro-Mobility Revolution, A Populus Research Report, July 2018
THE PROBLEM

Private mobility services are being launched in cities at an unprecedented pace.

Cities are largely in the dark about how new mobility services are changing how we move in cities.

Only cities have the ability to make policy and planning decisions about the public right of way.
Cities need data to develop informed policies and transportation plans. Their goals typically are to steer progress towards:

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.

No data → Undesired outcomes → Uninformed policy/plans

CITIES ARE LOOKING OUT FOR THE COMMON GOOD

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DOCKLESS MOBILITY HAS BEEN EASILY AND QUICKLY REGULATED

Cities from coast to coast have begun to rapidly adopt dockless mobility regulations since 2018.

- Fleets are owned
- Vehicles are small
- Vehicles are stationary (for a significant portion of time)
- Shared best practices between cities

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Most city councils have approved dockless mobility permitting policies which include:

1. **Safety requirements**: insurance requirements, information operators must communicate to users of systems, and vehicle requirements.

2. **General parking restrictions**: general guidelines related to where scooters/ bikes cannot be parked, and potentially language reserving the city’s right to designate incentivized or dis-incentivized (fined) parking areas.

3. **Data sharing requirements**: real-time or archival reports on vehicle fleet size/ availability, trips, and incidents (e.g. complaints, safety, etc.).

4. **Fees**: fees for submitting a permit application, a flat annual fee for operating a program if awarded a permit, and a per vehicle fee for operating.
COMMON MICROMOBILITY DATA REQUIREMENTS

COMMONLY REQUESTED DATA POINTS FROM OPERATORS

- Trips
- Vehicles
- Maintenance logs
- Complaints
- Injuries

REQUEST DATA THROUGH INDUSTRY STANDARDS

- GBFS (General Bike Feed Specification) is commonly required for public-facing APIs of vehicle locations (for example to third-party apps).
- MDS (Mobility Data Specification), introduced by LADOT, is now being used widely to require trip, vehicle status, and route data.

COLLECT SURVEY DATA TO ANSWER KEY QUESTIONS

- Many key policy questions cannot be answered with GPS based locational data alone. They require asking people to respond to a survey.
- Cities should require that operators collect data in a consistent format approved by the city.
CITIES NEED INFORMATION, NOT DATA FOR THE SAKE OF DATA

Ultimately, city policymakers and transportation planners want access to data to manage the future of transportation.

KEY EXAMPLES

- Vehicle and fleet compliance
- Equity analysis
- Harnessing data for new infrastructure
- Pricing to efficiently allocate public space
Equitable access to new mobility services by disadvantaged communities is a key concern for cities.

With access to real-time and historical data, cities can better design for equity.

Key examples:
- Incentivizing placement of a specific # or % of vehicles in underserved communities.
- Developing a low-income program for new mobility services and to measure progress.
DATA-DRIVEN DESIGN FOR MICROMOBILITY PARKING

Through Populus Mobility Manager, we deliver heat maps of scooter parking events, and user-friendly tools to design new bike and scooter corrals for cities to:

1. Design
2. Communicate
3. Evaluate

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1 PARKING SPOT FOR A CAR >> 15 BIKES AND SCOOTERS
BETTER DATA HELPS CITIES EXPAND BIKE/SCOOTER INFRASTRUCTURE

Cities that receive detailed trip data can now harness GPS trace data to plan safer routes for bicycling and scooter infrastructure such as protected lanes.
THANK YOU

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