Data is a city’s (and this girl’s) best friend:
Managing the ROW in 2019 and beyond
Objectives

1. Complementing active management in the physical world with digital infrastructure
2. Mobility services management
3. Other digital infrastructure examples
4. Risks
Active Management

• The role of cities and DOTs: actively manage the limited public right-of-way
• What this involves: receiving and giving data
• We’ve been doing this for one hundred years
Why cities need to receive data

We receive data every day that informs our work and decisions:

• Traffic flows
• Parking transactions
• Asset management
• Permit compliance

Q. What happens when we miss our chance to require data sharing from a new type of operator?

A. We end up trying to regulate something we don’t fully understand (e.g., Uber).
Why cities need to give data

We give information and direction every day to manage the right-of-way:

• Signals
• “No parking” signs
• Dynamic message signs

Seattle is already doing this in the digital space as well:

• **Static:** Open data portal
• **Real-time:** Twitter feed, open traffic feeds
Digital Infrastructure

- Active management is traditionally achieved with physical assets (e.g., paint, signs, signals)
- Need to complement in digital space (e.g., digital replicas of physical assets)
- Common language across jurisdictions and sectors

![Physical Asset](Image1.png)

![Digital Replica](Image2.png)
Standards and Common Languages

• Common language: consistent across jurisdictions and sectors
• Interoperability
• General Transit Feed Specification (GTFS) feeds Google, Transit App, local apps
The Mobility Data Specification (MDS)

- Common language being developed by LADOT, moving to city-led governance
- Allows cities to specify what data we **receive** from and **give** to private mobility providers like bike/scooter share
Receiving: Seattle is using MDS for bike share

- What we receive:
  - Trip records (start/end time/location)
  - Device status (available, unavailable)

- What we could give:
  - Appropriate bike parking locations
  - No-park zones
  - Speed limits
Why are we using MDS for bike share?

1. **Compliance** with bike share permit
2. **Program evaluation** to determine if we are advancing our goals (allows us to update our regulations accordingly)
3. **Planning** purposes including understanding broader impacts

### 1. Compliance

Counts exceeding fleet compliance targets are highlighted below. This snapshot was recorded at 5:00am today.

**JUMP**
- 1151 bikes *Under Minimum Threshold*

**LIME**
- 3723 bikes *Under Minimum Threshold*
- 6 scooters *Exceeds Maximum Threshold*

**LYFT**
- 0 bikes

### 2. Program evaluation
Giving: From static to streaming

dotMaps

Travelers Map

{ "type":"Feature", "id":49, "geometry":{ "type":"LineString", "coordinates": [ [-122.35118600400006, 47.612813753000012 ], [-122.35047739300001, 47.612458618000005 ], [-122.34890401099995, 47.611523250999994 ] ], "properties":{ "OBJECTID":49, "ID":"EVT_00000000000000005667", "EVENT_ID":4901, "ACTIVE":"TRUE", "DIRECTION":"BOTH_DIRECTIONS", "ON_STREET":"ALASKAN WAY", "FROM_STREET":"WALL ST", "TO_STREET":"XW BELL ST" } }
Why push out queryable data?

1) The City has a number of largescale, traffic-impacting events occurring over the next two years (the Period of Maximum Constraint)

-and- We wanted to reach the largest number of residents possible with information about travel disruptions

2) SDOT already collects and transmits data and information about street and traffic conditions and impacts

-but- That data exists in silos or if transmitted publicly, typically in static formats

3) SDOT seeks to test and pilot new standards, systems and tools in preparation for an uncertain future (e.g. What will AVs bring?) and broadcast policy in a “language” technology providers understand.
What are the risks?

• **Non-adoption of industry standards:**
  • Lower-quality or less granular data than what we need
  • Hard to regulate what you don’t understand?
  • Inability to communicate with technology providers

• **Privacy and data security:**
  • No PII (personally identifiable information) but geolocation data has been shown to be re-identifiable because where you go and how you get there may be unique to you
  • Rapidly evolving space with evolving best practices
Thank you and questions!

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