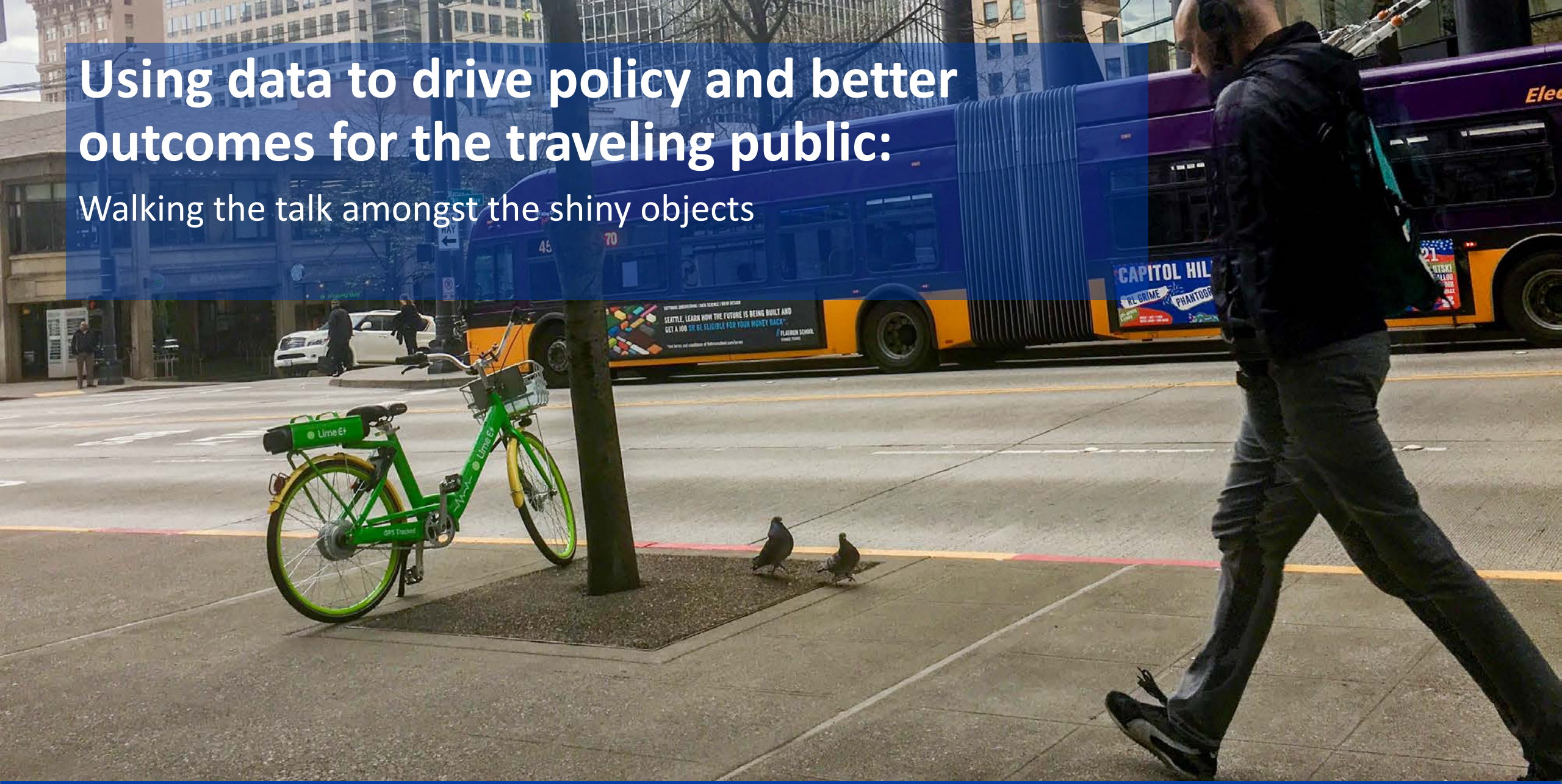
Using data to drive policy and better outcomes for the traveling public:

Walking the talk amongst the shiny objects



Urbanism Next
Kelly Rula
May 7, 2019

City of Seattle

Objectives

1. Understand the concepts of active management within a digital infrastructure
    - Understand the Mobility Data Specification (MDS)
2. Walk through world-class example of data-driven decision-making
3. Next steps

Active Management

- The role of cities and DOTs: actively manage the limited public right-of-way
- What this involves: **receiving** and **giving** data

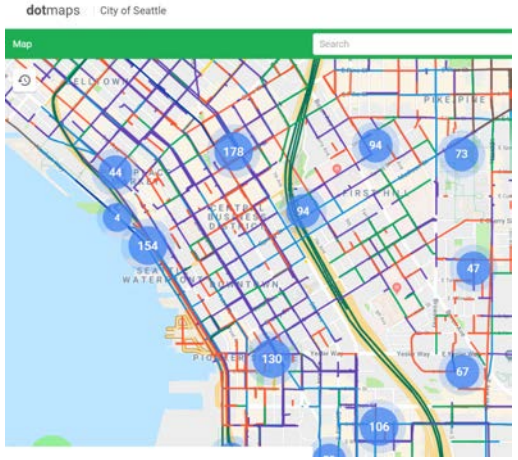
Why cities need to receive data

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).



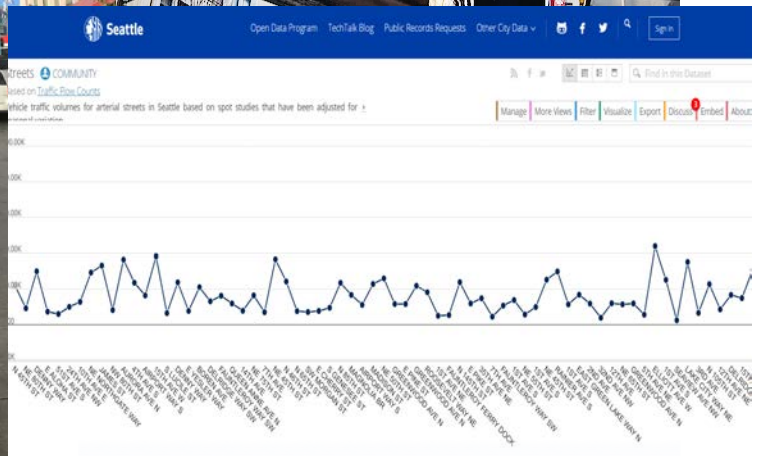
Why cities need to give data

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



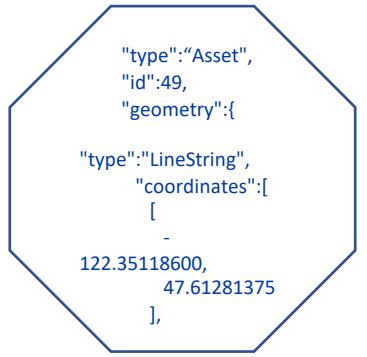
Seattle’s Open Data Platform

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

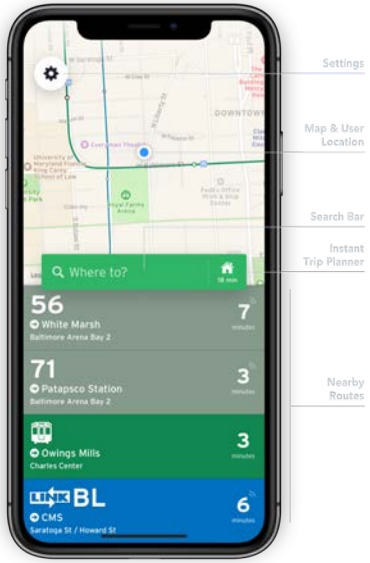
Physical Asset

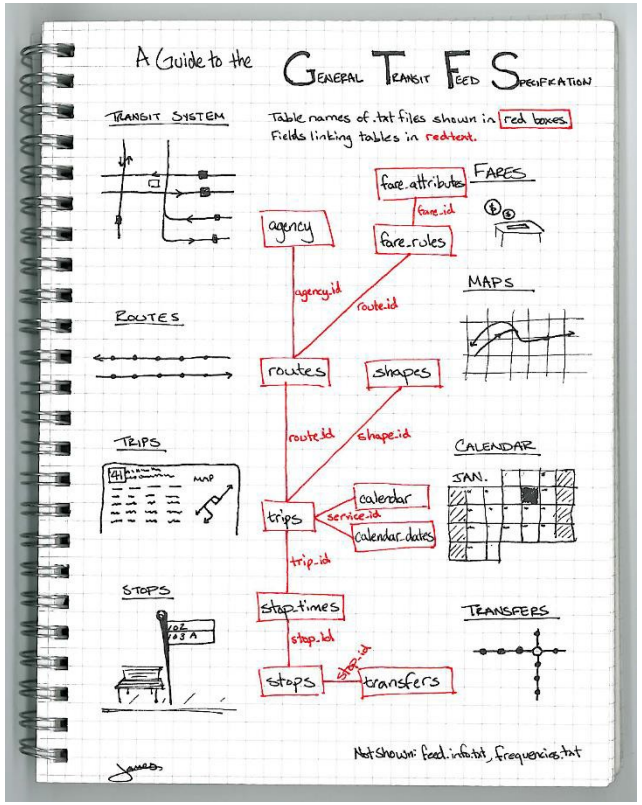
Digital Replica



Standards and Common Languages

- Common language: consistent across jurisdictions and sectors
- General Transit Feed Specification (GTFS) feeds Google, Transit App, local apps





What is 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

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

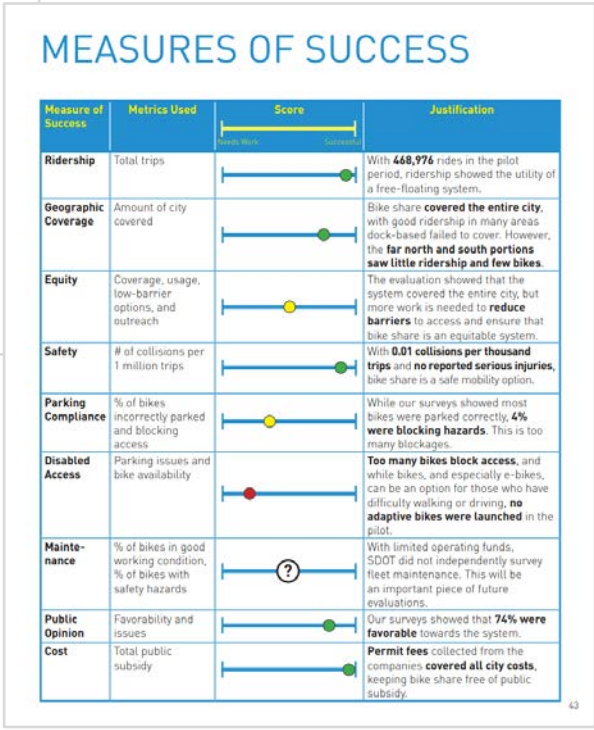
Counts exceeding fleet compliance targets are highlighted below. This snapshot was recorded at 5:00am today.

JUMP
1151 bikes **Under Minimum Threshold**

LIME
3723 bikes **Under Minimum Threshold**
6 scooters **Exeeds Maximum Threshold**

LYFT
0 bikes

2. Program evaluation

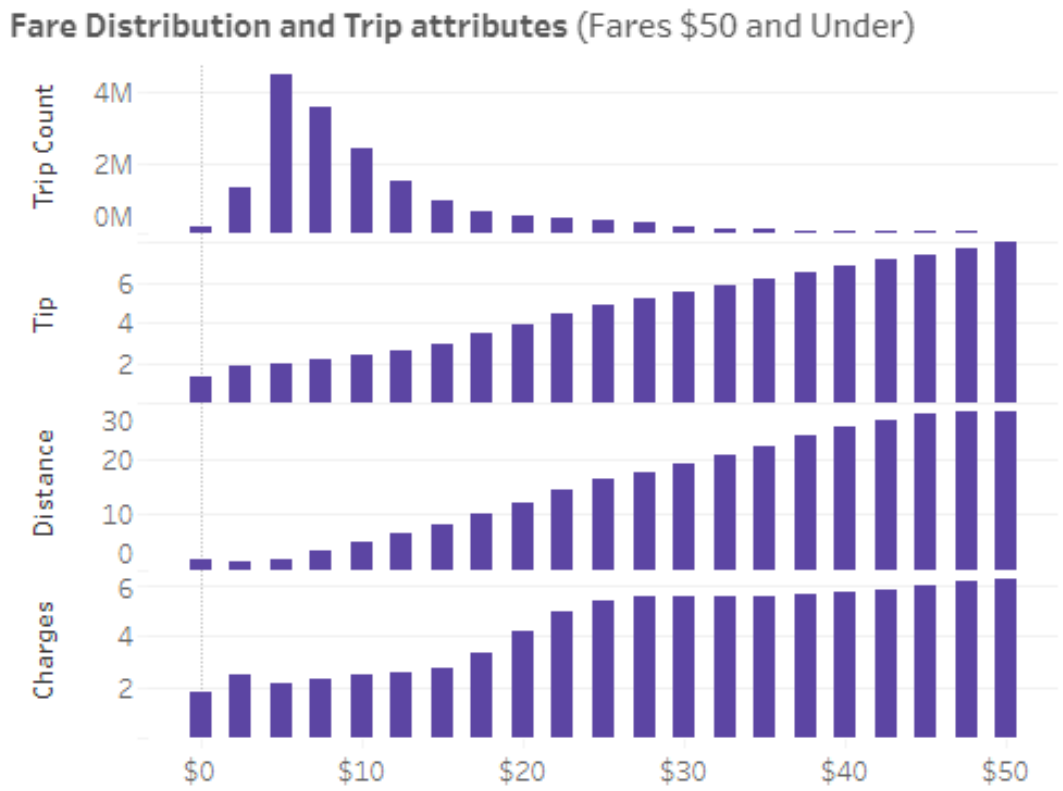


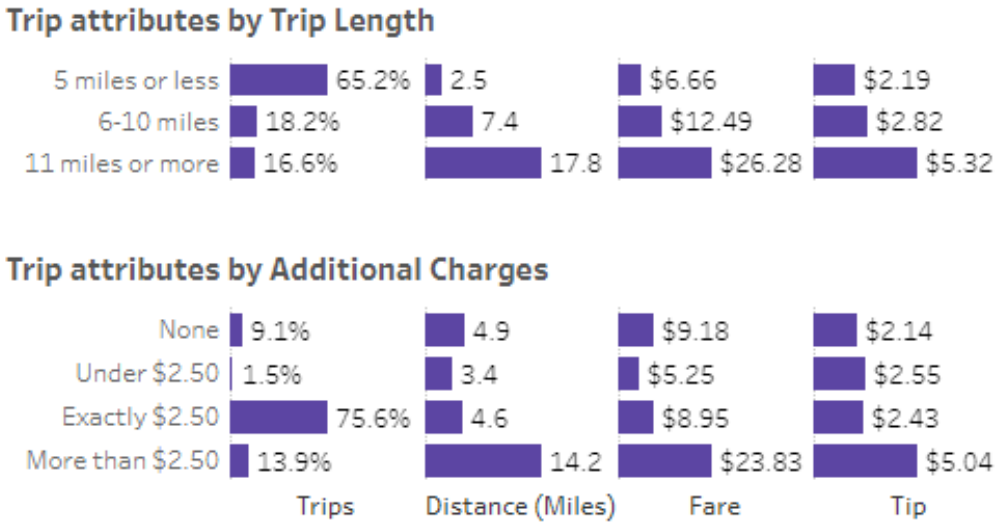
MEASURES OF SUCCESS

Measure of Success	Metrics Used	Score (Needs Work – Success)	Justification
Ridership	Total trips		With **468,976** rides in the pilot period, ridership showed the utility of a free-floating system.
Geographic Coverage	Amount of city covered		Bike share **covered the entire city**, with good ridership in many areas dock-based failed to cover. However, the **far north and south portions saw little ridership and few bikes**.
Equity	Coverage, usage, low-barrier options, and outreach		The evaluation showed that the system covered the entire city, but more work is needed to **reduce barriers** to access and ensure that bike share is an equitable system.
Safety	# of collisions per 1 million trips		With **0.01 collisions per thousand trips** and **no reported serious injuries**, bike share is a safe mobility option.
Parking Compliance	% of bikes incorrectly parked and blocking access		While our surveys showed most bikes were parked correctly, **4% were blocking hazards**. This is too many blockages.
Disabled Access	Parking issues and bike availability		**Too many bikes block access**, and while bikes, and especially e-bikes, can be an option for those who have difficulty walking or driving, **no adaptive bikes were launched** in the pilot.
Mainte-nance	% of bikes in good working condition, % of bikes with safety hazards		With limited operating funds, SDOT did not independently survey fleet maintenance. This will be an important piece of future evaluations.
Public Opinion	Favorability and issues		Our surveys showed that **74% were favorable** towards the system.
Cost	Total public subsidy		**Permit fees** collected from the companies **covered all city costs**, keeping bike share free of public subsidy.

3. Planning

Other mobility services data examples

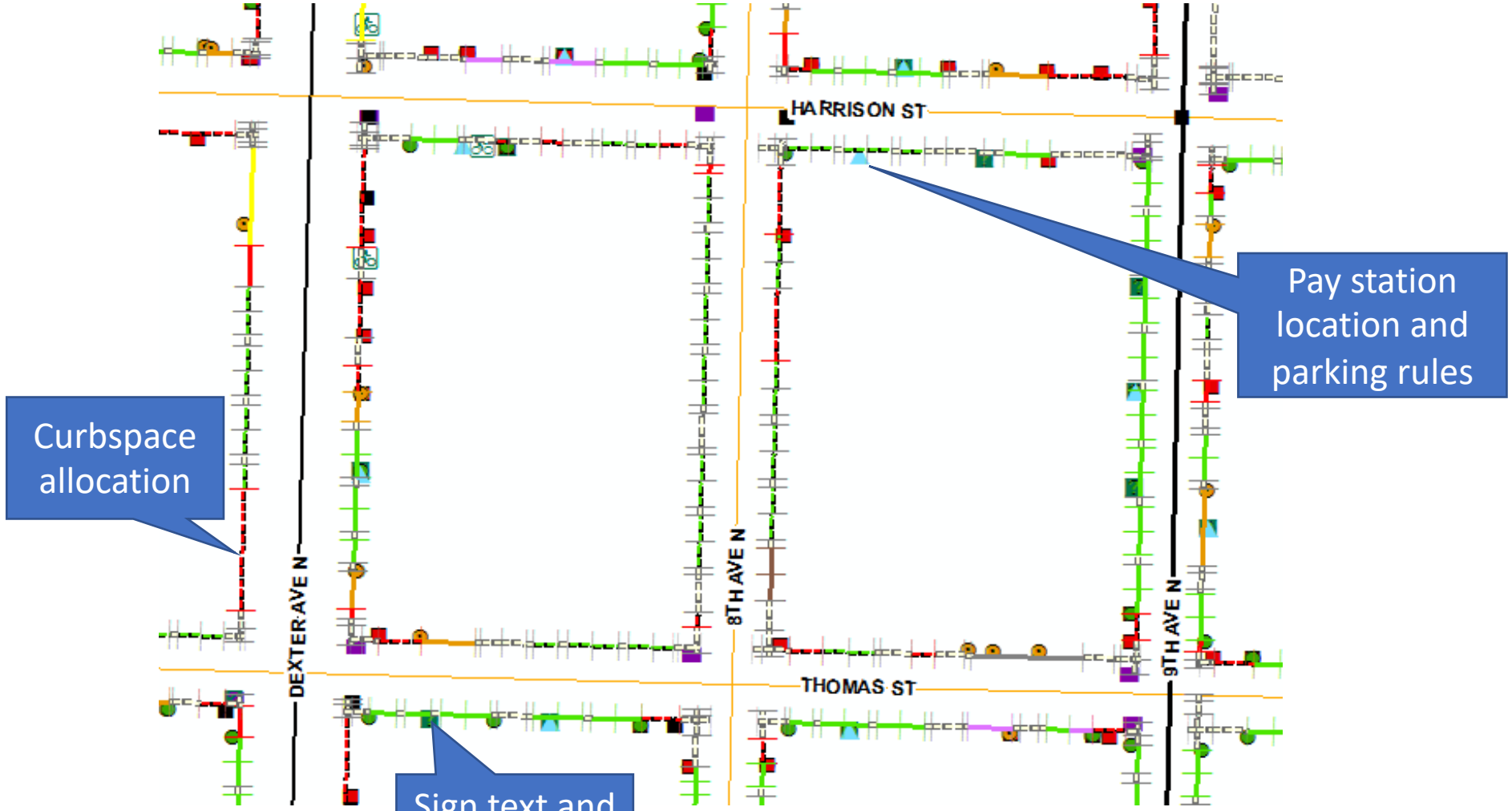




What are the risks?

- **Non-adoption of industry standards:**
  - Lower-quality or less granular data than what we need
  - How to regulate what you don't understand?
- **Privacy and data security:**
  - MDS does not collect user data (personally identifiable information, or PII)
  - However, geolocation data has been shown to be re-identifiable because where you go and how you get there may be unique to you

Data-driven decision making (Classic example)

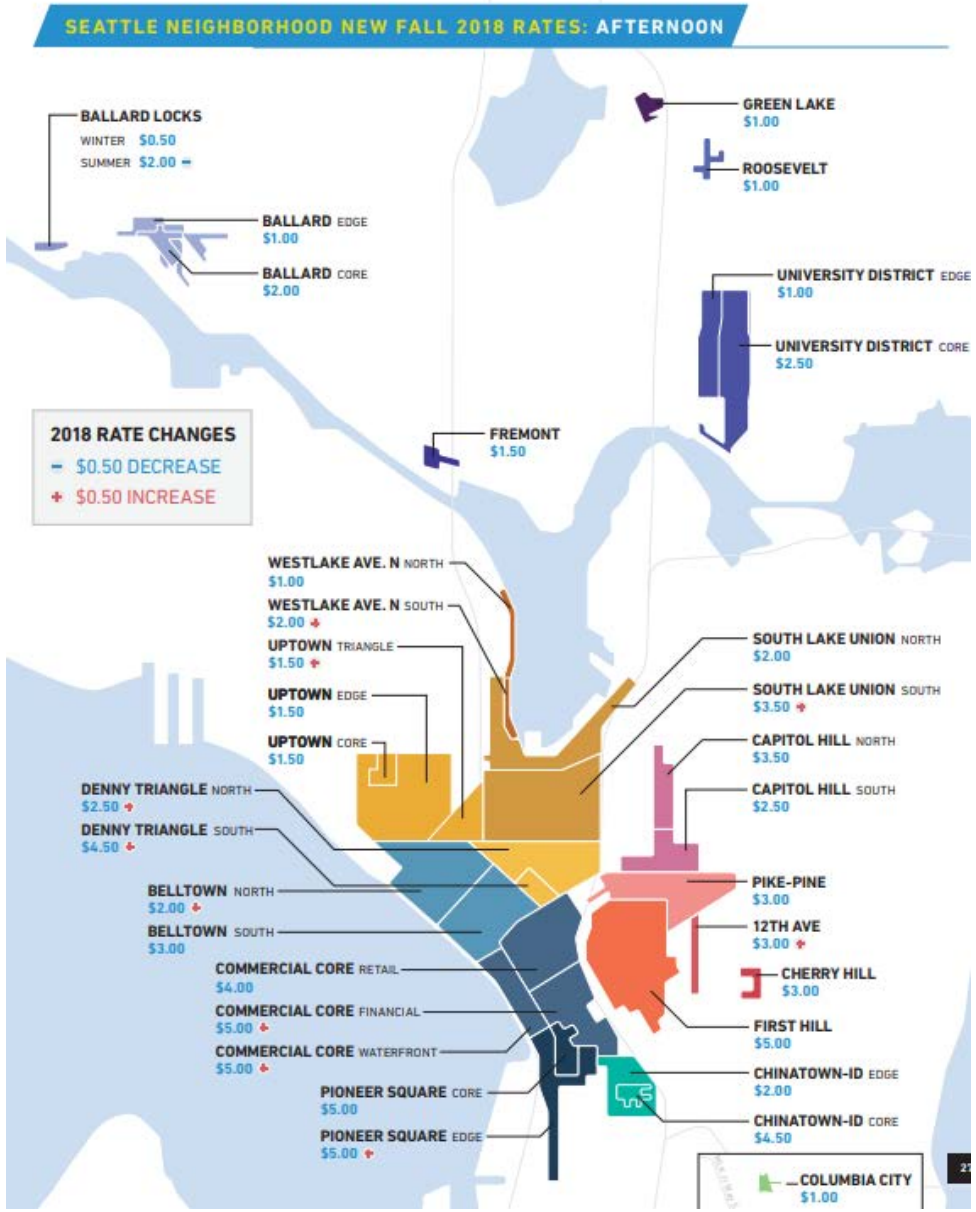


Parking data information flows

- Payment transactions –not representative of actual parking activity
- Ground-truth observations – Annual study, costly to collect more frequently
- Enforcement citations - Owned by other City departments, geocoding locations challenging and not representative of compliance problems
- Other parking demand influencers – parking rates, land use, economy, seasons, weather, day of week

How that translates into policy

- Changes considered in all paid areas
- Study conditions annually
- Manual counts in spring
- Adjust rates, time limits, times in fall
  - Rates range from $0.50 to $5.00 per hour
  - Time limits of 2 hours, 4 hours, or 10 hours
  - Paid parking from 8 AM to 6 PM/8 PM/10 PM



Next Steps: Thoughts for other cities

- Start from solid policy foundation (the why)
- Codify desired policy outcomes, rationale in code language
- Know your assets (what you have and what you don’t)
- Develop clear methodology for changes
- Commit to regular, ongoing data collection (avoid one-offs!)
- Connect the data results to adjustments
- Educate the public on an iterative basis as changes occur

Thank you and questions!

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