Data-Driven Decision Making at MTA

Leah Visakowitz
GIS Analyst
MTA, Office of Planning and Programming
Current/Recent Efforts

- Improved bus tracking
- GPS data for service planning
- Capital projects investment
- North Avenue Rising
- Annihilator program
- Real-time ridership
- Priority Corridors
Using Data to Prioritize Transit Investment

• Goal is to work with local jurisdictions to improve bus reliability, speed, and safety
• Key datasets include ridership, speed, and dwell
• Examination and identification of priority corridors along frequent network for investment
• Gay St and Belair Rd corridor identified
Key Dataset - Ridership

- Ridership measures how many individuals are boarding and alighting at each bus stop
- Collected by APC system (Automated Passenger Counter)
- Highest ridership at North Ave and Erdman Ave – transfer points

Weekday Ridership by Stop (Boardings + Alightings):

- 1 to 25
- 25 to 50
- 50 to 100
- 100 to 250
- 250 and up
Key Dataset - Speed

- The average speed of a bus (mph) traveling between two points
- Raw data is stop-to-stop speed
- Slowest travel southbound between Sinclair Ln and Preston St
- Compared to traffic speeds for scoring
Key Dataset – Dwell Time

- The time a bus spends at a bus stop picking up or dropping off passengers and re-entering the travel lane
- Normalized by ridership for scoring
- Map shows average dwell time per boarding per stop for segments
- Highest Southbound from Sinclair to Preston
GPS Breadcrumb Data

Each GPS point represents 10 seconds of bus dwell
GPS Breadcrumb Data

Selected GPS Points
- CityLink Lime - Study Period GPS Point

Other Features
- Traffic Signal
- Bus Stop

Each GPS point represents 10 seconds of bus dwell
Bus Dwell + Ridership

Avg # of riders per bus x avg dwell per bus:
14 riders x 30 seconds of dwell = 7 passenger minutes
Where can I find this data?

• Speed/Dwell times
  – https://www.mta.maryland.gov/developer-resources

• Ridership
  – https://data.imap.maryland.gov/datasets/maryland-transit-mta-bus-stops
  – ArcGIS Online public account
  – QGIS
Live Poll?

I would like to use __________ data to ____________.

Ex: Speed, figure out how fast my bus moves on Gay St

https://www.polleverywhere.com/free_text_polls/KU2jWgEg0V3kLkzFVFTQk