Using data to understand how people with limited mobility use Metro Transit

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Purposes of presentation

- share information about Metro Transit data

- summarize limited mobility use
  - wheelchair lift ramp cycles
  - limited mobility smart card tags

- describe how we use the data, and how others use it

Transit data

- **Vehicle** movement & activity

- **People** movement & activity

- **Operational** data
  - Operator & vehicle assignment
  - Work piece "picks"
  - maintenance of facilities

Vehicle activity data

- vehicle location
  - each bus every 8 seconds

- Passing time points
  - Adherence to schedule
  - predictions

- Number of passengers on/off at each stop

- Bike rack usage (some buses)

- **mobility lift deployment**

People activity data

- farebox activity on bus
  - "key 3" = mobility fare

- smart phone mobile app tickets

- smart card tag locations
  - on platform or bus
  - by type / program
  - **limited mobility go-to cards**

How can we use this data?

- understand where, and when, people with limited mobility ride

- create maps, tables, and other data summaries
  - over 186,000 lift deployments in service in 2018
  - over 2.5 million tags from limited mobility cardholders in 2018

- example: Route 5 in 2018
  - *seasonal*: highest lift deployments & card tags in spring and early summer
  - *time of day:* both tags and lift deployments are highest mid-day
  - 100 lift cycles per day
  - 350 – 450 mobility limited card tags per day

Top 10 stops (2018): wheelchair lift deployment

site ID	Intersection	Routes served
34	CHICAGO AVE S & 8TH ST S	5, 643, 663
17905	7TH ST GARAGE & TRANSIT CENTER	5, 19, 22, 134
52300	CHICAGO LAKE TRANSIT CTR	5, 21, 39, 53
16845	LAKE ST W & BLAISDELL AVE S	21, 53
17907	8TH ST S & LASALLE AVE / NICOLLET MALL	5, 7, 9, 14, 22, 39, 94
17980	NICOLLET MALL & 7TH ST S	10, 11, 12, 17, 18, 25, 59
16888	LAKE ST E & CEDAR AVE S	21, 53
17976	NICOLLET MALL & 3RD ST	10, 11, 12, 17, 18, 25, 59
13312	FRANKLIN AVE E & CHICAGO AVE	2, 9
51533	FRANKLIN STATION	2, 9, 67
53313	2ND AVE S & 7TH ST - STOP GROUP F	250, 261, 264, 270

Top 10 stops (2018): limited mobility card tags

site ID	Intersection	Routes served
17903	7TH ST N & HENNEPIN AVE / 1ST AVE	5, 19, 22, 94, 721, 724 etc
17982	NICOLLET MALL & 9TH ST S	10, 11, 12, 17, 18, 25, 59
17994	NICOLLET MALL & 7TH ST S	10, 11, 12, 17, 18, 25, 59
11859	6TH ST & JACKSON / ROBERT	21, 53, 54, 61, 63, 64, 70, 74, 94, 353, 361, etc
17998	NICOLLET MALL & 3RD ST S	10, 11, 12, 17, 18, 25, 59
17902	7TH ST S & NICOLLET MALL	3, 5, 22, 721, 724
40167	HENNEPIN AVE & 7TH ST S	4, 6, 61, 141
11837	5TH ST & MINNESOTA ST	61, 63, 64, 70, 74, 265, 275, 294, etc
17978	NICOLLET MALL & 5TH ST S	10, 11, 12, 17, 18, 25, 59
52300	CHICAGO LAKE TRANSIT CENTER	5, 21, 39, 53
17992	NICOLLET MALL & 9TH ST S	10, 11, 12, 17, 18, 25, 59

Sharing data with partners

- City of St Paul: 2018
  - created "priority score" of stops based on boardings, wheelchair lift, mobility cards
  - used to prioritize snow clearing

- City of Minneapolis: 2019
  - shared data and priority score by every stop throughout city
  - will be used for Transportation Action Plan
  - may be used by public works to prioritize snow removal

Questions?

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