MSP Regional Travel Behavior Inventory Program
Regional Model Background

• The Metropolitan Council, like all large MPOs, maintains a regional transportation forecasting model.
• The model is regularly updated to reflect changes in
  – Regional transportation networks
  – Observed travel patterns and behaviors
  – Questions of interest to planners and policymakers
  – Evolution of best-practice methods
  – Lessons learned
### Users of the Regional Model

<table>
<thead>
<tr>
<th>Metropolitan Council / Metro Transit</th>
<th>MnDOT</th>
<th>Counties and Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Transit ridership</td>
<td>• System studies</td>
<td>• Highway project forecasts</td>
</tr>
<tr>
<td>• Air quality conformity</td>
<td>• Corridor studies</td>
<td>• Development impact forecasts</td>
</tr>
<tr>
<td>• TPP / System Studies</td>
<td>• Highway project forecasts</td>
<td>• Transit ridership forecasts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Base to develop local models</td>
</tr>
</tbody>
</table>

Base to develop local models
The model is kept current and valid through the **Travel Behavior Inventory**

- Supports estimation and validation of travel demand forecast models
- Informs transportation planning
What’s Changed?

- 2015 TBI Program Evaluation recommendations
- Transition to continuous program
  - Household survey every 2 years (with larger starter survey)
  - Transit on-board survey every 5 years
  - Model updates, other data collection performed regularly
  - New data available more often
- New technology
  - Household survey based on smartphone GPS
  - Use of 3rd party commercial data where possible
New Program Benefits

• Adaptability to technological, social, economic change
• New data available regularly
• Growing ability to track changes
• Continuous improvement in forecasting
• Increasing confidence in forecasts
• More competitive projects
• Increased ability to make data-driven decisions
• More consistent expenditures
## Overview of TBI Data Collection

<table>
<thead>
<tr>
<th>Survey Type</th>
<th>Frequency</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Interview Survey</td>
<td>Every 2 years</td>
<td>Record travel of each member of a sample of households, Smartphone GPS</td>
</tr>
<tr>
<td>Transit On-Board Survey</td>
<td>Every 5 years</td>
<td>Passengers on all fixed-route transit lines</td>
</tr>
<tr>
<td>Special Generator Surveys</td>
<td>One every 2-3 years</td>
<td>Examples include University of MN, MSP airport, major shopping centers, visitors</td>
</tr>
<tr>
<td>Third Party Data Purchase</td>
<td>Every 5 years</td>
<td>Examples include external traveler origin-destination, Data shared with other stakeholders</td>
</tr>
</tbody>
</table>
Funding

• $2.5M average cost every two years
• Funding would be split evenly between major users
  – State: MnDOT (federal and local sources)
  – Region: Metropolitan Council (federal and local)
  – Local: Counties/Cities (TAB-allocated federal represents local contribution)
<table>
<thead>
<tr>
<th>Project</th>
<th>Status</th>
<th>Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018/19 Household travel survey</td>
<td>Under contract</td>
<td>$2,021,000</td>
</tr>
<tr>
<td>2020/21 Household travel survey</td>
<td>Under contract</td>
<td>$852,000</td>
</tr>
<tr>
<td>2022/23 Household travel survey</td>
<td>Under contract</td>
<td>$852,000</td>
</tr>
<tr>
<td>2019 Model update</td>
<td>Planning</td>
<td>$275,000</td>
</tr>
<tr>
<td>2019 3rd party data purchase</td>
<td>Planning</td>
<td>$215,000</td>
</tr>
<tr>
<td>2021 Transit on-board survey</td>
<td>Planning</td>
<td>$1,612,000</td>
</tr>
<tr>
<td>2022 Model overhaul</td>
<td>Planning</td>
<td>$1,150,000</td>
</tr>
<tr>
<td>2020, 2022 special generator studies</td>
<td>Planning</td>
<td>$280,000</td>
</tr>
</tbody>
</table>
Years 7-8

• Project:
  – 2024-2025 Household travel survey ($1000K)
  – 2024 Third party data purchase  ($250K)
  – 2025 Special generator surveys ($200K)
  – 2025 Model update ($300K)

• Cost estimate- $1,750,000

• Three-way equal split- (rounded)
  – $585,000 (TAB/Regional Solicitation)
  – $585,000 (MnDOT)
  – $585,000 (Council)
2018/2019 Household Travel Survey
Household Survey Status

- Under contract: January 2018
- Pilot test: May 2018
- Data Collection: October 1, 2018 – September 30, 2019
Household Travel Survey - Data Collected

Household
- People
- Workers
- Students
- Vehicles
- Income
- Residence Information

Vehicle
- Characteristics
- Fuel
- Parking/Toll

Person
- Demographic Characteristics
- Work data
- School data
- Typical travel behavior
- Interest in AV

Employment

Trip
- Mode
- Purpose
- Time / Date
- Travel party
- Payment
# Household Travel Survey - Data Collected

<table>
<thead>
<tr>
<th>Estimated 2018/2019 Data Collection</th>
<th>As of 5/3/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>7,500</td>
</tr>
<tr>
<td></td>
<td>4,632</td>
</tr>
<tr>
<td>Persons</td>
<td>15,400</td>
</tr>
<tr>
<td></td>
<td>9,688</td>
</tr>
<tr>
<td>Travel Days</td>
<td>107,800</td>
</tr>
<tr>
<td>Trips</td>
<td>485,100</td>
</tr>
<tr>
<td>Data Points</td>
<td>485,510,000</td>
</tr>
</tbody>
</table>
TBI Data Collection

**Mailed Invitation Materials**
- Address-based sample
- Invitation Letter
- Two reminder postcards

**ONLINE OR PHONE (rSURVEY)**
- 1 Day of trip data collected
- Approximately 25% of HHs will participate using this method

**SMARTPHONE (rMOVE)**
- 7 Days of trip data collected
- Approximately 75% of HHs will participate using this method
Complete a survey about how you travel and receive a gift card as thanks for your time.

Visit MSPtravelstudy.org for more information about the study.

Your participation helps transportation planning in your community!
Outreach

General Population Outreach
- Social media
- Council website
- Press release / earned media
- Newsletters / emails

Targeted Outreach
- Targeted social media
- Targeted paid media
- Partner with community organizations
- Community ambassadors

Translated materials
- Spanish
- Hmong
- Somali
- Oromo
- Karen