

Travel Behavior Inventory Program

2019-06-24

Metropolitan Council Transportation Committee



Regional Model Background

- The Metropolitan Council, like all large MPOs, maintains a regional transportation forecasting model.
- The model is used to forecast travel for all modes and usage of highway and transit facilities.
- The model is regularly updated to reflect changes in
 - Regional transportation networks (roadways, transit routes)
 - Observed demographics
 - Observed travel patterns and behaviors
 - Best-practice methods
 - Important policy issues

Users of the Regional Model

Metropolitan Council / Metro Transit

- Transit ridership
- Air quality conformity
- TPP / System Studies

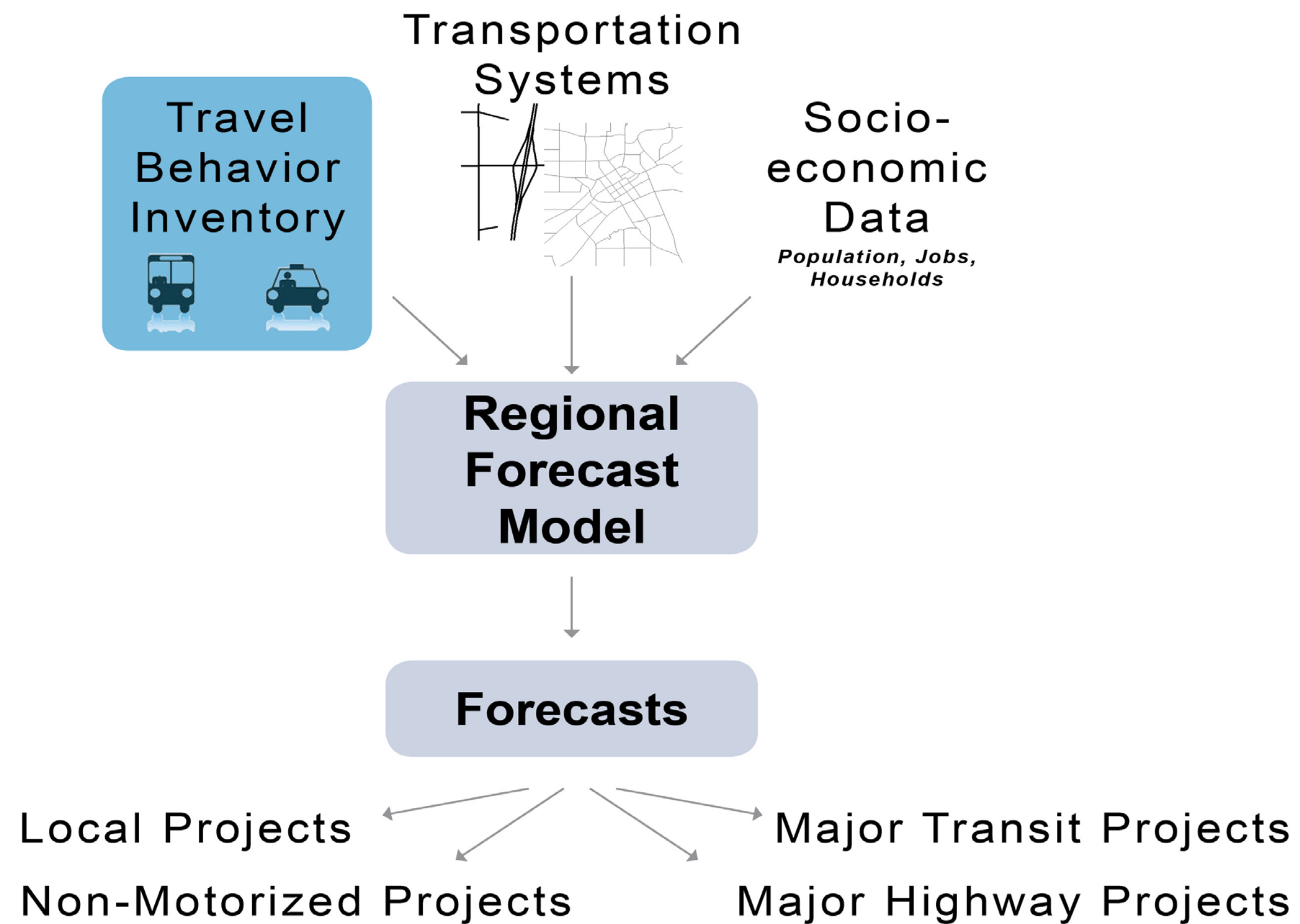
MnDOT

- System studies
- Corridor studies
- Highway project forecasts

Counties and Cities

- Highway project forecasts
- Development impact forecasts
- Transit ridership forecasts
- Base to develop local models

The model is kept current and valid through the Travel Behavior Inventory



- How much do people travel?
- How far?
- By what modes?
- For what purpose?
- Where are people travelling to/from?
- How does this vary by geographic and demographic characteristics?

New TBI Program

- Conducted every 10 years: ~1950-2010
- 2015 TBI Program Evaluation
- 2017 began transition to new data collection and update structure:
 - 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
- Use of New technology
 - Household survey based on smartphone GPS
 - Use of 3rd party commercial data where possible

New Program Structure 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

Household Interview Survey	Transit On-Board Survey	Special Generator Surveys	Third Party Data Purchase
<ul style="list-style-type: none">• Every 2 years• Record travel of each member of a sample of households• Smartphone GPS	<ul style="list-style-type: none">• Every 5 years• Passengers on all fixed-route transit lines	<ul style="list-style-type: none">• One every 2-3 years• Examples include University of MN, MSP airport, major shopping centers, visitors	<ul style="list-style-type: none">• Every 5 years• Examples include external traveler origin-destination• Data shared with other stakeholders

Funding

- \$2.5M average cost every two years
- Funding split evenly (~\$850,000) between major users
 - State: MnDOT (federal and local sources)
 - Region: Metropolitan Council (federal and local)
 - Local: Counties/Cities (TAB-allocated federal represents local contribution)

Years 1-8:

Project	Status	Cost Estimate
2018/19 Household travel survey	Under contract	\$2,021,000
2020/21 Household travel survey	Under contract	\$852,000
2022/23 Household travel survey	Under contract	\$852,000
2020 Model update	Planning	\$275,000
2019/20 3 rd party data purchase	Planning	\$215,000
2021 Transit on-board survey	Planning	\$1,612,000
2022 Model overhaul	Planning	\$1,150,000
2020, 2022 special generator studies	Planning	\$280,000
2024-2025 Household travel survey	Planning	\$1,000,000
2024 Third party data purchase	Planning	\$250,000
2025 Special generator surveys	Planning	\$200,000
2025 Model update	Planning	\$300,000

2018/2019 Household Travel Survey

Household Survey Schedule

- Under contract: January 2018
- Pilot test: May 2018
- Data Collection: October 1, 2018 – September 30, 2019
- Data Collection: October 1, 2020 – September 30, 2021
- ...


**TRAVEL
BEHAVIOR
INVENTORY**



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 autonomous vehicles

Employment

Trip

- Mode
- Purpose
- Time / Date
- Travel party
- Payment



Household Travel Survey- Status

	Estimated 2018/2019 Data Collection	As of 6/20/2019	Pct of Estimate to Date	
Households	7,500	5,692	76%	
Persons	15,400	11,871	77%	Persons per HH: 2.1
Person Travel Days	107,800	47,652	44%	Days per Person: 4.0
Trips	485,100	255,847	53%	Trips per Day: 5.4
Locations	4,851,000	3,038,516	63%	Locations per Trip: 11.9



TBI Data Collection



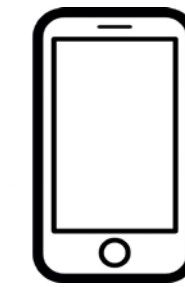
Mailed Invitation Materials

- 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

Keys to Ensure Representation

- **Oversampling** is critical to obtaining sufficient participation from hard-to-reach groups
- **Outreach** to communicate the importance of the survey to communities to encourage participation
- **Engagement/Reminders** once a hard-to-reach household engages with the study to ensure they can easily complete the survey

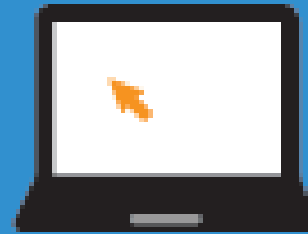


TRAVEL BEHAVIOR INVENTORY

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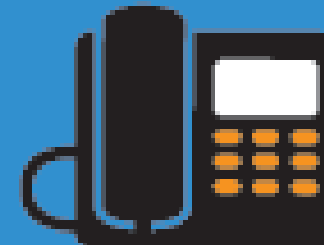
PARTICIPATE THIS WEEK!

TO BEGIN:



Go online:
MSPtravelstudy.org

OR



Call toll free:
1-888-476-6157

YOUR PASSWORD IS: MPS123

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
- Door to door outreach

Translated materials

- Spanish
- Hmong
- Somali
- Oromo
- Karen



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