

# HOUSEHOLD TRAVEL SURVEY STATE OF THE PRACTICE RECOMMENDATIONS

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TPB Technical Committee  
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# Background

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- TPB has conducted a regional household travel survey about once a decade since 1968
- Rapid changes in travel patterns and behavior in recent years
- Increasing costs of data collection and declining survey participation rates



# Findings from MPO Stakeholder Interviews

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- Based on the interviews conducted with peer MPOs, they can be divided into three groups:
  1. Conducting or actively preparing for a more frequent and smaller sample size household travel survey
  2. Participating in and purchasing add-on samples at varied frequencies through the Federal Highway Administration (FHWA) Next Generation National Household Travel Survey (NextGen NHTS)
  3. Planning to conduct a large-scale household travel survey once a decade



# Options for Conducting Future HTS

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- Travel patterns and behavior have been changing more frequently in recent years with the emergence of smartphones, new travel options, and rise of remote work
- The DC region is dynamic and multimodal
- Two options for conducting future household travel surveys:
  - **Option A:** Design survey and secure contractor for data collection
  - **Option B:** Participate and purchase add-on samples through the NextGen NHTS pooled fund effort



# What is State of the Practice in HTS?

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- Latest survey data collecting technology including smartphone apps, passive data, GPS enabled data collection
- Creative use of survey incentives including targeted and differential incentives to increase participation from hard-to-reach populations
- Innovative sampling approaches to ensure maximum participation, reduce coverage bias, and expand the reach of surveys for underrepresented groups

# Key Considerations for Future HTS Efforts

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- Is it state of the practice? Does it embrace the latest survey methods and data collection technology?
- Would it yield statistically valid and representative results?
- Would it help improve response rates and reduce respondent burden?
- Is it cost effective? Would it potentially alleviate level of required staff resources?



# Considerations for Future HTS in the Washington, DC Region

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- Would it sufficiently capture travel patterns and behavior that are unique to our diverse region?
- Would the data provide critical input needed for developing our regional travel demand models and forecasts?
- What is the appropriate/“sweet spot” frequency for conducting surveys? Every 2 years? Every 3 to 5 years?



# Option A: Design Survey and Secure Contractor for Data Collection

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- Several MPOs are conducting their own HTS on a more frequent basis with smaller sample sizes
  - Met Council (Twin Cities Region)
  - PSRC (Puget Sound Region)
  - SANDAG (San Diego Region)
  - MTC (San Francisco Bay Area)





# Potential Advantages: Design Survey and Secure Contractor for Data Collection

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- Flexibility to select latest data collection technology
- Ability to capture rapidly changing travel trends and behavior
- Address policy makers' expectations for the latest data
- Funding more evenly spread over time
- Contract rider available to local jurisdictions to acquire additional samples
- Flexibility to apply methods to obtain participation from difficult to reach populations



# Potential Disadvantages: Design Survey and Secure Contractor for Data Collection

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- May require more staff time and resources to conduct surveys more frequently
- Sample sizes may not be sufficient for statistically valid and representative results
- Multimodal trips and hard to reach groups may be more difficult to capture unless certain geographies and demographic groups are oversampled



# Option B: Participate in the NextGen NHTS

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- Two of the MPOs interviewed are participating in the NextGen NHTS and purchased add-on samples for their jurisdictions
  - ARC (Atlanta Region)
  - NCTCOG (Dallas/Fort Worth Region)



# Potential Advantages: Participate in the NextGen NHTS

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- Survey design, implementation, post-processing and weighting are performed by FHWA and their contractor
- FHWA manages data contractors
- FHWA offers technical and survey methods support
- Monthly progress reports with survey completes to date



# Potential Disadvantages: Participate in the NextGen NHTS

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- No smartphone survey option, only web-based survey
- Only six add-on questions are permitted
- Cost for purchasing add-on samples may be significant
- Rigid timeframe for local jurisdictions to develop agreements and to transfer funds for additional samples
- Limited control over fielding and implementing survey methods to obtain participation from difficult to reach communities



# Evaluating the Options – (A) Design Survey and Secure Contractor or (B) Participate in NextGen NHTS

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- Statistically valid and representative results
- Latest survey and data collection technology
- Cost effective
- Improve response rates and reduce respondent burden
- Level of required staff resources
- Capture travel patterns and behavior unique to our region
- Input needed for developing our regional travel demand models and forecasts

# Evaluating the Options – (A) Design Survey and Secure Contractor or (B) Participate in NextGen NHTS

Key Considerations for Future HTS Efforts	Design Survey and Secure Contractor for Data Collection	Participate in the NextGen NHTS
Statistically valid and representative results	Both options could potentially yield statistically valid and representative results.	
Latest survey and data collection technology	Most flexibility to adapt state of the practice (e.g., smartphone option, incentives, mixed methods)	Limited flexibility since only web option is offered, survey design and methods largely determined by FHWA
Cost effective	Unclear, as both options can be potentially expensive	
Improve response rates and reduce respondent burden	Smartphone survey will likely reduce respondent burden due to passive data collection	Web survey has potential to increase respondent burden since more user input is needed

# Evaluating the Options – (A) Design Survey and Secure Contractor or (B) Participate in NextGen NHTS

Key Considerations for Future HTS Efforts	Design Survey and Secure Contractor for Data Collection	Participate in the NextGen NHTS
Level of required staff resources	Depends on level of work (e.g., developing sampling plan and survey design, post-processing)	Likely reduce burden for contracting, sampling plan and survey design, post-processing
Capture travel patterns and behavior unique to our region	More likely because survey design and questionnaire can be tailored to our region	Not clear because limited ability to customize survey design and questionnaire
Input needed for developing our regional travel demand models and forecasts	More likely since models development staff can provide input for data items that are critical for future models	Not as certain because limited ability to customize data items





# Recommendations for Conducting Future Household Travel Surveys

- Pursue Option A (Design Survey and Secure Contractor for Data Collection)
  - **Flexibility** to adopt state of the practice technology
  - **Customizability** for our diverse and multimodal region
  - **Control** over survey design and methods to ensure statistically valid and representative results

# Recommendations for Conducting Future Household Travel Surveys

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- Data collection every three to five years
- Sufficient sample sizes to capture multimodal trips
- Ability to oversample and supplement with non-probability based sampling approaches
- Flexibility for local jurisdictions to ride contract



# Next Steps (Tentative Dates)

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- Seek input from TPB members and stakeholders
- Coordinate with models development team
- Develop scope of work (Summer 2023)
- Procure survey contractor (Fall 2023)
- Conduct survey pretest (Spring 2024)
- Full scale data collection likely in 2025 (after 2024 elections)

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