

# Highlights from an In-Depth Behavioral Survey on Transformative Technologies in Transportation

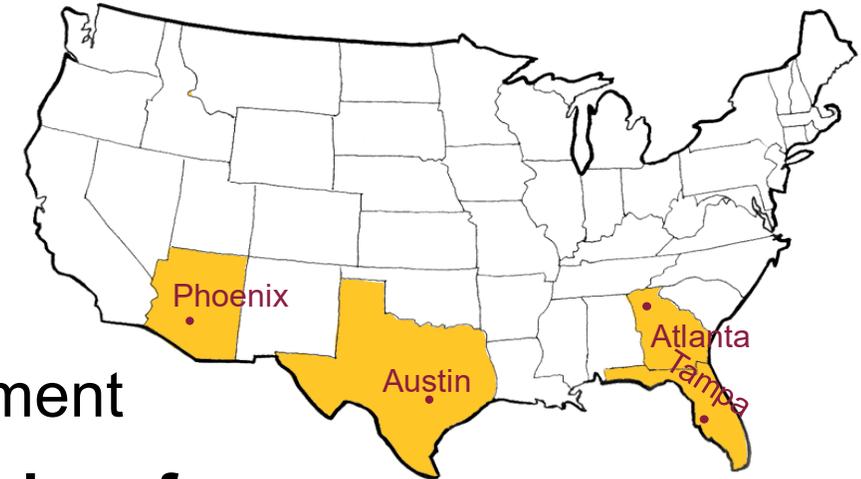
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**Traveler Behavior and Values Committee, AEP30**  
**Transportation Research Board**  
**January 11<sup>th</sup>, 2021**



# TOMNET Transformative Transportation Technologies (T4) Survey

- Phoenix, Atlanta, Austin, and Tampa metro areas
- Summer and Fall 2019 (pre-pandemic)
- Random address-based sample with online instrument
- Inclusion of rich **attitudinal data**, and robust **stated preference** questions, and extensive coverage of **Mobility-on-Demand and Autonomous Vehicles**



	Phoenix, AZ	Atlanta, GA	Austin, TX	Tampa, FL	Total
Sample Size	1,027	944	1,127	260	3,358
%	30.6%	28.1%	33.6%	7.8%	100%

# Survey Team

Sponsored by **TOMNET Tier 1 University Transportation Center**



# Survey Instrument



Attitudes  
and  
Preferences



Vehicles  
You Have  
and Where  
You Live



Current  
Travel  
Patterns



Mobility on  
Demand  
and Shared  
Mobility  
Services



Autonomous  
Vehicles

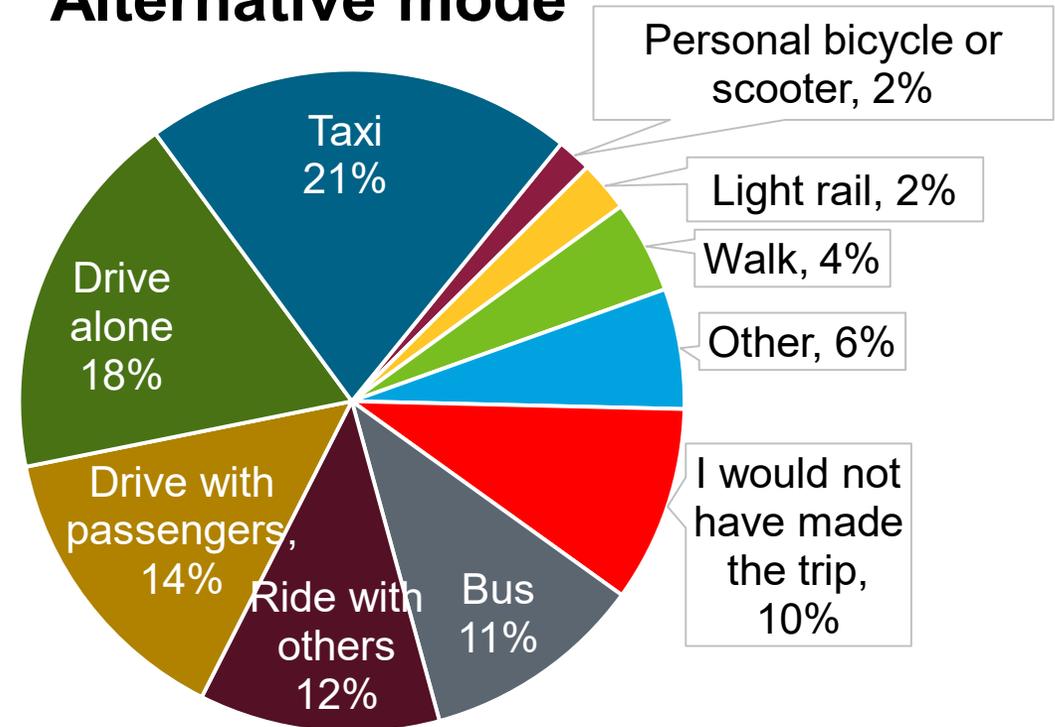


Background  
Information

# Ridehailing (RH) Trips (N=1,219)

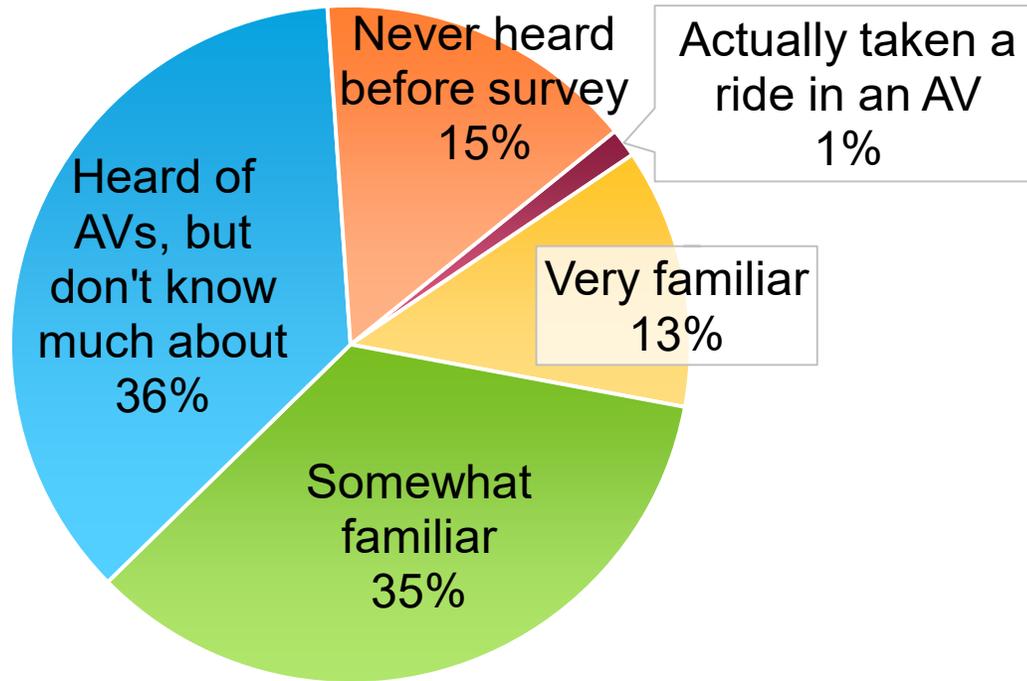
- 16% of sample use private RH (at least monthly)
- Average travel time 21 min
- 47% weekdays, 25% weekend nights
- 12% of last RH trips are in shared mode
  - Low income, women, and frequent users share more

Alternative mode

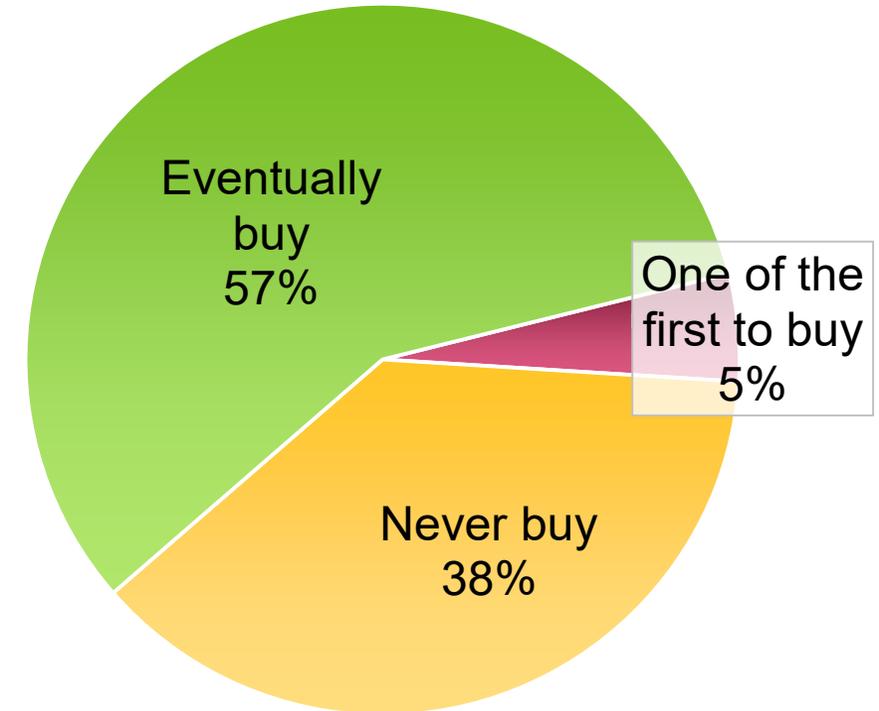


# Autonomous Vehicles (N=3,356)

## FAMILIARITY



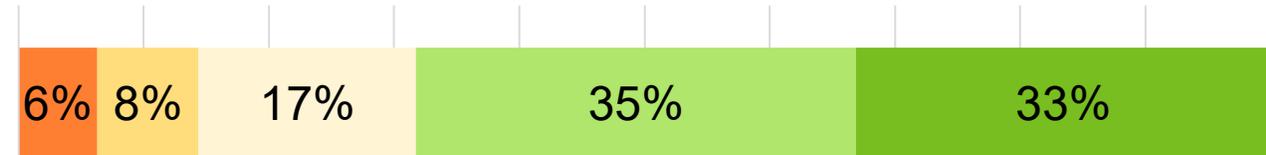
## WILLINGNESS TO BUY



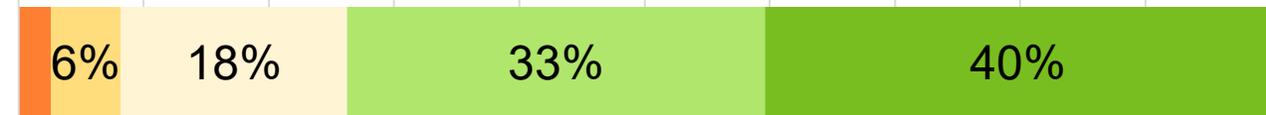
# Autonomous Vehicles: Safety and Sharing Perceptions

Strongly disagree    Somewhat disagree    Neutral    Somewhat agree    Strongly agree

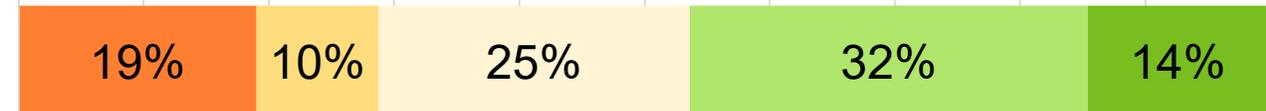
I am concerned about the potential failure of AV sensors, equipment, technology, or programs. (N=3331)



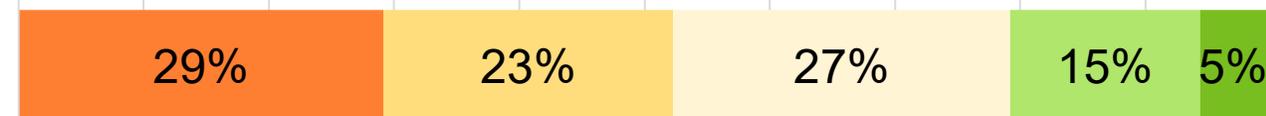
I want the ability to take control of the AV at any time during the ride. (N=3331)



I will use AV ridehailing services alone or with coworkers, friends, or family. (N=3358)

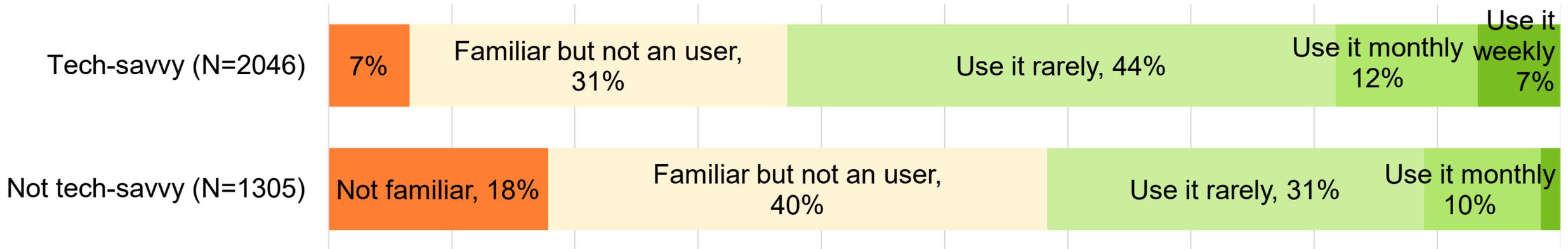


I will use AV ridehailing services with other passengers I don't know. (N=3358)

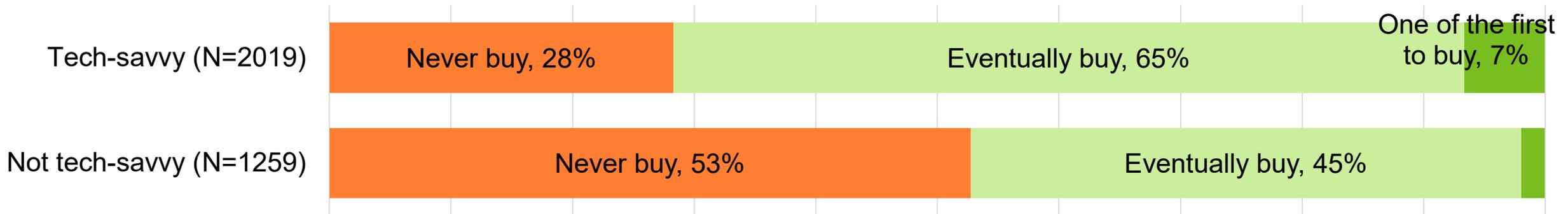


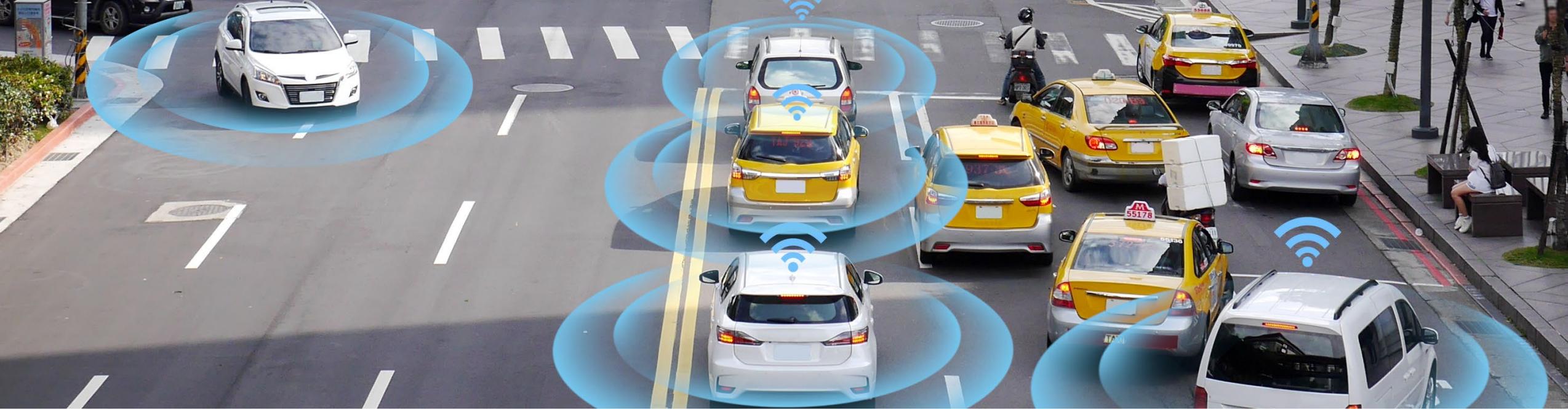
# Role of Tech-Savviness

## Use of Private Ridehailing



## Willingness to Buy AV





# Thank you!

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For more information visit: <https://tomnet-utc.engineering.asu.edu/>

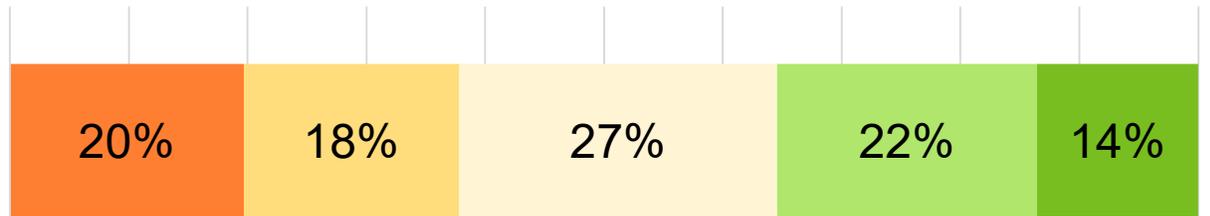
*Full citation: Khomeini, S. , Capasso da Silva, D., & Pendyala, R.. "Highlights from an In-Depth Behavioral Survey on Transformative Technologies in Transportation". Presented at Critical Issues Subcommittee Meeting, AEP10(1); Transportation Research Board; January 2021.*

# Ridehailing Impacts

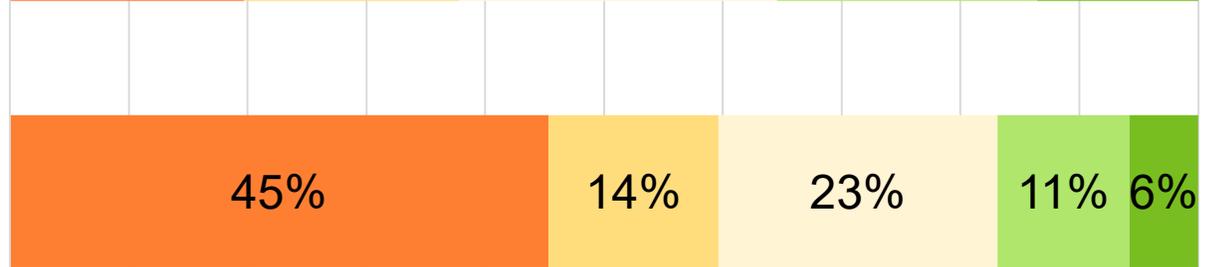
## Only monthly and weekly users

Strongly disagree    Somewhat disagree    Neutral    Somewhat agree    Strongly agree

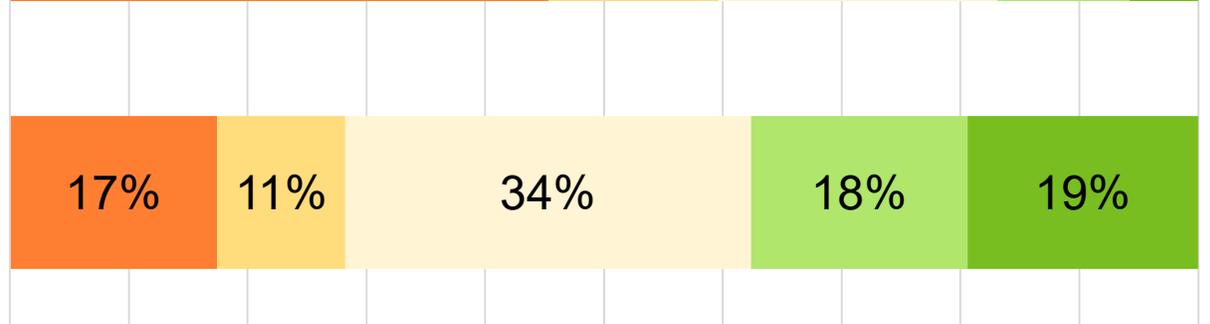
Ridehailing services allow me to live with fewer or no cars. (N=508)



Ridehailing service availability affects where I choose to live, work, and/or go to school. (N=503)



Ridehailing services help me get to/from public transit stops. (N=510)

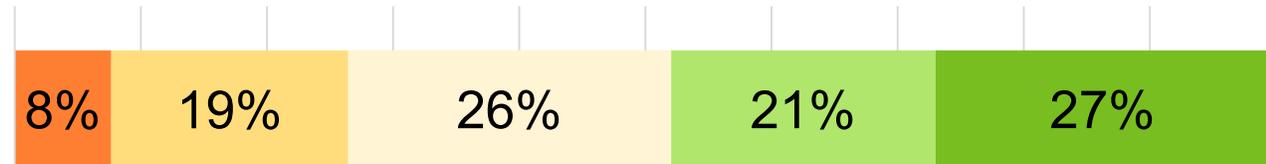


# Autonomous Vehicles: Travel Impacts

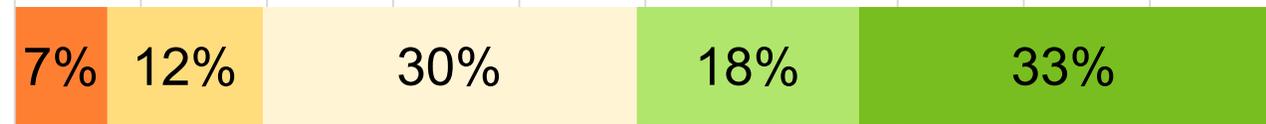
(N=3,358)

■ Very likely   
 ■ Somewhat likely   
 ■ Neutral   
 ■ Somewhat unlikely   
 ■ Very unlikely

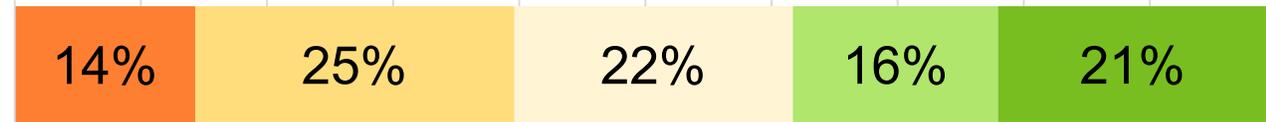
Making additional trips that are not made now



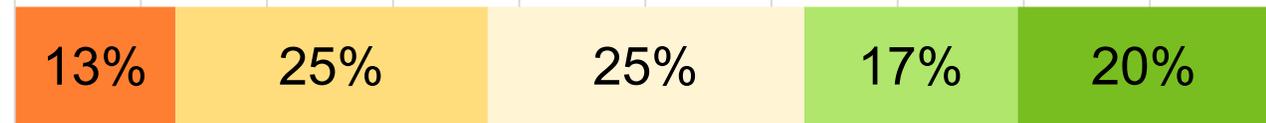
Moving to a better location or home



Making more long-distance road trips



Traveling more in peak hours (due to multitasking)



# How AVs Shape the Future of Mobility?

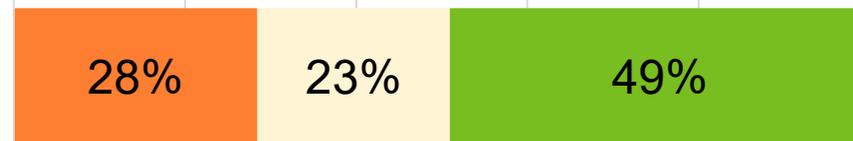
N=3,356

Disagree Neutral Agree

I would feel comfortable having an AV pick-up/drop-off children without adult supervision.



I would send an AV to pick-up groceries/laundry/food orders by itself.



AVs would save me time and money for parking by dropping me off and parking themselves.



Photo: Brian Tietz for Transdev

Photo: Ross D. Franklin, STF / Associated Press

