

ARTS21

The 2021 TRB Annual

TRB TRANSPORTATION RESEARCH BOARD

Automated Road Transportation Symposium

AV Perceptions Among Older People

Exploring Results From TOMNET T4 Survey

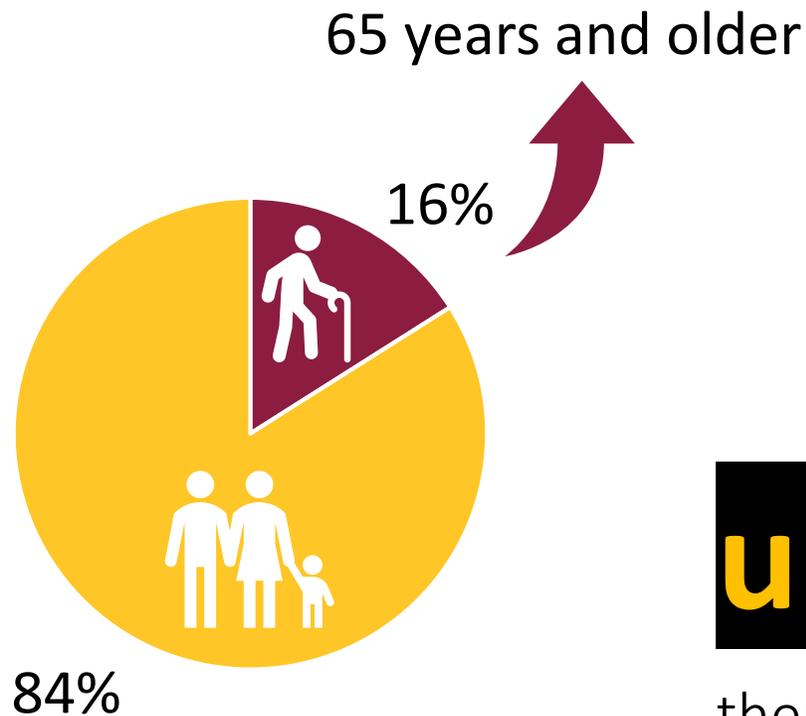
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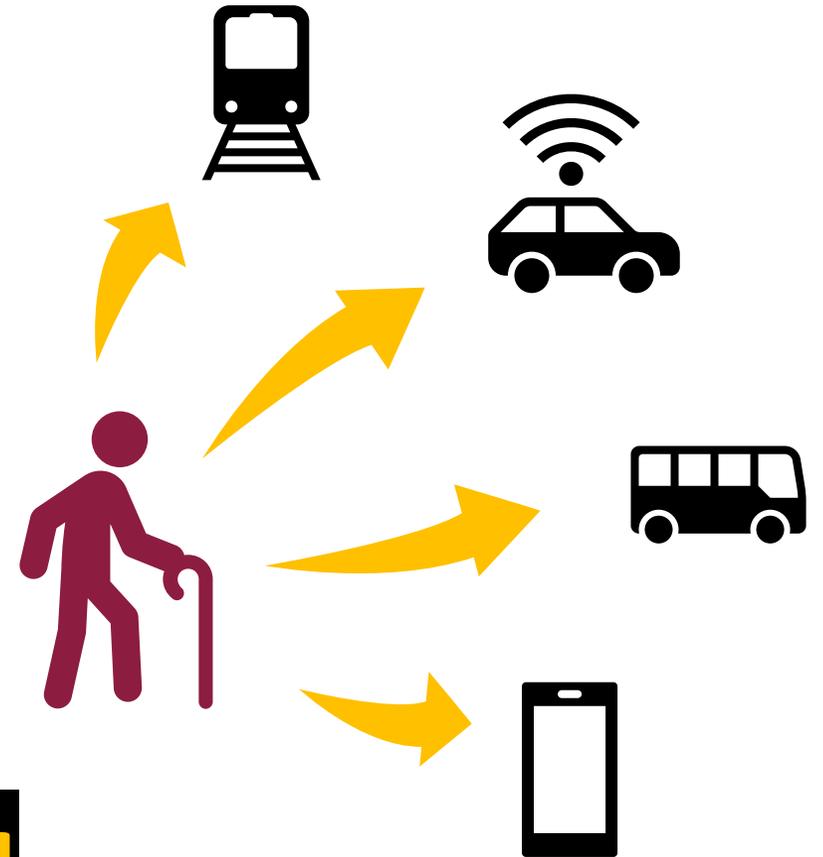


Introduction



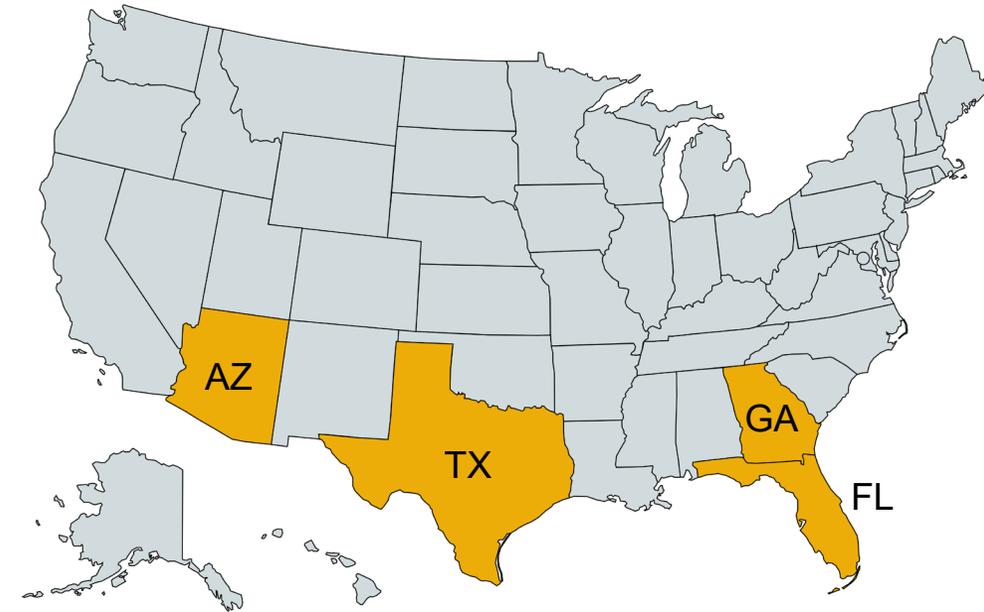
understand

their mobility needs to ensure transportation equity



Data Description

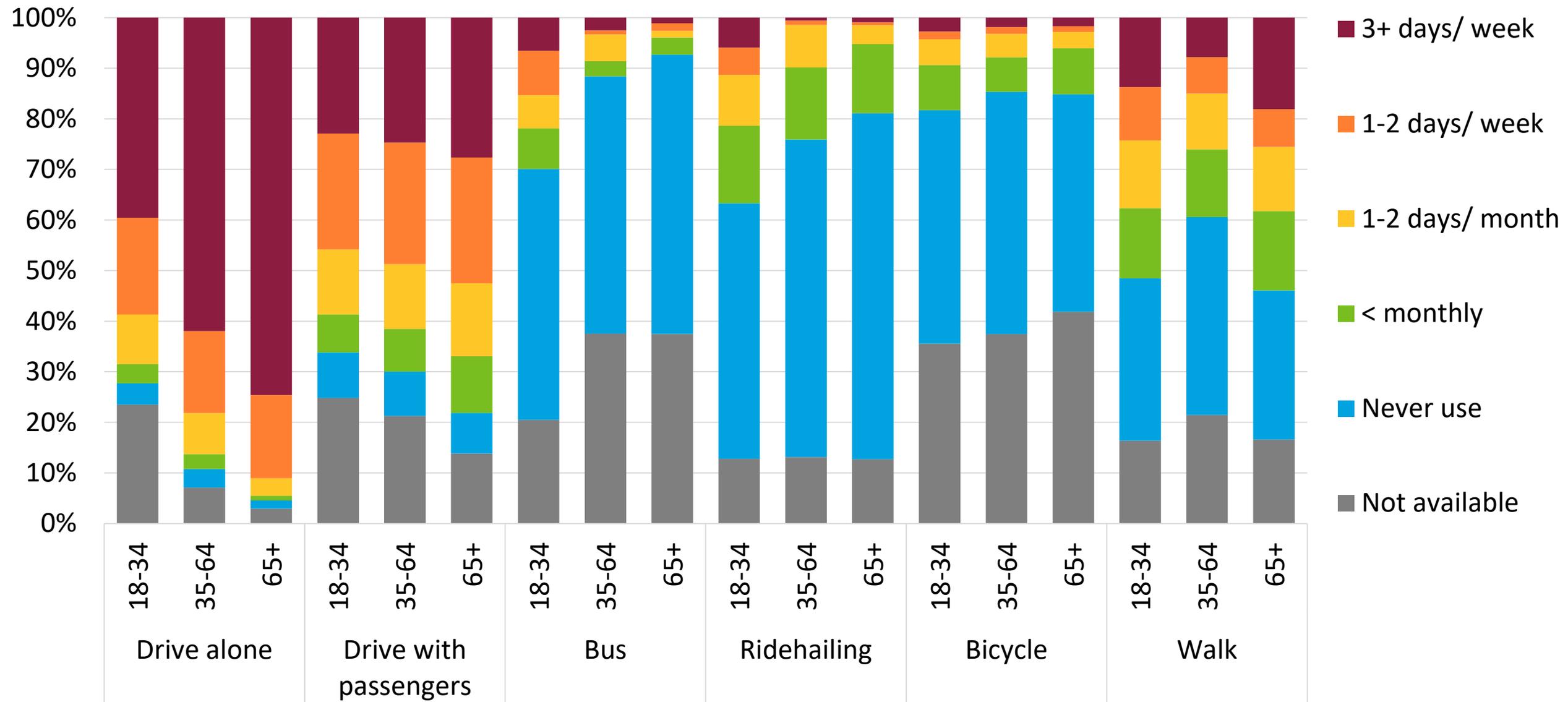
- TOMNET – D-STOP University Transportation Centers collaboration to explore transformative technologies in transportation
- T4 Survey (2019) administered in Phoenix, Atlanta, Austin, and Tampa metropolitan areas
- Attitudes, Mobility Behaviors, Ridehailing Usage, and AV Perceptions
- Three age groups
 - young adults (18 to 34 years old)
 - middle-aged adults (35 to 64 years old) and
 - older adults (65 years and older)
- Weighted sample: N = 3,436



Survey Team



Frequency of Mode Use for Non-Commuter Trips by Age Group

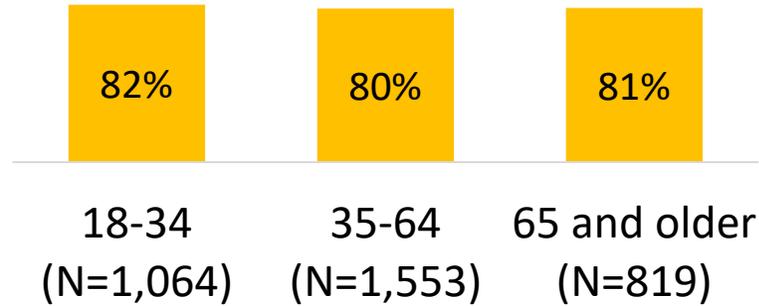


Attitudes

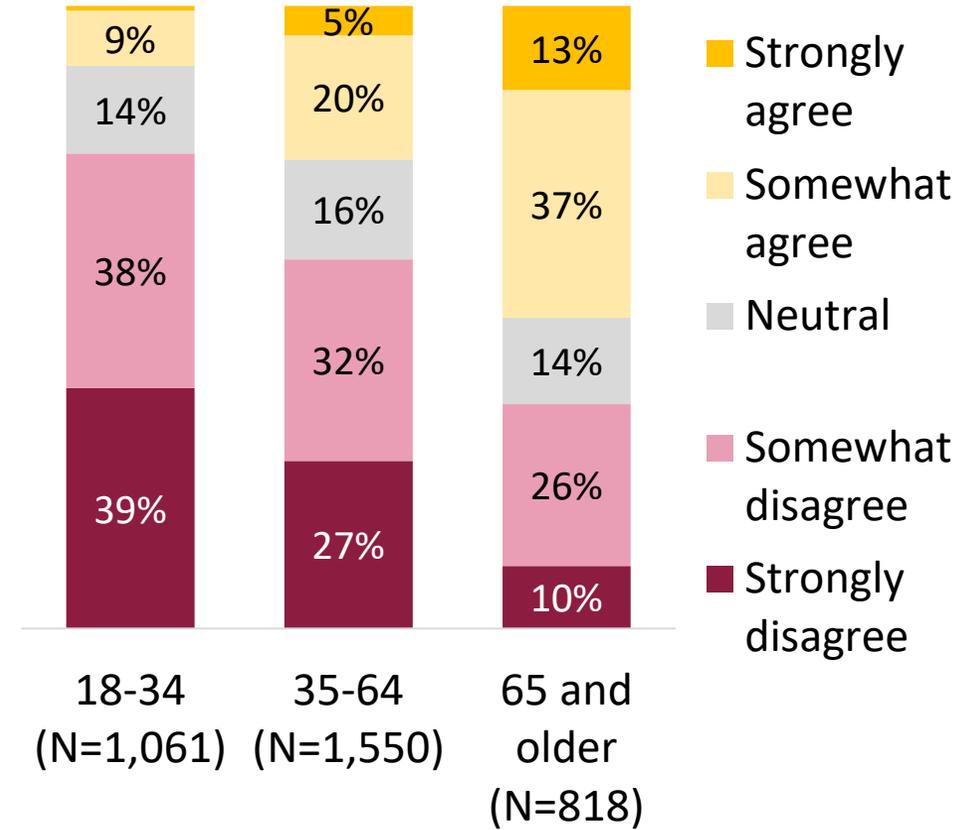
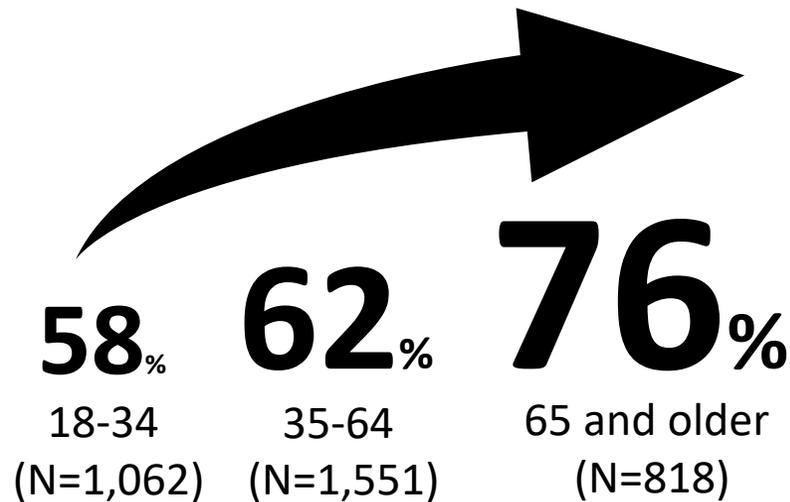


“Learning how to use new technologies is often frustrating for me” (N=3,429)

Agreement with “I like trying things that are new and different”



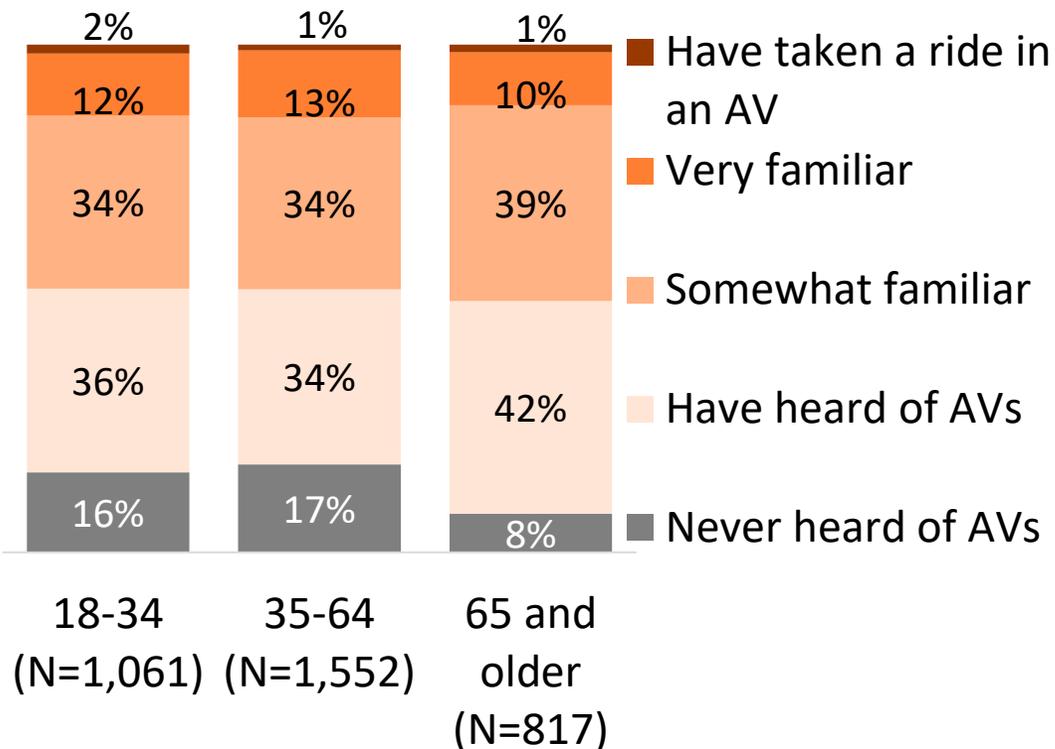
Agreement with “my daily travel routine is generally satisfactory”



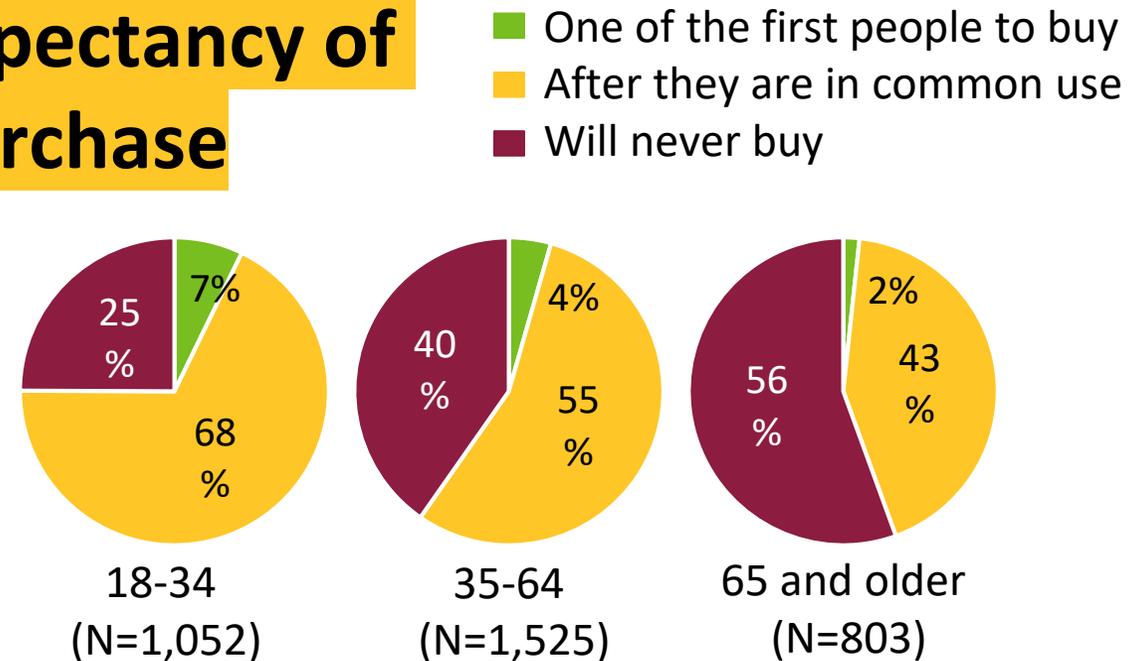
Adoption of AVs

$\frac{1}{3}$  are likely to use **human-driven vehicles less** once AVs are widely accessible

Familiarity with AVs



Expectancy of purchase



Concerns Regarding AVs

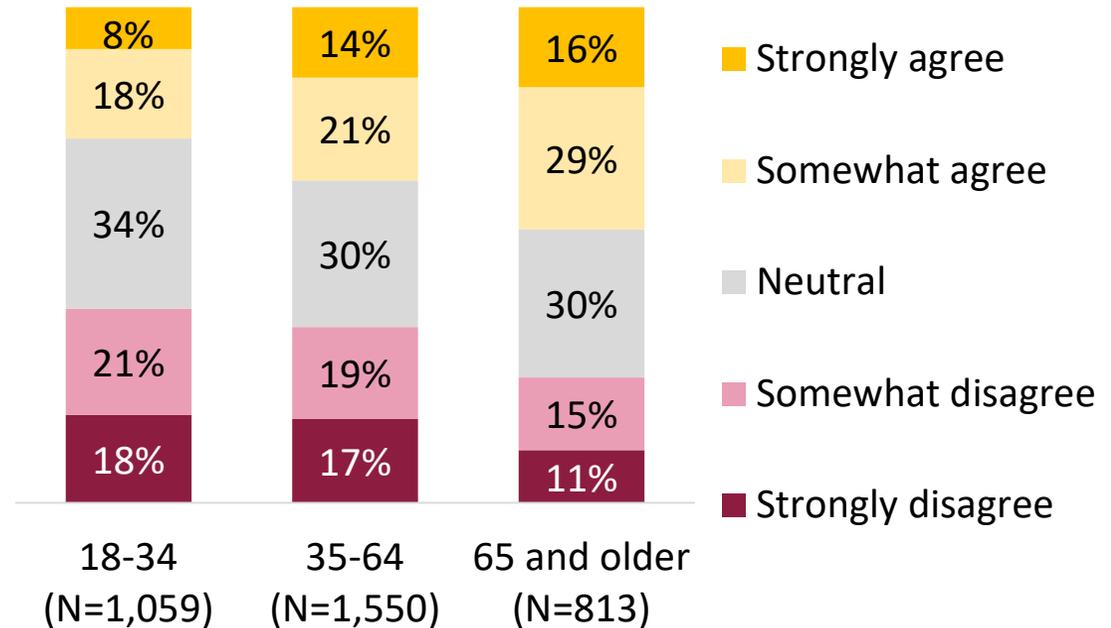
Concerns about AV technology failure **do not vary** across age groups

30%



would **never** ride in an AV
(vs 20% of middle-aged and 14% of young adults)

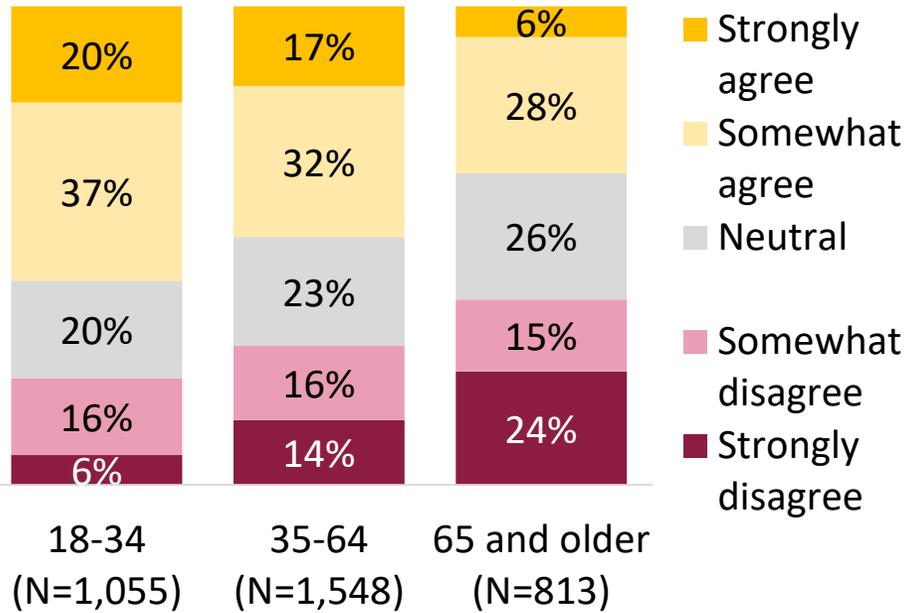
“AVs will eliminate my joy of driving” (N=3,422)



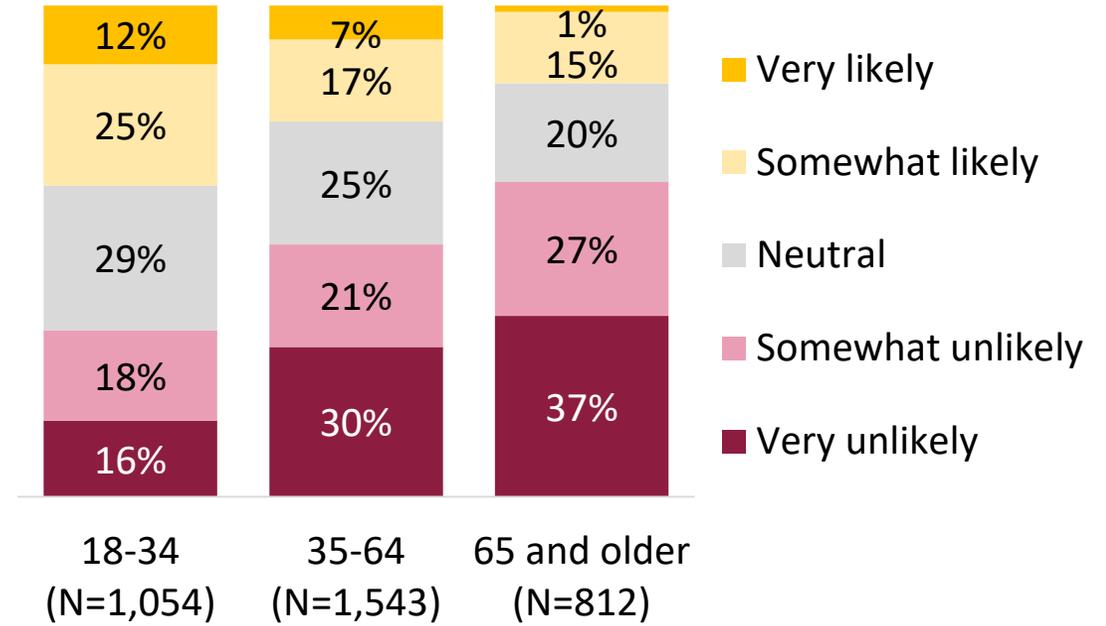
Benefits

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

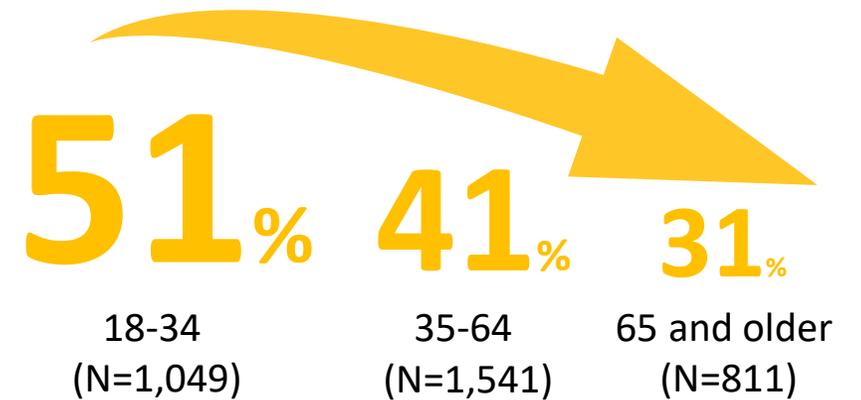
(N=3,416)



"Likelihood of making additional trips when AVs are widely accessible" (N=3,436)



Likelihood of tolerating congestion better



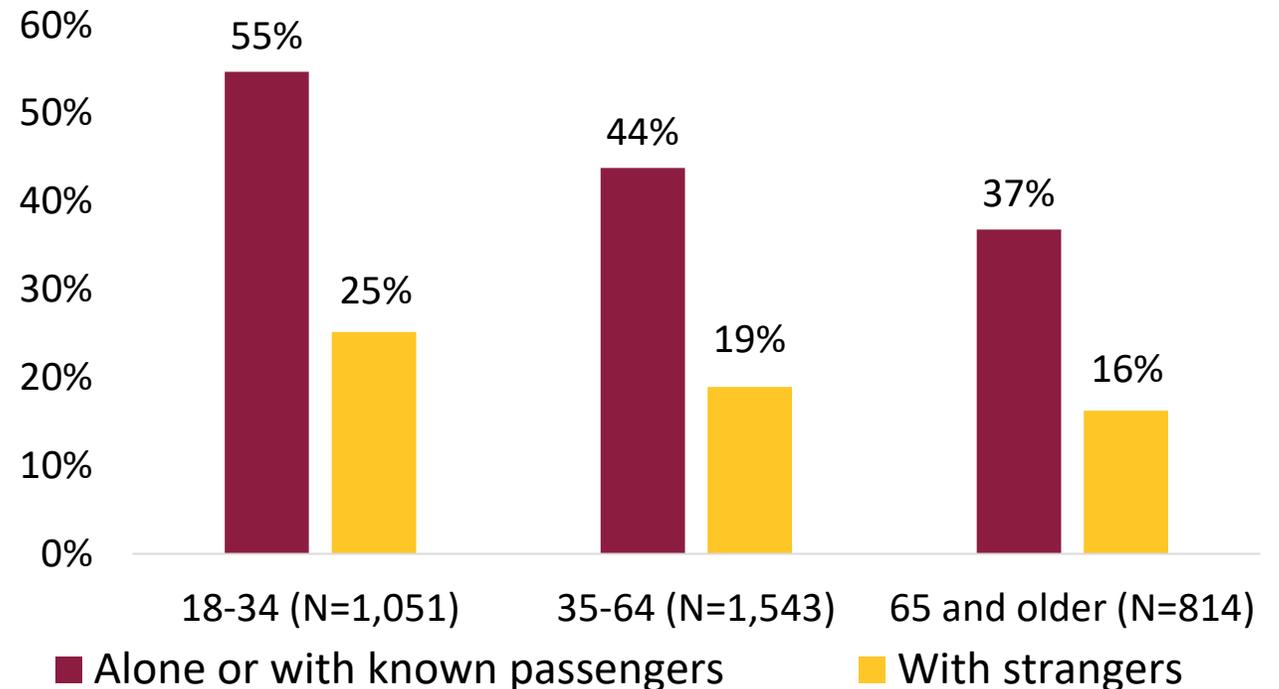
Shared Mobility

70% 

have no reasonable alternative to driving

(vs 65% of middle-aged and 53% of young adults)

Agreement with "I will use AV ridehailing services..."





Valley Metro-Waymo Partnership

First-hand experiences

59% were taking **more trips** after they started riding Waymo

Shift in travel modes

transit, ridehailing rides  Waymo

After trying Waymo...



Riders became more comfortable with riding with friends or relatives and riding with strangers



Willingness to ride alone remained rather unchanged



Participants felt that AVs would improve safety and mobility for all



Participants were eager to see more AVs on streets

Conclusions

- older people are **as aware of AVs as younger age groups**
- appear to be more attached to driving
- although they seem to be open to new experiences, they have **more skepticism** regarding AVs
- do not believe in the potential benefits from AVs as much as younger age groups
- likely to be late adopters of AVs

FUTURE

- investigate how **first-hand experiences** change behaviors and perception of AVs
- explore how tech-savviness may be related to older adults' willingness to ride in an AV

Thank you!

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TOMNET Transportation Center

Teaching Old Models New Tricks

<http://tomnet-utc.org> | <http://mobilityanalytics.org>

ASU Ira A. Fulton Schools of
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