

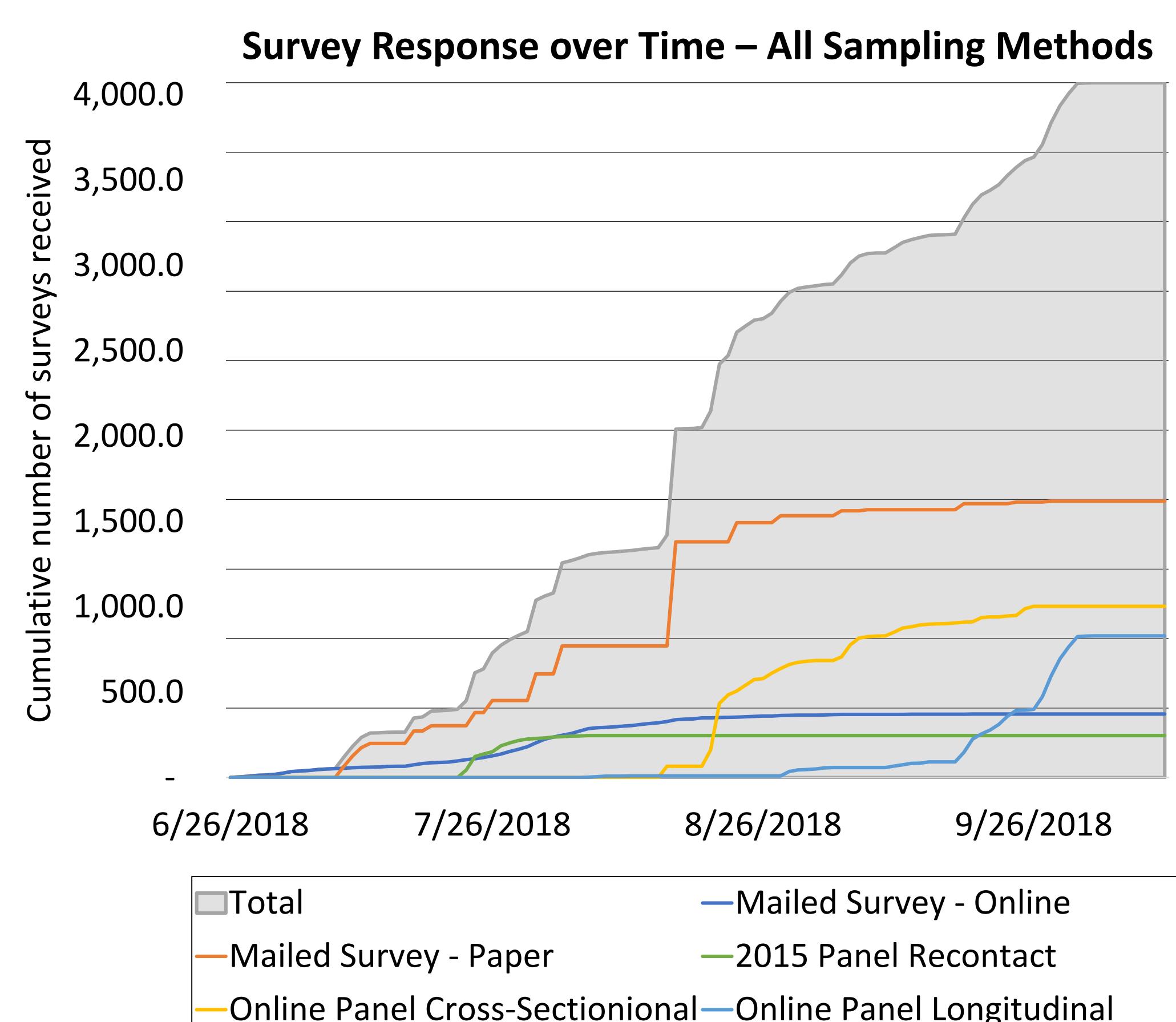
California Transportation Panel Study

The California panel study seeks to improve the understanding of the impacts of emerging technologies and transportation trends through the application of a unique longitudinal approach. In this stage of the research, we build on the research efforts that led to the collection of 2015 California Millennials Dataset and complement them with a second wave of data collection in 2018, generating a longitudinal study of emerging transportation trends with a *rotating panel* structure. The use of longitudinal data allows researchers to better assess the impacts of *lifecycle, periods and generational* effects on travel choices, analyze emerging components of travel behavior, e.g. the use of shared mobility among various segments of the population and its impact on vehicle ownership over time. Further, it will help researchers evaluate causal relationships between these variables, supporting the development of better-informed policies to promote transportation sustainability.

Sampling Methodology

We employ a mix of sampling methods to reduce deviations from non-representativeness of the sample. The 2018 survey was made available in English and Spanish and both online and by mail. In the project:

1. A questionnaire was mailed out to a stratified random sample of 30,000 California residents of which 1,620 were returned via the mail and 372 complete the survey online
2. We used an online opinion panel to recruit 1,833 Californians, of which 830 had agreed to be part of the future longitudinal component of the study (an additional 170 are still being recruited to join the panel)
3. All available respondents from the 2015 survey were recontacted by the online opinion panel vendor, and 246 completed the survey



Survey Response Rates by Sampling Method (to date)

Type	Number of Invitations Sent	Number received	Response Rate
Mailed Survey	29,999	1992	6.64%
Mailed Back		1620	5.40%
Completed Online		372	1.24%
2015 Panel Recontact	1939*	246	12.69%
Online Panel Longitudinal	N/A**	830	-
Online Panel Cross-Sectional	N/A**	1003	-
Total	4071		

* Number of 2015 respondents that could be recontacted

** Number of invitations sent has not provided (yet) by the panel vendor

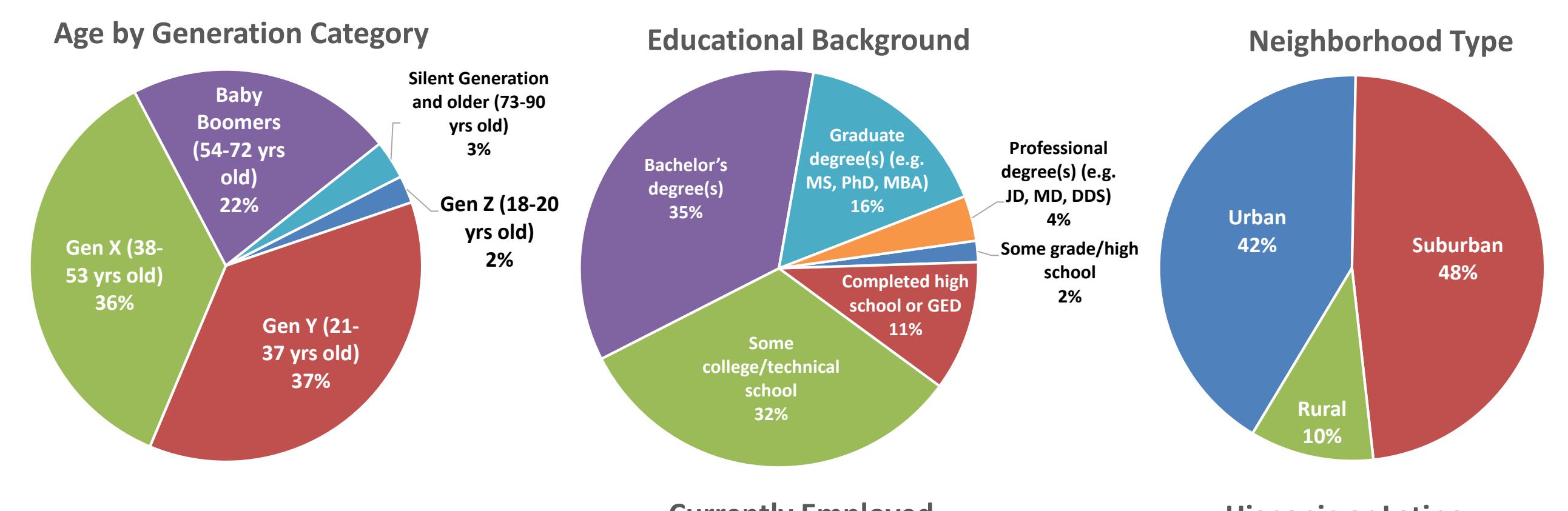
Survey Results Overview

Data Composition by Sampling Method (raw data, before data cleaning and weighting)

Sampling Method	Online	Paper	Total
Mailed Survey			
Count	372	1,620	1,992
Percent by row	18.67%	81.33%	100.00%
Percent by total	9.14%	39.79%	48.93%
2015 Panel Recontact			
Count	246	N/A	246
Percent by row	100.00%	N/A	100.00%
Percent by total	6.04%	N/A	6.04%
Online Panel Longitudinal			
Count	830	N/A	830
Percent by row	100.00%	N/A	100.00%
Percent by total	20.39%	N/A	20.39%
Online Panel Cross-Sectional			
Count	1,003	N/A	1,003
Percent by row	100.00%	N/A	100.00%
Percent by total	24.64%	N/A	24.64%
Total	2,451	1,620	4,071
Percent	60.21%	39.79%	100.00%

Sample Composition*

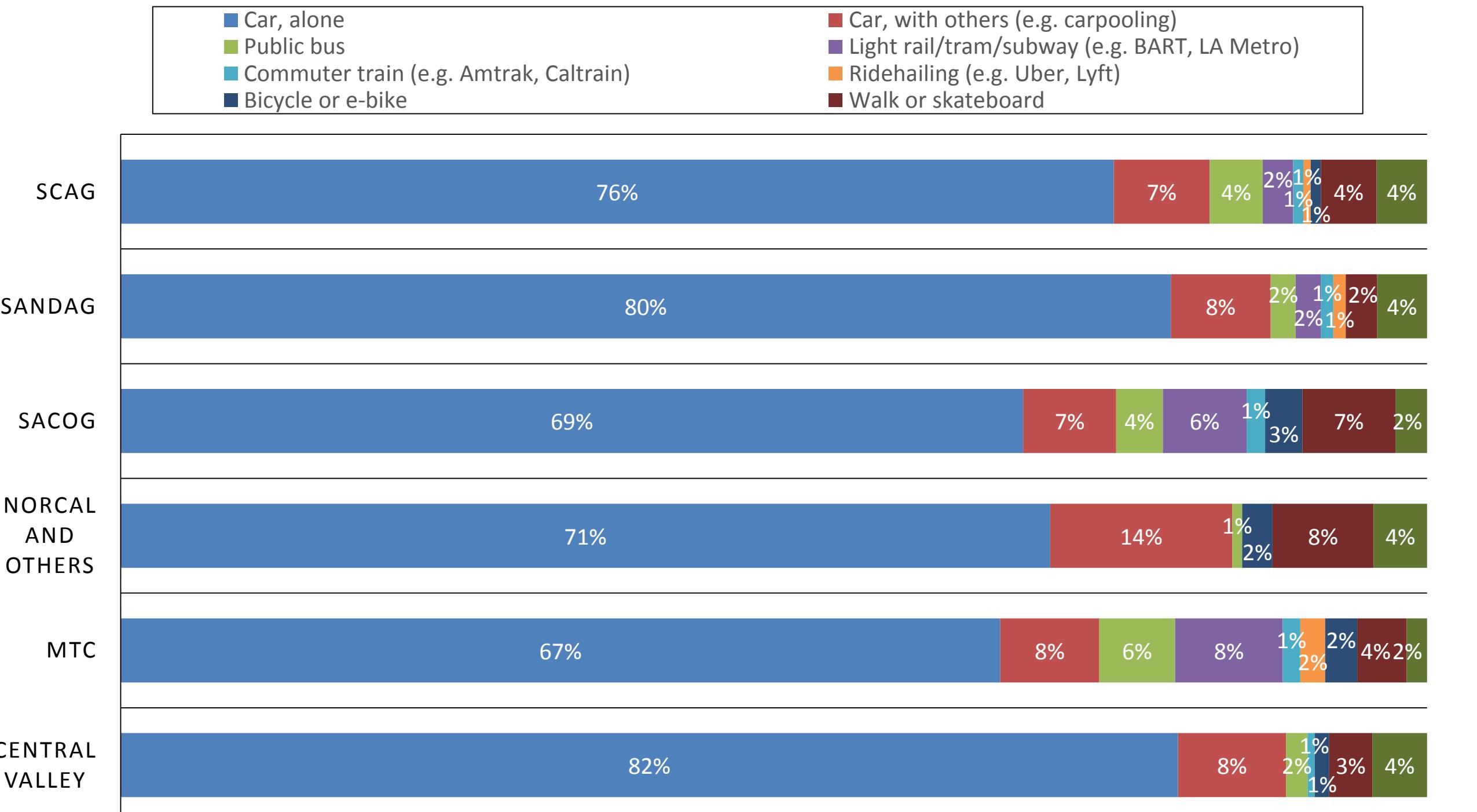
* Does not include paper surveys returned via mail, as they are currently being inputted



Distribution of Cases by Region

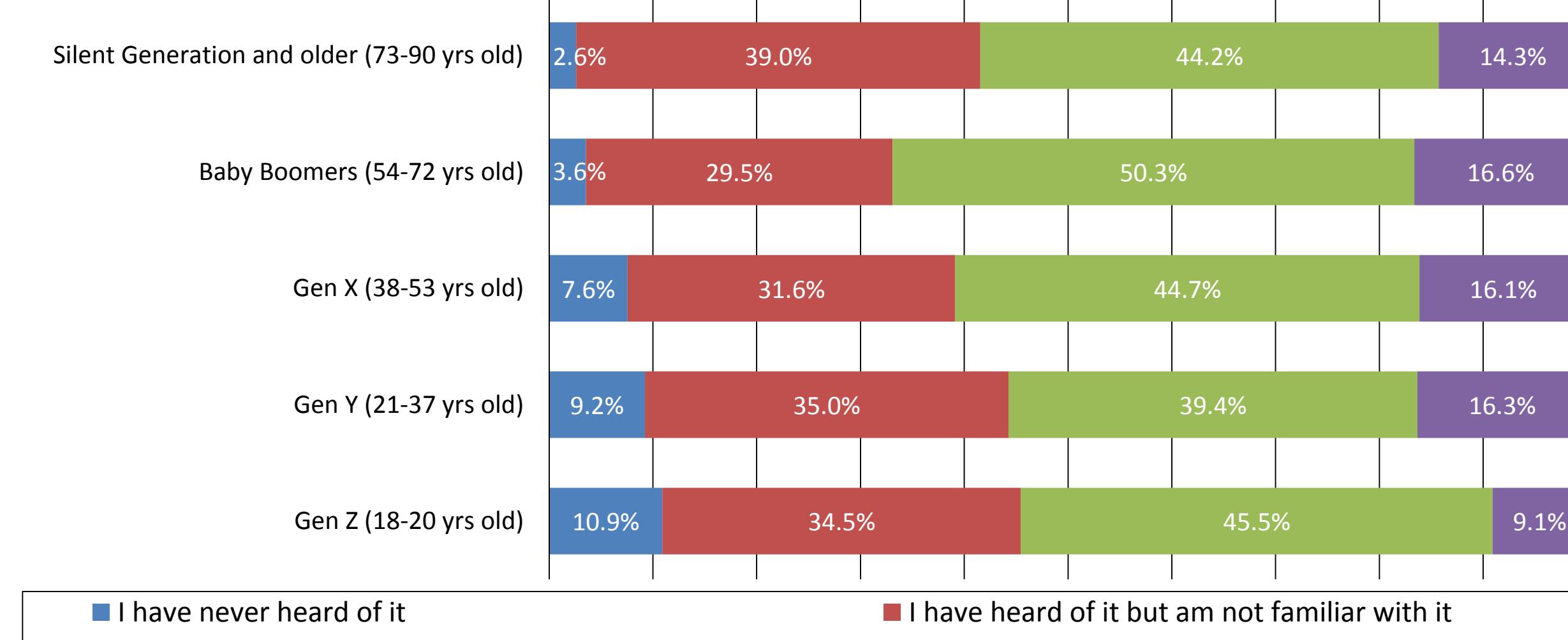


Primary Commute Mode Choice by Region

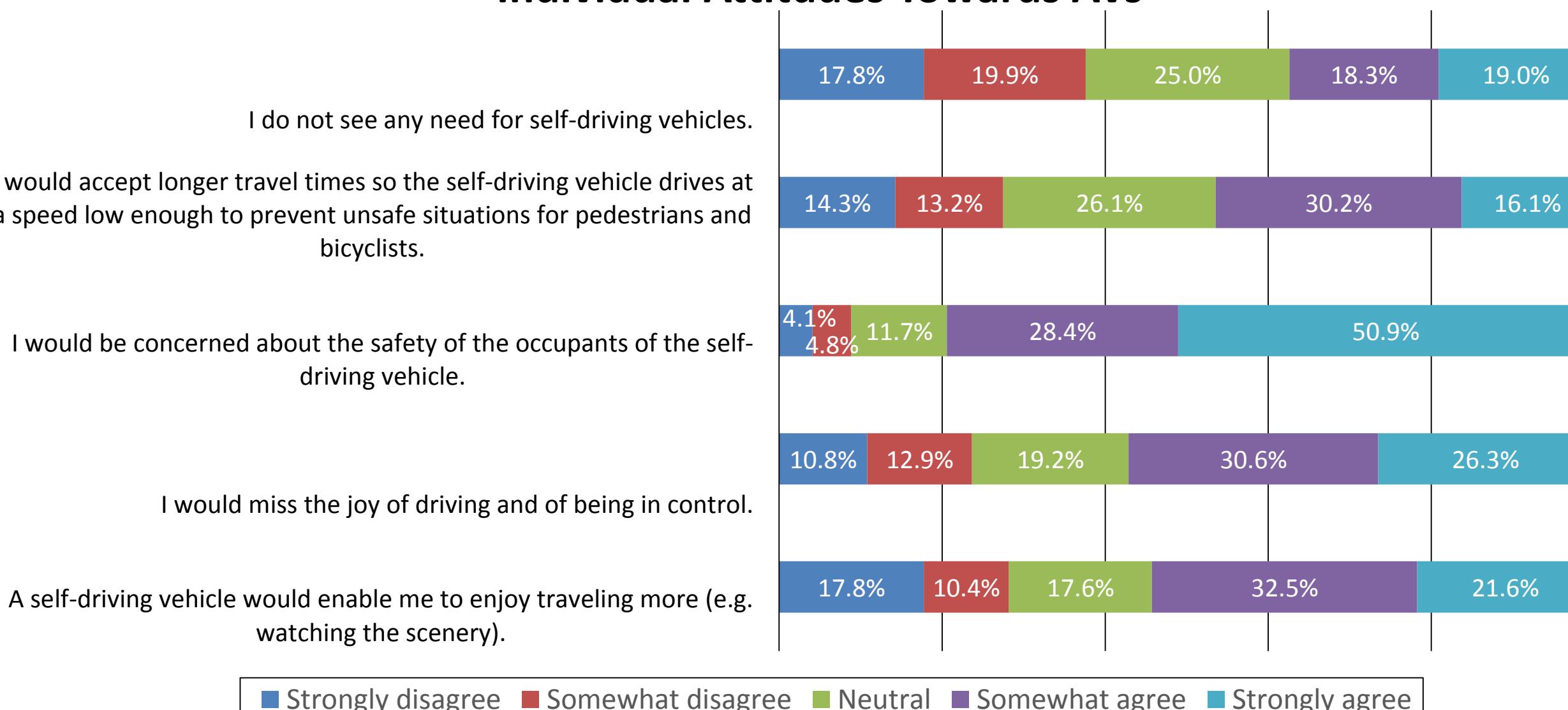


Automated Vehicle Perceptions

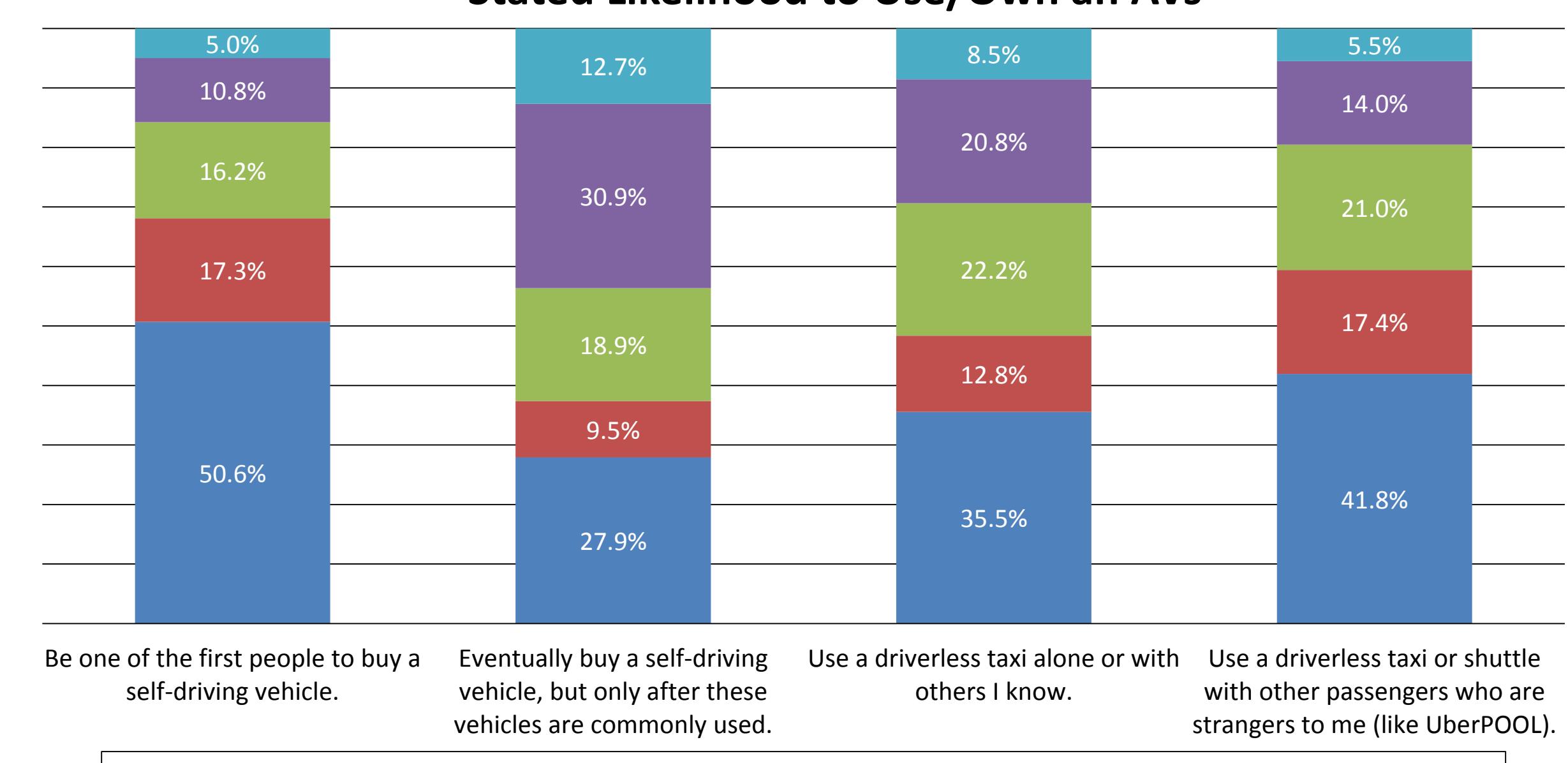
Familiarity with AV/s by Generational Cohort



Individual Attitudes Towards AVs



Stated Likelihood to Use/Own an AVs



Next Research Steps

- Data entry for the paper surveys that were mailed back:
 - 1620 surveys will be double entered during the data input and validation process
- Full dataset management:
 - Cleaning & Validation: identification and removal of untrustworthy responses
 - Augmentation: include external sources for variables measuring land use, built environment characteristics, transit accessibility, etc.
- Data analysis:
 - Investigate other variables in the dataset with additional descriptive statistical analysis
 - Deploy more in-depth statistical analyses to address the core research questions
- Annual updates to panel data:
 - Exploring the inclusion of annual data collections to ensure the most current data is available for analysis, quickly response to changes in the market, and analyze trends over time

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