



# 2022 Motional Consumer Mobility Report

November 2022

# ABOUT THE SURVEY

This report is based on independent research conducted by a third party for Motional that evaluates consumers' perception of mobility and autonomous vehicles. The results consist of 1,000 total responses from general consumers in the United States who took an online survey. This survey fielded at a 95% confidence level from September 21, 2022 to October 4, 2022. The 2021 version of the study [can be found here.](#)

## SUMMARY

The robotaxi industry is making rapid advancements toward commercialization. Multiple autonomous vehicle (AV) companies, including Motional, have launched public services in major U.S. cities, signaling that autonomous ride-hail service is no longer an R&D concept, but a real-world consumer product.

The 2022 Motional Consumer Mobility Report, now in its third year, analyzes consumer interest in the benefits of robotaxis, as well as some of the headwinds AV companies face moving forward, most notably, overcoming hesitations that the vehicles are safe and ready for public roadways. This year's survey data also shows a clear generational divide when it comes to consumer sentiment about AVs, with Millennials (78%) and Gen-Zers (82%) significantly more trusting of the technology and ready to try a robotaxi than their older counterparts (Boomers 48%). Support was also strong in California, where multiple AV industry pilot programs are underway.

The report also shows that prospective passengers are interested not just in how robotaxis will move them from place to place, but also in the level of comfort, solitude, safety, and customization AVs could potentially offer. Features such as being able to choose their own music, enjoying a moment of solitude between meetings, controlling the interior climate, and using AI to determine the most efficient path forward all registered as appealing benefits for robotaxis.

Survey respondents again recognized that human drivers can be flawed and that AVs have the potential to make roadways safer by reducing the number of drunk, distracted, drowsy, and angry drivers operating vehicles. Just 43% feel human drivers are safer than AVs today.

## A GENERATIONAL DIVIDE

Younger generations [tend to embrace technology faster](#). In the survey, 29% of Gen Zers and 37% of Millennials describe themselves as “early adopters,” or those who like to try new technologies before others, while 32% of Gen X and 48% of Boomers said they prefer to wait and “try new technologies once they are tried and tested.”

So it’s not surprising that the 2022 Consumer Mobility Report found a deep divide among the generations in their attitudes toward driverless vehicles.

Two-thirds of those surveyed said they were comfortable or neutral with the safety of AV technology. However, the figure includes 82% of Gen Z members and 78% of Millennials. In contrast, 48% of Boomers said they felt comfortable or neutral. An even higher number of Gen Z and Millennials (86% and 83%) had no concerns with vehicle security.

This matters because Millennials currently make up the largest segment of the U.S. population and are coming into their peak money-making years. Gen Z’s comfort with AVs is also promising given the younger generation [is projected to surpass](#) Millennials in terms of a consumer base around 2026.

Nearly 7 in 10 Boomers said they would feel “concerned” as a pedestrian in a city with AVs. The exact mirror number of Gen Z respondents (7 in 10) said they would feel comfortable as a cyclist or pedestrian in a city with AVs, or as a passenger in an AV. Only 1 out of 10 Gen Zers and Millennials said they would feel “stressed” or “afraid” to be a pedestrian in a city with driverless vehicles.

Even among those who are interested in trying a robotaxi, their motivations can often be different. Gen Zers said the top three reasons they would choose an autonomous ride-hail is to save money (28%), to travel at night (27%), or experience a new technology (26%). And 23% said they would make that choice to listen to music.

Experiencing new technology is the number one reason by far (33%) why Gen Xers said they wanted to try a driverless vehicle, followed by “after consuming alcohol or other controlled substances” (24%), and to run errands (19%).

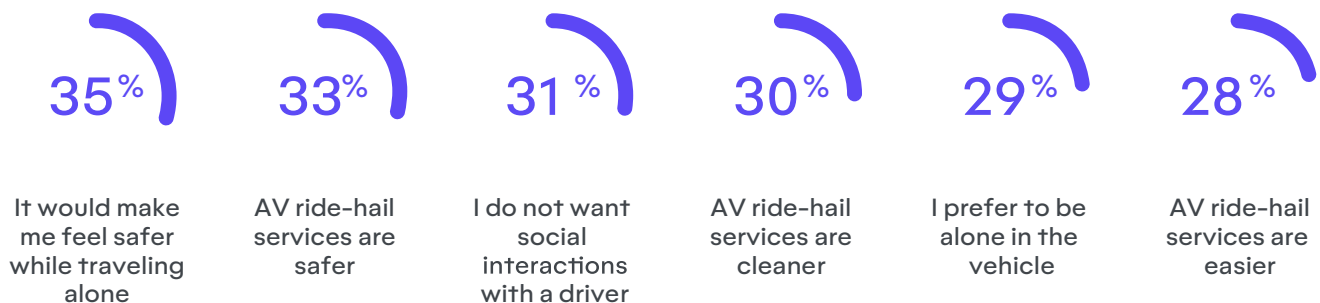
By comparison, 23% of Boomers said they would take a robotaxi to try a new technology, 21% said cost would play a role in their choice, and just 8% would be interested in listening to music.

Finally, 23% of Millennials would take a driverless vehicle to work compared to 9% of Boomers.

## COMFORT AND CUSTOMIZATION, SOLITUDE & SAFETY

The 2022 survey asked respondents about their motivations for using a driverless vehicle, as well as their expectations of the vehicle as a product. Results show that prospective passengers are interested in how the vehicle can serve their individual needs, such as ride customization or the desire for a ride by themselves.

### Top Reasons People Prefer AVs



Over half of respondents said that having a customized experience was an important detail, 55% agreed it was important for the vehicle to use AI to choose the most efficient route, and 55% wanted to be able to instruct the vehicle to wait for them if they were busy getting ready.

Another big motivating factor in choosing an AV over a human driver was the desire to ride alone, whether it was to capture a moment of solitude between meetings, or to enhance personal safety.

Nearly 1 in 4 members of Gen Z (23%) and Millennials (25%) would choose an AV because they need alone time, and 50% of Gen Z said they would prefer an AV ride-hail when they don't want social interactions with a driver.

Personal safety also emerged as an important factor. Although just 1 in 5 overall would prefer an AV for a ride-hail service, the top two reasons revolve around safety: 35% said a driverless vehicle would feel safer while traveling alone and 33% said they would feel safer in an AV in general.

In addition, approximately 1 in 4 Gen Zers (27%) and Millennials (25%) would choose an AV to travel at night. And 40% percent of women would feel safer in an AV while traveling alone (32% of men said the same thing).

While women prefer AVs over human drivers for personal safety reasons, men prefer AVs because they feel it would make the road safer (35%) and that AVs would be cleaner (33%).

## FAMILIARITY LEADS TO COMFORT

With the growth in personal vehicles offering advanced driver assistance technology, as well as the number of AV companies now offering public rides in major cities, the number of people who say they have experienced AV technology is rising. And as they become more familiar with the technology, they feel more comfortable with it.

According to the survey, 27% said they have ridden in an AV, including 51% of Gen Zers (compared to 5% of Boomers). (It is possible that respondents are including experiences in vehicles with advanced ADAS features that allow drivers to take their hands off the steering wheel but are not considered true autonomous vehicles). And 42% of all respondents they are either somewhat, very, or extremely knowledgeable about AVs.

Those with no or low AV knowledge have much stronger concerns related to safety, such as the possibility of a vehicle making a mistake: 65% of those with little or no knowledge are worried about vehicle errors compared to 24% with high AV knowledge. Those numbers are 28% for those who say they have already ridden in an AV, and 62% for those who haven't.

Only 1 in 4 (24%) Americans who have not ridden in an AV say they would feel comfortable as a passenger, but those numbers jump to more than 4 in 5 (84%) if the respondent had already experienced one. Over half (53%) of those who have ridden in an AV are comfortable with the safety and security of AV technology and almost half (46%) would choose an AV over a human-driven ride-hail.



Residents in California, where there are multiple AV pilots underway, appear more likely to be interested in AVs than the rest of the country. The number of California residents excited about AV technology has grown 20% year over year. In addition, belief in the safety of AV tech is 50% higher among Golden State residents than the rest of the country.

## OTHER BENEFITS

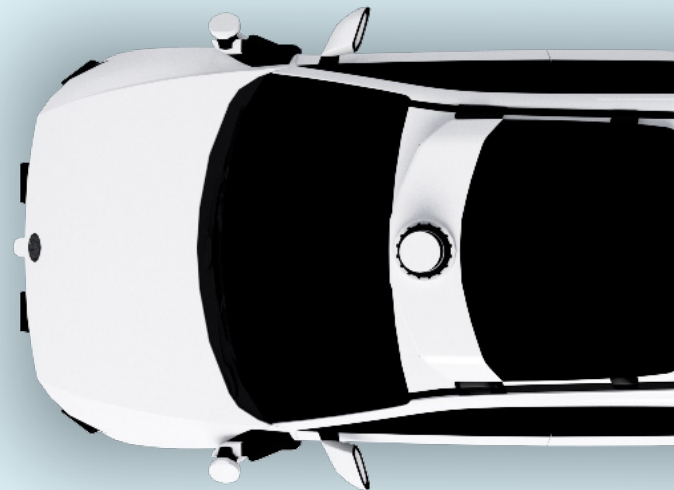
As previous Consumer Mobility Reports have shown, Americans are becoming aware of the unique benefits robotaxis can provide compared to human drivers, especially those focused on improved road safety.

Americans believe AVs can significantly reduce dangerous driving habits, including drunk driving (48%), road rage (42%), and distracted driving (39%). These are some of the leading causes of fatal and serious car accidents on public roadways.

In addition, consumers say AVs provide more equitable transportation options by providing transportation for those who have trouble driving (36%) and by improving public transportation options (20%).

## CONCLUSIONS

- There's a generational divide in comfortability and usage, with younger generations likely to feel the technology is safer and ready for passengers.
- Passengers are interested in robotaxis for additional comfort, and customization, including their own minute away from the world.
- Those exposed to AVs have a much higher level of comfort and trust with AVs, showing that consumer education and awareness will be important moving forward.
- Consumers recognize the unique benefits AVs can bring compared to human drivers, ultimately focusing on improved road safety.



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