

RIDING INTO THE FUTURE - Consumer Acceptance of Fully Automated, Self-Driving Vehicles

**J.D. POWER 2024 U.S. MOBILITY
CONFIDENCE INDEX (MCI) STUDYSM**

In collaboration with MIT Advanced
Vehicle Technology Consortium

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J.D. Power 2024 U.S. Mobility Confidence Index (MCI) StudySM

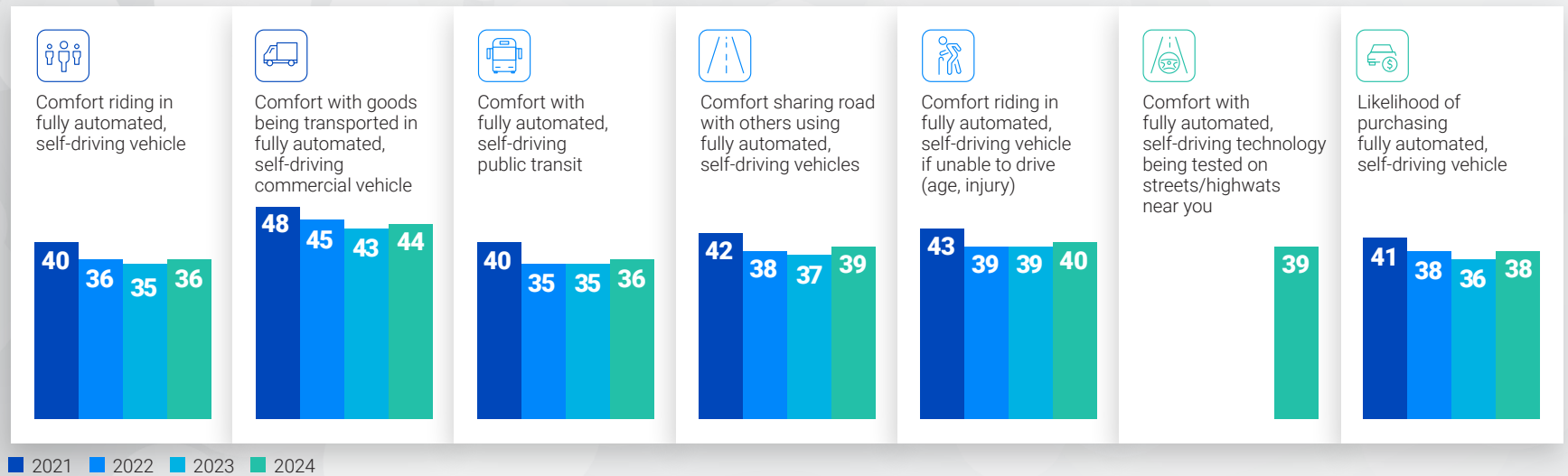


The *J.D. Power 2024 U.S. Mobility Confidence Index (MCI) Study* brings together two organizations with an aligned mission to understand consumer knowledge and acceptance of fully automated, self-driving vehicles. Each organization has extensive independent research experience providing consumers, government, and industry with a data-driven comprehension of consumer behaviors. In this collaboration, the partners leverage each other's experience and data to develop insights that enhance the global conversation regarding consumer viewpoints on automated vehicle (AV) comfort level, roadblocks/enablers to acceptance, and new topics impacting AV adoption. Since 2019, J.D. Power has conducted the annual Mobility Confidence Index Study to provide a comprehensive measurement of consumer readiness for fully automated, self-driving vehicles. In 2021, J.D. Power's efforts in this area were combined with MIT Advanced Vehicle Technologies (AVT) consortium's multi-year research centered on assessing consumer knowledge and acceptance of driving automation (Lee et al., 2021) to create today's comprehensive MCI study that provides a yearly barometer of consumers' interests in new mobility solutions and related topics.

AV Readiness Increases After a Two-Year Decline

The automotive industry is seeing modest signs of increased consumer confidence in fully automated self-driving vehicles, although overall confidence remains low. After a two-year decline, the index score for consumer automated vehicle (AV) readiness increases 2 points to 39 (on a 100-point scale), which is where it was in 2022. While the index moved in a positive direction, the pace with which consumers accept the technology remains relatively flat, and the examination of the transportation modalities and conditions in which AV technology may be deployed has consistently shown that consumers continue to be most comfortable with the transportation of goods and riding if unable to drive due to age or injury.

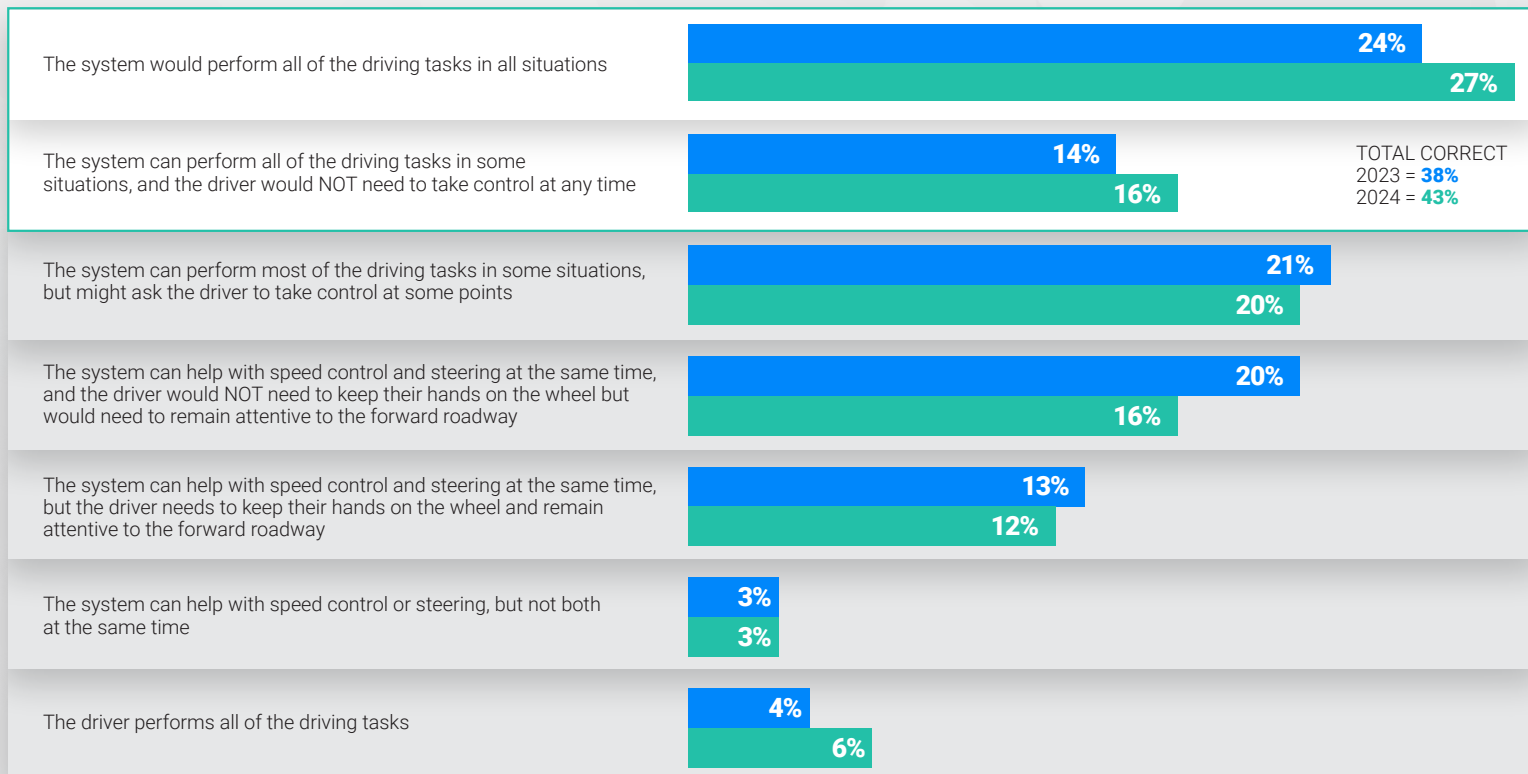
Mobility Confidence Index Attributes – Level of Comfort with AVs



Consumer Understanding is Slowly Evolving

There is an incremental increase in the percentage of consumers able to accurately define what is a fully automated, self-driving vehicle (43% in 2024 vs. 38% in 2023); however, that is overshadowed by the 57% of all consumers that failed to select a definition in which the system performs all of the driving tasks in all situations. Consumers remain unable to make the distinction between lower levels of automation in which the driver must be ready to take control as compared to higher levels of automation where they are never expected to take over control. These results reinforce the belief that increased exposure to automation and usage of Active Driver Assistance Systems (ADAS) features increases comfort with automation but does not necessarily aid with the accuracy of AV understanding.

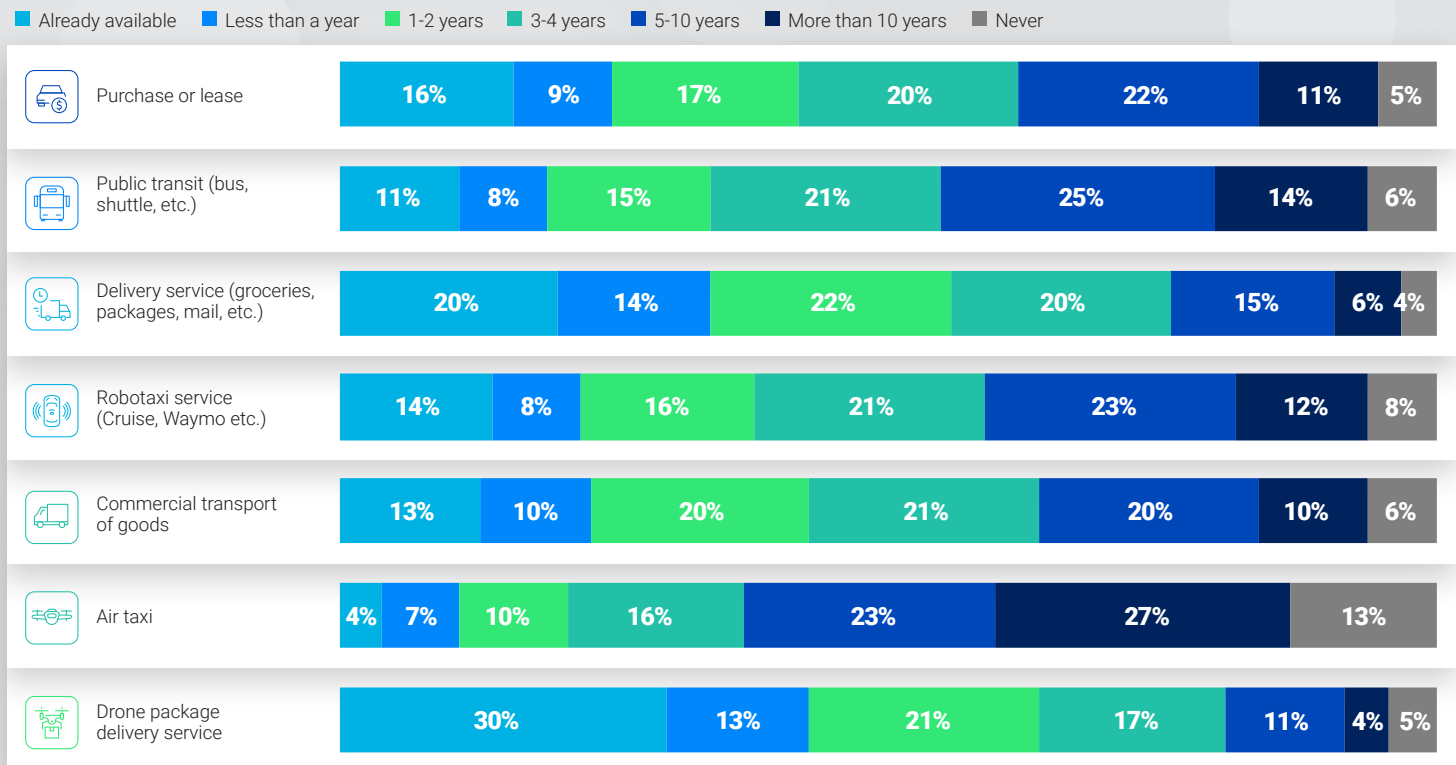
Which of the following do you think most closely defines “fully automated, self-driving” vehicles?



■ 2023 ■ 2024

The slow evolution of consumer understanding is further illustrated when consumers are asked how long it will be before fully automated, self-driving vehicles are available for each transportation modality. The percentage of consumers who incorrectly believe that fully automated, self-driving vehicles are available to purchase or lease today has remained steady (16% in 2024 and 15% in 2023) which further highlights the ongoing need for consumer education in this area. This highlights the need to educate consumers on understanding the driver's role with ADAS systems in an effort to calibrate consumer understanding of the state of the technology as stated by the public service announcement (September 2024¹) by the Alliance for Automotive Innovation and Partners for Automated Vehicle Education (PAVE). Positive gains are seen this year as consumers accurate recognition of AV delivery (e.g., Amazon, pizza) and drone package delivery services has grown.

How long before fully automated, self-driving vehicles are ready for...



¹ <https://www.whoisdriving.org>

Persistent Concerns Regarding Data Privacy and Security Must Be Addressed

Data privacy and hacking remain top concerns as 64% of consumers worry that the data collected in the vehicle is not safe and secure, and 80% want to understand what is being done to prevent fully automated, self-driving vehicles from being hacked. While older consumers are less willing to share personal data collected in the vehicle, the concern regarding the safety and security of data collected is apparent across all ages.

Most consumers are concerned that data collected in the vehicle is not safe and secure (84%) and over 80% are unsure or do not think their automaker is transparent about how their data is being used. Lack of comfort in sharing personal information is a result of automakers not being transparent about what information is being shared, how the information is being used, and if the information is stored securely creating uncertainty in consumer's minds. The issue of data protection is becoming so important that 78% of consumers state the automaker's data protection policy will play a role to some degree in their next vehicle purchase.



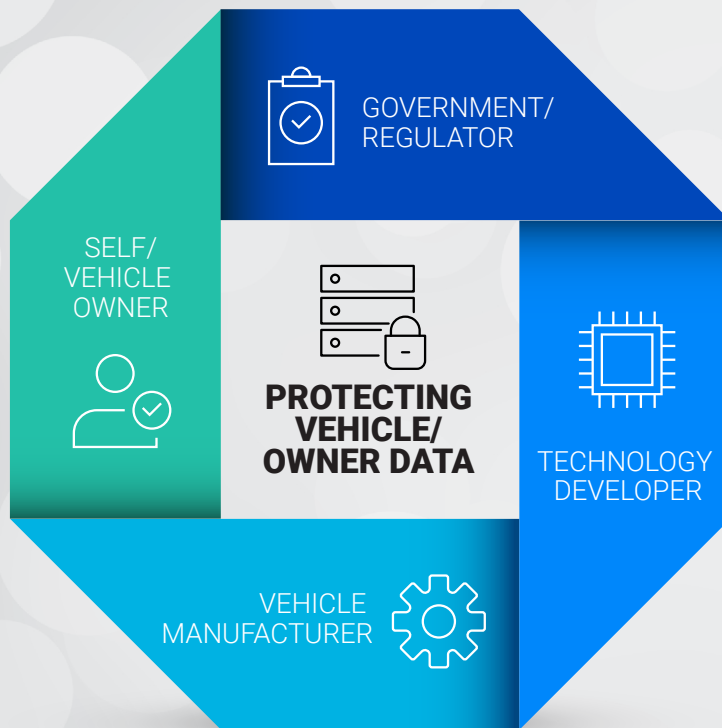


Data privacy and transparency around data utilization appears to be a growing pain point. The frequency with which it is cited as a factor that may influence purchasing decisions is an important finding to highlight. In the absence of a comprehensive U.S. privacy law, a patchwork of well-intended but difficult-to-reconcile and enforce principles exist across various entities, including the automotive industry. This situation may be a significant contributor to why many consumers are not expressing an optimal degree of comfort concerning the treatment of their data.

The level of concern expressed by consumers around privacy and data transparency suggest that accelerating the deployment of safe mobility solutions in today's market requires more than educating consumers around vehicle centric elements of safety systems, automation features, and other mobility solutions.

Stakeholders across the mobility ecosystem may need to begin working together to devise an approach to simplify and standardize communication around key elements of personally identifiable and otherwise sensitive data collection, storage, and transmission from devices and vehicles to ensure greater transparency around data usage. Such an investment may need to be implemented quickly to mitigate consumer concerns and help accelerate comfort with new mobility solutions.

Who is responsible for protecting vehicle/owner data?



“...Striking a balance between the benefits of data collection for improving services and respecting privacy rights is key.”

FEMALE, AGE 25





Want to Learn More?

The comprehensive 2024 U.S. Mobility Confidence Index Study is available to subscribing clients. The complete study contains additional insights including, but not limited to, how consumers feel about teenager transportation usage and AV technology, what vehicle data and personal information consumers are willing to share, and who consumers think should provide regulation for AV testing.

For more information contact [Lisa Boor](#) or [Kathleen Rizk](#).

Study Methodology

The **J.D. Power 2024 U.S. Mobility Confidence Index Study** was fielded in August 2024 and is based on seven unique attributes of consumer comfort with fully automated, self-driving vehicles and purchase intent. The comprehensive metric measures consumer readiness for AV technology in several categories: personal vehicles; commercial vehicles; public transit; riding if unable to drive due to age or injury; sharing the road with other AVs; testing AV technology and consumer purchase intent. The study is based on responses from 3,000 vehicle owners, age 18 and older, who completed an online survey. Recruitment occurred through a leading non-probability-based panel provider. The study results were balanced to basic census demographics (age, region, gender) to be nationally representative.

ABOUT J.D. POWER

J.D. Power is a global leader in automotive data and analytics, and provides industry intelligence, consumer insights, and advisory solutions to the automotive industry and selected non-automotive industries. J.D. Power leverages its extensive proprietary datasets and software capabilities combined with advanced analytics and artificial intelligence tools to help its clients optimize business performance.

J.D. Power was founded in 1968 and has offices in North America, Europe and Asia Pacific. To learn more about the company's business offerings, visit [JDPower.com/business](https://www.jdpower.com/business).

ABOUT THE MIT ADVANCED VEHICLE TECHNOLOGY CONSORTIUM

The **Advanced Vehicle Technology (AVT) Consortium** is an academic-industry partnership founded in 2015 within the Massachusetts Institute of Technology (MIT) Center for Transportation and Logistics. It is supported by over 25 different automakers, insurance companies, suppliers, and research organizations through a pre-competitive collaboration designed to develop a data-driven understanding of drivers' behavior with, and utilization of, vehicle automation, driver safety systems, and other technologies. AVT research aims to support a future of safe, convenient, and sustainable mobility through more effective human-centered vehicle technology development and consumer understanding of appropriate technology usage. To learn more about the AVT consortium and its members, visit [avt.mit.edu](https://www.avt.mit.edu).





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Navigation map showing a route through a city grid.

Vehicle status icons: battery, signal, Wi-Fi, and other system indicators.



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