



SAE DEMO DAYS SURVEY



Public Perceptions & Preferences for Self-Driving Cars



EACH DEMO

is customized but has four main elements:

- pre- and post-ride survey
- the ride in a self-driving car
- engagement with interactive displays
- chat with experts

THE SURVEY

captures public perceptions of benefits and risks, important concerns related to safety and regulation, and their perceived preferences for how self-driving cars will ultimately offer them the most comfortable and safe experience.



Background

Public acceptance is critical to the long-term success and near-term testing of self-driving cars.

SAE International, drawing on over a century of leadership in the mobility sector, created an opportunity to engage and learn from the public while documenting their experience

SAE convened industry partners and executed four free public self-driving car demonstrations to date – called SAE Demo Days, allowing the public to experience the technology first-hand and to foster informed decision-making while capturing insights into public sentiment.

Over 2,000 rides were given and data was collected from 1,395 participants at four demonstrations between November 2017 and April 2019 held in Los Angeles, Tampa, Babcock Ranch in FL and Detroit.

The Data

The data from all four demos was compiled to create a discussion-starter for industry, regulators, technology suppliers, vehicle makers and others impacted by self-driving technology and those seeking to understand public sentiment.

This data is unique as it combines a participant's experience in a self-driving car and face-to-face engagement in the field.

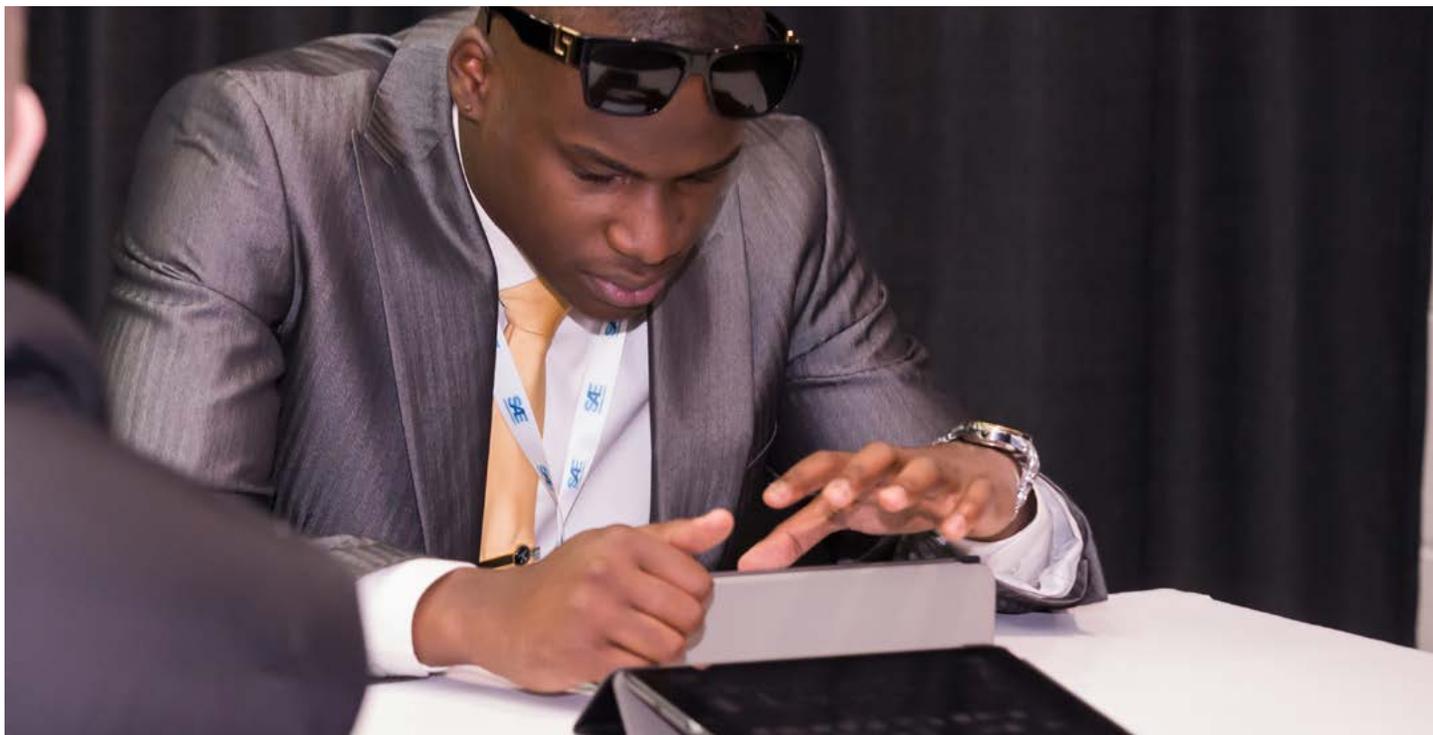
In an effort to grow the demographic and geographic reach of these events and to document the voice of the public for Government and industry insight, select results from the survey are shared in this document.



LEARN MORE

To learn more about the survey results and ways you can get involved, contact:

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ALL RESPONSES

have a confidence interval of 95%



LEARN MORE

Watch videos from each demo and learn more about SAE Demo Days at [sae.org/demodays](https://www.sae.org/demodays)

Methodology

Design of the SAE Demo Days survey was a collaborative effort between SAE and its strategic partners. Questions were added and removed for each event based upon participant feedback, partner ideas and value of collected responses.

Surveys were collected on-site via electronic tablets connected to a cloud instance to store replies as they were entered both before and after the self-driving demo ride. Proctors oversaw and offered assistance with use and ensured the responses were collected independent of any other participant's opinions.

The survey contained three sections: registration, pre-ride and post-ride. The registration portion collected personalization and demographic questions.

The pre-ride and post-ride portions contained a mix of modal, brand, consumer use and mobility opinion-based questions. Questions were asked both pre-ride and again post-ride as an attempt to measure difference in opinions after experiencing a ride in a self-driving vehicle.

The survey responses within this document have been weighted on age and gender to align proportionally with US Census ACS targets. Total responses and margin of error are noted in each instance. All responses have a confidence interval of 95%.

Survey Results



The Public Is Enthusiastic About Self-Driving Cars

Only six percent of riders had ridden in a self-driving car before. The self-driving car experience spurred enthusiasm among nearly all of the riders and the experience overall is viewed by participants as comparable to or better than a human-driven experience.



% of Respondents

Who were initially enthusiastic for self-driving cars



Who would seek out a ride in self-driving cars in future



Who think self-driving car experience is similar or superior to human piloted



Enthusiasm remained high after the ride! Nearly ten percent of participants reported a higher level of enthusiasm after their ride, with the net result being that eighty-eight percent of riders were enthusiastic about self-driving cars after riding in one.

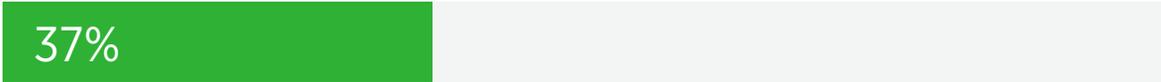
Self-Driving Cars Expected to be a Safer Experience

The public easily ascertains the important safety benefits of self-driving cars for all drivers – whether they are in self-driving or human-driven cars as well as pedestrians and animals - everyone on or near the road. The public also prioritizes the benefits of self-driving cars for elderly people who may experience more limited mobility options as they age or those who may have limited transportation options due to a disability or health condition.



% of Public That Thinks the Greatest Benefit of Self-Driving Cars will be to...

Eliminate or reduce deaths due to accidents



Increase mobility for elderly & those with disabilities



Reduce travel times/commutes



Self-Driving Cars Expected in the Next Five to Ten Years

During the post-ride survey, **seventy-two percent of participants see that ADAS (Advanced Driver Assistance Systems) enabled cars have the same features or similar capabilities as self-driving cars.** And this perception may serve as the basis for a somewhat optimistic expectation for when self-driving cars will be common. A full seventy-eight percent expect that by 2028 self-driving cars will be routinely transporting people on public roads.



How many years do you think it will be before the public will be routinely riding in self-driving cars on public roads?

Within 5-10 years



Within next 5 years



More than 10 years



Liability Close Race Between Manufacturers & Owners

Additionally, the public perceives that the liability of self-driving cars is owned by the vehicle manufacturers with the owner/operator a close second and a smaller cohort supporting liability resting with riders and regulators.



% of Public That Believe Primary Liability for Self-Driving Cars Rest With...

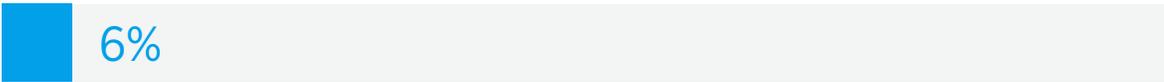
Vehicle manufacturers



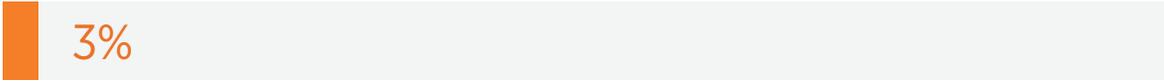
Owner/Operator



Rider



Government/Other



Ownership Preferred

The option to buy or own a self-driving car is preferred by fifty-six percent of riders. However, the growing use of ride-sharing and subscription-based vehicle services is clearly evident in the results. Nearly one-third of riders prefer access to self-driving cars through both subscription-based services and ride-sharing services.

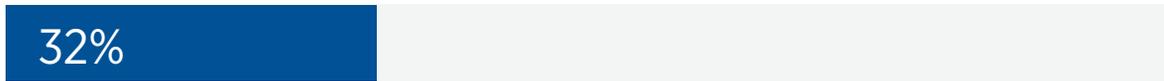


How would you prefer to have access to a self-driving car?

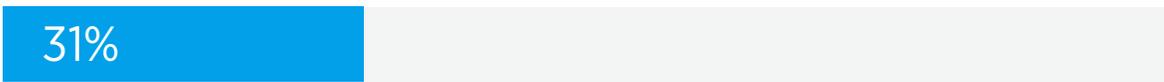
Own



Subscription based



Ride Share



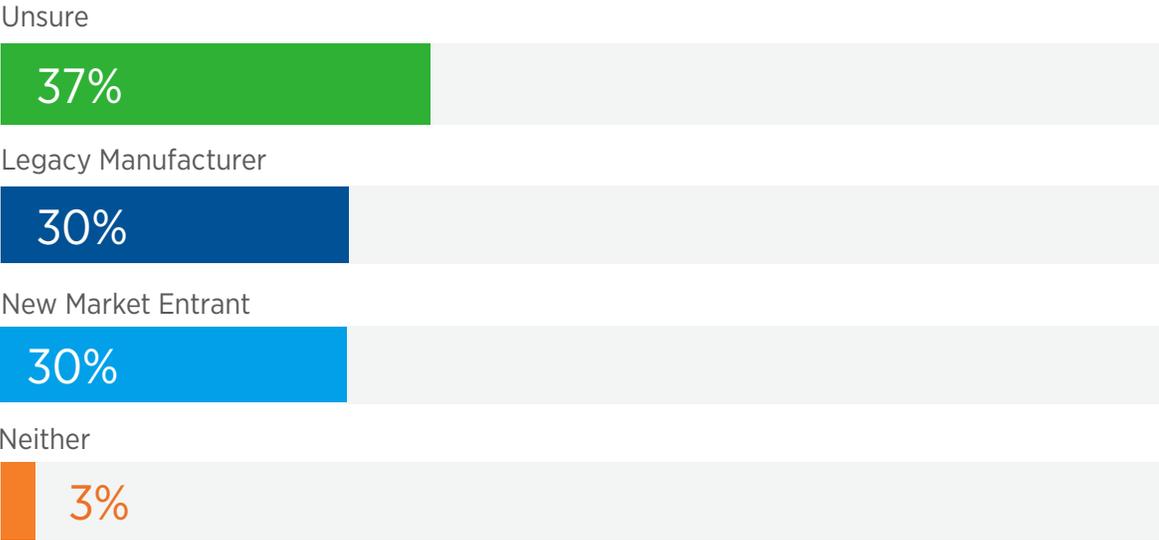
Mixed Preference for Self-Driving Car Brands

Riders report a nearly equal preference for legacy auto makers and new market entrants. And more than a third of riders - thirty-seven percent - reported that they are unsure of which brand they prefer.

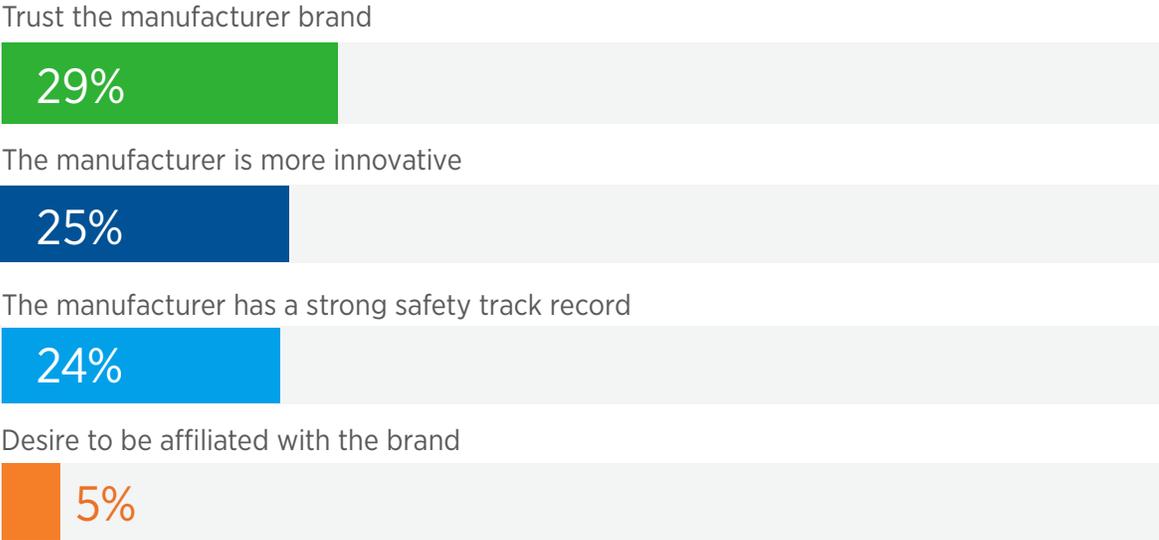
Twenty-four percent of participants report that a trusted brand can deliver a safe, quality self-driving car. **Twenty-five percent of riders also prefer that a manufacturer appear to be innovative to meet their needs and create a compelling solution.** Twenty-four percent of participants prefer a manufacturer with a strong track record of safety.



If You Were to Ride Regularly in a Self-Driving Car, What Type of Manufacturer Would You Prefer?



What was the primary motivation of your manufacturer preference?



The Public Prefers to Share Control with the Car

While more than one-third of participants are comfortable with allowing the self-driving car to have complete control of the driving experience, **seventy-three percent prefer to share control with the vehicle**. This speaks to both the participant's expectation that vehicles may not be able to account for all situations, emergency or otherwise, as well as the participant's preference to have control when or if they desire to do so.



What Level of Control Would You be Most Comfortable With?

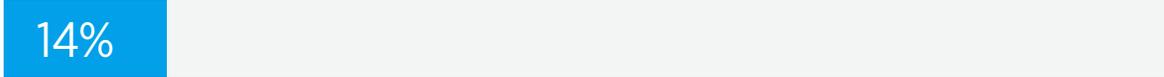
Control shared between human & self-driving car



Self-driving car In control



Human in control

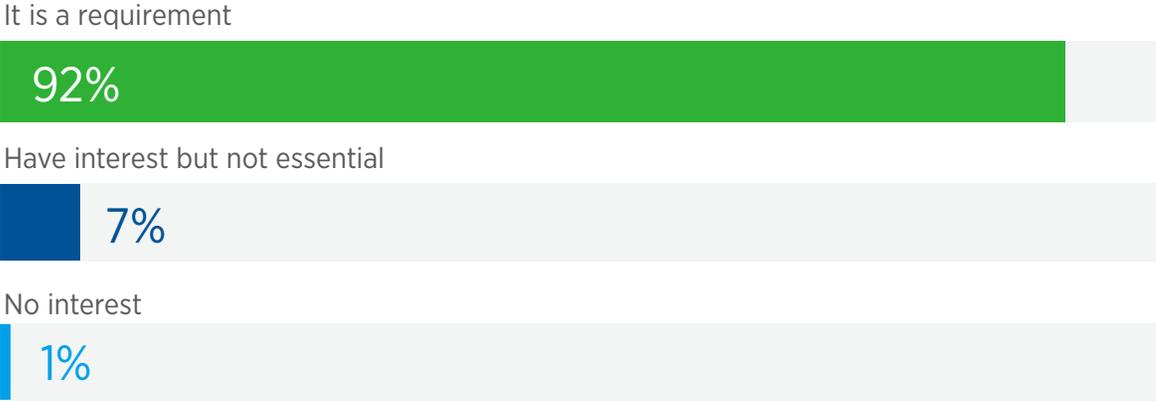


“Emergency Stop” Overwhelmingly Preferred by Riders

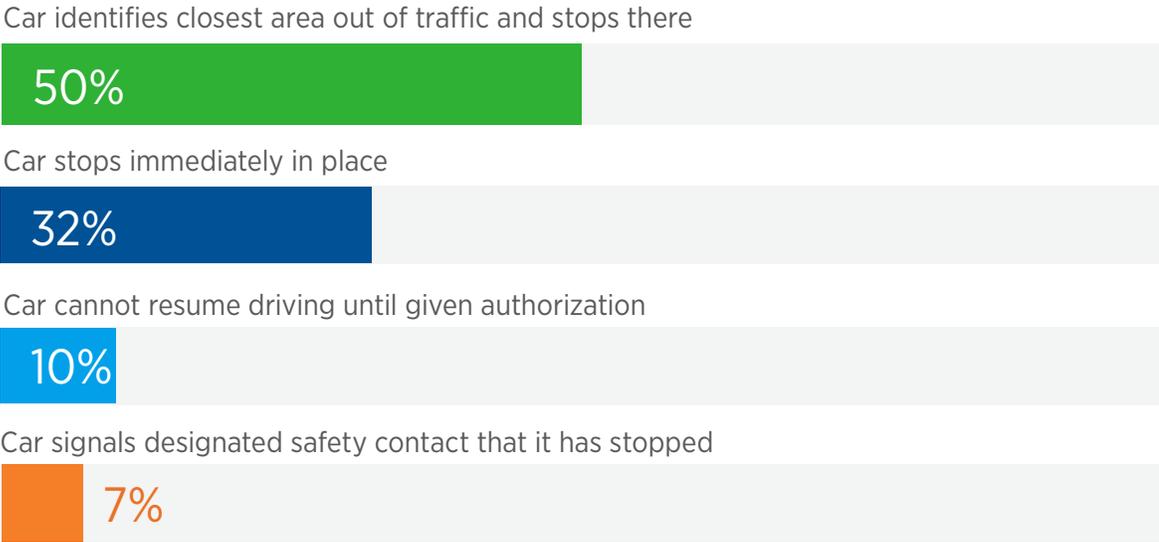
The public puts a high preference on an “emergency stop” function that they can activate as a rider in a self-driving car. A full ninety-two percent of participants see this as a valuable feature.



When riding in a self-driving vehicle, how important is it to be able to activate an “emergency stop”?



If an “emergency stop” was activated, what do you believe should occur?



Identifying Self-Driving Cars is Valuable

The ability to quickly and easily identify self-driving cars from human-driven cars on public roads is an important preference. **Sixty-nine percent of riders consider it valuable to be able to identify them on the road.**

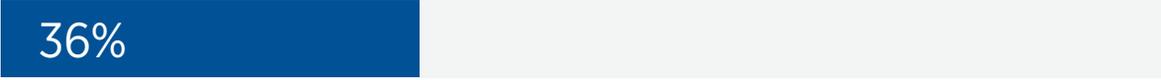
A light/bar on the vehicle exterior is preferred over a display seen through the window from inside the vehicle, or an exterior sign/text.

▶ Of the following potential driving mode signals (human/self-driving) which would you find value?

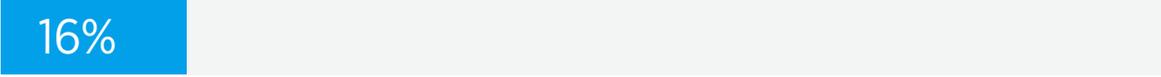
Lighted bar on outside of the vehicle



In-vehicle display



Text displayed on vehicle exterior



***94%** of participants would recommend SAE Demo Days to a friend..*



If you would like to learn more about SAE Demo Days, or how you can get involved visit sae.org/demodays



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