

XPERI[®]



The 2022 Vehicle Predictions Report

INTRODUCTION

The future of the car is as core to Xperi's DTS Connected Car division as it is to Xperi's automotive manufacturers and supplier partners. To that end, DTS fielded a survey of nearly 2,000 consumers to provide a snapshot of just how they view that future. The results provide the industry with some key and, in some cases, startling, insights about consumer attitudes towards, among other things, self-driving vehicles, the vehicle as a 'third place', EVs and yes... even flying cars.

Survey methodology

The third-party survey was fielded in October, 2021 across an online panel of 1,969 car owning or leasing adults across the US.

SELF-DRIVING CARS ARE INEVITABLE, BUT MANUFACTURERS NEED TO BUILD TRUST

The past couple of years have shaken people's trust in the future, so it is no wonder that some may be reluctant to embrace world-changing technologies. Right now, the majority are unconvinced by the self-driving technologies on the market, particularly when it comes to safety.

Although more than a third surveyed aspire to own a self-driving vehicle, over half say a computer will *never* be able to drive as safely as a human -- and only 13% currently trust self-driving technology.

That being said, there is hope for self-driving vehicles. Autonomous driving is sparking interest among survey respondents, with 30% personally planning to adopt self-driving cars within the next five years, and over 40% trusting that eventually it will be the safest way to travel and a good option for seniors. Looking ahead, 80% believe automated vehicles will, indeed, be commonplace in the future.

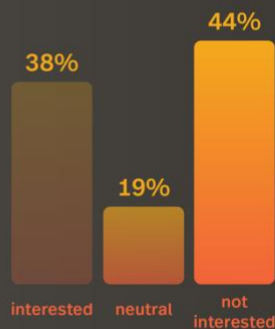
Half of the survey respondents believe a self-driving car could be a good option once age affects their ability to drive

WHEN DO YOU BELIEVE YOU WILL USE A SELF-DRIVING CAR?

Self-Driving Cars

Q: How interested are you in some day owning a self-driving car? By this we mean a car that can drive itself to your destination with little or no input from you as the driver. Q2: When do you personally believe you will regularly use a self-driving car?

Interest in owning a self-driving car



When do you personally believe you will regularly use a self-driving car?

39%
never



26% have ridden in a car using autopilot or driving assist mode (can accelerate, brake, and steer itself with some input from a human driver)

HOW CONSUMERS FEEL ABOUT SELF-DRIVING CARS?

Appeal of Self-Driving Technologies

Q: How strongly do you agree or disagree with the following statements?

■ agree ■ disagree

At this point in time, I do not trust self-driving car technology



A computer will never drive as well as a human driver



A self-driving car will someday be a good option once your age affects your ability to drive



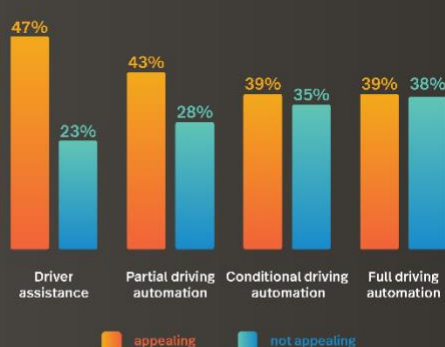
Eventually, self-driving cars will be the safest way to travel



MOST APPEALING SELF-DRIVING TECHNOLOGIES

Attitudes about Self-Driving Cars

Q: Some automated driving features available today require an active and engaged driver, while future self-driving cars may drive entirely without human supervision. How appealing to you are each of the following types of automated driving?



• **Driver assistance:** The car provides some assistance with accelerating, braking, and steering, but a human driver controls the car.

• **Partial driving automation:** The car can accelerate, brake, and steer by itself in certain circumstances.

• **Conditional driving automation (future):** The driver can turn their attention away from driving, but must be ready to take over if the system fails.

• **Full driving automation (future):** The driver can completely turn their attention away from driving because the car can stop itself safely if the system fails.

Driver assistance examples: Lane keeping assistance, adaptive cruise control, parking assistance feature, etc.

Partial driving automation examples: Highway driving assist, Tesla autopilot, etc.

Conditional driving automation: The car can accelerate, brake and steer itself.

Full driving automation: The car can safely drive itself to any destination without any human intervention at all.

THE THIRD PLACE PARADOX: DESPITE BEING AN ESCAPE, OWNERS WANT THEIR CAR TO FEEL LIKE HOME

When asked their feelings about the concept of the car as a 'third place', nearly fifty percent agreed that they view their car as a place of refuge away from the pressures of home and work.

But, perhaps paradoxically, 71% see a future where the car becomes an extension of their office or living room - a place to work, play, and relax. Indeed, many wished they could make better use of time spent in their vehicles. This data certainly aligns with a future where more vehicles are self-driving.

51% believe the car will become an extension of the office or living room within 10 years. It is also referred as "third place."

HOW CONSUMERS SPEND TIME IN THEIR CARS

Attitudes about Time in the Car

Q: How strongly do you agree or disagree with the following statements?



39% wished they could find better things to do in their cars.

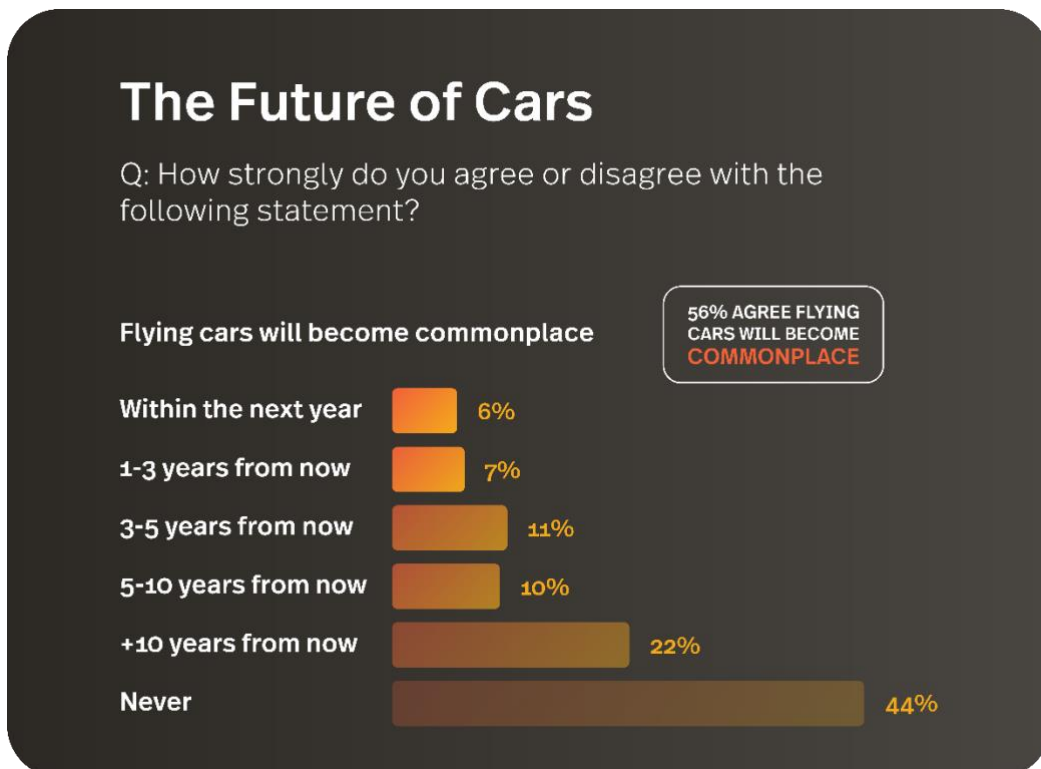
NEXT DECADE: CARS WILL ROLL DOWN ELECTRIC AVENUE, RECOGNIZE THEIR OWNERS... AND THEY MAY FLY...

Although reluctant to trust a self-driving vehicle right now, more than half of respondents couldn't deny a future that is electric and on the 'fly'. When asked to predict when electric car sales would surpass gasoline ones, 58% agreed it would happen within 10 years – and over a third expect it within five years.

And, respondents envision a more personalized vehicle future, one in which their vehicle will not only recognize them, but silently make adjustments to suit their preferences when they get in the car. That future is well within grasp, with 45% expecting this technology within the next five years and 23% within the next three.

Perhaps, most extraordinarily, in light of their concerns about autonomous vehicles, over half of respondents believe flying cars will be commonplace in the future – and nearly a quarter envision flying cars within the next five years.

WHEN WILL THE FOLLOWING TAKE PLACE?



10 VEHICLE PREDICTIONS FOR TODAY AND TOMORROW

1. 69% of consumers do not trust self-driving technology today....
2. But...30% say they believe self-driving cars will become commonplace within the next five years
3. 41% believe self-driving will eventually be the safest way to travel....
4. But...57% believe a computer will never drive a vehicle as safely as a human can
5. 50% believe a self-driving vehicle could be a good option once age affects their ability to drive...
6. But... only 43% of consumers surveyed find partial automation appealing (car can accelerate, brake, and steer by itself in certain circumstances, but a human driver must always keep a hand on the wheel.)
7. 58% believe more electric than gasoline powered vehicles will be sold within 10 years
8. 51% believe their vehicle will become an extension of the office or living room - a place to work, play, and relax, within 10 years
9. 45% believe vehicles will recognize their owners and adjust preferences within 5 years
10. 56% believe flying cars will become commonplace in the future.

CONCLUSION

Despite huge progress in the realm of machine learning and self-driving technologies, this survey reveals that consumers simply don't trust autonomous vehicles...yet. But it also demonstrates that the industry can reverse this concern through a sustained initiative to educate consumers as well as a laser focus on safety.

A natural consequence of the current economic and environmental trends is the increase in sales of electric vehicles, which consumers believe will only rise in the next 10 years. Industry stakeholders are already preparing for this momentous change, and those who aren't, must if they want to maintain their influence in the market.

The survey also underscored the tremendous opportunity for in-cabin technology suppliers and OEMs. By enhancing safety features in cars today, they can meet consumers' desire to count on reliable, completely autonomous vehicles years later, when they're older. At the same time, by facilitating the integration of sensing technology that recognize vehicle users and adjust preferences, they can showcase a car's ability to not only serve the driver's purpose but the entire family.

The survey also revealed that one of consumers' pain points is the lack of activities in the car. This can be tackled through a more substantial offer of in-cabin productivity tools and entertainment sources. For OEMs, broadcasters and automotive suppliers to thrive, dedicating more time and resources to enhancing the in-cabin environment is critical. Consumers are clearly indicating that they view their vehicle as an extension of their home and office.

As for flying cars, automakers worried about consumers' lack of faith in autonomous vehicles can perhaps take comfort in their futurism, as demonstrated by how many expect that someday they might take flight in their personal car.

Clearly, the sky is no longer the limit for consumers' view of the vehicle future!

DTS, part of Xperi Holding Corporation (NASDAQ: XPER), enables extraordinary in-vehicle infotainment experiences and advanced in-cabin monitoring systems at all levels through DTS Connected Car, their automotive vertical. DTS Connected Car automotive technologies designed to improve the in-vehicle experience include DTS AutoSense™ and DTS AutoStage™. DTS AutoSense comprises occupancy and driver monitoring systems implemented at the edge. DTS AutoStage is built on the largest and deepest data set of broadcast and music metadata and combines over-the-air broadcast with IP-delivered content for a robust, richer, more personalized in-cabin infotainment experience. Learn more at xperi.com/markets/connected-car/.