

**VERRA  
MOBILITY™**

# **CONNECTED VEHICLES AND VEHICLE-BASED PAYMENTS: A 2024 SMART MOBILITY SURVEY**

Most consumer vehicles manufactured today feature connected capabilities and advanced software technology, but a Verra Mobility survey found that American drivers are not yet taking advantage of connected vehicle benefits.

This may be attributed to a lack of awareness and manufacturers not offering enough relevant services to take advantage of these advanced capabilities, leaving consumers with unmet expectations as they demand more comprehensive solutions to fully leverage the technology in their vehicles.



# OVERVIEW

Today’s automakers are embedding advanced sensing technologies and native wireless connectivity features into their vehicles. These connected vehicles present new opportunities to enhance the driving experience, improve road safety and enable manufacturers to monetize new software-driven services.

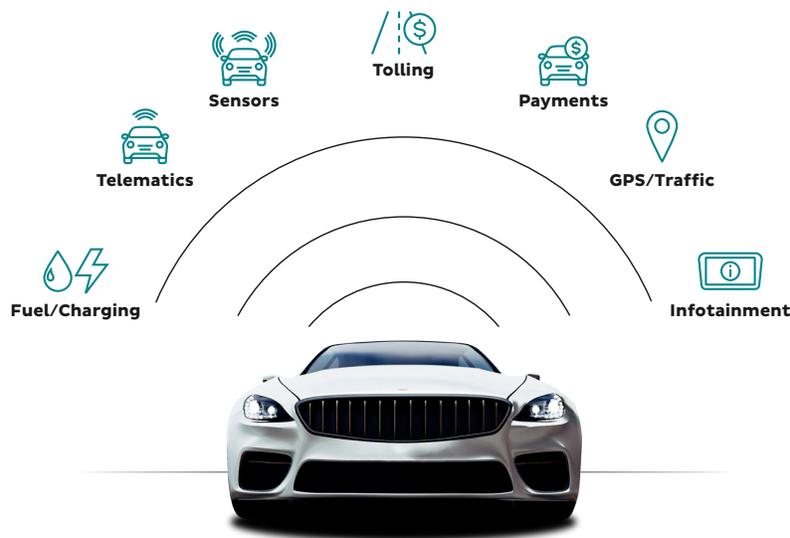
However, U.S. drivers are not fully aware of the possibilities that connected vehicles can provide.

To examine the opportunities, challenges and driver attitudes about connected vehicles and connected services, Verra Mobility conducted a consumer survey of 2,000 Americans who currently own or lease a vehicle manufactured in 2019 or later.

Today’s connected vehicle services may include features such as in-vehicle Wi-Fi, emergency assistance, parking support, and the ability to use the manufacturer’s app to track the vehicle’s location, check tire pressure, lock or unlock doors, adjust climate control, start the vehicle remotely, and access vehicle health reports and maintenance reminders.

These connected services can be a key factor in car buying decisions. The survey found **57%** of Americans said connected vehicle services are a reason they would spend more on a vehicle.

*For the purposes of this national survey, connected vehicle services were defined as services that utilize data from a vehicle’s native internet connection. Services used in the vehicle through a mobile phone like Apple CarPlay® or Android Auto were not considered Connected Vehicle Services for the purposes of this survey.*



## Connected Vehicle Capabilities

## DRIVER AWARENESS AND USAGE

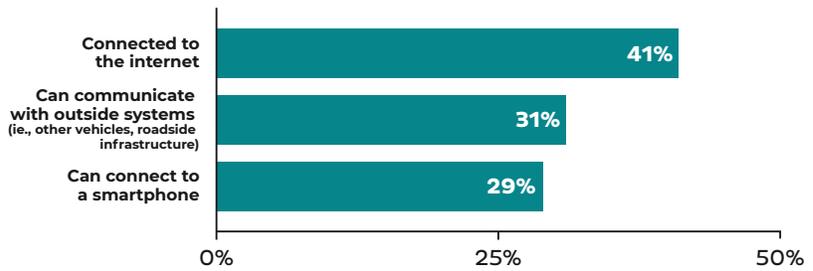
According to the survey, **60%** of Americans stated they were familiar with the term “connected vehicle,” but the results were split on how they defined the term. More than a quarter of the respondents said they believed connected vehicle referred to a vehicle that “can connect to a smartphone device.”

The survey found American drivers are more aware of connected vehicle services. Of the respondents, **63%** of respondents were aware that their vehicle offered connected services.

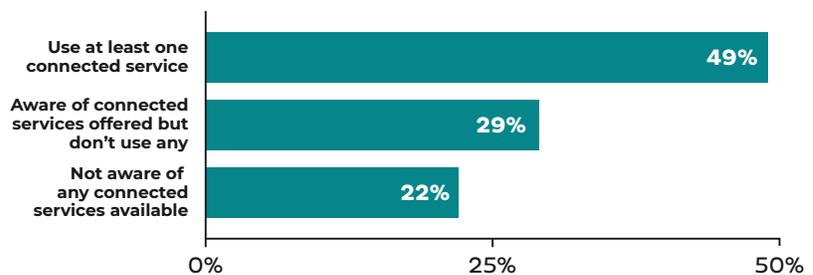
**Nearly 50%** were using at least one service, such as FordPass®, Subaru STARLINK®, HondaLink®, NissanConnect®, Stellantis UConnect®, etc.

**40%** of survey respondents had enabled or signed up for a connected vehicle service using the vehicle infotainment system or built-in dashboard screen. Connected services do appear valued with more than one-third of respondents indicating they have renewed or opted in to connected vehicle services.

### How would you define a “connected vehicle”?



### Are you currently using any connected vehicle services?

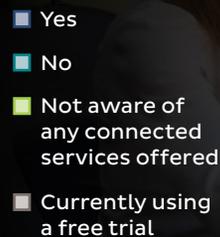


## “DIGITAL WALLET” ON WHEELS

One of the key promises connected vehicles offer today is the ability for drivers to seamlessly pay for services directly from their vehicles. This includes transactions for tolling, fueling, parking, electric vehicle charging, and even ordering at drive-thru restaurants. The vehicle can harness embedded geolocation technology and artificial intelligence to reduce or eliminate the need for using a credit card, smartphone or a third-party RFID tag to conduct transactions.

Verra Mobility’s survey found that over half of Americans find the idea of a vehicle being a “digital wallet” appealing, and **54%** would enable this feature if it was made available to them.

### Have you renewed or opted in to connected vehicle services when prompted? (in the vehicle, via email or car app)



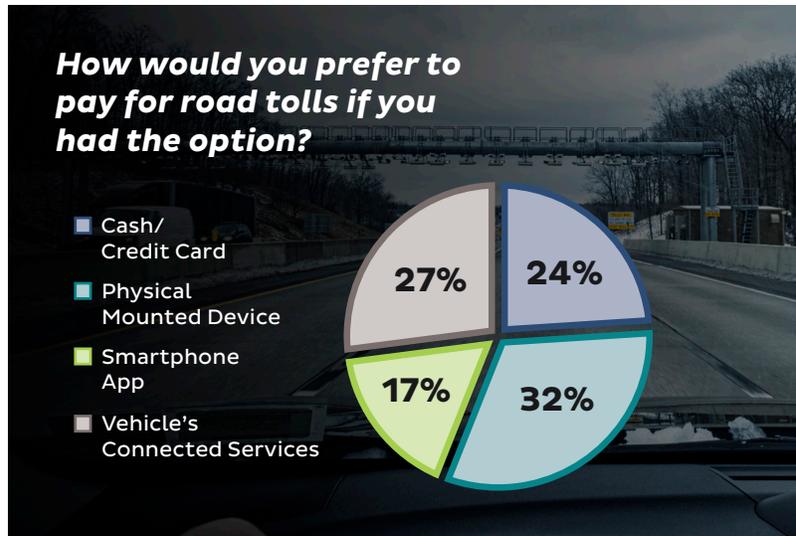
Toll roads in particular provide an opportunity to harness connected vehicle technology to improve and simplify the driving experience. In fact, a significant number of drivers indicated they would prefer modern methods to pay for tolls.

Today, as cashless or automated toll roads are becoming more prevalent, many drivers in the U.S. pay for toll road usage using a windshield-mounted RFID tag or transponder device that is pre-funded for payments to a tolling authority. Drivers often don't have the opportunity to stop and pay cash at a toll booth.

And drivers who lack the automated tags are forced to incur penalties or services charges, which often appear in the mail as a bill weeks after accessing the toll road.

When surveyed, **27%** of Americans would prefer to pay for tolls directly through their vehicles connected services.

***“Utilizing a vehicle as a digital wallet to pay for services such as tolls, parking, and maintenance is the next frontier for OEMs and their customers,”*** said Cathi Chinn, vice president of innovation for Verra Mobility’s [Commercial Services](#) business. ***“When it comes to connected vehicles, we are just getting started and I believe the number of Americans opting in to these types of services and seeing value from them will continue to grow exponentially in the coming years.”***



# THE SMARTPHONE'S ROLE

Most Americans already have access to a wireless connection through a smartphone, which can be used to unlock a number of different services related to their vehicles. In fact, **25%** of survey respondents said they believed the term “connected vehicle” referred to a vehicle that can connect to a smartphone device.

Apple CarPlay and Android Auto are two popular operating systems that integrate with most vehicles manufactured today. However, drivers in the Verra Mobility survey indicated they do not want to have their smartphones to be an extra step when it comes to connected vehicle benefits.

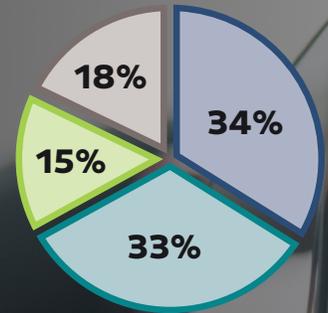
**70%** of survey respondents said they would prefer to not connect their smartphone to their vehicle to enable digital services.

*When asked, “If your car could pay for services such as gas, tolls, or parking directly without using your phone, would you enable this feature?”*

**54% of survey respondents said, “yes.”**

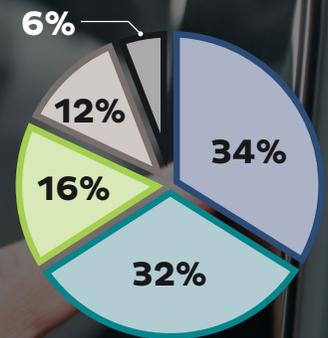
## Do you access connected services through your vehicle's in-dash screen and Apple CarPlay® or Android Auto?

- All the time
- Occasionally
- Rarely
- Never



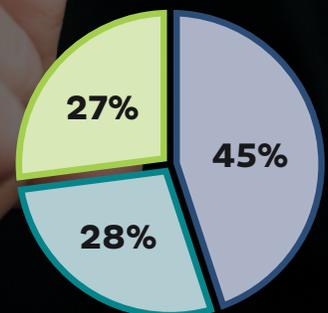
## Do you connect your smartphone to your vehicle?

- Every time
- Most of the time
- Occasionally
- No
- I don't have a smartphone



## Which feature do you find most valuable to access in your vehicle through your smartphone?

- Navigation/traffic
- Calling and texting
- Playing music, podcasts, audiobooks, etc.



## DATA CONCERNS

Surprisingly, survey respondents were not overly concerned about the data their smart vehicle may be using.

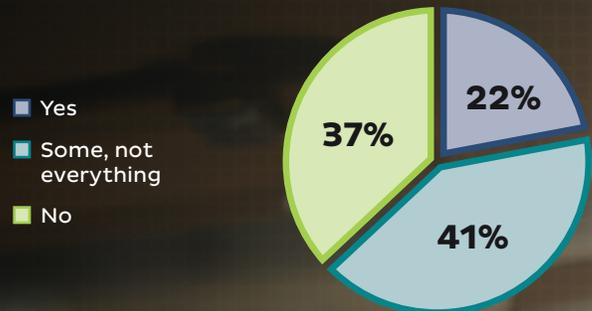
The survey found that **76%** of Americans are willing to share driving and location data for certain benefits such as a service discount.

## OBSERVATIONS

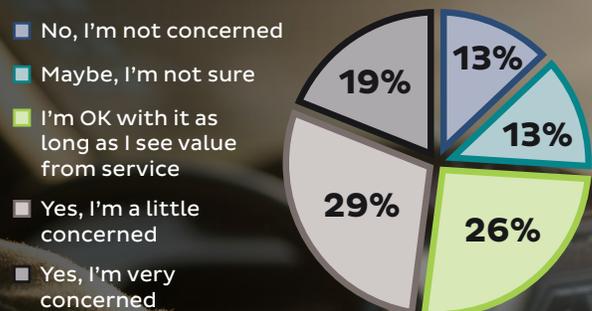
**“These results echo what we have seen with our OEM partners,”** said Steve Crumb, Executive Director at the [Connected Vehicle Systems Alliance](#) (COVESA).

**“Awareness is still a crucial first step in connected feature adoption. I’d venture to say that the majority of people who are saying they wouldn’t use these services don’t fully understand how they work and their value. What Verra Mobility is doing with tolling is an exciting application for the technology, and one we think many will find extremely valuable.”**

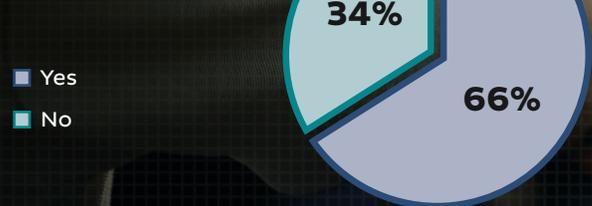
**Do you know what types of data your vehicle is monitoring or collecting?**



**Do you have concerns about the type of data your vehicle may be collecting?**



**Are you willing to share driving and location data for benefits such as service discounts, emergency services and automatic toll payments?**



## METHODOLOGY

The data was derived from a survey by Verra Mobility conducted online via Pollfish between July 11-12, 2024. The survey was completed by 2,000 Americans who own or lease a vehicle manufactured in 2019 or newer.

All decimals in this report are rounded to the nearest percentage point, which may lead to certain numerical totals adding up to slightly more or less than 100%.

## ABOUT VERRA MOBILITY

Verra Mobility Corporation (NASDAQ: VRRM) is a leading provider of smart mobility technology solutions that make transportation safer, smarter and more connected. The company sits at the center of the mobility ecosystem, bringing together vehicles, hardware, software, data and people to enable safe, efficient solutions for customers globally. Verra Mobility's transportation safety systems and parking management solutions protect lives, improve urban and motorway mobility and support healthier communities. The company also solves complex payment, utilization and compliance challenges for fleet owners and rental car companies. Headquartered in Arizona, Verra Mobility operates in North America, Europe, Asia and Australia.

[Verra Mobility's Commercial Services business](#) provides integrated toll and violation management solutions and title and registration services for rental car companies, fleet management companies, corporate fleets, rental car operators, OEMs, car dealerships and financial institutions.

For more information, please visit [www.verramobility.com](http://www.verramobility.com).

