

smartcar

2023

State of Connected Car Apps

What do drivers expect from connected car services?





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What we’re exploring:

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Driver sentiment about using third-party car apps and services

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The features and capabilities that **motivate drivers** to use third-party car apps and services

3

The types of services **drivers want to access** with vehicle telematics

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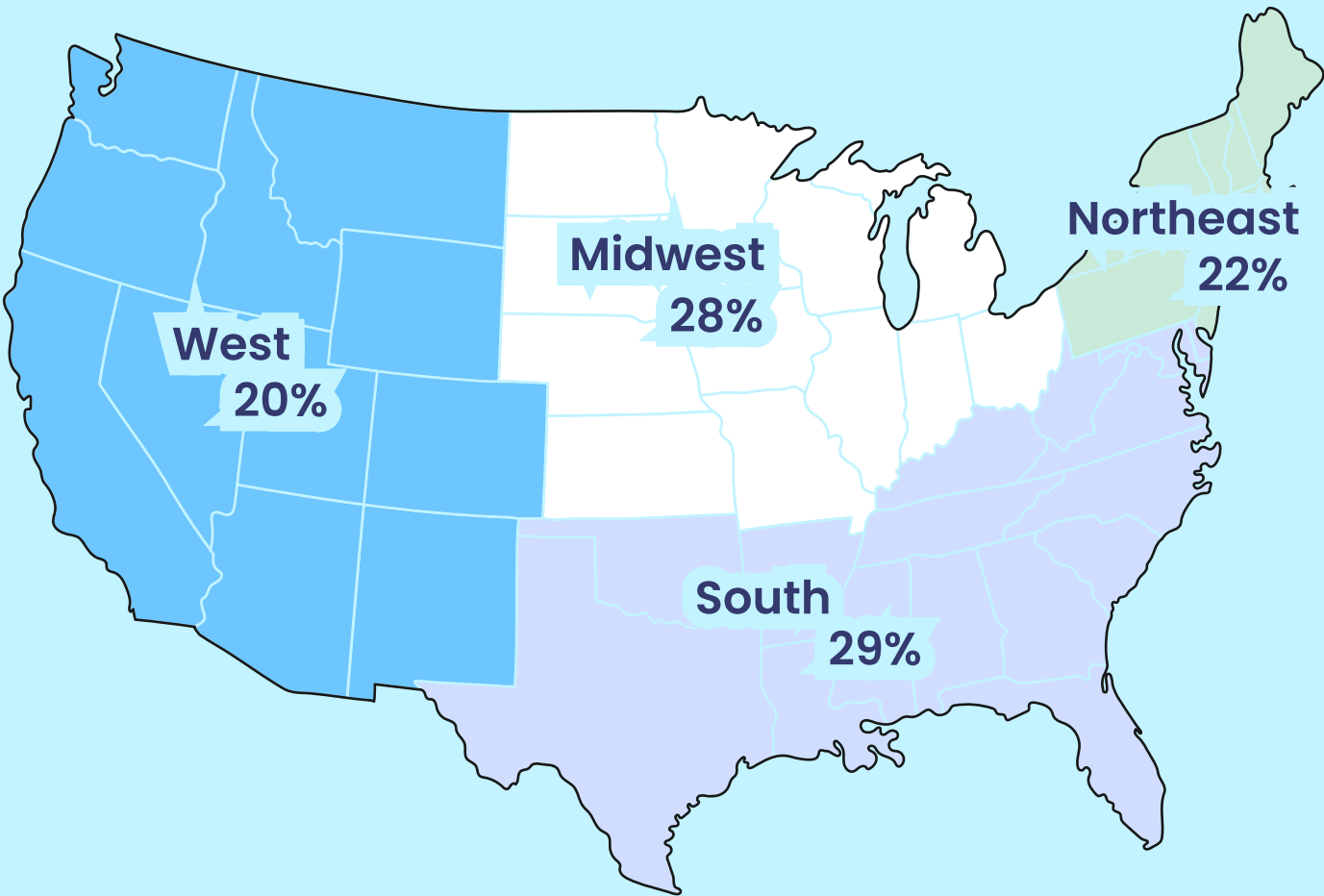
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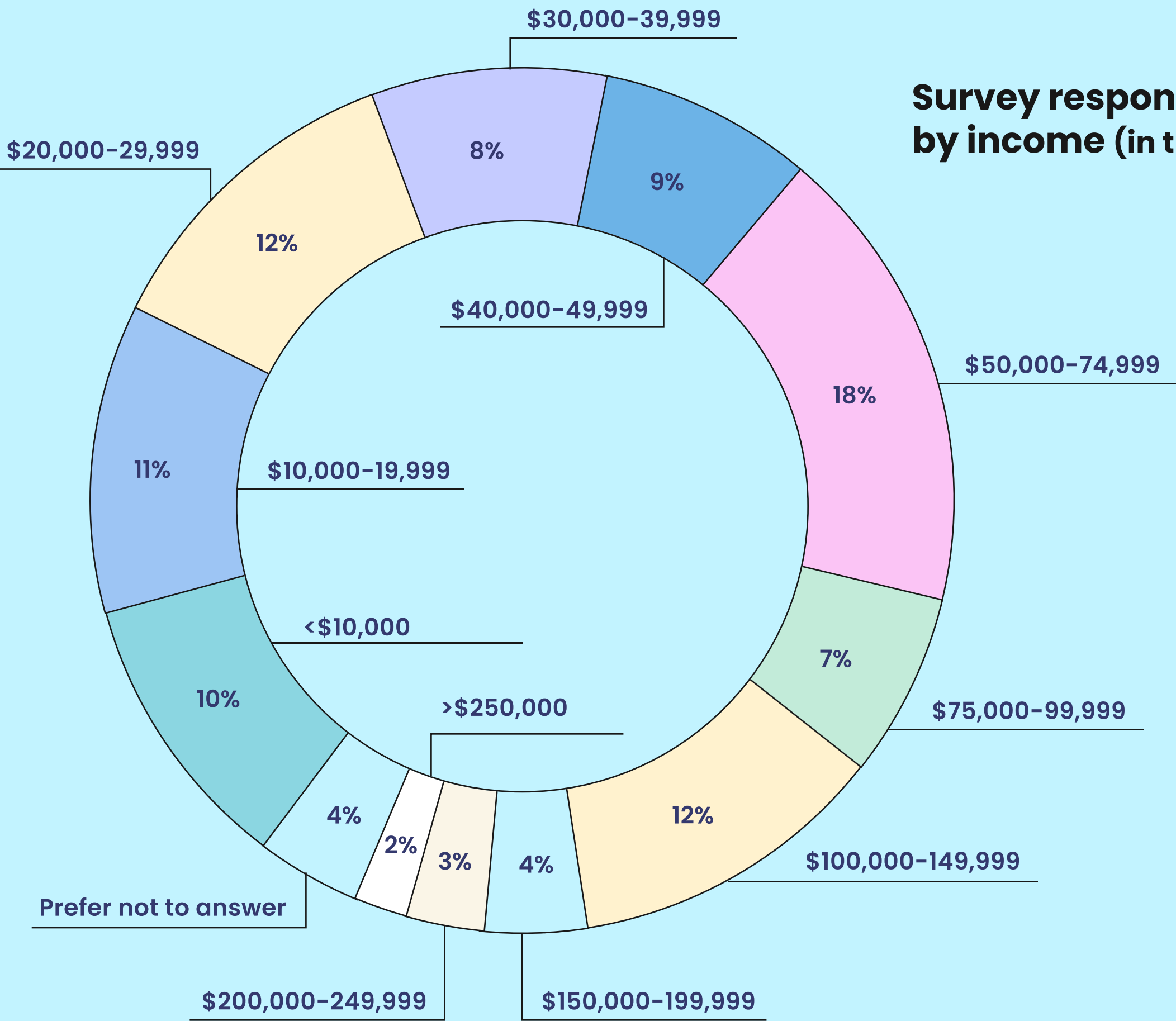
Who did we survey?

We surveyed 110 vehicle owners in the United States above the age of 25.

Survey respondents broken down by regions in the United States



Survey respondents broken down by income (in the United States dollar)





The rise of connected car apps

Mobility apps aren't just reserved for high-end vehicles of the future. Today, the most popular cars on the road come with access to connected services — **18 models** out of **the 25 best-selling cars** of 2023 in the US are compatible with the **Smartcar API**.

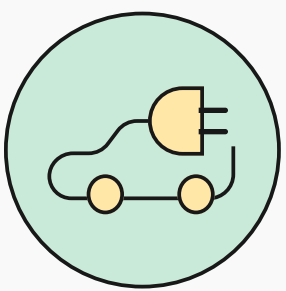
Automaker investment, transportation legislation, and vehicle owner expectations have shifted dramatically over the past decade with the emergence of **three trends**.



Vehicle connectivity

9 out of 10 cars now come with built-in internet connectivity. These modern cars do more than just support infotainment. Ford CEO Jim Farley tells Automotive News that automakers see potential in monetizing apps that improve the functionalities of connected cars, whether that's through in-vehicle safety, roadside assistance, or predictive maintenance.

But beyond subscription services offered by automakers, companies across the energy, insurance, transportation and technology industry are using vehicle connectivity to produce exciting new solutions that allow vehicle owners to customize their driver experience using a mobile app or web-based browser.



Electrification

In an effort to meet local decarbonization targets, global automakers are investing over \$1 trillion in manufacturing EVs from now until 2030.

The shift to electrification means new infrastructure. Beyond building EV chargers, electrical grids must be upgraded to support additional charging capacity. Vehicle connectivity can be used to address new gaps in the consumer experience and to proactively manage EV charging loads.

Connected car apps help drivers manage different aspects of the EV experience, like planning routes, locating chargers, and managing charging costs. Utilities can also use managed charging solutions to reduce grid strain without spending billions of dollars on new grid infrastructure.



Mobility-as-a-Service (MaaS)

Consumers today want more convenience and accessibility when they move from one place to another, whether that's through the availability of different modes of transport or the ability to customize trips according to factors like location, cost, timing, or comfort levels.

Car sharing, ride-hailing, and transit planning apps are examples of MaaS software that commuters frequently use to get to their destination.



56%

of respondents have downloaded a mobile or online application for additional vehicle services and functionalities.

How frequently do vehicle owners check connected car apps and services?

31%

use these apps daily

27%

use these apps weekly

27%

rarely check these apps

Drivers engage with connected car applications on a day-to-day basis. These use cases include road navigation, safety, vehicle management, EV charging, route planning, energy management.

Who uses connected car apps daily?



41% | 25-34 years old



36% | 45-54 years old



25% | 35-44 years old



8% | 55-64 years old

Who rarely uses connected car apps?



11% | 25-34 years old



18% | 45-54 years old



25% | 35-44 years old



75% | 55-64 years old



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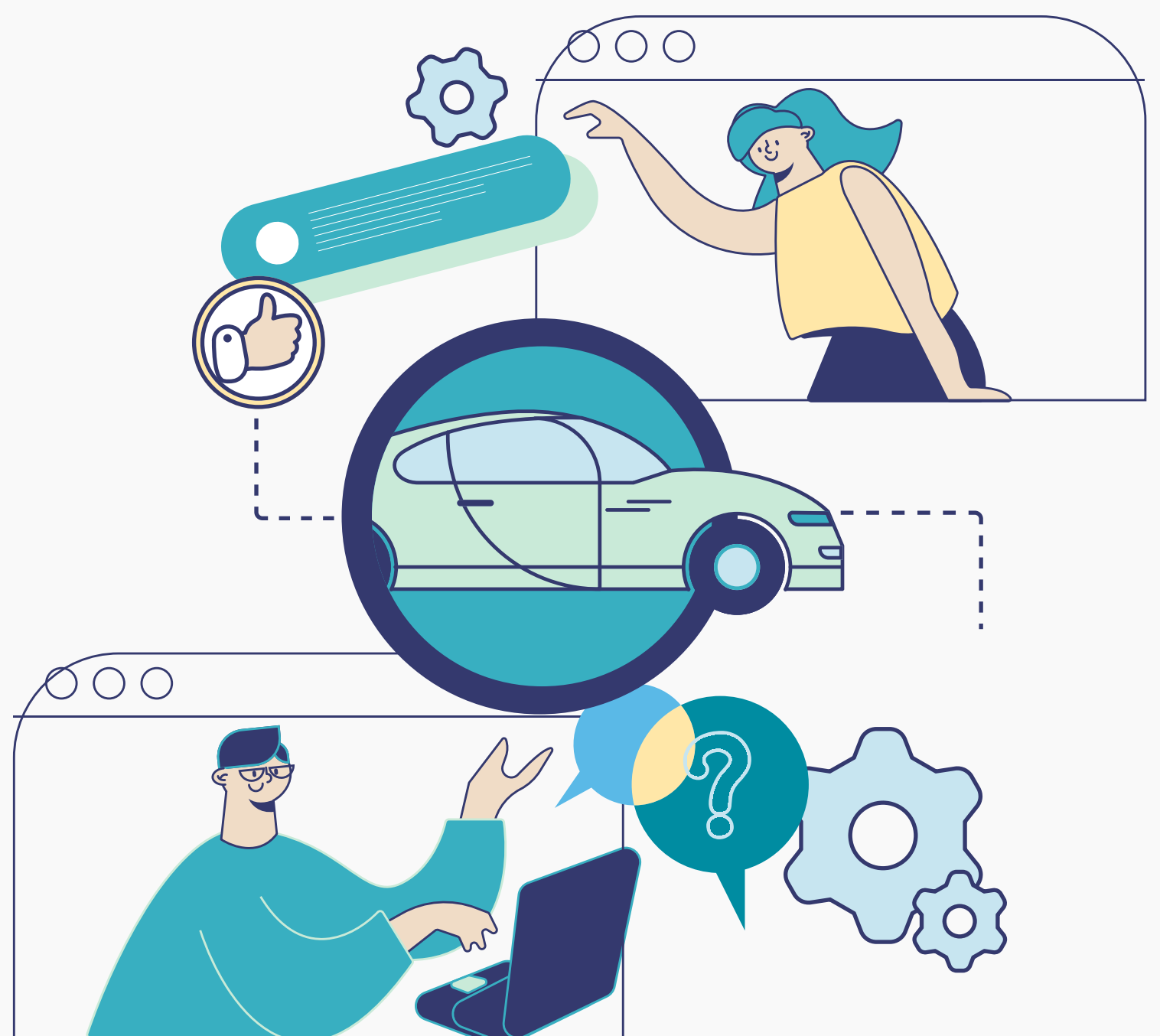
As connected and electric vehicles proliferate on our roads, we're seeing more and more third-party software applications emerge — similar to the technology shifts that have occurred in other previously undigitized sectors like banking and telecommunication.

These software applications will need to be user-friendly and well-integrated to meet consumer demand, qualities best supported by a robust developer ecosystem. If done right, **connected car applications can transform the relationship we have with our cars while generating a massive revenue opportunity for the otherwise poorly utilized assets that are our vehicles.**

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Tyler Lancaster
Partner at Energize Capital

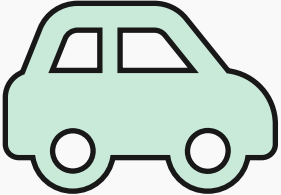




Interest in third-party apps — which are apps developed by a company other than automakers — is growing every day.

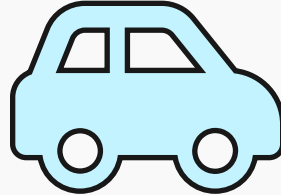
We see more drivers connecting their vehicles to third-party apps and services across each of the **following use cases**.

Industries with the most drivers connecting their cars to an app via Smartcar (from Q1 to Q2 of 2023)

4x 

Energy & utilities

4x increase in drivers onboarded

2x 

Fleet management

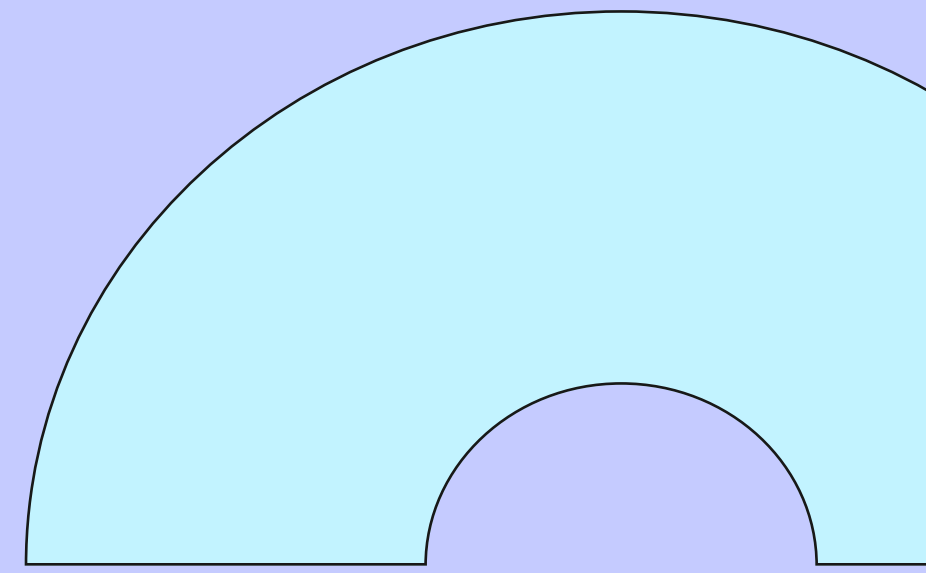
2x increase in drivers onboarded

3x 

Car sharing

3x increase in drivers onboarded

With Smartcar’s API, third-party connected car apps have a big advantage in the market: they can focus on building solutions that improve the driver experience without wasting time trying to make their backend vehicle integrations work.



How do drivers feel about connected services?

If you purchase a connected car, you might have heard of — or might already be using — your car manufacturer's connected services application.

With this app, you can remotely monitor and control your car with features like real-time location and mileage tracking, locking and unlocking car doors, and preheating batteries.

Each car manufacturer has their own connected services account with a unique mobile application. The features offered vary by each brand, and so do the prices of accessing the features offered in the app.





39%

of respondents say that cost is the biggest letdown in their experience using their automaker's connected services account.

Although some brands offer connected services at no cost with the purchase of a vehicle, some brands require drivers to pay a subscription fee.

Upon purchasing a vehicle, there are automakers that provide complimentary access to their connected services for a limited period of time.

In recent years, complaints have been raised against automakers that do not make it clear when this free period ends and what features would be lost if the subscription isn't renewed.

Let's take a look at the costs of connected services subscriptions for a **few popular vehicle brands**.



Automaker	Connected services account	Connected services mobile app	Price
	BMW Connected Drive	BMW Connected Drive	\$50/year + 3-month free trial
	OnStar	myChevrolet	\$14.99/month + 3-month free trial
	FordPass Connect	FordPass	No cost
	OnStar	myGMC	\$14.99/month + 3-month free trial
	HondaLink	HondaLink	No cost for a basic plan \$89/year for paid plans
	Tesla	Tesla	No cost for standard connectivity \$99/year for premium connectivity
	Connected Services	Toyota	\$50/year + 1-year free trial

Vehicle brands, logos, and model names belong to their respective trademark holders and do not indicate endorsement or affiliation with Smartcar.



The subscription model has become increasingly popular across all industries. From streaming services to health and wellness services and food delivery, customers are willing to pay for premium services if they believe the quality justifies the cost.

Automakers have a bigger challenge convincing customers because their subscriptions come with the hefty costs of the vehicle itself.

Having a high-quality app that unlocks more convenience, comfort, and long-term vehicle durability will make customers more willing to pay a fee for telematics.

71%

of respondents believe they're making the most out of their access to their connected services account, but **74%** say they are dissatisfied with the quality of their connected services application.





Why are drivers dissatisfied with their automaker's connected services app?

39%

Too expensive

13%

Poor customer support

36%

Difficult to use

29%

App crashes, freezes, or loses connectivity

30%

Limited telematics features and capabilities





Vehicle owners believe that **collaboration with third-party apps and services** will lead to more and better telematics capabilities.

64%

say **third-party automotive apps** offer more or better features than their automaker app

57%

say **they believe** they'll benefit if their automakers were more open toward working with third-party apps

51%

say **they would consider switching** to a different vehicle brand or model if they could leverage a bigger ecosystem of automotive apps and services





What do drivers want in third-party vehicle apps and services?

The popularity of third-party mobility apps across use cases like ride-hailing, car sharing, managed charging, and vehicle maintenance indicates that vehicle owners are drawn to solutions that prioritize user experience, convenience, and personalization — even if the best solutions are not developed by automakers.

57%

of respondents want to see automakers collaborate with third-party innovators who have the skills, expertise, and resources to explore new approaches to vehicle software.

Vehicle owners feel inclined to download third-party vehicle apps and services because they offer:

38%

A more user-friendly app

35%

Ability to personalize vehicle services and experiences

35%

Better customer support

28%

Ability to access features that are not available on their automaker app

26%

More reliable telematics capabilities



// If automakers are going to reach their connectivity subscription goals, they're going to have to facilitate drivers using third-party apps. **Fundamentally, consumers want choice, and many will opt out if the built-in option is not good enough.**

Look at music streaming: Apple Music, Spotify, SoundCloud, Pandora, etc. People listen to and interact with music differently. People also listen to and interact with their car differently. There's far more value to be created giving people the choice of a third-party connected vehicle app instead of forcing one app on all drivers.

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Alex Rawitz
Founder at DIMO

Third-party innovators have more opportunity and incentive to build and invest in new ideas, technology, and specialized talent across specific mobility use cases.

While automakers double down on their resources and expertise in manufacturing vehicles, building stellar in-vehicle experiences, and forging strong industry partnerships, they can lean on third-party apps to scale and elevate experiences outside the vehicle. For example:

- Car sharing company, **Turo**, is making it easier for consumers to travel with a car when the option for private vehicle isn't available.
- EV applications like **Recurrent** and **Optiwatt** give drivers access to information on key aspects of EV ownership: Battery health and EV charging costs.
- Managed charging providers like **Rolling Energy Resources** help utilities control energy demand for EV charging to avoid power outages and costly power distribution upgrades as EV sales increase.



How many third-party vehicle apps do drivers use?

Drivers tend to use more than one connected car app.

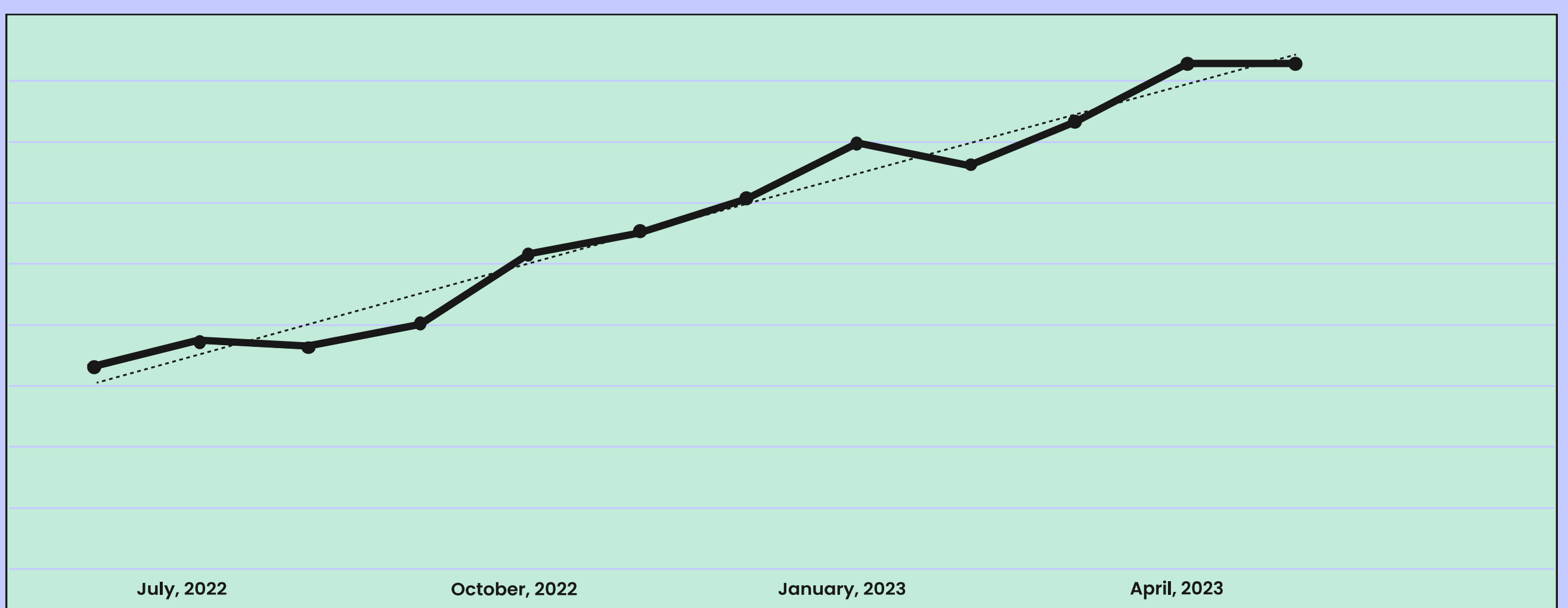
Many drivers like having access to a breadth of mobility services.

You can be an avid Turo user during vacations or work trips, who also uses both Recurrent and Optiwatt to manage an EV at home.

Centralizing all these capabilities at their highest quality is difficult — and unnecessary — to include in an automaker's wheelhouse.

27% of respondents have used more than **5 third-party** apps for their vehicle

At Smartcar, we see an increasing number of vehicles using more than one Smartcar-powered app.



Number of vehicle owners who use Smartcar to connect to two or more apps



What data privacy features do drivers expect from connected car apps?

Opening up the doors to more third-party vehicle apps and services means amping up the standards that uphold vehicle data and privacy. Drivers have become more wary of vehicle telematics in recent years, especially with the onset of automotive data marketplaces that sell vehicle data obtained without driver consent.

We believe that the data produced while driving and interacting with vehicles belongs to vehicle drivers — not automakers, or any other external party that hasn't been authorized by a vehicle owner to use that data.

When vehicle owners use any app or service — whether it's from their automaker or a third party — they need to know how exactly their data is being used before allowing access to that data.

52%

Clear verbiage about the app's data processing and storage policies

45%

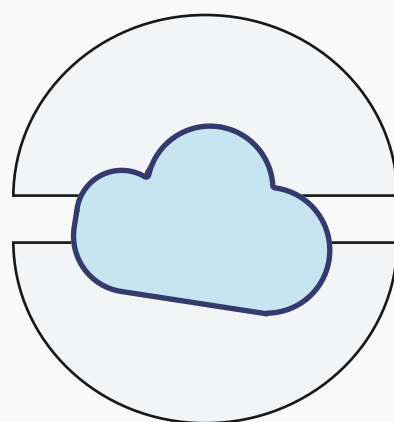
Written breakdown of how the app will use the car data that's being collected

41%

Complete visibility into the data points requested by an app before authorizing it for use

29%

Consent-based permission system when sharing vehicle data





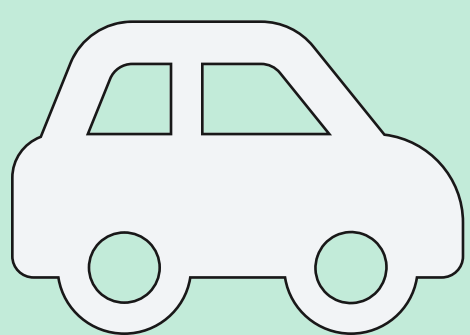
What are the most popular use cases for third-party apps and services?

A software-led mobility ecosystem is made possible when automakers, private organizations, and public departments are willing to share data, collaborate, and embrace change together.

Today, data-driven partnerships between the public sector and mobility businesses are helping us improve our energy usage, democratize vehicle ownership, and fund highways.

If user experience and data privacy continue to be a priority in the mobility industry, we'll begin to see more innovation integrated more seamlessly into existing transportation infrastructure and behavior through connected car apps and services.

We asked consumers about the use cases that would prompt them to use third-party apps. Let's take a look at their answers.





Car sharing and rentals

42%

of respondents want to use connected car apps to **remotely lock and unlock vehicles.**

The potential for peer-to-peer car sharing is immense because it allows commuters to rent vehicles from hosts without relying on rental fleets.

Car sharing and rental apps like Turo and **ANYMOVE** use vehicle telematics data to offer significant improvements to both the vehicle host and renter experience.



Car sharing relies on optimizing user experience along with understanding the technical parameters of the fleet that enables better operations. **Third-party connectivity software can elevate the operations and user experience while keeping per-unit costs lower.**

The peer-to-peer car sharing model has been growing even more in recent years and so have the security concerns. The low-cost, low-tech option of keys-in-a-box is so risky. Plus, better data from connected fleets means better analytics and lower asset risk. Insurance companies love that.



Venkatesh Gopal

Principal – e-Mobility and Financial Feasibility
at Movmi



Car sharing businesses can use connected car data to enable contactless pickups and administer automatic fuel, mileage, or EV battery level checks — all from within an app.

Car rental operators are also investing in digitized operations and customer experiences to keep up with technology-led models like peer-to-peer car sharing and ride-hailing apps.

There are also businesses like **Coastr** that help rental operators adopt vehicle telematics for the same goal of preventing long queues at physical locations and enabling 24/7 rentals.

On-demand services

Drivers want to use third party apps to access the following on-demand features...

37%

vehicle
maintenance alerts
and reports

42%

roadside
assistance

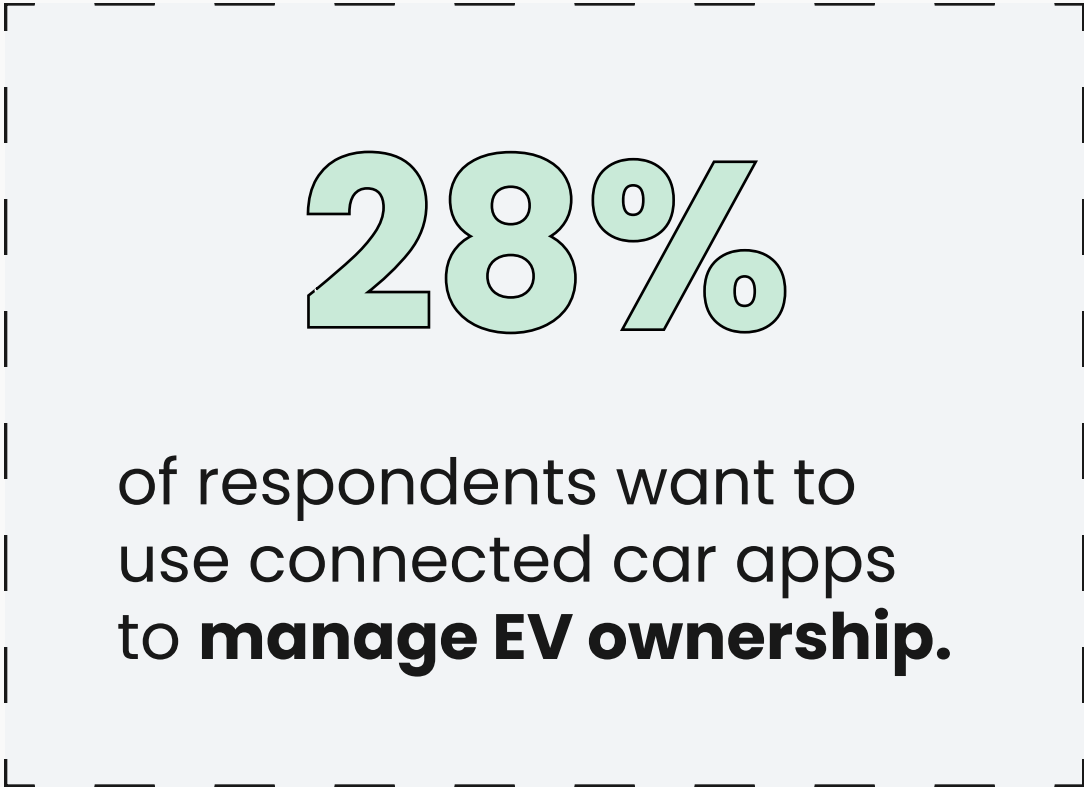
Connected car data gives vehicle owners the ability to act on vehicle emergencies promptly and proactively. Drivers want to be able to tie in roadside assistance and predictive maintenance capabilities seamlessly with services provided by their auto insurance providers, financial providers, repair shops, and OEM dealerships.

Vehicle telematics gives these businesses the agility to bundle these on-demand features into an existing app or to create new specialized solutions that streamline processes for drivers.

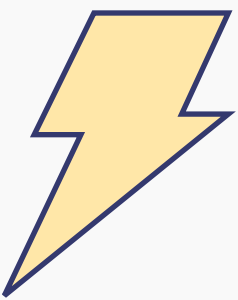
For example, auto insurance providers can use APIs to integrate with vehicles for faster roadside assistance services in their app. Customers can share their location when requesting help and automatically file reimbursement forms based on that request.



Electric vehicles



The two standout use cases chosen by respondents are **EV battery reports** and **smart charging**.

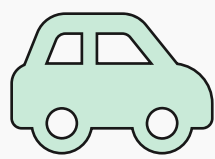


Although EVs are far from the majority of vehicles on the road, adoption is growing rapidly. Case in point: the US hit the 5% tipping point for EV sales in 2022 — a sign that infrastructure is improving and consumers are interested. In 2023, EV market share climbed to 7%.

Smartcar powers all kinds of EV-focused apps, and we’ve witnessed first-hand how EV drivers are becoming increasingly interested in trying out new solutions to optimize their vehicle experience and energy usage for more cost-efficiency and sustainability. More importantly, we’re seeing more utilities and energy partners use EV data to strengthen electrical grids and upgrade distribution systems to support more renewable and distributed energy resources.

Growth in EVs connected to EV apps via Smartcar

(from Q1 to Q2 of 2023)

12x 

Smart EV charging

12x increase in drivers onboarded

3x 

Battery reporting

3x increase in drivers onboarded

3x 

Household energy management

3x increase in drivers onboarded



// While there is a very obvious revolution happening in the auto industry with EVs, there is a more subtle, yet perhaps even more important shift that is happening in the shadows: the digitalization of what a car ownership actually means.

Most automakers are struggling to get their software game up to date today, so there is plenty of room for third-party apps to fill the gap and almost be seen as brand-agnostic. There's a reason we've seen OEMs snatch up some of third-party apps already —like EVgo buying PlugShare and Rivian acquiring A Better Route Planner.

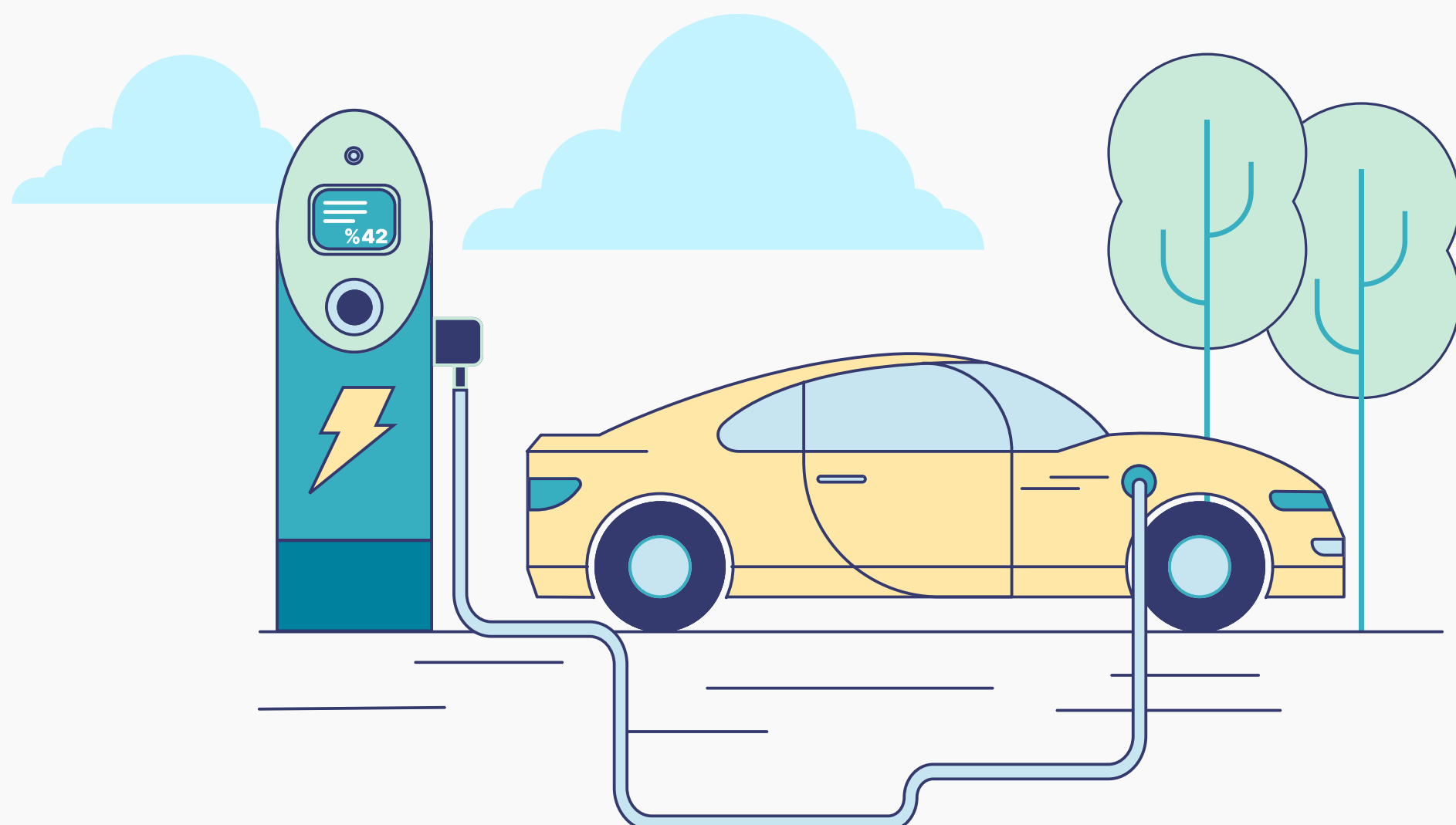
From my experience with hundreds of EV owners, it seems that they naturally are receptive to new ways of tweaking their experience for the better. Because that's essentially what buying an EV has been until recently – tweaking your car ownership for the better. I believe that's also why third-party apps gain traction. Some apps save you the hassle, and some are just making it all better.

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Jaan Juurikas

Creator of the EV Universe newsletter

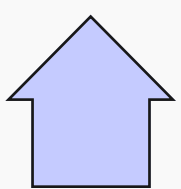




The future of connected car apps

In 2023, **over 70 million** connected vehicles will be shipped worldwide by the end of the year. Automotive electronics now make up **over 50%** of a vehicle's total cost today, with vehicles generating **around 50 billion** data points daily.

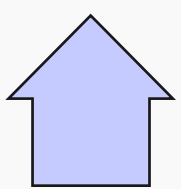
In addition to all the new EV models being released, **many of the vehicle models** we know today **will be redesigned** to support some of the software-driven use cases featured in this report. Here's how the mobility industry will drive the connected car boom forward now and in the future:



Prioritizing collaboration to maximize the power of telematics

The future of data-driven transportation policy — as defined by William Riggs, professor at the University of San Francisco — should prioritize behavioral nudges that inform commuters about their mobility choices and its sustainability.

Mobility software can only do so much when siloed. We can increase visibility into manufacturing capabilities, behavioral trends, and infrastructure development by engaging in long-term partnerships that leverage each organization's unique strengths and capabilities.

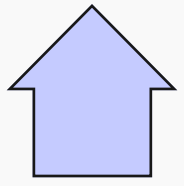


Emphasizing vehicle owner data and privacy

We believe that vehicle owners have the right to own their data and make their own choices about how their mobility data should be used.

As the ecosystem of connected car apps continue to grow, the pressure is on from legislators and consumers in ensuring that mobility businesses onboard vehicle owners in a secure and transparent way.

This includes making the intentions of the app or service clear and giving users the ability to view and provide consent to data that's being shared.



Accelerating innovation with purpose-built tools

There isn't a Swiss army knife to solve all challenges related to improving transportation infrastructure and driver experiences with vehicle telematics.

But there is a diverse range of tools that organizations can turn to operationalize different parts of their workflow. Today, mobility apps use Smartcar's APIs to go to market faster. The Smartcar platform connects apps to over 160 million compatible vehicles using a single integration.

Build the future of mobility

Smartcar enables businesses to integrate their apps and services with cars. Connect your app to 36 compatible brands with just a single integration. Retrieve data and trigger actions using simple API requests to endpoints for EV charging, EV battery, location, odometer, lock and unlock, and more.

Learn more about Smartcar at www.smartcar.com