

State of AVs

How autonomous vehicles will reshape the economics of our cities, who they will help, and what the public thinks

Preview Report

October 2026



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01



Executive summary



In 2026, autonomous vehicles are moving from early experimentation to deployment at scale. Overall, paid weekly trips in AVs are likely to more than double this year, while the technology increasingly spreads beyond the US.

To explore what this means for the future of our transport, we combined three research methods:

- findings from a global poll of 15 countries on overall attitudes to AVs
- a new global integrated model of the economic and social value that could be created by them over the next few decades
- three detailed city polls in San Francisco, London and Washington DC

Here are some of the most interesting things we found:

- **We expect AVs to deliver over \$1 trillion a year in economic value globally by 2050.** That is more than the entire airline industry earns in revenue today.
- **AVs will transform access to safe transport.** We expect that AVs could give 100 million people who cannot currently use a car access to one, and save around 60,000 lives a year because they crash less often than human drivers.
- **AVs could radically change how our urban cores work.** We estimate they could allow over 75 million people to give up their cars, and free up large amounts of city-centre space that is currently used for parking.
- **AVs could free up over 80 billion hours a year for drivers.** Adding up all such social benefits, we estimate they are worth about half as much again as the market value.
- **Over the next decade, AVs could help drive increased demand for wider automotive supply chains.** Within a decade, we estimate AVs could be generating \$400 billion a year of demand for the industry, and giving people a reason to upgrade their vehicle early.
- **There is still relatively low awareness of the safety benefits of AVs.** Around half of respondents in advanced economies think that AVs are less safe than a human driver.
- **This is holding back support for deployment.** In advanced economies, over half (55%) told us it was too soon to legalise self-driving cars, with safety (75%) overwhelmingly chosen as the leading reason, more than twice as often as concerns about jobs (29%).

How to build support for AVs

In our initial research, we identified three levers that can help persuade people of the wider benefits of AVs:

1 – Increase awareness of the safety benefits of AVs. We found that people were willing to listen to the evidence on this, and that it helped address their biggest hesitation by far. Providing the public with evidence that AVs are safer than human drivers increases support for legalisation by 5–7 percentage points.

2 – Focus on benefits beyond costs. In the very long run, AVs are likely to bring down costs, but in the short term it is more powerful to focus on benefits that people are more likely to experience in the next decade or so: an improved passenger experience, widening access for those who cannot drive themselves, and helping close current gaps in public transport availability.

3 – The most powerful argument is exposure. We found much of the current hesitation is just wariness about a technology people have not experienced – but as it becomes normalised and people gain real-world experience for themselves, many of the initial concerns go away. In the Bay Area, where robotaxis are already a familiar presence, 60% thought they should be legal, and on average our respondents thought they were already safer than human drivers.

02

AVs will transform the
economic potential of
our cities

Much of the value in the modern economy is created within our cities – and the economic efficiency of our cities in turn depends greatly on transport. Historically, from the horse-drawn cab to the underground, the car to the lift, advances in transport technology have transformed urban life. Easier movement accelerates the process by which workers, businesses and ideas bounce off each other and produce innovation.

Over the next 25 years, we expect AVs to create a similar effect. In our central scenario, we estimate they could deliver over **\$1 trillion a year in economic value globally by 2050**. That is more than the entire airline industry earns in revenue today.

AVs will deliver this value mainly through two channels:

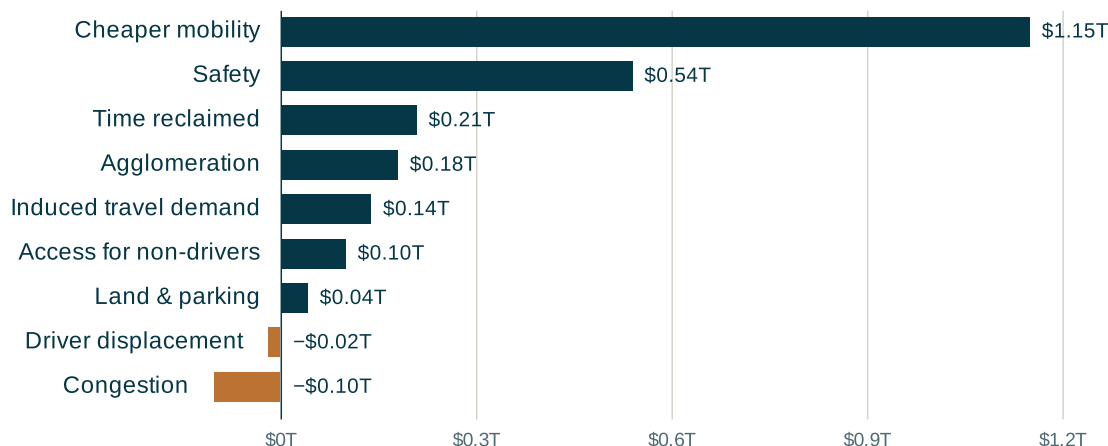
- **Reducing costs and saving time.** At present, AVs deliver little cost benefit over conventional vehicles. But over the next few decades, as learning effects bed in, we expect AVs to help reduce the cost of transport – and particularly so in areas like freight and delivery.
- **Agglomeration.** By expanding access to fast, convenient and safe travel, AVs should increase the effective density of urban areas, raising the frequency and intensity of economic interaction, with spillover gains in productivity.

Beyond its applications in passenger transport and freight, autonomous technology is likely to have wider spillover impacts across many other industries:

- For the **wider automotive industry**, AVs could lift demand in the short term by giving consumers a reason to upgrade their vehicle early. We estimate they will be generating **\$400 billion a year of demand for the industry within a decade**, rising to **\$1.9 trillion a year by 2050**.
- In **manufacturing**, tools like lidar, simulation and motion planning can help radically boost productivity within a factory – with a supply chain shared between vehicles and factory robotics helping ensure both benefit from reduced costs and economies of scale.
- In **delivery**, autonomous vehicles are already being trialled for last-mile delivery. Over the next few years, they could significantly reduce costs, opening up delivery to a wider range of businesses and helping to reduce congestion on urban roads.
- In **construction**, autonomous technology can help boost productivity, potentially enable 24-hour operation and remove the need to put people on more dangerous tasks.

Where the value comes from

2050 annual value by mechanism, \$ trillion, central scenario



Source: Public First Global AV Value Model, central scenario.

Our Global AV Model

Public First's Global AV Value Model estimates the annual value of autonomous vehicles in 2050 across 13 markets and regions under three adoption paths.

Our estimate is built up from nine mechanisms. Seven are benefits: cheaper freight, taxi and bus travel; access to travel for people who cannot drive; land released from parking; fewer deaths and injuries; driving time reclaimed; agglomeration gains from denser, better-connected cities; and new travel induced by lower costs. Two are costs netted off the total: the displacement of professional drivers, and the congestion that extra vehicle travel causes.

We separately estimate the supply chain demand supported by the sector, while excluding this from our headline estimates to avoid double counting.

Adoption is estimated segment by segment, taking into account falling costs, the savings on offer, what buyers will pay and how quickly regulators grant approval.

While the above numbers are our current central estimate, we are still very early in the development and deployment of the technology, and significant uncertainties remain:

- **How receptive cities are to the technology.** Despite strong early evidence of the technology's safety, there is still political resistance to AVs in cities across the US and internationally. While the policy direction is often ambitious, many legislative frameworks are still under development or fragmented. Over the next decade or so, this is likely to significantly affect the roll-out speed of robotaxis in advanced markets.

- **How fast overall costs change.** Looking beyond this, the technology will need to keep falling in cost to see widespread adoption, particularly for private vehicles, freight, and in emerging markets. Like most technologies, AVs will almost certainly experience a learning curve of gradually reduced costs – but the speed of this will make a significant difference to how much impact they create in the 2030s and 2040s.
- **How consumer behaviour ultimately reacts to AVs.** It is still unclear, for example, whether AVs will ultimately lead to a net reduction in the number of vehicles on the road – as people switch from private vehicles to shared robotaxis – or add more, as the technology gives people who could not otherwise drive the option of their own car.

Spotlight on the UK



After the Automated Vehicles Act 2024 gave Britain one of the world's clearest legal frameworks for self-driving, commercial pilots and supervised rides began in 2026. In 2027, a full launch is expected in London.

£30bn

a year in market value for the UK by 2050 in our central scenario

47%

of Londoners think autonomous taxis should be legal in the city, against 39% who do not

56%

of Britons think AVs are currently less safe than a human driver, against 15% who think they are safer

229

deaths avoided a year

1.9 billion

hours of driving time freed

119,000

jobs supported by a UK AV supply chain

03

AVs will democratise
access to safe transport

As important as the economic potential from AVs will be the wider social impacts they deliver: expanding access to more egalitarian, safer and greener transport.

In our initial modelling, we focused on four key social benefits that are likely to come from the technology.

1. **AVs will significantly reduce the number of deaths and serious injuries from road accidents.** Early studies of real-world deployments have found that on average AVs cause significantly fewer injuries than human drivers in comparable conditions (see the box on AV safety). In our city polling, we found that **eliminating drink, drugged and tired driving is the public's single most recognised benefit of autonomous taxis** – and, in total, we estimate that AVs could help **prevent around 300,000 serious injuries and save around 60,000 lives a year by 2050.**
2. **AVs can expand access for people who cannot afford to drive, are unable to, or simply do not want to.** This could be life-changing for the elderly or people with a significant disability, while expanding options for millions more. By offering a personal vehicle on demand, AVs also make it far easier for people in urban centres to manage without owning a car. Three in ten Londoners, for example, either have no driving licence or have a health condition that makes driving difficult or impossible. **In our modelling, by 2050 AVs could give access to a car to an additional 100 million people who currently cannot use one.**
3. **AVs can help expand access for people who live in transit deserts, complementing other modes of transport.** For many people, public transport is not available, is inconvenient to get to, or does not feel safe alone at night. AVs can help connect people into the dense urban core, where they can pick up mass transit. In our city polling, around 40% of women told us they feel unsafe using public transport after dark.
4. **In the long term, AVs could support the redevelopment of urban cores, freeing up space that is currently used for parking.** At the moment, around 10% of land within cities is used for parking. AVs both reduce the need for private car ownership – and even when they are personally owned, can drop passengers off and then travel elsewhere to park. **Around half of car owners in our city survey told us they would consider giving up their car under the right conditions with AVs.** Over time, we estimate that AVs could help over 75 million people give up their private car.

How safe are current autonomous vehicles?

In the long run, there are good reasons to believe that AVs will become much safer than human drivers. Computer-controlled cars are never distracted, drunk or tired, can make use of sensors not available to humans and could in future coordinate directly with each other. Today, around half of road deaths in the US involve at least one of alcohol, speeding, fatigue or phone use.

NHTSA 2024 data: alcohol-impaired driving was a factor in 30% of US road deaths, speeding in 29%, distraction in 8% and drowsy driving in around 2%; the categories overlap, so they cannot simply be added.

At the same time, that does not mean that current technologies have passed this threshold, and many people worry about how AVs will react to the long tail of unusual road situations or weather.

The best way to judge this is through real-world experience. We now have multiple studies: peer-reviewed work by Waymo researchers (Kusano et al., 2024, 2025), an insurance claims analysis with Swiss Re (Di Lillo et al., 2024) and an independent analysis by the Insurance Institute for Highway Safety (2026). These compare the crash rate across the millions of miles now driven by Waymos with the best available, though imperfect, benchmarks for human drivers in the same cities. Across these studies, Waymo vehicles are involved in fewer crashes, those crashes tend to be less severe, and when they happen it is usually not the fault of the automated vehicle. **These studies tend to find a relative reduction in injury crashes of around 80–90%**, though the size of the effect varies by city.

Deaths from road accidents remain, fortunately, relatively rare, and automated vehicles have not yet driven enough miles to give us statistical confidence either way on fatal crashes. There is reason to hope the pattern extends to them, but fatal crashes have a different profile, skewing towards high speeds, motorways and night-time driving, where current deployments are thinnest.

04

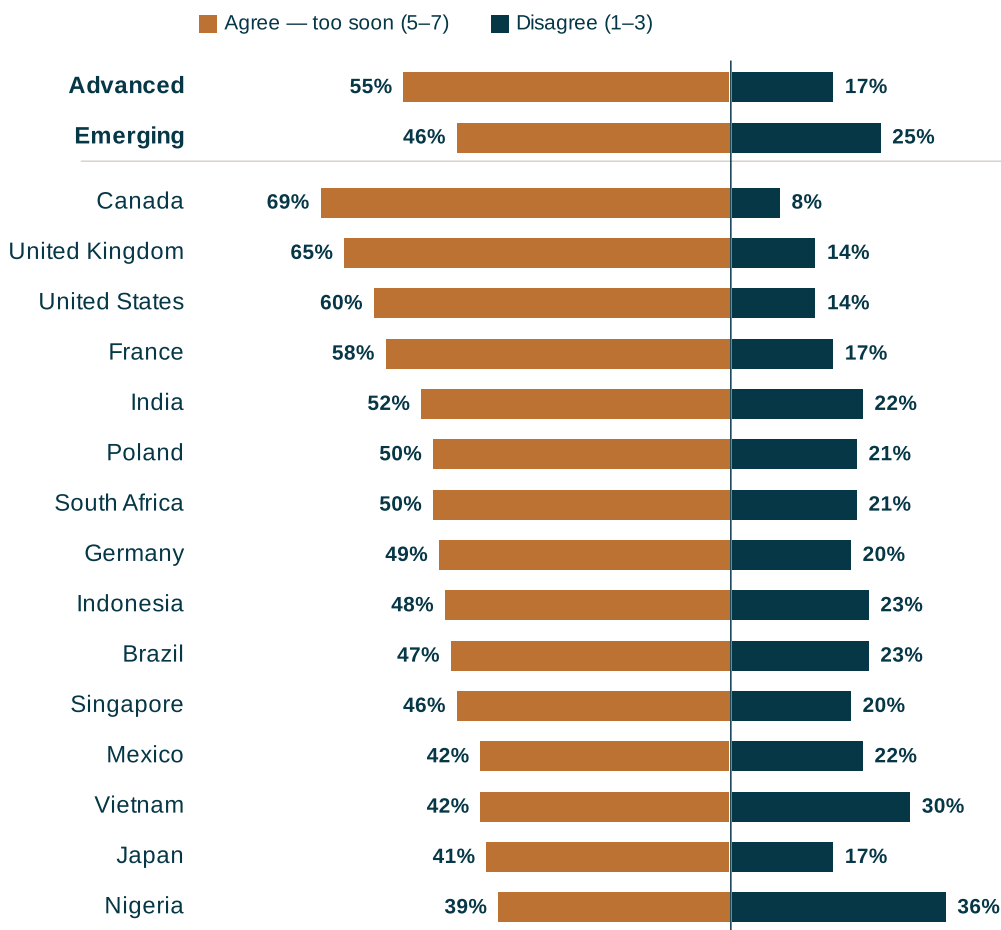
Public scepticism about
AVs is driven by safety
concerns

In a new global poll, we surveyed over 17,000 people across 15 countries in both advanced and emerging markets.

Overall, the public leant towards thinking it was too soon to legalise self-driving vehicles – with this scepticism particularly concentrated in advanced economies.

“It is too soon to legalise self-driving cars”

Agree (5–7 on the 7-point scale) vs disagree (1–3); “neither” and don’t knows not shown

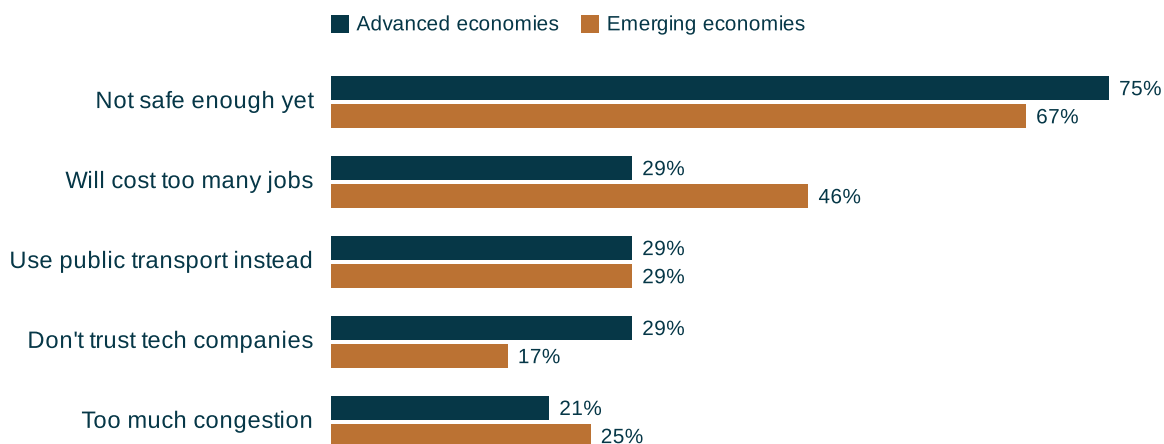


Source: Public First AI Global poll, 15 countries, May 2026, 17,000+ respondents

What is most telling, however, is the reason for this wariness. When asked why, respondents in advanced economies overwhelmingly cited safety (75%), more than twice as often as concerns about jobs (29%).

Why is it too soon?

% selecting each reason, among those who agree it is too soon (5–7, n≈7,190)

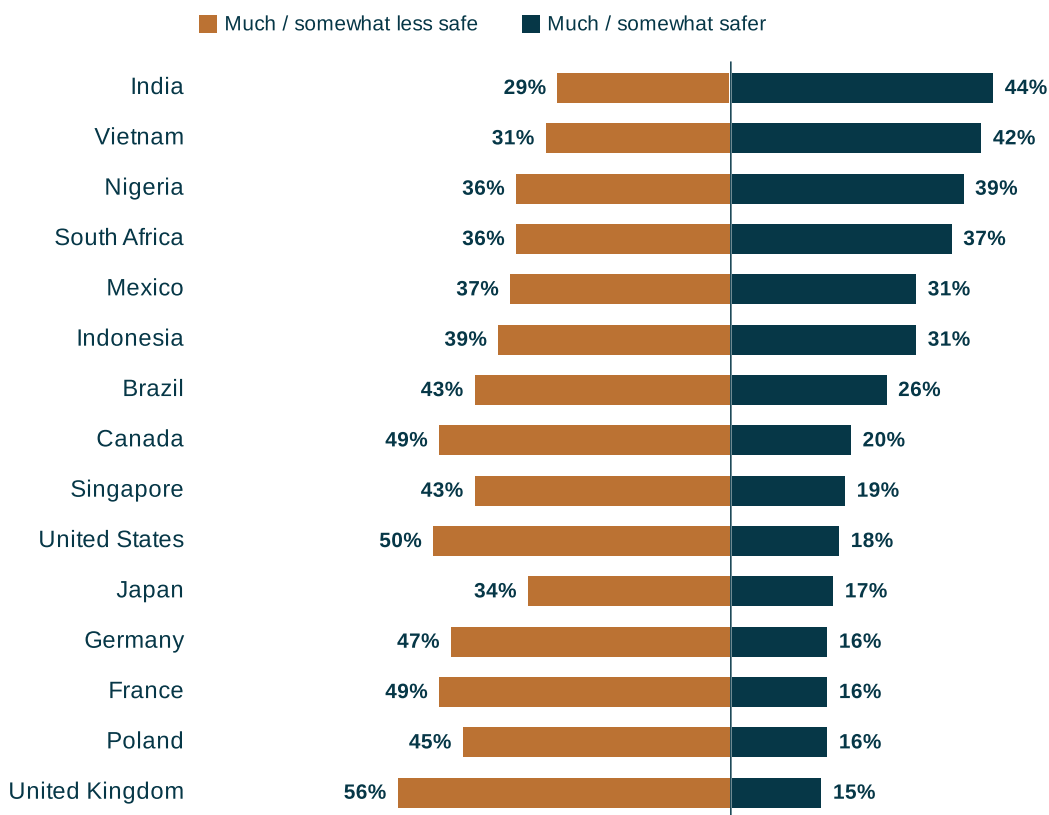


Source: Public First AI Global poll, May 2026

When asked how safe they thought AVs were, respondents in advanced economies were much more likely than those in emerging economies to believe that AVs were less safe than a human driver.

How safe are AVs today, compared with a human driver?

"Much/somewhat less safe" vs "much/somewhat safer"; "about the same" and don't knows not shown

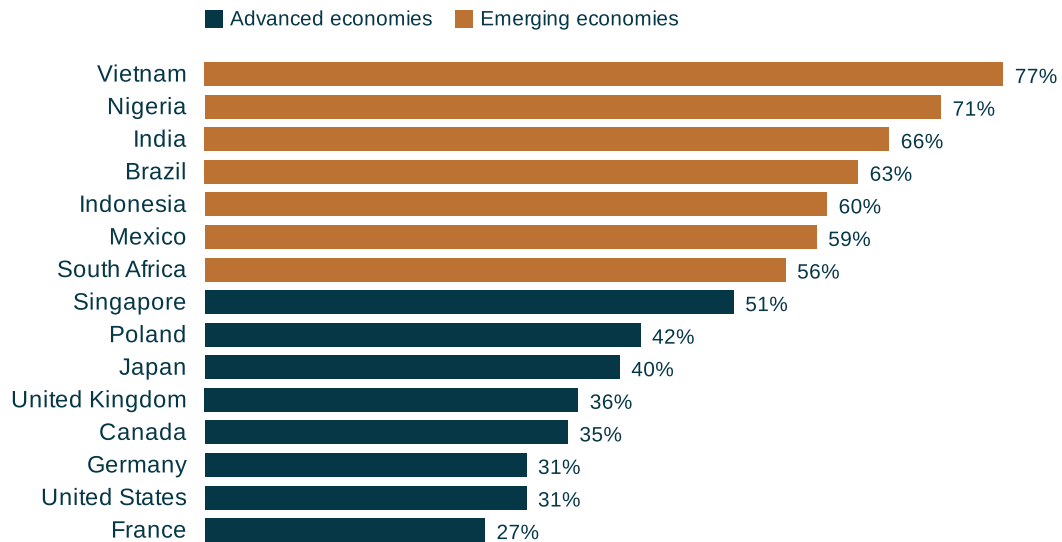


Source: Public First AI Global poll, May 2026

When we showed people some of the real-world evidence on AVs' relative safety, they did not completely discount it: in every country, a large share said it increased their support for allowing AVs on the roads.

“This study increases my support for allowing AVs on public roads”

% somewhat + significantly increases

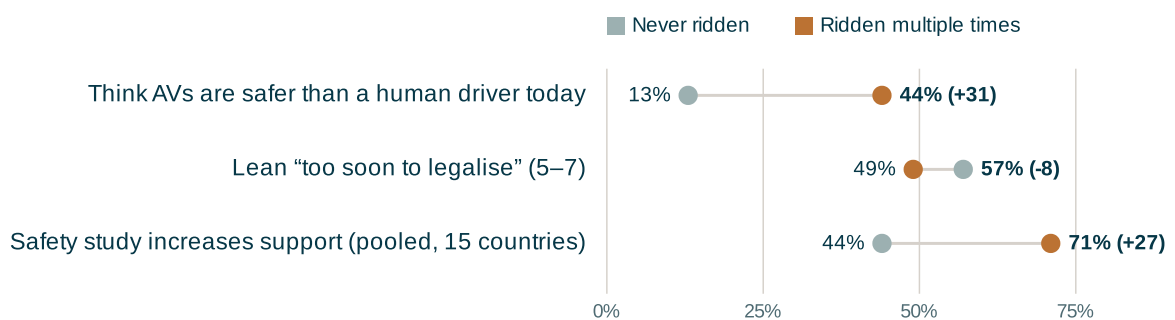


Source: Public First AI Global poll, May 2026

And even more powerful was direct personal experience. Across advanced countries, people with real-world experience were far more likely to think AVs were safer than human drivers, and somewhat less likely to think it too soon to legalise.

Experience and attitudes

Advanced economies; never ridden vs ridden multiple times



Source: Public First AI Global poll, May 2026

Spotlight on the US



Autonomous vehicles are now a day-to-day reality in a growing number of US cities: Waymo now runs driverless taxis in 15 cities with more than 4,000 vehicles, and Tesla charges for driverless rides in six. Regulation, however, remains a state-by-state patchwork, with no comprehensive federal framework or guidance.

\$653bn

a year in market value for the US by 2050 in our central scenario

60%

of Bay Area residents think autonomous taxis should be legal in their city, against 28% who do not

50%

of Americans think AVs are currently less safe than a human driver, against 18% who think they are safer

7,830

deaths avoided a year

34 billion

hours of driving time freed

970,000

jobs supported by a US AV supply chain

05

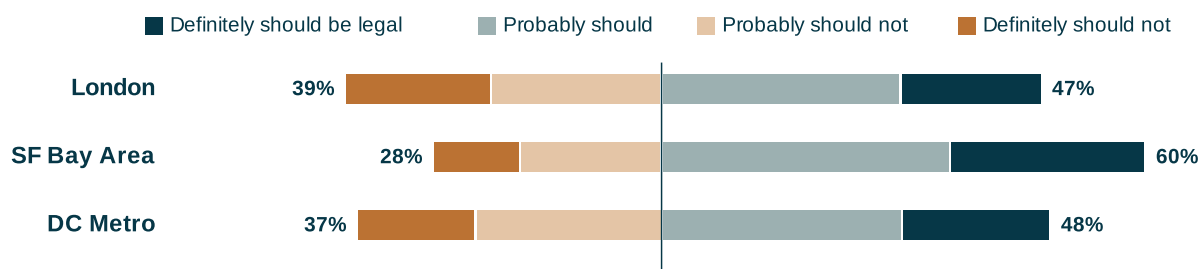
Direct experience of
AVs significantly
increases support and
perceived safety

To dig further into attitudes towards AVs, we ran three follow-up polls at the city level, comparing an urban area where robotaxis have been deployed for some time (the San Francisco Bay Area) with cities where they have yet to launch: London and DC.

Across all three urban areas, more people supported legalising autonomous taxis than opposed it, a warmer picture than the national polling. In SF this was a clear majority, with more than twice as many people thinking they should be legal as not.

Should autonomous taxis be legal to operate in your city?

Centred between support and oppose. Don't knows (12–15%) not shown.

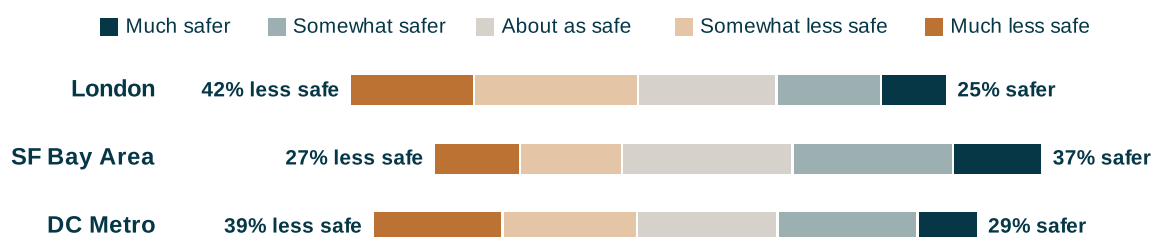


Source: Public First AV Tracker, London, SF Bay Area and DC Metro, July–August 2026

Similarly, residents of the Bay Area were far more likely to see the technology as safe, and the Bay Area was the only one of the three where more people thought AVs were already safer than a human driver than thought they were less safe.

How safe are AVs today, compared with a human driver?

Centred on "about as safe". Don't knows (11–13%) not shown.

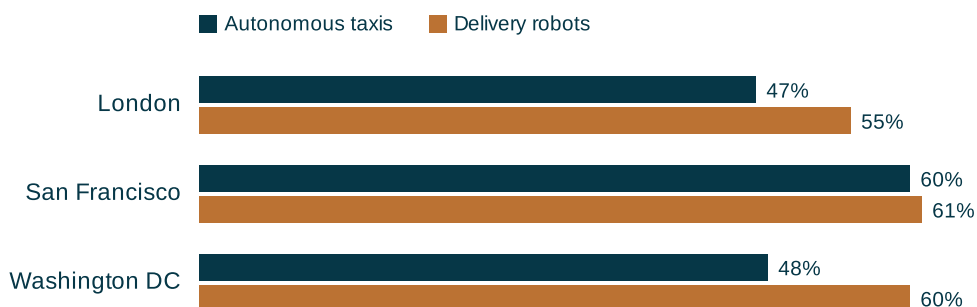


Source: Public First AV Tracker, July–August 2026

As a comparison, delivery robots raise a similar legalisation question to autonomous taxis, but without a human passenger inside the vehicle. This changes both the personal stakes of using the technology and, it turns out, the level of public support: delivery robots are more popular than autonomous taxis in every city we polled, and substantially more so in London and DC.

Support for legalising: autonomous taxis vs delivery robots

Share saying each technology should be legal (“definitely” + “probably”), by city

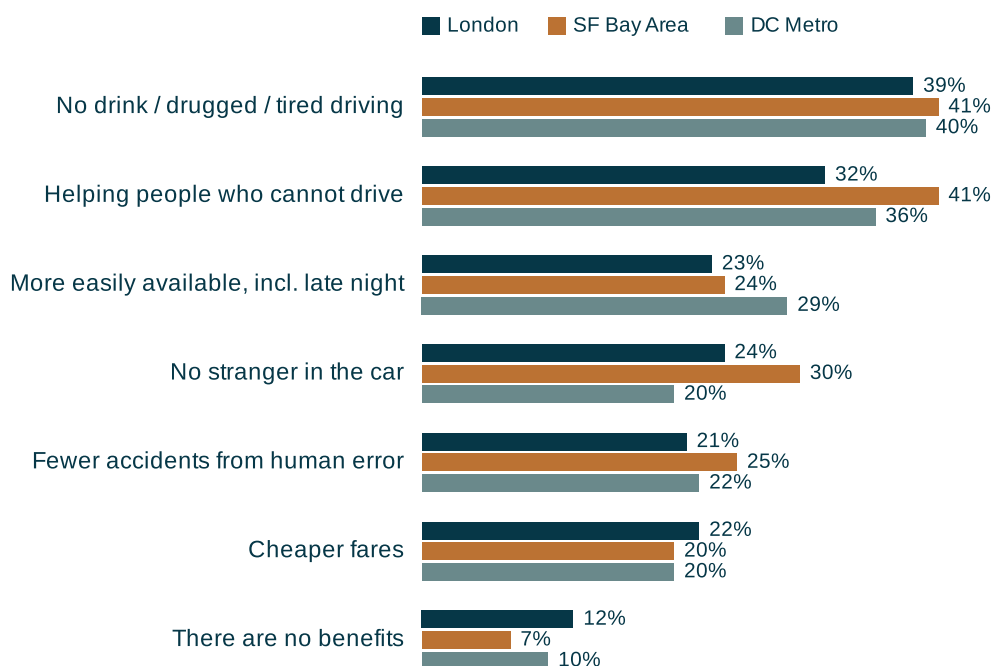


Source: Public First AV Tracker, July–August 2026

When asked about potential benefits of AVs, the pattern was fairly similar across the cities. Bay Area residents were more likely to see helping people who cannot currently drive, and a ride without a stranger in the car, as benefits.

Main perceived benefits of autonomous taxis

% selecting each, up to three. Base: all respondents.

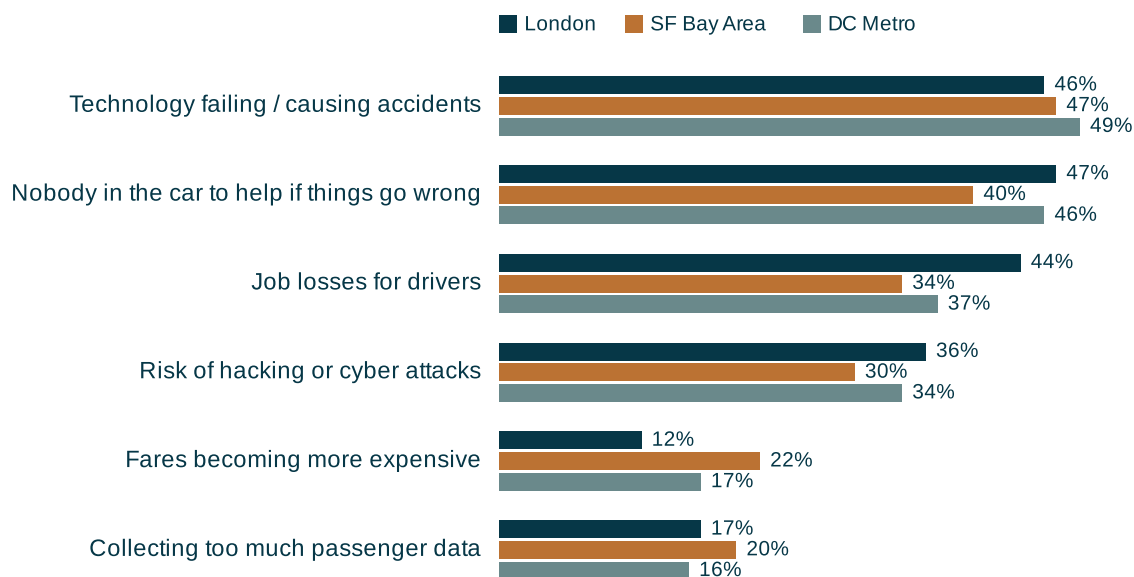


Source: Public First AV Tracker, July–August 2026

Turning to perceived disadvantages, those in SF were less likely to worry about nobody being in the car to help if things go wrong (perhaps having more experience of remote assistance), but noticeably more likely to worry about fares becoming more expensive.

Main perceived disadvantages

% selecting each, up to three. Base: all respondents.



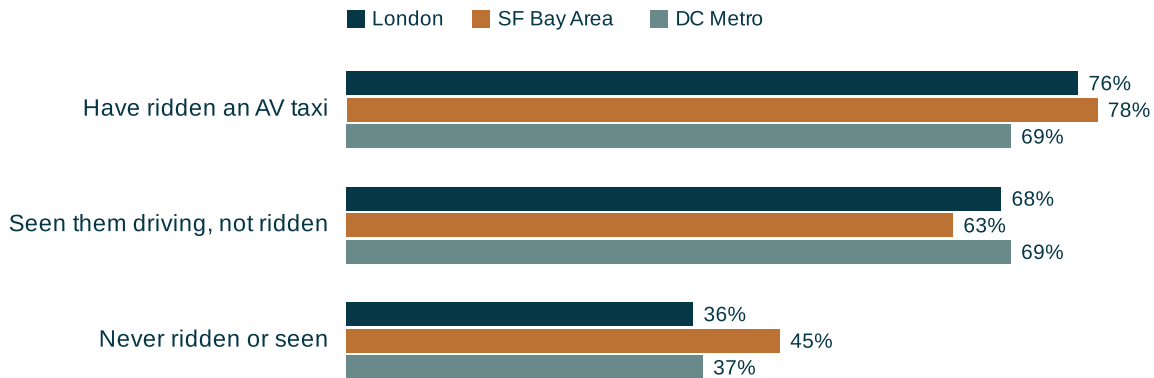
Source: Public First AV Tracker, July–August 2026

No matter which city our respondents lived in, having direct experience was associated with more support for AVs.

Some of the causation is likely to run the other way: people who are more enthusiastic about AVs are more likely to choose to ride in them. But when we cut the data by other factors, such as how enthusiastic people are about AI or whether they self-describe as an early tech adopter, the pattern holds within every group, which suggests it is reasonably robust.

Support for legal AV taxis, by personal experience

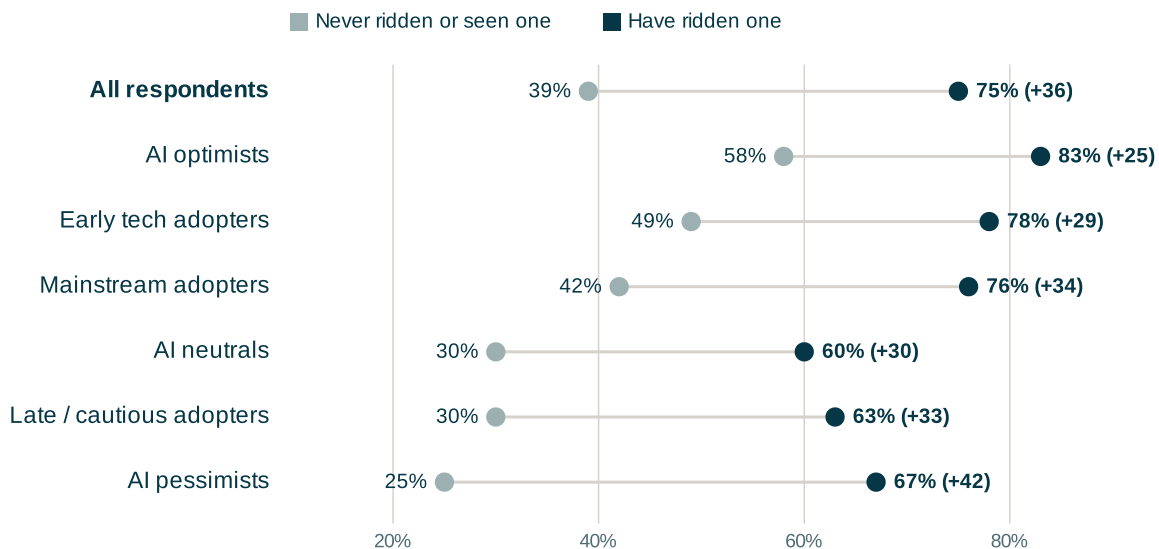
% saying AV taxis definitely/probably should be legal, within each experience group



Source: Public First AV Tracker, July–August 2026

Never exposed vs have ridden, within attitude groups

Pooled across the three cities, unweighted. AI optimists, neutrals and pessimists: whether respondents expect AI to make society better, have no impact (or don't know), or make it worse; adopter groups from self-described attitude to new technology.

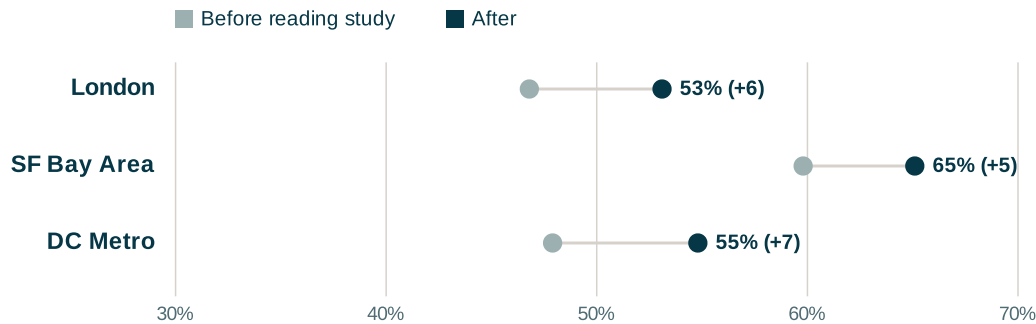


Source: Public First AV Tracker, July–August 2026

As in the country study, we tested the impact of giving people more information about the reported real-world safety benefits of AVs. We found that this has a relatively consistent effect across the three cities – improving support even in SF from its already higher base.

Support before and after reading the safety study

% saying AV taxis should be legal, asked before and after the 91%-fewer-injuries stimulus



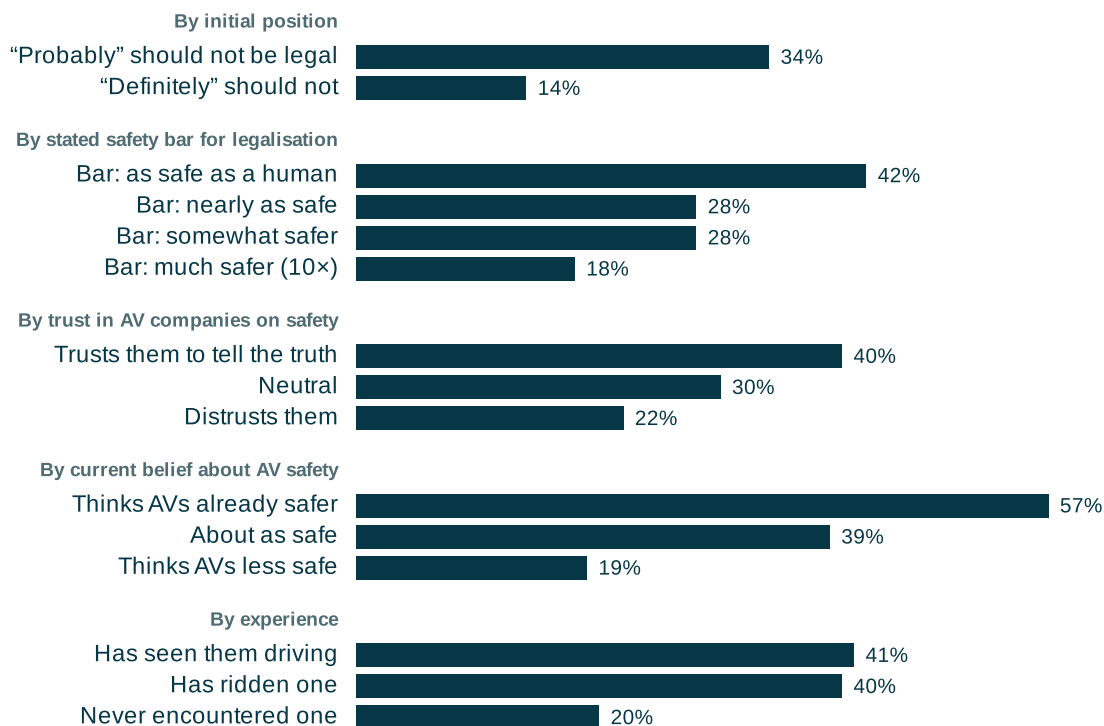
Source: Public First AV Tracker, July–August 2026

Those who were more likely to be swayed by this kind of information were:

- those who were already on the fence, and initially thought AVs probably but not definitely should not be legal
- those who have greater trust in technology companies to tell the truth
- those whose bar for acceptable safety of the technology was at around human level (i.e. not an order of magnitude higher)
- those with indirect or direct experience of the technology

Which opponents does the safety evidence convert?

% of baseline opponents switching to support, by subgroup. Pooled.



Source: Public First AV Tracker, July–August 2026

We also looked at how demographics affect people's support for AVs. To do this, we ran a regression analysis that lets us see how support for legalisation varies by characteristic, controlling for age, gender, income, education, city and household composition at the same time, so that each effect shown reflects that characteristic's own association with support, independent of the others.

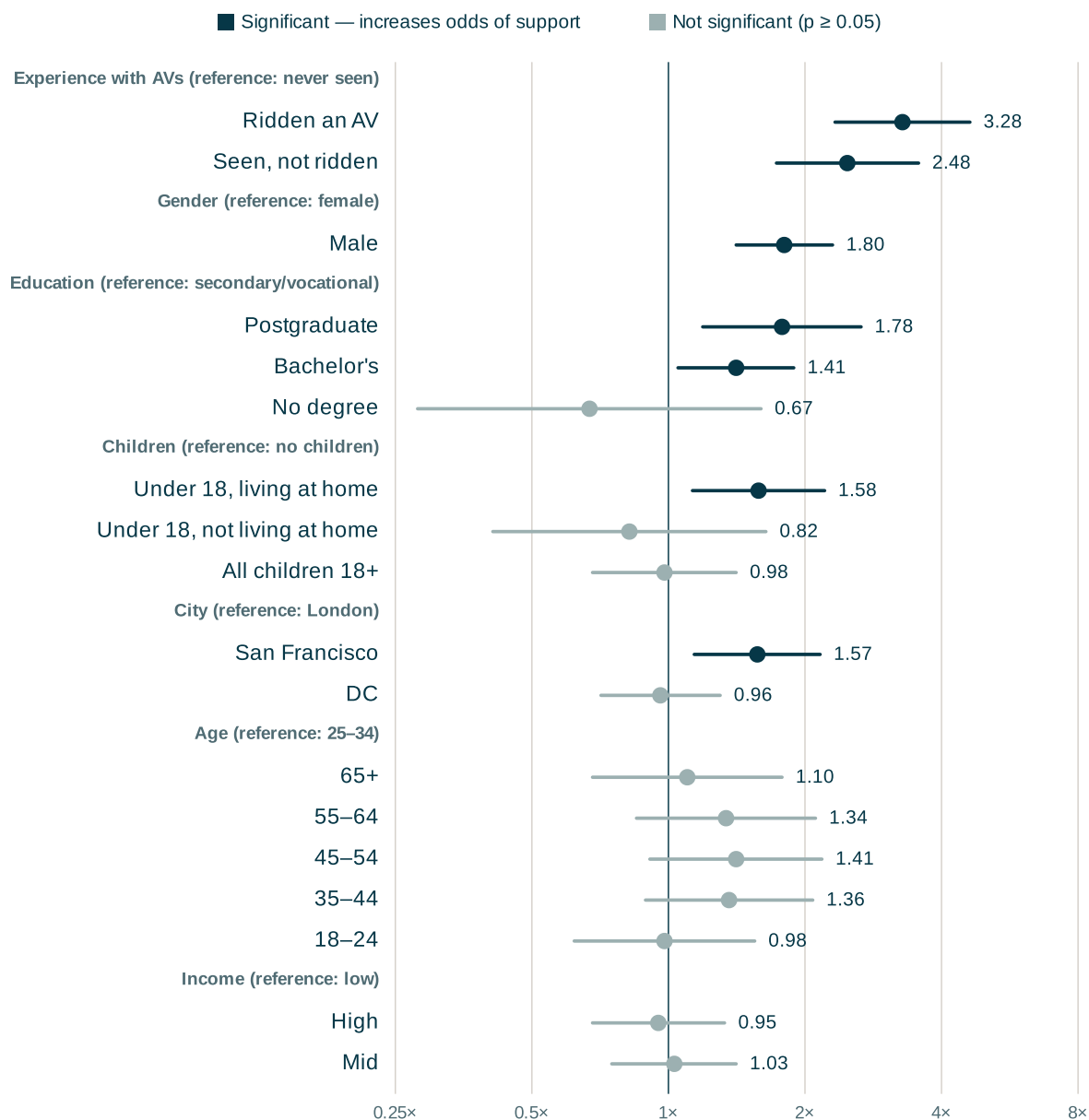
In line with the findings described above, we found that experience of AVs and living in San Francisco, where the technology is already readily available, increase the chances of someone being in favour of legalisation.

Other strong factors are being a man and having high levels of education, with postgraduates having close to twice the odds of supporting legalisation as someone with only secondary or vocational education.

The final factor that demonstrated a significant impact on support is having children under the age of 18 living at home, with more than 50% higher odds of support. One reading is that those who would feel the benefits of this technology on a day-to-day basis are much more likely to be in favour.

Odds of supporting AV legalisation, by characteristic

Pooled logistic regression, London + SF + DC, n=1,238. Odds ratio vs reference group, 95% CI; vertical line = no effect



Reference groups: London, age 25–34, female, low income, secondary/vocational education, no children, never seen an AV. Income and education tiers are locally defined per market.

How should policymakers respond to AVs?

What policies should governments and local officials implement to best take advantage of the potential economic and social benefits from AVs? Setting credible safety standards to maintain public trust is clearly essential – but at the same time, policymakers have to ensure that they are not captured by proposals from special interests trying to delay competition.

Here are three policy principles we would suggest to help get the balance right:

Set technology-neutral safety standards. Many people in the industry continue to argue over whether specific technologies are essential for fully autonomous driving. Rather than try to predict the future and prescribe which technologies developers must use – which risks becoming out of date and reducing flexibility – policymakers should focus on clearly defined safety standards in regulation. Where possible, policymakers should align these with international standards rather than start from scratch. At the same time, to reduce consumer confusion, regulators should issue clear marketing guidance on how companies may describe the level of autonomy their vehicles provide, depending on the safety standards they have reached. This would allow consumers to make informed choices.

Design mode-neutral congestion policies, rather than treating AVs as a special case. Many people have expressed a concern that AVs will lead in the short term to increased congestion in dense urban areas. While they could add to traffic at first, they are likely to remain a significant minority of overall traffic for a long time to come. For a congestion policy to be effective, it should treat all modes of transport equally, allowing traffic and transit patterns in cities to more naturally evolve.

Ensure liability and accountability are clear and up to date for the autonomous age. Clarifying this can help set the right incentives through the supply chain, and reduce legal uncertainty. For a self-driving vehicle, it no longer makes sense for responsibility to sit with the humans who happen to be in the vehicle, but instead with the organisation or organisations that designed its behaviour, such as the vehicle manufacturer, the designer of the autonomy subsystem or both. This is roughly the model followed by the UK's Automated Vehicles Act, which requires a designated Authorised Self-Driving Entity to take on regulatory and legal accountability for how the vehicle drives.

State of AVs

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