

# TfL's approach to automated vehicles

2025

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## Our approach to innovation is led by the Mayor's Transport Strategy

Innovation in transport is happening all the time. Londoners have historically embraced new technologies, which has helped the capital earn its reputation for integrated, sustainable transport. As London's transport authority our purpose is to deliver the Mayor's Transport Strategy (MTS), through which we commit to:

- explore, influence and manage new transport services in London so that they support the Healthy Streets Approach (Policy 23),
- take part in trialling of new vehicle technologies including self-driving (Proposal 105) where there is a business case and funding source,
- adopt appropriate policy and regulation to ensure that connected and autonomous vehicles develop and are used in a way that is consistent with the MTS (Proposals 106).

## Current context

The Automated Vehicles Act 2024 describes an automated vehicle as one that satisfies the "self-driving test", which is to be given greater detail in forthcoming secondary legislation. In their Connected & Automated Mobility 2025 document, the Government defined a self-driving vehicle as "one that has at least one self-driving feature, delivering sufficiently high levels of automation that it meets a legally defined threshold and is capable of safely driving itself with no human input. Such features could provide self-driving capability for all or part of a journey".

Self-driving vehicles may be designed to drive themselves with no input at all from any person in or near the vehicles. Alternatively, they may be designed to work in certain environments only and then pass control back to a human where appropriate. Use of self-driving features may be limited by a range of factors such as location, street type, time of day, road surface conditions or simply the weather. The vehicles may have the capability to carry passengers, freight, or both.

Self-driving vehicles have been in development for decades. The technology is maturing, and trials are already happening across the country. The world's first full-sized self-driving bus service launched in Scotland in 2023, and self-driving taxi and private hire services are on offer in many cities worldwide. Through the Automated Vehicles Act 2024 the Government has sought to put Great Britain at the forefront of self-driving regulation, investment, and technology development.

There is still uncertainty about what vehicle designs and service models may be most attractive for vehicle manufacturers and service operators. Use cases may be limited either by the capability of the technology or through regulation, for example limited to

certain roads or environmental conditions. As the technology develops, new use cases may emerge.

In 2019 TfL published two documents: our connected and autonomous vehicles statement and our guidance for London trials<sup>1</sup>, developed with London Councils and London boroughs. Since then, we have responded to consultations and calls for evidence on self-driving to help ensure that safety and sustainability are at the heart of changes to legislation and regulation.

## **Opportunities and risks**

Self-driving technology is developing rapidly, and it is difficult to predict all the possible impacts. We are learning from trials in the UK and other countries, and from engaging with industry. It could take many years for a reliable body of evidence to be built. We are therefore keen to explore a range of opportunities to deepen our understanding.

The primary benefit put forward for self-driving vehicles is a potential reduction in road danger. There is considerable uncertainty around the potential for safer driving, for example what new risks will materialise or how the risk profile differs by road type, traffic, or time of day.

Similar assessments will need to be made on the impacts on other outcomes, such as congestion, accessibility, emissions and security.

## **Future changes to legislation or regulation**

Trialling new technology is part of innovation. Under current national regulation, self-driving vehicles can be trialled on highways in London. The trialling organisation must follow Department for Transport guidance and their code of practice, including a requirement for a safety driver or operator to be ready and able to override the vehicle. Trialling organisations do not always need permission from TfL to run a trial in London, however we encourage trialling organisations to let us know about trials and to also follow our guidance.

We need to be ready for changes to legislation and regulations relating to passenger carriage, freight, and vehicle design, as well as how these changes sit within our strategic approach to sustainable travel. This may include being involved in trials or research which enable us to learn more about the impact of self-driving on our policy objectives.

It is possible that manufacturers and operators will seek to run more advanced trials of self-driving technology on London's roads over the coming years. These could include trials where no safety driver is inside the vehicle. As guidance and regulations develop TfL will continue to work with industry and CCAV to help ensure trials are implemented safely and in a way that works for Londoners.

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<sup>1</sup> [TfL publications and reports: connected and autonomous vehicles](#)

## Self-driving outcomes for London

We have engaged with stakeholders as trials have progressed to better understand the potential benefits and risks. We are now looking more broadly at the needs of all our customers, to help shape our longer-term approach to self-driving. To help ensure meaningful engagement we have identified five key outcome areas that we believe should be embedded in future self-driving services. These should be supported by manufacturers and operators as part of deployment of self-driving vehicles and services in London.

Self-driving vehicles and services must help to deliver the MTS and support:

- A safer road network in which death and serious injury are eliminated and people feel safe to choose active travel and use public transport.
- A more efficient and reliable road network which prioritises Healthy Streets and active, sustainable and efficient modes, and supports efficient freight and servicing.
- A more accessible road network, which expands access to travel and reduces journey times for people with accessibility needs.
- Achieving air quality and carbon reduction to support the global air quality guidelines set by the World Health Organisation and London's net zero carbon's ambition by 2030.
- A more secure road network, protected against terrorist or criminal threats and which safeguards vulnerable persons and the privacy of both users and non-users.

This is intended to be a living document, and will be updated to reflect legislation, best practice and the interests of the public.