

# Future of mobility call for evidence

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## Introduction

This call for evidence seeks views and evidence to inform government's work on the Future of Mobility Grand Challenge, including our Future of Urban Mobility strategy and regulatory review. Thank you for taking the time to read the document and to respond to the questions.

### Confidentiality and data protection

We're not asking for any personal data as part of this consultation. If we receive any it will be securely deleted in line with [DfT's privacy policy](#).

# **Organisation or individual**

## **1. Are you responding:**

on behalf of an organisation? Go to Question 2  
as an individual? Go to Question 4

# Organisation details

## 2. Organisation name

Urban Transport Group

## 3. What type of organisation are you responding for?

Local or regional council or transport authority

Trade association

Transport provider

Other business

Non-governmental organisation

Other:

Representative body for the UK's largest urban transport authorities. Our full members are Transport for West Midlands, Merseytravel, Nexus (Tyne and Wear), South Yorkshire PTE, Transport for Greater Manchester, Transport for London and West Yorkshire Combined Authority. West of England Combined Authority, Nottingham City Council, Strathclyde Partnership for Transport and Tees Valley Combined Authority are associate members.

# Future of Urban Mobility Strategy – emerging technologies

## 4. We have identified in our call for evidence the main technologies and trends that we believe will affect urban mobility in the coming decades. Are there any missing?

An additional trend with implications for the future of urban mobility is the desire to create liveable cities which promote health and wellbeing, attract investment and are places that people want to live, work, play and spend time in.

With these goals in mind, urban conurbations across the world are increasingly looking to restrict or even ban private vehicles from city centres. The Healthy Streets approach (see <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets>) provides a useful tool for considering the features needed to create environments centred around people and their health. The ten indicators of a Healthy Street are:

- Everyone feels welcome
- People choose to walk, cycle and use public transport
- People feel relaxed
- Easy to cross
- Clean air
- Not too noisy
- Places to stop and rest
- People feel safe
- Things to see and do
- Shade and shelter

In considering the various forms that the future of mobility could take it is important to keep in mind the vision of a liveable city and the extent to which the options presented can help us to achieve this.

## 5. We want our urban infrastructure to support these trends and deliver benefits to society. What changes are required to urban infrastructure?

The changes required are hard to predict as there are many uncertainties around how the trends identified might play out in practice.

As current highway systems and infrastructure reach the end of their lives, transport authorities need to decide how best to upgrade and replace their assets. Infrastructure such as roads and traffic management systems have potentially very long life spans. Guidance from Government and industry would be welcome to ensure any new infrastructure is future-proof and to minimise expensive retrofitting.

More broadly, in order to respond effectively to emerging trends, transport authorities will need adequate funding combined with the right skills and powers to shape change in a way that best meets the needs of individual travellers and city regions as a whole.

This is particularly the case given the following factors:

- The rapid pace of change – new technologies and business models are already having a fundamental effect on transport provision over a very small space of time (e.g. dockless bikes, app-based private hire vehicles, electric vehicles).
- The exponential growth in the availability of data – we need to attract and retain the skills necessary to manage and analyse data as well as develop applications for its use in making travelling easier and in facilitating better decision-making.
- The need to develop, provide, manage and maintain smarter infrastructure to accommodate new types of vehicles and journey behaviours.
- The need for more resilient infrastructure and operations that can respond to evolving risks and threats such as more extreme weather conditions and cyber-attacks.

## **6. What evidence do you have to enhance our overview of the impacts of these trends on cities and their use of urban space? Are any impacts missing?**

Again, it is difficult to predict with accuracy the likely impact of these trends as this invites speculation based on a number of different scenarios. To reiterate the points made in our response to question five, it is important that transport authorities have adequate funding, skills and powers to explore, plan for and manage these emerging trends.

In terms of missing impacts, we refer back to our response to question four. Cities across the world are actively reducing space for private vehicles in favour of space for people and encouraging more journeys to be made on foot, by bike or by public transport.

Regardless of technology, these modes continue to be the cleanest, most space efficient ways of moving large numbers of people in a way that enhances the urban realm and cuts congestion.

At present, what could be described as the ‘tech-based’ urban mobility vision for the future of cities too often runs in parallel to, and in isolation from, the vision of liveable cities and healthy streets where walking, cycling and public transport are prioritised. There is a need to bring these two visions more closely together to explore the extent to which technological developments can support the creation of places designed around people and their health.

# Future of Urban Mobility Strategy - role of government

## 7. What possible market failures might emerging technologies and trends give rise to that could require intervention by government?

There are four areas where we believe that intervention could be required by Government in order to maximise the benefits of new technologies and trends whilst avoiding unintended consequences.

### **1. Ensuring legislation keeps pace**

Where legislation fails to keep pace with the scale and rate of change for a particular sector, there can be significant knock-on effects for wider public policy priorities like public safety, public health, congestion or inclusive growth. The prime example at present being Taxi and PHV legislation which is struggling to cope with how the sector is changing and growing.

Our recent report on the taxi industry (see

<http://www.urbantransportgroup.org/resources/types/reports/taxi-issues-and-options-city-region-taxi-and-private-hire-vehicle-policy>) found that the current legislative framework is:

- leaving passengers and drivers at risk from ‘races to the bottom’ and loopholes in enforcement as vehicles can be licenced in areas which set the lowest standards and then operate entirely in areas which set higher standards but which have no powers of enforcement over them;
- resulting in endless court challenges given the ambiguities of the legislation;
- leaving local transport authorities without the tools they need to ensure quality and limit excessive provision where that could result in congestion for all road users.

It identifies four key changes the Government could make to tackle these problems:

- New statutory national minimum standards for taxi and PHV licensing (in particular to ensure passenger safety) whilst allowing local transport authorities to set higher standards as they see fit (for example in order to tackle poor air quality);
- Ending the race to the bottom and closing enforcement loopholes through ensuring that a vehicle has to start or finish its journey in the area it was licensed and strengthening enforcement powers;
- Introducing clear statutory definitions of ‘plying for hire’ and ‘pre-booked services’ to remove legal ambiguities and move more of taxi and PHV policymaking out of the courts and into wider city planning functions;
- Giving local authorities the powers to limit taxi and PHV numbers so that they can better manage the implications for air pollution, traffic congestion and the urban realm.

### **2. Powers to mandate data sharing agreements**

In our smart futures vision statement, published in June 2017 (see

<http://www.urbantransportgroup.org/resources/types/reports/our-vision-smart-futures>) we committed to sharing our data where this best serves: the interests of travellers; the efficient and effective operation of our transport systems; and the wider goals for our cities (environmental, economic and social).

However, cities also need backstop powers to mandate data sharing agreements in cases where a private sector company wants to access this data and is also providing (or planning to provide) a service which could have significant implications for transport in a city.

This is needed, for example, in order to understand the ramifications for the wider transport network (including traffic congestion); funding or financial implications (such as participation in fares schemes); and for public safety (both road safety and personal security).

### **3. Greater flexibilities around by-laws and highways powers**

There is a lack of flexibility in existing legislation, causing difficulties in responding to new transport services. Government should allow for greater flexibility around by-laws and highways powers (including FastTrack or research and development powers) so that innovative vehicles and services can be trialled more easily and transport authorities can strike a balance between safety; the quality of the urban realm; innovation; and consumer benefits in relation to rapidly emerging trends such as dockless bikes, scooters and whatever the next wave of change brings to our roads and pavements.

### **4. Bringing together CAV stakeholders**

Central government should seek to bring together CAV stakeholders to capture and build upon lessons learned from Centre for Connected and Autonomous Vehicle funded trials. With each subsequent competition there is a need to take stock of what has been learnt from previous trials and use those lessons to decide where future investment can be best targeted.

## **8. We are committed to a transport network that works for everyone. What role should government play in helping ensure that future transport technologies and services are developed in an inclusive manner?**

We welcome the Government's commitment to take a people-centred approach which places a central focus on the importance of inclusion. In our view, inclusion is about ensuring that everyone – regardless of factors such as income, location, disability, age, ethnicity, gender, religion or sexual orientation – has access to the opportunities they need to move 'onwards and upwards' in life.

To ensure that future transport technologies and services are developed in an inclusive manner, the Government should ensure that a diverse and representative range of people are given the opportunity to voice their opinions and shape policy.

The Government should also keep in mind the 'four A's' of inclusive transport and consider whether what is proposed meets these requirements for the largest possible range of people across the diversity of needs and backgrounds.

The four A's are as follows:

### **Available**

Will the transport technology or service be readily available to those who wish to use it or who could benefit from it? For example, will shared CAVs be a viable option in rural areas? How can we make the Mobility as a Service experience available for people who do not have smart phones? How can we ensure that new technologies and services tackle loneliness and isolation?

### **Accessible**

How can the transport technology or service be designed in such a way that, as far as possible, everyone is able to use it without unreasonable difficulty? How can we ensure that the

intervention does not create new accessibility problems? For example, CAVs may unlock further mobility options for some disabled people, but what options will there be for those unable to get in and out of a car unassisted? How can we plan charging points so that they do not obstruct paths or pose trip hazards?

#### **Affordable**

People should not be ‘priced out’ of good mobility. How can we ensure that new transport models, such as ride-hailing apps, complement – rather than hollow out - affordable transport options? How can we open up access to electric vehicles for people on lower incomes? Could autonomous public transport vehicles facilitate reduced fare levels? How can a range of affordable MaaS packages be developed?

#### **Acceptable**

Will people feel that the new transport technology or service is ‘for them’? Will they want to use it? For example, will people feel safe in unstaffed, shared autonomous vehicles? How can we encourage more people to use electric vehicles? Are people ready to embrace shared mobility?

## **9. How can government ensure that future urban transport systems support people's wellbeing and flourishing, healthy communities?**

One of the ways that the government can ensure that future urban transport systems support people’s wellbeing is by assessing the extent to which what is proposed supports the five ‘ways to wellbeing’. Devised by nef in 2008, these provide a useful checklist for assessing the impact of a range of public policies on people’s wellbeing. To promote mental wellbeing any future transport system should ideally enable people to:

#### **Connect with one another**

Transport systems that encourage social contact and a sense of community should be prioritised. Modes that encourage people to travel alone in individual pods, for example, are unlikely to contribute to overall societal wellbeing, instead promoting social atomisation and isolation. Walking, cycling and public transport support interaction and create lively streets and communities.

#### **Be active**

Being physically active makes people feel good as well as promoting physical health. In planning future urban transport systems active travel modes such as walking and cycling should be modes of first choice. Care should be taken to avoid encouraging or incentivising the use of vehicles for short trips which could easily be made on foot or by bike.

#### **Take notice**

The time that walking, cycling and using public transport allows to take notice of, appreciate and take pleasure in our surroundings is valuable in terms of wellbeing. Future urban transport systems should create attractive environments that people want to spend time in. The Healthy Streets principles described in our response to question four can serve as a useful benchmark in this respect.

#### **Keep learning**

More automation of vehicles could enhance opportunities to learn ‘on the go’ with private vehicles joining public transport vehicles as places where work and study can be completed. Conversely, there is a risk that increasing automation could have the effect of de-skilling drivers. Opportunities for new technology to learn from the experiences of real people should be maximised. For example, how can we incorporate valuable local knowledge into MaaS apps?

#### **Give**

Giving to others helps people to feel good. How can moves towards shared mobility, for

example, be designed to maximise opportunities to do positive things for other people? The more the experience of travel can be made a social one, the more chances there are to interact with, and help, others.

Promoting people's wellbeing goes a long way towards supporting flourishing, healthy communities. This is further supported by placing people as well as the wider vision for the city region first in policy planning. Technology should be at the service of these wider goals rather than an end in itself. As described in our response to question four, increasingly, cities are placing people, their health and wellbeing at the centre of a vision to create liveable cities that are attractive places to live, invest, work, play and spend time in.

#### **10. What role should government play in understanding, shaping and responding to public attitudes to emerging technologies and services?**

National research into public attitudes is useful as it can help understand where the public is likely to be receptive to new technological innovations and where it is unlikely to be receptive (or at least where opinions would need to change). It might be particularly useful to scope out people's attitudes to shared mobility which will be crucial in ensuring that developments such as CAVs complement and enhance public transport options rather than serve to generate more traffic and congestion.

We would question whether or not it is the best use of public money for the Government to be promoting hearts and minds campaigns around the adoption of particular technologies when compared with the benefits that could be gained from investing that funding in practical transport measures.

#### **11. What changes do you expect to the mobility-related labour market? How can government best support people and businesses affected by these changes?**

There are many uncertainties around how long run trends will play out. However, from a transport authority perspective the automation of more jobs and tasks could mean a shift in the focus of some frontline transport roles (operational roles on vehicles, traffic surveys) to more people and customer focused roles (such as customer hosts on vehicles or data science). The increasing importance and potential of data could also create challenges for public sector transport authorities in attracting and retaining the required skills.

#### **12. What other actions should government prioritise to help people, businesses and cities prepare for the future?**

Please refer to our previous responses, particularly questions five and seven.

# Future of Mobility Grand Challenge – fostering innovation

**13. Which ‘missions’ in the areas we have identified could be most effective in driving innovation and investment? Please refer to the criteria suggested in paragraph 2.6.**

## **Safer streets**

The Call for Evidence highlights self-driving vehicles as an opportunity to address road fatalities. CAVs certainly have the potential to lower the number of road fatalities, however, as the recent House of Lords inquiry into CAVs notes ‘the eradication, or near eradication, of human error will only be realised with full automation’. This means vehicles that require no intervention from the driver and would rely on the vast majority of vehicles on the road operating at this level. If it occurs, this is likely to be many years in the future with a lengthy transition period in the meantime.

We cannot wait for technology to save us. There are many actions that can be taken now to improve the safety of our roads and streets, see, for example, the Parliamentary Advisory Council for Transport Safety’s list of priorities for road safety to 2020 <http://www.pacts.org.uk/wp-content/uploads/sites/2/Key-Priorities-For-Road-Safety-to-2020.pdf>. As PACTS suggest, the Government could demonstrate its ambition in this area by developing a ten year strategy to move towards a vision of zero casualties. The London Mayor’s Transport Strategy has set the goal that by 2041, all deaths and serious injuries will be eliminated from London’s transport network <https://tfl.gov.uk/corporate/safety-and-security/road-safety/vision-zero-for-london> and has published a Vision Zero action plan.

## **Improved access to transport**

The Call for Evidence rightly points out that new technology and business models could improve and extend demand-responsive services in rural areas as well as enhance multi-modal integration in urban areas. As a mission in this area, we would suggest rolling out more, long-term, total transport pilots. Our research shows that these kinds of projects are not easy or quick to achieve. It takes time to research what is needed as well as to build trust and relationships between partners. The Government could set out a long-term programme for getting these projects off the ground. The potential prize is considerable, particularly if the health sector can be engaged (see our report ‘Total Transport: a better approach to commissioning non-emergency patient transport <http://www.urbantransportgroup.org/resources/types/reports/total-transport-better-approach-commissioning-non-emergency-patient>’). Through pooling, coordination and making best use of transport assets it is possible to provide a better experience for the passenger, greater geographical coverage and reduced costs to the taxpayer.

In terms of the Government’s long term ambition that disabled people should have the same access to transport as everybody else, a potential mission could be the development of a new journey planning app. Often the mobility of disabled people can be reduced due to one section of their journey being inaccessible. A new door-to-door journey planning app could be developed to help disabled people plan their journey and check whether each section is likely to be accessible. The app could make use of crowd-sourced intelligence, allowing users to contribute accessible routes they have successfully used as well as report routes and locations where they have encountered difficulties. The app could invite users to rate each journey and highlight areas for improvement, gradually building up a map of accessibility across the country and an invaluable source of data for transport planners to prioritise improvements.

## **Cleaner freight**

We welcome the Department’s commitment to harness greener deliveries, making the most of electrical delivery modes and the benefits they bring in terms of carbon reduction, air quality improvements and greater safety for other road users, particularly pedestrians and cyclists. However, whilst clean vehicle technology is undoubtedly a key component, we believe that this

should form part of a wider mission which also includes: more consolidation of consignments; maximising the potential of rail and water infrastructure; and influencing customer behaviour. Innovation in the last mile of deliveries in particular is important and could be incentivised via a new challenge fund. For more details, please refer to our response to the DfT's Call for Evidence on The Last Mile.

### ***Liveable cities***

The focus on making walking and cycling the natural choice for shorter journeys is welcome. CAVs do have the potential to free-up parking spaces, provided a shared mobility model is promoted (rather than privately owned vehicles) and provided CAV cars and taxis complement, rather than compete with, more space efficient modes such as walking, cycling and the bus (which could also be autonomous). However, even if a shared mobility model is adopted, CAVs will still need space and opportunity on the street to pick people up and drop them off, which could be disruptive to cyclists and pedestrians.

In selecting a mission to foster liveable cities it is important to maintain a people centred approach which prioritises walking, cycling and public transport use and supports health and wellbeing. The Healthy Streets approach is a useful tool in achieving this (see our response to question four).

## **14. How should government funding be targeted to help UK innovators build and scale transport solutions?**

Urban transport authorities can play a key role in bidding for, channelling, partnering and shaping innovation funding. We have a strong history in backing innovation and trialling new approaches. Recent examples include:

- Transport for West Midlands is the first area outside Finland to trial the Whim MaaS app and the first in the UK to launch a MaaS platform.
- Transport for Greater Manchester, BT and Manchester Science Partnerships ran an Open Innovation Transportation Hackathon in early 2018 challenging start-ups and SMEs to use Internet of Things technology to solve smart city challenges.
- Nottingham City Council's park and ride services are provided by an all-electric bus fleet – the largest in Europe.
- 42% of Londoners use apps powered by Transport for London's open data. A Deloitte report found that TfL's open data policy made a £130m per annum contribution to London's economy (see <http://content.tfl.gov.uk/deloitte-report-tfl-open-data.pdf>).
- Merseytravel's new fleet of metro trains will have step free access through 'intelligent sliding steps'.

Urban transport authorities are well placed to work in partnership with UK innovators to ensure that any new products or services developed work with the grain of the city region's wider inclusion, accessibility, health, air quality and climate change objectives.

To facilitate this, transport authorities need the leeway to take different approaches depending on their priorities, resources, outlook and ambitions. This includes the role they might play in collaborating with new private or public sector initiatives and whether or not they look to use regulatory and policy frameworks in seeking to shape or intervene. In terms of collaboration, many cities face similar challenges and are keen to work together towards common solutions. It would be helpful to have the option to put together joint funding bids (e.g. to CCAV) to tackle

shared issues where appropriate. See our response to question seven for further areas where intervention by Government would be helpful to maximise the benefits of investment.

**15. Which laws or regulations not currently being addressed need to be amended or created to help harness the benefits and mitigate any risks associated with new transport technologies or services?**

Please refer to our response to question seven.

**16. How could the experience of working with local and / or national regulators be improved for transport innovators?**

Please refer to our response to question seven.

**17. What further actions should government prioritise for resolving barriers to data sharing and use in the mobility sector while protecting privacy and security?**

We see transport authorities as having a key role to play on trust, assurance, privacy and impartiality on the collection, holding and provision of data. We also have an important part to play in ensuring the integrity, comparability and accuracy of data and the information services and other uses it is put to.

We want to share our data where this best serves: the interests of travellers; the efficient and effective operation of our transport systems; and the wider goals for our city regions.

As set out in our response to question seven, we also need backstop powers to mandate data sharing agreements in cases where a private sector company wants to access this data and is also providing (or planning to provide) a service which could have significant implications for transport in a city.

**18. Do you have any further suggestions or comments on the subject of this call for evidence?**

No one can say with any certainty exactly what the future will look like in terms of how transformative technological and social changes will play out. However, transport authorities have a critical role to play in capitalising on the benefits for both transport users and the future of our cities, whilst at the same time seeking to mitigate or avoid the potential downsides.

Transport authorities are uniquely placed to ensure that, whatever new technologies or services the future may bring, these are shaped to serve the needs of people and communities first and are in line with wider goals for inclusion, health, accessibility, air quality and climate change.

Our smart futures vision statement

<http://www.urbantransportgroup.org/resources/types/reports/our-vision-smart-futures> underlines the work we have already completed in this area and our appetite to work with government and its key agencies to do more.

As public sector authorities we will ensure that change does not result in sections of the community being left behind; that we meet our obligations to improve air quality and reduce carbon emissions; and that our streets are healthy places that people want to live, work, invest and spend time in.

## How to respond

The consultation period began on 30 July 2018 and will run until **10 September 2018**. Please ensure that your response reaches us before the closing date. If you would like further copies of this consultation document, it can be found at <https://bit.ly/2zJGbae> or you can contact [futureofmobility@dft.gov.uk](mailto:futureofmobility@dft.gov.uk) for alternative formats (Braille, etc.)

It would be helpful if you would respond [online](#). Alternatively, you can send your response to:

Department for Transport Zone  
1/33 Great Minster House  
33 Horseferry Road London  
SW1P 4DR

Email: [futureofmobility@dft.gov.uk](mailto:futureofmobility@dft.gov.uk).

If sending responses by email, please keep responses to a **maximum of 10 pages**.

When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation, please make it clear who the organisation represents and, where applicable, how the views of members were assembled.

Please note that we do **not** expect you to submit evidence or views in response to every question listed if not applicable.