Future of Transport Regulatory Review: Regulatory Sandboxes

Government Response

OGL

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Introduction

The future of transport regulatory review was launched to ask fundamental questions about how transport is regulated, to achieve a flexible, forward-looking regulatory framework that is fit for the future. Regulatory sandboxes are a way to introduce temporary or specific place-based regulatory flexibilities to support innovation.

This consultation on regulatory sandboxes, ran between 28 September 2021 and 22 November 2021. This consultation explored the benefits of the use of regulatory sandboxes, including the roles of participating bodies, and the legislative support needed to enable innovation in a sandbox setting.

Government response

This consultation was designed to gathered evidence on the future use of regulatory sandboxes to support innovation. The consultation asked broad questions about the function and benefits of sandboxes, and also sought specific views on new legal powers that might be required, existing regulatory barriers to trialling innovation, and flexibilities that might be introduced. Responses identified some regulatory changes that Government intends to bring forward via primary legislation, as well as barriers to innovation that are being considered by the Department through other programmes of work. This document summarises the consultation responses and provides a government response to each chapter. The government will continue to explore the extent to which regulatory sandboxes could unlock barriers to innovation and our role in supporting them.

Summary of responses

Advantages and disadvantages to using a sandbox in surface transport

The most frequently identified advantages of using a sandbox in surface transport were that sandboxes could enable trialling to inform future regulations and help with early deployment. Collaboration and improved public perception of new technologies was also cited as a potential benefit.

Risks to safety, challenges of regulating emerging technology, and liability risks were reported as potential challenges or disadvantages of the regulatory sandbox approach. While responses were generally positive about the use of sandboxes, there was also a call to ensure other ways to facilitate innovation were preserved.

The role of central and local government in a surface transport sandbox

Responses called for government to provide guidance, management and governance of sandboxes. Government was also seen as a key player in resolving disputes, managing risks, and stakeholder engagement.

Existing powers that can support innovation

Respondents identified several regulations that currently prevent innovation and some regulations which should be amended to unlock barriers to innovation. These included using Traffic Regulation Orders to quickly support trial environments and using Vehicle Special Orders for trial vehicles.

Existing powers that could be transferred or delegated to help support innovation at a local level

While some responses did identify powers that might be transferred or delegated to support innovation, there was a general lack of specificity as to existing powers that could unlock barriers. There was also a varying level of responses as to the scale of any such delegation and how appropriate it was to make such a delegation.

New powers required to enable use of surface transport sandboxes

Some responses suggested new overarching primary legislation may be needed to permit regulatory exemptions and disapply existing legislation, while others called for increased regulatory flexibility such as the re-designation of roads. Responses also noted that regulatory changes will need to consider the broader ecosystem, in terms of impact on business infrastructure and technology regulation.

2. Introduction

Background

DfT's Future of Transport Programme aims to secure the UK's position as a world-leading innovator, creating a greener and more inclusive future transport system for us all. We want to create a safe, secure, and accessible transport system that is fit for the future and helps people to move around.

In 2019, we published the 'Future of Mobility: Urban Strategy', setting out our approach to maximising the benefits and managing the risks of new technology in urban areas.

We want the UK to be a world leader in shaping the future of transport. A flexible and forward-looking regulatory framework for transport is critical to achieving this.

In 2020 we sought views and evidence from those with an interest in what an innovative and flexible regulatory framework looks like for emerging transport technologies and business models, recognising their benefits to society, the environment, and the economy but also the risks they potentially pose if left unmanaged. We launched the Future of Transport regulatory review: call for evidence on micromobility vehicles, flexible bus services and Mobility-as-a-Service, which ran between 16 March and 3 July 2020. A summary of responses was published in November 2020.

What is a regulatory sandbox?

Innovation can disrupt the status quo and challenge the way things have been done previously. It can quickly outpace regulation. Regulation can then create barriers that prevent the meaningful deployment of new technologies. Innovators and regulators need support to help break new ground in a way that is safe and responsible. Harnessing innovation in a place-based way will help us level up local areas and communities.

A regulatory sandbox is a defined space where new business models, technologies and policies can be deployed and used in a way that is safe and responsible. Regulators take a leading role to provide guidance, exemptions, and regulatory support to innovators. Sandboxes can:

- make more effective use of the existing legislative framework

- reduce the risk of innovative new technologies, allowing their use ahead of legislative changes
- reduce the regulatory burden placed on innovators
- help regulators better understand the impact of new technologies and services
- create opportunities to build new capabilities within local and central government – to understand how innovative new technologies might fit into traditional transport planning and business cases

Sandboxes are being considered as part of the wider context of modernising transport legislation to support innovative new modes and technologies.

Consultation

The Department for Transport (DfT) ran a consultation on the Future of transport regulatory review: regulatory sandboxes between 28 September and 22 November 2021. It sought views and evidence from all those with an interest in what an innovative and flexible regulatory framework looks like for emerging transport technologies and puts forward specific proposals. The consultation invited respondents to submit their views on 6 questions.

This document summarises the points raised by respondents in response to the consultation and provides the government response. The responses will inform future policy.

The identification of particular suggestions within this document does not mean that DfT will necessarily take them forward. Similarly, the absence of a suggestion from this report does not mean it will not be considered.

Structure of this document

Respondents had the opportunity to answer 6 questions spread across the thematic sections as follows:

- Section 1: Advantages and disadvantages of sandboxes
- Section 2: Roles and responsibilities
- Section 3: Sandbox powers and regulatory flexibilities

Overview of respondents

Responses to the consultation were received via email and online survey. In total, 37 responses were received.

Responses to the consultation were submitted by a mixture of individuals and organisations including councils, transport authorities, sub-national body, academics, trade associations, charities, businesses, law firms, pressure group and public bodies.

Government response

This consultation was distinct from the other consultations within the Future of Transport Regulatory Review as it was designed to gather evidence towards future work on regulatory sandboxes and not test a specific proposal or regulatory change. Respondents generally saw sandboxes as a useful tool to support innovation, and government agrees that there may be circumstances in which they are considered helpful to implement at a local level.

In terms of regulatory changes necessary to enable this, Government intends to bring forward the specific reforms identified by consultees through primary legislation, when parliamentary time allows.. For example: in relation to Traffic Regulation Orders; new powers to regulate self-driving passenger vehicle services; and establishing a regulatory framework for e-scooters. Respondents also focussed on making use of existing powers and exemptions and helping local authorities to build capability to support greater innovation.

The Department has a range of programmes underway to support innovation, such as our Future Transport Zones, and the innovation being considered as part of the wider Future of Transport Programme, for example: the Centre for Connected and Autonomous Vehicles leads work to support the trialling of novel self-driving vehicles on a case-by-case basis.

Respondents submitted views on the transfer or delegation of powers to a local level. While responses varied in terms of how this might be done to support innovation, no clear view emerged on which specific powers could be transferred or delegated to remove a specific barrier or enable a specific innovation that is not being considered as part of our wider programme of work. Moreover, some respondents cited safety risks if current safeguards or powers were delegated or transferred.

Some responses raised the issue of a lack of local authority capability and capacity to drive innovation. The Department recognises this is an important issue and will continue to work with local authorities to help build capacity to support innovation, such as through our Future of Transport Programme including our £92m Future Transport Zones. The DfT is also continuing to support local authorities through a range of investment programmes aimed at improving capability and capacity, and we will continue to explore opportunities to support capability building in local authorities.

The responses to this consultation raised a variety of challenges and barriers to innovation where sandboxing could help. This included organisational and governance arrangements, as well as regulatory challenges. Government will continue to explore the extent to which regulatory sandboxes can unlock barriers to innovation and our role in supporting them. For example, we will keep engaging with innovators and local authorities to identify future opportunities. The evidence submitted as part of this consultation will directly factor into this policy development, as indicated by the detailed responses to the findings in each chapter.

3. Advantages and disadvantages of sandboxes

Our consultation sought views on the advantages and disadvantages of using a sandbox within surface transport to support innovation and build capability across all levels of government.

Questions:

What do you see as the:

- Advantages of using a sandbox in surface transport?
- Disadvantages of using a sandbox in surface transport?

Advantages of using a sandbox in surface transport

Enabling safe trials facilitating development of technologies and services

Responses made it clear that a sandbox could create a system which fosters innovation, enabling the development of transport technologies and solutions in a safe and controlled 'real world environment' before being fully deployed. It was noted that relaxing regulations through a sandbox could facilitate trials of innovative technologies which may be challenging without changes to the law. Sandboxes could offer the opportunity to run small scale trials with appropriate safeguards in place, which can then be scaled up.

Respondents mentioned that that sandboxes could provide the freedom to trial innovative and novel solutions that are tailored to a specific environment, meeting the needs of future users and enhancing accessibility and inclusivity. The product or service that is being trialled in a sandbox could be improved iteratively as the trial develops. Learning from the controlled deployment of a product or service could enable continuous development, improving the competitiveness of businesses and increasing the UK's speed to market to deliver new technology and services.

Learning opportunity

Many respondents saw regulatory sandboxes as a tool to create a safe space to trial technologies and observe interactions with users in the real world, gather user feedback and assess safety to better understand any issues before implementing on a larger scale.

Some responses highlighted that access to data can be a barrier to entry in several industries and to effective innovation. Sandboxes could offer a learning opportunity for both businesses and authorities to develop an understanding of legal constraints, as well as the changes that may be required to enable safe deployment of new transport technologies.

Collaboration and networking

Respondents noted that sandboxes could encourage collaboration between stakeholders such as innovators, regulators, consumers, law enforcement and all levels of government. Sandboxes could also encourage collaboration at all stages of tech development and learning between innovators. By encouraging robust dialogue between innovators and regulators, respondents felt that government could improve its understanding of innovators needs and how to overcome regulatory challenges. They thought this could enable government to deploy agile regulation to meet the needs of the market.

Access to guidance could help innovators to develop a better understanding of the regulatory framework, and some may use the sandbox as a mechanism to understand whether an innovation is permissible under existing regulations. Sandboxes have a wide range of stakeholders, and the role of a regulator could provide a one-stop shop for stakeholders seeking advice and guidance.

Some answers mentioned that a sandbox could give the government a better understanding of the innovation that the market can provide, which may encourage broader thinking about the requirements for technology led solutions and an understanding of administration operations needs before wider implementation.

Public perception

Some respondents suggested that trials in sandboxes could help to build public awareness of transport innovations. For example, allowing the public to interact with the innovations and gathering evidence of the real-world impacts of new technologies was thought to have potential to build trust in the public and improve perceptions of new deployments.

Disadvantages of using a sandbox in surface transport

Safety risks

A significant concern among respondents was that sandboxes could present a high degree of safety risk to road users, local communities and vulnerable groups, given that they could be used to facilitate trials of new technologies on public roads. Respondents suggested

that risks associated with new technologies would need to be managed effectively in a sandbox setting, highlighting the challenge of understanding and building knowledge of associated risks.

Scale, standards and effective operation

Some responses warned that small scale deployments within a sandbox may not give full and proper evidence to support wider scale deployment. This could be because of the unique, localised conditions within a given sandbox. They felt that if the development focus is too specific to the trial location and does not consider scalability and transferability to other locations nationally, the challenge of drawing conclusions from localised data to apply in other locations and regulatory challenges could be substantial.

Some responses warned against a high acceptance of risk and liability within a sandbox, which would not be acceptable in real world conditions. It was noted that sandboxes could be launched with a sense of complacency as acceptance of safety risks and liabilities in a controlled environment would not be accepted in the real world. This may reduce the effectiveness of learning as deployments operate within artificial conditions. One respondent specified that scalability and consistency between trial conditions across various locations would need to be measured as performance indicators.

Several responses called for robust measures and processes to be developed when managing sandboxes to avoid and mitigate any risks associated with trialling activity. Respondents also called for any future sandbox scheme to have clear and transparent criterion for entry and participation. It was highlighted that any such scheme should also be delivered over an appropriate timescale to allow for operators to gather meaningful data.

A few respondents identified that competition risks might emerge through the early access to the market and users that a sandbox approach might facilitate. Some respondents also suggested that operators benefiting from any regulatory flexibilities will have a better knowledge of the direction of regulatory changes and may therefore gain an advantage on competitors.

A few responses discussed the lack of a single, cross-modal regulator in the transport industry which could lead to varying standards for implementing new transport technology. This lack of a consistent approach could create barriers or inefficiencies for innovators.

Some respondents noted that in order for a regulatory sandbox approach to work, knowledge, capability, and capacity to support innovation at a local level is essential. Respondents suggested that such capability may not exist or may not be spread evenly at a local authority level.

Communication and public perception

Respondents raised concerns that managing public perception is important, particularly where safety is concerned. Members of the public may distrust or lack confidence in the safety of innovative new transport technologies. Respondents suggested that detailed information on the exact nature of the technologies being used in a given sandbox should

be available to those that might interact with it. The nature and scope of the sandboxes should be promoted so that relaxed regulation is not equated to mean reduced safety.

The introduction of a new technology through a sandbox could cause for that technology or service to be quickly over-subscribed due to its novelty or popular demand. Respondents suggested that care should be taken to manage this demand properly, and to consider the impact of potentially removing a popular service from users at the end of a trial period.

Responses warned against the approval of a technology being deployed in a sandbox to be seen as a tacit acceptance or approval from the Government for its wider use elsewhere. This could cause confusion as such technologies are unavailable in other areas outside of a sandbox setting. Respondents cited the user of private e-scooters being used widely outside of permitted trial areas as an example.

Regulatory risks

A number of responses mentioned the risk that relaxing regulation could bring to local authorities, stating that it could mean operating in a sandbox without appropriate cover through legislation. Respondents were clear that a sandbox should be providing proper regulatory cover which covers the extent of the geographic area as well as the nature of the technologies and trials within a given sandbox.

Sandbox as a road to deployment

Some respondents identified the risk that a sandbox may act as a gatekeeper for new technologies and could lead innovative transport to get stuck in a sandbox without a clear process for moving to real-world deployment. One response noted that waiting for long term results from a sandbox could deter new legislation or regulatory change. It was felt that the findings of trials in a sandbox should lead to meaningful changes in regulation, reflecting the changes in the mobility landscape.

Alternative methods to a sandbox

Several respondents expressed concerns that a sandbox may decrease the likelihood of the introduction of other schemes to facilitate innovation. Responses referred to other methods of facilitating innovation such as innovation hubs, incubators, accelerators, financial grant schemes and research and development funding schemes which can offer specific benefits to innovators. In particular, innovation hubs were called out as being less costly, easier to set up, and having equally as effective results as a sandbox. It was felt that surface transport sandboxes should work in conjunction with these other solutions in an integrated approach to maximise effectiveness and learning opportunities.

Government response

We agree that sandboxes could be a useful tool to enable greater innovation and help provide regulatory flexibility to those looking to trial new technologies and services. We also agree with respondents that sandboxes are one of many tools which local and central

government could use to support trials within a strong innovation ecosystem, and other tools and approaches should also be considered. We have a range of programmes underway to support innovation, such as our Future Transport Zones and our self-driving vehicle programme, being run by the Centre for Connected and Autonomous Vehicles, among many others.

We agree with responses that suggest trials supported through sandboxes should ensure that findings support innovation elsewhere, and that trials are scalable and transferable to other areas. We note responses calling for greater collaboration and support between authorities and trialling organisations, particularly in building knowledge, capability, and capacity for meaningful participation and support during a trial period. Providing the right level of support for sandbox participants is important to ensure that there is a consistent standard of quality and learning being produced across all trials. This is considered in more depth in chapter 4, as well as other issues raised regarding the roles and responsibilities of parties within a sandbox.

We note the responses citing risks to safety and the potential negative impact of a broad relaxation of regulations. The Government's view is that any regulatory flexibility should be specific, identifying barriers to innovation which can be addressed through the sandbox approach. This is considered in more depth in chapter 5, as well as other issues related to new or existing powers and regulations.

We will consider the responses to this question when designing any future policy on the use of sandboxes. It is clear that respondents felt that the balance of risk between flexibility and safety is key, and that sandboxes are generally seen as a useful tool to help innovation.

4. Roles and responsibilities

Our consultation sought views on the specific roles and responsibilities within a sandbox and further views on how relationships within a sandbox should be managed.

Questions:

What, in your view, should be the role of:

- Central government in a surface transport sandbox?
- Local government in a surface transport sandbox?

How, in your view, should relationships between parties be managed within a surface transport sandbox?

- Voluntary, non-contractual arrangements?
- Contractual arrangements?
- Another option:

Why?

Role of central government in surface transport sandboxes

Governance and management of a sandbox

The theme most frequently identified by respondents was governance and management of the sandbox, with several respondents identifying a governance role. Respondents felt that central government should be responsible for developing a regulatory framework or code of practice to govern trials in the sandbox, which could set out the minimum standard for sandbox trials to ensure consistency and transferrable learning. Respondents also said that central government should provide operators and local authorities with support, advice and guidance on all aspects of sandbox operation. Others mentioned setting out licencing rules and identifying the sandbox regulatory boundaries. Some respondents also stated

the government should be responsible for setting out a framework which outlines risk and liability, referring to the Automated and Electric Vehicles Act 2018. A number of responses stated that central government should have oversight of the monitoring and evaluation of trials and activities taking place in the sandbox, stressing the importance of sharing learning and outcomes.

Defining the sandbox

A large number of responses thought that the central government should be responsible for defining the sandbox. This included the government setting out the national priorities of the sandbox, policy context for trials, objectives of trials and the sandbox, setting a minimum standard and setting out the performance indicators for the sandbox.

Point of contact

Several responses suggested that the central government should set up a sandbox team to act as a key point of contact to provide support and guidance. Respondents also mentioned that a central sandbox team should be responsible for stakeholder engagement.

Regulatory changes

Some respondents felt that central government should be responsible for identifying and administering the required regulatory changes or waivers to enable operation of the sandbox. Based on the evidence gathered using the sandbox, central government should make legislative changes to facilitate the deployment of innovative transport technologies.

Local authority capability

Respondents suggested that central government should ensure that local authorities have the necessary capability, resource and funding to operate a sandbox. One response noted that the government should establish a level playing field for local and combined authorities that are aiming to host trials. This respondent suggested this can be done by ring fencing funding to support local authorities that are less equipped to develop business cases.

Other considerations

Some respondents noted that central government could coordinate a rolling programme of sandbox trials, trialling different technologies around the country. This could include several trials taking place together in a small number of sandboxes for 2-3 years at a time to ascertain the synergies that can be achieved, rather than just encouraging only one trial at a time in sandboxes.

Responses also suggested that before sandboxes could be established, central government should determine which body or bodies would perform the role of regulator.

Respondents noted that this could be a new body or involve assigning powers to existing authorities at national, regional or local level.

Role of local government in surface transport sandboxes

Identifying local challenges

The most frequently identified role for local government in a surface transport sandbox was identifying local challenges, with 39% of respondents identifying a role within this theme. Respondents suggested that sandboxes could be used to invite solutions to support problems that need to be solved based on local challenges and priorities. Some respondents suggested that local government should be responsible for providing local context and strategic direction regarding the need for technologies, risks of harm, discrimination and environmental damage.

Managing the sandbox

Several respondents suggested that local government should be responsible for the day to day management of the sandbox and delivery of trials, taking on a project management role in adherence to regulations and guidance. Some respondents mentioned that allowing local government to manage sandboxes and trials allows them to be tailored to local context.

One respondent suggested the role of local government should not extend any further than day-to-day management of the sandbox in accordance with the guidance set by the central government.

Stakeholder engagement

Several respondents mentioned that local government should be responsible for handling stakeholder engagement related tasks. Responses specified liaising with stakeholders regarding the location and parameters of the sandbox, ensuring views and concerns are considered and involved in decision making and ensuring the sandbox meets local needs. Some responses stated that managing relationships with local stakeholders and the public is important as these relationships can facilitate data sharing, monitoring performance, and resolving issues.

Collaboration

Some responses mentioned that role of the local government in a sandbox should include collaboration between sandboxes, stakeholders and local authorities. One respondent specified forming collaborative sandbox hubs to test innovations to address common issues, while other responses suggested collaborating on different trials and projects to see where synergies can be achieved. A common theme amongst responses was that to run a successful sandbox, partnerships will be required between local governments, central government, innovators and regulators.

Other considerations

A number of respondents noted that in order for local government to carry out these functions, the necessary funding and resource should be provided by central government. It was also mentioned by some respondents that transport powers should be devolved to the most appropriate level to allow for agile transport governance which supports wider goals for people and places, ensuring that new services are a good fit for the existing transport network.

Management of relationships within sandboxes

We asked respondents how they think relationships between parties could be managed within a surface transport sandbox.

14 respondents did not provide an answer to this question; however, some non-responders provided a detailed response to the following question which requested a reason for the responses provided.

Number of respondents that provided opted for each type of arrangement:

- Contractual: 11
- Voluntary: 1
- Mixed/Combination: 4
- Another option: 7

Reasons provided for these responses

Contractual arrangement

Contractual arrangements were seen as beneficial to ensure that all parties understand their responsibilities, liabilities, and other expectations specific to the trials, such as timings, access to data, governance, and managing risk. Service level agreements were seen as a potentially useful tool to ensure a guaranteed minimum level of service provision during the trial period.

Given the scope for collaborative partnerships in a sandbox, respondents were keen to ensure that parties had legal certainty, and so a more formal arrangement was recommended.

Data was seen as commercially important and sensitive for trials. Respondents were concerned about data sharing, and the necessity of a formal agreement or arrangement between parties to facilitate access and sharing.

Voluntary

Some respondents suggested that private sector interest in collaboration may be negatively impacted by a formalised contractual agreement. This was due largely to the uncertainty of new technologies and innovation, and a potential wariness of being tied to an unsuccessful trial that could pose a financial risk.

Respondents suggested that a formalised contractual approach may not be strictly necessary and that voluntary service level agreements can be used to keep relationships collaborative and agile, provided that suitable governance and project management arrangements were implemented.

Some responses also suggested that a contractual approach could be avoided by clear guidance and expectations being set by Government when funding sandbox trials.

It was also mentioned that existing trials have successfully used a voluntary grant determination letter with no issues.

Mixed

Some respondents suggested that the type of arrangement opted for may depend on the activity being undertaken and the level of risk nature of innovation being tested. Given that projects will have different challenges, the type of arrangement should be decided on a case by case basis.

One respondent was wary that the arrangement opted for should not penalise parties for events that are out of their control, such as changes made following a major incident, strategic review or political change. Contracts should implement mechanisms for these unforeseen circumstances.

Another option

A few responses said that an overarching framework created by a regulator or central government could ensure that the operation of the sandbox stays within regulations. The government could set the strategic objectives of the sandbox as well as what they aim to achieve through trials. The sandbox could be operated by local government, sandbox teams, volunteers and private sector which will report their findings.

Consortium agreement, Memorandum of Understanding (MOU), Intellectual Property (IP) agreement, ethics framework and data frameworks are examples of other options that respondents mentioned which can all help to manage public, private and academic parties in a sandbox. A potential approach was thought to be for central government to set out a code of practise with consortia members assessing suitability of contract or voluntary arrangements on case-by-case basis.

Waivers and no enforcement letters could be used to set out requirements for partners to abide by.

Government response

We note the varied responses to the roles of central and local government, and we agree that there should be close partnership across all parties involved in a sandbox. We do not believe that further new legislation is necessary to enable sandboxes at this time, and we acknowledge the potential role of central government in terms of setting objectives and direction, as well as providing support, advice and guidance to local authorities and innovators on the operation of sandboxes. Further consideration on powers required for sandboxes is outlined in chapter 5.

We acknowledge that there is currently no regulator that can sit across the various transport modes and regulatory frameworks that might exist within a sandbox setting. We think that regulation of activity within a sandbox area could be best served through close partnerships between operators, local authorities and central government. A new body would not necessarily need to be created to facilitate operation of a sandbox or to support new technologies, provided that there is good governance and accountability, particularly where regulatory flexibilities have been introduced.

We agree that the role of local government should be to identify local challenges and handle the day to day operation of the sandbox with support from guidance provided by central government. We think that local authorities will be best placed to identify local challenges and would welcome a collaborative approach between local and central government to agree priorities. This local-led approach has been successful in supporting innovation previously, including in our Future Transport Zones, in which local authorities take a leading role to identify local priorities and oversee trials taking place within the zone.

We agree that a strong strategic objective or vision is necessary to help set goals and specific outcomes for trials within a sandbox. There may be a benefit to central government working together with local authorities to develop objectives for a specific sandbox operation and to align them with wider policies and priorities for local transport. We also agree that central government could potentially work alongside local authorities to ensure robust monitoring and evaluation processes are in place to inform future learning and trials.

We note the varied responses regarding how relationships could be managed in sandboxes. We think that contracts should be used where legal certainty is required, such as in commercial arrangements, and to ensure that parties understand their responsibilities. We also agree that contracts can be useful to promote a minimum service level, such as to facilitate data sharing. We agree with responses that suggest terms of reference or memoranda of understanding could be used to cover all other working arrangements to help sandboxes to set up quickly and remain flexible.

5. Sandbox powers and regulatory flexibility

Our consultation sought views on how existing powers might support current and future innovation, as well as whether there are any gaps in the regulatory framework that could be usefully employed in future sandbox trials, to stimulate innovation and the development of emerging technologies.

Questions:

What existing legal powers, in your view, might unlock barriers to innovation in surface transport (including specific examples)?

What existing powers, in your view, could be transferred or delegated to help support innovation at a local level (including specific examples)?

In your view, are new powers required to enable the use of sandboxes in surface transport (including specific examples)?

Existing legal powers that might unlock barriers to innovation in surface transport

Traffic Regulation Orders

The power that was most frequently identified by respondents was Traffic Regulation Orders (TRO) which allow councils to introduce new traffic rules for a period of time to enable sandbox testing. A TRO would be a quick way to regulate certain areas and allow innovation in surface transport in further areas. One respondent mentioned that if the government required local authorities to make TRO data openly available, this will unlock many barriers to innovation.

Respondents encouraged the use of Temporary or Experimental Traffic Regulation Orders (ETROs) which impose traffic and parking restrictions on a temporary basis to allow trials in real-world situations and see whether new innovative schemes will work in practice. Respondents believed this is a cost-effective way to adapt infrastructure and trial technology, as well as allowing schemes to launch and compete quickly. One response mentioned that the consultation process can risk promoting a scheme that has not been trialled and developed further.

A respondent suggested that amending the Road Traffic Act 1984 to modernise the process to make Traffic Regulation Orders would unblock some smaller barriers in any future innovation project.

Other existing legal powers that can unlock barriers to innovation

Respondents suggested that innovation could be stifled where there is legal uncertainty. The Automated and Electric Vehicles Act (AEVA) 2018 was mentioned as a clear example of Government providing support and clarity to innovators by setting out a new legal framework for insuring automated vehicles which could be emulated in the future.

Two respondents identified Vehicle Special Orders (VSOs) as a power that can be effective in unlocking barriers to innovation. VSOs can be granted to exempt vehicles from regulatory requirements for trials, and it was noted that VSOs are useful in permitting experimental vehicles to be trialled on public roads so that their impacts can be assessed in real world conditions. This power may also be useful in limiting the type, number, and operating area of trial vehicles for safety reasons and enhancing confidence in vehicle safety following a VSO being issued. While VSOs were seen as a potential route for supporting innovation, respondents acknowledged that any flexibilities or exemptions should not have a negative effect on the safety of a vehicle or its use.

Regulations preventing innovation

Some responses to the consultation identified regulations which prevent innovation from taking place, suggesting that flexibility around these regulatory requirements would allow for new services and infrastructure to be delivered quickly, offering better choices for consumers and passengers.

One respondent raised the Competition Act 1998 as a piece of legislation which could potentially create barriers to innovation in the Mobility as a Service market, particularly when considering multi-operator ticketing.

Some respondents suggested that existing legislation to regulate public service vehicles could act as a barrier to new and innovative transport modes. Such transport modes may not neatly fit within the existing regulatory framework. This might include new vehicle types such as micromobility solutions which current regulatory framework may not account for. The Department actively works to understand the requirements of new technologies and transport modes.

Regulations which could be amended to unlock barriers to innovation

Some respondents suggested variation to the Public Contract Regulations 2015 to provide flexibility for procuring providers for trials. This could cut costs and project timelines, and allow for quicker deployment of trials, particularly for small-scale trials. Other respondents suggested personalised support from the Government to help navigate procurement, contractual, accounting, and State Aid considerations.

One response suggested that traffic order requirements should be removed for specific highway changes in relation to trials or that the Government should explore which elements of the Traffic Signs Regulations and General Directions (TSRGD) can be streamlined to reduce administrative burden and costs. The respondent noted that amendments to the TSRGD have in the past enabled local authorities to deploy highway changes without the need for a traffic order. This would reduce the administrative burden of creating traffic orders which is a limiting factor in making specific highway changes and enabling trials.

Other changes suggested by respondents include variations to private hire vehicle or public service vehicle operator's licences, as well as facilitating access to public or private land, unlocking land uses support the testing of new approaches.

Planning and delivering trials

One respondent suggested expanding franchising powers to support greater collaboration between those conducting trials and to help balance the need to trial a new technology with the potential impacts of competition. The respondent suggested that local authorities currently have little control over trials, and that some greater level of oversight might improve outcomes for all.

Respondents also suggested a light touch process for agreeing the roll-out of supporting infrastructure for trials, such as additional street furniture, sensor deployment or dedicated road space, particularly if for a limited time period.

Existing powers that could be transferred or delegated to help support innovation at a local level

Responses to this question did not have the same level of specific detail as previous questions. While some responses did identify powers that might be transferred or delegated to support innovation, there was a general lack of specificity as to existing powers that could unlock particular barriers.

Flexibility around existing regulations or power to grant approvals

Several responses stated that local authorities should be given the power to make changes to existing regulations to support the objectives of the sandbox and flexibility around byelaws. Some specific examples provided were implementing non-standard signs or non-standard infrastructure on highways without formal approval from central government; the ability to introduce temporary or area specific flexibility on how routes and innovative vehicles are designated; and more freedom for local authorities to experiment with traffic signs for small scale, time limited trials. Respondents suggested these flexibilities could allow for a greater variety of vehicles and designs to be tested by local authorities.

Another response suggested that public transport service regulations could be transferred to local authorities, as well as right of way regulations which could permit the use of micromobility modes and delivery robots among other modes in designated spaces.

Waive national law or regulations and exemptions

Some respondents suggested that sandbox regulators and local authorities should be given powers to waive or modify national laws on a case-by-case basis to enable large scale testing of transport modes. Responses also called for sandbox taskforces to be given powers to create guidelines and issue limited no enforcement action letters. Responses also mentioned that local authorities should be given temporary and restricted devolution of the Secretary of State for Transport's powers for specific regulatory exemptions subject to robust safety cases and agreement with regulators.

A few responses called for a protocol where local government can provide approval for exemptions such as for the construction and use of unregistered automated vehicles to operate on specific routes. One response also called for primary legislation which extends these permissions across a wider array of regulation such as exemptions from vehicle type approvals to trial innovative new vehicle classes as well as devolving decision making to a local level.

Considerations for the transfer of powers

Some respondents noted that in transferring or delegating powers to local areas, there is not a one size fits all approach, and that this any transfer of power depends on the context and local needs. It was mentioned that transport powers should be devolved to the most appropriate level to allow integrated and agile transport governance which supports wider goals and ensures services fit the existing transport network.

One response noted that any transfer of powers taking place outside of London is unlikely to be suitable in London as there is a statutory transport authority and two layers of local government, which differs from the structure of local government nationwide.

A respondent mentioned that compliance with safety frameworks should be assessed by a safety expert, and this responsibility should not be delegated to local authorities as they may not have the capability to conduct safety framework compliance so would need to subcontract to experts unless there is a common agreement on assessment standards across multiple authorities.

New powers required to enable the use of sandboxes in surface transport

Responses to this question include considerations such as stakeholder engagement, publishing guidance on existing and new powers, the limit of new powers, data collection, cost of compliance, flexibility of regulations and other cross-cutting issues such as security and privacy. Responses suggested that Government should be mindful of these issues when considering new powers.

New powers

Respondents suggested a range of new powers that could be introduced to enable the use of sandboxes. Some responses stated that where exemptions from primary and secondary legislation are required, a new overarching piece of primary legislation could be required to permit regulatory exemptions and disapply existing legislation to operate a sandbox. Respondents suggested that powers might also be needed to create an insurance and liability framework for a sandbox. One respondent specifically mentioned primary legislation to permit experimental traffic regulation orders in a sandbox.

Some responses called for regulatory flexibility to allow a transition to a managed end of service following the completion of sandbox trials, noting the disruption to users that could be caused if services are suddenly cancelled or scaled back at the end of a trial period. Respondents also suggested that powers may be needed to pause and set limits to activity within a sandbox.

Other responses suggested that some trials may require flexibility such as the re-designation of road types and the expedited approval of new forms of vehicle, both of which may require new powers.

One response suggested that powers will be needed to regulate self-driving passenger services, in particular Private Hire Vehicle (PHV) services.

Data

A number of responses highlighted the potential need for new powers to help facilitate data sharing. Respondents noted that operators should enter data sharing agreements as condition of operation to ensure that there is a common pool of data for innovators to use, and that anti-competition laws do not prevent the sharing of data. One respondent suggested that the Government should require local authority Traffic Regulation Order data to be classified as open data to support innovators to further digitise.

Considerations for new powers to enable the use of sandboxes

Responses provided a number of factors to consider when determining what new powers are needed to enable a sandbox. Responses suggested that the Government should

consider existing barriers in regulation to innovation before creating new powers, and that any such powers should be following extensive consultation.

Respondents referenced the cross-modal nature of a potential sandbox setting, and that any supporting new powers would need to cut across a variety of legal frameworks. Such changes would also need to consider the broader ecosystem in terms of impact on business, infrastructure, and technology regulation, instead of a simple focus on a given technology.

Responses noted that the regulatory changes required to facilitate a sandbox will vary across sandboxes, so it was felt that the Government should develop a streamlined system for requesting trials. This would help the Government consider all regulatory challenges on a case-by-case basis. It was also mentioned that in order to mitigate risks and regulatory challenges associated with each sandbox, regions could apply for a sandbox status which would require a clear breakdown of benefits and risks.

Government response

We have concluded that it is important that flexibilities and exemptions to regulation should be specific and should be considered only where there is a potential barrier to innovation or deployment. We therefore do not intend to take forward broad powers to disapply laws on a case-by-case basis or within sandboxes more generally, or for the creation of bespoke frameworks such as new liability frameworks for a sandbox. We agree with responses that suggest safety risks could be introduced if such exemptions are not managed carefully. We believe that legislation to disapply regulation within a sandbox area or delegate this responsibility may be disproportionate to the specific needs at hand within a sandbox setting.

We note responses which call for wider support to navigate the existing regulatory environment, such as challenges with procurement processes and engaging with public sector processes. We believe that a sandbox could provide a helpful environment to package bespoke support to innovators to help with deployment of new technologies in specific settings. This could cover a wide range of potential barriers to specific innovations or approaches and would help identify issues which might need bespoke guidance or clarity.

We agree that Traffic Regulation Orders (TROs) could be used to support innovation. This is why we have recently consulted on possible reforms to the process for making TROs, including digitalising TROs by requiring traffic authorities to publish all their TROs on a central publication platform in line with a data model and standards that would update over time. Responses to that consultation are currently being analysed and the outcome will be published shortly.

Respondents mentioned that experimental or temporary TROs could be used to trial new schemes. However, it should be noted that the reasons for which temporary TROs can be used are set out in Section 14 of the Road Traffic Regulation Act 1984 and cover activities such as road closures to carry out road works, measure to protect public health and for environmental purposes. It might, therefore, be more appropriate for experimental TROs to trial new or innovative schemes, but traffic authorities already have powers to make all the different types of TROs and it is for them to decide how best to use them.

We have concluded that there is not a need for further flexibilities in the Traffic Signs Regulations and General Directions (TSRGD). This is the legislation that prescribes traffic signs, signals and road markings for use on the public highway. Decisions on what signs to provide are a local matter. TSRGD already provides considerable flexibility on what signs to place and where they can be placed.

The Secretary of State for Transport also has powers to authorise signs that are not prescribed in the TSRGD. Although use of this power is carefully considered, it has been used in the past to enable trials, including those undertaken by Transport for London to develop new cycling measures. We believe the existing flexibility in the signing system enables innovation and trials while still maintaining a safe and legible environment for road users.

We agree with the potential usefulness of Vehicle Special Orders (VSOs) to support innovative vehicle types through exemptions. In January 2022, the Centre for Connected and Autonomous Vehicles (CCAV) updated its code of practice for self-driving vehicle trials. This update provided extensive guidance for advanced trials of innovative vehicle types, as well as information on exemptions and approvals for their use on public roads. Advanced trials of self-driving vehicles that may require a VSO would be assessed on a case-by-case basis as outlined in the updated code of practice.

We agree with responses that identified potential barriers to new digital-driven innovations, such as mobility-as-a-service (MaaS) platforms. We have previously consulted on MaaS, and in the Transport Decarbonisation Plan we committed to publishing a MaaS code of practice to help provide guidance to operators and local authorities. A consultation for this code of practice closed in May 2022 and responses are currently being analysed. The Department will publish the code of practice this year and will keep specific issues such as competition under review.

We agree with responses calling for greater legal certainty on the deployment of self-driving vehicles. The Department has been considering the future legal framework for self-driving vehicles through its Centre for Connected and Autonomous Vehicles (CCAV). CCAV asked the Law Commission of England and Wales and the Scottish Law Commission to undertake a multi-year review of automated vehicle legislation; this reported in January 2022. The Government responded to the Law Commissions' recommendations in the Connected and Automated Mobility 2025 paper, published in August 2022, and has committed to bringing forward legislation on self-driving vehicles when parliamentary time allows.

We agree with responses calling for greater legal certainty for the use of e-scooters. When parliamentary time allows, we intend to pursue powers to create a new regulatory framework for low speed zero emission vehicles, such as e-scooters. The proposed new powers would allow the government to decide how e-scooters should be regulated to ensure safety and support innovation.