Rail Delivery Group

Response to:

Department for Transport & Centre for Connected and Autonomous Vehicles

Future of mobility: Call for Evidence

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Organisation: Rail Delivery Group
Address: 200 Aldersgate Street, London EC1A 4HD
Type: Business representative organisation

The Rail Delivery Group (RDG) brings together passenger train operators, freight train operators, as well as Network Rail; and together with the rail supply chain, the rail industry – a partnership of the public and private sectors – is working with a plan 'In Partnership for Britain's Prosperity'[1] to change and improve for everyone in Britain, now and in the future. The RDG provides services to enable its members to succeed in transforming and delivering a successful railway to the benefit of customers, the taxpayer and the UK's economy. In addition, the RDG provides support and gives a voice to passenger and freight operators, as well as delivering important national ticketing, information and reservation services for passengers and staff.

For enquiries regarding this consultation response, please contact:

Anna Pandoulas
Public Affairs Manager
anna.pandoulas@raildeliverygroup.com

Rail Delivery Group
2nd Floor
200 Aldersgate Street
London
EC1A 4HD
https://www.raildeliverygroup.com/

[1] *In Partnership for Britain's Prosperity,* RDG (October 2017): http://www.britainrunsonrail.co.uk/files/docs/one-plan.pdf

1. Overview

The RDG welcomes the opportunity to respond to the Department for Transport (DfT) and the Centre for Connected and Autonomous Vehicles joint call for evidence on the future of mobility, focussed in this first instance on urban areas. We note that further calls for evidence/consultations are proposed for rural areas in the near future and would like to place on the record our intention to engage with these in due course.

2. Responses to Questions

Q1. We have identified above the main technologies and trends that we believe will affect urban mobility in the coming decades. Are there any missing?

Any trends in moving away from petrol/diesel fuelled vehicles to predominantly (or exclusively) electric vehicles, and from personally owned or leased private vehicles to access on demand collectively or corporately owned, or leased shared vehicles, are likely to move faster and reach saturation earlier in urban areas than in rural, or outer suburban areas. Promotion of the use of electric vehicles needs to be backed up with a credible 'green' power creation strategy.

Q2. We want our urban infrastructure to support these trends and deliver benefits to society. What changes are required to urban infrastructure?

As essential pieces of urban infrastructure, stations play a vital part in an urban community. The RDG has developed the Vision for Stations[2] in cooperation with its members which sets out nine principles for the future of Britain's stations. Railway stations provide a gateway to local communities, as well as access to the rail network. As such, they are a crucial piece of rural and urban infrastructure. The RDG is working closely with its members to encourage station operators to adopt the emerging technologies available to them; for example, FirstGroup and Great Western Railway are trialling a system to assist wayfinding at stations by having sensors that interact with the lighting in the station. This technology has many potential uses and will, in the first instance, assist wayfinding and in spreading passengers evenly along a platform. A potential future use could be to reduce antisocial behavior.

A significant challenge is likely to be electricity generating and distribution capacity for the increasing number of rechargeable vehicles. We note the recent deployment of local, static diesel-fuelled generating equipment to support the rollout of rechargeable battery-equipped buses in some urban areas (see picture of page 4), which would seem to have the effect of changing the location of CO2, NOx and particulate emissions, rather than reducing them.

[2] *Vision for Stations: Nine principles for the future of Britain's stations*, RDG (October 2015): https://www.raildeliverygroup.com/files/Publications/archive/2015-10_vision_for_stations.pdf

With the increase of electric vehicles, there is a need for long-term forward planning for ‘green’ energy generation, such as solar or wind farms.

Rail depots may need to be equipped with electric charging points for battery electric locomotives or units. Again, these should be fed by ‘green’ energy. This will require investment by Train Operating Companies (TOCs) and/or the Government through, for instance, changes in franchise agreements.

Moreover, increased facilitation and adoption of Mobility as a Service (MaaS) within urban areas and between urban and extra-urban/rural areas, implies the increased use of multi-modal facilities to enable mode changing within a single MaaS delivered journey – current legacy mode changing facilities such as bus stations, car parks or taxi ranks may not be in the ideal locations, be ideally sized or configured, or ideally equipped – for instance, connected to high power electricity distribution networks with multiple vehicle charging points or wireless broadband data facilities.

In addition, road space 'feeding' these multi-modal interchanges is likely to be constrained. As such, thought needs to be given as to how infrastructure can be adapted for mixed use (automated vehicles, public transport, sustainable modes of transport, etc.) to ensure a successful 'feeder system' is in place.

Much rail-related urban freight infrastructure has been lost over the past decades, meaning that urban freight needs are largely met through (currently) diesel-fuelled vans and trucks. We believe, that with appropriate incentives and a sustained willingness to make it happen, there is a possibility of a future renaissance of urban rail freight, based on freight only and mixed passenger/freight rail services to new or restored urban rail freight hubs. The use of, for example, rechargeable electic delivery carts or local delivery drones operating out of local, urban rail-served freight hubs are all feasible future options.

Q3. 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?

The possible impact on the digitally disadvantaged element of our future society may have been underestimated. In addition, the possible impact of a more digitally enabled urban mobility eco-structure on those with less obvious disabilities such as learning disabilities or aging-related cognitive disabilities, may have been underestimated.

Q4. What possible market failures might emerging technologies and trends give rise to that could require intervention by Government?

Access to future transport mode change facilities, or enhancements to legacy transport mode change facilities may not be open to all on equal terms, or may be constrained to disadvantage those with certain types of disability, without the opportunity and appropriate mechanisms for government intervention.

Q5. 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?

A review of national and local development and planning authorisation mechanisms should be in place to ensure transport networks are still fit for purpose with the new transport technologies and resultant infrastructure being forecast, and any necessary changes required identified and put in place.

Transport is not an end in itself - it is a means to an end. National and local government are best placed to set a clear aim at the appropriate national or local levels. They then need to step back in order to allow for the delivery to take place, through appropriate partnerships between the public and private sectors, and where the latter is open to companies of all sizes, including SMEs.

We note that the UK population is becoming increasing unhealthy with around one in every four adults and one in five children aged 10 to 11 now being considered obese[3], and notwithstanding any commendable initiatives to encourage greater adoption of healthier lifestyles. As such, inclusive transport of the future implies both an understanding and recognition of the needs of those affected by obesity.

A role for government would be to encourage the development and adoption of accessibility standards, including those for inclusive design, and where necessary, requiring the adoption of these. Increasingly, standards and protocols associated with accessibility and inclusivity will not just be limited to hardware adaptations, but will additionally cover data gathering and sharing to better facilitate the take up and use of facilities. We note that standards and regulation to facilitate greater accessibility to transport facilities are already well established in some parts - for example rail and bus services - but not well established in newer and possible future transport means – such as mobile app-faciliated mini cabs and autonomous vehicles. A common and equal approach to standards and regulation across all current and projected future modes of transport to facilitate accesibility and inclusivity should therefore be pursued by government.

People's transport needs are not conveniently co-located with local authority boundaries; in particular, boundaries that define the limits of metropolitan areas. Future MaaS infrastructure development might be constrained by local authority boundaries unless coordinated effectively. This will require central government leadership to ensure that such future infrastructure is not artificially and unintentionally hampered. People either regularly or occasionally crossing such boundaries should not be penalised in terms of local access to and affordability of transport services. Conversely, democratically proposed and agreed decisions to locally fund enhanced services should not excessively impact unfairly on those within the boundary funding them, to the disproportionate benefit of those out of boundary not funding them.

For rail, direct incentivisation to do better or differently is available through the franchising system and government's role in rail enhancement projects.

Q6. How can Government ensure that future urban transport systems support people's wellbeing and flourishing, healthy communities?

The concept of protected and contiguous corridors for cyclists, pedestrians, etc. should both be protected and enhanced as we move forward with urban mobility transport systems, as should the concept of these being open to all, on equal terms. It is important that future autonomous road vehicles be equipped with assured sensing, motion control and decision-making systems so that safe interaction with cyclists and pedestrians will be possible. In the interim, protected and contiguous corridors for autonomous vehicles only may be deemed necessary, but such provision should not be at the expense of current or future protected and contiguous corridors for cyclists and pedestrians.

[3] https://www.nhs.uk/conditions/obesity/

It is possible that future autonomous vehicles will benefit older and less mobile people who would otherwise remain isolated, by providing options for door-to-door travel based on the customer's preferences - as opposed to the current more restrictive bus stop-to-bus stop, station-to-station travel model. However, this provision cannot be restricted to digital channels only, as a small but significant customer segment relies on non-digital means for travel. Traditional, non-digital channels, such as existing contact centres, could and should help to encourage those customers who are not yet familiar with the use of, or don't have access to, the internet.

Q7. What role should Government play in understanding, shaping and responding to public attitudes to emerging technologies and services?

Recent publicity around poor visibility of access to and dubiety about informed consent to use personal data harvested from popular mobile applications, acts as a warning to get this right for future mobility systems. There will be significant commercial value associated with bundled user data, which, without proper oversight and transparency, might incentivise poor behaviours by future industry players. Public confidence around ownership of their data, transparency and understanding of how such data has a value and how it will be used, clarity about what both the upsides and downsides are at an individual user level of granting or denying personal data access, will be critical. Government can and should play a role here.

Q8. What changes do you expect to the mobility-related labour market? How can Government best support people and businesses affected by these changes?

Those with digital skills will be in high demand in any future mobility-related labour market, as will those with both classic face-to-face and newer remote, wireless broadband-facilitated customer service skills; as will those who demonstrate the willingness and ability to acquire them. Those whose skills and inclinations are limited to non-customer facing, legacy transport operations delivery only will find that their future employment opportunities will reduce over time. There should also be investment in upskilling people in green energy design and utilisation skills in a transport context. The Strategic Transport Apprentice Taskforce (STAT) can play a role in all of the above.

Q9. What other actions should Government prioritise to help people, businesses and cities prepare for the future?

We believe that additional funding for apprenticeships for new transport system market players/skillsets should be made available.

Station improvements frequently require a partnership approach that brings together devolved administrations, Network Rail, train operators and government. An excellent example of this approach working is the DfT ring-fenced fund National Station Improvement Programme (NSIP). NSIP has been a success story over the last decade and delivered station transformation for the benefit of passengers and communities. The RDG has prepared, in cooperation with Network Rail and train operators, a brochure outlining 16 case studies of

station improvements brought about through NSIP[4]. We would encourage Government to continue prioritising this successful partnership approach to help prepare stations and cities for the future.

Q10. 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.

No comment.

Q11. How should Government funding be targeted to help UK innovators build and scale transport solutions?

Moving innovation transport solutions from the laboratory/prototype phase to the pre-production/field trial phase is costly, complex and time-consuming – focus for government funding thus needs to concentrate on the latter as much (if not more) than the former. Such funding does not necessarily need to focus on grants to specific innovators or specific innovations, but possibly could be focused on new or enhanced representative test facilities for pre-production testing/field trialling, and on increased access to/reduced access charges for such facilities. Seed funding is crucial in public transport innovation to attract private investment. Usage guarantees or long-term leases may also be helpful in some cases.

Q12. 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?

The national fuel duty escalator freeze in place for the past seven years has not been helpful in terms of resultant diesel/petrol-fuelled road traffic growth, cutting demand for public transport use, holding back demand for electric vehicle take-up, such vehicles also including those that could be MaaS-enabled. Legislation around private finance in the public sector may need to be reviewed with the aim of facilitating and attracting greater private investment in the public and/or public/private transport sector.

Q13. How could the experience of working with local and/or national regulators be improved for transport innovators?

Regulators in the rail industry play a complex, mixed role which is perhaps not mirrored in other sectors – the Office of Rail and Road (ORR) acts as an infrastructure monopoly market regulator for Network Rail and HS1 only; a safety regulator for the entire (public and private sector) rail industry and a competition regulator for the sector. If rail is to be part of a future vibrant and effective MaaS market, the role that the ORR and other relevant regulators (for

[4] Transformational partnerships: National Station Improvement Programme, RDG (June 2018): https://www.raildeliverygroup.com/files/Publications/2018-06_transformational_partnerships_nsip.pdf

example Ofcom) currently play, and could potentially play in the future, will need to be reviewed.

Q14. What further actions should Government prioritise for resolving barriers to data sharing and use in the mobility sector while protecting privacy and security?

On the fringes, for the most part, service providers such as train operators, third parties and bus companies - along with others such as Google or Apple - have ambitions to "own the customer". This makes data sharing about passengers problematic. There needs to be an acknowledgement that service providers need to share data to provide services tailored to customer need. Additionally, there is no obvious incentive for a service provider to collect or share data in a timely and appropriate manner and there are costs in taking this data from the provider over the air and making it available. In particular, providing data is not free for local authorities. It carries considerable costs in terms of hardware and software, as well as support costs. The concept of a transparent, open to all, but commercially viable transport data market, where those that incur costs to provide transport-related data can receive market-rate determined revenue for supplying it in a non-discriminatory fashion to all of those who can use it, is attractive and should be promoted further. This is an area covered in the recently published Joint Rail Data Action Plan[5].

The key to success is to act as an enabler rather than a gatekeeper. If data centres can talk to each other, then there is the opportunity for infinite combinations and evolutions of propositions, not restricted to rail. If a transport data market can be established and become widely adopted, some current disincentives to collect and share more widely (under commercial terms set by the transport data market) may fall away.

The other key point is the degree to which the transport industry will need to work together to share customer information. It is apparent that the concept will not develop if transport operators keep non-commercially confidential customer information to themselves. Essentially, there is data needed to understand the transaction, which cannot be restricted to one operator (and which should be compatible with GDPR regulations); and another level at which customers will need to consent to one or more parties marketing to them, ideally through incentivisation.

Q15. Do you have any further suggestions or comments on the subject of this call for evidence?

The rail industry is entering into negotiations with the Government over the development of a Rail Sector Deal. One of the deal's priority themes is very relevant to the development of MaaS as it focuses on sharing data across all modes of transport to enhance passenger travel from door-to-door and to support the more effective movement of goods.

As a more general point, it will be important to ensure that future planning and investment in

[5] *Joint Rail Data Action Plan*, DfT, ORR, Rail Safety and Standards and Network Rail (August 2018): https://www.gov.uk/government/publications/joint-rail-data-action-plan

rail supports the development of electric and connected road vehicles. This issue has already been recognised by the National Infrastructure Commission's first National Infrastructure Assessment which recommends that (in relation to connected and autonomous vehicles):

> "… government should address the implications of technological innovation in long term transport planning processes, including the next rail control period and road investment strategy"

We agree with this recommendation given the opportunities in the medium to longer-term for the railway to provide seamless connectivity with connected, autonomous vehicles and so provide the best possible door-to-door transport service to customers.

The topics covered by this call for evidence cover many varied government departments, and as such, the responses to it should be shared widely across government and any resultant policy or regulatory initiatives proposed should also be widely developed and consulted across government.

Other comments

No further comments.

Response Ends