Press release: UK at Forefront of Transport Innovation

This is a time of unprecedented change in transport, Sir Patrick Vallance, Government Chief Scientific Adviser will say today at the launch of the Foresight Future of Mobility Report.

The UK is well placed to capitalise on the exciting opportunities offered by transport technologies and innovation which will benefit the economy, society and the citizen. The Industrial Strategy and in particular the Mobility Grand Challenge will be central to helping us realise this ambition, building on the UK's world leading expertise and knowledge.

The report finds that technologies such as self-driving and zero-emission vehicles will drive innovation in the future. Behavioural and social sciences will be essential to maximise the impact of these technologies allowing us to develop a clear understanding of how citizens and businesses make decisions and interact with the transport system.

The report also finds that the movement of goods around the country is an equally important consideration. In 2017 logistics added £121 billion to the UK economy and employed 2.5 million people. Data will grow in importance to 2040. Therefore the ability to use data to integrate different forms of transport, both passenger and freight, will be key.

Government Chief Scientific Adviser, Sir Patrick Vallance said:

> Transport is more than just travel, it connects people, places and shapes the way we live. The UK was a pioneer of transport technologies throughout the 19th and 20th centuries, and we can be at the forefront of the next transport revolution.
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> We must grasp the opportunities to fully exploit our potential and create a transport system fit for the future. To be successful, industry, academia and policy-makers will need to work together, with the user at the heart of the system.

Jesse Norman, Future of Mobility Minister, said:

> We want our new Future of Mobility Grand Challenge to encourage innovations that will usher in an era of easier, safer and cleaner travel.
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> But great innovation and rapid technological change need to be based on robust evidence and a deep understanding of human behaviour. This report is a very useful contribution to that evidence base.

Key findings:

- Data is already driving change in the system. Using and sharing data securely and in ways that benefit both companies and public authorities is key. Transport for London’s shared data generates around £130 million per year for the economy.

- Closer to real-time understanding of systems is possible, improving understanding of trends and making it easier to design more integrated systems, spot disruptive trends sooner, and improving decision-making.

- The movement of goods continues to be critical to our economy. Two billion tonnes of goods were moved in the UK in 2016, 89% by road. There are opportunities out to 2040 for technology in freight. A growing population and demand for quicker deliveries in narrower windows, puts pressure on urban freight deliveries. This, combined with the changing nature of work, increases the number of vans.

- Hard and soft measures are likely to be key to achieving change, linked with clear goals. This means that the potential of technologies such as self-driving vehicles (be those buses, droids, cars or trains) to support wider objectives can be realised. In Stockholm, through a combination of investing in separate cycling lanes and campaigns, the proportion of cycling trips increased from 5 to 9% between 2004 and 2015.

- The right solution is needed for each place. Urban, sub-urban and rural areas all require different responses. In rural areas 87% of trips are by car/van and 78% in urban areas, in London the figure drops to 53%.

- There has been profound social change over the last 20 years. For example, commuting trips are down 20% per person, shopping trips are down 20% per person. Since 2002 the annual distance driven by each car driver is down about 12%.

- The nature of work, retail, and leisure are changing. People’s and businesses responses to this are shaping new travel patterns and behaviours. For example, in 2018, 17.9% of all retail sales were internet sales, compared to 3.3% in 2007.

- Behavioural and social science can help us better design our built environment and its transport system around users, and allow technology to improve the lives of individuals and society. For example, mostly for societal reasons, the percentage of young people with driving licences fell between 1992 and 2014 from 48% to 29% among 17-20 year olds. This

trend of lower car use continues throughout their lives.

The report also considers four scenarios, one in which progress continues incrementally, one where technology is allowed to dominate, another where environmental and social issues take precedence, and a fourth where less data sharing predominates. None of these scenarios is absolute but choices will need to be made to secure the right mix.

The report, published by the Government Office for Science, looks out to 2040 and identifies areas in which society and government face key choices to capitalise on the opportunities change brings. It brings together evidence to inform the UK's response to a range of challenges and opportunities. It considers evidence from a wide range of sources, through commissioning working papers, to organising roundtables bringing together experts to develop and test new ideas. While the report does not represent government policy, it provides further evidence that will help to inform the Future of Mobility Grand Challenge strategy.

Notes to editors

1. A full copy of the Foresight Future of Mobility report can be found at https://www.gov.uk/government/publications/future-of-mobility

2. The supporting materials for the report can be found at https://www.gov.uk/government/collections/future-of-mobility#evidence-reviews

3. The Government Office for Science:

- Ensures that the Prime Minister and government have advice based on world leading science and innovation and that policies and decisions are informed by evidence and strategic long-term thinking.

- Harnesses the power of scientists and engineers across government, putting scientific evidence at the centre of government thinking.

- Ensure the UK Government has a world leading science advice mechanism and is an exemplar to the rest of the world.