

**9<sup>th</sup> September 2019**

**Future Mobility**

**Purpose of Report**

This report and presentation provides LEP Board Members with an overview of an item considered at the Transport Board on 30<sup>th</sup> August 2019. Advances in technology, changes in demand characteristics and the emergence of new business models are disrupting the transport sector. The report introduces Board members to recently commissioned research that will inform the SCR's approach to the risks and opportunities presented by future mobility trends.

**Thematic Priority**

Secure investment in infrastructure where it will do most to support growth.

**Freedom of Information**

This paper will be available under the SCR Publication Scheme.

**Recommendations**

That LEP Board Members:

- Note the technological advances, changes in demand and new business models driving 'future mobility' innovation;
- Note the research work the SCR Executive is currently undertaking on Future Mobility trends and opportunities which will inform the principles and priorities that enable the SCR to adopt, adapt and innovate;
- Consider the economic opportunity presented to the SCR by emerging Future Mobility trends and recommend the prominence and focus of this theme in the Local Industrial Strategy.

**1. Introduction**

- 1.1** This report presents an overview of advances in technology, changes in demand characteristics and emerging new business models that are disrupting transport.
- 1.2** The SCR Transport Strategy included technology and innovation as a cross cutting theme. In July 2019 the SCR Executive commissioned Arup to undertake research work to identify opportunities for SCR arising from our unique assets and businesses.
- 1.4** The UK's Industrial Strategy includes Future Mobility as a 'Grand Challenge' and identifies the potential for the UK to lead the world in innovation in how people, goods and services move.

## **2. Proposal and justification**

- 2.1** The Government's Future of Mobility: Urban Strategy (2019) sets out the forces disrupting the transport sector. These include the heightened availability of data which is enabling individuals to plan journeys differently as well as facilitating communication between vehicles and supporting Machine Learning. Transport is becoming increasingly automated and cleaner. Our behaviours are also changing, individuals are making fewer commuter journeys as our working patterns and lifestyles change. The population is ageing with older people more likely to drive than previous generations and younger people less likely.
- 2.2** New business models are emerging, often digitally enabled with shared mobility becoming more prevalent. This includes sharing access and sharing journeys, the success of the latter will be key to determining the impact on congestion. The adoption and integration of new technologies and new business models has the potential to deliver huge economic, social and environmental benefits. The Government has set out nine Principles which will underpin their approach and the outcomes they are seeking to achieve.
- 2.3** The SCR Transport Strategy will be delivered through a series of Implementation Plans concerning Rail, Roads, Active Travel and the Strategic Transit Network. Two cross cutting themes are identified in the Strategy – Technology and Innovation and Environment and Quality of Life. The SCR Executive also recently submitted an Expression of Interest to the DfT's Future Mobility Zones Fund. Unfortunately, this was unsuccessful however it highlighted the need for further work to develop our approach.
- 2.4** The SCR Executive has recently commissioned Arup provide an evidence base, analysis and foresight on Future Mobility to support the development of a work programme relating to transport technology and innovation.
- 2.5** The research will summarise and map innovative mobility solutions that have already been delivered in SCR including tram-train, clean bus technology, electric bus feasibility, integrated TravelMasters and ebike trials. This will provide an evidence base of capabilities on which SCR can build.
- 2.6** Working initially with stakeholders innovating in future mobility, the research will explore the most significant disruptions and the timeframes in which these are likely to occur, the potential impact on current policies and infrastructure planning, barriers to change and key partners to engage in this transition. This will be accompanied with an analysis of global drivers of change focused on mobility and technological/innovation trends.
- 2.7** The report arising from the research will outline Future Mobility principles and priorities for partners to consider and will inform SCR's approach to the implementation of the Innovation and Technology theme in the Transport Strategy. The findings of this work will be available in late September 2019. The outcomes of the research work will also be used to strengthen any applications to future rounds of Government funding
- 2.8** The UK's Industrial Strategy includes Future Mobility as a Grand Challenge, recognising the potential for the UK to lead the world building in innovations in the way people, goods and services move. The development of the SCR Local Industrial Strategy provides an opportunity to identify Future Mobility specialisms and opportunities. The West Midlands LIS for example positions the City Region as at the centre of transport innovation in the UK. The SCR has the opportunity to articulate the city region's specialisms and potential in a similar vein and the research work currently being undertaken will inform this.
- 2.9** The SCR has significant assets to leverage to innovate in future mobility. This includes: business sectors for example rail and logistics specialisms, companies operating at the frontier such as ITM power and the Floop, University research and translation excellence in particular AMRC's specialisms in capabilities underpinning transportation innovation, University of Sheffield specialisms in the environment, civil engineering,

energy and robotics and AWRC's specialism in movement and advanced wellbeing technologies.

- 2.10** The Northern Powerhouse Independent Economic Review identifies digital and energy as two of the North's prime capabilities with logistics an enabling capability. Transport for the North's Integrated and Smart Travel (IST) programme is an ambitious four-year programme to widely introduce new technologies across public transport in the North to improve the passenger experience.
- 2.11** Research for the Future Cities Catapult (now part of the Connected Places catapult) has estimated the value of the global Advanced Urban Services market will be worth around £2.5 trillion by 2025. There is an opportunity to exploit the global market opportunities presented by our expertise particularly working with countries adopting new 'smart' and low carbon technologies in the context of rapid urbanisation.
- 2.12** The ability of the SCR to adapt, adopt and pioneer in Future Mobility will depend on enabling infrastructure in particular the energy infrastructure to support the transition to a zero-carbon economy and an appropriate approach to data. The research will consider requirements and implications for the collection, storage and provision of data.
- 2.13** The work undertaken by Arup will be presented to the Transport Board in October for consideration. It will include recommended principles and priorities to adopt to advance the implementation of future mobility solutions. Recommendations will align with the SCR Transport Strategy, SEP, LIS and the DfT Future of Mobility report. Proposed actions will likely require collaboration with partners, in particular private sector mobility providers, and might require policy and legislative changes. Actions will be identified for the short, medium and long term.

### **3. Consideration of alternative approaches**

- 3.1** Consideration has been given in recent months to the best approach to operationalising themes that cut across the Transport Plan in particular, Air Quality and Future Mobility. It is proposed that these themes warrant specific dedicated approaches underpinned in the first instance by research and development work to be followed by specific implementation plans.

### **4. Implications**

#### **4.1 Financial**

There are no direct financial implications arising from this paper. The research work will make recommendations which might have financial implications should they be adopted.

#### **4.2 Legal**

There are no direct legal implications to this paper at this stage. The research work will make recommendations which might have legal implications should they be adopted.

#### **4.3 Risk Management**

There are no specific risk implications to this paper at this stage. The research work will make recommendations which should they be adopted might require a risk assessment and risk management strategy.

#### **4.4 Equality, Diversity and Social Inclusion**

The research will consider the potential benefits and risks presented by Future Mobility trends to delivering positive equality, diversity and social inclusion outcomes.

## 5. Communications

- 5.1 Depending on the outcomes and recommendations of this work the Board might want to recommend further work to communicate to, or engage with, communities, sectors or businesses in the SCR.

## 6. Appendices/Annexes

- 6.1 Annex i) Slide Pack presentation to LEP  
Annex ii) Department for Transport Future of Mobility: Urban Strategy – Definitions

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Background papers used in the preparation of this report are available for inspection at: 11 Broad Street West, Sheffield S1 2BQ

Other sources and references:

**The full evidence paper is available on request and will also be available on the website:**

<https://sheffieldcityregion.org.uk/explore/our-strategic-economic-plan/>