



Report To: Greater Cambridge City Deal Executive Board

13 July 2016

Lead Officer: Noelle Godfrey, Cambridgeshire County Council

Smart Cambridge: First Steps towards Intelligent Mobility

Purpose

1. “Intelligent mobility” has been defined as *“the convergence of digital industries, transport infrastructure, vehicles and users to provide innovative services relating to different modes of transport and traffic management”*. This work is separate to, but complements, the Smart City programme.
2. The purpose of this report is seek Board approval to pursue three research/investigative work packages at a cost of £90,000 to inform future thinking; and to highlight a fourth work package for which a separate proposal will follow in early 2017.

Recommendations

The Board is recommended to:

- (i) Approve the following three work packages:
 - a. Research and data-gathering about why people make specific transport choices in the Greater Cambridge area.
 - b. Investigate the current legislative, commercial and other barriers and opportunities with regards to integrated ticketing and on-line ticket purchase in Greater Cambridge.
 - c. Conduct an initial feasibility study on the potential of running autonomous vehicle trials, using the unique aspects of the guided busway.
- (ii) Note that in early 2017 the Board will be recommended to approve a fourth work-package, to support better digital way-finding in the City and to improve the experience of the travelling public for leisure, business and tourism purposes.

Reasons for Recommendations

3. The first two work packages will complement and support the current Cambridge Access Study work, and the third will fit with timescale for the Government funded CCAV (Centre for Connected & Autonomous Vehicles) £10m competition announced for Autumn 2016. The fourth will be refined in due course.

Background

4. Part of the City Deal 2016/17 budget report (discussed by the Executive Board in March 2016) included an outline proposal to undertake the first steps towards Intelligent Mobility with four interlinked work packages. The Board requested that a more detailed investment proposal to be brought to the July meeting series.

Considerations

5. Introduction

By taking a holistic approach, which includes data driven monitoring and modelling as well as providing better information to travellers, the City Deal objectives will be supported by:

- I. Encouraging more journeys to be made by sustainable transport (e.g. public transport, supported by cycling and walking) thereby cutting congestion.
- II. Making it more attractive to use sustainable transport for an entire door-to-door journey, by helping to make multi-modal journeys as convenient as travelling by private transport.
- III. Focusing on improving the entire door-to-door journey.

The opportunities available to use emerging technology to improve the experience of the travelling public have been highlighted in a recent report commissioned by the Transport Catapult *. The key aspects of Intelligent Mobility have been grouped into the four themes:

- I. **Access:** New mobility solutions (e.g. car-sharing, ride sharing etc.) that offer more affordable, more convenient travel.
- II. **Automation:** Increased levels of automation, e.g. emergence of automated driving functionality, moving from assisted driving to fully autonomous driving ('driverless cars'), recognising that this will still be many years away.
- III. **Demand & Supply:** Developments that seek to influence travel demand patterns and also better match supply to demand within transport systems.
- IV. **Integration:** The bringing together of disparate information, systems, and services to provide travellers with a seamless end-to-end mobility experience.

6. It is proposed that the following three work packages are undertaken in the first instance. They span all four categories above:

- (a) **Research and data gathering about why people make specific transport choices in the Greater Cambridge area.**

Output: A report providing greater understanding of what the barriers are to greater use of sustainable transport choices (including walking, cycling and the use of public transport).

Timescale: Complete by December 2017. Cost estimate: £30k

- (b) **Investigate the current legislative, commercial and other barriers and opportunities with regards to integrated ticketing and on-line ticket purchase in Greater Cambridge**

Output: A report identifying the barriers which prevent better integrated ticketing and on-line ticket purchasing, in order to enable an action plan to be generated, so we can establish better and on-line ticketing throughout Greater Cambridge.

Timescale: Complete by November 2017. Cost estimate: £30k

- (c) **An initial feasibility study to explore the potential for running autonomous vehicle trials, utilising the unique aspects of the guided busway.**

Output: The Government has announced that it will be making grants totalling up to £100m for studies and other work under a CCAV (Connected and Autonomous Vehicles) funding programme.

Interested parties can 'bid' for this money later in the year, and we want to do so. But we first need to undertake some preparatory work, and we seek Board approval for the funding to do that. If we are successful in our bid, that will lead to much more funding, from the Government, in due course.

This will enable Greater Cambridge to participate in future transport innovation centred on driverless vehicles for business and leisure travel – supporting out of hours working, evening leisure activities and future-facing “on demand” transport services not reliant on individual car ownership.

Timescale: Complete by October 2017 to fit in with anticipated Innovate UK funding competition timescales.

Cost estimate: £30k

Implications

7. In the writing of this report, taking into account financial, legal, staffing, risk management, equality and diversity, climate change, community safety and any other key issues, the following implications have been considered: -

Financial and other resources

8. The total investment proposed for the first three work packages is £90k. This will be used to fund a combination of temporary County Council contract staff and University of Cambridge specialists to undertake the investigative work and produce the output reports.

Background Papers

*Traveller Needs and UK Capability Study – commissioned by the Transport Catapult on behalf of the Department for Transport: <https://ts.catapult.org.uk/current-projects/traveller-needs-uk-capability-study/>

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