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**A separate report is submitted in the private part of the agenda in respect of this item, as it contains details of financial information required to be kept private in accordance with Schedule 12A of the Local Government Act 1972. The grounds for privacy are that it refers to the identity, financial and business affairs of an organisation and the amount of expenditure proposed to be incurred by the Council under a particular contract for the supply of goods or services. The public interest in maintaining the exemption under Schedule 12A outweighs the public interest in disclosing the information.**

Cabinet

4<sup>th</sup> July 2017

**Name of Cabinet Member:**

Cabinet Member for Jobs and Regeneration - Councillor O'Boyle  
Cabinet Member for City Services – Councillor Innes

**Director Approving Submission of the report:**

Deputy Chief Executive (Place)

**Ward(s) affected:**

All

**Title:**

Connected and Autonomous Vehicles Test Bed – Proposed Funding Bid

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**Is this a key decision?**

No, however it is considered appropriate that the recommendations contained in this report are taken by Cabinet as in the event of a successful bid subsequent decisions may be key decisions and will need to be taken as such.

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**Executive Summary:**

Coventry has a growing reputation for advanced automotive research and engineering led by the city's two universities and major local businesses, including Jaguar Land Rover and MIRA. This reputation has been enhanced by the City Council's success over recent years in helping to secure new funding for innovative transport solutions which use emerging technology to find new ways to cut congestion, reduce the impact of cars and other forms of transport on air quality and support people of all ages and mobility levels to travel more freely. A summary of the key transport innovation projects the Council is currently involved in is outlined in Appendix 1.

An opportunity has arisen to bid for additional funding as part of a £55m government funded initiative being run by Innovate UK, which aims to make the UK one of the world's most attractive centres for connected and autonomous vehicle (CAV) development and testing. Connected vehicles are capable of 'talking' to each other and to roadside equipment like traffic lights using the wireless network to help inform the choice of routes to minimise congestion and pollution and

to avoid accidents. An autonomous vehicle takes this concept a step further by taking over aspects of the driving tasks, ultimately to the point of full automation, meaning a vehicle that is capable of driving itself without human intervention.

If a bid is successful it would place Coventry and the wider region at the centre of a national research and development programme into connected and self-driving vehicles of all types, making the city and region a global leader in this field. This would also further enhance Coventry's growing reputation for advanced automotive research and engineering led by the city's two universities and major local businesses such as Jaguar Land Rover.

The funding bid requires 100% industry match funding but research organisations and local authorities can be funded at 100%, meaning there would be no match funding required by the City Council. In addition, any maintenance and other costs throughout the expected 10 year life of the test facilities would be funded through the project, resulting in the proposal having a zero Net financial impact on the City Council. The scope of a potential bid, which must be submitted by the 19th July 2017, is being developed with potential partners by a joint Coventry City Council and Transport for West Midlands team.

A requirement of the bid is that organisations must work together as part of a consortium which should be led by a business or research organisation rather than a local authority and bids are encouraged to limit the number of partners. Non-Disclosure Agreements and a collaboration agreement will be required between the partners; as well as contracts with the funders and the formation of an entity to construct and operate the testing infrastructure. The bid will be for an element of the £55m, which due to the competition rules is limited to a maximum £17.5m grant to be shared between the collaborators and match-funded by industry over the build and operational life of the project. The final value of the bid will be dependent on the amount of match funding secured from industry. If the full £17.5m match funding can be secured the total funding package available could be up to £35m. A number of other bids from the West Midlands for laboratory and off-road elements of the testing eco-system are anticipated and will be coordinated with this bid to maximise the West Midlands impact, with only this bid addressing testing infrastructure for the operation on the public highway.

This bid presents an excellent opportunity to help cement Coventry's reputation as a global leader in this field and comes at a time when the automotive industry is moving rapidly towards CAV and is an opportunity therefore for Coventry to be at the heart of the development and possible production of the next generation of motor vehicles. Subject to Cabinet approval, it is proposed to submit a joint bid with the other consortium members as outlined in the private report.

Given the timescales involved in submitting the bid it is also proposed that approval of the final submission document, non-disclosure and collaboration agreement is delegated to the Deputy Chief Executive (Place) in consultation with the Cabinet Member for Jobs and Regeneration and Cabinet Member for City Services.

In the event of a successful bid whereupon the exact value of the grant secured and the conditions attached are finalised, a separate report will be brought back to either Cabinet and/or Full Council seeking authority to enter into any grant agreement in accordance with Paragraph 2.3 of Part 3F (Financial Procedure Rules) of the Constitution.

**Recommendations:**

Cabinet is requested to have regard to the contents of this report when considering the recommendations contained within the private report on this matter and to:

- (1) Authorise that the City Council take part in a joint funding bid as part of a consortium for the Connected and Autonomous Vehicles Test Bed competition;
- (2) Authorise the City Council to enter into a Non-Disclosure Agreement, Collaboration Agreement and associated contracts with the other submission partners as part of the bid process; and
- (3) Delegate approval of the final submission document and completion of the legal agreements to the Deputy Chief Executive (Place) in consultation with the Cabinet Member for Jobs and Regeneration and Cabinet Member for City Services.

**List of Appendices included:**

- (1) Overview of Coventry-based transport innovation projects

**Background papers:**

Movement for Growth Ten Year Delivery Plan, Transport for West Midlands, April 2017

**Other useful documents:**

Competition guidance: connected and autonomous vehicles test bed, Innovate UK, April 2017 (<https://www.gov.uk/government/publications/funding-competition-connected-and-autonomous-vehicles-test-bed>).

**Has it been or will it be considered by Scrutiny?**

No

**Has it been or will it be considered by any other Council Committee, Advisory Panel or other body?**

No

**Will this report go to Council?**

No

## **Report title:** Connected and Autonomous Vehicles Test Bed – Proposed Funding Bid

### **1. Context (or background)**

- 1.1 Coventry has a growing reputation for advanced automotive research and engineering led by the city's two universities and major local businesses including Jaguar Land Rover (JLR) and MIRA. Building on this reputation the city has become one of the UK's major hubs for research and development into connected and autonomous vehicles (CAV) or self-driving cars. Over the next two years working with major industry partners, the consortium UK Autodrive, which includes the City Council, will carry out trials of self-driving cars on urban roads within Coventry; and UK CITE, another consortium involving the City Council, is expected to carry out similar trials extending to the motorway and trunk road network surrounding the city.
- 1.2 A connected vehicle is a vehicle with on-board technology that enables it to communicate and exchange information wirelessly with other vehicles, road side infrastructure like traffic lights and other devices and networks outside the vehicle such as the "Cloud" to increase convenience and comfort for drivers and passengers and contribute towards improving road safety, reducing fuel consumption and vehicle emissions, facilitating parking, and improving traffic management and network efficiency. An autonomous vehicle takes this concept a step further resulting in automation of some of the driving tasks, and ultimately full automation to the point that a vehicle is capable of driving itself without human intervention.
- 1.3 Coventry and the wider West Midlands is now in an excellent position to capitalise on the potential growth within this sector to create a global centre of excellence for autonomous and connected vehicle technology and comes at a time when the automotive industry is moving rapidly towards CAV and is an opportunity for Coventry to be at the heart of the development and possible production of the next generation of motor vehicles. To illustrate this, by 2030 it is expected that the CAV industry will create of up to 320,000 new jobs in the UK, 25,000 of them in automotive manufacturing. It has the potential therefore to boost the city's economy in terms of jobs and investment into local businesses and research centres including Coventry's two universities. The automotive sector forms a significant part of the Advanced Manufacturing and Engineering economy which is strong but also critical to the area's overall economy. By the mid 2020's approximately 40% of the cost of a vehicle is forecast to comprise the electronics, which is indicative of a wider sea change in the automotive industry as it transitions itself from vehicle maker to global mobility provider (with numerous public strategy statements to this effect from Ford, BMW, JLR, Volvo and others).
- 1.4 The automotive industry is global and conducts significant activity at this level. Much of the global research activity occurs in the United States and within Europe in Germany and the UK. In order to foster continued activity in the UK and in particular in the West Midlands (with a jobs multiplier in excess of 2.5 jobs in the supply chain for every vehicle manufacturer research job) it is important that a high standard of test and development facilities are available close to research bases. In the UK this focuses on a broad corridor from London to the West Midlands.
- 1.5 A major factor in supporting the city's growing reputation in this field has been the Council's success over recent years in helping to secure new funding for innovative transport solutions, which use emerging technology to enable traffic to move more efficiently on the highway network. These projects have significant future benefits for reducing congestion, improving the impact of cars and other forms of transport on air quality and supporting people of all ages and mobility levels to travel more freely. An overview of the transport innovation projects the City Council is presently involved in is outlined in Appendix 1.

- 1.6 In April of this year, the government agency Innovate UK announced that up to £55m of funding would be available as part of a competitive bidding process for projects to develop CAV testing infrastructure. The aim of the funding is to create the world's most effective CAV testing environment here in the UK which would be a test bed where global vehicle manufacturers could test their connected and autonomous vehicles in both off road and on road environments.
- 1.7 For any bid to be successful organisations must work together as part of a consortium and enter into a collaboration agreement. The deadline for applications is 19<sup>th</sup> July 2017.

## **2. Options considered and recommended proposal**

- 2.1 Option 1 – The City Council collaborates on a joint bid for funding  
Coventry lies at the heart of the UK's current research and development plans for self-driving car technology. An opportunity now exists to bid for external funding, which if successful, would have the potential to elevate Coventry and the West Midlands region into being the world's most effective connected and autonomous vehicle test bed. This would have considerable economic benefits in the form of encouraging jobs and growth in the many local companies involved in automotive innovation and would also support Coventry's goal to be a 'living lab', which will help create the right environment for attracting jobs and inward investment into the city.
- 2.2 The total value of the funding available within the competition is £55m split between three different competition streams and requires 100% industry match funding, but university's and local authorities can be funded at 100% meaning there would be no match funding required by the City Council. The competition stream subject to this bid is to test CAVs on public roads within an urban area and/or highly dense city location. Due to the competition rules for this stream, the bid is limited to a maximum £17.5m grant to be shared between the collaborators and match-funded by industry over the build and operational life of the project. The final value of any bid will be dependent on the amount of match funding secured from industry. If the full £17.5m match funding is secured the total funding package available could be up to £35m.
- 2.3 In order to submit a bid and be successful, partner organisations must work together as part of a consortium, which should be led by a business or research organisation. In addition to the City Council, the consortium for the bid would also include Transport for West Midlands (TfWM) which would be the accountable body for local authority partners. This minimises any risks for the City Council and also with the weight of the transport arm of the WMCA behind the bid it will ensure a greater chance of success. Coventry City Council would however still remain at the heart of the project including through the secondment to TfWM of the Council's Transport Innovation Manager to work as part of a joint team. This strengthens the bid by enabling the consortium to build on the existing infrastructure and projects as outlined in Appendix 1. The joint approach with TfWM will also strengthen and provide greater resilience in terms of staff resources and expertise to support the ongoing transport innovation agenda in Coventry.
- 2.4 The bid will be for an element of the £55m which due to the competition rules is limited to £17.5m grant to be shared between the partners and matched by industry over the build and operational life of the project. A number of other bids from the West Midlands for laboratory and off-road elements of the testing eco-system are anticipated and will be coordinated with this bid to maximise the West Midlands impact, with only this bid addressing testing infrastructure for the operation on the public highway. If successful the funding would enable some existing traffic control equipment on selected routes within Coventry to be upgraded and replaced as part of the project. This would enhance Coventry's existing traffic control infrastructure and provide added value to the city. The

equipment would also be maintained and further upgraded as necessary throughout the life of the project, expected to be up to 10 years, at zero Net cost to the Council.

- 2.5 If the bid is successful programme governance arrangements would be established, which would include a leading role for the City Council including Elected Members. This would include amongst other things, developing protocols to govern how vehicle manufacturers would be able to use the test bed and also managing any potential risks, liabilities or concerns. One area of public concern might be over any potential safety issues involving self-driving cars using public roads. Before any testing took place, as a minimum, only CAVs that have been proven first to work successfully and safely off-road, which comply with all UK law and guidance and are covered by full public liability insurance would be permitted to be tested in Coventry.
- 2.6 A requirement of the bid is that a collaboration agreement is submitted with the application detailing how the consortium partners will work together to deliver the project. A Non-disclosure Agreement will also be required between the partners as well as contracts with the funders and the formation of an entity to construct and operate the testing infrastructure. If this option is supported it is proposed that the City Council enters into a collaboration agreement with consortium partners, which is submitted with the bid application. It would be proposed to delegate final approval of the legal agreements to the Deputy Chief Executive (Place) in consultation with the Cabinet Member for Jobs and Regeneration and Cabinet Member for City Services.
- 2.7 Option 2 – The City Council does not collaborate on a joint bid for funding  
The only other viable option available is for the City Council not to take part in the bid. If this occurred it is highly likely that a bid would still be submitted by the other consortium members, but without Coventry City Council as a consortium member, the bid would have less chance of succeeding meaning potentially a lost opportunity for attracting the jobs and inward investment into the city as a result. Alternatively, if the bid was successful without the City Council being involved this would mean that the Council would be unable to influence the scope and direction of the project and have less influence over its delivery, thereby resulting in Coventry potentially losing out on some of the economic benefits that could result from the funding as the focus of the research and development could be centred elsewhere in the region.
- 2.8 In light of the above, it is recommended that option 1 is supported and the City Council becomes a member of the consortium and submits a joint bid along with other consortium members. It is also recommended that approval of the final submission document and legal agreements is delegated to the Deputy Chief Executive (Place) in consultation with the Cabinet Member for Jobs and Regeneration and Cabinet Member for City Services.

### **3. Results of consultation undertaken**

- 3.1 Given the timescale involved in submitting the bid and commercial and competitively sensitive nature of the bid, consultation on the specific details of the bid would not be appropriate.
- 3.2 In terms of the wider CAV agenda, Transport for West Midlands have recently undertaken a public consultation exercise on their Movement for Growth Ten Year Delivery Plan, which was endorsed by the WMCA Board on 7<sup>th</sup> April 2017 and includes details of plans in the region for research and development on connected and autonomous vehicles, including in Coventry.

#### **4. Timetable for implementing this decision**

- 4.1 Subject to Cabinet approval of the recommendations, the bid application documents will be submitted to government by midday on 19<sup>th</sup> July 2017 at the latest.
- 4.2 Should the bid be successful it is anticipated that any grant award to TfWM would be made towards the end of 2017. The design and construction of the test facilities are then likely to take approximately two years from award and the operational period would last for around 5-8 years after that meaning a project duration of up to 10 years.

#### **5. Comments from Director of Finance and Corporate Services**

##### 5.1 Financial implications

Transport for West Midlands will act as the accountable body which minimises the financial liabilities for the City Council.

The bid will be for an element of the £55m which due to the competition rules is limited to £17.5m grant to be shared between the partners and matched by industry over the build and operational life of the project. Local authorities are funded at 100% meaning there would be no match funding required by the City Council.

The final value of the bid will be dependent on the amount of match funding secured from industry. If the full £17.5m match funding is secured the total funding package available could be up to £35m.

The cost of maintaining, upgrading or removing any equipment installed as part of the project would be funded by the grant or through the generation of fees charged to any vehicle manufacturer using the test facilities. As such there should be a zero Net financial impact on the City Council as a result of these proposals.

The potential grant will come with grant conditions and these will not be known until after any in-principle award is made, probably in the autumn of 2017. At this stage a separate report will be brought back to Cabinet and/or Council seeking approval to enter into any grant agreement.

##### 5.2 Legal implications

If the bid is successful it is likely that grant conditions will be imposed by the government as to the use of the funding and the outputs to be derived from it. Once these grant conditions are known, the Council as part of the wider consortium governance, will seek to mitigate any risks through a robust risk management process. Ultimately, the Council does not have to accept any grant award unless it is satisfied with the conditions and any other liabilities that may apply.

Non-Disclosure Agreements and a collaboration agreement will be required between the partners; as well as contracts with the funders and the formation of an entity to construct and operate the testing infrastructure.

From a state aid perspective, any support given for the construction or upgrade of research infrastructure that performs economic activities will be considered state aid. However there are exemptions granted under the General Block Exemption Regulation which declares that specific categories of aid to be compatible with the Treaty if they fulfil certain conditions, thereby exempting them from the requirement of prior notification and Commission approval. It is our view at this stage that the grant can be made to be compatible with investment aid for research infrastructure, however Legal Services will

continually assist the officers involved in the project and will monitor the state aid position such that any risks identified are adequately mitigated.

## **6. Other implications**

### **6.1 How will this contribute to achievement of the Council Plan?**

The bid will help to make Coventry one of the most important global hubs for self-driving car research and development. This will help to support the Council's key objective to promote the growth of a sustainable Coventry economy, in particular by supporting businesses to grow, creating the infrastructure and raising the profile of the city.

### **6.2 How is risk being managed?**

Transport for West Midlands will be the accountable body on behalf of the local authorities for the bid and any subsequent grant money awarded. This significantly reduces the Council's financial risks and liabilities.

Should the bid be successful robust governance arrangements will be established to ensure that all project risks are identified and mitigated.

### **6.3 What is the impact on the organisation?**

Grant funding will cover all staffing and delivery costs as may be required including the secondment of one member of staff to work jointly with TfWM on this and other joint transport innovation projects. The joint approach with TfWM will also strengthen and provide greater resilience in terms of staff resources and expertise to support the ongoing transport innovation agenda in Coventry.

### **6.4 Equalities / EIA**

This proposal has no immediate impacts on protected groups. In the longer term, development of autonomous and connected vehicles could have a positive benefit to people with mobility impairments, including the disabled and elderly by providing a safe and personalised transport service facilitating greater mobility and access.

### **6.5 Implications for (or impact on) the environment**

The proposals could have a positive impact on the environment through the development of a more eco-friendly mode of travelling by car and other forms of motor vehicle which have the potential to reduce congestion, cut the number of road accidents and improve air quality.

### **6.6 Implications for partner organisations?**

If the bid is successful there will be a positive impact on partner organisations, not only those within the consortium but also other local businesses and research centres through the potential to attract jobs and inward investment into Coventry.

## **Report author(s):**

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Cllr J Innes	Cabinet member City Services		12.06.17	13.06.17

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**Appendix 1 - Overview of Coventry-based transport innovation projects**

<b>Name</b>	<b>Timescale</b>	<b>Project Overview</b>
UK Autodrive	Nov 2015 – Oct 2018	<p>The testing of connected and autonomous cars and small last mile ‘pods’ in Milton Keynes and Coventry to help develop specific technical use cases and assess public engagement.</p> <p>The proposed test routes in Coventry include A4114 Holyhead Road, the Ring Road and A4114 London Road.</p>
UK CITE	Jun 2016 – Dec 2018	<p>The construction and use of a 42 mile connected vehicle test circuit on public roads through Coventry and along the A45, M42, M40 and A46. This provides a globally unique combination of connected infrastructure to support vehicle-to-vehicle and vehicle-to-infrastructure communication.</p>
HoPE	Apr 2014 – Sept 2017	<p>The development of a travel and payment mobile phone App with various European partners to allow lowest carbon footprint journey planning.</p>
iVMS	Dec 2015 – Mar 2018	<p>The development of connected infrastructure linked to in-vehicle user and mobile phone base interface to support intelligent route choice, time of journey and travel speed (coordinated dynamically with traffic signals).</p>
SUITS	Dec 2016 – Nov 2020	<p>A European project led by Coventry University examining the organisational and societal change in cities associated with intelligent mobility and transport technology.</p>
CATCH!	Jan 2016 – Dec 2018	<p>The development and market testing of a background technology for mobile phones which harvests and aggregates travel data in a personalised way to help evidence and improve the management of the transport system.</p>
AppyParking	Apr 2017 – Mar 2018	<p>The development and deployment of a mobile phone App to enable booking and payment of on-street parking spaces throughout the city centre.</p>