



Subject:	Innovative Research and Development project piloting new technology to collect city centre transport data
Date:	23 September 2016
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Is this report restricted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Is the decision eligible for Call-in?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

1.0	Purpose of Report or Summary of main Issues
1.1	To seek Members support for the Council to participate in, as part of its Smart Cities programme, a research and innovation project to test the use of leading edge technologies to collect and analyse city centre transport and road quality information using new locally-developed sensors mounted on the 'Belfast Bikes'.
1.2	The consortium will include BT, Cisco, Queen's University, Transport NI and local SME, See.Sense. The Council's proposed contribution to the project is £10,000 out of a total project cost of £95,000.
2.0	Recommendations
2.1	The Committee is asked to: <ul style="list-style-type: none">• Approve a contribution of £10,000 research and development funding for the deployment of innovative sensor technology across the city to support ongoing analysis of the city's transport system and to help test technology required to set in place the foundations of a smart Belfast.

3.0	Main report
	<p data-bbox="272 295 421 327"><u>Key Issues</u></p> <p data-bbox="165 344 1474 680">3.1 At the SP&R meeting in June 2016, Members received an update on the Council's Smart City programme which aims to foster a collaborative environment between public and commercial partners for the better collection and exploitation of city data; to enhance our existing digital infrastructure; to present the city as a test bed for innovation; and to build our capabilities in using data and smart technologies in the Council. The proposal outlined below contributes to each of these aims while also contributing directly to our understanding of city challenges around city centre transport patterns.</p> <p data-bbox="165 748 1474 1084">3.2 Local SME 'See.Sense' have developed an award winning innovative smart sensor which they propose to fit to the "Belfast Bikes" as part of the project. The sensors - which use leading edge technology - would allow the Council and its city partners to collect real-time information about such things as road quality (eg, location of pot-holes), commuter behaviour, traffic congestion, sudden stops, near misses and accident hotspots etc. Over time the data would paint a sophisticated picture of the city's road infrastructure and, in particular, the experience of the city's thousands of cyclists.</p> <p data-bbox="165 1151 1474 1330">3.3 If successful, this would be an international demonstrator that could be exported to other cities across the world. It would help showcase Belfast's potential as a test-bed for smart city investments whilst at the same time support local entrepreneurship and provide valuable insights into important issues regarding urban transport.</p> <p data-bbox="165 1397 1474 1890">3.4 See.Sense have already been exploring the practicalities of the pilot project with partners including Next Bike. Cisco and BT have agreed to put in place the infrastructure required to capture the sensor data using a citywide radio system which would test out the foundations required for future smart projects. BT will provide the data platform in the cloud to hold the data and Queen's University's data scientists have agreed to provide the complex data analytics to interpret the real-time data for the council and its partners including the Department for Infrastructure who have also agreed to contribute. The diagram in Appendix 1 illustrates the various elements in the project's architecture. This will allow us to test out the technology whilst demonstrating the value of collaborating across sector and supporting our SMEs with the aim of improving city services.</p>

3.5	<u>Financial & Resource Implications</u> The £10,000 project contribution will be financed from the existing Smart City budget.
3.6	<u>Equality or Good Relations Implications</u> None
4.0	Appendices
4.1	Appendix 1: The project architecture