



Subject:	Harnessing a 'smart city' framework to address Belfast Agenda priorities
Date:	22 January 2016
Reporting Officer:	Ronan Cregan, Director of Finance and Resources
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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	<p>This paper recommends that the Council lead on the development of a 'smart city' framework to support the delivery of priorities within the Belfast Agenda. Smart Cities is a collaborative partner approach between business, academia and public bodies to make use of new technologies and big data to better understand and tackle traditional urban and neighbourhood challenges. Many local authorities (including Glasgow, Dublin, and Manchester) have already established such frameworks in order to find new ways to address such issues as waste, energy, traffic and water management.</p> <p>Members are asked to approve a programme of work which, with support and co-investment from the Government's Future Cities Catapult and other partners such as local SMEs, Invest NI, Queen's University and the Ulster University, would seek to build Belfast's smart city capacity while at the same time demonstrate a financial return on this initial investment through the delivery of a number of projects. This investment seeks to build on the city's successful infrastructure investment in Superconnected Broadband and City WiFi.</p>
2.0	Recommendations
2.1	<p>Members are asked to consider and agree the following:</p> <ol style="list-style-type: none">1. To work with our public and private sector partners to develop a smart city framework for the city.

	<p>2. To co-invest in a programme of work with the Government's Future Cities Catapult to support the development of this framework whilst at the same time delivering four demonstrator projects that will deliver a financial return on the investment.</p> <p>3. To reassign existing resource to set in place an innovation team to design and deliver the programme over the next two years.</p>
3.0	Main report
3.1	<p><u>Key Issues</u></p> <p>A 'smart city' uses new technologies (such as apps, sensors, cloud computing), and big data to find innovative ways to tackle traditional urban challenges and support the city's' strategic objectives. Places such as Glasgow, Dublin, Bristol, and Manchester have established smart city frameworks to attract funding and investment in order to create smart, sustainable ways of addressing urban challenges such as waste, energy, traffic and water management.</p>
3.2	<p>For example, with a smart city framework in place, Glasgow City Council was able to attract £24 million from central Government to deliver a number of major projects including a sophisticated traffic management system for the city, visitor apps, smart street lights and neighbourhood air quality monitors.</p>
3.3	<p>The leadership role of the local authority has proven crucial in the development of these frameworks. All successful 'smart cities' need a partnership between the public and private sectors to ensure that the right infrastructure, systems and shared objectives are in place to encourage business, academia and public bodies to work together to create innovative solutions and services.</p>
3.4	<p>Belfast is well-placed to take a similar approach. Both of our local universities have strong reputations in this field and the city has a growing digital SME sector that is eager to work with us (including the Centre for Secure Information Technologies¹). We have a good physical infrastructure with recent investments in Superconnected Broadband and City WiFi. At a Government level, DFP, DETI and Invest NI have all acknowledged the importance of a shared smart city approach in fostering SME innovation and attracting investment.</p>
3.5	<p><u>Building a smarter Belfast framework</u></p> <p>What Belfast currently doesn't have is a joint framework that brings partners together to determine what our 'smart city' priorities should be and how best we can work together in order to deliver them. Government agencies and the private sector want to see evidence</p>

¹ <http://www.csit.qub.ac.uk>

	<p>of such city frameworks in place before they invest.</p> <p>In discussions with partners and experts (and looking at best practice elsewhere²) officers have identified four critical elements that Belfast needs to have in place:</p> <ul style="list-style-type: none"> i. A collaborative environment: Public and commercial city partners working together to develop a shared framework to confirm smart city priorities, enablers, investment opportunities, and joint working arrangements. ii. City data and intelligence: Finding better ways to work with our partners on the collection, management and interpretation of shared city data to support understanding, analysis, decision-making and joint accountability on our challenges. iii. Funding and procurement: Establishing a long term 'roadmap' for funding and investment. Developing new procurement models (such as SBRI³) that encourage the best of our local SMEs to create innovative solutions that can address Belfast's challenges (while at the same time offering these companies opportunities to develop products which they sell abroad). iv. Capacity and infrastructure: Supporting infrastructure developments including City WiFi, smart building management, smart transport sensors, Internet of Things technology, etc. We also need to foster an organisational culture where managers and leaders have the necessary skills and training to better understand and exploit the potential of data analytics and technologies.
3.6	<p>Belfast City Council's leadership role will be critical in ensuring that these elements are in place. No other organisation in the city has the necessary remit to support the development of the framework. Officers have had exploratory discussions with Invest NI and Queen's University both of which are eager to work with the Council to develop one or more of these elements. For example, researchers at Queen's University are investing in a new city data platform and analytics team and are keen to work with the Council in using this resource to understand and tackle issues in the city. Invest NI also see the potential of such a framework in supporting R&D with local digital SMEs and have up to £250,000 available to co-invest in a smart city collaborative network.</p>
3.7	<p><u>Future Cities Catapult</u></p> <p>The Council has also been approached by the Future Cities Catapult - a body set up by Government to support cities in the development and exploitation of smart city approaches. The Catapult have made a proposal to co-invest with the Council in the</p>

² <http://www.bsigroup.com/en-GB/smart-cities>

³ <https://sbri.innovateuk.org>

development of a Belfast smart city framework. As part of the proposal they are recommending that Belfast should seek to drive the development of its smarter cities framework by delivering a number of practical demonstrator projects. These projects outlined below, would provide practical support for growing the rate base and increasing rate collection, the delivery of the City Centre Investment Framework and the delivery of a performance infrastructure to support the community plan.

1. A Rates Identification tool: A tool to greatly increase accuracy in identifying occupied properties in Belfast (with the potential to recover an estimated £1.5 million in lost Rates for Council each year.)

2. A Rate Forecasting model: A data model that will support Council decision-making by predicting future levels of income and identifying the wider economic impact of changes to the Rate.

3. Belfast Growth-mapper: A tool to support planning and investment decision-making by sharing data on city utility infrastructure (gas, sewage, broadband, electricity, etc.) This would provide a resource to the Council and partners, developers and future city centre investors. A similar tool is already used by Manchester City Council.⁴

4. Support for the development of a community planning dashboard to share performance and impact data amongst our community planning partners.

3.8 These demonstrators would provide a financial return on the initial investment while at the same time providing a number of solutions to support our new roles as the spatial planning and community planning authority.

The Catapult is recommending that these demonstrator projects would (where possible) be commissioned from Belfast's digital SMEs which would circulate R&D investment back in the local economy while strengthening the partnership between the Council and private sector partners.

3.9 Next steps

Members will be aware that a small team of officers have begun exploratory work on the potential of a Belfast smart cities framework. However, in order to develop the framework in a timely manner that can align with the emerging Belfast Agenda, officers are recommending the following next steps:

1. Begin a programme of work to develop a smart city framework and a supporting collaborative city partnership with public and private sector partners (Feb 2016 to July 2016).

⁴ <http://www.mappinggm.org.uk/gmodin>

	<ol style="list-style-type: none"> 2. Finalise a co-investment package between the Future Cities Catapult and the Council to deliver the four demonstrator projects. (Feb 2016 to Oct 2017 – with the demonstrators on phased delivery during this 18 month period.) 3. Engage with Invest NI and DETI to develop collaborative smart city investments. (Invest NI have potentially up to £250,000 to invest in a collaborative network if a smart city framework is in place). (Spring 2016) 4. Engage with the local universities (and with DFP) to seek agreement on co-investment in data management and analytics. In principle, Queen’s University are willing to work with Council on a city data analytics platform to address issues such as traffic and parking management. (Spring/Summer 2016). 5. Draw on existing officer support and resources to oversee the design of the Smart City Framework to support the Belfast Agenda, set in place the necessary partnerships and deliver the demonstrator projects over a two year period from February 2016.
3.10	<p><u>Financial & Resource Implications</u></p> <p>Future Cities Catapult has estimated the development costs of these four demonstrators would require a joint investment of £593,000 of which they are willing to invest £118,000. Revenue and Capital resources for this programme of work have already been identified within the existing Superconnected Broadband budget.</p> <p>Members should note that the Rate Identification tool alone is expected to demonstrate an annual financial return on this investment of approximately £1.5 million for the Council beginning from Year Two.</p> <p>Council aim to use this co-investment package to attract other smart city investment from partners – including, in the first instance, Invest NI (potentially up to £250,000) and from Queen’s University.</p> <p>An element of the framework would be a detailed investment roadmap for the city that would identify and pursue other investment opportunities – particularly from Horizon 2020 and Innovate UK.</p>
3.11	<p><u>Equality or Good Relations Implications</u></p> <p>Equality and good relations implications, in relation to this policy, are still under consideration. Further updates will be sent to the Equality and Diversity Officer in due course.</p>
4.0	Appendices – Document Attached

4.1	None
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