



Subject:	Smart Belfast programme 2018/2019
Date:	24 November 2017
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Restricted Reports	
Is this report restricted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If Yes, when will the report become unrestricted?	
After Committee Decision	<input type="checkbox"/>
After Council Decision	<input type="checkbox"/>
Some time in the future	<input type="checkbox"/>
Never	<input type="checkbox"/>

Call-in	
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>The first year of the Smart Belfast programme focused on successfully demonstrating the benefits of 'smart' technologies for both the Council and the wider city. The work resulted in a jointly agreed framework for urban innovation with our business and university partners; and the delivery of scalable projects that applied the concepts of the framework to real-world problems (one of which – the Business Rates Identification tool – has already generated substantial new recurring income for the Council).</p> <p>This paper sets out recommendations for Members that aim to embed the Smart Belfast approach into mainstream programmes in order to generate innovative solutions to economic</p>

1.2	growth, city planning, and the Council's commitment to service transformation.
2.0	Recommendations
2.1	<p>The Committee is asked to:</p> <ol style="list-style-type: none"> 1. Approve the proposed Smart Belfast programme for 2018/2019 and the associated costs. 2. To note the update on the current work of 2017/2018 including the following individual items: 3. The closing of the Smart Belfast Collaborative Challenge and the plan to bring an update on successful applications to Members in December 2017. 4. Note the opportunity to contribute to service or city challenge proposals for the LPWAN project. A draft challenge programme will be presented to Members in early 2018. 5. Note the planned opening date for the Immersive Tech hub of 28 November. 6. Agree that Belfast sign TM Forum's 'City as a Platform' manifesto 7. Note the development work on an all-island SBRI fund for 2018/2019 and to agree in principle to a £30,000 contribution from Belfast City Council. Proposals will be presented to Members for approval. 8. To agree to Council participation in the DIT trade mission to Dublin 9. Agree to the acceptance of a Maynooth University Phd placement with the Smart Belfast team. 10. Agree to the development of a proposal with BT on a local air quality monitoring pilot. 11. Agree to the development of Smart Belfast infrastructure pilot(s).
3.0	Main report
3.1	<p>The Council's decision to invest in a Smart Cities programme is driven by three imperatives:</p> <ul style="list-style-type: none"> - Rapid technological change: Very low-cost cloud computing; ubiquitous mobile phone use; high speed internet; WiFi and Internet of Things networks; and advances in data modelling, analytics and artificial intelligence systems – together offer vastly different ways to effectively address the city's problems and the efficiently manage its services. However, to make the most of these advances the Council needs to co-opt the knowledge and creativity of our universities and local digital sector. - City Growth Deal ambition: The economic growth and the productivity challenge at the heart of the City Region Deal, the emerging sub-regional industrial strategy and the Belfast Agenda, are all predicated on Belfast's ability to inculcate an innovation culture and to exploit data science and technologies. This will be true not only in terms of attracting inward investment and growing the indigenous digital SME sector, but for the

success of the wider economy and public sector service transformation. The Smart Belfast foundations are important elements in building the city's capacity in this regard.

- **Public sector service transformation challenge:** The Council is undergoing significant organisational re-design and is committed to citizen-centric services. The adoption of scalable, agile technologies – and an environment that can harness the wider innovation in our universities and SMEs - can assist the Council and wider public sector to design and deliver much more effective services, programmes and interventions. In order to do this the city needs to foster a creative partnership ecosystem and a much stronger culture of public sector innovation.

Proposed Smart Belfast programme 2018/2019

3.2

Following extensive engagement with global digital partners, the local digital SME sector, universities and the public sector, the Smart Belfast framework was launched to 300 business representatives on 26 September 2017 at City Hall. The framework aims to marry the city's ambition to support its high-growth digital sector with a desire to bring commercial innovation to bear on urban challenges and public service transformation at three levels:

- **City and regional** – By, for example, informing the innovation and infrastructure elements of the City Region Deal; the Belfast Agenda; and Place Positioning particularly in supporting foreign direct investment, local entrepreneurs and high growth SME development under the 'Smart Belfast' rubric.
- **Organisational transformation** – informing Council service transformation by supporting the adoption of agile, user-centric design methodologies; innovative procurement (such as SBRI); and the application of data science and new technologies in service re-design.
- **Building the core foundations** – working with partners to put in place the underpinning foundations necessary for a Smart Belfast to operate over the longer term (including, for example, developing a city data platform, building skills in agile design).

3.3

The Smart Belfast team have identified a substantial programme of work for 2018/19 that is required to achieve this ambition. This includes:

- **Establishing a scalable city data platform and data development and assurance**

programme. This resource is required to managed the substantial data being generated as part of the Smart Belfast work – and ensuring that it is available for appropriate re-use by services, businesses and universities. This will include ensuring GDPR privacy compliance.

- **An integrated Smart Belfast Challenge programme** that will include putting in place the management and resource requirements to deliver the following:
 - o LPWAN city and regional challenge programme
 - o 5G trails and testbeds
 - o Full Fibre use cases
 - o All-Ireland SBRI challenge programme
 - o Immersive tech challenge programme
 - o 'In-house' challenge fund for innovative service re-design

- **Promoting Smart Belfast:** The idea of a 'Smart City' is a hugely attractive proposition for investors, SMEs and individual entrepreneurs – and has been adopted by many places worldwide to articulate a shared ambition for innovation, growth and economic development. Belfast is well-placed to use its 'Smart Belfast' approach as part of its wider place positioning work to attract inward investment and also to showcase the best of the city's SMEs and the cutting R&D work of our universities. It is proposed that the Smart Belfast presence is developed on the web and social media and a shared story in designed that can be adopted for investment opportunities (such as SXSW, MIPIM, China, Sister Cities, Smart Cities World Congress, etc.)

- **Develop the Belfast Digital strategy** – To work with city stakeholders to determine the long term infrastructure and skills investments required to support a twenty-first century knowledge economy.

- **Developing Smart Districts:** The development of 'smart infrastructure' is an important strand of work for any smart city. This is about ensuring that capital investments are future-proofed for new sensor and data technologies. Many building, open space and civil engineering projects now seek to embed low-cost sensor and data gathering technologies into their design in order to support better integrated whole-life management of infrastructure. This is often developed at a 'smart district' level initially before being deployed across an entire city.

- As initial pilots for this concept, the Smart Belfast team are proposing to work with colleagues from City Centre Regeneration, City and Neighbourhood Services, and the

Planning & Projects department to scope a number of opportunities in the city.

- These pilots would explore how smart city approaches could be incorporated into the design of projects to support successful outcomes. The learning from this pilot would then be transferable to future projects. There are a number large multi-national companies interested in the idea of a Smart Belfast district and the team will engage with them on potential co-investment opportunities.

3.4 **Update on the current Smart Belfast programme 2017/2018**

Alongside planning for the next financial year, the programme has a number of current and emerging opportunities:

3.5 *Smart Belfast Collaborative Challenge Fund*

Sixty-eight SMEs have submitted seventeen scoping proposals to the Smart Belfast Challenge Fund. Up to £25,000 will be available from Invest NI to support up to eight of these proposals which seek to explore innovation in tourism, public transport, active living, circular economy and managing the public estate. Successful SMEs will be notified by end November and their projects will commence as soon as they have signed contracts with Invest NI. Council officers will work with companies to understand and support the development of each proposal during an initial 6 to 9 months scoping phase. At the end of this phase, proposals which demonstrate strong business development propositions can apply for up to a further £170,000 from Invest NI. A future SPR report will provide information on the successful challenge proposals.

3.6 *'Internet of Things' network (LPWAN)*

Digital Catapult UK has now confirmed that the £100,000 Northern Ireland consortium bid to the Things Connected competition has been successful. The consortium, made up of Smart Belfast, Ulster University, Invest NI, Tourism NI and a number of other NI local councils, will provide a regional free-to-use LPWAN network. (This is a state-of-the-art wireless network that can control a vast range of low-cost sensors and smart devices. Such networks are an important building block for the Internet of Things - a recognised future growth area for the digital and manufacturing sectors and for the future smart management urban infrastructure.)

3.7 The Catapult will fund the deployment of the network by February 2018. Partners, including Belfast City Council and Tourism NI, have agreed to contribute to a 'Things Connected' Challenge programme which would provide competition funding to local SMEs and communities to exploit the network to tackle local and regional challenges and to improve

public sector services. (For example, such networks have been used elsewhere for such things as: asset tracking, fleet management, tracking tourist and shoppers' behaviours, interactive signage, building management, commuter and freight transport analysis, etc.)

- 3.8 The Smart Belfast team will work with private and public sector and including colleagues from across Council to determine a series of challenge and use-cases for which SMEs could use the network to develop solutions. Once agreed a draft challenge programme will be presented to Members.

Immersive Tech hub at Bel Tel

- 3.9 Following approval at the September SPR Committee, work is now underway to complete the fit-out of the Immersive Tech hub at the Bel Tel building. Once complete the Digital Catapult NI team will move into the hub as part of a wider plan to create a collaborative working environment that will also act as a showcase for cutting edge technologies developed in the city. The hub will also receive £70,000 of immersive tech equipment from Digital Catapult UK while the Department for the Economy are funding the appointment a full time hub and programme manager. The Lord Mayor will officially open the new hub on 28 November, the launch event will also be attended by Professor Sir Mark Walport, the Chief Executive Designate of UK Research and Innovation (UKRI).

- 3.10 The Smart Belfast team are now working with the Department for the Economy, the Council's own Economic Development Unit and the Digital Catapult to develop joint programmes of work on immersive technology. The first of these will be a £25,000 eight-week immersive technology challenge to encourage local SMEs to develop Virtual Reality and Augmented Reality proto-types to demonstrate the value of the technology to tourism, culture and arts in the city. This challenge is currently in development with our Tourism Unit and due to go live in November. It is expected that successful proto-types from the challenge will be used at SXSW in Austin in March 2018.

TM Forum

- 3.11 Belfast has been invited by TM Forum to become a co-signatory to their 'City as a Platform' manifesto that sets out ten symbolic principles for private and public sectors to adopt when deploying digital city platforms. Other signatories include 40 cities, government bodies, telecoms operators, technology firms and associations. (These include Dublin, Chicago, Leeds, Liverpool, Medellin, and the Future Cities Catapult.)

3.12	<p>The principles are aligned with the ambitions of the Smart Belfast framework and Members are asked to agree that Belfast sign the manifesto (see https://www.tmforum.org/smart-city-forum/city-platform-manifesto/)</p>
3.13	<p>As part of Belfast's membership of the Forum, the city is entitled to consultancy support from a number of international platform partners as part of the Forum's 'Catalyst' programme. The Smart Belfast team have begun engaging with TM Forum's global lead, Carl Piva, on this, with initial suggestions that the focus might be on Belfast's future smart infrastructure requirements. A draft proposal will be brought to Members in early 2018.</p>
3.14	<p><i>Irish Cities SBRI challenge</i></p> <p>Through the All Ireland Smart Cities Forum, and working with the NI Department for Economy and Enterprise Ireland, the team are developing the content for a joint all-island SBRI (Small Business Research Initiative) challenge fund. This will provide pre-commercial procurement R&D funding to innovative SMEs to address challenges common to cities across the island.</p>
3.15	<p>Following a workshop on 18 October, Dublin, Derry & Strabane, Cork, Limerick and Belfast all expressed interest in funding such a challenge. Enterprise Ireland have informally indicated they would provide support funding with the possibility of €200,000 for an SBRI challenge addressing issues of common concern for three to four cities.</p>
3.16	<p>The process of identifying common challenge areas with other cities is underway and cities have been requested to make a financial contribution. Smart Dublin is planning to invest €200,000 and Members are asked to agree in principle that Belfast City Council would provide £30,000 to a joint programme. Once agreed with the other cities, proposals for the programme will be presented to Members for consideration.</p>
3.17	<p><i>British Embassy Smart City Trade Mission</i></p> <p>The Department for International Trade's unit in the British Embassy in Dublin are co-ordinating a UK trade mission for London Smart Cities companies to showcase their products and services at the Mansion House in Dublin on 30 November.</p>
3.18	<p>The Smart Belfast Portfolio manager has been asked to present on the Smart Belfast framework, an outline of the SBRI process and take part in a panel discussion. A Belfast SME has also been asked to take part in the event. Travel and accommodation expenses will be covered by DIT. Members are asked to agree to Council participation in the event.</p>

3.21	<p><u>Financial & Resource Implications</u></p> <p>1. Establish Scalable city Data Platform to support SMEs and range of projects underway Including independent assurance on Data Protection, Privacy and Security aspects. £95,000</p> <p>2. Integrated Smart Belfast Challenge fund £195,000</p> <ul style="list-style-type: none"> • LPWAN city and regional challenges • 5G trails and testbeds • Full Fibre use cases • All-Ireland SBRI challenge programme • Immersive tech challenge programme • 'In-house' challenge fund for innovative service re-design • SBRI competition for Rates Forecasting • Competition programme for Immersive Tech Hub • Catalyst for change programme with TM Forum <p>3. Promoting Smart Belfast and Engagement tools/programme for collaborative working with Public Sector SMEs and academia £30,000</p> <p>4. Scoping exercise for Smart District(s) £30,000</p> <p>5. Commission and Deploy Rates Maximisation product £40,000</p> <p>6. Further development of the Growth Mapper – infrastructure tool £10,000</p> <p>7. University programme to support a data scientist to work with the team £ 5,000</p> <p>8. Commission Belfast Digital Strategy £50,000</p> <p>Proposed budget for 2018/2019 £455,000</p> <p>Through collaborative working the programme will leverage in funding from Enterprise Ireland and Invest NI as well as income from the deployment from the rates maximisation project in the region of £400,000 together with a high level of in-kind support.</p>
3.22	

	<p><u>Equality or Good Relations Implications</u></p> <p>Equality and good relations implications will be taken into consideration and it is proposed that we will take this through equality screening; however, it is anticipated that any collaborative efforts should have a positive effect on section 75 groups.</p>
4.0	Appendices
	None