



**City of Kingston
Report to Council
Report Number 18-102**

To:	Mayor and Members of Council
From:	Gerard Hunt, Chief Administrative Officer
Resource Staff:	Craig Desjardins, Director, Office of Strategy, Innovation & Partnerships
Date of Meeting:	March 20, 2018
Subject:	Smart City Challenge Fund Application

Executive Summary:

The federal government announced their priorities around innovation in 2016. As part of the program, the federal government has now announced grant funding available to support smart city innovation solutions. The Smart Cities Challenge Fund is a Canada-wide competition open to municipalities, regional governments and Indigenous communities of all sizes. Led by Infrastructure Canada, the competition encourages communities to adopt a smart city approach to improve the lives of their residents through innovation, data and connected technology.

There are three prize categories for competition submissions:

- One prize of up to \$50M - open to all communities, regardless of population
- Two prizes of up to \$10M - open to communities with populations < 500,000
- One prize of up to \$5M open to all communities with populations < 30,000

A community, or a group of communities, can only submit one application. The Smart Cities Challenge application must include a detailed and comprehensive overview of the proposal. Applications are due by April 24, 2018.

In the Smart City Update Report (18-012) dated December 19, 2017, Council received details of the progress of City and Utilities Kingston (UK) Smart City initiatives. In addition to the significant list of accomplishments in 2017 and plans for the upcoming year, staff provided an overview of a strategy to advance “Smart Kingston”. Central to the strategic priority of advancing Kingston as a smart, livable, 21st century city is the foundational goal of making the lives of residents better through innovation and technology.

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The report also identified Infrastructure Canada's Smart City Challenge Fund as an opportunity to help accelerate our strategy implementation by advancing Smart Kingston engagement and partnership development. Public sector partners including Queen's University and St. Lawrence College and several private sector technology firms have begun to discuss strategy and opportunities that take advantage of the community assets of Kingston.

Recommendation:

That Council approve the submission of a grant application to the Smart City Challenge Fund in the \$10M category; and

That the Chief Administrative Officer or designate be delegated the authority to sign the application for the Smart City Challenge Fund.

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Authorizing Signatures:

ORIGINAL SIGNED BY CHIEF ADMINISTRATIVE OFFICER

Gerard Hunt, Chief Administrative Officer

Consultation with the following Members of the Corporate Management Team:

Lanie Hurdle, Commissioner, Community Services	Not required
Jim Keech, President & CEO, Utilities Kingston	Not required
Desirée Kennedy, Chief Financial Officer & City Treasurer	Not required
Denis Leger, Commissioner, Corporate & Emergency Services	Not required

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Options/Discussion:

With significant competition for the Smart City Challenge Fund anticipated, any Smart City Challenge application developed must complement the Smart Kingston strategy. Staff has developed an engagement and partnership development plan for the public and businesses and has spent the past several months researching best practices in smart city technologies around the world. A staff working group has been created to complete the application.

Applications are to be submitted by April 24, 2018 to Infrastructure Canada, who is administering the program. The application process includes two stages with finalists (shortlist) being selected in the third quarter of 2018. Communities that make it to the finalist (shortlist) stage will then be provided with a \$250,000 grant to develop their final proposals. Fully implementable final proposals will be due in the first quarter of 2019 and will outline design, planning, and project management components of their plans. An independent jury will select winners by the second quarter of 2019. Depending on the nature and scope of the final proposal, the implementation phase is expected to span between 2-5 years. Grant payments will be made to winning communities once projects attain key milestones that demonstrate progress toward outcomes.

The Application Submission

The Smart Cities Challenge (the Challenge) encourages municipalities to adopt a Smart City approach to find innovative solutions that:

- improve the quality of life for residents
- address the community's most pressing challenges
- use data and connected technologies to achieve real and positive outcomes
- requires a consultative process, including public engagement with residents about the most vital issues their community faces
- fosters partnership with businesses, academia and civic organizations to design innovative and meaningful solutions with maximum impact

The aim is to achieve meaningful outcomes for residents by leveraging the fundamental benefits offered by data and connected technology including:

- **Openness** - Open and accessible data makes decision-making processes transparent, empowers citizens and strengthens the relationship with public organizations
- **Integration** - Data and connected technology empower communities to break down silos that exist within public organizations
- **Transferability** - Tools and technological approaches that are open-source, transparent and standardized can be used by communities across the country, no matter their size or capacity
- **Collaboration** - Connected technology enables communities to bring traditional and non-traditional partners together to collaborate

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Staff is currently exploring technologies such as blockchain, artificial intelligence & machine learning and data analytics that may be developed into pilot projects to achieve the outcomes described above.

The Challenge requires that outcomes of smart city applications be measurable and achievable and consider factors including:

- **Empowering Communities to Innovate** - Communities should take risks and think big, identify significant, pressing, and perceived “un-solvable” problems, and achieve outcomes through data and connected technology.
- **Forging New Partnerships and Networks** - Communities will need to undertake meaningful engagement with residents and forge relationships with new and non-traditional partners.
- **Spreading the Benefits to all Canadians** - Smart cities approaches should not only benefit a single community; they should be scalable and able to be replicated across Canada.

As part of the application, each community must develop a one-sentence Challenge Statement that defines the outcome it aims to achieve by implementing its smart cities proposal. The Challenge Statement must be measurable, ambitious and achievable through the proposed use of data and connected technology. Communities are encouraged to engage the public in determining what the Challenge Statement and overall submission will be.

Public Engagement & Partnership Development

As referenced in the Smart City Update Report (18-012), staff is developing a communication and engagement plan for the Smart Kingston strategy that will also support engagement for the Smart City Challenge Fund application.

Community engagement efforts will include:

- Empathy and journey mapping of residents to determine challenges and pain points in people’s lives.
- Use of design thinking methodologies to identify problems in the community and find desirable solutions for residents. Design thinking uses logic, imagination, intuition and systemic reasoning to explore what could be and to create desired outcomes.
- Use of the City’s new online engagement platform to share information with the community and then seek input through surveys.
- Developing events that support public engagement in innovation and smart city activities such as the recent Mayor’s Innovation Challenge.
- Hosting open house “technology talk” events that provide residents with an opportunity to share challenges and ideas, express concerns and hear updates from City staff and community partners on smart city technology
- Developing communication and marketing material that supports a variety of markets and resident populations. Radio, print and digital media tools will be used where appropriate.

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Particular attention will be given to ensure that all segments of the population are given a chance to share their input. Students, rural residents, seniors and youth all have voices that need to be heard.

The engagement strategy will include Kingston staff to ensure that they understand the vital role that they play in helping to realize the benefits of a Smart Kingston and share ideas for innovation in municipal services.

Work continues to build a team of community partners that will contribute to the development and eventual implementation of smart city strategy and projects. A number of faculties and organizations at Queen's University and St. Lawrence College across several disciplines including healthcare, engineering, public policy, business and computer science, are already contributing to both the Smart Kingston and Smart City Challenge Fund application. The City will continue to add interested people, organizations including healthcare and businesses to this effort.

Alignment with Strategic Priorities

The Smart City Challenge application must align with both our Smart Kingston strategy and strategic priorities. The Smart City strategy includes:

- **Overall business strategy**

Council's strategic priorities of smart economy, greening the city, livable community and open government directly relate to Smart City efforts with opportunities to build on a number of projects already identified by Council. In addition, greater customer focus, organizational effectiveness and efficiency and improved engagement are major drivers of smart technology.

- **Capital budget and infrastructure investment strategy**

Investments in innovative, smart infrastructure and facilities, platforms and applications will continue to support City operations whether specific to technology (hardware and software i.e. ESRI's ARC-GIS platform or systems controls for facilities) or in the incorporation of new processes or methods i.e. new formulations of asphalt, changes in the way we process bio-solids or how land use and development are supported through the Development and Services Hub (DASH) system.

- **Communications, branding and engagement strategy**

Building City and community branding and communications both within Kingston and to the rest of the world will involve a significant reliance on technological platforms to inform and sell our community to the region, province, country and the world. The significant success of Kingston in attracting direct foreign investment is an example of the potential outcome of global/international communications and branding plan.

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- **Economic strategy**

The large concentration of public sector organizations in Kingston (education, healthcare, military, corrections and general administration) is an important component of our economy and can be part of our competitive advantage as a community. As the public sector is increasingly disrupted by new technological advances, Kingston can be the “testbed” for innovation in the public sector that is then scaled across the country. There is great potential to see new private sector technology firms flourish in the community with so many government organizations needing technology solutions. Small start-up firms that capitalize on this close access to public sector customers will drive employment and wealth creation.

- **Climate Change and GHG Reduction strategy**

Greening the city requires the coordination of efforts to address climate change through greenhouse gas (GHG) emission reduction, waste reduction, recycling and active transportation. The introduction of an Electric Vehicle Strategy and use of innovative building technologies will help reduce GHG emissions and make our community a great place to live.

- **Workforce development and talent recruitment & development strategies**

To ensure that organizations have the human resources needed to compete and thrive in a global economy requires a coordinated and targeted strategy. Defining what it means to work in Kingston, tapping into talent, creating pathways to employment and careers and creating more diverse and inclusive workplaces makes our community better able to grow and prosper.

- **Kingston Fibre Network Strategy**

Building on Kingston’s vision to facilitate economic development, Kingston is committed to innovation, prosperity and service excellence through infrastructure and reinvesting in our community’s future. The fibre optic infrastructure owned by Utilities Kingston provides an incredible advantage to Kingston to further support smart city development and investment attraction through greater connectivity opportunities.

In conclusion, as part of the final submission due for April 24, 2018, and as part of the elements of the Smart City Challenge Statement it will be important to demonstrate how smart city innovation, tools and technology can support inter-connectedness of people with city services and community services more broadly. The goal is to leverage data and technology to enable inclusivity through access to information and services that enable improvements in the quality of life of people. Not just for services offered by the municipal government, but those of healthcare, learning and life assistance that enable communities to reduce isolation and promote inclusivity. These solutions will improve the lives of people throughout the city, and will apply across the region and in communities across the country.

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Existing Policy/By-Law:

Kingston's Strategic Plan 2015-2018

Notice Provisions:

None.

Accessibility Considerations:

None.

Financial Considerations:

Information related to the grant program is included in the Options/Discussion section of this report. Should Kingston's application be shortlisted, additional details will be developed with respect to elements and costs associated with the application supported by the grant. The work of staff to develop the application for Stage 1 can be accommodated within the approved 2018 budget.

Contacts:

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Other City of Kingston Staff Consulted:

Jeff Bumstead, Chief Information Officer

Kevin McCauley, Director, Measurement & Communication, Utilities Kingston

Exhibits Attached:

None.