

HALIFAX

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Item No. 4
Halifax Regional Council
March 5, 2019

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY:

Original Signed by 

Jane Fraser, Director, Finance and Asset Management

Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: January 30, 2019

SUBJECT: Smart Cities Challenge Update

INFORMATION REPORT

ORIGIN

Staff-initiated report.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, S.N.S. 2008, c. 39

2. The purpose of this Act is to

- ...
- (c) recognize that the functions of the Municipality are to
- (i) provide good government,
 - (ii) provide services, facilities and other things that, in the opinion of the Council, are necessary or desirable for all or part of the Municipality, and
 - (iii) develop and maintain safe and viable communities.

74(1) The Municipality may agree with... the Government of... Canada or a department or agency of...them... to provide or administer municipal or village services

BACKGROUND / DISCUSSION

HRM was not selected as a finalist in the first round of Smart Cities Challenge funding. This report provides a summary of Smart Cities Challenge developments, as well as the related work HRM is doing nonetheless.

Smart Cities Challenge

Application Process

The Smart Cities Challenge is a \$300M, 11-year program that was announced in the 2017 federal budget. Managed by Infrastructure Canada, the program is a merit-based competition among communities across Canada to develop and implement plans that leverage technology to meet their challenges. This pan-Canadian competition is open to communities of all sizes, including municipalities, regional governments and Indigenous communities (First Nations, Métis and Inuit).

The first round of the Smart Cities Challenge was launched on November 23, 2017, with the following prizes to be awarded in 2019:

- one prize of up to \$50 million open to all communities, regardless of population;
- two prizes of up to \$10 million open to all communities with populations under 500,000 people; and,
- one prize of up to \$5 million open to all communities with populations under 30,000 people.

Indigenous communities are eligible to compete for all the prizes in the current competition. Infrastructure Canada indicated that the competition will favour transformative projects that address significant social issues and include substantial buy-in from the private sector and the community at large.

In November 2017, Infrastructure Canada announced that applications for the first round of Smart Cities Challenge funding were due on April 24, 2018.

On January 22, 2018, based on a [staff report](#), Regional Council directed the CAO to partner with the Halifax Partnership (the Partnership) to develop a Smart Cities Challenge submission based on poverty reduction, on behalf of HRM, in partnership with the United Way and in cooperation with the Mayor's Office. Regional Council also allocated up to \$50,000 from ICT's consultation budget (A721-6399) to fund the project.

The Partnership and HRM struck a working group that included staff from HRM, the Partnership, the Mayor's Office, and the marketing and communications firm engaged by the Partnership, NATIONAL.

An Advisory Committee of post-secondary, non-profit, government, and innovation representatives was also established. It recommended that the application focus on food security, one of the seven focus areas contained in the report [Building Poverty Solutions: Ideas for Action](#) co-developed by HRM and the United Way. The report states that food insecurity is one of the most pressing social issues in the municipality.

Engagement on the application's development was extensive. Nineteen public engagement sessions were held throughout the municipality, a half-day session with technology vendors was held, and 2,339 hard-copy and online surveys were collected.

HRM's application for the \$50 million prize, accessible at www.smartcitieshfx.ca, was submitted to Infrastructure Canada with Regional Council's approval (the related in camera report discussed at the April 10, 2018, meeting of Council was made public on April 24, 2018, the day after the competition closed).

HRM's application included the following challenge statement: "Despite record growth, Halifax is one of the most food insecure cities in Canada, so we will improve access to nutritious, affordable food for every person, making this a more equitable place to live, and our community the most food secure in the country."

The application outlined activities under six thematic areas to make Halifax the most food secure city in Canada:

- 1. Creating greater access to services and resources through identity management.** This included: creating a single Virtual Identity for every individual in need, regardless if they have a fixed address; and, developing a Smart Card that would allow residents to access services provided by HRM and its partners.
- 2. Closing the digital divide.** Residents without access to the Internet are at a greater risk of living in poverty and being socially isolated and excluded. Proposed activities to close the digital divide included: maximizing available connective technologies such as expanded public WiFi and small cell technology (to buses and shared public spaces) to connect more residents to the world; and, increasing the availability of digital infrastructure and tools in public spaces like municipal kiosks, Halifax's public libraries and community centres.
- 3. Improving digital engagement with residents.** To better serve residents, HRM and its partners proposed developing Geographic Information Systems to map routes and physical locations of residents in need and available services and programs (e.g. food suppliers, grocers, service providers, etc.). They also proposed implementing a Customer Service Relationship Management (CRM) solution to improve residents' access to municipal services, as well as an Enterprise Content Management (ECM) solution for HRM to quickly locate and share information across systems.
- 4. Reducing the cost of non-food essential items through technology and collaboration.** Partners proposed to identify and share data, and develop data analysis tools to support cost reductions of non-food essential items. Potential projects included: working with Efficiency Nova Scotia and Nova Scotia Smart Grid program to share data and enhance programs to reduce home heating costs for those most in need; and, adding an open data component to Habitat for Humanity projects to better provide transportation, employment, and food access services to Habitat users.
- 5. Creating a community platform to connect food supply and demand.** With Smart Cities Challenge support, HRM and its partners intended to create an open, distributed transportation and supply chain management platform connecting food supply with demand. This would entail identifying vulnerable residents, food deserts, and primary and secondary food producers willing to provide food for free or at a reduced cost, and developing the technologies to plan and optimize food distribution in real time. It also included plans to expand the mobile food market supported by HRM and others.
- 6. Designing and deploying a Halifax Food Hub.** The Halifax Food Hub would support community partners by: increasing resident and community awareness of, and engagement in, Halifax's food system; streamlining access to municipal and community information, programs, and services; and, improving municipal land and building use for community gardens and food programs. It also included plans for HRM and its partners to adopt a Halifax Charter and develop a Halifax Food Strategy.

The submission highlighted that technology solutions to reduce poverty in other areas, such as transportation, housing or employment, can also contribute to residents' ability to have reliable access to affordable, nutritious, and culturally appropriate food.

On June 1, 2018, Halifax was not one of the twenty finalists announced to go to the next step of the Challenge. The Community Planning and Economic Development Standing Committee was informed of this through the [economic strategy update](#) that appeared on its November 15, 2018, agenda.

Related Work Being Undertaken by HRM

Although Halifax's Smart Cities Challenge was unsuccessful, HRM is advancing many of the initiatives proposed in the application. Technology-intensive "Smart Cities" activities are being managed by Finance and Asset Management's Information, Communication and Technology division (ICT), while those focused on food security are being advanced primarily by Planning and Development's Regional Planning division.

HRM's Broader Smart Cities Work

According to Infrastructure Canada, a smart city approach is one that delivers meaningful outcomes for community residents by using connected technology and data, and is rooted in the principles of openness, integration, transferability, and collaboration. The sharing of standardized, usable data and open-source technologies between partners is an example of all four principles at work.

In an [information report](#) that went before Regional Council in August 2017, staff outlined some of the "smart/intelligent" or "digital solutions" HRM has deployed, including field equipment and sensors with near- or real-time monitoring and control capabilities, some of which can communicate with one another. Examples include HRM's traffic signal and LED streetlights control systems¹ and Halifax Transit's Automatic Vehicle Location (AVL) and Automatic Passenger Counter (APC) technologies.²

HRM staff are developing a long-term plan to create a robust communications network capable of accommodating a range of "smart" solutions. Known as the Digital Communications Infrastructure Action Plan (DCIAP), it will enable greater two-way communication between citizens and the municipality, as well as real-time service delivery. An inventory and analysis of HRM's current technology assets, to be completed in March 2019, will inform the DCIAP.

Despite not being selected as a Smart Cities Challenge finalist, HRM continues to advance technology-based projects highlighted in the Smart Cities Challenge submission:

- **in identity management**, HRM staff are continuing discussions with the Province of NS to collaborate in the creation of a single virtual identity for all citizens, and ICT is hiring a cybersecurity expert to maintain adherence to best practices in digital security and privacy;
- **to close the digital divide**, ICT is working closely with Halifax Transit and Halifax Public Libraries to expand public wi-fi to areas to enhance citizen access to the internet, and the Halifax Partnership and the Government Relations and External Affairs unit are determining how Develop Nova Scotia's \$200-million Nova Scotia Internet Funding Trust can support the establishment of high-speed internet in underserved areas of the municipality; and,
- **to improve digital engagement with residents**, ICT is:

¹ The municipality is converting its 43,789 streetlights to LED technology and adding a central management system and supporting communication network that enables the streetlights to be remotely monitored and controlled. The conversion project is anticipated to provide operational savings from energy efficiency gains and lower maintenance costs, as well as opportunities for improved public safety and service delivery.

² While still in the early stages, Transit's objective is to have their data displayed in electronic dashboards and reports that will enable management to analyze the right information and make smart decisions on the services they are delivering. One example of this would be analysing ridership and bus routes, to help determine route optimization.

- developing an Enterprise Content Management strategy that will support the capture, storage, and delivery of information for citizens, businesses, and staff;
- implementing a Customer Relationship Management roadmap to improve residents' access to municipal services, information, and engagement through various service channels; and,
- implementing a Mass Notification System to push notifications to subscribing residents.

HRM and Halifax Partnership staff are also exploring ways in which HRM's Smart Cities work can advance the Partnership's creation and marketing of the Halifax Innovation District.³

HRM's Work Related to Food Security

HRM has undertaken several activities to support food security which now falls under Regional Council's Healthy Communities -- Community Wellbeing Council Priority Outcome Area. In 2008, for example, HRM established the Community Garden Program to enable small-scale gardening by non-profit societies on HRM-owned lands. In 2013, HRM became a member of the Halifax Food Policy Alliance whose vision is a Halifax where "no one is hungry and everyone has nutritious food that they enjoy, for generations to come, sustained by local producers." This partnership has resulted in a better understanding of the local context, raised awareness of the issues, and increased collaborative effort between institutions, sectors and communities.

In 2016, HRM partnered with Nova Scotia Health Authority, Ecology Action Centre and other community partners to pilot the Mobile Food Market (MFM), using a Halifax Transit bus to deliver affordable produce to communities at risk for food insecurity. Since the original pilots the MFM has grown from serving five sites to 14 sites in seven communities. In July 2018, Regional Council demonstrated a commitment to improving community access to healthy and affordable food by extending its support for the Mobile Food Market through 2018/19 to 2020/21 and to considering future support in 2021. The extension of municipal support furthers thematic area 5 of the bid ("Creating a community platform to connect food supply and demand"), which committed to expanding the mobile food market.

HRM policies and strategies have also advanced food security in the municipality. The 2014 Regional Plan recognizes the importance of preserving agricultural land and stipulates that food security must be considered when designing communities which has resulted in increased opportunities for urban agriculture in Centre Plan Package A and proposed for Package B. The 2017 Public Safety Strategy highlights food insecurity as a risk factor in the provision of safe and secure environments, while the Building Poverty Solutions report includes food security as one of the seven focus areas for change. Furthermore, the 2018 Halifax Green Network Plan recognizes the importance of preserving open space for food production by protecting valued agricultural land; encouraging small-scale agriculture; and, considering food production when designing open spaces.

A fuller listing of HRM's food security-related activities are listed as an appendix in the January 2018 [staff information report](#) responding to the Building Poverty Solutions: Ideas for Action co-developed by HRM and the United Way.

In 2019, Planning and Development's Regional Planning division intends to present a staff report regarding the May 2017 Community Planning and Economic Development Standing Committee motion to: clarify HRM's role in the promotion of food security; formalize the partnership with the Halifax Food Policy Alliance; explore development of a Food Charter and Food Strategy; locate communities vulnerable to, and assets that support, food security; and, scan municipal barriers, opportunities and enablers. The report will be brought to Regional Council in 2019 and will recommend ways to advance

³ The Partnership is leading the creation and marketing of an innovation district in Halifax in collaboration with Dalhousie University and other post-secondary partners, the private sector, and three levels of government. This initiative is part of the Province of Nova Scotia's \$8.5 million investment in entrepreneurship and innovation in the province. A Halifax Innovation District Master Plan is being developed.

some of the specific activities outlined in the Smart Cities submission. This includes the development of public platforms to highlight municipal food work and share resources, as well as data projects to better understand community dynamics and assets that support food security.

Next Steps

HRM staff will seek Regional Council direction regarding the potential submission of a Halifax application for the second round of Smart Cities funding. Infrastructure Canada has not announced when the second round will take place.

FINANCIAL IMPLICATIONS

There are no financial implications.

COMMUNITY ENGAGEMENT

While Halifax's Smart Cities Challenge submission was based on extensive community engagement, there was no community engagement in the development of this report.

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

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