



**City of Kingston
Report to Council
Report Number 18-126**

To:	Mayor & Council
From:	Gerard Hunt, Chief Administrative Officer
Resource Staff:	Craig Desjardins, Director, Office of Strategy, Innovation & Partnerships
Date of Meeting:	May 1, 2018
Subject:	Eastern Ontario Cell Gap and Capacity Expansion Project

Executive Summary:

The Eastern Ontario Mayors' Caucus (EOMC) and the Eastern Ontario Wardens' Caucus (EOWC) have established a common objective of advancing Eastern Ontario as a region for economic growth and opportunity. The development of the Eastern Ontario Economic Development Strategy has set the strategic direction of focus for this objective with the Eastern Ontario Leadership Council (EOLC) and its working groups advancing the implementation of the priorities of the strategy.

The Eastern Ontario broadband project managed by the Eastern Ontario Regional Network (EORN) and completed in fall 2014 is an example of the region investing in technological infrastructure to enable the region to be positioned for overall economic growth and to be prepared for the changing landscape of technology, business and people needs in a constantly changing world. The EORN project was funded jointly by the federal and provincial governments each of whom contributed \$55M, Eastern Ontario Wardens' Caucus (EOWC) and six of the EOMC municipalities contributed a total of \$10M, including Kingston's contribution of \$509K. Private sector partners provided the remaining funding for the \$170M project. Staying ahead of technological change and being positioned to be seen as a leader in Canada and the world will ensure our region is an attractive place for investment, opportunity and quality of life for years to come.

The Cell Gap and Capacity Expansion Project is a new regional project on the cutting edge of technology to support the regional vision and objective. Part of the project is a requirement to fix the "holes" in cell coverage in order to be able to then address the "capacity" challenges that

May 1, 2018

Page 2 of 7

come about when more and more people in concentrated areas vie for access to the cellular network.

Today people need, want and expect three kinds of fast, high speed connectivity--**fixed** for their home or work - typically fiber; **mobile** voice and data wherever they are to access information and apps via cell network; and then **Wi-Fi** for offloading data consumption from their mobile plans. Ubiquitous mobile/cell coverage and ubiquitous Wi-Fi coverage go hand in hand and complement each other for access to information and data. In areas outside the downtown core where the community does not have public Wi-Fi, sufficient cell capacity is the necessary alternative. The initiative to close cell gaps and expand capacity in Kingston is an important step and opportunity to achieve the Council priority to "Create a Smart Economy".

This report provides a summary of the project, the solutions to the challenges throughout the region, the financial business model components and return on investment and the next steps as they are known today.

At the Council meeting on May 1, 2018, David Fell, Chief Executive Officer of the Eastern Ontario Regional Network (EORN) will provide a briefing to Council on the status of upper level government funding, describing a methodology for cost sharing among the municipalities of the region and engaging in a discussion on next steps/timing for the City of Kingston.

The Board of Eastern Ontario Regional Network (EORN) must be commended for their vision, their tireless work to bring technology to strengthen the region's competitive advantage and for the energy to move this project forward. This work enables cities like Kingston to "piggy-back" on the investment to enhance critical technological infrastructure to support quality of life and promote economic development.

At the April 4, 2018 meeting of the Eastern Ontario Mayors' Caucus, unanimous approval was received to move forward with the Eastern Ontario Cell Gap and Capacity Expansion Project and that the request for funding be presented to individual Councils for a decision on funding.

This report seeks Kingston City Council's approval for Kingston's share over a four-year period, subject to specific conditions as noted in the recommendation.

Recommendation:

That the City of Kingston's funding share in the amount of up to \$954,783 be approved, subject to the following:

- a) Approval of funding from the Provincial and Federal governments of a minimum of \$71M each, and
- b) Funding flows to Eastern Ontario Regional Network (EORN) over a four year period to commence after final project approval and not commence before 2019, and
- c) Funding to be provided from the Working Fund Reserve.

May 1, 2018

Page 3 of 7

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	√
Desirée Kennedy, Chief Financial Officer & City Treasurer	√
Denis Leger, Commissioner, Corporate & Emergency Services	Not required

May 1, 2018

Page 4 of 7

Options/Discussion:**Overview of the project:**

For Eastern Ontario to prosper and grow, people need high-speed internet access at home, work and on the road. They expect to access online content anywhere, any time and on any device. In order to participate in this universally connected world, Eastern Ontario needs a robust network of both fixed and mobile broadband. Today nearly one-sixth of Eastern Ontario is in a cellular “dead zone” – meaning there are homes, businesses and major roadways with no cell service at all, and as equally important, 40% of the region does not have enough capacity to support rapidly growing data demands or the increase load from large groups of users in one location – i.e. public events and tourism. (Even if an area were well covered, the service levels may still be inadequate due to network congestion. This congestion occurs when there are a large number of users competing for limited spectrum resources.)

To assess this situation, EORN commissioned four independent studies, including: an engineering cell gap analysis, costing study, cell market analysis and economic impact study to prove market failure. These studies looked at current services as well as forecasted growth by existing carriers. Extensive coverage and capacity gaps of mobile infrastructure operators in Eastern Ontario reflect the extent of market failures and underinvestment in networks in our region.

In response, EORN has proposed a \$213 million public-private initiative that would build on its high-capacity, fibre-optic backbone network to help close the gap in cellular services. This will keep products and services that create prosperity moving across the region, and keep Eastern Ontarians connected to the world – at home, at work and on the road.

Costing/funding:

The proposed network would cost approximately \$168M to address the coverage gap (79% of the total investment), with an additional \$35M to address the future capacity gap – most of this investment would be made in the urban centres of Eastern Ontario (minimum 17% of the total investment), and \$10M (about 5%) for EORN management costs, for a total project cost of \$213M.

Current status of discussions with upper levels of government:

The private public partnership investment structure is:

- one third funded by the Provincial Government - \$71M,
- one third funded by the Federal Government - \$71M; and
- one third funded by the private and municipal sectors - \$61M from the private sector and \$10M from the municipal sector.

The Eastern Ontario Mayors' Caucus (EOMC) of which Kingston is a member municipality and the Eastern Ontario Wardens' Caucus (EOWC) created a working group with two EOMC CAOs

May 1, 2018

Page 5 of 7

and two EOWC CAOs to develop an equitable funding formula for the municipal contributions. The proposed formula is based on three factors:

- an area contribution with 20% weight;
- a proposed 40% weighting for the population of each municipality as reported in the 2016 FIR; and
- 40% based on weighted assessment.

The application of this formula would see the EOMC member municipalities pay a total of \$2.7M or 28% of the EORN operating cost and the EOWC members would pay \$7.3M or 72% of the EORN operating cost.

The provincial government is developing a province wide broadband strategy, and in the provincial budget on March 28, 2018, the Province announced \$71M for the cell gap project. On Monday April 24, Minister Jeff Leal, Minister of Agriculture, Food and Rural Affairs in conjunction with the Ministry of Infrastructure, announced the provincial funding share at the offices of the County of Hastings. EORN also has letters of support from opposition MPP's in Eastern Ontario and have worked with the opposition to encourage and support a \$100M commitment to broadband in one of the election platforms.

EORN is also working closely with the federal government at both the political and staff level to ensure that the review and approval process is coordinated. We anticipate an announcement within the next six months and a project start sometime in 2019. Municipal contributions would likely start in 2019. As with the original EORN project a commitment from the municipal sector of the 5% (\$10M) will be required in order for the Province to commit to a contract negotiation. Municipal contribution payment schedules could either be paid as a one time, upfront payment with 5% interest paid on the declining balance over three years; or on a semi-annual installment basis without interest over a four-year period.

Benefits:

Economic analysis indicates that this project will create jobs and private sector business growth:

- Potential jobs: Over 10 years, about 3,000 full-time job equivalents.
- Potential revenues: \$420M in private sector business revenues.

This project will also support key priorities of the region's Economic Development Strategy by:

- Creating an integrated and intelligent transportation system.
- Supporting technological integration and innovation.
- Enabling workforce development & deployment

Delivering government and community services to sparsely populated regions is difficult and costly. The use of mobile apps, sensors and the Internet of things (IoT) in service delivery, payments and the sharing of vital information such as road work, weather conditions and traffic issues can vastly improve public services provided to rural residents.

May 1, 2018

Page 6 of 7

Whether friends and family live next door, across town or across the world, people depend on the internet to connect to one another via social media, as well as one-to-one communications enabled by the internet via cellphones and tablets. This project will improve this social connectivity.

Planning for the future and service provider accountability:

Mobile broadband demand is growing by leaps and bounds as more people and businesses are use devices to run apps that require greater bandwidth. According to the 2015 Communications Monitoring Report of the CRTC:

“For the first time, more Canadian households subscribe exclusively to mobile wireless services (20.4%) than to wireline (i.e., landline) telephone services (14.4%)”.

There is rapid growth in mobile broadband use and the ongoing deployment of new generations of technology such as the recent announcements surrounding a 5G corridor. As part of its governance and administrative policies, EORN goes through an open, competitive and public Request for Proposal (RFP) process which identifies the provider that is best able to meet the design requirements in the most cost-effective way. EORN then negotiates a contract which includes service level agreements (SLAs) and requires the service providers to add additional capacity into the network as usage increases and the network becomes congested over time. Contracts with private sector partners set out long-term technical and customer service requirements. EORN is charged with managing and monitoring vendor performance and ensuring that all contractual obligations are met, both during the construction phase and once the network is operational.

This project provides an opportunity to advance significantly on a Council priority established for the 2015-2018 period. The priority “Create a Smart Economy” describes enhanced connectivity in broadband and fibre access. The closing of cell gaps and capacity expansion is a necessary and strategic investment in technology to ensure we are prepared for the future, and positions Kingston to continue to enhance technological opportunities of the future, including enhanced cellular connectivity and capacity as well as 5G.

Existing Policy/By-Law:

There is no existing policy/by-law.

Notice Provisions:

There are no notice provisions required with this report.

Accessibility Considerations:

Improved accessibility and openness to all residents will be experienced should this project be approved and move forward to the implementation stage.

May 1, 2018

Page 7 of 7

Financial Considerations:

The total project cost is approximately \$213M of which local municipalities including separated towns and cities (EOMC) and counties (EOWC) across Eastern Ontario will contribute \$10M, the federal and provincial governments will each contribute \$71M and the balance from private sector partners of \$61M. The investment by municipalities provides for a 21% return on the total project cost, or a 15.2% return on the total government investment. The City of Kingston's share at \$954K can be funded from the Working Fund Reserve over four years at \$238,500 from funds currently available. The funding is recommended subject to the conditions outlined in the recommendation section of this report.

Contacts:

Gerard Hunt, Chief Administrative Officer 613-546-4291, ext. 2205

Other City of Kingston Staff Consulted:

Craig Desjardins, Director, Office of Strategy, Innovation and Partnerships

Exhibits Attached:

Not applicable.