



Backgrounder: Improving Mobile Broadband in Eastern Ontario

Enhance. Expand. Empower.

Eastern Ontario can only thrive if all residents, both urban and rural, have the tools to succeed. Today, that includes access to high-speed internet, whether at home, work or on the road.

The Canadian Radio-television and Telecommunications Commission (CRTC) has designated both mobile and fixed broadband access as a basic service for all Canadians.

But telecommunications companies alone are unable to meet rural broadband needs. There's just not enough revenue for companies to justify large capital investments to serve few customers over a large area. The result is market failure.

“... fixed and mobile wireless broadband Internet access services are catalysts for innovation and underpin a vibrant, creative, interactive world that connects Canadians across vast distances and with the rest of the world.”

Modern telecommunications services – The path forward for Canada's digital economy, CRTC, December 2016

Current Gaps and Future Demand

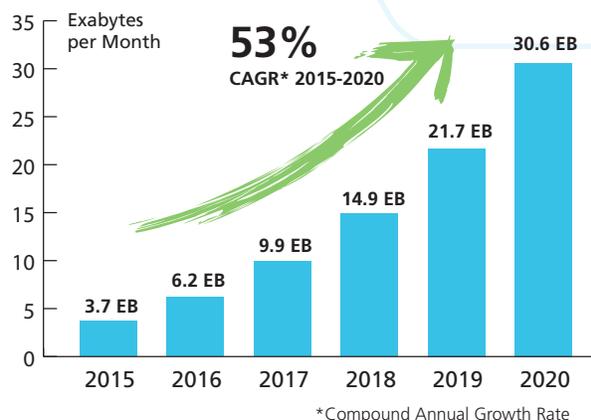
There are currently significant gaps in both the reach and capacity of mobile broadband networks across rural Eastern Ontario:

- One-quarter of the areas where there are homes, businesses or major roadways cannot access mobile data services from their major carrier of choice.

- Depending on the provider, anywhere from 28% to nearly 40% of areas where there are homes, businesses or major roads do not have capacity to handle current demand for data services. If no improvements are made, the capacity gap will grow to 65% by 2018.

The Eastern Ontario Regional Network (EORN) has developed a solution to expand mobile data services in Eastern Ontario. EORN is an innovative public-private partnership that expanded high-speed internet access across the region. The proposal builds on EORN's 5,500-kilometre fibre backhaul network, leveraging earlier investments in the region.

Worldwide, demand for mobile data is skyrocketing. By 2020, overall mobile data traffic is expected to increase eightfold over 2015. Without a creative solution, Eastern Ontario will be left behind.



Global Mobile Data Traffic, 2015 to 2020
(Source: Cisco VNI Mobile Forecast, Feb 1, 2016)

A Public-Private Solution with High Returns

EORN is proposing a public-private funding model to close cellular gaps in Eastern Ontario, creating a network that will support:

Jobs, business growth and economic development

- Potential to create more than 3,000 full-time job equivalents over 10 years.
- Potential to generate more than \$420 million in private sector business revenues.
- Supporting regional economic development by enabling innovations like intelligent transportation systems and other technology integration.

Stronger, more connected communities

- Improving public services online and making them easier to access.
- Ensuring cellular access to emergency services in remote areas and improving public safety by connecting all first responders on a dedicated network.
- Allowing people to connect with friends, families and community organizations whether they are down the street, or around the world.

Well-Researched Project Design

EORN has conducted an engineering cell gap analysis, costing study, cell market analysis and economic impact study. The design includes the planned expansion of the 700 MHz spectrum and was informed by input from cell carriers through a Request for Information.

EORN has designed a cellular expansion project that will cover more than 95% of the region where there are homes, businesses or major roads, and will increase capacity to handle growing mobile data demand.

The project takes into account that in rural areas, unlike urban centres, cellular data services may be the only internet access available. This means that an even more robust network is needed.

Supporting a Public Safety Network

EORN's design also supports the proposed Public Safety Broadband Network (PSBN). This would be a dedicated, secure network for first responders to communicate seamlessly and share information in real-time. Canada has set aside 20 MHz of 700 MHz spectrum for a national network.

Project Cost

EORN envisions a public-private project, built in phases to respond to changes in the marketplace and evolving technology. Including the PSBN option saves \$47 million as compared to building it separately.

Project	Cost Estimate
Cellular Network Improvements	\$203 million
EORN Admin Costs (5%)	\$10 million
Subtotal	\$213 million
Public Safety Broadband Network	\$82 million
EORN Admin Costs (5%)	\$4 million
Subtotal	\$86 million
Total	\$299 million

About EORN

EORN, a non-profit created by the Eastern Ontario Wardens' Caucus, helped to improve fixed broadband access to nearly 90% of Eastern Ontario through a \$260 million network funded by the federal, provincial and municipal governments and the private sector service providers. It works with governments and community organizations to improve and leverage broadband access to fuel economic development and growth across the region.