

EORN Update

City of Kawartha Lakes

June 6, 2023



EORN

EASTERN ONTARIO
REGIONAL NETWORK

Agenda

- EORN – who we are and our core values
- EORN projects past and present – overview and technology
- EORN 2023 initiatives
- Questions and contact information

Who We Are and Our Core Values

- The Eastern Ontario Regional Network (EORN) is a non-profit organization dedicated to improving rural connectivity, supporting economic growth and enhancing quality of life.
- Created by the Eastern Ontario Wardens' Caucus (EOWC) in 2010, EORN helps to create innovative public-private partnerships to address the digital divide and support a stronger future for rural eastern Ontario communities.
- Small team of 13 employees.
- Core values govern everything we do: we pursue **innovative** solutions to **regional** matters by **leveraging partnerships** with a focus on regional orientation.

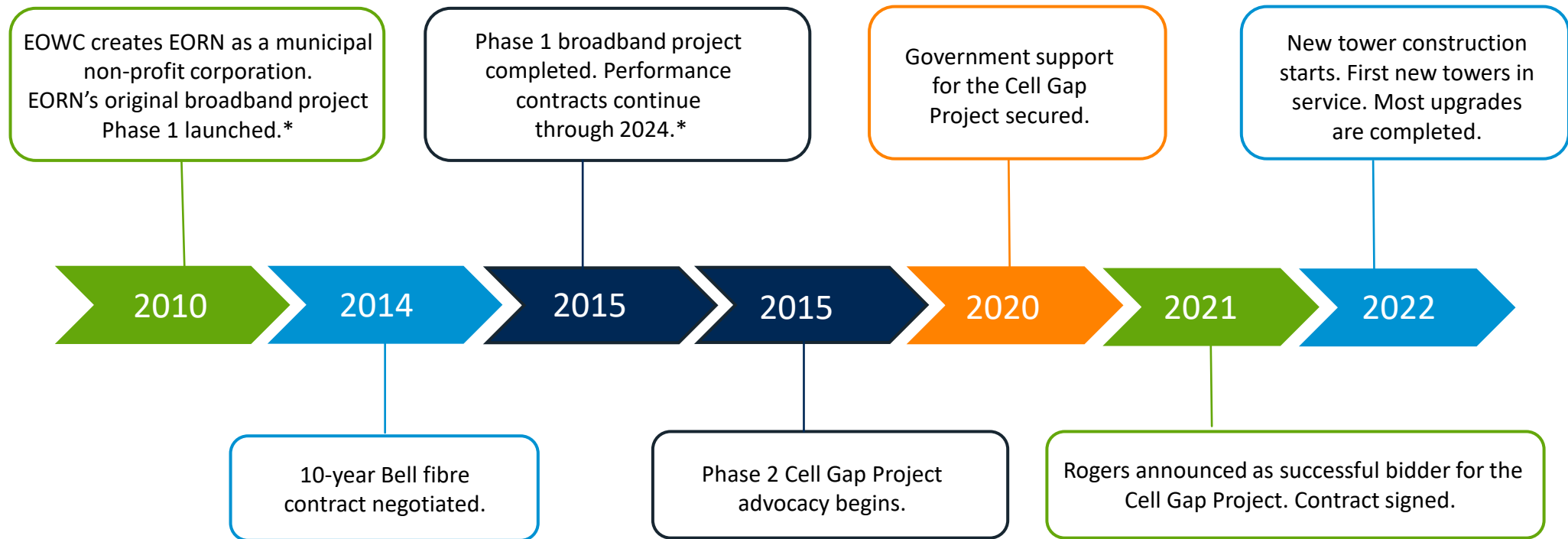
EORN Projects



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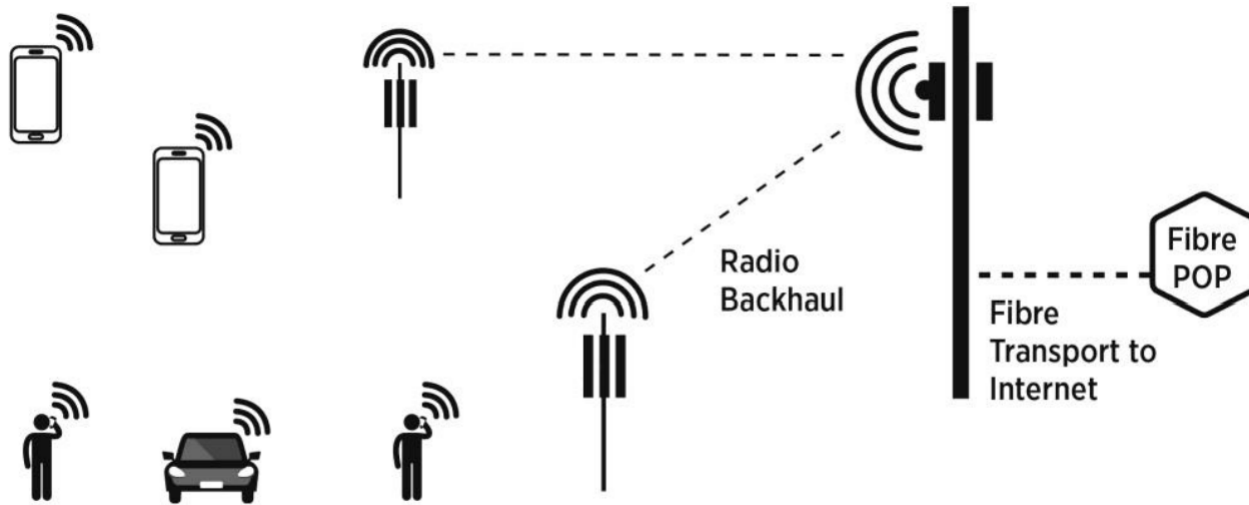
Short History of EORN Projects



*** Phase 1 highlights:**

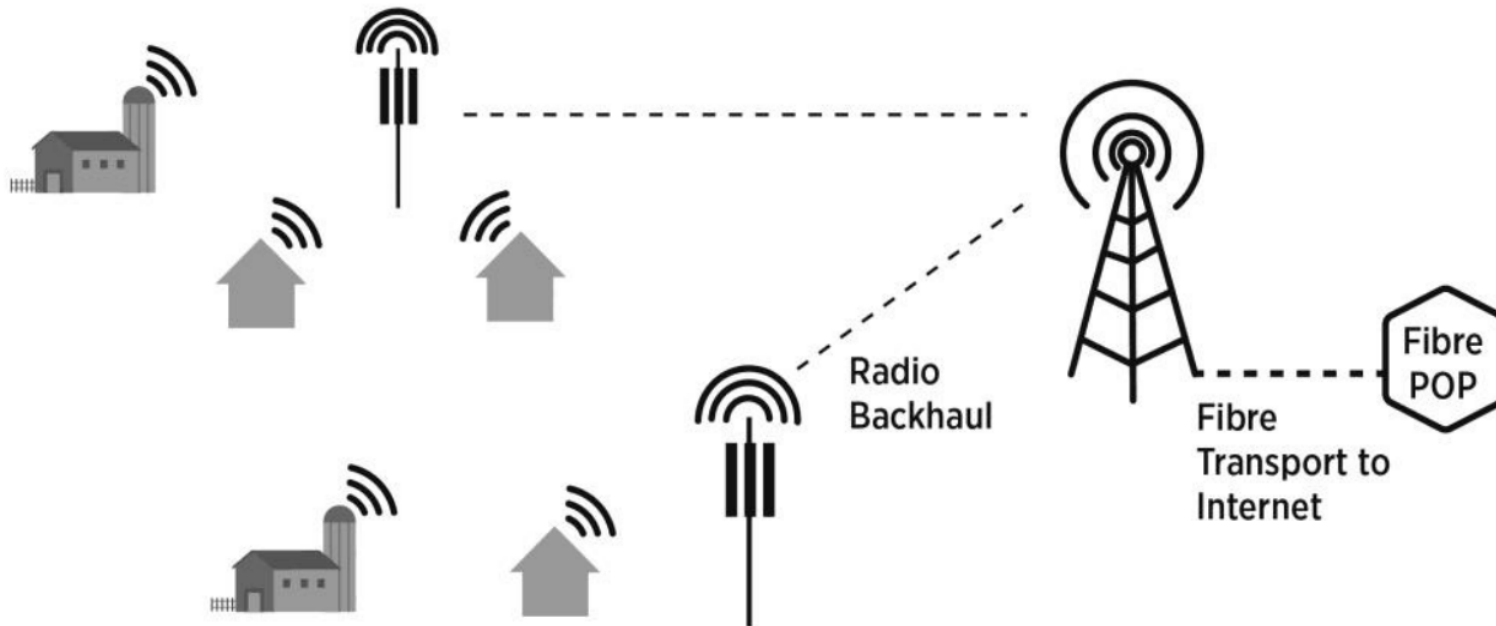
- More than 5,500 kms of new fibre placed
- 63 business parks connected to fibre
- \$175 million build with \$260 million value
- Connected four First Nations reserves

Wireless or Mobile Technology - Cellular



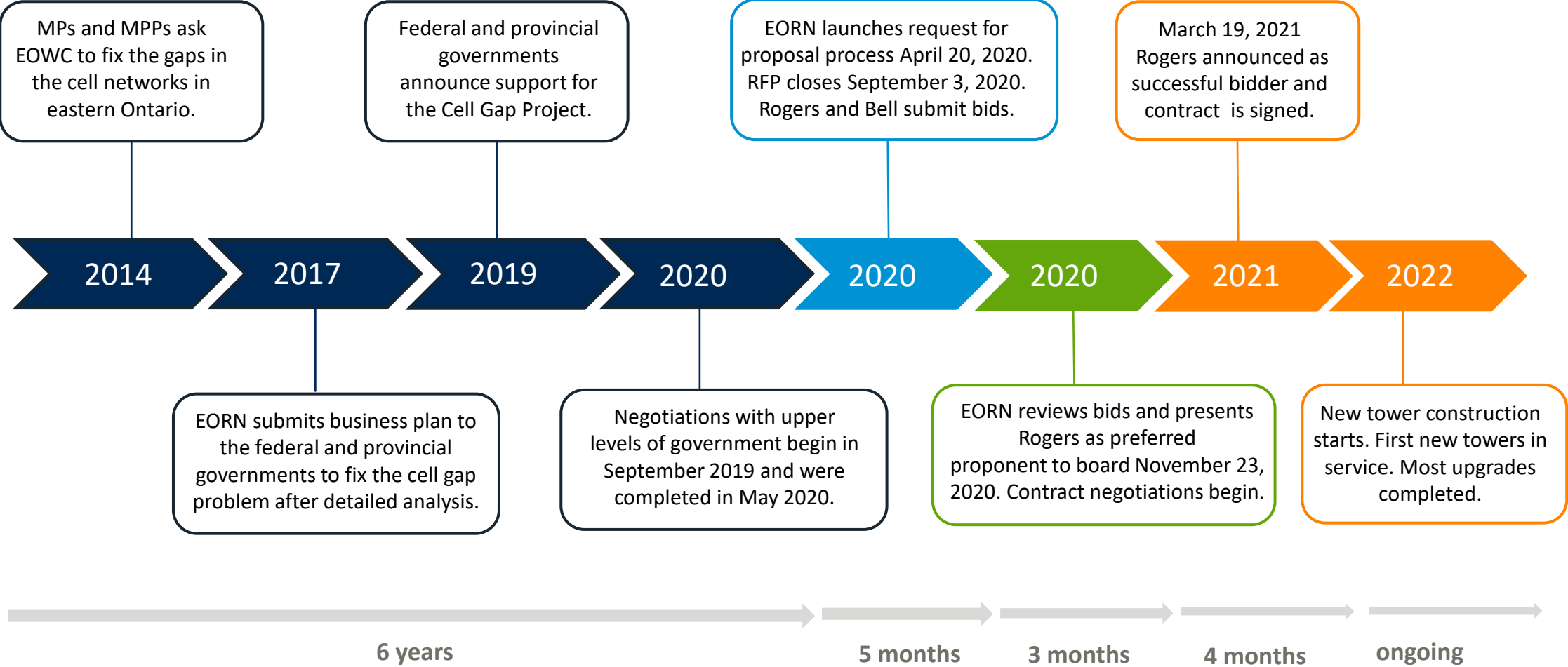
- Cell or mobile service is the ability to access voice or the internet via portable or handheld devices.
- Users can move or be mobile and maintain a call or service as long as they have coverage from their provider.
- Technologies continue to evolve in wireless and 5G equipment is now being rolled out by telecom service providers (TSPs).

Fixed Wireless Technology - Broadband

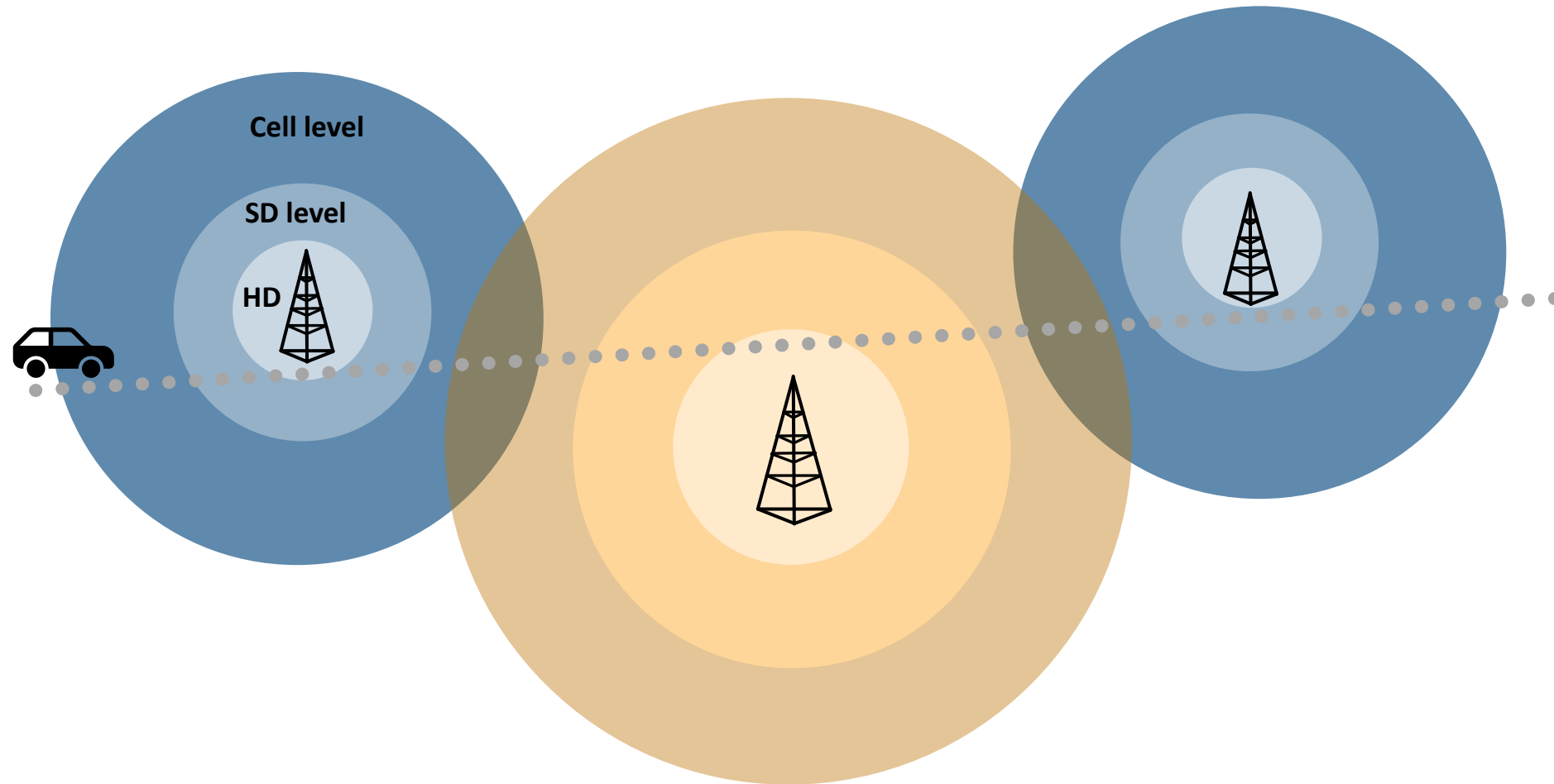


- Fixed wireless is an internet connection delivered via a radio service to a fixed location like a home.
- An antenna is mounted to the exterior of a building and connected to a modem.
- This type of technology can only be used in the location of the antenna and modem.

Phase 2 - Current Cell Gap Project Timeline



Why Adding Sites is Required



As vehicles move along a roadway, signal strength decreases the further you get away from the cell tower you are connected to. Unless there is another tower further up the road your call will drop. New towers are required to fill in the gaps to avoid dropped calls.

EORN Cell Gap Project Goals



Achieve **99% coverage** in the eastern Ontario region where people live, work and travel on major roadways so that they can make and receive cell phone calls.



Achieve **95% coverage** in the eastern Ontario region where people live, work and travel on major roadways with standard definition service level which can support email, web browsing and social media services.



Achieve **85% coverage** in the eastern Ontario region where people live, work and travel on major roadways with high-definition service level which can support video conferencing, movie streaming and other more data intensive applications.

Cell Gap Project Overview



Approximately 312 existing sites are being upgraded to support LTE phones as well as 5G.

Approximately 297 now complete.



Approximately 261 new sites are being built. 13 of the sites are in service.

Approximately 73 sites will be located on existing towers of other providers. 27 sites are now in service.



Project work expected to be complete by 2025.



Will meet or exceed project goals.

Service level agreements in place for five years to ensure capacity is maintained.

Benefits of the Project



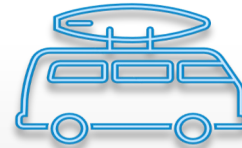
Closing coverage gaps to help you stay connected



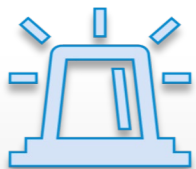
Improved municipal services – paramedics, public works, etc.



Increased capacity



Improved economic development opportunities and tourism experience



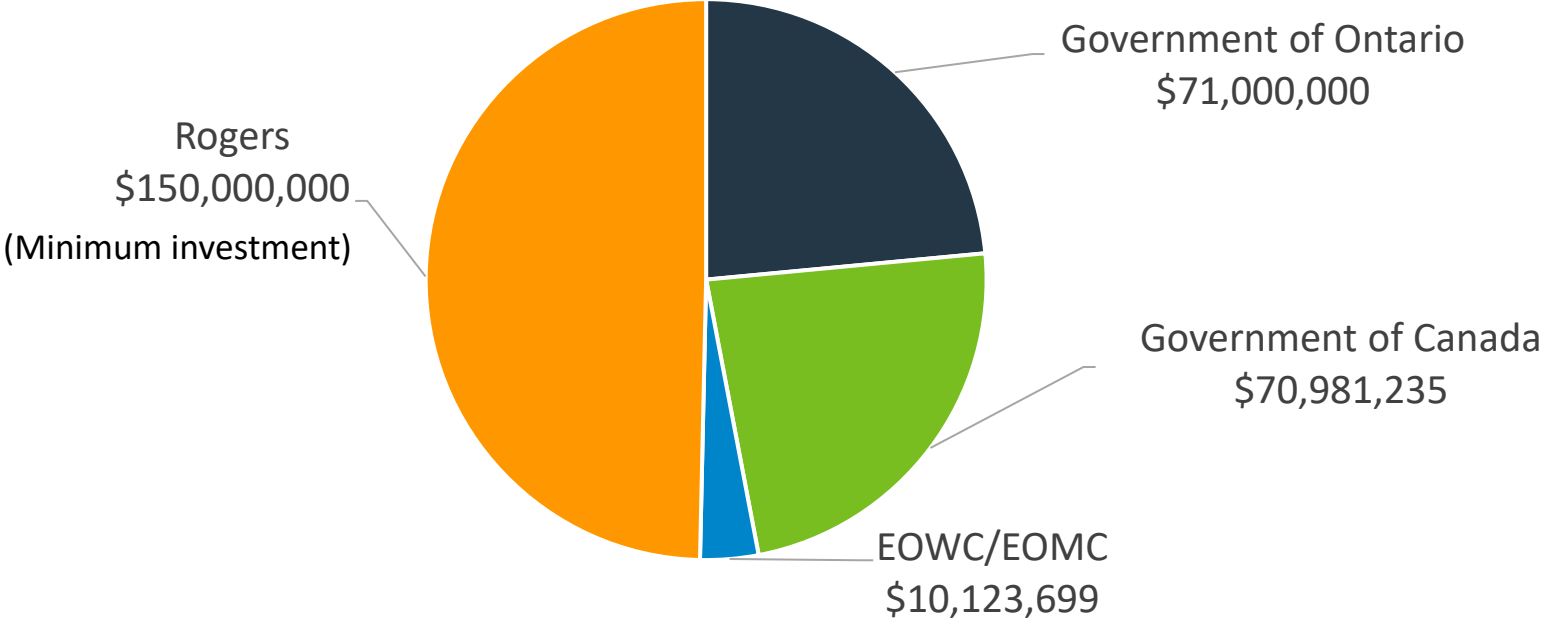
Improved public safety (9-1-1 calls)



New towers allow for future deployment of fixed wireless and new technology roll outs

Financial – Funding Details

Over \$300 million dollar investment in eastern Ontario before in-kind contributions and community benefits.



City of Kawartha Lake contributed \$715,711.

ROI estimated at about 20:1 to 50:1 upon project completion.



Regional and City of Kawartha Lakes View

	Tower upgrades		Tower builds		Co-locations		Land use authority	
	Planned	Completed	Planned	Completed	Planned	Completed	Planned	Completed
Regional	312	297	261	13	74	27	261	168
City of Kawartha Lakes County	14	14	18	0	6	4	18	6

Data as of April 15, 2023

Please note that sites are subject to change

Steps to Construction



Find a property that meets the needs of the network.



Negotiate a lease.



Conduct archaeological assessments (Stage 1 and Stage 2) and natural heritage assessments of proposed sites.



Follow land use authority (LUA) process with municipalities.



Notify the province that the site is ready to proceed. 129 new tower sites have been released for construction to date.



Site preparations, ordering and delivery of supplies for construction to begin.



Consultation with Indigenous communities and organizations is an ongoing process through the duration of the project.

Duty to Consult

- EORN has been delegated the duty to consult with 18 Indigenous communities and organizations by the Crown
- EORN is dedicated to working closely with Indigenous communities and organizations and addressing concerns about impacts of the Cell Gap Project on territorial and treaty rights
- EORN and the EOWC strongly believe that the benefits of the project must extend to all communities, municipal and Indigenous, in eastern Ontario
- EORN has completed archaeological and natural heritage assessments on 129 new tower sites to date
- EORN has been in more than 120 meetings and phone calls with Indigenous communities and organizations to date
- EORN has developed training documents to assist staff in the field

How Municipalities Play a Key Role

- Municipalities are responsible for land use authority (LUA) for proposed new tower builds.
 - Rogers Communications has completed the LUA process on half the planned tower sites and will continue to work with municipalities in obtaining LUAs for the remaining sites.
- After LUA approval, municipalities are key to moving the project forward by working with Rogers on processing building applications, etc. in a timely fashion.
- EORN has created resource documents for use by municipalities and are always available to assist where possible. A Tower Siting Resource Guide and a 5G Resource Guide are available at: www.eorn.ca/towersiting

Towers

- Most towers will range in height from 60 meters to 90 meters in the project
- Immediately supports both 4G and 5G
- Having both 4G and 5G capability allows for incremental capacity on sites, and future-proofs today's network for tomorrow



Equipment on Towers

- Antennas are the height of a door
- Generally attached to the tower structure before it is lifted in place by a crane
- Upgrades use the same antenna equipment but are either winched in place by the installation crew, or lifted by a crane



2023 EORN Initiatives

- 80 to 85 new tower and co-location builds planned
- Most of the upgrades to existing towers to 5G will be completed
- New board in place in April
- Collaborations with EOLC and EOWC on affordable housing
- Working with EOLC on their permitting system
- Will be investigating possibilities of Public Safety Broadband Network (PSBN) for region
- Supporting Infrastructure Ontario on AHSIP broadband program
- Working on regional municipal approach to address cyber security gaps

Note that these 2023 initiatives are pending EORN board approval

Contact Information



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Questions