

Up to Speed: Ontario's Broadband & Cellular Action Plan

By: Sebastin Noor and Katherine Spencer

At the Economic Developers Council of Ontario 2021 annual conference "EvolveOn", Sebastin Noor and Katherine Spencer, students in the post-graduate Public Administration Program at Seneca College summarized the workshop entitled "Up to Speed: Ontario's Broadband & Cellular Action Plan". The speakers included George Bridge, Mayor, Town of Minto; Kelly Elliott, Deputy Mayor, Municipality of Thames Centre; and Jonathan Hofeller, Vice-President of Starlink and Commercial Sales, SpaceX. Moderator: A.J. Wray from the Town and Gown Association of Ontario.

Abstract

Rural communities in Ontario have been struggling with digital access during the COVID-19 pandemic. The Economic Developers Council of Ontario (EDCO) panel, "Up to Speed: Ontario's Broadband & Cellular Action Plan", discussed public sector projects for getting Ontarians connected to reliable high-speed internet, and commercial programs that are working in tandem to strengthen Ontario's broadband network. Small towns and rural areas in Ontario require reliable connection to attract and retain businesses and industries; the pandemic has only heightened the need for internet access. The requirement to develop a strong network across Ontario cuts across the rural-urban divide: as more services and businesses are moving online, internet service is no longer a luxury for rural communities, but a necessary utility in its own right.

Keywords: *Digital Infrastructure, Rural-Urban, Connectivity, Broadband, Satellite, Internet Access, Fixed Wireless, COVID-19, SWIFT, SWIFT 2.0 'GigaProject', Starlink, agricultural connectivity, Pikangikum, EDCO, EvolveON*

Introduction

Rural communities in Ontario have been advocating for better digital access for over a decade, an issue now illuminated by the COVID-19 pandemic as the risk of falling behind in an increasingly digital society become more and more apparent. With an ever-increasing reliance on internet services to participate in online schooling, to work from home, or to provide business services online, the pandemic has only heightened the need for high-speed internet access. EDCO's panel, "Up to Speed: Ontario's Broadband & Cellular Action Plan," discussed current projects, public and commercial, working towards establishing province-wide connectivity, and ways forward to bridge the gap between rural communities and the digital society. The Town of Minto's Mayor, George Bridge, spoke on behalf of Southwestern Integrated Fibre Technology (SWIFT), a public expansion project working to connect rural areas in Ontario to high-speed internet access. He was joined by Deputy Mayor Kelly Elliott of Thames Centre, a long-time advocate for improving internet services in rural communities, and Jonathan Hofeller of SpaceX, representing the private sector's role in building digital infrastructure through the Starlink program, a satellite-based internet service providing high-speed access in

low-latency networks. The panel was moderated by Alexander “A.J.” Wray of the Town and Gown Association of Ontario (TGAO), a coordinating body connecting post-secondary institutions and municipalities, which has witnessed first-hand the difficulties of accessibility that many students are facing as schools and services move online during the pandemic.

1) SWIFT: Connecting Southwestern Ontario¹

Currently in its third phase, the SWIFT project has been working to implement broadband services across Western Ontario since 2014. As the public sector’s approach to in-the-ground internet, SWIFT has been working with internet service providers (ISPs) to implement fibre optics and address the digital divide that exists in Ontario between rural and urban communities. As Deputy Mayor Elliott noted, leaving city borders behind can be like leaving behind the digital world. The upcoming SWIFT 2.0 ‘GigaProject’ will address 95% of the population in its targeted region and continue to develop a strong broadband network in rural Ontario.²

2) Starlink³

SpaceX’s Starlink program works with a low-latency, high-bandwidth network of over 1000-launched satellites providing flexible, high-quality internet service without the need for in-the-ground connection. Currently in its beta program, Starlink kits can be purchased by consumers in remote areas, with easy installation, connecting communities to the internet within minutes.

3) “What’s your internet like?”

As more services are moved online, the pandemic has heightened the need for reliable, high-speed internet. This is especially true for the agriculture industry, the leading economic driver in rural Ontario; modern farms need digital access to maintain business operations. As industries like agriculture become increasingly digitized, schools are moved online, and more Canadians are working from home, Mayor Bridge predicted that more Ontario residents will be migrating from urban centres to smaller towns and rural communities for a change in lifestyle.

Internet connectivity is crucial for economic development and competitiveness; as Mayor Bridge noted, “What’s your internet like?” is often the first question that rural communities will receive from urban dwellers – yet it is also necessary to attract and retain new businesses to small towns, and to grow existing industries. The panellists agreed that developing a strong network across Ontario is a team effort and a group

¹ Swift Rural Broadband, swiftruralbroadband.ca/.

² SWIFT 2.0 GigaProject. “Preparing for Tomorrow’s Economy Today. A Broadband Solution for Southwestern Ontario.” www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewjvrJqq0MfuAhX7MlkFHcqZDtcQFjAAegQIBBAC&url=https%3A%2F%2F council.grey.ca%2Fmeeting%2FgetPDFRendition%3FdocumentObjectId%3D86d8d900-7746-4afb-8915-4dada30ce59a&usg=AOvVaw0MK5ge0ziBMK68vv4bl_nN.

³ Starlink Beta Program, www.starlink.com/.

project: private programs like Starlink are a complement to the fibre efforts of public projects and voices like SWIFT, and both are necessary to get rural communities connected to the digital world.

4) An Integrated Digital Approach: Intergovernmental Relationships to Get Ontario Connected

Although the provincial and federal governments have previously acknowledged the need for and importance of better internet access for all citizens, each level of government is seemingly waiting for someone else to make the first move. As Deputy Mayor Elliott pointed out, the federal government has the funding to make it happen and the provincial government has the legal framework to ensure this is delivered, but they must be willing to work with local governments; municipal staff know their communities best. Wray noted that in order for a cost-effective digital infrastructure to be established across the province, municipalities have to work together to share information and resources. He encourages communities to reach out to their neighbouring municipalities and determine if an existing fibre line is nearby which may be used to establish a network within a municipality rather than establishing a new line from scratch.

5) Prioritizing Digital Infrastructure

Hofeller spoke on the importance of recognizing that “a connectivity point is a connectivity point” when it comes to internet access, and that communities should explore every option available to them. Hofeller noted that it is not always feasible to get every person in every community connected to a fibre network, or even to a fixed wireless network. This is where satellite internet services through commercial projects like Starlink can be brought in to improve internet access in communities at a more affordable cost compared to more traditional methods. For example, Starlink was able to successfully connect the Pikangikum indigenous community in Northwestern Ontario to its network in December 2020, drastically improving the community’s bandwidth⁴. Current federal regulations hamper services like Starlink from offering internet to anyone in the country who wants it; Hofeller hopes that a streamlined approval process will be implemented in the near future, giving Canadian municipalities more service options available to them.

6) Take it Further: Fixed Wireless Internet Networks in Ontario Municipalities

The speaker’s panel recommended the EDCO On-Demand session with the telecommunications company Calix⁵, “Municipal Broadband: Deploying the High-Speed Connectivity Your Community is Demanding”⁶ for a more in-depth look at another

⁴ Walters, Jeff. “Pikangikum First Nation gets broadband from SpaceX Starlink.” *CBC News*, 2 December 2020, www.cbc.ca/news/canada/thunder-bay/pikangikum-spacex-starlink-1.5824234.

⁵ Calix: Platforms That Connect the World, www.calix.com/.

⁶ Take it Further: Calix On-Demand session “Municipal Broadband: Deploying the High-Speed Connectivity Your Community is Demanding”, www.youtube.com/watch?v=hyjSTpks1wQ&feature=emb_logo

project in Ontario working to strengthen the province's network. Calix has worked with over 40 municipalities in Canada to oversee the successful implementation of a digital infrastructure, and recommends that rural and isolated communities look to fixed wireless internet or fibre internet networks as their most reliable options as opposed to the traditional coaxial cable and digital subscriber line (DSL) internet connections. For communities that are able to accommodate both fixed wireless and fibre internet networks trying to decide which is best for them, Calix cautions that communities must consider that wireless has limits that fibre internet does not. Fixed wireless internet networks have a limited ability to expand across a community, and the upkeep and maintenance of these networks can make it more costly in the long-term in comparison to fibre internet. Communities must also consider that as technology continues to advance, usage and bandwidth demands will only increase over time; it is much faster and easier to apply improvements to a fibre network to meet these demands than what will be required of strengthening a fixed wireless network.

Conclusion: Cutting Across the Urban-Rural Divide

Advocacy is key to ensuring higher levels of government become more active in the pursuit of building a strong digital infrastructure in Ontario. It is not only important to push for reliable internet across Ontario, to support individuals as employment responsibilities and education shifts toward online platforms, but it is an essential piece in the success of any community's economic development, whether it is a rural community or an urban centre. The increasing reliance on digital infrastructure during the COVID-19 pandemic has shown that internet inaccessibility is an issue that cuts across the urban-rural divide; in the City of Toronto, for example, 38% of residents do not have access to reliable internet⁷. As Wray poignantly stated, internet access is the new "utility", and in the same way the province-built infrastructure for electricity delivery in the 1950s and established the public works infrastructure for clean drinking water in the 80s and 90s, the time is now to shape policy objectives that support a province-wide digital infrastructure.

The panellists were optimistic about the future of internet access in Ontario. As Deputy Mayor Elliott noted, the public and private sector both play a part in getting Ontarians connected and building a strong digital network - a project that has been underway for over a decade.

⁷ Francis, Angelyn and Danica Samuel. "Imagine COVID-19 with crappy internet. For 2 out of 5 people in Toronto, it's a stark reality." *Toronto Star*, 20 January 2021, www.thestar.com/news/gta/2021/01/20/imagine-covid-19-with-crappy-internet-for-2-out-of-5-people-in-toronto-its-a-stark-reality.html.

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