

Report Staff Report The Corporation of the City of Brampton 4/26/2023

Date: 2023-04-21

Subject: Downtown Brampton – 5G Pilot Status Update

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Report Number: Corporate Support Services-2023-371

Recommendations:

- 1. THAT the report titled " **Downtown Brampton 5G Pilot Status Update** " dated April 21, 2023, be received;
- THAT Council approves for the City of Brampton to work collaboratively with Alectra and telecommunication services providers to resolve power supply issues and payment arrangements between telecommunication services providers and Alectra;
- 3. THAT Council approves for the City of Brampton to clearly communicate to telecommunication services providers the need to enter into and sign the Municipal Access Agreement (MAA) with the City; and
- 4. THAT Council approves for Planning, Building and Growth Management, and Economic Development to champion 5G initiatives corporately including intake, review and execution of telecommunication services providers' requests that leverage City passive assets.

Overview:

 On April 24, 2019, City Council resolved that "Staff be directed to explore collaboration and partnership opportunities to implement 5G technology throughout the city and report back to a future Council meeting."

- During the summer of 2021 Bell approached various City departments (i.e., Realty, Economic Development, Public Works & Engineering, Digital Innovation & Information Technology) about conducting a 5G Pilot (installing 5G microcells on City streetlights/traffic signal poles in Brampton Downtown core).
- The Downtown Revitalization Project team reached out to Utility and Telecommunication Services providers to gauge interest in providing services in this area.
- Bell was the only service provider showing interest to pull fiber optics / install conduits to expand their network in the downtown core.
- Q3-Q4 2021 DIIT was asked to facilitate the conversations between City Departments and Bell on the feasibility of a 5G Pilot.
- A Hyper Connectivity Cross Departmental Working Group (WG) was created.
- This WG met to discuss Bell's proposal and began putting together a preliminary framework.
- The WG leveraged what other Canadian municipalities like the City of Calgary and City of Mississauga were already doing in this space.
- The WG modified Bell's proposed pilot agreement and began drafting a general agreement that can be used by any telecommunication service provider in the future.
- February 2023 Bell provided an updated package for their pilot proposal.
- April 2023 it was communicated by Alectra (Electricity Provider) that Bell could not use the power supplied to the City without separate agreement with Alectra, as the City is not an electricity distributor.

Background:

5G represents a transformational change to mobile networks from the current 4G LTE networks and is expected to deliver a connectivity revolution. This transformation will not only change the way we live, work and play, but will also deliver a profound change to communications that affect government, enterprise and consumer customers.

Today's 4G LTE networks are high power/low density broadcast emitters, whereas 5G networks will be low power/high density beam-forming emitters.

In its simplest form, 5G is a different way to deliver mobile communications technology as compared to 4G LTE. 5G is a high-density network of small emitters rather than the tall mobile cell towers we are now familiar with. The City of Brampton can play a radically different role in the connectivity revolution through managing our passive assets, enterprise attractiveness and enhancing citizen services.

When it comes to owning hyper-connectivity, leading global practices range from the creation of global digital innovation hubs, cross-sector working groups, infrastructure investment, optimizing value for the city, and improvements to citizen services. Regardless of the avenue, significant economic, commercial, and social benefits can be realized.

Current Situation:

The City needs to actively manage multiple risks associated with 5G including technical disruption, legislation, and regulation, managing decision delays, passive asset value leakage, and 5G market mechanics.

On April 24, 2019, Brampton City Council directed staff to explore collaboration and partnership opportunities to implement 5G technology throughout the City.

The experience of Bell's pilot project has highlighted some challenges that may arise for other telecommunication companies seeking to implement similar solutions in the city. Bell has been advocating for the use of the city's street lighting infrastructure to power their 5G solution, with payment for hydro consumption directly to the city. However, Alectra, the authorized electricity distributor, has advised against direct connection to the street lighting infrastructure, citing legal restrictions. Instead, telecommunication service providers (telcos) should have a separate connection and enter into a direct power agreement with Alectra, which could add complexity and cost to their proposals.

Bell's position is that the Ontario Energy Board (OEB) Act permits the city to sell electricity to Bell without a license and for Bell to pay the city at cost for their electricity consumption. Bell has also cited other Ontario municipalities where telcos have directly connected to street lighting infrastructure for their 5G solution. Nonetheless, Alectra has confirmed that they will require Bell to disconnect from municipal infrastructure in other Ontario municipalities and create a new power connection directly with Alectra.

There is clearly a difference in perspective and legal interpretation between Bell and Alectra. It is advisable for the city to engage with them both, in an effort to unlock the current situation and come to a resolution. The City will need to play a similar role with other telecommunication providers and Alectra.

The City's role is important in the 5G context. The follow excerpt is from a report from Ernst & Young titled, "How can 5G be a powerful catalyst for collaborative action in Canada?" speaks for the need of collaborative action between all stakeholders involved.

"Taking down barriers and building up connection points will feel new for many of this industry's stakeholders. But maybe that's the point. The magnitude of 5G merits a unique approach. Not only because it can help businesses operate better, but because those businesses can apply 5G to innovate around the world's toughest problems. That's powerful. A collaborative ecosystem where governments, telcos and other businesses come together to drive progress represents a new direction for Canadian innovation. It's most certainly worth a shot." (Rohit Puri, EY National TMT Industry Sector Leader)"

Bringing 5G to Brampton's Innovative District will be a driver of innovation for the entire community and a necessity to maintain competitiveness. Brampton's award-winning Innovation District is a thriving entrepreneurial ecosystem. Home to a network of companies, educational institutions, incubators and accelerators in the heart of downtown, the Innovation District supports tech-enabled businesses at all stages of development. 5G is critical to the economic growth in the District.

The Downtown Revitalization project has been working with various stakeholders including the Region to integrate 5G related activities into the City infrastructure work. Anticipating accelerated growth and extension of 5G deployment from Bell and other telcos throughout the City, the Planning, Building and Growth Management is best positioned to champion this effort in close collaboration with Economic Development, to manage the increased scope and drive stakeholders' coordination required. DI&IT will continue to provide technical support and advice throughout the project.

Conclusion:

This report summarizes the current status of Downtown Brampton – 5G Pilot.

It is recommended that Council approve for the City of Brampton to work collaboratively with Alectra and telecommunication services providers to resolve power supply issues and payment arrangements between telecommunication services providers and Alectra.

In addition, it is recommended that Council approves for the City of Brampton to clearly communicate to telecommunication services providers the need to enter into and sign the Municipal Access Agreement (MAA) with the City. It is also recommended that Council approve for Planning, Building and Growth Management, and Economic Development to champion 5G initiatives corporately including intake, review and execution of telecommunication services providers' requests that leverage City passive assets.

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