BRAMPTON

Date: 2020-04-19

Subject: **City of Brampton 5G Hyper-Connectivity Options Report**

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Recommendations:

1. THAT the report titled " **City of Brampton 5G Hyper-Connectivity Options Report** " dated April 19, 2021, be received; and,

2. THAT Council approves for the City of Brampton to play an active role, both strategically (engaging with the connectivity ecosystem, planning funding and investments for connectivity) and tactically (proactively organizing to respond to 5G-driven change and driving use-cases to enhance value) in the development and adoption of 5G hyper-connectivity technology; and

3. THAT a public engagement approach, including creating a web site to house information on 5G technology, be taken to facilitate two-way feedback exchange with Brampton residents.

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."

- Staff were asked to deliver a review of 5G and future connectivity, and its potential impact on Brampton that focused on four themes: technology and innovation; Brampton's Smart City agenda; increased City attractiveness; and cross-industry collaboration.

- On October 15, 2019, the City acquired KMPG to assist with reporting on options for 5G technology.

- The review included analysis of global and Canadian telecom markets; engagement with external 5G ecosystem and dependent City stakeholders; and identification of relevant global case studies.

- On March 5, 2021, City staff and KPMG presented at the Council Workshop to enhance awareness and understanding, and open additional communication channels.

Background:

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

Current Situation:

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.

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.

Term of Council Priorities:

2018-2022 Term of Council Priority: Brampton is a Well-Run City

Continuously improving the day-to-day operations of the corporation by streamlining service delivery, effectively managing municipal assets, and leveraging partnerships for collaboration and advocacy.

Hyper-connectivity is key to the Brampton is a Well-Run City priority, it is an initiative that contributes to effective management municipal assets leveraging partnerships for collaboration and advocacy.

Conclusion:

This report summarizes the analysis conducted to explore collaboration and partnership opportunities to implement 5G technology throughout the city by reviewing global and Canadian telecom markets; engaging with external 5G ecosystem and dependent City stakeholders; and by identification of relevant global case studies.

It is recommended that Council approves for the City of Brampton to play an active role, both strategically and tactically in the development and adoption of 5G hyper-connectivity technology and that a public engagement approach, including creating a web site to house information on 5G technology, be taken to facilitate two-way feedback exchange with Brampton residents.

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