TORONTO   **REPORT FOR ACTION**

ConnectTO Program Update: City Assets for Efficiency and Connectivity

Date: September 19, 2023
To: Executive Committee
From: Deputy City Manager, Corporate Services and Chief Technology Officer
Wards: All

SUMMARY

In January 2021, City Council adopted the "Affordable Internet Connectivity for All – ConnectTO" report, which outlined a program focusing on bridging the digital divide and improving connectivity for all Toronto residents. This report is a progress update on the program, focusing centrally on its expansion of public Wi-Fi across the City. This report seeks Council's continued support to increase digital equity through the ConnectTO program, as well as providing updates on the next phase of implementation, focused on leveraging City assets for efficiency and connectivity, such as free public Wi-Fi and connectivity through partnerships with Agencies and Corporations.

Since the previous report to Council, the ConnectTO program has continued to take action based on data and research and per Council's mandate to centralize and lead the City's connectivity equity efforts, including:

- Access to City and other online services has increased through the deployment of free public Wi-Fi at:
    - 74 community recreation centres, in partnership with Parks, Forestry and Recreation Division;
    - Eight housing facilities' common areas, in partnership with Toronto Community Housing Corporation; and
    - Free public Wi-Fi in the St. Lawrence Market Complex, including St. Lawrence Hall;
- Continued partnerships with Higher Education Institutions (HEIs) to research and analyse digital access, including impact of the Digital Canopy initiative (see Attachment 1);
- Engaged in external legal review on of models to leverage City assets to bridge the digital divide;
- Continued productive dialogue and leadership with other big cities coast to coast and with the Federation of Canadian Municipalities (FCM), seeking alignment on connectivity priorities (see Attachment 2); and

- Engaged a consultant to determine which regional models might exist to collaborate with Greater Toronto and Hamilton Area (GTHA) partners to meet municipal telecommunications needs (details are included in Attachment 2).

Building on existing work, staff recommend the development of a Council-directed City of Toronto Wi-Fi strategy, which would aim to further increase free public Wi-Fi access for residents and visitors (Recommendation 1). This strategy would be guided by a public consultation process and the principles of digital equity, universal accessibility, security and transparency, and community safety. Providing public Wi-Fi in City facilities and public spaces – meeting resident and visitor expectations – would represent an upgrading of the City's digital offering to meet Canadian and North American municipalities' long-standing standards.

The impact of this and of ConnectTO's other projects detailed below is key because we know that digital access and affordability barriers correlate to underlying issues of social equity. Low-income, racialized, and elderly communities have fewer options for reliable broadband access available to them. Council's continued support for the ConnectTO program overall will allow the City to take important steps to improve digital equity in the City of Toronto.

Research shows that, in Toronto, digital access and affordability barriers correlate to underlying issues of social equity; with low-income, racialized, and elderly communities having fewer options for reliable broadband access available to them. Council's continued support for the ConnectTO program overall will allow the City to take important steps to improve digital equity in the City of Toronto.

Additionally and as directed by Council on July 19, 2022, this report also includes Attachment 3 which reviews the full cost of the July 8, 2022 Rogers outage to Toronto's economy, City services, and functions that were disrupted.

Social Development, Finance and Administration, Toronto Public Health, Economic Development and Culture, Parks, Forestry and Recreation, Toronto Emergency Management, Transportation Services, Corporate Real Estate Management, Legal Services, and the City Manager's Office were consulted in the preparation of this report. In addition, Toronto Community Housing, Toronto Public Library, and CreateTO were consulted on this report.

RECOMMENDATIONS

The Deputy City Manager, Corporate Services, and Chief Technology Officer recommend that:

1. City Council direct the Chief Technology Officer, Technology Services, to consult with the technology community, anti-poverty groups, those with lived experience in the digital divide including Indigenous, Black, and racialized groups, and potential end users in developing an expanded Toronto public Wi-Fi strategy, with a focus to bridge the digital divide and to promote economic development through connectivity modernization.

2. City Council direct the Chief Technology Officer, Technology Services, to leverage the Technology Strategic Partnership Roundtable with Agency and Corporation technology leaders to:

   a. Explore potential utilization of all City, agency, and corporation network assets to deliver efficient and cost-effective services and;
   b. Ensure, as far as possible, that all new developments, builds, major revitalizations, and upgrades in City-owned facilities assess the inclusion of City-owned in-building wiring and fibre connectivity infrastructure, and use City-defined standards and specifications.

3. City Council direct the Chief Technology Officer, Technology Services, to continue intergovernmental collaborations, and authorize the Chief Technology Officer to negotiate, enter into and execute any agreements with, and receive funds from or pay funds to other public entities and levels of government with which staff may partner in order to promote regional and other collaboration for more efficient use of public assets, that may be necessary to carry out and implement the recommendations in this report, on terms and conditions satisfactory to the Chief Technology Officer, and in a form satisfactory to the City Solicitor.

4. City Council request the Chief Technology Officer, Technology Services to report back to the Executive Committee in 2025 to provide a further progress update on the ConnectTO program.

FINANCIAL IMPACT

Required funding of $869,899 for the tasks planned for 2023 is included in the Council Approved 2023 Capital Budget for Technology Services Division under WBS CIT047-14-01. Should Council adopt recommendations with subsequent financial impact beyond the approved budget, additional resources required for those additional phases would be included in future Capital and/or Operating Budget submissions for approval.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

EQUITY IMPACT STATEMENT

The digital divide in Toronto is an enduring reality, made worse during the pandemic and in the face of an inflationary moment. These impacts, too, do not fall equally upon Toronto residents, with the most significant impacts affecting low-income households and equity deserving communities; data related to these are detailed in the Summary and Comments section of this report.

As a primary indicator, the 2021 broadband study indicated that 34% of Toronto households worry about paying their internet bills—and this is highest among low-income, newcomer, single parent, Latin American, South Asian, Black and Southeast Asian residents. Fully half of Toronto households cite internet service cost as the

reason, and 61% of households without internet service say it impacts their ability to access critical services and information.

The ConnectTO program exists to bridge the digital divide and to ensure that all Torontonians have access to reliable, high-speed broadband internet. Its public Wi-Fi, fibre strategy, regional and national collaboration, and HEI research efforts all aim at mitigating the inequitable distribution of internet access—and the negative impacts on quality of life that flow from it.

The recommended strategies will have a high level of impact for those who currently do not have reliable access to affordable high-speed internet. This includes segments of the population who are overrepresented in this group, including Indigenous, Black, and equity-deserving communities, especially low-income and racialized seniors.

DIGITAL INFRASTRUCTURE IMPACT STATEMENT

The ConnectTO program aligns with the principles of the Digital Infrastructure Strategic Framework (DISF), including the following Strategic Priorities:

Strategic Priority 1.4: Connectivity and Digital Equity

Toronto residents and businesses should have access to affordable and reliable high-speed internet and be able to access critical services online. ConnectTO promotes these outcomes and ensures that the hardware, software, practices, and policies implemented take DISF principles into account.

Strategic Priority 2.3: Asset Management

Digital Infrastructure assets used by the City of Toronto should be governed in ways that protect the public interest. ConnectTO aligns with the principle of a Well-run City by working to centralize the coordination and management of fibre assets.

Strategic Priority 6.5 Democratic Control

Similarly, ConnectTO aligns with the principle of democratic control and digital autonomy by advocating for City ownership and control over fibre assets and public Wi-Fi networks.

DECISION HISTORY

A decision history is attached to this report as Attachment 4.

COMMENTS

The 2021 ConnectTO report set out four pillars for the program's future development: increasing digital equity and bridging the digital divide; economic recovery and growth; supporting the City's long-term financial health; and solidifying Toronto's position as an innovation and technology leader. All of these are informed by a growing body of data and research, some of which is Toronto-focused and has been undertaken with higher education institution (HEI) partners (details are included in Attachment 1).

Increasing Digital Equity & Bridging the Digital Divide

Data confirm that bridging the persistent digital divide remains critical for Torontonians. The ConnectTO program makes use of these data in its strategic and programmatic planning, and they inform the overall program effort and decisions regarding optimal resource deployment. Most central at this point in the program's development is its public Wi-Fi project.

Although affordable, reliable, high-speed home internet access is the gold standard to mitigate the digital divide in Toronto, public Wi-Fi represents a critical and capital-efficient intervention that can help ameliorate connectivity divides for Torontonians most in need. The Toronto Public Library (TPL) has for many years operated public Wi-Fi at its locations, and ConnectTO staff are borrowing learnings and best practice from their knowledgeable staff to implement public Wi-Fi at other City locations, including to-date:

- 74 (of 126 planned by end 2024) community recreation centres, in partnership with Parks, Forestry & Recreation (PF&R)—including two, new-build community recreation centres;
- Eight housing facilities' common areas, in partnership with TCHC; and
- The St. Lawrence Market complex (including St. Lawrence Hall).

Staff recommend (Recommendation 1) that ConnectTO build on these learnings and experience by undertaking public consultation to inform a broad strategic framework for equity-driven free public Wi-Fi in public spaces and facilities. Providing access in more public spaces would be both a digital divide mitigation strategy as well as a way for the City to update its facilities' digital offerings in line with public connectivity expectations and the practices of cities across Canada and elsewhere. This strategy would aim to incorporate the principles of digital equity, universal accessibility, security and transparency, and community safety. Key performance indicators would be established and tracked to ensure program efficacy.

Staff further recommend (Recommendation 2) that in this and other ConnectTO strategies and planning, the utilization of all municipal assets be considered as appropriate, in order to ensure maximal coverage across the city and in areas where public need and impact is greatest.

Stimulating Economic Recovery & Growth

Providing internet connectivity in City facilities and other public spaces represents an additional economic driver for residents, visitors, and businesses who may utilize it. Expanding this access through an expanded public Wi-Fi strategy contributes to economic activity and resilience through changing conditions. As public Wi-Fi has become a routine amenity in many places of public accommodation, many have come to expect a similar level of service in City facilities (e.g., City Hall, subways, payment centres). This is in line with the municipal provision of public Wi-Fi by Canadian and North American cities, many of which have offered this for some time.

With additional public Wi-Fi in new spaces, opportunities will be explored to determine how to further promote economic development activity using the connectivity.

Supporting the City's Long-Term Financial Health

One of the primary ways that the ConnectTO program is advancing this goal is through ongoing investigation of options for configuring and/or optimizing the City's fibre assets to ensure that resources over the long-term are utilized in ways that mitigate ongoing financial risk and that bring about more efficient operations.

Fibre infrastructure is a critical communications networking asset for large organizations such as the City of Toronto. While wireless technologies provide a flexible and efficient means of deploying sited connectivity in facilities and public spaces, wireless technologies themselves rely on connections to high-capacity fibre backhaul.

The value of fibre is clear and the City of Toronto has operated its own corporate network in the past. The City previously owned 500km of high-capacity fibre internet infrastructure but sold it to Cogeco Cable in 2008.[1] These assets were later acquired by Beanfield Metroconnect and now are used to provide private service to the telecommunications market.[2] The City of Toronto is one of its customers and now contracts with Beanfield, among others, for municipal telecommunications services.

In concert with the efforts of other Canadian municipalities to renew and reinvest in their fibre network capacities (e.g., Calgary, Montreal, Vancouver), City staff have worked to understand the potentials for fibre asset optimization in the service of municipal operations. Through these efforts, two primary paths are being pursued, with no final decisions having yet been taken as further information is required to provide the best advice.

First, internal to the City, a process is underway with the Technology Service Division's Network Services team regarding a small, limited proof-of-concept for optimization of the City's fibre network. Second, in partnership with its GTHA partners, a consultant has

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[1] "Cogeco Cable Acquires Toronto Hydro Telecom Inc." Cogeco company statement. June 13, 2008. (https://corpo.cogeco.com/cca/en/press-room/press-releases/cogeco-cable-acquires-toronto-hydro-telecom-inc/)

[2] "Beanfield Metroconnect buys Aptum's WAN business for latest expansion." *Channel Daily News*. May 7, 2020. (https://channeldailynews.com/news/beanfield-metroconnect-buys-aptums-wan-business-for-latest-expansion/70855)

been engaged to determine which models, if any, would deliver a regional telecommunications partnership. Such a model would, if determined to be operationally and financially sound, make maximize the return on already-public assets for the benefit of GTHA municipalities. In order to ensure staff have the ability to pursue arrangements of this nature and others related to the ConnectTO program and strategy development Recommendation 3 provides the necessary clarified authority to enter into agreements and to receive funds for cost-sharing arrangements; any regional or other major engagements would be part of a subsequent report back to Council

In addition to any fibre connections between City facilities potentially contemplated under these evolving strategies, staff recommend (Recommendation 2) that new developments, builds, major revitalizations, and upgrades in City-owned facilities assess the inclusion of City-owned in-building wiring and fibre connectivity infrastructure, and use City defined standards and specifications. At the time of construction or renovation, adding fibre represents a marginal capital cost as compared to connectivity retrofits. In-building wiring allows the City to reduce thereafter its telecommunications spend and to ensure that City staff have wide technical and legal latitude as to how best to provide connectivity to its own facilities.

Finally, in order to coordinate these efforts effectively among various divisions, agencies, and corporations that may have relevant contributions, the Chief Technology Officer will engage the CIO and other staff leadership at an existing leadership coordination table to facilitate planning and execution of connectivity needs as appropriate and needed. This forum will ensure executive strategic alignment and staff efforts as the various aspects of the connectivity projects develop.

Solidifying Toronto's Position as an Innovation & Technology Leader

Staff have advanced the City's position as a leader in this area in two key ways: (1) engaging in leading research with higher education institution (HEI) partners to obtain Toronto-specific data on the digital divide and its effects, and (2) leading and working with regional and national partners to advance City connectivity priorities.

Research partnerships demonstrate a high return-on-investment. Comparable efforts to obtain needed Toronto neighbourhood-specific data through other sectors or vendors would increase cost and may lack the rigour of formal academic research methodologies and other expertise. Toronto's HEIs have long-standing and deep expertise to address the digital equity questions that City staff are attempting to resolve. These partnerships and related data are detailed in Attachment 1.

Additional collaborative partnerships, particularly with GTHA municipalities and regions, provide staff with the opportunity to learn from and develop potentially innovative and more efficient regional models for municipal telecommunications. Staff can also work with other municipalities and regions to develop and share common understandings with other levels-of-government to address emerging issues. These partnerships are detailed in Attachment 2.

All of these partnership types enhance the City's ability to develop public knowledge and evidence-based policies in response to digital connectivity barriers, as well as long-term cooperation with other entities to make the most efficient use of City resources.

In summary, the work of the ConnectTO program since it came together per Council's COVID-moment mandate to explore ways to mitigate the digital divide has provided staff with extensive learnings and achievements in these several key areas: free public Wi-Fi; potentials for City and regional municipal asset renewal and cooperation; regional and national partnerships; and high-ROI research.

The recommendations in this report build on these and seek Council approval to continue to positively impact digital equity and participation, including in concert with the public and civic organizations. The ConnectTO program and its previous reports to Council recognize that broadband access is necessary to carry out one's life tasks, including interacting with a digitizing City government. Through its efforts, the program leverages City assets to bridge the digital divide—effectively, efficiently and on equitable terms.

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SIGNATURE

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ATTACHMENTS

Attachment 1: Data & Research Related to the Digital Divide

Attachment 2: Regional & National Collaboration Related to Connectivity

Attachment 3: Rogers Communications July 2022 Outage Impact: Economic, Operational & Potential for ConnectTO to Mitigate Future Events

Attachment 4: Decision History