

Attachment 4: Jurisdictional Scan of Municipal Fibre Infrastructures

Jurisdiction and Program	Background	Notable Policies	Results
<p>City of Toronto</p> <p><i>Toronto Hydro Telecom (2000-2008)</i></p>	<ul style="list-style-type: none"> - 400 km of fibre sold to Cogeco Cable Inc. in 2008 for \$200M (\$240M in 2020 dollars). - Reaches throughout the City with strong connectivity in Downtown, particularly the Financial District 	<ul style="list-style-type: none"> - Contract between City and Toronto Hydro Telecom created a <i>Public Policy Benefits</i> reserve fund - This reserve was for safety and emergency; education, knowledge and public good; and city administrative purposes 	<ul style="list-style-type: none"> - \$200M in one-time cash to Toronto Hydro
<p>City of Montréal</p> <p><i>City Fibre Expansion Plans and MTLWi-Fi</i></p>	<ul style="list-style-type: none"> - Deployed 30 km of fibre in the Quarter des Spectacles, downtown and the Quartier de l'Innovation (2015-2017) - Focus on linking municipal buildings and future free Wi-Fi zones in major public spaces. 	<ul style="list-style-type: none"> - MTLWi-Fi is a partnership with ZAP, who is responsible for the maintenance of the network. ZAP is a Montréal not-for-profit in operation for 18 years. 	<ul style="list-style-type: none"> - MTLW-iFi has 825 access points across the island of Montreal - Plan to expand fibre even further - Bell Canada invested \$850 million to build 7000 km of private fibre in 2018.
<p>City of Calgary</p> <p><i>City owned fibre network</i></p> <p><i>Infrastructure leasing</i></p>	<ul style="list-style-type: none"> - City owns over 400 kms of leasable fibre reaching all quadrants of the city - City leases street poles and rooftops to connect fibre to 5G infrastructure 	<ul style="list-style-type: none"> - Services all networks and operators - Not for residential use - City has a 'Dig Once' policy— installation of dark fibre during unrelated street digs (e.g. road/water/sewer) 	<ul style="list-style-type: none"> - Free public Wi-Fi at LRT stations and City facilities - Revenue opportunities in leasing access to network being explored - University of Calgary research done using the municipal dark fibre network published in <i>Nature</i>
<p>City of Coquitlam, BC</p>	<ul style="list-style-type: none"> - 85 kms of unused capacity in the City's fibre network 	<ul style="list-style-type: none"> - Services all networks and operators - Includes businesses and 	<ul style="list-style-type: none"> - QNet continues to pay off debt to the City. QNet had an operating surplus of \$250k and made

<i>Coquitlam Optical Network Corporation (QNet)</i>	- Colocation facility leased to third-party data centres	residences, except for single family homes	loan payments of \$340k in 2018, which reduced its remaining debt to \$4.4M.
Eastern Ontario Municipalities <i>EORN Broadband Project</i>	- 5,500 kms of fibre connecting 60+ business parks and clusters in Eastern Ontario - Project of the Eastern Ontario Wardens' Caucus	- Services all networks and operators - Maintain relationships with local First Nations to determine how to improve service within communities - Priority on cell service throughout all homes, roads and businesses in the region and broadband throughout Ontario	- Broadband coverage to ~90% of Eastern Ontario - Improved cellphone service throughout - A total network worth \$260 million. - 140,000 subscribers in 2018.
Region of Peel (and constituent municipalities) <i>Municipalities-owned fibre network (Public Sector Network)</i>	- Over 800 kms of fibre connect over 290+ sites across the city. - Established 1996 - Owned/governed by constituent municipalities and other public sector users	- Only public sector and broader public sector organizations can access the network - Currently implementing private sector leasing	- Generated over \$100 million in savings, a return on \$25 million total investment. ¹ - 1/3 rd of fibre laid is in use - Free public Wi-Fi across City of Mississauga (<i>Wireless Mississauga</i>)
Region of York <i>Region owned fibre network (YorkNet)</i>	- Over 200 kms of fibre connecting Regional and Broader Public Sector buildings and assets - Governed as a Municipal Services Corporation, whose board is controlled by the region and its municipalities	- Services all networks and operators - Receives federal grants under the Universal Broadband Fund - Three policy objectives: 1. Serving public sector operational needs effectively	- Spun off York Telecom Network into a new Municipal Services Corporation with public governance - Shares corporate functions (legal, IT, finance, comms) with York Region divisions

¹ <https://pub-peelregion.escribemeetings.com/filestream.ashx?DocumentId=1428>
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	<ul style="list-style-type: none"> - Established 2017 with an allocation of \$500k as an offshoot of the York Telecom Network - Cost \$16M to lay existing fibre since 2002 	<ul style="list-style-type: none"> 2. Driving economic and social benefits in communities 3. Extending high speed broadband into under-served areas of the Region 	<ul style="list-style-type: none"> - 9 MUSH sector partners on the Network
<p>City of Chattanooga, Tennessee</p> <p><i>City owned fibre network (EPB Fibre Optics)</i></p>	<ul style="list-style-type: none"> - Fully connected fibre-to-the-home City (150,000 homes) - Owned/operated by the City's electrical utility, originally as a 'smart grid' exercise 	<ul style="list-style-type: none"> - Guaranteed offer of a 'Chattanooga Gig' (1 Gbps downstream speeds to all 150,000 homes) - Public mandate results in rapid crisis response infrastructure 	<ul style="list-style-type: none"> - April 21, 2020, tornados knocked out 106,000 EPB customers, but the smart grid prevented 44,000 further outages. - During Covid-19, EPB suspended disconnections and waived late fees, and implemented a program that: <ul style="list-style-type: none"> - provided new internet access to 523 families in need and continued free access to 1,182 more families. - Created 130 free "EPB Quick Connect Wi-Fi Hot Spots" in areas with high numbers of students, resulting in 13,000 user sessions in 3 months. - Received \$110M in stimulus grant from the Department of Energy in 2009, and EPB paid \$160M of the network's \$220M cost.
<p>City of Amsterdam</p> <p><i>City owned fibre network (Citynet)</i></p>	<ul style="list-style-type: none"> - Connected 40,000 homes in 2.5 years - P3 which involved rapid new digs 	<ul style="list-style-type: none"> - Network/operator-neutral (open access) 	<ul style="list-style-type: none"> - Amsterdam (and the Netherlands) has the highest percent of wired

			households in the EU (98%) ²
<p>City of Stockholm</p> <p><i>City owned fibre network (Stokab)</i></p>	<ul style="list-style-type: none"> - First creation of a municipal owned passive optical network in 1994 (in order to control rights of way requests) - World's largest municipal fibre network at 1.8 million fibre kms. - Used by 100 operators and 700 enterprises, serving 100,000 students and 50,000 city employees - Primary routes are in the metro network 	<ul style="list-style-type: none"> - Network/operator-neutral (open access) - City owned de facto monopoly on passive infrastructure (fibre) 	<ul style="list-style-type: none"> - Stokab's fibre network facilitated the deployment of the first LTE/4G mobile network in the world - 90% of households and 100% of enterprises have fibre-to-the-premise - Stokab contributes significantly to the municipality while providing a competitive marketplace (~\$120 million CAD in operating profits, 2019) - All schools are connected to the fibre network, and enable smart technologies like motion-sensor ventilation
<p>New York City</p> <p><i>Internet Master Plan</i></p>	<ul style="list-style-type: none"> - <i>The New York City Internet Master Plan</i> was passed in January 2020, with a goal of city-wide fibre and multiple choices for service. - Anticipated total costs of \$2.1B. - 46% of NYC households living in poverty do not have broadband at home. - Accelerated deployment timeline 	<ul style="list-style-type: none"> - NYC is 'neutral-host' infrastructure, shared between operators - Heavy focus on public/private partnerships, with 'seed investments' from the City - Focus on poorly connected areas first and improving digital equity/avoiding 'digital redlining' of fibre deployment. 	<ul style="list-style-type: none"> - In 2014, the City contracted Verizon to do a citywide fibre rollout, and in 2017 the City sued Verizon for not meeting the obligation. - City contributed a \$157 million broadband investment in July.

² <https://longreads.cbs.nl/european-scale-2019/internet/>
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