

York Region Broadband Strategy

**Unleashing Innovation:
Business and Bandwidth Conference**

October 16, 2013

Drivers for York Region Broadband Strategy

- **E-Governance and Government Service Delivery** – access to connectivity provides the opportunity to improve service delivery while reducing costs.
- **Population Growth / Demographic Distribution** – avoid potential skewing of population distribution to those with (younger) and without (older) good connectivity.
- **Business Investment** – providing high-speed connectivity is a pre-requisite for attracting knowledge based companies and investments across the Region.
- **Post-Secondary Research** – high-speed connectivity is a pre-requisite for high-value post-secondary research.

York Region – Coverage Overview

All parts of York Region have connectivity – just not always at the speed and price point that makes the Region competitive with other communities.

Location	Business Speeds	Residential Speeds
Waterfront Toronto - Toronto, Ontario	10 Gbps	250 Mbps
Olds, Alberta	1 Gbps	1 Gbps
Stratford, Ontario	1 Gbps	
Kansas City, Kansas	10 Gbps	1 Gbps
Austin, Texas (2014)	1 Gbps	1 Gbps

York Region – Coverage Overview

- ❑ Urban areas generally have access to connectivity – this tends to be fibre-to-the-node, with new areas receiving fibre-to-the-address.

- ❑ Rural areas generally have access to wireless and satellite solutions, albeit at higher costs for slower speeds.

- ❑ Some employment areas and businesses are challenged with connectivity as a result of:
 - ❑ Unavailable infrastructure
 - ❑ Cost of connectivity

York Region Broadband Strategy Vision

Vision:

To establish York Region as a Gigabit Region recognized for its leadership in fostering an eco-system of collaboration and business innovation within a connected lifestyle community.

Objectives:

- ❑ Enable higher connectivity speeds to 100% of homes and businesses within York Region.
- ❑ Facilitate open, competitive and innovative services and applications.
- ❑ Leverage resources and work collaboratively with public and private sector stakeholders to encourage investments in broadband infrastructure and applications.

Broadband Infrastructure - Targets

- Connectivity speed and technology targets set for land-uses and facilities.

Land-Use	5-Year Target		10 Year Target	
	Up	Down	Up	Down
Regional Centres and Corridors	10 Gbps	10 Gbps	1Tbps	1Tbps
Employment and Institutional Lands	10 Gbps	10 Gbps	1Tbps	1Tbps
Urban Residential	500 Mbps	500 Mbps	1 Gbps	1 Gbps
Urban Commercial	1 Gbps	1 Gbps	10 Gbps	10 Gbps
Towns and Villages	50 Mps	250 Mbps	100 Mbps	500 Mbps
Rural Areas	50 Mbps	100 Mbps	50 Mbps	250 Mbps

- Certain areas have been identified for greater connectivity because of:
 - Ability to complement municipal planning goals.
 - Ability to improve economic development.
 - Ease of investment and availability of infrastructure.

York Region Connectivity Challenges

Priority	Land-Use Focus Area	Major Issue(s)
1.	Employment and Commercial Lands – New and Existing	Currently limited infrastructure and/or high-cost prevents adequate access to connectivity.
2.	Urban and Rural Residential - Existing	A high-cost to retrofit and upgrade connectivity infrastructure.
3.	Rural Residential – New	Low densities and lack of spectrum limit infrastructure investments for connectivity.
4.	Urban Residential - New	Receiving fibre-to-the-address but competition is limited.

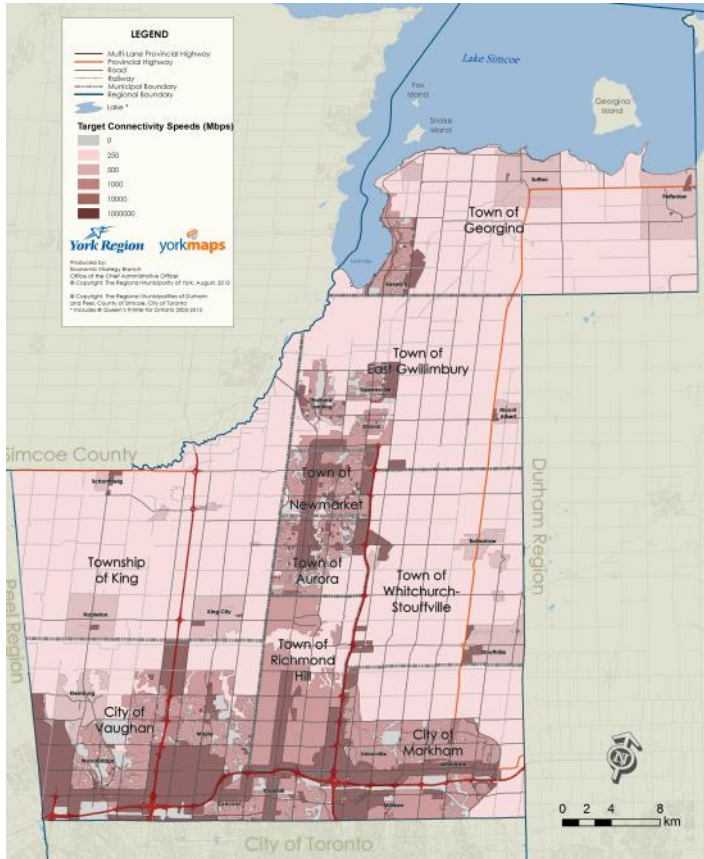
Implementation Opportunities

- ❑ **Education and Advocacy** – actions focused on educating public and private sector stakeholders on the importance and potential uses of high-speed connectivity.
- ❑ **Municipal Processes** – actions focused on opportunities for improving municipal processes to facilitate investments in connectivity.
- ❑ **Infrastructure Investments** – a range of infrastructure projects to be explored in order to improve connectivity within the Region.

Focus Area #1: Education and Advocacy

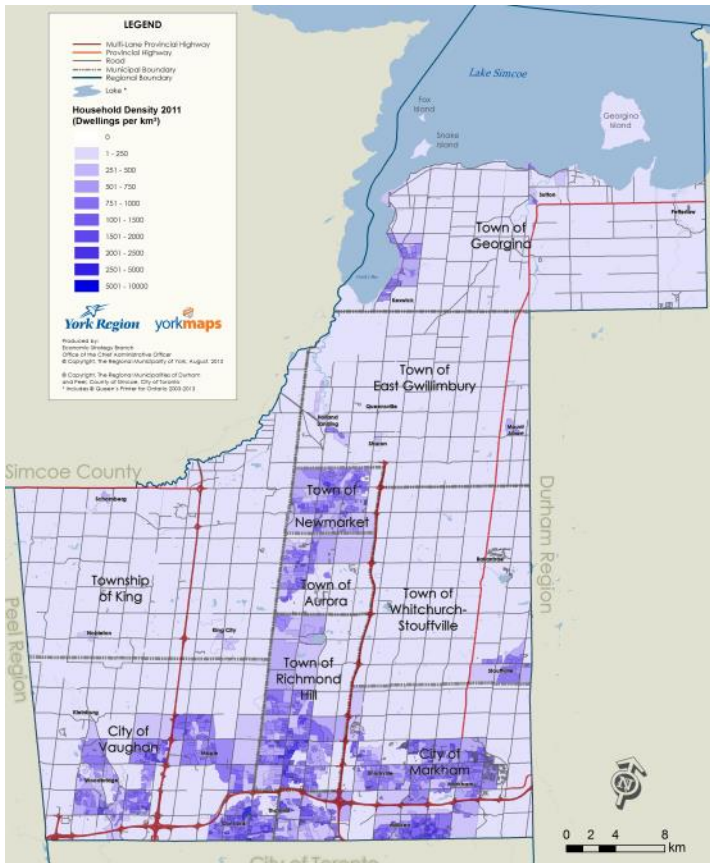
Project	Description
Government Engagement	Engage upper levels of government on the importance of broadband investments within York Region.
Development Community Engagement	Engage development industry on the importance of connectivity.
Property Management Engagement	Engage commercial, industrial and multi-residential property managers on the importance of connectivity.
Business Service Portal	Develop a portal so that businesses can identify what types of services are available by address in the Region's employment areas.
Residential Service Portal	Develop a residential service portal so that residents can determine which providers are available at their address, and at what speeds and cost.

Focus Area #2: Municipal Processes



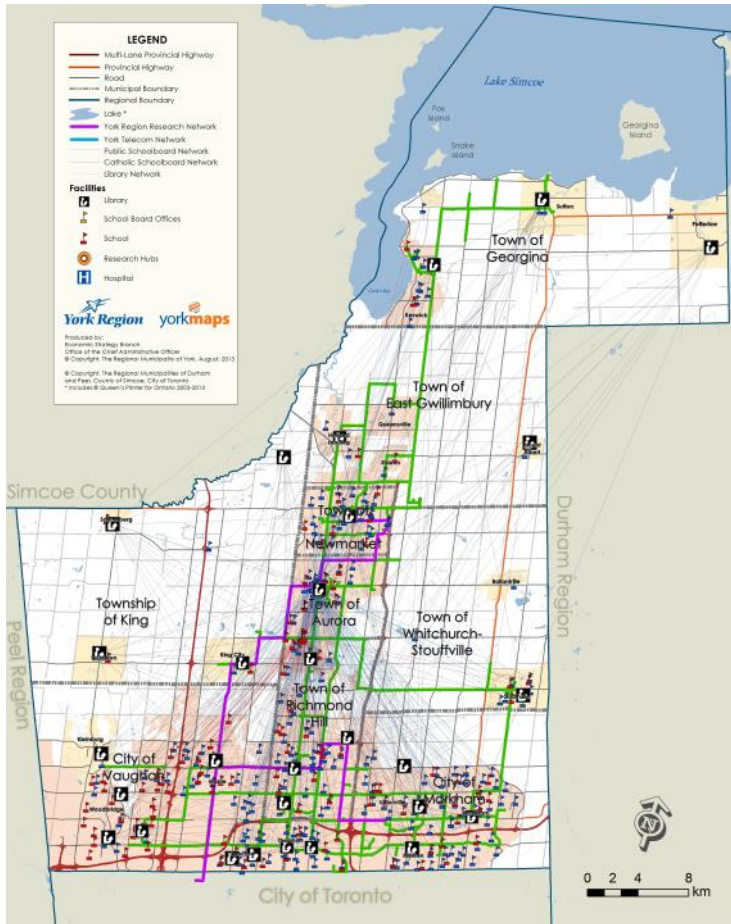
- ❑ **Municipal Access Agreements** – harmonize process for municipal access agreements to make it easier for private sector investments in fibre.
- ❑ **Development Approvals** – mandate installation of fibre conduit in new developments throughout the Region.
- ❑ **Municipal Conduit Installation** – make it policy to include fibre conduit as part of all Regional and local municipal road (re)construction projects.

Focus Area #2: Municipal Processes (cont'd)



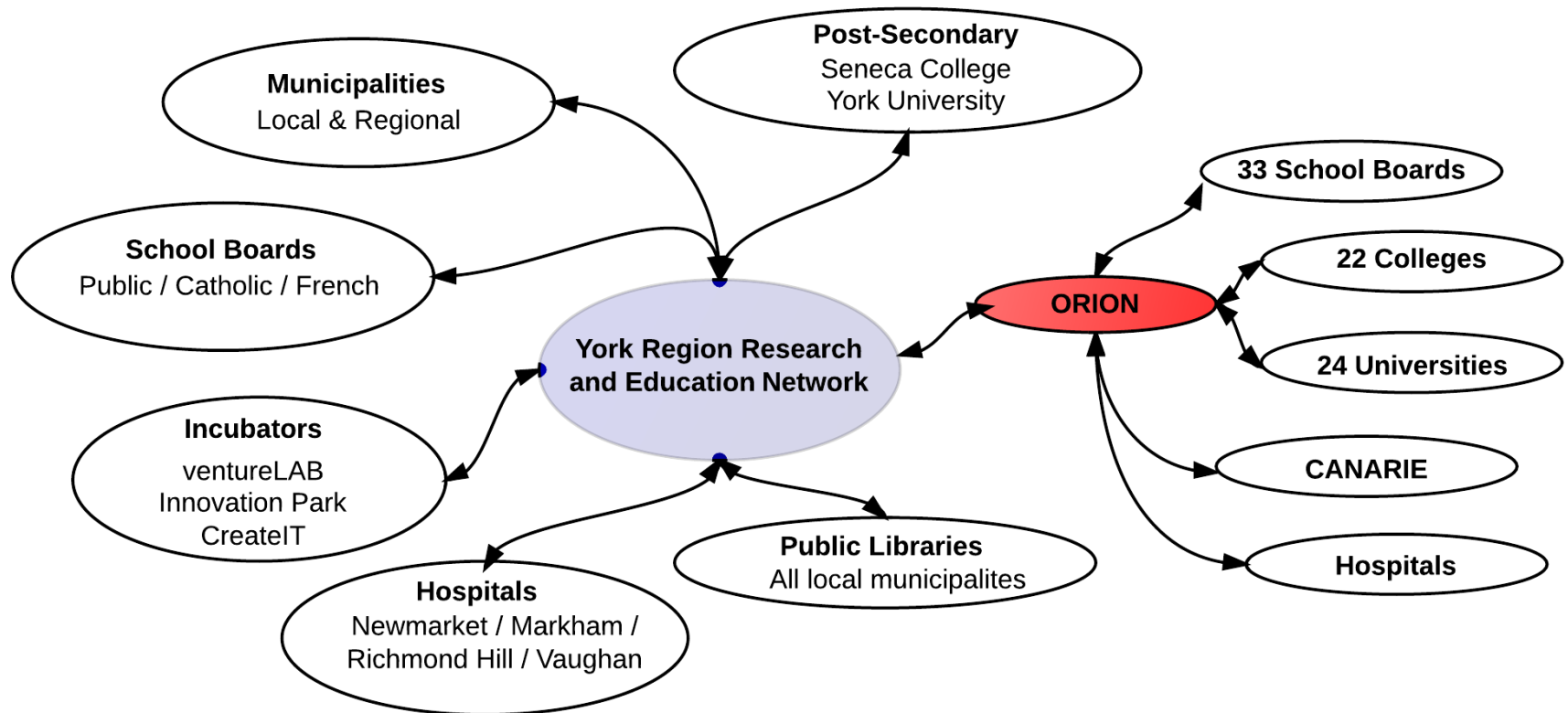
- ❑ **Municipal Conduit Leasing** – to improve availability and accessibility of connectivity, develop a municipal conduit leasing program.
 - ❑ Municipality would construct and manage conduit through the following processes:
 - ❑ *Development Approvals* – require installation in new developments.
 - ❑ *Road Projects* – include in key Regional and local road projects.
- ❑ **Benefits for Improved Connectivity**
 - ❑ Reduces barrier to entry by a cost of up to 80% per metre.
 - ❑ Provides greater competition and improved access.
 - ❑ Generates revenue from infrastructure investment.

Focus Area #3: Infrastructure – Public Sector Service



- ❑ Develop York Telecom Network to provide connectivity for the Region, as well as:
 - Local Municipalities
 - Libraries
 - Police and Fire
 - Hospitals
 - School Boards
 - Post-Secondary Institutions
- ❑ Utilize YTN were feasible to provide dark fibre to ISPs.
- ❑ Leverage YTN builds to complete shared construction with ISPs.

Focus Area #3: Infrastructure – Public Sector Service *(cont'd)*



Establish a York Region Research and Education Network to connect public and private sector research and education assets.

Focus Area #3: Infrastructure – Private Sector Service

- ❑ All of the Region's land-uses need strategies for improved connectivity. Those land-uses have been organized as follows:

- | | |
|-----------------------|--------------------|
| • Centres & Corridors | • Urban Commercial |
| • Urban Residential | • Towns & Hamlets |
| • Employment | • Rural |

- ❑ There are two conditions that need to be addressed:

- | | |
|-------|------------|
| • New | • Existing |
|-------|------------|

- ❑ Both conditions are equally complex and require different approaches.

Focus Area #3: Infrastructure – Private Sector Service *(cont'd)*

In new development, these are the actions being pursued:

- ❑ **Development Standards** – require the installation of fibre optic conduit as part of the development approval process.
- ❑ **Site Plan / Building Code** – ensure new buildings have the ability to accept connectivity both internally and from the street.
- ❑ **Developer Engagement** – engage development companies on importance of connectivity and explore opportunities to meet or exceed Regional speed targets.
- ❑ **Service Provider Engagement** – engage service providers on new development areas and explore opportunities to meet or exceed Regional speed targets.

Focus Area #3: Infrastructure – Private Sector Service *(cont'd)*

In retrofit situations, there are three scenarios that can be explored:

- ❑ **Option #1 – Private Sector** – engage private sector to make the necessary investments in the defined area.
- ❑ **Option #2 – Public-Private Partnership** – if private sector is not willing to be the sole investor in projects required to reach the Region's targets, explore public-private partnership opportunities for defined areas.
- ❑ **Option #3 – Municipal / Non-Profit** – if private sector has no interest in investing in certain projects, municipalities can lead projects on their own, using one of the following approaches:
 - ❑ Utility – examples include Stratford, Ontario.
 - ❑ Not-for-Profit / Profit Corporation – examples include Olds, Alberta.
 - ❑ City-Owned / Contracted Services – examples include Fredericton, New Brunswick.

Current Initiatives: Moving Forward with Implementation

- ❑ **Research and Education Network** – currently engaging the stakeholder group to further refine and develop a business model for moving forward.
- ❑ **Internet Service Provider Engagement** – ongoing engagement with ISPs on infrastructure investment opportunities within the Region. A number of initial projects have been identified and are being planned for 2014.
- ❑ **Municipal Conduit Network** – developing specifications and a business model for the development and management of a municipal conduit network.
- ❑ **York Telecom Network** – developing the business model and capital plan for the build of the York Telecom Network.