

# CONNECTIVITY COMMITTEE MEETING

Thursday, November 5, 2020

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# CONNECTIVITY COMMITTEE MEETING

Thursday, November 5, 2020  
1:00 p.m.  
Meeting to be held electronically.

## Agenda

1. Approval of Agenda
2. Adoption of October 22, 2020 Minutes
3. Disclosure of Pecuniary Interest and the General Nature Thereof
4. Delegation: Independent Telecommunications Providers Association (ITPA)  
–Jonathan Holmes, ITPA Executive Director, Grant Roughley, VP Northern Frontenac Telephone Company, Ian Stevens, CEO Execulink Telecom  
*(Presentation to be circulated in advance of the meeting)*
5. Action Plan Update – Councillor Marks, Chief Administrative Officer
6. Conduit in Road Allowances - Director of Engineering Services
7. Summary of Discussion with Local Municipal Partners – Chief Administrative Officer
8. Broadband Government Outreach – Director of Financial Services, General Manager of Economic Development
9. Summary of Municipal Broadband Masterclass with Jesse Hirsh Summary – Councillor Giguère (Vice Chair), Legislative Services Coordinator (report will be circulated in advance of the meeting if possible)
10. Date of Next Meeting
11. Adjournment

**Meeting:** Connectivity Committee  
**Date:** October 22, 2020  
**Time:** 1:00 p.m.  
**Location:** Webex

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**Attendees:** Tom Marks, Councillor and Committee Chair  
Dominique Giguère, Councillor and Committee Vice Chair  
Dave Mennill, Warden  
Justin Pennings, Community Member  
Mike Andrews, Community Member  
Shawn Southern, Community Member

**Regrets:** Joshua Kiirya, Community Member

**Staff:** Julie Gonyou, Chief Administrative Officer  
Jim Bundschuh, Director of Financial Services  
Alan Smith, General Manager of Economic Development  
Al Reitsma, Manager of Information Technology  
Cecil Coxen, IT Manager – Township of Malahide  
Katherine Thompson, Supervisor of Legislative Services  
Carolyn Krahn, Legislative Services Coordinator

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## **DRAFT MINUTES**

### **1. Call to Order**

The Connectivity Committee met this 22<sup>nd</sup> day of October, 2020. The meeting was called to order at 1:00 p.m.

### **2. Approval of Agenda**

Moved by: Warden Mennill  
Seconded by: Councillor Giguère

RESOLVED THAT the agenda be amended to include a report from the Chief Administrative Officer regarding Local Municipal Partner Connectivity Question Responses.

### Recorded Vote

	<b>Yes</b>	<b>No</b>
Mike Andrews	Yes	
Councillor Giguère	Yes	
Warden Mennill	Yes	
Shawn Southern	Yes	
Justin Pennings	Yes	
Councillor Marks	Yes	
	6	0

- Motion Carried.

### 3. Adoption of October 8, 2020 Minutes

Moved by: Mike Andrews

Seconded by: Justin Pennings

Resolved that the minutes of the previous meeting be adopted.

### Recorded Vote

	<b>Yes</b>	<b>No</b>
Mike Andrews	Yes	
Councillor Giguère	Yes	
Warden Mennill	Yes	
Shawn Southern	Yes	
Justin Pennings	Yes	
Councillor Marks	Yes	
	6	0

- Motion Carried.

### 4. Disclosure of Pecuniary Interest and the General Nature Thereof

None.

### 5. Elgin County Connectivity Committee: Literature Review

Erin Braam and Merrill Taylor, Community and Cultural Services, presented profiles of five (5) communities in Ontario and Alberta that have successfully implemented rural broadband Internet projects: Amherstburg, ON; Olds, AB;

Chatham, ON; Chapleau First Nations, ON; and Timiskaming and Gogama-Foleyet, ON.

Moved by: Warden Mennill  
Seconded by Justin Pennings

RESOLVED THAT the October 15th, 2020 report titled Elgin County Connectivity Committee Literature Review submitted by Erin Braam, Natalie Marlowe and Merrill Taylor, be received and filed for information; and

THAT staff be directed to follow up with each community and report back on the type of technology used, the partners involved, the projected and actual costs, funding source breakdown, population density of the community, number of properties served, number of kilometres of fiber installed, and the status of the project.

**Recorded Vote**

	<b>Yes</b>	<b>No</b>
Mike Andrews	Yes	
Councillor Giguère	Yes	
Warden Mennill	Yes	
Shawn Southern	Yes	
Justin Pennings	Yes	
Councillor Marks	Yes	
	6	0

- Motion Carried.

**6. Action Plan Update**

The Chief Administrative Officer presented an update on the Committee's Action Plan, noting completed actions, ongoing actions, and upcoming activities.

Moved by: Councillor Giguère  
Seconded by: Mike Andrews

RESOLVED THAT the Action Plan Update presented by the Chief Administrative Officer be received and filed.

## Recorded Vote

	<b>Yes</b>	<b>No</b>
Mike Andrews	Yes	
Councillor Giguère	Yes	
Warden Mennill	Yes	
Shawn Southern	Yes	
Justin Pennings	Yes	
Councillor Marks	Yes	
	6	0

- Motion Carried.

### **7. Local Municipal Partner Connectivity Question Responses**

The Chief Administrative Officer presented information gathered from Elgin's Local Municipal Partners regarding connectivity in their respective municipalities. The Chief Administrative Officer will continue to collect information from the remaining Local Municipal Partners and report back to the Committee at a later date.

### **8. Internet Forum**

The General Manager of Economic Development presented a draft outline of the Rural Internet Forum and sought Committee feedback. The purpose of the Forum is to have a conversation with ISPs about best-practices and to review the general public survey results. The length of the forum will be three (3) hours with two (2) hours for presentations and one (1) hour for facilitated discussion. The first Rural Internet Forum is scheduled for December 3 at 9:00 a.m. A second end user forum to include public feedback will also be considered.

### **9. Draft Connectivity Survey (Public) Communications Plan**

The Supervisor of Legislative Services presented the Connectivity Survey Communications Plan, which includes steps to promote the survey to the public. Staff will monitor the survey response. If more promotion is needed, staff will investigate mass mailing options.

#### **10. Draft Internet Service Provider Survey**

The Supervisor of Legislative Services presented a draft survey for current Internet Service Providers, and Committee Members provided feedback. Staff will update and distribute the survey to local Internet Service Providers.

#### **11. Date of Next Meeting**

The Committee will meet again on Thursday, November 5 at 1:00 p.m.

#### **12. Adjournment**

The meeting was adjourned at 2:32 p.m.

	Actions	WHAT DO WE WANT TO KNOW?	HOW?	Notes/Updates
<p><b>Conduct an Environmental Scan</b></p>	<p>Conduct a literature review to identify what other rural communities have done to address connectivity challenges and issues (i.e. best practices, emerging practices, lessons learned, etc.)</p>	<p>Lessons learned</p> <ul style="list-style-type: none"> <li>• What has worked well?</li> <li>• What has not worked well?</li> </ul> <p>Who did they work with to make it happen?</p> <p>What made the business case work for building rural fibre?</p>	<p>Utilize Reference Librarian Support from Community and Cultural Services</p> <p>Timeline: 2 weeks for preliminary research; 2 weeks for analysis.</p> <p>Ongoing</p>	<p>Literature Review completed by Community and Cultural Services – presented to Committee October 22, 2020 (attached).</p> <p>Staff have contacted communities in Literature Review seeking additional information as requested by the Committee. An update will be provided at meeting 6.</p> <p>Research to identify best practices will be ongoing.</p>
	<p>Meet with the Independent Telecommunications Providers Association</p>	<p>Lessons learned</p> <ul style="list-style-type: none"> <li>• What has worked well?</li> <li>• What has not worked well?</li> </ul> <p>Who did they work with to make it happen?</p> <p>What made the business case work for building rural fibre?</p>	<p>Mike Andrews to facilitate connection</p> <p>Delegation to committee</p> <p>Timeline: Meeting 4 or 5 subject to availability of the group</p>	<p>Mike Andrews facilitated connection.</p> <p>The Executive Director of the Independent Telecommunications Providers Association will attend Connectivity Committee Meeting #5 (November 5, 2020).</p>

	<p>Talk to other communities who have successfully implemented connectivity solutions</p>	<p>How did they make the business case to internet service providers?</p> <p>What did they do to make the business case work?</p> <p>Lessons learned</p> <ul style="list-style-type: none"> <li>• What has worked well?</li> <li>• What has not worked well?</li> </ul> <p>Who did they work with to make it happen?</p>	<p>Following the literature review (communities to be identified in literature review).</p> <p>Timeline: 4-6 weeks after literature review, dependent on community partner availability (COVID/resourcing concerns)</p>	<p>It is anticipated that an update will be provided to the Committee at Meetings #5 &amp; 6.</p> <p>Collection of additional information as requested by the Committee is ongoing. It is anticipated that an update will be available at meeting #6.</p>
<p><b>Gather Existing Data</b></p>	<p><b>SOURCE</b></p>	<p><b>WHAT DO WE WANT TO KNOW?</b></p>	<p><b>HOW?</b></p>	
	<p>Gather existing data that can help to inform the development of a connectivity strategy in Elgin. Contact the following organizations to access their data:</p>			
	<p>A. Thames Valley District School Board</p>	<p>How many students do not have access to internet at home?</p> <p>Are there particular locations where students don't have access to the internet?</p>	<p>Jim will connect with the TVDSB and report back to committee.</p> <p>Timeline: Meeting #5</p>	<p>Update to be provided at meeting #5 on November 5<sup>th</sup>, 2020.</p>

	B. SWIFT	What does connectivity currently look like in Elgin?  Where have you identified gaps?	Discussion with Barry Field	SWIFT is available as a resource as needed.
	C. Current Providers	What does connectivity currently look like in Elgin?  Where have you identified gaps?  Would you be willing to have a one on one discussion with Committee Chair?	Survey – draft completed by the committee  Timeline: Meeting #4 – distribution following meeting by email invitation	An ISP Survey as approved by the Committee on October 22, 2020 has been sent to ISP providers in Elgin with a letter from the Chair requesting participation. Results to be presented at meeting #6 subject to ISP availability.
	D. OMAFRA	Are you aware of any areas that are not being served? Where?  Are you aware of any areas that are underserved? Where?	Jim will connect with OMAFRA and report back to committee.  Timeline: Meeting #5	Update will be provided at Meeting #5.
	E. Chamber of Commerce	Are you aware of any areas that are not being served? Where?  Are you aware of any areas that are underserved? Where?	Alan Smith will connect with the Chamber of Commerce (Aylmer and St. Thomas) and report back.  Timeline: Meeting #5	Update will be provided at Meeting #5.
	F. Public Health	Are you aware of any areas that are not being served? Where?	Katherine will connect with Public Health and report back.	Update will be provided at Meeting #5.

		Are you aware of any areas that are underserved? Where?	Timeline: Meeting #5	
<b>Engage Stakeholders</b>	<b>Stakeholder</b>	<b>What we need to know</b>	<b>How</b>	
	A. End Users (businesses/homeowners)	<p>Where do you live?</p> <p>What do you have now?</p> <p>What is the speed?</p> <p>What do you pay for it?</p> <p>What do you need?</p> <p>What are you willing to contribute to the solution?</p>	<p>Survey – online and paper, distribution plan to include local municipal partners and Elgin’s libraries</p> <p>Online – social media, County website, LMP websites</p> <p>Press Release and paid advertisements in local media outlets.</p> <p>Timeline for survey: Week #4</p> <p>Virtual Input Session</p>	<p>Survey completed October 15, 2020. Communications/Distribution Plan attached for Committee Review (October 22, 2020).</p> <p>Survey collection is on-going. Promotions continue. Staff to provide numbers at the November 5<sup>th</sup>, 2020 meeting.</p>
	B. Local Municipal Partners	<p>What are you doing?</p> <p>Where are the underserved areas?</p>	<p>Local Administrators to discuss strategy. CAO will report back Week #4.</p> <p>County Councillors</p>	<p>Preliminary feedback has been gathered. A fulsome report will be provided to the Committee at Meeting #5.</p>

		<p>What are you willing to contribute to the solution?</p> <p>Are you undertaking any infrastructure projects/road work that we could leverage to install fibre?</p>		
	<p>C. Neighbouring Municipalities</p> <ul style="list-style-type: none"> <li>• Chatham-Kent</li> </ul>	<p>What have you done?</p> <p>What has worked well?</p> <p>What has not worked well?</p>	<p>Warden to Warden</p> <p>IT Manager to IT Manager</p> <p>Engineer to Engineer</p> <p>This will be ongoing.</p>	<p>Information from Chatham-Kent will be included in the follow up to the Literature Review to be presented at Meeting #6</p>
	<p>D. Potential Infrastructure Partners</p> <ul style="list-style-type: none"> <li>• Elgin County – Engineering Services</li> <li>• LMPs</li> <li>• Utilities</li> </ul>	<p>Are you undertaking any infrastructure projects/road work that we could leverage to install fibre?</p> <p>What are you willing to contribute to the solution?</p>	<p>Staff to connect with potential infrastructure partners and provide updates when available.</p> <p>Engineering Services to provide financial information regarding infrastructure opportunities (conduit).</p> <p>This will be ongoing.</p>	<p>A report from the Director of Engineering Services is included in the November 5<sup>th</sup>, 2020 (meeting #5) agenda package.</p>

	E. Thames Valley District School Board	<p>How many students do not have access to internet at home?</p> <p>Are there particular locations where students don't have access to the internet?</p> <p>What are the current costs of rural internet, and do they prevent access?</p> <p>What are you willing to contribute to the solution?</p>	<p>Gather existing data Timeline: Week #5</p> <p>If needed, consider survey.</p>	Information will be presented at Meeting #5.
	F. Current Internet Providers and small providers	<p>What can you do to improve connectivity? What are you willing to contribute? What do you need to achieve the last mile?</p> <p>How can we work together to implement solutions? How can we make the business case work to build rural fibre?</p> <p>Can you share with us any user complaints regarding rural internet access?</p> <p>Have you conducted a cost benefit analysis for building rural fibre? If yes, can you share that information with us?</p>	<p>Internet Forum (Committee to set date in November 2020.)</p> <p>Survey – following meeting #4</p> <p>One on one interviews with interested ISPs, following the survey and forum.</p>	<p>The Committee selected December 3<sup>rd</sup>, 2020 as a date for the Internet Forum. A framework for the virtual event was approved by the Committee at the October 22, 2020 meeting.</p> <p>Planning for this event is on-going.</p>

	G. SWIFT	<p>What are your current plans? What is your ultimate goal?</p> <p>Where are the gaps?</p> <p>What are the challenges?</p> <p>Where are you going, and how can we help?</p> <p>What are your timelines?</p>	Interview with Barry Field	Presentation from Barry Field received by Committee at Meeting #3.
<b>Identify Short-Term Solutions</b>	<b>WHAT DO WE NEED TO KNOW?</b>	<b>HOW?</b>	<b>SOLUTIONS</b>	
	<p>Where are the problem areas?</p> <p>What are the potential solutions?</p>	End User Survey/Existing Data	<p>Wireless</p> <p>Point to point access</p>	To be completed following analysis of end-user feedback received through survey.
<b>Explore Funding Opportunities</b>	<b>FUNDING OPPORTUNITIES</b>	<b>CONTACT</b>	<b>HOW</b>	
	<p>County</p> <ul style="list-style-type: none"> <li>Loans - Infrastructure Ontario</li> </ul>	Director of Financial Services	Director of Finance to report back with options and opportunities.	Preliminary information will be presented to the Committee at Meeting #5.
	Provincial Government	MPP	<p>Warden, Chairman and CAO to meet with MPP Yurek.</p> <p>Timeline: October 2020</p>	A meeting has been arranged with Minister Yurek for October 30.

	Federal Government	MP	Warden, Chairman, and CAO to meet with MP Vecchio.  Timeline: October 2020	A meeting has been arranged for with MP Vecchio for November 12.
	CRTC		Staff to provide an overview of program and available funding	Preliminary information will be presented to the Committee at Meeting #5.
	Canada Infrastructure Bank		Director of Finance to report back with options and opportunities.	Preliminary information will be presented to the Committee at Meeting #5.
<b>Identify the Role of the County</b>	<p>What is missing?</p> <p>Seek County Council support for a Made in Elgin solution for connectivity challenges.</p> <p>The role of the County is to support the Committee (staff).</p>			Ongoing
<b>Risks</b>	<p>Capacity (staff/COVID)</p> <p>Managing Committee, public, and stakeholder expectations (communication)</p> <p>Required processes and Council consent may take time (public procurement process etc.)</p>			Ongoing



## **REPORT TO CONNECTIVITY COMMITTEE**

**FROM:** Brian Lima, Director of Engineering Services

**DATE:** October 28, 2020

**SUBJECT:** Conduit in Road Allowances

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### **RECOMMENDATION:**

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THAT the report titled “Conduit in Road Allowances” from Elgin County’s Director of Engineering Services dated October 28, 2020 be received and filed.

### **INTRODUCTION:**

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Over the last decade, businesses and residents have identified fast, reliable, accessible and available internet connectivity as a priority for economic development and social equity. As part of the modern global economy, there is a recognition that the citizens and businesses of Elgin County need connectivity that is world-leading in its speed and accessibility.

The County has been supporting the deployment of broadband and advanced telecommunications infrastructure for a number of years. Examples of this include encouraging telecom companies to lay fibre optic cable at the same time as the County undertakes road reconstruction projects, accommodating the location of telecommunications towers, and encouraging the inclusion of telecom infrastructure within County facilities.

As part of the Connectivity Committee Action Plan, the Director of Engineering Services was directed to investigate the practices and costs associated with infrastructure opportunities (conduit) and to report back to the Committee.

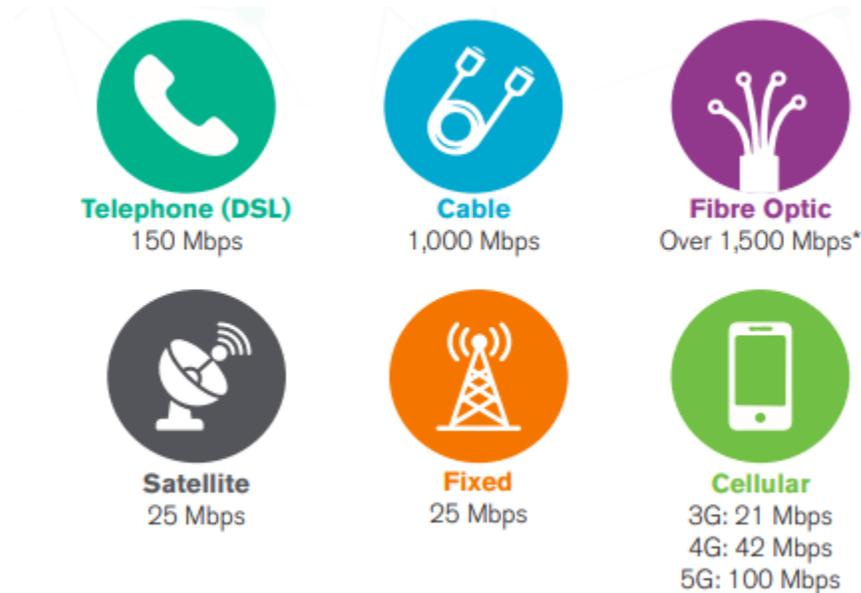
### **DISCUSSION:**

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#### **What is Broadband?**

There is no one standard definition for “broadband”. Simply put, broadband means internet access that is always on, available at higher speeds than traditional dial up

service, and capable of transmitting large amounts of data very quickly. There are several different forms of broadband internet technologies, including telephone-based Digital Subscriber Line (DSL), cable, wireless (fixed and satellite), and fibre-optic. Each of these technologies have different capabilities for maximum service speed (expressed in megabytes per second, or Mbps).



*Figure 1: Broadband technology options and their highest service speeds*

*\*Fibre optic service speed is limited by the electronics at either end of the line, as opposed to the fibre itself, which can theoretically transmit data at the speed of light.*

Broadband is now essential to economic growth. Broadband connects residents and businesses to billions of devices and users around the world creating a digital overlay to our physical world that has revolutionized how we work, play, live, learn, govern and inform our residents and relate to the world.

All of the above broadband technology options are currently being used in Elgin County. Telephone and cable lines, where they exist, are commonly used to deliver internet services in established areas. In rural areas where there is no existing “wired” infrastructure, wireless broadband technology is common. For newer construction and areas with supportive customer densities, ISPs may be installing fibre-optic service, which is currently the latest and fastest broadband technology, with service speeds increasing regularly.

## **Why Broadband is Important?**

Society, and the global economy, is increasingly digital and online. Government services, business functions and entertainment options have moved online at an increasing pace, continuing to change the way people work, play and communicate. The growing demand for fast service and constant connectivity highlights the need for fast, reliable, and affordable broadband service.

## **Connectivity Guidelines and Current Conditions**

In 2016, after an extensive review, the Canadian Radio-Television Commission (CRTC) established a baseline broadband service target that Canadians will require to participate in the digital economy. The target, which applies to residential users in both rural and urban areas, benchmarks download speeds of 50 Mbps and upload speeds of 10 Mbps (e.g. 50/10 Mbps), with unlimited usage capacity. To support the achievement of the target, the CRTC established a fund of \$750 million over five years to support investment in broadband infrastructure.

For businesses, government agencies and institutions, broadband needs tend to be higher and generally increase with the size of the organization. Other factors, such as the number of computers or other connected devices, as well as the market sector and the services being provided, will greatly affect the broadband needs of any given organization. Given these variances, it is challenging to predict the needs of any single business or institution without undertaking more detailed analysis.

Based on the CRTC baseline target for residential uses and current industry standards for non-residential uses, connectivity guidelines have been developed by Actional Intelligence Inc. and augmented through stakeholder feedback. It is recognized that some households, organizations, and areas (such as innovation hubs) may require higher or lower levels of broadband connectivity, based on their individual needs. It is also recognized that County's municipal partners may wish to establish their own targets to address local priorities.

## **Elgin County's Current Connectivity Conditions**

The existing connectivity conditions in Elgin County reflect those of many other jurisdictions in Ontario and Canada. This includes a strong divide in service quality and service options between urban and rural areas. In addition, the affordability of broadband is an issue for certain businesses and residents.

There are numerous ISPs operating in Elgin County including larger, established providers, as well as smaller and more recently established companies. ISPs may specialize in certain geographic areas or with a particular broadband technology. Often, the level of service and number of available ISPs is correlated with the location of the customer.

Overall, Elgin County's current connectivity conditions can be summarized as follows:

#### URBAN AREA

- Faster speeds, with multiple internet service options.
- New broadband technologies, with competitive prices.
- New residential developments are generally well served.
- Major institutions (post-secondary education, health care, government) are able to have their needs met.
- Some connectivity issues where population densities are lower.
- Services generally may meet or exceed the current CRTC baseline target.

#### RURAL AREAS

- Lower speeds, limited internet service options including fewer broadband technologies and limited internet service providers.
- Generally higher prices.
- Prevalence of wireless broadband technology and related issues of reliability due to line of sight obstructions.
- Available service generally does not meet the current CRTC baseline target.
- Service quality may diminish the further south one travels.

#### BUSINESS AND EMPLOYMENT AREAS

- Many employment areas and other business locations are not pre-serviced with adequate broadband infrastructure.
- Capital costs to install services can be prohibitive, especially for smaller businesses.
- Downtown areas with older legacy networks face challenges with costly retrofits.

#### **Broadband Priorities**

Like many Canadian municipalities, Elgin County's connectivity is not equally shared. In the County's urban areas, ISPs are attempting to keep pace by deploying the latest fibre-optic broadband technologies. At the same time, new advances in wireless mobile technologies (5G) are continuous. Many of the County's residents, businesses and

institutions benefit from these improvements and can access the level of broadband service they require.

Service limitations continue to be a challenge within the County's rural areas. This situation is problematic as technological advances will increasingly require superior internet connections to access services and participate in modern society. Affordability will remain a challenge for lower-income households, as well as for businesses that must pay the capital cost to extend suitable services to their building.

Overall, there is a growing concern that broadband service availability to parts of Elgin County that are lagging behind other jurisdictions in the province will fall further behind if their needs cannot be met.

These obstacles cannot be solved by any single organization or level of government. Instead, it will take a combined effort by many stakeholders and partners. Elgin County recognizes the importance of broadband connectivity and is committed to taking a proactive and supportive role in the delivery of broadband throughout the region, in partnership with other levels of government, ISPs, and other key stakeholders.

### **“Dig Once” Policy**

The following action could help achieve the County's broadband priorities:

Often, the highest cost associated with underground fibre deployment is the expense of digging up and restoring municipal rights-of-way. This can account for between 60 and 80 per cent of the overall cost.

The purpose of a “Dig Once” Policy is to reduce the cost of broadband deployment by providing for the placement of conduit (the plastic pipe that houses fibre-optic cable) during road construction projects, when there is easy access to the utility trench. This allows for conduit to be placed while minimizing the need and expense of excavation and restoration. At the desired time, the fibreoptic cable can then be pulled through the conduit without the need for expensive excavation.

The Dig Once concept was initially developed for U.S. Federal Road Projects as a means to pre-install conduit in large scale projects to facilitate easier access to remote and rural communities. This approach would ideally reduce private service provider costs and thereby make lower population areas financially feasible.

There are varying approaches and degrees of effort to implementing Dig Once Policy. A Dig Once Policy may focus on developing a formal process to advise ISPs of construction activities. This option provides ISPs with the opportunity for the cost-efficient placement of their own conduit while the trench is open. However, this

approach also requires a high degree of alignment between municipal and ISP staff, as well as project plans and budgets, which may not always be possible.

Another Dig Once option is for municipal governments to place their own conduit during municipal construction projects. In this approach, the municipality would retain ownership of the conduit, which can then be used for its own corporate purposes or as an asset that is either purchased or leased for use by ISPs.

### ***The Chatham-Kent Experience***

*Based on the Municipality of Chatham-Kent's like experience to date, the second option was found to be most successful for Chatham-Kent who bares the upfront capital cost, and eliminates the risk of roads and/or boulevards being ripped up potentially multiple times following a road reconstruction. This model also allows the Municipality full control of alignment.*

The Committee may desire for staff, in consultation with County municipal partners, to explore the concept of a region-wide Dig Once consistent approach that includes the potential for open access to County conduit. As part of this exercise the following could be considered:

- The experience and success of Dig Once policies in other jurisdictions.
- Whether there is a desire or market interest for ISP access to municipally owned conduit.
- That a technical standard be developed for the location and specifications of conduit within road rights-of-way that is consistent across the region and area municipalities.
- That any potential security and access issues related to sharing infrastructure can be addressed, including necessary legal and administrative agreements.
- That the condition and age of conduit be tracked as part of the County's asset management system.
- That the County establish a level of service connectivity guideline.
- That the placement of conduit be prioritized to those areas where current services do not meet the County's connectivity guidelines and where demand for improvement is most pronounced.
- That the costs of installation and anticipated return on investment be evaluated.
- The relevance of Dig Once given the increase in the use of "trenchless" technologies such as directional drilling.
- That Dig Once can be used in a manner that will not create complications of added cost due to the placement of conduit next to other infrastructure.

- An analysis of the likely number of Dig Once projects that could occur, given that Dig Once depends upon access to the utility trench, which is not typical for many reconstruction projects.

Counter arguments associated with the County's investment in providing empty conduits as part of road reconstruction projects are as follows:

- Utility infrastructure is installed to meet local area needs as planned by utilities making it nearly impossible to predict where conduit will be needed in advance.
- Each telecom provider has unique design requirements and equipment needs making conduit requirements difficult to predict. This relates to size, length of run and ideal termination points.
- Major utility upgrades are more effectively installed comprehensively rather than trying to link to disconnected lengths of spare conduit.
- Technology changes may avoid the need for conduit in all areas making route selection very difficult.
- Telecom companies are able to support higher density urban areas and associated installation costs based on revenue potential thereby not needing to rely upon County provided conduits.
- Generally biennial County road reconstruction projects are usually one to two kilometres resulting in a very low rate of installation.
- The County does currently encourage the use of joint trench where possible during retrofit projects as well as mandated coordination for new subdivisions.
- Utilities are consulted during any County road reconstruction project and offered the opportunity to install any upgraded services.

## **Further Opportunities**

Regional policies and processes can affect the extent and speed of broadband deployment by ISPs. Accordingly, review of the following policies and processes should be undertaken to support broadband network expansion:

### **1. Development Approvals Process**

Similar to the benefits of the Dig Once approach, requirements for broadband infrastructure to be included as part of new development ensures that future occupants will not be faced with costly and disruptive retrofits at a later date. There is an opportunity through the development approvals process to mandate new developments to make provisions for broadband infrastructure.

To maximize competition and service options for future residents and businesses, all ISPs should be given the opportunity to install broadband infrastructure within new

developments. The County, in co-operation with local area municipalities, could consider the use of conditions within subdivision agreements that affords all CRTC registered telecommunications service providers the opportunity to locate infrastructure in proposed municipal rights-of-way.

To enshrine these requirements, updates to the County Official Plan will also be required.

## 2. Planning Policy

As part of the County's Official Plan Review process, policies will be considered to support broadband infrastructure. This will include the encouragement of co-location of broadband infrastructure with existing telecommunication facilities wherever possible, as well as policies that support broadband infrastructure (conduit at a minimum) as part of new development applications.

## 3. Permitting Process

The process to obtain consent and permits to occupy municipal rights-of-way can vary between municipalities and can be difficult to navigate, particularly for new ISPs looking to deploy broadband networks. To streamline this process and clarify the standard requirements and conditions, the County could develop a standardized Municipal Access Agreement (MAA). ISPs not registered with CRTC would be required to enter into a MAA in order for the County to authorize new installations within its rights-of-way.

To create a predictable and uniform approvals environment, the County's municipal partners may wish to adopt a similar standardized MAA, leading to a harmonized approvals process across the region. To support this initiative, the County could make its standardized MAA template available and share the experience in developing the template in an effort to ease local municipal implementation of this tool.

## **FINANCIAL IMPLICATIONS:**

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None at this time. This report is for investigative purposes only.

### **Estimated Costs**

Following discussions with several municipal and ISP representatives, the following are estimated construction and material unit costs in the absence of technical standards,

and are subject to change based on many variables (i.e. road allowance infrastructure congestion, project limits, terrain, surface features, etc.):

Laying Empty Conduit

Directional Drilling (single conduit up to 100mm) ~ \$65/m  
 Ploughing (up to 2 x 50mm dia. conduits) ~ \$15/m  
 Open Trenching (up to 2 x 100mm dia. conduits) ~ \$40/m

Current Conduit Costs (HDPE SDR 11)

1.5" (38mm) to 4" (100mm) dia. ~ \$3 - \$12/m  
 4 way 18/14 multicell ~ \$9/m  
 7way 18/14\* multicell ~ \$15/m

*\*18/14 multicell conduits can handle 288 strand micro fibre trunk cables, whereas 14/10 can handle up to 216 strand cables)*

**ALIGNMENT WITH STRATEGIC PRIORITIES:**

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Serving Elgin	Growing Elgin	Investing in Elgin
<p><input checked="" type="checkbox"/> Ensuring alignment of current programs and services with community need.</p> <p><input checked="" type="checkbox"/> Exploring different ways of addressing community need.</p> <p><input checked="" type="checkbox"/> Engaging with our community and other stakeholders.</p>	<p><input checked="" type="checkbox"/> Planning for and facilitating commercial, industrial, residential, and agricultural growth.</p> <p><input type="checkbox"/> Fostering a healthy environment.</p> <p><input checked="" type="checkbox"/> Enhancing quality of place.</p>	<p><input checked="" type="checkbox"/> Ensuring we have the necessary tools, resources, and infrastructure to deliver programs and services now and in the future.</p> <p><input type="checkbox"/> Delivering mandated programs and services efficiently and effectively.</p>

**LOCAL MUNICIPAL PARTNER IMPACT:**

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None.

**COMMUNICATION REQUIREMENTS:**

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None.

**CONCLUSION:**

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Elgin County recognizes the importance of adequate broadband infrastructure for the well-being and economic competitiveness of the County’s residents, businesses, and institutions. Through the potential implementation of strategic actions such as a “Dig Once” Policy and/or undertaking a review of various County policies and processes to support broadband network expansion, may further facilitate increased connectivity throughout the County.

All of which is Respectfully Submitted

All of which is Respectfully Submitted

Brian Lima

Julie Gonyou

Director of Engineering Services

Chief Administrative Officer



## **REPORT TO CONNECTIVITY COMMITTEE**

**FROM:** Julie Gonyou, Chief Administrative Officer

**DATE:** October 30, 2020

**SUBJECT:** Local Municipal Partner Connectivity  
Question Responses #2

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### **RECOMMENDATION:**

THAT the report titled “Local Municipal Partner Connectivity Question Responses #2” from Elgin County’s Chief Administrative Officer dated October 29, 2020 be received and filed, and,  
THAT the Chief Administrative Officer be directed to continue the collection of information from the remaining Local Municipal Partner and report back to the Committee at a later date.

### **INTRODUCTION:**

As part of the Connectivity Committee Action Plan, the Chief Administrative Officer was directed to reach out to Elgin’s seven (7) Local Municipal Partners to gather information regarding connectivity in their respective municipalities and to report back to the Committee.

### **DISCUSSION:**

At the Connectivity Committee meeting on October 22, 2020 the Chief Administrative Officer presented responses to seven (7) internet connectivity related questions as received from some of Elgin’s Local Municipal Partners. At the time Elgin had received responses from the Township of Southwold, the Municipality of Bayham, the Municipality of Dutton Dunwich and the Municipality of West Elgin. The collection of this data continued and the County has now received responses from two (2) additional Local Municipal Partners. Please see attached a chart compiling the answers received.

### **FINANCIAL IMPLICATIONS:**

None.

**ALIGNMENT WITH STRATEGIC PRIORITIES:**

<b>Serving Elgin</b>	<b>Growing Elgin</b>	<b>Investing in Elgin</b>
<input type="checkbox"/> Ensuring alignment of current programs and services with community need. <input checked="" type="checkbox"/> Exploring different ways of addressing community need. <input checked="" type="checkbox"/> Engaging with our community and other stakeholders.	<input type="checkbox"/> Planning for and facilitating commercial, industrial, residential, and agricultural growth. <input type="checkbox"/> Fostering a healthy environment. <input checked="" type="checkbox"/> Enhancing quality of place.	<input checked="" type="checkbox"/> Ensuring we have the necessary tools, resources, and infrastructure to deliver programs and services now and in the future. <input type="checkbox"/> Delivering mandated programs and services efficiently and effectively.

**LOCAL MUNICIPAL PARTNER IMPACT:**

None.

**COMMUNICATION REQUIREMENTS:**

None.

**CONCLUSION:**

The input of Elgin’s Local Municipal Partners will be crucial to the Committee’s ability to create a “Made in Elgin” solution for rural broadband access in Elgin. The Chief Administrative Officer will continue to collect feedback from the remaining Local Municipal Partner and will present this feedback at a future meeting.

All of which is Respectfully Submitted

Julie Gonyou

Chief Administrative Officer

## Connectivity Committee – Local Municipal Partner Feedback

### Township of Malahide and Town of Aylmer Responses

Question	Township of Malahide	Town of Aylmer
<p><b>1. Are you aware of any Internet Service Providers (ISP) who are proposing work or who have completed work in your municipality? If so, please provide details (e.g. ISP, fibre, Wifi, etc.)</b></p>	<p>Malahide has had a few queries from third-party wireless ISPs. In addition, Malahide recently received a 3rd party consultant report regarding its Service Delivery Review. One of the recommendations in the report is for Malahide to consider creating a Municipal Services Corporation (MSC) for the purposes of providing broadband internet service. The Council will be considering this further in the coming months.</p>	<p>Aylmer is serviced by EastLink exclusively for all service.</p>
<p><b>2. Did your municipality partner with the ISP or otherwise provide support to the ISP? (please detail in-kind support as well as any financial support that you provided to them)</b></p>	<p>No.</p>	<p>No.</p>

<p><b>3. Do you have a map that indicates coverage area(s)?</b></p>	<p>Nothing other than SWIFT maps.</p>	<p>Aylmer has full municipal coverage.</p>
<p><b>4. Have you received any complaints from residents about connectivity and what are the nature of those complaints?</b></p>	<p>Yes, and there have been motions in the past to Council to encourage other ISPs to the come into the area.</p>	<p>Occasional complaints about speeds and connections – likely pretty reliable for residential service but robust needs require a fiber investment with EastLink.</p>
<p><b>5. Has your municipality taken steps to lay the ground work (i.e. conduit) for fibre during road reconstruction projects? If so, where?</b></p>	<p>No.</p>	<p>Fiber is available in town at least in places. The exact locations are a question for EastLink.</p>
<p><b>6. Are you aware of any business development initiatives that have failed as the result of lack of broadband internet access?</b></p>	<p>No.</p>	<p>No.</p>
<p><b>7. What are the high priority areas within your municipality for access to broadband internet access?</b></p>	<p>Essentially any where there is no reliable or decent high-speed internet access.</p>	<p>Mainly available so not likely as problematic as for other areas in Elgin County.</p>



## **REPORT TO CONNECTIVITY COMMITTEE**

**FROM:** Jim Bundschuh, Director of Financial Services

Alan Smith, General Manager, Economic Development

**DATE:** November 5, 2020

**SUBJECT:** Government Outreach

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### **RECOMMENDATION:**

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THAT the November 5, 2020, report titled, Government Outreach, submitted by the Director of Financial Services and the General Manager of Economic Development, be received and filed for information.

### **INTRODUCTION:**

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Elgin's goal to improve broadband connectivity across the County will benefit from the knowledge and resources available at other levels of government and business networks. This report summarizes the findings to date of outreach to a variety of organizations.

### **DISCUSSION:**

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#### **Thames Valley District School Board (TVDSB)**

The Thames Valley District School Board (TVDSB) has a vested interest in connectivity of its students. This need has been amplified in the spring as a result of the pandemic when TVDSB delivered their curriculum over the internet. They are aware of the following County areas that have experienced very limited/poor cellular-based LTE coverage:

- Springfield
- Vienna
- Port Stanley

- Port Burwell
- Eden
- Brownsville
- Iona Station

Further field testing would need to be conducted to delineate the specific boundaries of these areas – where due to topography, natural/human-made obstructions and/or limited cell tower coverage – broadband connectivity can be reduced to 1 Mbps or less. Speeds and bandwidth as low as this create significant challenges for remote learning from both a synchronous and asynchronous perspective - with limited or no alternate broadband options for students and staff to leverage in these areas. In some instances, TVDSB have had to deploy paper copies of learning materials to students/families frustrated with the lack of adequate LTE internet services at their homes. Elgin County IT staff set up TVDSB SSIDs (network name) on Elgin's library Wi-Fi routers to allow students experiencing difficulties to connect to the internet at our libraries. Obviously, this was a stop-gap measure that does not replace the need to have high-speed affordable internet in every student's home. County staff will continue to stay connected with staff at TVDSB as the Steering Committee and County Council work to achieving 50/10 connectivity.

### **Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)**

An outreach to the Ministry of Agriculture, Food and Rural Affairs resulted in introductions being made with the Broadband Development and Digital Connectivity Branch, Ministry of Infrastructure. They rely on the coverage information from Innovation, Science and Economic Development Canada (<https://www.ic.gc.ca/app/sitt/bbmap/hm.html?lang=eng>). They also pointed out that SWIFT has very detailed information on areas that have 50 mbps download 10 mbps upload speeds. The SWIFT maps have previously been presented by Barry Field and the data from this map has been added to the County's GIS system. A request has been made that an expert from the Broadband Development and Digital Connectivity Branch be a presenter at our upcoming broadband forum. This will be an important step in developing a working relationship between the Steering Committee and this vital branch of provincial government.

### **Infrastructure Ontario (IO)**

Infrastructure Ontario (IO) could be used as a source of funding for any investments that Elgin makes directly in broadband infrastructure. For instance, if the County were to lay conduit along its roadways during major road works, debentures could be procured through IO to fund this investment. Given fibre's long life cycles, it would make sense to fund such an investment with long-term debt. Debentures with 30-year terms can currently be obtained for rates of approximately 2.3%. With such favourable rates, a

business case could likely be made to install conduit to attract ISP investment in fibre and related hardware. Conduit space could be rented to the ISP to recover the costs of the debenture annual payments, but some funding from Elgin's taxes will likely still be required to fully cover the cost of annual debenture payments.

As an alternative to Elgin attracting ISPs through Elgin investing directly in conduit, Elgin could attract ISPs through providing grants, over and above grants provided by federal and provincial governments. IO would not provide debentures for providing granting, nor would IO provide debentures to fund ISP investments. Despite this, IO debentures could indirectly be used to provide Elgin with the needed cashflow to be able to fund grants. The County plans on investing approximately \$200 million in capital projects over the next ten years. Some of these projects, that were previously planned to be funded directly by tax revenues, could instead be funded by debentures, thereby freeing up cash to fund grants. Obviously, any investment in broadband, either through conduit installation or grants to ISPs, will still need to be funded by tax revenue; however, debentures allow tax revenue to be generated over multiple years (i.e. 30 years through long-term debentures) rather than a large tax increase up front.

### **Canada Infrastructure Bank (CIB)**

An alternative to IO debentures taken on by the County is ISPs taking on affordable debt through the Canada Infrastructure Bank (CIB). CIB attracts and co-invests with private sector and institutional investors in new, revenue-generating infrastructure projects that are in the public interest. Their priority areas include enhanced broadband infrastructure. The CIB has three main functions as a centre of expertise: advisory, investments, and knowledge and research. The advisory function supports governments in assessing the suitability of potential projects, and will foster awareness and education about innovative financing models. The investment function structures proposals, undertakes due diligence, manages risk transfer, negotiates agreements and supports project delivery as appropriate. The knowledge and research function will report on relevant data to improve analysis and inform investment decision-making. Bringing in private capital to infrastructure funding will allow more projects to be built than with public funds alone. Many domestic and international investors are looking to increased participation in infrastructure to build their long-term portfolios. This new model is focused on transferring risk to the parties best able to manage it and on building partnerships that address infrastructure needs with new and innovative solutions. The CIB model encourages innovation and efficiency in meeting infrastructure needs by partnering with the private sector. With their funds at risk, investors will get creative in planning and designing projects to respond to the needs of users and will consider upfront the best way to manage the infrastructure asset during its entire lifespan. The CIB model is aimed at mobilizing and leveraging private sector and institutional investment, both domestic and international, and attaching the financial

returns to the risks of infrastructure projects. To crowd-in private sector and institutional investment, federal support may be provided at below-market rates or on a subordinated basis. Elgin has submitted an inquiry into CIB and is awaiting a response. If needed, MP Karen Vecchio's office will be contacted to facilitate making contact.

### **Canadian Radio-Television and Telecommunications Commission (CRTC)**

The Canadian Radio-television and Telecommunications Commission (CRTC) will be awarding \$750 million over five years with the second call for funding now closed. CRTC states that Canadian residential and business fixed broadband internet access service subscribers should be able to access speeds of at least 50 megabits per second (Mbps) download and 10 Mbps upload, and to subscribe to a service offering with an unlimited data allowance. They will support:

- Transport projects providing broadband internet transport network capacity to one or more interconnection points
- Access projects providing fixed broadband internet access network infrastructure to connect communities to an interconnection point on the transport network
- Mobile wireless projects providing mobile wireless network to communities and/or along major transportation roads

The Universal Broadband Fund is Innovation, Science and Economic Development Canada (ISED)'s new program and is currently under development and will be another source of funding available. It will deliver up to \$6 billion in investments in rural broadband over the next 10 years.

### **St. Thomas District Chamber of Commerce**

To gain a perspective on connectivity from the business community, the St. Thomas and District Chamber of Commerce and the Aylmer and Area Chamber of Commerce were both approached. According to the St. Thomas Chamber, businesses in parts of Central Elgin and Southwold have connectivity issues compared with those located in the City of St. Thomas. Some of these businesses in more remote locations depend on cell signals, which can be weak. Therefore, advocating for our cell carriers to increase their signal strength was a suggested option. The Chamber stressed that highspeed internet is a need not a want. The St. Thomas Chamber is also surveying their membership in order to obtain more detailed information on connectivity challenges than was provided for the context of this report. Survey results will be shared.

It should also be noted at the most recent Canadian Chamber of Commerce's AGM, the following recommendations were passed with 97% support by nearly 200 Chambers across the country, including St. Thomas:

“THAT the Government of Canada: 1. Work with municipal, provincial and territorial governments and agencies to deliver broadband funding that will help maximize capital for broader internet access. 2. Launch the new Universal Broadband Fund quickly to expand broadband access to struggling communities so that they are well positioned for economic recovery. 3. Include remote and rural experts and stakeholders in national discussions and when evaluating federal programs and policies.”

### **Aylmer and Area Chamber of Commerce**

The Aylmer and Area Chamber of Commerce have been contacted; however, a response has not yet been received. Outreach efforts will continue.

### **Southwestern Public Health (SWPH)**

Staff contacted Southwestern Public Health who had their Epidemiologists investigate as to whether any data had been collected by the organization about access to internet, internet connectivity or broadband internet. At this time SWPH has not collected any data about these issues but is willing to forward any information to the County of Elgin if research is ever done in any of these areas.

### **FINANCIAL IMPLICATIONS:**

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Attracting ISPs to invest in 50/10 connectivity across the County will likely need Elgin tax funding to supplement grants from federal and provincial sources. Given the longevity/scalability of fibre technology, debt financing can be utilized to reduce the immediate impact on taxes. Additionally, as the Steering Committee develops a broadband business plan, the financial impact of not investing in connectivity should also be factored in. If Elgin falls behind technologically, economic stagnation may result, leading to taxation pressures greater than the tax pressures resulting from an investment in connectivity.

**ALIGNMENT WITH STRATEGIC PRIORITIES:**

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<b>Serving Elgin</b>	<b>Growing Elgin</b>	<b>Investing in Elgin</b>
<ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Ensuring alignment of current programs and services with community need.</li><li><input checked="" type="checkbox"/> Exploring different ways of addressing community need.</li><li><input checked="" type="checkbox"/> Engaging with our community and other stakeholders.</li></ul>	<ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Planning for and facilitating commercial, industrial, residential, and agricultural growth.</li><li><input type="checkbox"/> Fostering a healthy environment.</li><li><input checked="" type="checkbox"/> Enhancing quality of place.</li></ul>	<ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Ensuring we have the necessary tools, resources, and infrastructure to deliver programs and services now and in the future.</li><li><input type="checkbox"/> Delivering mandated programs and services efficiently and effectively.</li></ul>

**Additional Comments:**

**LOCAL MUNICIPAL PARTNER IMPACT:**

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None.

**COMMUNICATION REQUIREMENTS:**

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None.

**CONCLUSION:**

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Continuing to build relationships with partners throughout government and business networks will be critical to achieving optimal solutions in expanding broadband coverage across Elgin. These partners can bring expertise and funding that will enable Elgin to develop a “Made in Elgin” solution that dramatically improves connectivity service at minimal cost to rate payers.

All of which is Respectfully Submitted

Approved for Submission

Jim Bundschuh  
Director of Financial Services

Julie Gonyou  
Chief Administrative Officer

Alan Smith  
General Manager, Economic  
Development



## REPORT TO COUNTY COUNCIL

**FROM:** Councillor Giguère

Megan Shannon, Legislative Services  
Coordinator

**DATE:** October 30, 2020

**SUBJECT:** Elgin County Connectivity Committee:  
Municipal Broadband Master Class  
Summary

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### RECOMMENDATION:

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THAT the October 30, 2020 report titled Elgin County Connectivity Committee: Municipal Broadband Master Class Summary submitted by Councillor Giguère and the Legislative Services Coordinator, be received and filed for information.

### INTRODUCTION:

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The purpose of this report is to provide a detailed summary of the Municipal Broadband Master Class led by Jesse Hirsh held on October 21, 2020.

### DISCUSSION:

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On October 21, 2020, Municipal World hosted a Municipal Broadband Master Class with Jesse Hirsh. Jesse Hirsh is an Internet professional with 25 years experience in research, writing, and public speaking. The Master Class was designed to address potential solutions to the unstable internet that continues to be a challenge for many rural and remote communities.

#### **What makes an Internet Service Provider (ISP)?**

Jesse explained that the Internet is a learning curve. The Internet should not just be seen as a technical aspect, but also a social one. It is the way in which our communities connect with one another. The basic definition of an ISP is buying bandwidth wholesale and reselling it to customers. Margins for ISPs are high after they have paid for the

initial infrastructure installation. Jesse compared it to dealing crack because customers come to depend on the service and generally always want more data.

**Example:**

- A municipality could create its own Facebook-like application to provide two-way communication with its citizens.

**Different Kinds of Connectivity**

- Fibre
- Wireless
- Satellite
- Hybrid
- Mesh

**Fibre:**

- This type of connectivity is most commonly used. It will always be the fastest because it travels at light speed.

**Wireless & Satellite:**

- Response times for wireless and satellite are generally poor.
- Even Low Orbit Satellite will still have latency due to the distance the signal has to travel.

**Hybrid:**

- Combination of fibre and wireless.
- Example: UBIQUITI Networks. It is part of a wireless ISP movement.
- Makes inexpensive and easy to use wireless equipment.
- It can also solve some 'last mile' issues if customers can have a fibre optic network with wireless going to the door.

**Mesh:**

- Neighbourhood Connection (Quill Connection).
- Creates software and incentives.

Jesse highlighted that our long-term investment should focus on fibre optic connection. This is because the speeds of fibre optic connection will increase overtime.

**Why Municipal?**

Municipalities play an important role in recognizing the Internet as infrastructure, but also in providing the economic and social support of offering it. Municipalities make the

difference of acknowledging the Internet as critical infrastructure. Municipalities are also close to their citizens. That means that they can be cheerleaders and mobilizers of ISPs, or if they have the courage, they can create their own ISPs based on the needs of their citizens.

### **City vs. Country:**

There is a difference in literacy between the city and country. This includes municipal staff being aware of the need and potential of Internet as a required infrastructure. The global pandemic has made that point clear as more and more of us require Internet for work and school.

### **Examples:**

- B4RN. Offers Peer-to-peer tech support (E.g., Local champions, volunteers, etc.) Citizen driven and operated like a volunteer fire department with volunteer tech support. Because it requires citizen buy-in you can get around some issues like cutting across a field since the farmer who owns the field will directly benefit from the service.
- Guifi-net. Offered in northeastern Spain. Open, free and neutral wireless and fibre optic network.

Opportunities exist for more research into these examples.

### **Economic and Social Development**

Jesse referred to Ashleigh Weeden's article on Rural Economic Development from Municipal World. Highspeed internet results in different economic payoffs. Access to highspeed internet reverses brain drain as more people are able to work from home and seek pleasant (and cheaper) country settings to set up their home offices. Aging demographics who have come to depend on the internet for lifestyle and medical support can remain in the countryside. Weeden says debt financing is worth it in the long run for the above reasons.

### **Advocacy**

Commercial ISPs are not responsive to community development. They get away with continuing to provide poor service without consequence because the CRTC only works on a complaint's basis. Service maps show blanket coverage for high-speed internet, but in reality, this is inaccurate. Municipalities could facilitate complaints to CRTC who tend to respond to large numbers of complaints. Court of Public Opinion rather than RFPs. When needing service, have a town hall where ISPs have to compete in public and answer to their customers.

Jesse is a champion of municipalities becoming their own ISPs.

## **Range of Potential Policies and Solutions**

How can municipalities play a role in municipal broadband?

### **1. Literacy & Advocacy** (Learning Curve) (Foundation)

- Help residents and businesses understand their options
- Advocate on their behalf to secure providers and/or funding
- Identify if zoning, road usage, pole access, can play in role in improving access?
- Friendly Municipal Access Agreements (Becoming ISP Friendly)
- Does your municipality have access to railroad infrastructure?
- Are there local champions or people who could help? Municipal staff must understand internet in order for residents and business to. (Echo knowledge)

Jesse highly advocates for municipalities to play a key part in literacy and advocacy efforts.

### **2. Property taxes and collective bargaining** (Organizing) (Subsidizing)

- Helping residents pay for installation and set-up via their property taxes
- Amortize these costs over one, two, or three decades
- Help residents and business come together to pay for installation costs or service provision from existing ISPs
- Help incentivize existing ISPs to provide better services
- Example of Olds Alberta, O-Net & Kaslo infoNet (This is an opportunity for more in-depth research).

### **3. Infrastructure and internal usage** (More responsive)

- Invest in creating Internet infrastructure primarily for internal municipal usage
- Excess infrastructure can be used for additional purposes for example allowing external ISPs or business to use it.
- It could also be used for connecting libraries, schools, and other municipal agencies and buildings.
- The primary benefit is lowering of telecom costs and enabling of smart infrastructure and programs.
- This does not necessarily address remote work capabilities as infrastructure would be located at municipal facilities.
- Example of QNet in Coquitlam BC (Oldest) (This is an opportunity for more in-depth research).
- York Region in Ontario (Recent)
- Olds Alberta (Using a co-op model)

- It is a cheaper option to create your own fibre optic network than to pay the ISP to do it. Make sure to use low cost fibre. Some Quebec municipalities lay cable on the side of the road.
- SWIFT and EORN. Jesse criticizes that these examples don't always address the internet connection needs of local municipalities. They are a potential first step and return on investment. He mentions that EORN focuses too much on wireless instead of fibre. Fibre has a longer lifespan than wireless technology.
- In addition, local municipalities know and understand their geography. Just as municipal drains were created because locals knew and could map the territory accurately.

#### **4. Enabling competitive services**

- Building complete end-to-end FTTH (fibre-to-the-home) infrastructure but allowing others to provide services over it. (E.g., Sell excess capacity to commercial ISPs)
- Example of Ammon Idaho where it is possible to get super high-speed internet for \$10/month. Residents are able to access fast fibre optic internet at an affordable cost. Municipalities wouldn't have to deal with customer service support. They would be providing network services over the original infrastructure.
- Additional Example: The Town of Vermilion has activated its own hybrid internet service called V-net. (This is an opportunity for more in-depth research).

#### **5. Full Service Provision**

- Municipality as telecom and ISP
- Extension of Public Works?
- Can be financed by municipality, grants, or public-private-partnership (P3)
- Fairlawn Ohio is P3 example. Jesse referred this as an ISP out of a box. Expanding the ISP was based on resident demand.
- Chattanooga, TN is a celebrated example of Energy Power Board (EPB) extension. This is also known as "GIG City".
- Also Thunder Bay and Muskoka (Lakeland Networks) (Expanding through communities throughout)

Jesse explains that U.S. telecom-providers have lobbied state legislators to make municipal internet legal in the past. This would keep costs low and generate potential revenues for municipalities. This led to jurisdictional battles, but Jesse points out that through public opinion the big providers can be shamed if they are being seen as obstructing the public good.

Jesse also advocates the “ask for forgiveness model” especially in the world of the internet where it is common with groups like Uber. So run fibre first then work out the rules and agreements.

*An important question to ask is:*

Where is the balance point between affordability and profitability for the local government as the ISP? How much subsidization is needed up front to build and how long until return on investment?

### **Developing Expertise (Internal and Community)**

How do we do it?

- Who within your municipality understands telecommunications and the internet?
- The more who do understand, the better the ability for the municipality to adapt moving forward. Jesse suggested conducting a social media audit. Municipalities need to become business internet savvy.
- Same logic applies to the community at large.
- What is your strategy to increase literacy? Jesse suggest developing a municipal internet task force. This should be ongoing. Ensure Economic Development/IT are involved.
- It is important that an action committee stay in place not only for setting up a network, but for maximizing its use for economic growth of the community.

### **Example:**

- Municipalities working with a local community group who has created their own ISP.

### **Note:**

- ROMA is putting together a resource guide for Municipal Officials. It will be ready in the coming weeks.

### **Privacy and Data Protection**

**Advantage:** Puts a municipality in a better position to better foster security practices. Providing defaults that protect their resident’s privacy.

**Opportunity:** Use expertise to both protect the privacy of their residents and private security practices.

Municipalities could provide free software with similar types of secure services. VPN software hides customer location and details. If people are weary of ‘the government’ running their ISP this software could be provided to ensure anonymity. These are

important issues moving forward and are part of a rubric of municipal internet that enables or allows usage.

### **Future Considerations**

- The internet waits for nobody. The global pandemic has accelerated this and has put more pressure on us as municipalities to update and address these issues.
- Acknowledging the rapid rate of technological change
- Smart cities and responsive infrastructure
- Working and learning from home as a feature post pandemic. Municipalities should be anticipating this type of infrastructure moving forward. Uploading speeds make a difference. Jesse explains that commercial providers have not been providing this.

### **Notes from Zoom Chat:**

Fort Erie created a residential internet survey and a business internet survey and then put the results in an esri map and shared it with local ISPs. Put out posters at our libraries, a place where we figured the 'internet-less' would go to connect to let people know about the survey.

Private ISPs should be criticized for their mapping claims. They should be made to create actual maps that report actual speeds they are providing in rural areas. They have this data but they will not provide it.

Some people are advocating that urban users who benefit from stable high-speed internet be charges a surtax to assist in building the rural infrastructure.

Dig once policy. Even before a full network is in place, take advantage of all municipal works projects to include fibre optic cable.

While this is urgent, we all must have patience since it is a long-term issue.

### **Follow-Up Actions:**

- Identify local expertise
- Identify nearby infrastructure
- Invest in literacy, via internal and public education
- Connect with provincial and federal representatives
- Propose and build a broadband strategy (Determine costs)
- Plan and expand internet infrastructure

Jesse explains that Internet Forums are a good method for local municipalities and companies to share knowledge and activity.

**Note:** Municipal World is forming a LinkedIn group to keep the conversation going.

**Additional Municipal Examples:**

- Town of Caledon has introduced an internet levy.
- Councillor from the Town of The Blue Mountains, Rob Potter, is working on the Rabbit network in his town, which is faster than SWIFT.

**FINANCIAL IMPLICATIONS:**

None.

**ALIGNMENT WITH STRATEGIC PRIORITIES:**

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Serving Elgin	Growing Elgin	Investing in Elgin
<input checked="" type="checkbox"/> Ensuring alignment of current programs and services with community need.  <input checked="" type="checkbox"/> Exploring different ways of addressing community need.  <input checked="" type="checkbox"/> Engaging with our community and other stakeholders.	<input checked="" type="checkbox"/> Planning for and facilitating commercial, industrial, residential, and agricultural growth.  <input type="checkbox"/> Fostering a healthy environment.  <input checked="" type="checkbox"/> Enhancing quality of place.	<input checked="" type="checkbox"/> Ensuring we have the necessary tools, resources, and infrastructure to deliver programs and services now and in the future.  <input checked="" type="checkbox"/> Delivering mandated programs and services efficiently and effectively.

**LOCAL MUNICIPAL PARTNER IMPACT:**

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None.

**COMMUNICATION REQUIREMENTS:**

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None.

**CONCLUSION:**

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In conclusion, the Municipal Broadband Master Class allowed attendees to gain a fresh perspective on internet connectivity. Attendees were able to identify solutions of how to bring high-speed internet to their communities. The workshop and networking event will contribute further to our exploration of addressing our community internet needs.

All of which is respectfully submitted by

Councillor Giguère

Megan Shannon, Legislative Services Coordinator