



Envisioning a Future with Broadband across Ontario

*A Discussion Paper on Broadband Connectivity,
Growth and Utilization in our Rural Communities*



THE ONTARIO RURAL COUNCIL



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About The Ontario Rural Council (TORC)

As a forum for *all* rural voices, The Ontario Rural Council offers a vital venue for rural engagement in the form of dialogue, collaboration, action and advocacy. As a member-driven, multi-sector, provincial organization, TORC strives to foster communication that informs and ultimately helps shape and influence policy, programs and research development affecting today's rural Ontario.

Members share a commitment to strong, healthy, vibrant rural communities, businesses and organizations. Through Public Issue Forums and our Rural Development Conference, TORC provides the only venue dedicated to drawing together the *collective* rural voice, working to break down the silos between sectors and encourage effective partnerships for progress.

TORC Members represent non-profit organizations, private sector organizations, the public sector, and individuals with specialized expertise and resources in rural matters. In our role as convenor, TORC brings together these diverse interests and perspectives and offers valuable networking opportunities to link people, information and activities in support of rural community development and capacity building.

The TORC Mission:

- To act as a catalyst for rural dialogue, collaboration, action and advocacy.

TORC Aims To:

- Foster communications that inform – with the aim to influence and shape – policies, program and research development affecting rural Ontario.
- Enhance the understanding of rural realities.
- Act as a broker and clearinghouse of news, stories and research – linking local, regional, provincial and global thinking.
- Build innovative rural networks that stimulate the formation of province-wide collaboration.
- Be an outcomes-focused learning organization.

TORC and Broadband:

TORC's goal is to ensure the concerns and insights of rural stakeholders regarding the issue of Broadband connectivity, growth and utilization are heard and acknowledged by those who have been assigned the responsibility of keeping our province at the forefront of the competitive global market vis à vis a fully-integrated Broadband network.

Executive Summary

Whether at the local business or community level, broadband is an economic enabler. Numerous studies point to a surge in productivity with increased / enhanced use of broadband technologies¹. Broadband has powerful cross-sectoral impact - health, education, business – as well as the capability of eliminating recurrent distance- and weather-related challenges in rural communities.

Access to broadband and the utilization of broadband are two sides of the same coin and, as such, are heavily intertwined. Any attempt to increase utilization and uptake of broadband within rural Ontario will be futile unless the access to broadband service is ubiquitously available².

There currently exists large areas or 'gaps' that are not serviced via broadband connectivity, nor with any immediate likelihood of being filled. The private sector has identified an insufficient return on its investment in the more remote, rural areas which lack funding support, and is therefore unwilling to service these regions. Without broadband, rural communities will not have the advantages of their urban counterparts and the 'digital divide' between urban and rural communities will widen.

However, if you build it, will they come? Will they utilize broadband to increase their productivity if the service is made available to them? There appears to be a poor understanding of the potential of broadband – *they don't know what they don't know* – and, as such, there exists a decided need for an extensive training / awareness program to be designed and implemented.

And with whom does the responsibility of broadband rest? Participants at the fora overwhelmingly identified a lack of leadership at all levels of government. Government must take rural broadband seriously. Government programs must also strive to be effective. For instance, although the "Connecting Canadians" initiative of the late 1990s promised to help "Canadians to become the most connected people on earth", large gaps in service still remain.

There are numerous roles that government could potentially adopt. Some of these roles may not necessarily be in the form of direct funding for infrastructure builds; policy reviews and prioritization are also an important component. Governments could also assist with community capacity building through meeting facilitation resources, assistance with collaborative efforts and best-practices resources. A 'toolkit' has overwhelmingly been identified as a needed resource if communities and organizations are to move forward with local broadband initiatives. Government may also lead by example through improved websites utilizing enhanced applications. In the case of accessibility, municipal governments may need to assume a role, perhaps including an ownership in a local broadband network.

Communities, too, need to participate at a local level, as they have the ability to engage local champions and assist with the formations of partnerships. Champions and partnerships are the cornerstones of community projects.

We have the capacity to make extensive use of broadband technologies, however we must first create and follow a plan – we cannot expect uptake and utilization of broadband to happen on its own.

¹ See: http://www.cebi.ca/Public/Team1/Docs/net_impact_english.pdf

² At the time of writing, the Government of Ontario proposed \$10 million in its latest budget for rural broadband initiatives. See: <http://www.ontariobudget.ca/english/chpt1g.html#2d> - "The government is investing to bring broadband access to more communities in rural areas. It is investing \$10 million in 2007–08 to help expand broadband coverage in rural southern Ontario by leveraging community and private-sector investment."

Introduction

In Spring 2007, The Ontario Rural Council (TORC) partnered with the Province of Ontario (Ministry of Government Services) for a two-location series aimed at developing strategies towards enhanced connectivity, growth and utilization of broadband in rural Ontario. Each session consisted of a day of shared learning and dialogue as participants explored the roles community, organizations, government and the private sector play in broadband delivery, uptake and usage in our rural and remote sectors of the province. The outcomes of those sessions are recorded below.

March 20, 2007: TORC travelled to Brockville to host the inaugural broadband session at The Quality Hotel Royal Brock. Some 45 participants attended, representing private Internet Service Providers (ISPs), municipal and provincial government, social agencies, and community stakeholders.

March 22, 2007: TORC shifted to Ingersoll to host the second broadband session at The Elm Hurst Inn. There, 55 participants gathered from much the same cross-section with additional representation from the education/academic sector (University of Waterloo and University of Guelph) and community economic development (Community Futures Development Corporations - CFDCs).

The formats at each session were similar: After introductory remarks by TORC Executive Director Harold Flaming and Barbara Swartzentruber of the Ministry of Government Services (MGS), a series of speakers offered participants their view of the current state of broadband access in rural Ontario. Following these presentations, a 'Panel Discussion' ensued exploring "community strategies around uptake and utilization of broadband in rural Ontario". Speakers from a variety of interest groups and rural sectors – local government, business, community / human services – were asked to highlight the types of initiatives that have / have not worked for them around this issue, and to what extent (i.e. success rates, etc.)

Following a lunch break, participants were asked to break-out into separate groups to discuss the issue of broadband from the perspective of structured 'themes'. i.e. community and economic development, social equity and inclusion (e-learning) and e-government. A fourth theme was added to specifically address the issue of connectivity, as organizers anticipated this would be viewed as a top priority for those participating. Analysis of the outcomes of these discussions indicated a core lack of understanding when it comes to the issue of broadband, the salient points of which are captured within the context of this Report.

Enhanced Connectivity, Growth and Utilization

A. Broadband Awareness – The Need for Training

They don't know what they don't know! Based on feedback from the TORC Forum events, there appears to be a fundamental lack of awareness and general understanding of broadband and the potential for its use. This lack of knowledge may well extend beyond broadband to include the Internet itself.

Awareness needs to be developed on two levels – awareness of broadband *availability* and awareness of broadband *uses and benefits*. This can be accomplished through a myriad of approaches, most basis of which would be a series of public meetings, demonstrating where and when high-speed is available.

The term broadband is often misunderstood. Broadband technically refers to a transmission medium capable of supporting a wide range of frequencies. The term, however, is frequently used to mean high-speed, high-capacity Internet connections. Unlike a traditional dial-up connection, broadband services are always on, enabling productivity and efficiency improvements². The use of phrases typically used in marketing promotions such as “high-speed Internet Basic Lite” most likely contributes to the confusion around the term ‘broadband’. A stronger understanding of the *availability* of broadband access is also necessary. Examples were cited whereby consumers did not know broadband was available in their own home community. What’s more, an emphasis must be placed on ensuring it is not inferred to users that broadband is necessary in order to view the Internet. There are many instances where a good dial-up account will suffice. However, generally speaking, a ‘broadband’ connection is required if users are to participate in enhanced applications. Emphasis then should be placed on strengthening the concept of broadband as an enabler of increased Internet capabilities.

Without a solid understanding of broadband and the Internet, potential users will have limited comprehension of the benefits of connectivity and will, as a result, tend to have limited adoption of use. Use of online applications will be dismal, as users don't know what to ask for. Low-speed users think in terms of ‘low-speed’ capabilities, not knowing what can be delivered via high speed. Improved knowledge of the Internet can also provide for enhanced productivity – for example, the application for a license online saves both travel time and related costs.

There exists the need for a greater understanding and appreciation of broadband from a business / commercial perspective. Many businesses still do not grasp the advantages of having broadband and too often view only the costs, not the costs *savings*. They will adapt if they don't have it, making do. For small ‘ma and pa’ operations it can be a huge leap, initially requiring a significant investment of both time and dollars. What’s more, whether perceived or real, there are privacy and security concerns.

Considerations:

- ⇒ **Mental** – “*Why do I need it?*”
- ⇒ **Physical** – “*How much is it going to cost?*”
- ⇒ **Technical / Educational** – “*How do I use it?*”
- ⇒ **Relevance** – “*Does it do me any good?*”

Some businesses may well be assuming the worst, particularly around the use of credit cards. There is also hesitancy on the part of their

² City of Ottawa - http://ottawa.ca/city_services/planningzoning/2020/bb/7_0_en.shtml

customers. The perceived online costs of credit card sales may be prohibitive and there may be fears regarding liability.

A well-planned broadband awareness and education program must be undertaken immediately. Facets addressed should include advantages / benefits, availability, technical basics, and potential opportunities related to broadband access. The awareness program could be conducted through marketing campaigns, community meetings, forums, and technology showcases. Broadband service could be promoted at libraries and other public venues.

We need to make broadband tangible by showing people what can be achieved with it. Real-life demonstrations of enhanced and interactive applications can 'prove the case' (e.g. applications for municipal processes – licenses, planning, farming, health and education). Use of home and cottage tradeshows and other public venues may be a means of providing potential users with hands-on experience. These demonstrations could include work-at-home techniques and technologies (e.g. virtual private networks or VPNs). Alternatively, demonstrations could be made onsite at businesses as opposed to the employees having to go offsite to learn, as small-medium enterprises (SME) claim to have little available time. Demonstrations might also provide hands-on training for technical and equipment repairs and/or assistance with dispelling the myths related to Internet security.

We must acknowledge that different training needs/methods may be required for different user age categories (e.g. youth vs. seniors). We must appropriately factor in the nature of the target audience. There may well be some ability to provide, for example, peer-to-peer training and youth-to-seniors training at public access sites, seniors' residences, and other locations. Consideration should be given for online training courses and using students to teach.

Technical support in rural communities is definitely a challenge. Websites are increasingly geared to the 'technology-enabled'. As larger firms increase their website functionality, small businesses are finding it difficult to compete as they lack the understanding required to include these online functionalities (e.g. e-payments, online registration systems) into their websites. Consideration should be made for engaging software designers for training purposes, as we need to narrow the gap between those who design websites and the actual user.

We must capitalize on networks already in place, including chambers of commerce, economic development organizations, business improvement area (BIA) organizations, Community Futures Development Corporations (CFDCs), Enterprise Centres, and focus groups to build awareness of benefits and to provide training. However this suggestion implies that these organizations are themselves well-trained....

We must 'train the trainer'. How can these organizations train others if they themselves don't have sufficient understanding of broadband? Consider a 'train the trainer' program as a positive first step. The value of spending time and funds training the trainers will be realized in the sheer numbers addressed, i.e. can train more people for a snowball effect.

Broadband applications can be successfully promoted through newspaper and TV (e.g. success stories), as a way of offering potential users a reason for desiring broadband. Keep in mind some business categories have a better understanding of the value of the Internet (e.g. car dealers, realtors), and perhaps these stakeholders could become engaged and make presentations to fellow business operators, municipal councils, and community organizations (i.e. business outreach) on the merits of broadband utilization.

B. Access to Broadband

While the dial-up method of accessing the Internet is generally available, the quality of that service is not sufficient (e.g. too slow, disconnects) to support enhanced applications. In scores of rural Ontario areas, access to broadband service is non-existent and/or unaffordable for households and small businesses. Arguably, broadband access is available in most communities through a satellite connection. However, satellite connections are typically more expensive for users and carry limited capabilities. For some rural community members, there exists a misunderstanding around why it is they cannot acquire broadband connectivity - they have a phone, why not broadband? In other instances, users are not aware that broadband may be available to them.

Internet Service Providers (ISPs) are claiming there is no sustainable business case (i.e. return on investment / ROI) for them to provide (near) ubiquitous broadband access in many of the more remote areas, as these areas are too costly to serve (distance, rough terrain) and offer up lesser revenues (demographics / sparse population density). Placement of towers and other infrastructure, including electrical access, may not fit into the local topography as a result of inaccessibility caused by Mother Nature. Over time, newer, more advanced technologies may improve the business case for going into these areas, however, there will also be increased need for greater broadband capabilities (e.g. Voice Over IP - VoIP) and, as a result, increased costs.

It has been noted in several circumstances that an acceptable price for high-speed residential connectivity is less than \$50 per month, any higher than that and the demand for services falls off dramatically. The economics of supply and demand is such that suppliers (ISPs) are not willing to supply the service in some areas as their costs are greater than that \$50 / month maximum fee clients are willing to pay.

ISPs may, however, be willing to move into areas provided there exists support, which could include: funding for capital costs and/or in-kind from local governments (e.g. right-of-ways for towers, access to municipally-owned towers). Alternatively, there may exist a case for community-based ownership of which there are several models³. Some communities have been successful in their local broadband initiatives with only limited funding from the federal or provincial governments⁴.

Identifying the 'gaps' in broadband service has been problematic. **We need to better understand where the gaps exist, why they exist, and the challenges in overcoming them.** There have been various mapping initiatives to determine the extent of the broadband 'gaps'. The Eastern Ontario Broadband Coalition (EOBC) has developed and utilized an online 'GIS Portal' to collect service area information from ISPs. Further work in this area may be required and it has been suggested this would provide university students learning about GIS an excellent opportunity for practical application. The general sentiment of those with experience in this area suggests the gaps should be specifically targeted. Although the theory 'Build it and they will come!' may have some validity, suggestions to target 'gap' areas may not be feasible due to cost/revenue issues. Are there sufficient numbers of users to ensure project sustainability?

We should not assume that once broadband is available, users will be able to afford the service. There is, therefore, a need for public access points - for training and use - as not everyone will have access to broadband at home or perhaps even a computer / dial-up connection. Public broadband access points could include: CAP sites, kiosks, common service counters, libraries, township offices and business centres. These public access sites could be used to build capacity,

³ See: *Localizing the Internet: Five Ways Public Ownership Solves the U.S. Broadband Problem*. Becca Vargo Daggett, Institute for Local Self-Reliance

⁴ See: *South Shore Community Broadband project* (http://www.southshorebroadband.ca/top_aboutssc.html)

and would therefore require trainers (“assisted access” e.g. Service Ontario) and technical support personnel. These public access points need to be geographically close to those requiring the service and/or located in high traffic areas (e.g. coffee shops).

C. Community Involvement

Broadband is a community economic development enabler. Without the benefit of broadband, a business will think twice about expanding or locating in a rural/remote community. In broadband-challenged communities, youth are out-migrating and physicians refusing to set up practice. Municipal governments are finding broadband a necessity for many services, including forecast planning, where GIS capabilities is fast-becoming essential. As one TORC Forum presenter stated: *“Communities know that broadband supports existing business and attracts new business, but they lack all skills and opportunity to make it reality”*. Broadband plays a pivotal role in business attraction / retention / expansion, as well as in human capital. Broadband influences small and medium enterprises’ ability to attract employees and provide ongoing training.

Community plays a key role in the pursuit of broadband. A local group must adopt a leadership position and drive home the process. In some instances, municipalities are taking the lead in the interests of fulfilling planning and/or community economic development needs (e.g. City of Peterborough). For other regions, it’s the local Community Futures Development Corporations leading initiatives (e.g. Elgin County). Still, in other jurisdictions, local governments don’t yet know how to begin - or believe that they should not be involved in - leading a project. However, as one Forum presenter noted: *“Local governments often lack financial resources to support ISP’s needs, but often have other resources to offer up”*.

There still remains today a need to ‘sell’ some municipalities on the benefits of broadband as an economic development tool. Municipalities need to recognize the economic impact of broadband use within their communities and they should consider support for broadband adoption as a service supported by their economic development departments. There may exist a case for municipally-funded broadband service in the more remote-rural areas where sustainability issues exist versus in the more near-urban areas, where there is sufficient population densities to support multiple providers. The return on their investment may be measured in both qualitative and quantitative terms. The City of Ottawa, for example, is cited for being fully committed to rural broadband: *“It’s our number one rural priority,”* stated Forum presenter Chris Cope. *“Since 2002, broadband has been identified as an economic enabler”*.

The communities most successful in creating local broadband projects have been those successful at engaging local champion(s) and developing a network of local partners to be part of that project. Champions are important both as advocates and as coordinators, drawing together an often diverse group of community stakeholders. It is extremely important to include and acknowledge partners from a broad community sector perspective (e.g. political, private, marketing). All players should come together under a comprehensive strategy, creating a model that includes the political, community and technical components.

It must be noted that the creation and maintenance of community partnerships is a difficult and ongoing task that requires a terrific investment of time and effort. In most cases, there is a lack of resources to create and maintain these partnerships. One Forum presenter referred to this reality as the “sandbox syndrome”: when most of one’s time is spent managing the people within the partnerships.

Because we are dealing with both private and public sector players - and these two audiences are motivated by different things – it becomes particularly important to identify between an economic return on investment and a social return on investment. At the community level, when all are working together, all components are typically met, but when one organization is working alone, it may not meet all of those components e.g. a private partner may meet economic components but fall short on social concerns.

As a result of delays in funding etc, some potential partners have ‘moved on’ to other initiatives. Champions have tired over the years as a result of too many programs that promised funding for broadband and then disappeared. We need to better understand how communities should best handle “damaged champions”.

Analysis plays a key role in successful development of broadband strategies within a community. Spearheading the broadband process in Elgin County, local champions began by first researching *other* communities, engaging their own community in surveys (priorities, barriers, sector specific workshops, a business baseline and gap analysis), and developing partnerships. They also assessed the community’s current and potential uses of the Internet, coming to the conclusion that you cannot simply ‘build it and they will come’. As a result, the community conducted a series of ‘awareness’ workshops to expand the local understanding of available Internet applications and uses.

Working with community organizations / associations, a series of consultations should be conducted to identify and articulate business and individual needs. The needs should not be limited to the expressed needs, as businesses / individuals ‘may not know what they don’t know’. Determine whether people want broadband in their community either through dialogue with a local champion, a mail-out campaign, community event, area kiosk, local municipality, peers, chambers of commerce, and/or ‘broadband’ CAP (Community Access Program) sites i.e. places where people can go and try it. Once they’ve used it, they can decide whether or not they need it. Does it make them happier, richer, and safer? Who will provide the necessary advice on how to use it? Additionally, when pondering the necessary questions, don’t forget to identify reasons for *not* using broadband.

In addition to awareness, broadband infrastructure is also important. Local networking groups need to develop “thresholds of viability” (sustainability) for areas. Municipalities and the private sector need to determine at what ‘threshold’ it will economically be viable to provide service (density of population, cost of infrastructure). The County of Peterborough advanced their infrastructure build as a result of a need to move their municipal GIS (Geo-spatial Information Systems) out to the remote communities. The County also recognized that broadband was necessary for economic development, as much of Peterborough is exceedingly rural.

Communities need to be careful of what they are asking. Asking for what you want in technical terms may not garner what you actually need, as the communities’ objectives may require both a social *and* economic return on their investment. The social aspect of programs may lead to skyrocketing costs of any given project.

The use of community portals has been identified as being an important contributor to the local economy. These ‘portals’ should be set to view local stores, organizations and businesses with the information well-organized and up to date. In the instance of portals, the responsibility for updates may have to be delegated to an individual / organization. It was suggested that online shopping be generally improved to include price comparisons, stock availability and store-closing hours. Community events should be placed online. A suggestion was made to institute a common portal design wherein the information easy to find. Consideration should be made to include online

statistics, particularly business data to assist enterprises with decision-making (e.g. GIS tools linked to Stats Can).

In Elgin County, the ElginConnects portal is designed in such a manner that searches are first conducted from a local perspective, then fan out to a macro-level, global search. With this kind of local-first approach, ElginConnects currently has an astounding 110,000 page views per month, with Google search engine listing ElginConnects in their top 100,000 sites visited worldwide. But, as valuable as they may be, who pays for these portals? Sustainability for portals may well be an issue. Challenges can often exist in trying to attract paying subscribers to help sustain even the most popular portals.

It's important to avoid 'building wires for the sake of building wires'. The question needs to be asked: What are you going to put on those wires? The ElginConnects portal supports applications involving integrative and transactional capabilities. They are interested in developing local applications for local concerns. Local champion Donna Lunn cited an example from her own farm wherein, prior to broadband access, her husband would get his 'milk cheques' - an amount which was based on their milk's components – typically six weeks after the fact, too late to be of any value other than for information purposes. With broadband access, the milk now gets picked up and electronically analyzed, allowing the dairy farmer to access the necessary milk-component info within 36 hours of pick-up. This is important to the farmer as the components are affected by (e.g.) feed. Donna's husband is now able to use this information as a management tool

D. Best Practices

We need to share among colleagues how we are deploying broadband and how we are effectively using the Internet; to communicate best practices and lessons learned. We need to understand failures and successes. **Community framework models need to be shared.** Best practices could be shared through member organizations such as Association of Municipalities of Ontario (AMO), the Rural Ontario Municipal Association (ROMA) and the Ontario Association of Community Futures Development Corporations (OACFDC).

Recognizing that solutions may be as unique as each community, an examination of success stories (i.e. case studies that can be adapted and replicated) at the local community level should be conducted to ascertain what is working. Perhaps universities could be used to conduct such a study.

Ideally, best practices would form the basis of a helpful resource toolkit for universal use.

This toolkit could then assist community champions looking to improve broadband in their community by furnishing a list of essential components that they will have to address during the process: "I want to be a broadband champion and here are the things I need to be able to do. Here are the resources I need to pull together. Here is the process I can use and here are the partnerships (models) that have worked in the past and which can be used again". Directions need to be based on 'basic' principles' as technology is a moving target – in six months technology will have changed. Included in the toolkit should be quantitative and qualitative data on economic benefits, how partnerships work and business case solutions.

A reference was made to using RAAKS⁶ (Rapid Appraisal of Agricultural Knowledge Systems) as a method example of bringing participants together.

A suggestion warranting further investigation was also made around the establishment of 'rural broadband centres' that could become models for technology, best practices and related training.

⁶ *Rapid Appraisal of Agricultural Knowledge Systems – see (<http://www.iirr.org/PTD/Readings/General/RAAKS/RAAKS%20Introduction.htm>)*

A Role for Government

Throughout the two forum events, a common theme emerged in the form of a two-part question: **“Which government is taking the lead on broadband?”** and **“Is there a strategy?”** There appears to be a mindset problem in government’s approach to broadband. Why is it, asked one forum participant, that there is budget money for urban transit but not for broadband? Perhaps there is a need for a generational shift – a new generation who understands the value of broadband, who would be able to re-evaluate public policy. Broadband should be considered a quality of life issue. Rural communities need it for a number of reasons, including education, health, business and social considerations. We should look to governments in European communities and third world countries that have already come to acknowledge the value of broadband.

Many of these related comments focused on the Province of Ontario: *“Why can’t the Province take the lead in supplying broadband to rural areas?”*

There is a need for a rural broadband policy at all levels of government. We know that broadband enables community economic development and we know that near-ubiquitous coverage will not be achieved if left solely to the private sector. Government has to take the rural need seriously, step up the priority of broadband and decide who is going to take the lead. Perhaps there is a need to develop a business case scenario for politicians.

There needs to be a cross-ministerial policy framework linking broadband access to government priorities. We require policies that reflect an understanding of the value of our rural communities and the impact sustainable broadband services have on rural economic development. These policies must reflect as a true commitment by government to maintain rural communities as a first priority. Can government policy include legislation to ensure access for all?

A review of existing regulations and terms (e.g. CRTC policies) should be undertaken as these policies may be an impediment to the application of the new technologies (you may not be able to apply old regulations to new technologies.)

Are government programs effectively managed? **Government programs must be shown to work.** Previous government programs have focused too heavily on the business-case scenario. There may not be an economic business case for broadband insomuch as connectivity is also a social issue, thus government needs to include into the equation the all-important ‘social’ value. Consideration should be given for programs that help the least advanced, not the most advanced.

There is a lack of collaboration amongst funding partners with funds coming from different sources with different components. Funding partners from various governments, departments, ministries etc. should work together through one common funding agency; one agency to report to and that one agency will have a comprehensive solution. Layers of government need to have a central place to deal with broadband access. Whoever takes the lead needs to bring all players together including Canada / Province / lower tiers, and community sector organizations.

Government assistance may be achieved outside of funding. For example, in Ontario there are many instances in communities where the general public is without broadband access, but schools and hospitals enjoy a private broadband network, which was more than likely funded by the Province.

Forum participants noted existing government websites – at all levels – are poorly organized, not user-friendly, and inconsistent in the delivery of service through all government departments and levels. **Information on government sites needs to be more standardized** across various government departments, ministries etc. and organized to reflect users' needs versus governments' physical organizational structure. It should be a one-stop-shop through all levels of government and within each level, with better-managed information.

There is an expectation that government should lead the way when it comes to placing information online, using enhanced applications. However, a conundrum here exists in that enhanced e-government services/applications may only end up being of benefit to those who have access to broadband, given it is currently not ubiquitously available. Government delivery of service, therefore, must be complemented by available access so that clients can access e-government.

The following is a summary of government-related comments / suggestions provided by Forum participants:

Infrastructure Funding:

- Importance of government seed funding
- Government funds adjust to topography / geography and demographics – if you have a hilly terrain, need for more seed money than if you are flat
- Insure funding goes to infrastructure costs not management of fund
- Support required to cover difference between ISP dollar contribution and total costs
- Funding required over 'X' years for infrastructure
- Government dollars may be used as leverage tool
- Include social benefit to economic equation
- All levels of government must be willing to dedicate resources (time and money)
- Application for funding to be made easier/more simplistic rather than complicated; less strict on short-term deadlines i.e. getting funds spent by "March 31"

Broadband Implementation Strategies:

- Government-owned backbone in 'gap' areas made available to all ISPs who want to compete (e.g. Alberta's open access model]. Provincial government provides backbone, private sector goes last mile
- Government can help by providing locations of towers
- Assist municipalities in:
 - securing a competent consultant
 - RFP template
 - scope of work
 - decision criteria
 - municipal readiness

Facilitation Funding:

- Government assistance / incentives in place to support partnerships / collaboration between government, private, and not-for-profit organizations; government assistance in funding community meetings for awareness
- Government assistance to examine partnerships with alternative energy companies (e.g. supply of hydro)

Federal Policy:

- Suggestion that ISPs should be licensed, including a mandate to allow easier co-location on towers
- Promote through tax policy
- Spectrum policies that accommodate community networks

Provincial Policy:

- Government assistance in getting health and education to share access
- Promote through tax policy
- Create timeframe for implementation (both infrastructure and e-government)
- Balanced approach to utilizing more e-government to reduce costs – use cost savings to support broadband initiatives

Municipal Policy:

- Cooperation from municipalities including access to right-of-ways, municipal towers etc.

Incentives / Tax Policy:

- Special deductions or depreciation rates for business expenses related to technical expenses (e.g. change depreciation calculation on computers)
- Awards for innovative use of Internet (applications); awards that recognize excellence
- Telecommuting incentives – incentive for employee access
- Incentives for end-users & business – reduced costs / fees tied to e-government use; charges for e-government services reduced for using Internet; subsidy by government for doing a lot of ‘stuff’ online - should the costs of access to information be borne by the end user?
- Provide access to funding for francophone / First Nations / minority groups who have previously exhibited innovative methods

Other Considerations:

- Portal funding
- For online transactions, establishment of a designated enforcement ‘body’ similar to Better Business Bureau.
- New business model for ISPs that include social benefits, not just financial benefits.
- Security - standards enforcement; resource mechanisms; leadership; risk management guidelines set out by government
 - If public portal – should be government level of security
 - Enforcement – industry standards – similar to ISO example
 - Security of networks, existing standards in place etc.

Key Outcomes

Capturing input from rural Ontario stakeholders on the issue of broadband

- 1. Broadband - and the availability / utilization of broadband - are two sides of the same coin** and are, therefore, heavily intertwined. Dialogue on one topic in isolation of the other will prove futile. For example, increased utilization of online government services (e-government) will require increased accessibility. Those who stand to benefit most from e-government servicing are those potential broadband users who are located in the most remote-rural areas of the province and face very real challenges around distance and travel. Unfortunately, these are the same folks who are the least likely to have access to broadband services.
- 2. There is no sustainable business case for Internet Service Providers to provide (near) ubiquitous broadband access.** Communities where population is sparse and / or areas where the terrain is rough are, typically, areas where costs to provide broadband service exceed initial capital costs and ongoing operating (sustainability) costs. There may exist a case for municipally-funded broadband service in the more remote-rural areas where sustainability issues exist versus in the more near-urban areas where there is sufficient population densities to support multiple providers. Funding programs need to include numerous scenarios.
- 3. “You don’t know what you don’t know.”** Utilization and, in turn, demand is limited by users’ awareness of the benefits of broadband access. Enhancing their awareness and understanding should increase the demand for broadband service, thus improving the business case for the providers of Internet services. Additionally, having access to broadband connectivity may help spur innovation in the development of enhanced Internet-based applications that typically require high-speed access, once again increasing demand for access.
- 4. There appears to be a lack of broadband leadership in government** at both the provincial and federal levels. Local municipal leadership tends to vary from municipality to municipality. Government broadband policies seem to be the responsibility of more than one provincial ministry and the relationship between the federal and provincial government falls into two categories: unclear or ‘the other guy’s problem’. The provincial government needs to recognize that broadband is essential to rural economic development and they need to clearly (publicly) assign the broadband responsibly to one ministry. Federal / provincial programs (if any) need to be compatible wherein funding application and reporting requirements are similar or combined. It should be noted that most Forum participants assumed that broadband connectivity was a provincial issue. Specific issues, such as spectrum management, were discussed in the context of being a federal responsibility.
- 5. ‘Community Portals’ are recognized as a benefit to local economies**, however, there is no specific funding for their creation nor for the upkeep of the information within these portals. Upkeep of said information is understood to pose a challenge for communities (e.g. time / human resources) yet it is nevertheless considered to be crucial.
- 6. Partnerships amongst community stakeholders are typically required for broadband-related projects.** These partnerships require time and effort to maintain. It is also essential that they reflect both social and economic components, with each respecting the other’s needs. There has to be a very strong recognition that, because we are dealing with both private and public sector players, there will always be different motivating factors to address and incorporate.

7. **The social impacts of broadband accessibility must be recognized in tandem with the economic impacts.** Increased availability of such services as tele-health and distance education, for example, stands to contribute to the social health of the community. We need to acknowledge the difference between an economic return on investment and a social return on investment. Funding programs should reflect this need by featuring both social and economic considerations.
8. **There should always be a comprehensive community strategy in place before spearheading a broadband initiative.** Past experiences (e.g. ElginConnects) have proved that a well-planned community strategy, involving a partnership of community organizations, stands a far greater chance of success. (A demonstrated need for a best practices resource toolkit).
9. **There is an unequivocal need to “train the trainer”:** There appears to be an unfounded and / or unreasonable expectation that community champions / community groups etc. have sound knowledge in regards to higher-end use of broadband (e.g. applications). Forum participants at both regional sessions (Brockville and Ingersoll) called for increased training with the expectation it would be undertaken by Community Futures Development Corporations and other local economic development offices, chambers of commerce, municipal governments, CAP site personnel, and students, etc. In reality, although these people / organizations may understand the need and value for increased utilization of the Internet, they likely possess little practical knowledge.
10. Within the context of numerous discussions, participants repeatedly recommended the need to **develop a broadband ‘toolkit’** that could provide ‘best practices’ and other valuable resources (e.g. sample RFPs for broadband service) to assist champions, private sector groups and municipal governments through the process of broadband implementation and use.
11. **An increased, higher value of high-speed Internet access will only be achieved through the use of applications, not access per se.** Again, a demonstrated need for a best practices resource.

Appendix 1 – Glossary of Terms and Abbreviations

Broadband – definitions vary widely. Here is a selection:

- **CRTC**: Generally a data access link, especially an Internet access link, usually defined in terms of the minimum amount of bandwidth to which the end user has access, and whose characteristics facilitate the use of advanced telecommunications applications and services. Some definitions fix this threshold at 1.5 Mbps (T-1) speed in North America and at 2 Mbps (E-1) speed in Europe; at the same time, it is recognized that this scale is likely to increase as new applications become widely deployed, and so other definitions have usefully emphasized broadband's always-on (dedicated access) character, the user's ability to upgrade her or his access bandwidth as the need arises, and the consideration that the local link be neither a limiting factor in deploying existing applications nor a bottleneck in encouraging new ones. In the context of the CRTC's telecommunications monitoring process, the term "broadband" is not used with regard to data collection; instead, a distinction is established between narrowband (speed in either direction of up to 128 Kbps) and high-speed (speed in either direction of over 128 Kbps) Internet access.
- **Verio** (www.verio.com) - A transmission medium capable of supporting a wide range of frequencies, typically from audio up to video frequencies. It can carry multiple signals by dividing the total capacity of the medium into multiple, independent bandwidth channels, where each channel operates only on a specific range of frequencies.
- **City of Ottawa**: Broadband refers to the very high-speed transfer of information through technologies such as fibre optics, satellites, wireless transmission and co-axial cable. Data rich applications such as full motion video require more telecommunication capacity (bits of information per second) or bandwidth than a low bandwidth application such as e-mail or still imagery. Using current communication technologies, a transmission rate of 1.5 megabits per second (1.5 million bits of information per second) is often considered to be the minimum speed for acceptable broadband applications. Unlike a traditional dial-up connection, broadband services are always on, enabling productivity and efficiency improvements.

DSL or Digital Subscriber Line

- **CRTC**: A specification for dedicated, full-duplex service between customer premise and a service provider's point of presence via a conventional twisted copper pair's upper 4 KHz to 2.2 MHz frequency band. The capacity of the DSL connection is highly dependent on the length of the connection and, therefore, the distance between the customer premise and the service provider's point of presence; in general, the maximum range for repeaterless DSL is 5.5 km.

VPN or Virtual Private Network

- A virtual private network (VPN) is a private communications network often used by companies or organizations to communicate confidentially over a public network. VPN traffic can be carried over a public networking infrastructure (e.g. the Internet) on top of standard protocols, or over a service provider's private network with a defined Service Level Agreement (SLA) between the VPN customer and the VPN service provider. A VPN can send data (e.g., voice, data or video, or a combination of these media) across secured and encrypted private channels between two points.

Appendix 2 – Forum Agendas



Tuesday, March 20, 2007
Quality Hotel Royal Brock • Brockville • Ontario

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|-------------------------|--|
| 8:30 a.m. | Registration |
| 9:00 a.m. | Welcome and Opening Remarks <ul style="list-style-type: none">○ Harold Flaming, Executive Director, The Ontario Rural Council○ Barbara Swartzentruber, Policy Advisor
Office of Chief Strategist, Ministry of Government Services |
| 9:15 a.m. - 10:30 a.m. | Status Report: Current State of Broadband Access in Rural Ontario
offered from diverse perspectives: <ul style="list-style-type: none">○ Provincial Government – Marla Krakower, Manager, I & IT Strategy, Policy and Planning, Ministry of Government Services○ Community - Laura Bradley, Actionable-Intelligence Inc.○ Eastern Ontario Gap Analysis – Chris Cope, Eastern Ontario Broadband Coalition |
| 10:30 a.m. – 10:45 a.m. | <i>Refreshment Break</i> |
| 10:45 a.m. – 12:15 p.m. | Panel Discussion: “Community Strategies around Uptake and Utilization of Broadband in Rural Ontario”
<i>(Speakers representing a cross-section of sectors – local government, business and community/human services - address what initiatives have/have not worked for them, success rates, etc.)</i> <ul style="list-style-type: none">○ Donna Lunn, Community Economic Development Officer,
Elgin Community Futures Development Corporation, St. Thomas○ Chris Cope, Economic Development Consultant, City of Ottawa○ Bryce McLean, Director of Finance, County of Peterborough |
| 12:15 p.m. – 1:15 p.m. | <i>Lunch</i> |
| 1:15 p.m. – 2:45 p.m. | Facilitated Roundtable Discussions: <i>(see Page 2)</i> |
| 2:45 p.m. – 3:00 p.m. | <i>Refreshment Break</i> |
| 3:00 p.m. – 3:45 p.m. | Report Back
Abbreviated report back from select table Facilitators highlighting key priorities <i>(only)</i> moving forward |
| 3:45 p.m. | Wrap Up and Next Steps |

Thursday, March 22, 2007
Elm Hurst Inn • Ingersoll • Ontario

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|--------------------------------|---|
| 8:30 a.m. | Registration |
| 9:00 a.m. | <p>Welcome and Opening Remarks</p> <ul style="list-style-type: none"> ○ Harold Flaming, Executive Director, The Ontario Rural Council ○ Barbara Swartzentruber, Policy Advisor
Office of Chief Strategist, Ministry of Government Services |
| 9:15 a.m. - 10:30 a.m. | <p>Status Report: Current State of Broadband Access in Rural Ontario offered from diverse perspectives:</p> <ul style="list-style-type: none"> ○ Municipal – Jim Whelan, Reeve, Township of North Kawartha, Apsley, ON ○ Provincial Government – Marla Krakower, Manager, I&IT Strategy, Policy and Planning, Ministry of Government Services ○ Community – Barry Crampton, Eastern Ontario Broadband Coalition |
| 10:30 a.m. – 10:45 a.m. | <i>Refreshment Break</i> |
| 10:45 a.m. – 12:15 p.m. | <p>Panel Discussion: “Community Strategies around Uptake and Utilization of Broadband in Rural Ontario”</p> <p><i>(Speakers representing a cross-section of sectors – local government, business and community/human services - address what initiatives have/have not worked for them, success rates, etc.)</i></p> <ul style="list-style-type: none"> ○ Kathryn Wood, Natural Capital Resources Inc., Sydenham, ON ○ Wayne Knox, General Manager, Grand Erie Business Centre, Caledonia, ON ○ Donna Lunn, Community Economic Development Manager, Elgin Community Futures Development Corporation, St. Thomas, ON |
| 12:15 p.m. – 1:15 p.m. | <i>Lunch</i> |
| 1:15 p.m. – 2:45 p.m. | Facilitated Roundtable Discussions: <i>(see Page 2)</i> |
| 2:45 p.m. – 3:00 p.m. | <i>Refreshment Break</i> |
| 3:00 p.m. – 3:45 p.m. | <p>Report Back</p> <ul style="list-style-type: none"> ○ Abbreviated report back from select table Facilitators highlighting key priorities <i>(only)</i> moving forward |
| 3:45 p.m. | Wrap Up and Next Steps |

Themes and Questions for Facilitated Roundtable Discussions – Brockville + Ingersoll:

Forum participants will be asked to address specific themes in a Roundtable Discussion session. These themes will be incorporated in a series of questions which will then be presented to each table. A facilitator will preside over each group.

Themes:

1. Supporting Economic Innovation and Community Development in the Broadband world.
2. Supporting and ensuring Social Equity, Inclusion & Participation, and e-Learning through Broadband utilization.
3. Supporting the adoption of e-Government and e-Democracy in the Broadband world.

Participant Questions:

1. What strategies are needed to effectively promote Broadband connectivity growth, uptake and utilization in Rural Ontario i.e. business, community, government, organizations?
Consider:
 - *Challenges*
 - *Possible solutions and recommended actions*
2. What are public policy and government service delivery consideration for support of broadband access and utilization – at all levels of government?
Consider:
 - *Issues*
 - *Possible solutions and recommended actions*
3. What roles do community organizations and the private sector play in the delivery of Broadband in Rural Ontario?
Consider:
 - *Opportunities*
 - *Possible solutions and recommended actions*

Theme:

4. Determining the roles, responsibilities and innovative approaches to closing the current gap in Broadband infrastructure.

Participant Question:

What broad-ranging strategies will assist Ontario in closing the broadband infrastructure gap in our rural communities?

Consider:

- *Barriers and challenges*
- *Innovative Solutions*
- *Recommendations for action*

Appendix 3 – Speaker Biographies

▪ **Chris Cope**

Chris is a consultant in the Economic Development Branch at the City of Ottawa. He is lead on the Ottawa initiative to make high-speed Internet available to all of Ottawa's rural residents, and recently steered the push to make Ottawa a single telephone calling area. Previously, Chris was Director of SmartCapital Special Projects at the Ottawa Centre for Research and Innovation (OCRI) where he held the additional titles of Executive Director of EduNET and Executive Director of ORCnet. EduNET was a not-for-profit partnership of Carleton University, the University of Ottawa, La Cité collégiale and OCRI, while ORCnet is a grass-roots organization of rural champions, supported by the City to aggregate broadband demand in Ottawa's rural communities. He was employed by the National Capital FreeNet as its Executive Director from early 1997 until the end of 2000. The following year he joined NCF's Board and was elected President and Chair, a role he continues to serve. Chris is a director and holds the position of Vice President of Telecommunities Canada, an organization that represents and promotes the Canadian community networking movement at both the national and international level. He is on the steering committee of The Millennium Learning Centres, a community access network with 20 public sites and a member of the Eastern Ontario Broadband Coalition (EOBC) working group.

▪ **Barrie Crampton**

Since 1994, Barrie has employed his technical and business career expertise in the field of community and economic development, with a particular emphasis on the utilization of information and communication technology. While employed as Executive Director of the local Community Futures Development Corporation (CFDC) office, Barrie became a founding director of one of Canada's earliest community-based network (CBN) organizations in Lanark County. He is a founding member and past chair of the Regional Networks for Ontario and has served on the Ontario Smart Growth Panel for Eastern Ontario. Barrie has been involved in the development, writing and implementation of numerous community network and IT business plans, including Community Access and Broadband for Rural and Northern Development Programs of Industry Canada, and Telecommunications Access Partnerships Program for the former Ministry of Energy, Science and Technology.

▪ **Wayne Knox**

Wayne Knox has more than 30 years' experience providing corporate management services, small business consulting and advice - with specialization in franchising, financing, marketing and internet-based business. A former president of Dairy Queen Canada, Wayne has spent the last 17 years working with the Grand Erie Business Centre in Caledonia assisting in the development and implementation of Industry Canada's Community Futures Development Corporation (CFDC) program for the communities of Haldimand County and Township of West Lincoln in the Region of Niagara. He is an active member of his church and community, having held numerous Board positions with his local Chamber of Commerce and Rotary Club.

▪ **Donna Lunn**

A partner in a family dairy operation, Donna is immediate Past President of the Elgin Federation of Agriculture and a current Board member of the Ontario Federation of Agriculture (OFA), with many years' experience both provincially and nationally in leadership positions in rural and agricultural organizations. Her extensive community involvement led her to receiving the Canadian Commemorative Medal in 1992 "in recognition of significant contribution to compatriots, community and to Canada". Donna's most recent recognition was a provincial award, "Leading Women, Building Communities" in 2006. Donna's current projects include rural technology and broadband. She facilitated and wrote the proposals for IT and broadband for the Elgin Community Futures Development Corporation (CFDC) after an intensive six-month research phase in 2000. Elgin has been the only community to now have received BRAND (Broadband for Rural and Northern Development), COBRA (Connect Ontario Broadband for Regional Access) and COPSC (Connect Ontario Partnering for Smart Communities). Aggregating community resources resulted in a total of more than \$4.8 million for these projects for Elgin and St. Thomas. Donna is currently Project Manager for elginconnects and Community Development Officer for the Elgin CFDC.

- **Marla Krakower**

Marla is a Manager in the I & IT Strategy, Policy and Planning Branch with the Ontario Ministry of Government Services. She has 15 years' experience developing policy and programs, and providing strategic advice within the Ministries of Government Services, Community and Social Services, and Training, Colleges and Universities; as well as with the Financial Services Commission of Ontario. In her current role, Marla is responsible for I & IT policy and strategy development for the Ontario Public Service. Marla has a Masters degree in Political Science from the University of Toronto and an undergraduate degree in Political Science from York University.

- **Bryce McLean**

Bryce has been with the County of Peterborough for 20 years, serving for the last 10 years as Director of Finance/Treasurer. The Director's position includes responsibility for the Finance Department including Payroll, Purchasing, Geographical information Systems (GIS) and Information Technology (IT). Since 2005, he has served as Project Manager for broadband in Peterborough County. Prior to joining the County, Bryce worked in the private sector with a Chartered Accounting firm, gaining several years' experience in Municipal audits and accounting, Corporate and Personal accounting services and audits, Corporate and Personal income tax, and Estate Trusts. Bryce has been a Certified Management Accountant since 1973 and has served both on the Board of Governors and as Committee Chairman for the Society of Management Accountants of Ontario. At the community level, Bryce has volunteered with United Way and Community Care Peterborough.

- **Jim Whelan**

The Reeve of the Township of North Kawartha, Jim is a 30-year resident of Peterborough County, a cottager on Anstruther Lake and a permanent resident of North Kawartha since 1990. He is the now-retired president of two successful area businesses and, as such, places a high regard on local economic development issues. In the world of civic duty, Jim's name has been attached to a long list of township, county and community committees and associations over the years, each covering a wide range of sectors, from planning and zoning to recreation, library and police services. Among the many Peterborough Council committees on which Jim has served, is membership on its Broadband Committee.

- **Kathryn Wood**

Kathy is President and CEO of Natural Capital Resources Inc., an environmental consulting and product development business in Frontenac County. In addition to two honours undergraduate degrees from Queen's University (one in Economics and the second in Environmental Science), Kathy says she has earned an MBA in small business from the 'School of Hard Knocks' by growing up in a rural family business, being involved in four business start-ups, and advising many others. Over the last three years, Kathy has worked extensively in rural economic development, including service as the Project Coordinator for the Eastern Ontario Opportunity Action Plan and currently, the Eastern Ontario Rural Policy Project. Both of these assignments have included consideration of the role of broadband in rural development. After years of waiting - and several attempts to serve as local champion for these services - she now has wireless broadband at her rural business and home. In 2006, Kathy was presented with the Kingston Technology Council's Champion Award for encouraging and promoting the development of knowledge-based business.