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EXECUTIVE SUMMARY

Overwhelmingly our community consultation process of local forums and surveys indicated ***there is a need for a coordinated effort of managing the information for our community residents and businesses.*** The information needs to be clear and relevant and the format needs to be user friendly. The applications of Information Communications Technology (ICT or IT) are greatly supported for health and medical interaction, the emergency sectors, the distance education sector, and our business and social needs. The economic needs were identified and were articulated further into priorities. However, although the present uses are very obvious, and we see clear priorities for potential use, there is a large percentage of respondents answering 'somewhat' to the question of potential uses. This indicates that as education and awareness surrounding IT applications increases, so will the probability of its use. There exists large room for growth potential, but only if consumers are included in the process of moving forward. We need to continue with our efforts of increasing awareness of I.T. and its implications locally and worldwide. The paradigm shift will come as a result of the relevant applications. Also identified was that the community recognized the need for the necessity of learning the skills of IT and adapting to the changing environment. Through the survey it was apparent that even regular users were aware of the need for continuing education and training.

Our challenge lies in applying the use of Information Communications Technology in a way to interface with the new knowledge based economy while still maintaining our community identity. The importance and challenge of maintaining our identity while adapting to the new knowledge based economy is critical to the compliance of the technical usage. The common desire for Elgin was to use this technology as a tool to help shape our community in order to adapt and survive in the new knowledge-based global economy. We need to use this technology of information communications to link our individuals and groups in an integrated fashion. Our goal is to provide an environment to promote job growth, attract new investment, and encourage local economic development in a manner identified as appropriate for our rural community.

We have been directed by our community to link I.T. applications to our community's needs - to facilitate interaction of our community to technology. The need for locally focused information is needed in order to coordinate and manage the information needed for our own communities and can be accomplished through a community ' portal'. It will provide a clear and directed step to accessing relevant information - starting locally and building connections regionally, provincially, federally and globally - as the overwhelming amount of information found while 'surfing' was number one as a deterrent for looking for specific information. This community portal will expand the presence of our own businesses and services on the web and encourage our economic opportunities locally and beyond.

It is also apparent that there are many ideas and great excitement about how we can foster innovative partnerships among community organizations, both private and public; and how the community can transform itself to provide wide-ranging access to information through coordinated effort and common goals. Area enterprises are currently interested in exploring increased capabilities. The challenge remains the cost of the last mile technology. Working independently proves too costly, but the models of shared aggregate partnership which have been implemented in other areas would serve all businesses by working collectively and decreasing the individual cost. The same issues of needing to connect technologically challenges most rural communities, but the solutions need to be designed for and by the local communities in order for the process to be suitable and sustainable.

SECTION A: BACKGROUND

The Elgin Middlesex Information Technology (eMIT) Project was a study commissioned by the County of Middlesex and the Elgin Community Development Corporation (CDC) to conduct a needs and capacity study in regards to Information Communication Technology (ICT or IT) in the respective counties.

The County of Middlesex has developed a strategic plan and an economic development strategy. They clearly saw the trends and adopted a Technology Infrastructure Plan as well, which led to their participation in the eMIT project. Building upon their 'Middlesex Connects' the councillors endorsed a Technology Infrastructure Plan which included investigating the capacities, the needs and potential partnerships within the community.

The Elgin Community Development Corporation (CDC) is a community-based, non-profit organization funded by the Industry Canada branch of the Federal Government. The Elgin CDC was formed to assist and encourage job creation and community economic development throughout Elgin County. Governed by a volunteer Board of Directors comprised of a diverse mix of professionals drawn from the local community, the Elgin CDC undertakes to facilitate both business and community development objectives. The globalization of Information Technology was seen as a driving force to ascertain where Elgin sits with its infrastructure and I.T. needs.

The information of the present uses, future plans and any barriers to participating in this technology both in technical and human terms would enhance the planning needed for both counties.

The Elgin CDC and County of Middlesex entered into an agreement to conduct this study in both counties with funding received from Human Resources Development Canada (HRDC). Donna Lunn was hired as Community Facilitator to conduct the community needs and capacity assessment while Cynthia Nurse was hired to document the existing IT infrastructure.

This report will include only Elgin County. Although the methodology was the same and many of the findings were not statistically significantly different, some of the influences, responses and directions for the future were unique.

SECTION B: METHODOLOGY

The eMIT project's methodology was structured according to the objectives desired and the time frame presented. The purpose of the project was straight forward – to find information regarding the IT infrastructure present in our counties and to gauge the community's use and response to the knowledge-based economy in order to appropriately plan for our communities adapting to operate within this global information economy. Therefore it was important that we include community stakeholders for their input and direction for the applications needed or seen as important for them. The project began January 1, 2000 and the report completed by the end of August.

The timelines and structure of the project was flexible enough to respond to two important provincial actions – the Data Services Improvement Program (DSIP) and Connect Ontario.

The DSIP was an agreement between the government and private and public telecos to fund upgrading of phone lines to T1 capability to the service switching boxes which was to be

completed by June 2000. The program also contained a component for funding a community meeting within specific regions. We were able to take advantage of this and provided a regional meeting in March.

In April 2000 the Connect Ontario program of an $82 million initiative to develop a network of 50 connected smart communities across Ontario was announced. The purpose was to help communities stay competitive in the world economy and to improve delivery of services and access to information at the local level. Broad based partnerships, a broad geographic base and technology applications based on community and local business needs are the focus of this program. The community based focus of eMIT is an important component for a Connect Ontario application.

Structure of the project

- Literature review – The first month of the project was a gathering and reviewing of literature of smart communities. The Lanark County Workbook for Community Networks, the Regional Networks for Ontario Information Exchange Seminar December 1999, and information from COIN (County of Oxford Integrated Network) and Industry Canada's Connecting Canada were valuable starting points. During the duration of the project, additional information was gathered that influenced our countys' reactions and interactions with IT – such as the Local Training Board's environmental scan.

- Steering committees - In each county key individuals or stakeholders who knew the value of connectivity and represented the diversity of our communities were invited to participate in the committee. The meeting in Middlesex was held January 31 and in Elgin on February 14. The purpose of the project, the timelines and the background of smart communities were shared with the committees and input requested as to how they saw the project unfolding and how they saw themselves participating. Sub-committees were formed with people who were interested in specific aspects of the project for infrastructure, community forums, or surveys. (Appendix 1 – list of steering committee participants). A website was constructed by local participants and hosted by LargNet.

- DSIP – The DSIP meeting was used as a kick-off event for the project. Participants were invited to reflect the geographical areas of both counties and to reflect the diversity of business and social organizations. A very successful event was held with over 80 people attending on March 6. A wide array of best management practices of applications for a diversity of sectors was presented. The next steps identified by participants clearly articulated the need to take this information to the local communities, which was easily assimilated into the community forum format. The Round Tables were formatted to include open-ended questions regarding IT to stimulate discussions. That input was funneled into more closed ended and specific questions for the community survey. (Appendix 2 – DSIP flyer and evaluation)

- Community Forums – Ten forums were held in the two counties in areas determined by community interest, DSIP participants and steering committee members. The forums were structured in a power point presentation to consist of a summary of the project, why IT was being analyzed and examples of applications in other communities. Discussions were recorded that included citizen's input of their concerns, their barriers to IT, and the applications that would prove to be most useful for them. We included local citizens to help organize the event, and to speak at the forums. Most helpful were the 'stories' of local people who utilize IT. The forums were held from mid-March, April, and the beginning of May. Strathroy was the pilot meeting and it was at this forum that the local participants voiced a desire for a local IT

committee and began serious discussions of bringing high speed connectivity to the community. Two round table discussion groups with industry and public sector groups in St. Thomas and one in Strathroy were organized and they were quite well attended. (Appendix 3 – sample of forum advertisement) (Appendix 4 – example of media coverage) (Appendix 5 – forum power point presentation)

- Surveys – Two surveys were constructed. One was the community survey intended for any – and every-one to fill out. Literacy levels and various ways of distribution were examined. It was assembled with the whole community in mind,… those who use Internet and those who do not… therefore, it was available in hard copy and on the web site. After the deadline, the surveys left over were disposed of by the local drop-off points. As a result, a conservative figure of the response rate based on the total number printed was 14%.

A survey specifically to address the IT infrastructure was constructed by Cynthia Nurse and was available on the website. Businesses were contacted per email and web sites and invited to complete it. However, the response rate was poor and can not be documented as statistically significant. There also was not a method of calculating how many industries actually received the infrastructure survey. The CAP (Community Access Partnership) students generously donated their time to personally contact businesses and complete the survey on the phone and we were able to obtain a few more business surveys but due to the low response rates, we can not feel comfortable documenting statistics but we can gather some observations regarding the infrastructure needs of county businesses from the respondents.
(Appendix 6 - Community IT questionnaire) (Appendix 7 – infrastructure survey)

- Connect Ontario – This newly announced program took a large amount of time during May and June as enabling the counties to take advantage of this funding was crucial. As the program is based on partnerships and community applications, it was essential to share this information with our major partners. Here the two counties differed . The County of Middlesex decided to develop their Notice of Intent to Connect Ontario fit in with their Technology Plan. The eMIT information was needed to help enhance their Notice as community consultations were necessary for local applications. Elgin County needed awareness not only of the eMIT results but also the organization of the IT vision. The Elgin CDC became the lead agency for Connect Ontario in Elgin with the County of Elgin and City of St. Thomas being key partners. The eMIT Community Facilitator was then responsible for the writing of the Notice of Intent.

- Writing of the Report – July and August were utilized to compile the information and write the report. There was also much follow up still necessary for the local communities.

The time constraints of a short term project such as this does have some limitations. Much of the information gathered from the research deems further action. We were able to grossly examine the infrastructure and general needs of business and community. However, the enthusiasm and interest that was motivated is an indication that continued involvement in the counties is necessary. For instance, some local communities want to continue having local IT meetings to discuss applications, problems and mentorship. Other communities want to move forward now with improved infrastructure or programs. Many of the stakeholder representatives wanted to have a presentation for their own sector or agency. Although some of this was done, such as a presentation by the facilitator to the Dorchester Business Association, there was not time to accommodate all the requests. We also missed certain segments of the population. We did not adequately reach and address the needs of specific communities such as the disabled although we had 6 % identify themselves as disabled. Overall, however, we were able to reach quite an acceptable random selection of the counties.

The respondents of the community survey represent a good cross-section of ages and occupations and location in the county.

Figure 1: Age of Elgin Respondents

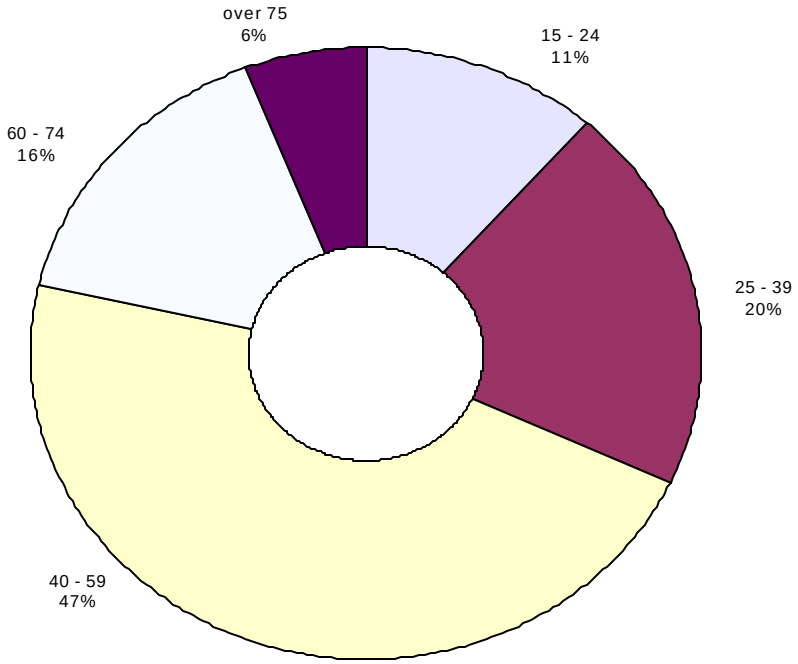
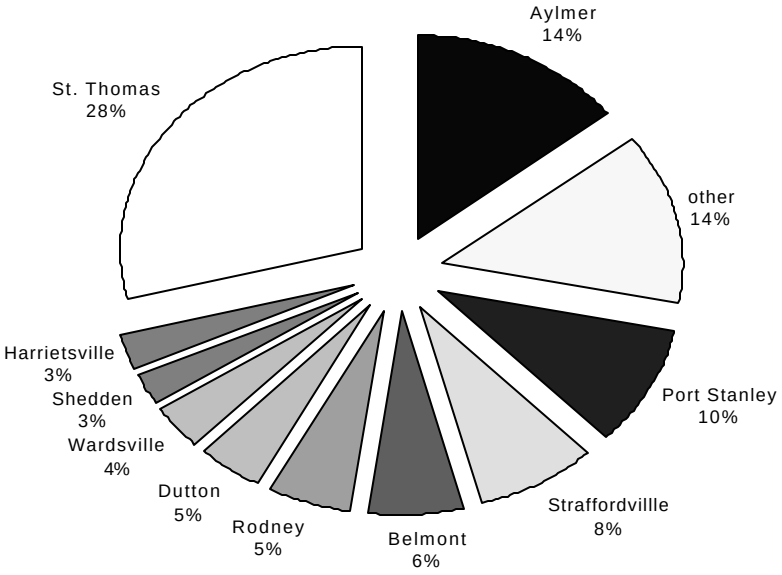
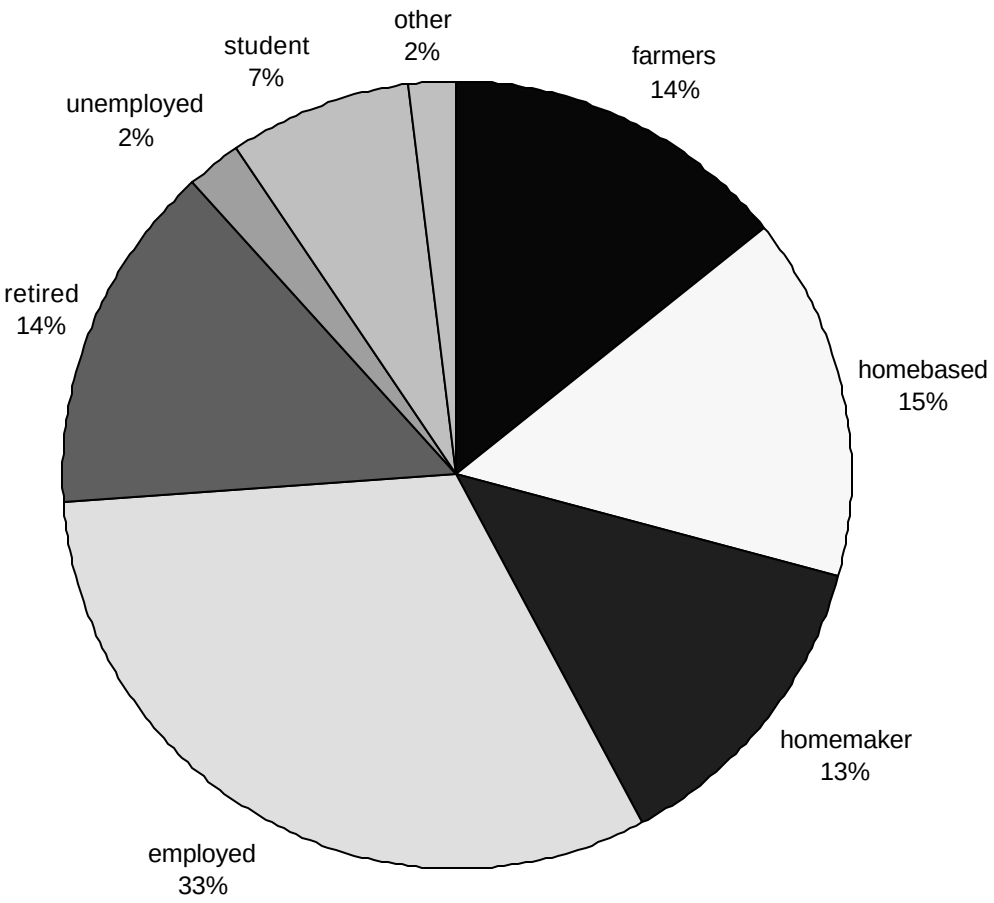


Figure 2: Location of Elgin Respondents



The portion of 'other' in Table 2 includes responses from Union, Wallacetown, Eden, Fingal, Mossley, Orwell, Port Burwell, Sparta, Springfield, Bayham, West Lorne and Central Elgin.

Figure 3: Occupations of Elgin Respondents



SECTION C: DESCRIPTION OF COMMUNITY

The County of Elgin, located in South Western Ontario, covers an area 1160 square kilometres (725 square miles) and its entire south border is the coastline of Lake Erie. Elgin County is known for its unique geographical profile as it is approximately 65 miles long and 35 miles wide. The County, restructured in 1997, is composed of seven area municipalities. The areas range in characteristics of agricultural, rural hamlets, international harbour ports, and one large town. The separated City of St. Thomas is located near the geographical centre of Elgin County. The 1996 census populations are presented in Table 3.

Figure 4: 1996 Census Population and Projected Population by Area Municipality

Municipality	**Census Population 1996**	**Projected Population, 2006**
St. Thomas (city)	**32275**	
Aylmer (town)	**7020**	
Central Elgin -Belmont - Port Stanley - Yarmouth	**11270** 1895 2495 7150	
Malahide - Springfield - South Dorchester - Former Malahide	**8890** 745 1895 6250	
Bayham - Vienna - Port Burwell - Former Bayham	**6235** 490 1025 4720	
West Elgin - West Lorne - Aldborough	5565 1525 4040	
Southwold	4280	
Dutton- Dunwich - Dutton - Dunwich	**3605** 1315 2290	
Elgin County	**79160**	**84 700**

[1]Source: Statistics Canada, 1996 Census.

Elgin County naturally divides itself into 3 regions - East, Central and West. East Elgin is heavily influenced by the agricultural industry. Tobacco is a major crop and has driven the industry to invest heavily in East Elgin where Imperial Tobacco provides a tobacco warehouse, auction and processing plant providing major employment opportunities year round. The demographics of East Elgin again present a unique presence as 52% of the population is Mexican Mennonite. The Town of Aylmer is the focal point for shopping, recreation, health, and education in East Elgin. The City of St. Thomas, is situated in the middle of Central Elgin, where employment, shopping, health and education, recreation and administration offices offer service to the County as well as providing for the City. The industrial sections of Central Elgin and St. Thomas is an attractive site for large companies. However, the large natural attractions of the lakeshore also provide commerce and tourism as London and Middlesex people congregate to the major bird watching sites. West Elgin small towns tend to be of more equal size to each other, however agriculture is the most visible and dominant presence . Again, the diversity of culture is very apparent as 48% of the population of the former village of West Lorne is Portuguese.

GOVERNMENT

Elgin County governments consists of a 2-tier structure with a County Council and seven area municipalities and the separated City of St. Thomas. The County government is responsible for libraries, Homes for the Aged, road reconstruction, emergency planning, and land division. Area municipal services tend to be more specific to the local community and includes parks and recreation, licensing, drainage, transit and cultural facilities among others.

The City of St. Thomas is responsible for its own services within the city boundaries. However, agreements between the City and the County councils are starting to streamline the large responsibilities in order to become more efficient and effective. The City now is responsible for delivering social housing and Ontario Works while the County takes the lead responsibility for land ambulance and provincial offences.

Economic development responsibilities are performed by all levels of government. The City of St. Thomas has a full time economic development office as well as a planning division. The Town of Aylmer uses a committee approach to meet its economic development mandate. The small towns and villages each have a business association or economic development committee.

LIBRARY SERVICES

Library services are provided through a large city library and a county library system which operates 11 local municipal branches. This essential service has broadened to include Internet access, Internet training, government information access thorough the Internet, and provision of space for local programs for all ages. The Library has a vibrant presence in the City and the county residents can also use the services.

EDUCATION

The Thames Valley District School Board and the London District Catholic School Board provide elementary and secondary schooling. We also have two private Christian schools, a Montessori school, and numerous day care facilities. The Mennonite population operates their own schools according to provincial standards. The University of Western Ontario also provides

for distance education courses offered in partnership at several local facilities. Fanshawe College provides post-secondary educational opportunities at the St. Thomas campus. Fanshawe College is a newly constructed building built on the same site as a new separate school. Sharing a cafeteria, and lab rooms they also share the outdoor track facilities. As well, the site offers a full time day care service. Fanshawe's program content and course offerings are community driven, reflecting local needs.

The Ontario Police College (OPC) is located just outside of Aylmer and is the school for police training for all of Ontario's jurisdictions. The enrollment per year coming to Elgin for this training swells our numbers significantly and is an important economic factor for our services and businesses. The facility is top grade and provides high-tech training for our provinces' police officers.

Another major asset which separates us from our surrounding counties is the Elgin Community Development Corporation's award winning, Career Management Generator (CMG) program, which provides relevant schooling and training for business plans and is available for youths 16 - 24.

HEALTH AND SOCIAL SERVICES

Health facilities are available throughout the County, with the St. Thomas -Elgin General Hospital being the hub for acute care facilities. This hospital provides the full range of services including emergency, obstetrics, paediatrics, surgical, medical, x-ray department, lab facilities, physiotherapy, etc. A complement of doctors provide for 24 hour accessibility to the hospital.

The Elgin/St. Thomas Public Health Unit is located in St. Thomas and provides county-wide service including the City of St. Thomas. Provisions are made to employ nurses and inspectors who speak low German for the Mennonite population. The mandate for disease prevention and health promotion involves many programs including water quality testing. The West Elgin Community Health Centre has become a hub for activity of health promotion in the West end of the County. The two physicians at WECHC have privileges at the Elgin General Hospital as well as the Four County Hospital in Middlesex. A social worker, a dietician, a chiropodist and health promotion coordinator are also employed at the Health Centre. Aylmer has a recently built medical building housing local physicians, a pharmacy and laboratory facilities.

The Thames Valley District Health Council (TVDHC) provides health care advice and co-ordination in London and a three-county area including Middlesex, Elgin, and Oxford. Elgin has an active Health System Planning Committee for local input to the regional health council. The Health sector of Elgin is currently investigating connectivity among the facilities.

The County operates three long-term care facilities, again, East, West and Central. The County is responsible for connectivity to the facilities and for the computer needs. Valleyview Home for the Aged is situated in the City of St. Thomas and has recently been awarded the Long Term Care responsibility for the City and the County. We also have private nursing and long-term facilities in Port Stanley, Aylmer and St. Thomas with top class standards.

The Victorian Order of Nurses (VON) also work intricately within our rural communities providing the various home care aspects and community forums.

Elgin County also houses one the few Ontario Psychiatric Hospitals in the province. A large facility that provides crisis care as well as long-term, it also houses the only Forensic Unit.

Historically known for the quality care of its residents, Elgin County and St. Thomas are now home to many group houses for the clients as they become more integrated into society.

Elgin/ St. Thomas has a wide range of social services. Ranging from very organized agencies such as the United Way and the Elgin Association for Community Living to local community groups, the County is well equipped border to border with caring communities. Our social service agencies have learned how to work within our unique geographical configuration and demographics and have been proactive in creating inter-agency collaboration through Information Elgin, Volunteer Elgin, Elgin Information Network, Employment Services Elgin, etc.

At present, our police community consists of the Ontario Provincial Police who are headquartered in Central Elgin with a substation in Dutton. The City of St. Thomas and the Town of Aylmer each have their own police force. For fire protection we have a mixture of City Firefighters, Town of Aylmer Fire Protection and the county which is protected by volunteer fire services located strategically across the region. Land ambulance is the responsibility of the County.

OCCUPATIONS AND BUSINESS

The Trades, Processing & Manufacturing sectors account for 32.10% of the occupations in Elgin/St. Thomas. Many of the employees are involved in companies specializing in automotive, specialty equipment, and textiles. The automotive and auto-related manufacturers are major players in the trades and transportation as well as the manufacturing sectors. These industries are high-tech, internationally competitive businesses which focus on quality products and a skilled workforce. The majority of the population of West Elgin is involved in trades and transportation. East Elgin stands out as a major force for processing and manufacturing followed closely by St. Thomas.

Sales and service account for the highest percentage of occupations at 22%, and those services are concentrated in the more urban areas of St. Thomas, Aylmer and Central Elgin. Communication linkages for these services is essential in order to reach the processors, manufacturers, agriculturists, trades, and business, finance, and administrative occupations in the perimeters of the county.

Agriculture is a thriving force in Elgin and the stated occupation actually exceeds Southwestern Ontario and Ontario by a large percentage - 10.2 for Elgin, 6.9 for Southwestern Ontario and 3.1 for Ontario. The entrepreneurial spirit of agriculturists is illustrated through the adoption of technology from field to computer desk throughout the diverse range of agri-businesses.

Not surprisingly, our business, finance, education, health services, and social services are concentrated occupations in the Central region in order to service the long, narrow geographic county. As well, the distance to the regional services of health and education are close to London from Central Elgin.

The uniqueness of the whole length of our southern border, being the shoreline of Lake Erie, provides for diverse and unique occupations. Commercial fisheries and international ports for import and export of produce and materials dot the southern border. Along with these are the numerous camp and trailer parks, recreational sites, historical sites along the Old Talbot Trail, boating docks, and beaches. Tourism is a significant force in Elgin County for revenue and employment.

Elgin has an active Tourist Association and Marketing Alliance which includes both the City and the County businesses and which both the City and the County councils support. Pride and volunteerism is strong among Elgin businesses and tourists attractions and great plans are being made. Among the events is the 2001 Summer Games coming to Elgin/St. Thomas in order to take advantage of the large baseball Park and other exceptional recreational sites we have here. A unique asset of Elgin Tourism is the ownership of the kiosk shelter at a full service centre on the 401 corridor. A natural halfway point of rest between Detroit and Toronto, the computer at the kiosk provides information to travelers.

HIGHLIGHTS LEADING TO CONNECTIVITY

The Elgin/St. Thomas community has begun another pioneer effort of creating their new "highway" of communication for economics, government and social service.

- In 1994 Elgin Information Network initiated the first inter-communication between agencies and created a data base of agencies and services. Through HRDC, information job searches locally, provincially and federally was offered through the Internet. A Centre was open to the public in the City Library.
- In 1995 the St. Thomas Public Library was awarded the Minister's award for Innovation for its role in establishing the Community Centre for Information Access which was a model for future CAP sites
- In 1997 the Elgin County Library linked all its local community branches to the Internet and started operating as CAP sites, and have been operating as sites every year since with summer students training community residents
- Elgin County government puts Internet connections into their long term care facilities.
- Amtelecom, an independent telephone company which covers most of East Elgin, also owns a cable company which has extensive coverage throughout its catchment area into small hamlets.
- Continuing with its history of collaboration, Employment Services Elgin is a partnership group consisting of The Elgin Association for Community Living, Elgin/St. Thomas Youth Employment Counselling Centre, Fanshawe College, Human Resources Development Canada, Ontario Works, and the YWCA -housed under one roof to address training, employment and unemployment needs
- Libraries in partnership with HRDC become sites for one-stop service for Federal Government information
- In Jan 2000, the Elgin-Middlesex Information Technology Project, eMIT, begins.

14 additional CAP sites granted to the City of St. Thomas for a total of $245,000.00

- United Way has a database of all member agencies and lists their email addresses
- The St. Thomas / Elgin Chamber of Commerce created a database of existing businesses

Information Elgin - has an extensive database of agencies; organizations, education, health and social services in Elgin County and St. Thomas and it is available on-line.

- YouthStart - beginning in 2000 Elgin is the second community in Ontario to begin the YouthStart program. Under the direction of Employment Services Elgin an interagency approach engaging the community and business will be starting in the summer of 2000. Centered around the youth sector the program will help communities address career development, employment, transition from school to work issues.
- The County of Elgin's emergency services coordinator recently acquired a mapinfo software for 911 interfacing and land ambulance use.

SECTION D: TECHNOLOGY

There are a number of technological solutions for building community infrastructure which include Information communications fibre, hybrid fibre solutions (mixed with copper, coax) and wireless technology. There is no simple comparison to be made between them because of a variety of factors involved.

Fibre

Fibre is generally known to be the most capital intensive solution for upfront cost. It is the most stable, and provides transportation for data with minimal loss. If life line services (such as 9-1-1) are already supplied, then the multimedia services on fibre become more cost-effective.
Today's technology allows for 3 fibres to be run from the Central office to a splitter that can serve 32 homes which make the deployment of fibre most cost-effective.
If infrastructure is being replaced or built anew, laying fibre alongside copper is not expensive. The expense is the labour and the infrastructure costs, not the cost of fibre over copper or coaxial cable.

If deploying into an area where there is existing copper, or building infrastructure once the right-of-ways are obtained and construction cost is accounted for, the amount of fibre is not an expensive item. The installation of 'dark fibre' (fibre not utilized, or ' lit up') is likened to selling customers a fifty-story building for the price of the first floor… if you need more room, you just add more lights and switches." The cost of lighting up the fibre is decreasing very quickly.

Thinking ahead of the explosive growth of telecommunications services that will be consuming more and more bandwidth, the expandability factor is important. As noted in a conference on telecommunications "As demand rises, fibre to the home may be the best and only technology that can provide higher transfer rates and the only technology with low upgrading costs."

Copper, Coaxial

Copper is the common technology used by telephone companies. Coaxial is another copper technology used by cable companies. Many companies are now using hybrid fibre-copper and fibre-coaxial solutions to bring higher speeds to their networks, decrease their operating costs and allowing for future growth.

Copper wire is installed in most homes for phone use and provides high quality, dependable voice services. The cost to changing all this to fibre is enormous to companies, therefore finding ways to boost the capacity of copper is occurring. These solutions include ISDN, and DSL.

ISDN (Integrated services digital network) provides 64-128 kbps services. The T- 1 service increases bandwidth but substantially increases cost. DSL (Digital subscriber line) increases speed greatly by installing a new switch at the Central Office of the telephone company. Variations and includes variations such as ADSL, XDSL and HDSL. For example, ADSL (asymmetric DSL) – provides higher speeds for downloading and lower speeds for uploading – delivers 3-4 Mbps to the home and lower speeds from the home/office.

The services depend greatly on how close the end user is to the central office.

Wireless

There are again a variety of wireless technologies whose definitions depend on the frequency on which it operates and the height and distance of the equipment.

The satellite-based services are the most risky to date. A small dish antenna is necessary for the user and the signals are received from the satellites placed at a height above the earth to orbit at the same rate so that receiving dishes don't have to move to track signals. The drawback is the delay in signals and resulting degradation of data.

The low-earth-orbit satellites are able to send and receive data using whichever satellite is overhead. The end user needs only a small antenna and the distance decreases the delay in signals. However, the cost is high due to the number of satellites necessary. The user also needs an uploading line which is normally a dial up phone line.

Earth-bound wireless systems are more common and offer modest data ranges. Systems with higher bandwidth can be expensive because of the need for several base stations. LDMS (Local multipoint distribution services) can offer speeds up to 155 Mbps and other high speed data applications. LMDS cells cover geographic areas typically from 2 - 5 kilometers. LDMS can be useful for rural communities but has limitations due to the fact that radio waves travel only in straight lines. Trees, buildings and topography, as well as weather conditions and moisture interfere with transmission. Research is rapidly progressing to address these issues for new LDMS technology. Microwave wireless is superior in that it allows greater flexibility for the topography and increases efficiency.

Factors such as life cycle of the technology, maintenance, flexibility, expandability, and cost need to be taken into consideration for future planning of infrastructure. As well, the technology is rapidly progressing and pressuring suppliers to respond with infrastructure, services and price. For instance, Hydro One has now established the state-of-the-art fibre technology along the 401 corridor and is fully prepared to aid in business plans in order to develop and compete in the field.

An example of a rural homegrown solution was explained during a community forum in Lucan.

Craigwood Youth Services near Ailsa Craig needed connectivity but did not have the fibre infrastructure to support it. Craigwood decided to install a wireless connection but they were situated in a hollow and could not afford the construction of a tower. A partnership between Craigwood and a private company resulted. The wireless dish now stands atop the silo of the Great Canadian Bean Company.

Figure 5: Characteristics of Fibre, Copper and Coaxial and Wireless

	FIBRE	COPPER / COAXIAL	WIRELESS
COST	- most expensive upfront unless digging up and laying down other infrastructure otherwise - support and maintenance costs are lower	- T-1 : provides 1.5 Mbps but price too high for data access individually - cable lower price than telephone	- low earth satellite systems cost is high, - cheap alternative to building a new network - LMDS relatively inexpensive
MAINTENANCE	- tends to be maintenance free - resistant to electro-magnetic interference - can last up to 20 years - corrosion free	- subject to interference, noise and other problems - degradations associated with copper and coaxial cable - easily accessible service	
PERFORMANCE	- transmits multiple channels of data simultaneously at greater speeds over longer distances - optical signals lose very little power as they move through fibre - provides the highest bandwidth	- ISDN provides 64-128 kbps services - ADSL - deliver 3-4 Mbps to home - one answer for voice and data but cannot carry television.- sometimes limiting - cable - offers larger bandwidth and improving television signal while making it possible to offer two-way Internet and telephone traffic	earth-bound – can offer high bandwidth rates - LMDS (local multipoint distribution services - supports high speed data applications deployed quickly - interference more common - microwave superior due to broader range increasing superiority and efficiency
EXPANDABILITY	- easily expandable by replacing inexpensive electronics. No need to upgrade to another infrastructure	- building on copper wire for future growth or expensive to replace	- need to build structures and replace end systems as technology emerges - however, can move and use equipment elsewhere
CONDITIONS	- unaffected by atmospheric conditions - no dangers of sparking -	- home must be located within a few kilometres of the central office	- can be blocked by building, obstacles, foliage and moisture. - a solution for rural and remote
SECURITY	– almost impossible to tap into, yet easily monitored for intervention	- ADSL signal not shared with other users – more secure than regular phone line	- signal can be interrupted and intercepted - progress is rapid in this technology

SECTION E: EXISTING INFRASTRUCTURE

Major Telecommunications Sector:
Elgin County is serviced by two telecos - Bell and Amtelecom. Both have extensive wiring throughout the county. Essentially, Amtelecom covers the East End of Elgin and Bell services the Central and West areas of Elgin. Both companies have been able to take advantage of the DSIP upgrade program to the switching boxes and Elgin now has available FT 1 and T1 lines. Accessing the Internet is accomplished largely by dial-up through 56 K modem over the phone lines.

Bell has 10 or 100 M dedicated lines in Central Elgin and St. Thomas, with the rest of their territory having access to 10 M shared wireless solution licensed by Industry Canada with Bell.

- ADSL - is available in St. Thomas to provide access to the Internet with a 2.2 M connection, with the remaining Bell area having up to 85% access up to 1M modem. ADSL offers higher speeds down loading and is not shared with other uses such as cable companies so secures line transactions. ADSL is available throughout the entire Amtelecom area.

- ISDN - is available in the St. Thomas, Dunwich and Port Stanley area.

- Bell Express View - An announcement by Bell states that service for residential and small business is available this year. This service will allow Internet capabilities by satellite dish.

- Cable - rogers@home is rolling out Home Internet Service for residents able to access existing cable TV which covers residential St. Thomas. Amtelecom owns its own cable company and largely covers their whole region with cable coverage down to the small hamlets.

Both companies still have party lines in some areas. Amtelecom is working toward eliminating party lines this year. Customers with Bell service have yet to hear of upgrades from party lines.

The Elgin County School Board had connected all its schools prior to the re-structuring which amalgamated Oxford County, Middlesex County, Elgin County and City of London school boards under the name Thames Valley District School Board (TVDSB). In 1996 a wide area network developed in partnership with the TVDSB and the London and District Catholic School Board and Bell Canada resulted in a shared licensed wireless network throughout rural areas and fibre delivery within the City of St. Thomas. Bell owns and operates the network for the school boards and invested about $12 million in the initiative. The services range from shared 10 M systems to providing 100 M availability to the secondary schools. Central Offices in St. Thomas were upgraded to 100 M. The Bell delivery of ADSL (up to 8 M) in the City of St. Thomas has a final implementation date of autumn 2000. The wide area network was completely implemented in May 2000. The Bell towers can also provide area residents with improved wireless telecommunication.

Fanshawe College St. Thomas Campus is part of Fanshawe's wide area network which runs over a 10 M frame relay.

The Ontario Police College (OPC) - the only one in Ontario - has fibre optics and cable to its facility implemented by Amtelecom. The OPC is currently investigating the provision of some

of their courses on-line with either the student connecting to the college in real time, or the instructor video-conferencing to the students.

The City of St. Thomas Intranet has a combination of wireless from the Justice building to the work yard and a 10 M dark fibre connection between City Hall to the library to the Justice building tower. It also includes ISDN lines to Valleyview Home for the Aged, the St. Thomas Airport and the Fire Station. The WAN accesses the Internet through a 128 K connection.

The County of Elgin administration building provides an Intranet to all departments in its building. The other Municipalities have access to the Internet through dial up and local ISPs. The three County Homes of Elgin's long term facilities have been connected through separate ISDN lines since 1995.

The County of Elgin connected its 11 branch libraries to the CAP (Community Access Program) in 1996 offering rural residents access to the Internet and to training in their own local communities. Currently the access is accomplished through dial-up connections. Branches of the County Library provide information and services for a variety of Federal and local government issues and connect to on-line catalogue in the administration building.

Industry Canada has invested heavily in Elgin County through the Community Access Program (CAP). In 1996 eleven branches of the Elgin County Library were funded through CAP. Each summer, the Community Access Program has provided funding to hire a summer youth to provide training, web page development and enhance program delivery at each CAP site. This has provided a large boost to the CAP program each year.

In October of 1999, the Elgin CDC agreed to take a leadership role in submitting an application for 10 organizations to become CAP sites in St. Thomas. The "Steering Committee" of these organizations, under the leadership of the Elgin CDC was recently awarded $240,000 over three years to set-up and maintain public Internet access throughout St. Thomas. The sites are: The Elgin Community Development Corporation, the St. Thomas and District Chamber of Commerce, Fanshawe College, the Senior's Centre, Valleyview Home for the Aged, the Elgin Association for Community Living, the Adult Learning Centre, the YWCA, the Alternative School, and the Family Enrichment Centre.

The local employment office is operating on a fractional T1. Other agencies are accessing the Internet through a combination of ISDN or dial-up configurations.

Many of our agencies have been pro-active in creating their databases. Information Elgin has an extensive list of services, agencies and organizations in Elgin. The Chamber of Commerce has a database of businesses, while the smaller local business associations have created their own lists of businesses and services. As well, a number have websites including our Elgin Tourist Association.

The St. Thomas-Elgin General Hospital is currently accessing the Internet through an ISDN connection. The hospital is also participating in an initiative with hospitals in the Thames Valley region moving towards tele-health. All emergency voice traffic travels over radio through a radio system installed on water towers throughout the county. There is much interest in a voice over data system similar to the City of Guelph.

Industry

Elgin and St. Thomas is an industrial home to many 'branch plants' whose corporate offices buy and decide what software and Internet access will be used. However, the head office is not always aware of what the existing infrastructure is at the branch plant locations. Expensive down time issues results from transferring large files between locations over an existing network that is not supportive of an application which requires greater infrastructure.

There has been an implementation of connectivity by large branch plants (such as Sterling) and its suppliers. A recent installation of a wireless network solution between Presstran and their warehouse was installed by Cobra Systems Inc. They are now presently installing a point to multi point solution between Formet Industries and the same warehouse. Formet and Presstran also have implemented a solution using a wireless Intranet.

The infrastructure survey results were not conclusive for statistical recommendations however consideration needs to be given to the responses. The majority (64%) of the respondents were small (1-49 employees). The responses also reflected the diversity of business in Elgin.

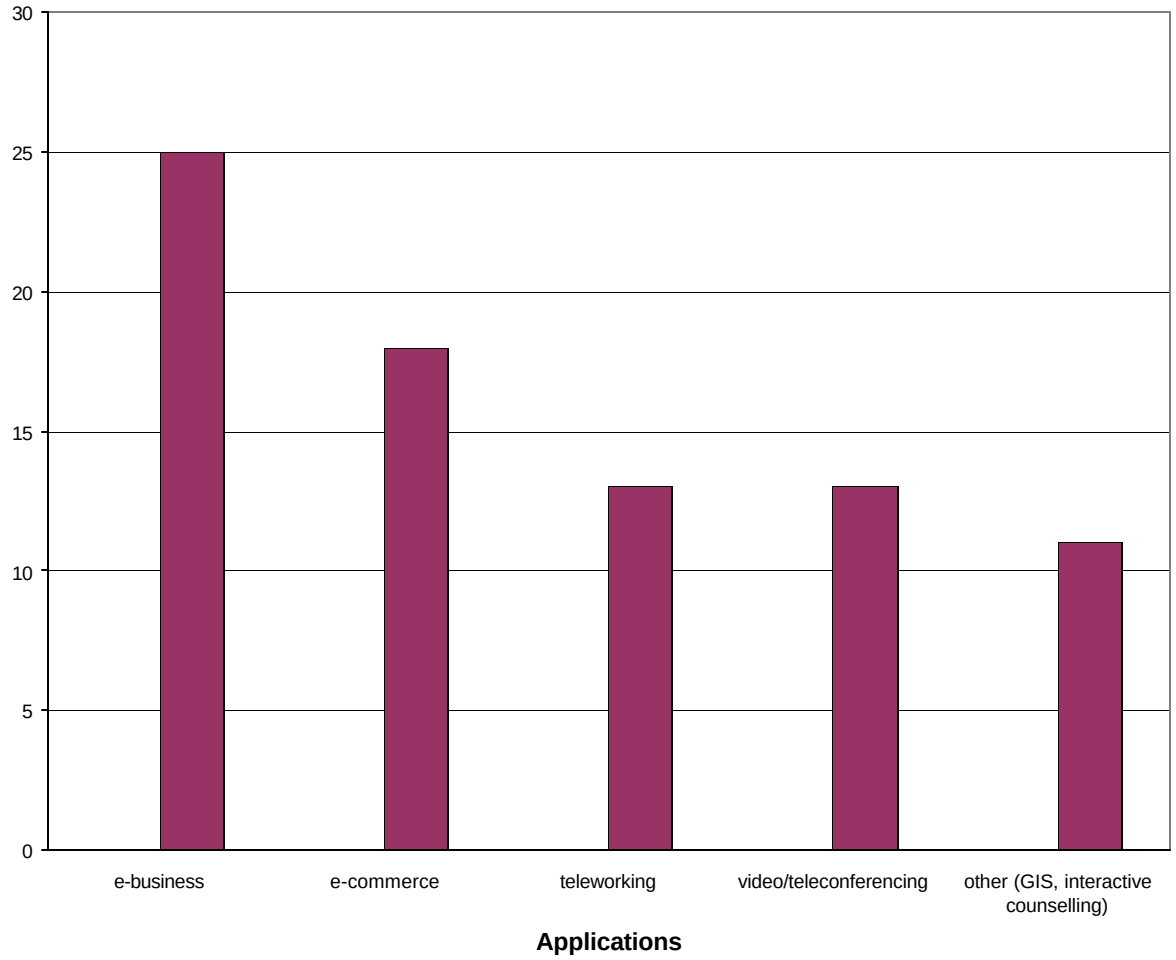
Figure 6: Types of Businesses Responding to Infrastructure Survey

Types of Business	Number
industrial	8
government	7
non-profit	6
technology	5
retail	4
media	3
health	2
financial	3
agriculture	2
transportation	1
education	1

The responses in the infrastructure survey also reflects the type of connectivity utilized. The majority is carried on dial up and 56k, while the large businesses utilize a T1 or ISDN facility. However, a number of respondents did not know the type of connectivity utilized. That may also partially explain some of the incongruency found. Fifty-five (55) % of the respondents utilize less than 50% of the bandwidth but 72 % indicated that they did not have enough bandwidth. The barriers documented 19 businesses which feel that bandwidth is the stumbling block, however, 17 respondents also note that availability of skilled IT support and the fact that IT decisions are made out of office are seen as stumbling blocks. It may be that the small businesses do not have the dedicated personnel for IT or access to an IT department that perhaps could answer many of the problems encountered that may not be bandwidth related.

The future applications desired by the respondents illustrate the trend of business-to-business transactions and the planning for e-commerce.

Figure 7: Future Applications Desired by Infrastructure Survey Respondents



SECTION E: RESULTS OF COMMUNITY CONSULTATIONS

This section explains the result of the community forums and the surveys. The forums provided qualitative analysis while the surveys provided quantitative data

IDENTIFIED FACTORS INFLUENCING OUR REACTION TO I.T.

As a result of the community consultation process, we were able to document the factors that were affecting our businesses and residents and influencing our direction and readiness for I.T.

- **Municipal re-structuring** – Elgin restructured in 1998 decreasing our municipal governments from 15 to 7. As a result, most of our municipal areas are of a larger size.

Residents and businesses cited the increased distance to municipal offices and some of the municipal workers and councilors noted that it was now more difficult to service a larger area.

- **Municipal responsibility load increasing** – municipal workers and councilors noted that the downloading from the province has increased workloads. The new responsibility coupled with the increased size of the areas have resulted in some difficulties of service.

- **OMAFRA re-structuring** - with the restructuring of the Ministry of Agriculture, Food and Rural Affairs in November of 1999, the 125 year history of OMAFRA with specialized services and specialists available in each county was abruptly halted. The information and access to provincial specialists is now available on-line.

- **Medical issues -** Elgin/ St. Thomas is among other areas with physician shortages. I.T. was seen as a possible avenue for attracting and retaining physicians and medical personnel for ready access to the regional London Health Sciences Centre for specialists, up- to-date information, and access to the teaching hospital library I.T. was thought to be a necessary tool for them. As well, health information would be available for all residents.

- **Access to infrastructure** – Many people who were unable to access the Internet from home or business could not do so because of hardware barriers. We still have some areas with party line access only and some of the infrastructure is too old and slow to support modern technology. Frustration was evident among the residents who still have party lines. The barriers of time, distance, and availability factor of the Library access then became an issue.

- **CAP sites –** The CAP sites have greatly increased the awareness of County residents regarding the Internet and their comfort level with it. The summer students have helped the local residents with work issues, and with Internet skills. The City is now going to benefit from these sites this coming summer.

- **Employment needs** -- It was apparent to many that the skills of the labour force is changing. Many related the importance of a comfortable working level with computers and the Internet for employment. Many businesses stated that they had difficulty finding a labour force skilled in the areas of Internet.

- **Global competition –** Businesses noted that global competition was not only important for their product or service, but they also noticed encroaching businesses within their traditional geographic boundary. Some businesses noted that they have increased business as a result of a web presence.

- **Decreasing employment and revenue in rural areas** -- The rural areas have experienced a decrease in employment and revenue as work patterns shift and the labour force moves to where the jobs are available. There has been a substantial effort to increase local employment and increase youth employment with government incentives. Many saw I.T. as an opportunity to provide for home based businesses in the rural area.

- **School board initiatives** – As a result of the school board initiatives with wiring every school, there was a parental response of increased awareness of I.T. as a result of the children coming home and sharing that with the family. As well, children are becoming comfortable with the technology and are needing it to complete homework and research assignments. Many parents felt it necessary to invest in the Internet at home and some felt the financial

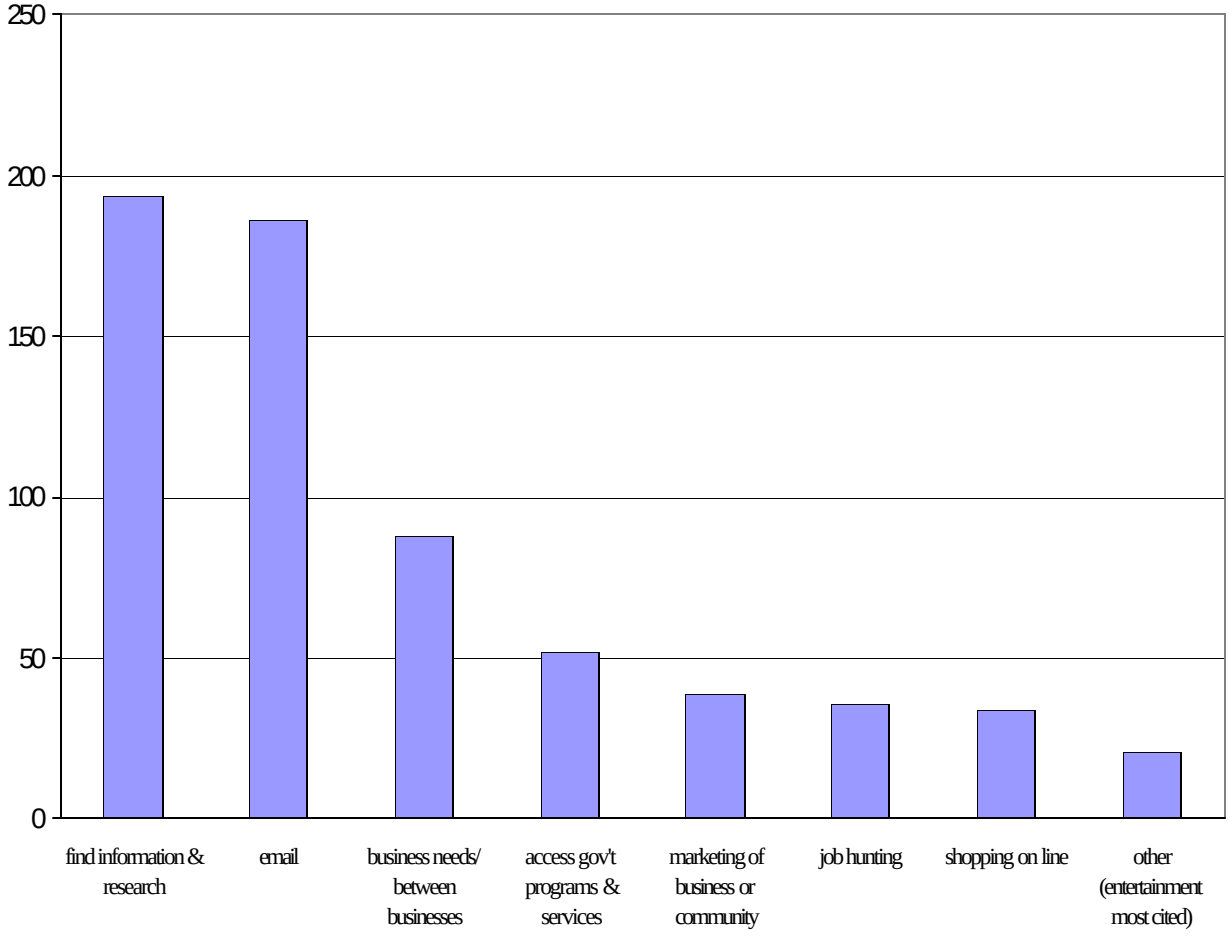
pressures. There was general agreement that the Library access was necessary but it was restrictive as the increased pressure grows.

- **Grant funding** – Businesses, both public and private, and organizations noted that the grant funding stressing partnerships and collaboration has impacted their awareness of the process and it was helping to shape the design of connectivity.

IDENTIFIED APPLICATIONS

The following applications were identified by businesses and residents present at the forums and from the surveys. Figure 8 illustrates the present uses of ICT by the community respondents. The outstanding uses are for research and information and for email. Shopping is the least application used by respondents which also supports the findings of Statistics Canada's surveys.

Figure 8: Present uses by respondents who already are using the Internet



Discussions at the forums revealed details, concerns and opportunities for potential applications.

- **Medical applications** - Health practitioners noted that a common database would be beneficial for increased communication among each other and among facilities. An enclosed system for health practitioners is currently being explored. The hospital and the Public Health Unit are on-line and the West Elgin Community Health Centre installed an Intranet this past Spring. Connections are being planned for connectivity between sites and to the London Health Sciences Centre.

  - Community residents noted that public health information available on-line would be welcome. Especially in light of the water quality issues in rural areas dependent on shallow wells, information regarding well water testing, and disease prevention was crucial. A community calendar of upcoming events and registry was cited, for example, prenatal classes. Health information for appropriate class levels could be available from the Health Unit to the school classes.

  - The highest priority for survey respondents was for emergency services. Very close to the top was the identification of the need to help medical services communicate and slightly further down was the need to attract physicians to our area through provision of IT needs for them.

- **Small business** – Small businesses recognized the need for increased marketing and promotion with a presence of a web site. Many residents saw home-based businesses and tele-working as an alternative of driving to a work site out of their community everyday. It allows them to be able to work from home with either a technological way to link to work or to provide for their own business connections on line.

- **Tourism** – the Tourism industry was very excited about I.T. and its implications. Mapping was seen as essential for recreational spots, bed & breakfasts, accommodations, tourist attractions and eateries. The promotion and marketing was seen as a great boon for the tourism industry in Elgin. The Conservation Authorities mentioned that they would also like to increase their usage perhaps by creating registration online for camping and renting of facilities. The ability to link the tourism industry on the county website would be user friendly. The chance for increased employment and revenue to the whole of Elgin County would result.

- **Large business** – Large businesses remarked that on-line access was essential for connection between subsidiaries and central plants. It was also necessary for businesses to order their supplies through I.T. connections, for instance, Amtelecom Inc. can only order their supplies through on-line connection to Nortel. Businesses made special note of increased speed and bandwidth that was necessary for applications like videoconferencing for modern business today.

- **Agriculture** – As noted, the sudden change in OMAFRA structure has forced farmers to take a sudden leap into the I.T. world if their infrastructure allows them to. The increasing global market of competitiveness and tight margins makes it essential that the operator can access critical information, weather, and markets at any time of the day. Farmers now have the opportunity to connect directly with their buyers worldwide instead of being dependent on the Chicago Board of Trade. Producers of Tofu beans can direct market to buyers in Japan through the Internet. Where once the information was useful it now becomes a management tool and essential for internal business operation. As the second highest gross domestic

industry it is also essential for supplying jobs and sustaining other small businesses and services. Farmers are also using e-commerce increasingly for machinery and input needs. The largest agricultural portal in the world was created in Southwestern Ontario. Many farmers in Elgin have invested in GIS and satellite mapping combined with grid soil samples for field information.

- **Government services** – Municipal workers and councilors remarked that they would welcome the increased efficiency to connect with the other municipalities and the upper tiers for communication. They also remarked that if all were on the same network that networking and receiving forms would be more efficient. Both the public and municipalities saw that easy access to government forms would save time and money. If taxes could be paid directly on line, permits purchased it would be so convenient. Public information regarding permits, building zones and requirements, and municipal meeting notes, could be posted and accessed on-line. The Public also wanted connection to all levels of government for information, and easy access to government forms. The Public doesn't necessarily want to know which level of government it is dealing with, and sees that the one window access solution would result in more efficiencies and less frustration as then one would not need to know which section of the blue pages to look into. The convenience of not having to drive over two hours to reach some government services that are only located in a regional area such as London was not only attractive to save time but essential for those who experience difficulty accessing transportation or, as within the rural regions of the County, there is no public transportation available. Information sharing, removing barriers for ill and seniors were also high on the priority list indicating the need for public and/or private services to be accessible.

- **Distance education** – Again, the time saved travelling 2 or 3 hours to a post secondary educational institution was seen as reducing a barrier for many people who need to keep up with their education and ongoing training. The difficulty some had experienced was that the increased traffic after hours and the slow servers sometimes made the Internet difficult to access. As well, some needed as much technical support as the program they were studying. Therefore, increased bandwidth was necessary and local training and support to supplement the programs were seen as essential. Although distance education was identified at the forums by the participants it was not a subject they dwelled upon. It was apparent from the surveys however, that distance education and training was a high priority.

- **Email** – e-mail was a boon to the rural areas! Seniors especially noted the convenience of staying in touch with family, with grandchildren away at university, with neighbours. Our immigrant families, of which agriculturally we have many, find it necessary to link with their families across the sea. Housebound individuals also found email to be a godsend. An example of a neighbour with Multiple Sclerosis says it all – confined to a wheelchair she is unable to access the library herself and none of the neighbours can transport her wheelchair or scooter. Hooked up now to the Internet she can visit all day! She connects with her neighbours, her health support agency, and has a virtual support group. Her quality of life has greatly increased. Email was cited as a high use by respondents presently using the Internet and discussions at the forums reinforced that.

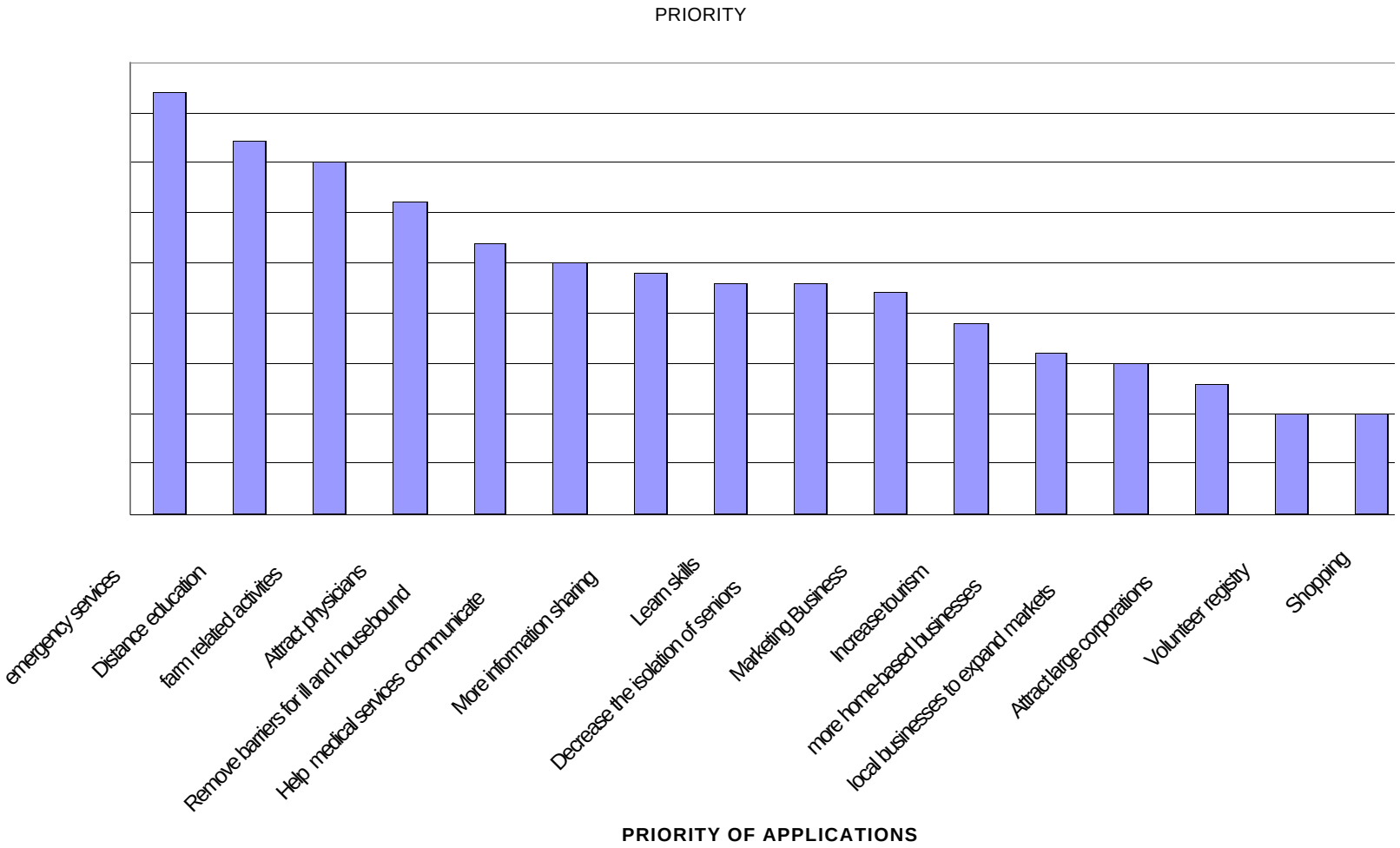
- **Emergency services** – some people envision I.T. to be invaluable to emergency services such as fire, police and community policing. Although many people in the forums thought emergency services already had this kind of sophistication, it was a clear priority in the survey , as illustrated in Table 6. Police and fire officials were excited about the mapping

possibilities and using the find and locate options, and critical sensitive information that would be invaluable for officers en route in vehicles.

Figure 9 graphs the responses according to the uses that respondents deem to be potentially useful applications. It is significant that possible activities include a variety of applications. Again it is significant that although business uses are prioritized, shopping remains at the bottom of the list. However, it is important to note the 'somewhat' answers illustrate that many are considering the possible uses of ICT and will be influenced one way or the other once exposed to the technology. Participants expressed the fear that large corporations would jeopardize the local shops. In both small and large businesses, the business- to -business applications are seen as both necessary and advantageous to the industries.

An unexpected priority was that farm related activities are seen as one of the highest priorities for applications. While agriculture was addressed by some at every forum, the priority of farm related activities having access to the IT infrastructure was third out of 16 choices in the survey when respondents were asked to prioritize the potentially useful applications. Checking the occupations as reported by survey respondents it is significant that only 14% of the respondents indicated that they were farmers. The high support for farm related activities may correlate to the fact of many secondary industry and indirect jobs related to agriculture in our county. The order of the priorities generally reflected Figure 9.

Figure 9: Potential Application Uses Identified by Respondents



IDENTIFIED GAPS AND BARRIERS

Due to the relatively small population base in this largely rural area, we are low on the list of priorities for the large telcos. Therefore, the citizens and businesses of this area cannot choose between available services – they simply cannot get the services at a reasonable price. Services such as ISDN that has been available to (and taken for granted by) the residents of Toronto, Waterloo and London for years are not commonly available in Elgin. With the current pace of technology, that leaves the local businesses and population disadvantaged again.

Residents noted that some areas still have party lines and that does not support faxes let alone the Internet. Still others claimed that connections are too slow for some downloading and modems work at ½ speed. Many businesses are claiming the need for higher bandwidth and infrastructure to support more sophisticated applications such as videoconferencing**.**

The community survey data along with the infrastructure survey results of businesses validate the qualitative data of the forums that training was a major barrier.

Training for skills necessary for using the Internet was cited by businesses for in-service as well by community residents. Availability of skilled IT support for small and medium businesses was a critical barrier. The surveys discovered that many people recognized that in order to adapt to the new economy it was necessary to learn the new skills. However, issues of cost, availability, and accessibility were factors to consider for training. Equitable access for all was cited as a priority. Training was a major element in all discussions at forums, both business and community. The need for on-going IT support, training that is constant and available, affordable, and relevant was necessary. In-house training was necessary for specific industries and organizations, such as policing, and manufacturing. In the community surveys, a full **81 %** answered "yes" to the question of the requirement for training or assistance in using the Internet. This illustrates that people who use this technology recognize the need for upgrading and learning of new applications.

The following 4 graphs illustrate the barriers of ICT. The first graph of Figure 10 illustrates the barriers respondents feel that they face.

Figure10: Barriers to Information Technology by Elgin Respondents

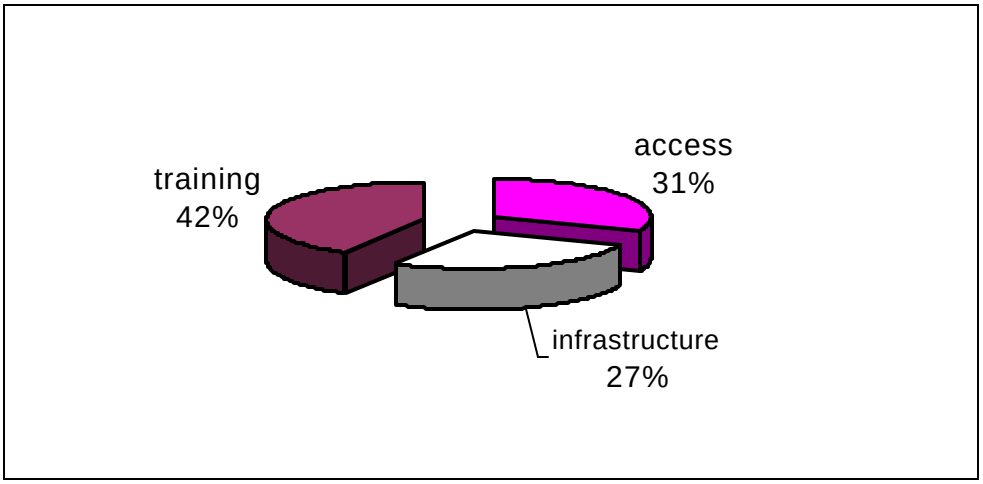


Figure 10A shows the breakdown of the differing barriers of access. The hours of availability and the lack of knowledge of where public access is located were the highest responses. Clearly the libraries can use this information.

Figure 10A: Barriers to Information Technology – ACCESS

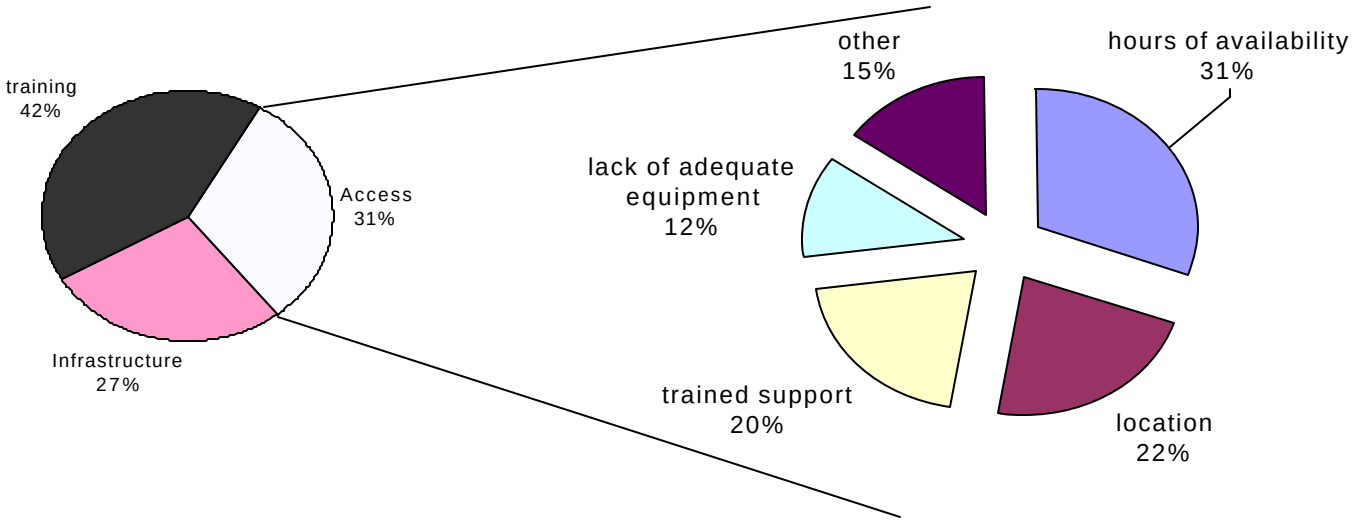


Figure 10B illustrates the barriers to training. Cost and location are the most common stumbling blocks indicated

Figure 10B: Barriers to Information Technology - TRAINING

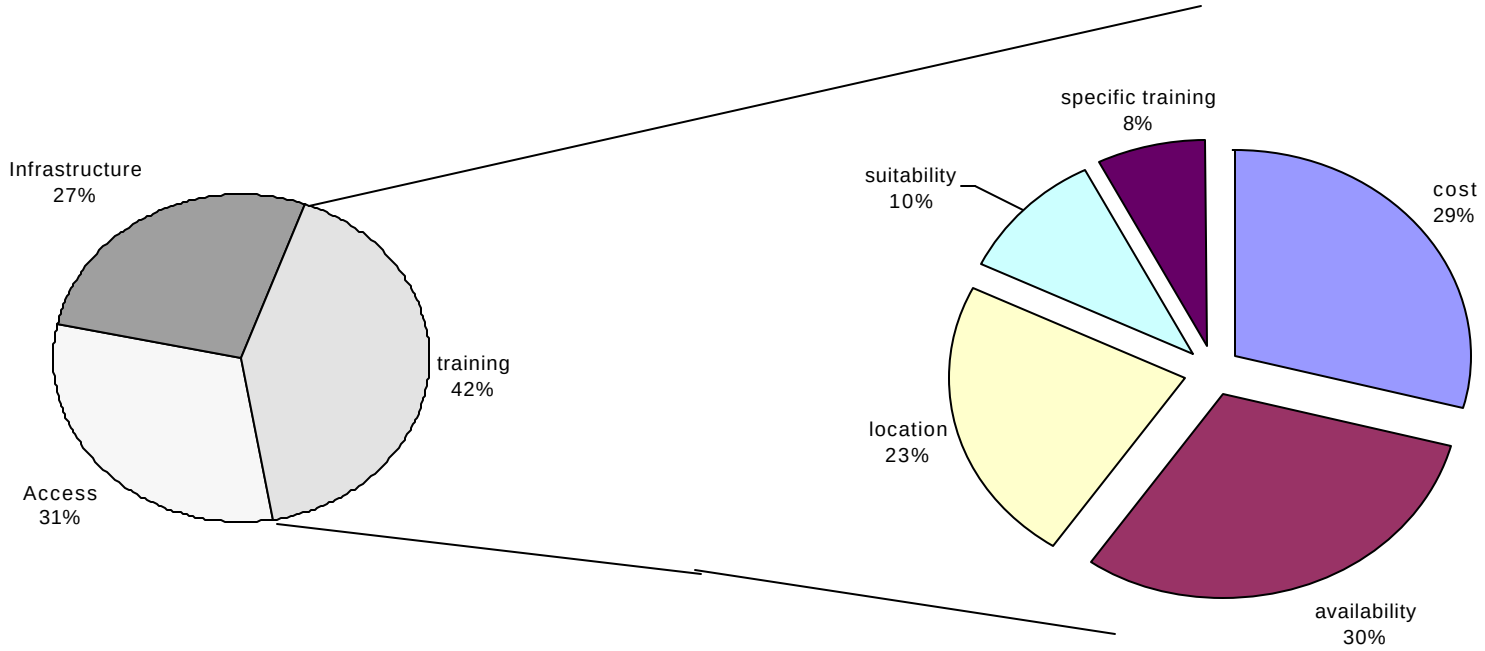
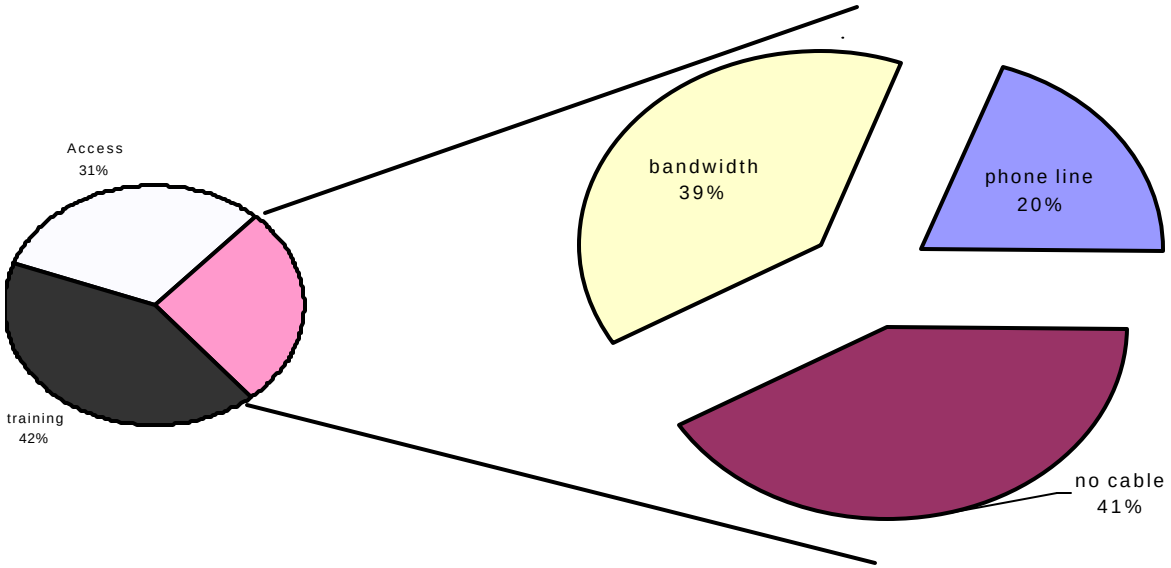


Figure 10C points out the barriers of infrastructure. Access to cable, and the need for bandwidth were cited as the top barriers. The need for phone lines to support the technology was also a significant barrier.

Figure 10C: Barriers to Information Technology - INFRASTRUCTURE



SECTION F: RECOMMENDATIONS

Employing the Lanark model of smart communities, one can see that it is dynamic activity. Starting with engaging community and conducting audits to identify IT applications a community can start to build a business case for sustainable infrastructure. The eMIT project was a good start to community engagement, needs assessment and identification of IT applications. A little more research regarding infrastructure in the whole of the counties would complement the findings. We are very fortunate to have good timing with the Connect Ontario funding, the Ontario Small Town and Rural (OSTAR) announcement, and private partnerships such as Bell, along with federal initiatives, coinciding with our investigations. Community consultation and partnerships is the basis of all of these grants and we have been able to accomplish that. Aggregating of applications is the next step to formulating the business case to include a thorough cost analysis plan to move forward utilizing the present and potential public and private funding available building on the needs of the community as presented with their responses to applications and priorities.

1. Infrastructure options - fully investigate all options of possible infrastructure and costing. There are more providers interested in increasing their business and the competition is bringing to light more resources both in terms of financial and human knowledge. Many contacts have been made through the project and most are interested in participating. The challenge remains to find the shared partnering necessary to decrease costs for the best possible infrastructure not only for our present needs but for the future. Recommendations from other communities who have created infrastructure point to the necessity of hiring a planner who can supply an architectural and engineering report. Hydro One is able to supply state-of-the art fibre-optics to either small networks or be suppliers to large networks such as LargeNet. However, they are about a year away from being able to work in this area due to their demand. Bell Canada's business case with the Thames Valley District School Board is another option to pursue for sustainable infrastructure. They own the infrastructure which the school boards' WAN runs on but are able to utilize the common framework for the community. We are also fortunate to have LargNet in our area and should continue to include them in our investigations.

2 A community portal should be developed in order to manage and direct the information for community use. The Connect Ontario program funding fits well with our community consultation results and provides for portal development. This connection to regional, provincial, and federal information will encourage a common framework and cooperation among all involved. Hand-in-hand with a community portal is the need for development of databases from business directories to community services.

3. There should be a concentrated effort to include those persons or communities which our project did not reach. For example, more research is needed for Persons with Disabilities. We need to take a leadership role in ensuring that the Ontario Disability Support Program or Opportunities Fund supplies supports and financial aid for all employment / vocational assessments, assistive devices and user fees in order to increase the employability of persons with disabilities.

4. As a result of the community forums awareness was raised regarding the new VolNet program which provides funding and assistance for non-profit organizations to create a presence within the technological age. Craigwood Youth Services in Ailsa Craig further

investigated VolNet and is now the Directing Agency for a number of counties. A recommendation is to further develop VolNet to fully address our non-profit sector needs.

5. Encourage the development of local IT committees to feed into a county group or organization. This would accomplish the grassroots input needed and help in addressing the development of a broad geographic solution. As a result of one of the forums a local group was formed and is interested in supporting the IT technical workers in the community, aid in the creation of applications, and to share ideas and encourage trust among the partners and stakeholders. The local committee could develop as a separate entity or be included as a subset of an existing group which would help address some of the logistical problems. From the database many indicated a willingness to be included on a mailing list, to be kept informed of developments, to act as mentors or to offer financial or human technical support.

6. The superiority of fibre needs to be contemplated when a municipality is working on construction of infrastructure. More conduits should be installed when municipalities are in the process of laying infrastructure thereby decreasing the cost of installation when the community is ready for it.

7. Training was an overwhelming issue when addressing IT. We need to be including technical support and training in both private and public ventures. Our libraries have filled in the gap through the use of CAP to aid community individuals and businesses. However, space is limited, time is limited, (especially in small rural areas), and human support is limited. We need to either create or enhance our learning centres for the purpose of support, training, and use of facilities for those who do not own their own equipment or have access to supportive infrastructure.

8. A recommendation is made to either include emails and urls in directories or to create a separate one of email addresses and urls. It was a disappointing finding that many businesses or organizations do not include their email address in correspondence and when contacting the secretary many did not know it themselves. If we are serious about using information technology then we must utilize it to the fullest and let others be aware of our presence.

9. Options of sustainability need to be investigated. At the present, we have governments willing to invest in our infrastructure and applications in order to move our economy forward. There is no mention of sustainable funding from any of the government programs. This technological infrastructure is one which all the population will need in the future and critical issues need to be addressed such as governance, ownership, marketing plans, human resources, and financial plans. An example of private/public partnership is the Algoma District Network (ADNet) in Sault Ste. Marie, Ontario.

10. Community awareness is a necessity in order to move the planning forward. In order for the 'buy-in' to occur, a campaign needs to be planned in order to facilitate the project through its various phases. The community forums were a starting point and everyone attending felt they were worthwhile. Most wanted to be able to take the presentation to a business or organization meeting. The opportunity to dialogue about the applications, the challenges and concerns will encourage the building of infrastructure.

11. Continuation of co-funding opportunities need to be investigated. Connect Ontario is already being accessed by both counties. Canadian Agricultural and Rural Communities

Initiatives, Agriculture and Agri-Food Canada; Ontario Small Town and Rural, are a few of the public grant funding possibilities and should be partnered with private initiatives such as the Bell Canada Economic Development Fund and local private business initiatives.

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- Human Resources Development Canada - providing the funding for this necessary community groundwork
- And to the people who had the foresight to apply for this funding in order for our communities to adapt to the changes of The New Economy.

Donna Lunn, Community Facilitator

APPENDICES

Appendix 1 – list of steering committee participants

Appendix 2 – DSIP flyer and evaluation

Appendix 3 – sample of forum advertisement

Appendix 4 – example of media coverage

Appendix 5 – forum power point presentation

Appendix 6 - Community IT questionnaire

Appendix 7 – infrastructure survey