

**A Scan of Community Economic Development Organizations,
Rural Communities and First Nations in Manitoba
and their Participation in the New Economy**

By
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A Thesis
Submitted to the Faculty of Graduate Studies
In Partial Fulfillment of the Requirements
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Master of Natural Resources Management

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Abstract

The growth of the New Economy has the potential to positively benefit community economic development (CED) organizations, rural communities and First Nations in Manitoba. Organizations and communities have not necessarily profited equally from this knowledge-based economy. This study sought to identify current participation in the New Economy and how increased participation can enhance CED organizations, rural communities and First Nations. Questionnaires were sent to CED organizations to determine what types of technology they use, how they use it and how it is shared with their community. Rural communities and northern First Nations also received questionnaires, which determined the types and quality of telecommunications in their communities, as well as how technology is used in their local education system.

Urban and rural CED organizations are active participants in the New Economy. Technology is integral to all of their activities, and is shared with the community through public access computers. The greatest barrier for CED organizations to participate in the New Economy is the cost of technology. Recommendations for CED organizations included the need to utilize new software for CED planning, to participate in other New Economy activities, to share information with other organizations and to provide a greater number of public access computers for their communities. Participation in the New Economy is very important to rural Manitoba communities for the sharing and dissemination of information and for education and training. The lack of Broadband Internet access in rural communities was identified as their greatest barrier. The need to connect all rural communities to Broadband Internet, to use technology for CED planning, to get local retailers and governments on-line and to provide more public access

computers were all recommended for rural communities. Northern Manitoba First Nations have the poorest participation in the New Economy of all respondents to this project. There are still First Nations in northern Manitoba that do not have Internet access. Unreliable Internet connections, a lack of Broadband Internet and inadequate technology are all ongoing problems for northern First Nations. Recommendations included the need to partner with *Nations Sphere* to access Broadband Internet in all northern First Nations, to use technology for CED planning, to get local retailers and governments on-line, to provide public access computers and to integrate technology into the education system.

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Chapter 1 - Introduction

1.0 Background

Community economic development (CED) is an effective tool of economic development. Economic development can be described as “the deliberate effort to improve the economy of a specified geographic area” (Perry, 1999). From this goal has evolved many explanations and definitions of CED. In 1955, the United Nations interpreted CED to be “a process designed to create conditions of economic and social progress for the whole community with its active participation and the fullest reliance upon the community’s initiative” (United Nations, 2000). Almost 40 years later, Blakely (1994) defined CED as “the process in which ...community-based organizations engage to stimulate or maintain business activity and/or employment. The principal goal of [community] economic development is to stimulate local employment opportunities in sectors that improve the community...” A current and inclusive definition comes from Rupert Downing, Executive Director of Canadian Community Economic Development Network (2001), who states that “CED is a action by people locally to create economic opportunities and enhance social conditions, particularly for those who are most disadvantaged, on an inclusive and sustainable basis.”

Community economic development “happens when the community becomes determined to find the answers from within” (Canadian Community Economic Development Network, 2003a). As marginalized communities face barriers to development, CED can provide communities with an alternative to traditional economic development. Communities are using CED to keep people in the community, to find new ways to build on their assets, to take control of local resources and to invest in local

infrastructure and people (Canadian Community Economic Development Network, 2003a).

The New Economy, as defined by the Manitoba Research Alliance on Community Economic Development and the New Economy (2003), is characterized by three major structural changes in communities: a rise in general education levels; the development and availability of new information technology (IT); and an increase in "invisible" trade in services, mergers and acquisitions, and the flow of information (Bosworth and Triplett, 2000). IT can be defined as "the branch of technology devoted to (a) the study and application of data and the processing thereof; *i.e.*, the automatic acquisition, storage, manipulation (including transformation), management, movement, control, display, switching, interchange, transmission or reception of data, and (b) the development and use of the hardware, software, firmware, and procedures associated with this processing" (Telecom Glossary 2000, 2002).

For this thesis, the New Economy will refer to the use of computer technology and the Internet by First Nations, rural communities and CED organizations, and how that use results in those structural changes. It will also include the use of telecommunications in rural areas, including First Nations.

The growth of the New Economy has the potential to positively benefit First Nations, rural communities and CED organizations. This knowledge-based economy has not necessarily benefited communities and organizations equally and, as such, it is important to understand current participation in the New Economy and how increased participation can enhance First Nations, rural communities and CED organizations.

1.1 Problem Statement

The Manitoba Research Alliance on Community Economic Development and the New Economy is researching the links between CED and the New Economy. It is important for the Research Alliance to have a baseline from which their research is being conducted, as there is presently no inventory of participation in the New Economy. This inventory is fundamental to identify who is benefiting from computers, the Internet and other forms of telecommunications and what the barriers are for those who are not participating. This inventory will also determine the role the New Economy plays in CED.

Manitoba Keewatinowi Okimakinak (MKO) is also investigating telecommunications in their northern Manitoba First Nations member communities. They currently do not have a record of the capabilities of their communities or how they are using computers and the Internet. This research is important to MKO as they continue to make the case to Manitoba Telecom Systems (MTS) and the Canadian Radio-Television Telecommunications Commission (CRTC) that telecommunications in northern Manitoba First Nations are inadequate.

1.2 Purpose & Objectives

The purpose of this research was to identify First Nations, rural communities and CED organizations across Manitoba and gauge their participation, or potential participation, in the New Economy, as well as the barriers to their participation. This research also identified available tools and resources for communities and CED organizations to facilitate that operation. This initial scan provides a baseline for the research of The Manitoba Research Alliance on Community Economic Development in

the New Economy, Manitoba Keewatinowi Okimakinak as well as CED students, practitioners and organizations across Canada and throughout the world.

This thesis addresses the above, and includes 4 objectives:

1. to examine CED literature and theory and New Economy literature;
2. to determine participation in the New Economy by CED organizations, rural communities and First Nations in Manitoba;
3. to organize and analyze the collected data; and
4. to identify the participation and barriers to participation of First Nations, rural communities and CED organizations in the New Economy.

1.3 Organization of Thesis

This thesis is divided into six chapters. The methods used for this research are described in Chapter 2. Chapter 3 explores current CED and New Economy literature. Chapter 4 examines CED organizations and their participation in the New Economy, Chapter 5 discusses the New Economy in rural communities and Chapter 6 explores at First Nations in Manitoba and the New Economy. Chapters 4, 5 and 6 provide discussions and recommendations.

1.4 Acronyms

The following is a list of acronyms used throughout this paper:

CED	Community Economic Development
MKO	Manitoba Keewatinowi Okimakinak
MTS	Manitoba Telecom Services
CRTC	Canadian Radio-Television Telecommunications Commission
CFDC	Community Futures Development Corporation
CCEDNet	Canadian Community Economic Development Network
HRDC	Human Resources Development Canada
INAC	Indian and Northern Affairs Canada

SIP	Service Implementation Plan
TEA	The Exceptional Assistant
FRED	Friendly Regional Economic Development
EI	Employment Insurance
GIS	Geographic Information System

Chapter 2 - Methods

2.0 Methods

The following methods were used to determine, assess and evaluate the participation of rural communities, First Nations and community economic development (CED) organizations in the New Economy. Different methods were used to address each objective. The first objective, to examine CED literature and theory and New Economy literature, was completed through textbook, journal and Internet searches. The determination of the participation in the New Economy by CED organizations, rural communities and First Nations in Manitoba was done with the collection of information from questionnaires. Collected data was then sorted by CED organization, rural communities and First Nations. Data analysis included coding and organizing information into logical groups, as well as comparison of this information. Finally, discussions and recommendations were created to identify the participation and barriers to participation of First Nations, rural communities and CED organizations in the New Economy.

2.1 Literature Review

There is a vast amount of literature to examine for this project. Initial literature collection began with a review of texts and other CED documents collected from CED courses. PowerPoint presentations from the Canadian Community Economic Development Network (CCEDNet) were another good introduction to CED. Searches on the Internet of CED practices and organizations provided insight into CED in Canada. Useful sites included the CCEDNet website (<http://www.ccednet-rcdec.org>) and CED

Across Canada (<http://www.cedcanada.ca>). New Economy literature was collected in a similar manner. After reviewing articles and texts, Internet searches proved again to be useful. Books were found on-line, such as Kevin Kelly's *New Rules for the New Economy: 10 Radical Strategies for a Connected World*, as well as valuable websites. Initial information on the Broadband Initiative was made available by Maurice Montreuil, the Director of the Broadband Project Office in Manitoba. Additional information was then found on the Broadband website (<http://broadband.gc.ca>). The documentation on the Public Consultations between Manitoba Telecom Services (MTS) and Manitoba Keewatinowi Okimakinak (MKO) was given by Ken Henry, Special Projects Manager at MKO. Finally, literature on the plan from *Nations Sphere* came from the *Winnipeg Free Press* and Kim Sigurdson, Manager of *Nations Sphere*.

2.2 Questionnaires

Questionnaires were developed to determine participation in the New Economy. Questionnaires were chosen as a research instrument to allow for a variety of options for participation. It could be e-mailed or faxed, or used to conduct an interview.

Questions were based on the information desired by the Manitoba Research Alliance on CED and the New Economy, by MKO, as well as with the assistance of the *Community Development Toolbox Telecommunications Readiness Index* (Laboratory for Community and Economic Development, n.d.). While addressing the required data, the questionnaire was kept short to ensure the maximum number of participants (Canadian Community Economic Development Network, 2003b). Respondants to the many questionnaires conducted by CCEDNet indicated that they should take less than 10 minutes to fill out. As staff of CED organizations are often too busy to take time away

from their work, most stated that they would be more inclined to complete a shorter questionnaire. Participants were given the option of having the name of their community or organization in the final report, allowing for anonymity if they desired.

Two questionnaires were created to reflect the two different groups to be surveyed. The first questionnaire was developed for CED organizations (Appendix 1). This questionnaire examined computer and internet usage, other New Economy participation and barriers to participation.

The second questionnaire was designed to address both rural and First Nations communities (Appendix 2). This questionnaire examined telecommunications in communities, including Internet access and computer usage, government and organizations available online and computer education in the community.

The questionnaires were piloted to allow for revisions. The sample organizations and communities completed the questionnaire, provided feedback on questions asked and agreed to participate again when the questionnaire was revised. Following an evaluation of the piloted questionnaire, the revised questionnaire was then distributed. Participation was divided into three groups: CED organizations, rural communities and First Nations. Different approaches were taken to contact each group, as described below.

2.2.1 Community Economic Development Organizations

The researcher had a database of 30 organizations and contacts to begin this research. Initial participants came from contacts known to the researcher, as well as from Canadian Community Economic Development Network website directory of CED organizations (www.ccednet-rdec.org). Upon conducting the initial questionnaires, new contacts were also identified through snowball sampling. This method allowed the

researcher to begin with a small group of organizations who, as well as providing data, identified other useful participants (Babbie, 1998).

Some organizations focus all of their work on CED, while others have staff that work specifically on CED, while their organization does a variety of work. Executive Directors or the people responsible for CED from these organizations were initially contacted by telephone to ask if they would participate in the research. This process ensured that a greater number of organizations would participate, as it has been found to be more effective than only faxing or e-mailing the questionnaire (Canadian Community Economic Development Network, 2003b). Organizations then either completed the questionnaire at that time over the telephone, or received the questionnaire by fax or e-mail. The completed questionnaire and consent form were then faxed back to the researcher.

2.2.2 Rural Communities

To contact rural communities, the researcher worked with the sixteen Community Futures Development Corporations (CFDCs) in Manitoba (see Appendix 4). CFDCs “assist the communities in their region to develop their economic potential,” including the development of long term CED strategies, coordinating resources for development plans and promoting the economic potential of each region (Community Futures Partners of Manitoba, 2004). All of the CFDCs were contacted, rather than a sample, for two reasons. First, the total number of CFDCs was small enough that the researcher could take the time to speak with all of them. As well, not everyone that is asked to participate in a research project or complete a questionnaire will actually participate (Canadian Community Economic Development Network, 2003b), so by talking with all sixteen

CFDCs, the researcher would end up with a sample group of the CFDCs that were willing to participate or assist.

After initial contact was made by e-mail, the researcher telephoned and spoke with either the CED contact person or the Economic Development Officers. Some of the contact people had already completed the questionnaire and most agreed to assist with the project. Some distributed the questionnaire to their member communities, some contacted communities and gave out surveys to those willing to participate and some provided the researcher with the contact information for their member communities. Through these different means, rural communities that agreed to participate completed the questionnaire and consent form and faxed them back to the researcher.

This method resulted in an additional benefit. Seven CFDCs agreed to participate in the questionnaire as a CED organization. Therefore, most CFDCs received the community questionnaire to distribute to their member communities, as well as the CED organization questionnaire to complete.

2.2.3 First Nations Communities

To contact First Nations in Manitoba, the researcher worked with Ken Henry, the Special Projects Manager at MKO. MKO represents First Nations in Northern Manitoba (See Appendix 5). MKO was in the process of reviewing telecommunications in their member communities as a follow up to the Public Consultations held with MTS. Working together, Mr. Henry distributed the researcher's questionnaire, which encompassed the data desired by MKO. The researcher agreed to analyse the data for MKO and create a report on telecommunications in Northern Manitoba First Nations. The partnership allowed MKO and the researcher to mutually benefit from this research.

Questionnaires were distributed by Mr. Henry and MKO to all of their member communities. Questionnaires were completed by chiefs, school principals and other community members who could contribute useful information. Questionnaires were returned to MKO, who retained the original copies, and photocopies were given to the researcher.

The researcher attempted to collect data on southern Manitoba First Nations as well. It is important to note that Manitoba's Southern Chiefs Organization (SCO), which represents Southern Manitoba First Nations, was not willing to work with the researcher. The researcher tried to contact these First Nations but had no success in collecting data. As such, the information collected about First Nations will only represent Manitoba's Northern First Nations.

2.3 Data Analysis

Collected data was first organized by CED organizations, rural communities and First Nations. For each group, data was then coded and put into categories. Categories were created to summarize topics into groups to make the data more manageable. For example, when asked what programs CED organization used for their work, responses were organized into word processing, data management, financial management and publishing and multimedia. Other data was grouped by yes or no responses. Once all of the data was organized, comparisons were done of urban and rural CED organizations. Analysis was also done of rural communities and First Nations.

2.4 Identification of Participation and Barriers

From the analysis, discussions of the data were created. These discussions looked at how CED organizations, rural communities and First Nations are participating in the New Economy. Collected data was also compared to other research to reinforce how the New Economy can and does affect Manitoba.

Recommendations were then offered for each group. To create these recommendations, the researcher conducted further analysis of the data to identify where gaps exist. These recommendations provide guidance to CED organizations, rural communities and First Nations to assist their increased and improved participation in the New Economy.

Chapter 3 – Community Economic Development and the New Economy

3.0 Introduction

Although community economic development and the New Economy have become interconnected, there is little combined literature on these topics. Therefore, the literature review first focuses on CED and then on the New Economy.

3.1 Community Economic Development

“Community economic development (CED) is a comprehensive, multi-faceted strategy, conceived and directed locally, for the revitalization and renewal of community economies by managing and strengthening community resources for community benefit” (Canadian Community Economic Development Network, 2001). CED occurs when a community or group of people decide to take action from within, rather than looking for a solution from outside. Often, communities recognize that there are untapped skills and resources within their community, and CED is a logical method of utilizing these attributes and retaining them within the community. As well, CED tends to address more marginalized communities, such as urban inner cities, urban Aboriginal communities, rural communities and First Nations communities. This happens because marginalized groups tend to have greater barriers to inclusion, and inclusion, equal access and equal opportunities are all important values of CED. To address these issues, CED includes those most affected by decisions made in the decision-making processes, making participants partners rather than clients (Canadian Community Economic Development Network, 2003a). Finally, CED has a different focus than traditional economics, balancing the desire for economic growth with the social and environmental needs of a

community. The following table, taken from the Province of Manitoba CED Policy Framework (2001) demonstrates the differences between CED and conventional economics:

CED Priorities	Market Economics Priorities
Integrate social, economic and environmental objectives	Maximize profits of individual private businesses
Meet community needs	Respond primarily to consumer dollars
Mutual help and cooperation	Highly competitive
Local economic linkages and ties to the community	Flexibility of ownership
Balanced, equitable and sustainable economic development	Rapid economic growth and increase in commercial output
Social equality and empowerment	Concentration of wealth and power
Focus on job creation and stability	Return on capital investment
Household and volunteer production viewed as valuable	Exclusive focus on commercial production

A community can be defined in many different ways. “Community” can define a location or represent a group of people based on common interests or characteristics, such as race, religion or sexual orientation (Warburton, 1998; Perry, 1999). Within this thesis, a community, as defined by Flicknoe and McLellan (1994), will be “that web of personal relationships, groups, networks, traditions and patterns of behaviour that develops against the backdrop of the physical neighbourhood and its socio-economic situation.” Warburton (1998) explains that there are two fundamental relationships that exist within this definition. The first is the relationship between people within the community. The interactions and relationships of people create a shared sense of responsibility that will help in working towards common goals (Hempel, 1998). The second is the relationship between people and the place in which they live. Both of these relationships must be positive to ensure that the community will function at its greatest capacity.

CED is an effective economic tool because it works within the definition of sustainable development. Sustainable development is “development that ensures that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). Sustainable development ensures that development addresses economic, social and environmental issues. CED follows this belief, looking at the local economy, as well as the social and environmental issues that affect a community.

Economically, CED requires a vision for a community, created with the input of community members. The reduction of poverty is a necessary requirement in CED planning and can be accomplished in many ways. Some suggested methods are matching of skills of unemployed workers with community initiatives, helping families move off government assistance and providing affordable childcare. Investment in education and training for community members will give a community an abundance of skilled labour (Local Government Commission, 2001). The community should encourage local economic development that will support local business and create long-term local employment (Stewart, 1998; Local Government Commission, 2001). These businesses should then work as partners with the community and invest in the programs to encourage their success over time (Local Government Commission, 2001).

The social well being of a community is essential when looking at CED. Social problems, such as alcohol abuse, should be addressed to help rehabilitate affected people. Contributions of youth are essential to the achievement of community goals (Les Cheneaux Economic Forum, 1998). Community involvement by most members must occur, as goals can only be achieved with support from the community (Les Cheneaux

Economic Forum, 1998; Hart, 1999). People will have no sense of ownership in the community if they have not invested in it (Taylor, 1998). With community pride, the quality of life in the community is likely to increase (Hempel, 1998).

Finally, the environment must be considered in CED. Development that occurs should be done with minimal impact to the environment. As well, the community should take pride in their local environment, improving the physical landscape to ensure its continuous renewal, to provide habitat to local wildlife, and to beautify the community.

The interconnectedness of CED can be seen in the CED principles developed by Neechi Foods Co-op of Winnipeg in 1993 after two years of community consultations.

1. Use of locally produced goods and services
2. Production of goods and services for local use
3. Local re-investment of profits
4. Long term employment of local residents
5. Local skill development
6. Local decision making
7. Promotion of public health
8. Improvement of the physical environment
9. Promotion of neighbourhood stability
10. Promotion of human dignity
11. Mutual aid support among organizations adhering to these principles

Their neighbourhood recognized that, to revitalize their community, CED needed to deal with social, environmental and economic issues, as opposed to traditional economic development. To address the three areas of CED, the decision-makers should strive for equality among social, economic and environmental decisions and priorities within their community (Les Cheneaux Economic Forum, 1998).

3.1.1 CED Theory

The CED theories that are discussed in this thesis are different methods of examining the economics of a region. These theories explain the strengths and weaknesses of CED ventures.

3.1.1.1 Economic Base Theory

Economic base theory relies on the assumption that economic growth is based on demands for goods and services from outside of the community. The export of goods created by local resources will create local jobs and revenue. A CED strategy based within this theory will function within the global market, encouraging creation of export-based industries. The community will also promote transport and telecommunication industries to support their export-based market. Economic base theorists postulate that local service industries will develop from creation of jobs in the export-based market as they are needed (Blakely, 1994).

Economic base theory is an inappropriate CED theory, as it is based on external demand, not on local needs. While there would be some economic benefits from some export-based industries, a local economy would require investment in its own market, not that of the world (Blakely, 1994).

3.1.1.2 Location Theory

Location theory is important to creation of CED strategies, as it states that development will occur where it is most cost-effective. Industries locate where they can access their markets easily, as well as where there are the least expensive transport links. Labour costs, training facilities and sanitation services are also some variables at which

industries look when establishing a new firm. For a CED endeavour, the community must look at all of these issues to see if a proposed project is really feasible. While a fishing camp may be a realistic venture, a manufacturing plant may not be. The parameters of this theory ensure realistic CED strategies are undertaken (Blakely, 1994).

3.1.1.3 Linkages and Leakages

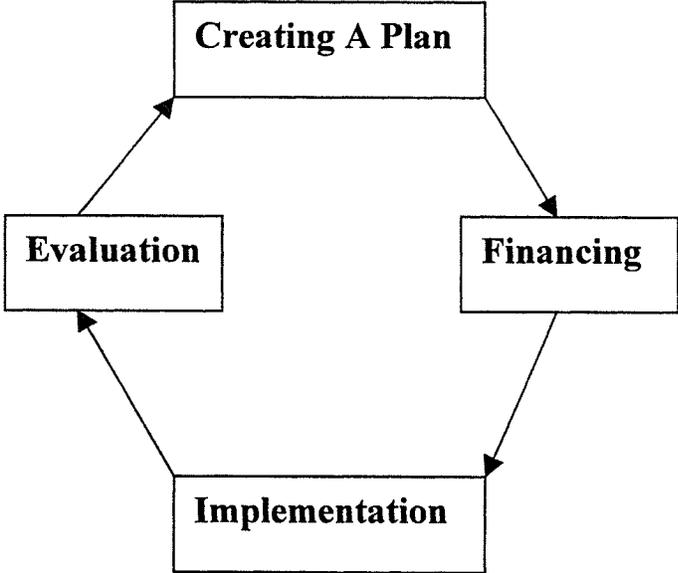
The strength of the local economy is determined by the interdependence between the sectors in that economy (Loxley, 1985). This flow of goods and services is referred to as linkages. These are found in three forms: backward linkages, forward linkages and final demand linkages. Backward linkages occur when a sector purchases goods from other sectors in a community, thus retaining money within the community. Forward linkages exist when goods created by one sector are sold to other sectors in a community. There are also final demand linkages. These linkages are found when final products remain in the community in which they were produced. Therefore, the greater the number of final products that remain in the community and are not exported, the greater the final demand linkages (Loxley, 1985; Province of Manitoba, 2003). By looking at linkages, the importance of retaining economic activities in the community becomes clear. Through backward, forward and final demand linkages, the community benefits from a multitude of economic activity, including salaries, profits and rent.

In most communities, there will always be leakages in the economy. When goods are purchased from outside the community or exported, money leaves the community. As well, if goods are purchased at a store located in the community, but the store is owned externally, profits will also leave the community. This loss of profit results in a

lack of re-investment in a community (Province of Manitoba, 2003). These leakages result in economic losses in the local economy.

3.1.2 The CED Process

When a community begins to examine CED, they must decide on the process that will be used (Blakely, 1994). This will ensure personal investment in the strategy (Taylor, 1998) and lead to success. This process begins with the creation of plan, which includes consensus decision-making, financing and evaluation. Upon evaluation, new goals and objectives will be established and a new plan will be created.



3.1.2.1 Creating a Plan

In creating a CED strategy, a community must go through a set of phases before the implementation of their strategy. This will provide them with a thorough plan, in which any problems can be alleviated before they occur. Blakely (1994) has created a list of six phases:

Phase 1: Data Gathering and Analysis

- Determining economic base
- Assessing current employment structure
- Evaluating employment needs
- Examining opportunities for and constraints on economic development
- Examining institutional capacity

Phase 2: Selecting a Local Development Strategy

- Establishing goals and criteria
- Determining possible courses of action
- Developing a targeted strategy

Phase 3: Selecting Local Development Projects

- Identifying possible projects
- Assessing project viability

Phase 4: Building Action Plans

- Preassessing project outcomes
- Developing project inputs
- Establishing financial alternatives
- Identifying project structures

Phase 5: Specifying Project Details

- Conducting detailed feasibility studies
- Preparing business plan
- Developing, monitoring and evaluating program

Phase 6: Overall Development Plan Preparation and Implementation

- Preparing project plan implementation schedule
- Developing an overall development program
- Targeting and marketing community assets
- Marketing financial needs

These six phases will ensure that before a strategy is put in place, all aspects of a plan will be analyzed and potential problems will be removed.

3.1.2.2 Consensus Decision Making

The use of consensus in the decision making process is an effective tool that creates equality between all stakeholders. Defined by Cormick et al. (1996), “[a] consensus process is one in which all those who have a stake in the outcome aim to reach agreement on actions and outcomes that resolve or advance issues...”. Coover et al (1985) point out that consent does not mean that everyone is completely satisfied with the

end result. Rather, the decision is one that is acceptable to everyone and one that everyone will support.

A decision-making process utilizing consensus begins with an assessment of the process. This includes defining potential participants and the issues that will be addressed. By addressing the possible issues, stakeholders have the opportunity to decide if they wish to participate in the process. The second step is to design the process that participants will use. By incorporating a set of ground rules into the design of a process, there is then a protocol agreed upon by all parties. One option during this step is to employ or modify a process used elsewhere that has been proven to work (Cormick et al., 1996). Finally, the process begins. Led by a facilitator, an idea is brought forth for discussion by the group. All relevant information is gathered and used by the group to reach a conclusion. The group has the opportunity to agree or disagree with the conclusion, with objections discussed until an overall consensus is reached (Coover et al, 1985).

It is very possible that a group cannot reach a consensus on an issue. A person or group of people within the decision-making group have the right to disagree with a decision that has been made. At this point in the process, it is the role of the objectors to explain their reasons to the group. The reasons can range from moral objections to the possibility that an issue has not yet been discussed with the group. It is also the responsibility of the rest of the group to listen and consider that which the objectors have to say. Using the information put forth by the objectors, new discussions can arise that can lead to a consensus. Conversely, decision-making may have to be delayed while more facts are gathered further discussions occur and people can ponder the issue at

greater lengths. A new meeting will then need to be held at a later date to renew discussions on the issue (Coover et al, 1985). In the end, participants may not agree completely with the decision but they agree to go along with it.

3.1.2.3 Financing CED Initiatives

Too often, money used for CED ventures is referred to as “funding”. Funding describes the influx of economic resources for a project and is often assumed to continue through the lifespan of a project. As CED strives for independent, local economic development, financing is a more appropriate term. Financing provides primary financial support to a new undertaking. It is then expected that the endeavour will generate adequate earnings to support itself, therefore promoting independence (Blakely, 1994).

As financing can be obtained from the private sector (Blakely, 1994), partnerships can transpire between organizations and private businesses. A partnership is defined as a “legal entity formed by two or more persons to do business. The partners must invest assets in or contribute services to the entity and must share in both the profits and the losses from the business” (Blakely, 1994). These partnerships have been found to encourage job-training programs, as well as to create competent and responsible organizations to abet the partnership (Human Resources Development Canada, 1999). Self-sufficiency is also a benefit of partnerships, as organizations no longer have to rely on government funding for programs (Indian and Northern Affairs Canada, 1993). Cortis (1999) has suggested that limited incentives, such as tax deferrals, will encourage these partnerships, benefiting both the organization and investing partner.

3.1.2.4 Evaluating CED Initiatives

Evaluating is essential to successful CED initiatives. This tool allows the community to observe what is and what is not working, what needs to be changed, and what new strategies can be implemented. With continuous and consistent evaluation, each CED project can be assessed to determine modifications that must be made (Hempel, 1998; Hart, 1999). The following evaluation process, based on Blakely (1994), will allow communities to evaluate the success of their CED ventures.

Step 1: Determining an Evaluation Strategy

- Utilize indicators as a sign of what is improving and what is not
- Comparison between the planning of the project and what actually occurred
- Data collection from community members using interviews or questionnaires
- Cost-benefit analysis
- Any other strategy that will be effective for the community to identify their desired outcomes

Step 2: Data Collection and Analysis

- Data collection by community members of relevant data based on selected evaluation strategy
- Examine data for successes and areas requiring improvement

Step 3: Communicating Evaluation

- Use collected data to create an evaluation that can be understood by community members
- Present the evaluation to the community

Step 4: Reassess Goals of the Project

- The evaluation should lead to new goals for the next evaluation period
- Identify what worked and why and what did not work and why, and apply those techniques to the new project plan
- Identify areas that were successful and what should occur in those areas in the next plan
- Identify areas that continue to need improvement and what can be changed for a greater chance for success in the next evaluation

It is important that there is consistency in the evaluation process. This requires evaluations to take place within a set time frame (such as every two years) using the same technique each time (Blakely, 1994). This will ensure consistent results that will allow a

community to truly gauge the changes occurring, as well as providing the opportunity to modify areas that are not producing the desired results.

3.1.3 CED Organizations

There is no one strategy to “do” CED. There are some general characteristics of CED strategies, such as community ownership, research and planning, and human resource development. There are also certain key factors that heighten the effectiveness of CED initiatives. These include the creation of partnerships for equity investment, the integration of social, economic and environmental goals, the empowerment of community members, strategic planning of development projects, and the creation of a central, independent organization such as a community development corporation (Perry, 1999; Canadian Community Economic Development Network, 2001). In reality, though, to be effective, strategies must be tailored to specific needs of the community.

The need to adapt a strategy to the neighbourhood results in many different types of CED organizations. Organizations can address a single issue, such as housing or training. Very often though, while organizations claim to only address one issue, they tend to do more. Inner-city Renovations, a construction company that renovates homes in Winnipeg’s inner city, also provides employment to residents and creates a safer and more attractive community (Canadian Community Economic Development Network, 2003a). Community Development Corporations bring together many different functions under one roof, including research, networking, loan funds and advocacy. North End Community Renewal Corporation in Winnipeg’s north end coordinates and provides a plethora of services that address the many needs of their neighbourhood (Canadian Community Economic Development Network, 2003a; Canadian Community Economic

Development Network, 2003b). There are also infrastructure organizations that offer technical assistance, funding, research, policy development and networking. The Community Economic Development Technical Assistance Program (CEDTAP), based out of Ottawa, is one of the leading CED infrastructure organizations in Canada (Canadian Community Economic Development Network, 2003a; Canadian Community Economic Development Network, 2003b).

3.1.4 CED Challenges

While often viewed as being an effective strategy for community revitalization, there are challenges for CED. There is a definite lack of financing available for CED organizations. The absence of long-term financing results in unnecessary time spent filling out grant applications, as well as excessive concern about the ongoing existence of an organization due to lack of money. As well, funders have short-term expectations, requiring results after as little as one year. For organizations that are providing training or creating a loan fund, this often takes years to accomplish. Funders also want quantitative results, requiring numbers to justify success. This is difficult for many organizations, as it is challenging to quantify something like a safe neighbourhood. Funders need to recognize that CED is a long-term strategy for community revitalization, not a quick fix to one, small problem (Canadian Community Economic Development Network, 2002b).

Another difficulty faced by CED organizations is building a sufficient skill base. While organizations desire to employ local residents, it is a challenge when there is a lack of people with the requisite abilities for employment. The challenge is compounded when there is not enough money to train people to meet the needs of the organizations.

This results in hiring from outside the community to fill positions, a difficulty for an organization trying to maintain the goals of CED.

Finally, there is a challenge of addressing all of the components of CED. As opposed to traditional economic development, CED focuses on economic, social and environmental goals. This means that organizations have to think about all three areas in everything they do. Economic development is a priority for organizations, but there also has to be a focus on social aspects of their community as well as for the environment. Often this results in activities or programs that overlap two or three of these areas. For example, a program to promote a safe community can result in many outcomes. Environmentally, the community may be cleaned, including lighting and beautification. Economically, residents will obtain employment cleaning the neighbourhood and as security patrols. Socially, residents will feel safer in their neighbourhood. With the challenge of creating a safer community, an organization can meet all of the goals of CED. Although that is the ideal, it can be very easy for an organization to simply take up one of goals and not consider the others.

3.2 The New Economy

The New Economy has the ability to create new opportunities for CED organizations, rural communities and First Nations. This may include technological advances, new employment opportunities, new options for wealth creation and increased productivity (Mandel, 1996). For CED organizations, new prospects may exist for training and education, as well as for research and the sharing of information with other organizations. The possibilities for rural communities and First Nations are even greater, as many of these communities do not have Broadband Internet access. The greatest

reason for this lack of access is “the high costs of upgrading and extending infrastructure to customers dispersed over very long distances” (Veenhof, Neogi & van Tol, 2003). It is due to these problems that Broadband is most needed in these regions, as Broadband will allow communities to create new industries with reduced time, distance and cost factors (Veenhof, Neogi & van Tol, 2003). Because of the small size and remote location of many communities and First Nations, it is difficult to market services and goods outside of these communities. There is a lack of skilled labour in many communities and First Nations, and training could come through the New Economy. Using Geographic Information Systems (GIS) and other mapping programs, along with databases, rural communities and First Nations can gather and utilize data on their local natural resource base, resulting in education and natural resource management. As well, as many youth leave rural communities and First Nations, there is an increasing need for computer literacy to allow them to compete and participate in the labour force in larger, urban centres (LeBlanc, 1994). It is critical that rural and First Nations children be given every opportunity to participate in the New Economy. It has been postulated that the New Economy has not equally benefited all communities. (Manitoba Research Alliance on Community Economic Development and the New Economy, 2003), and it is important to allow all rural communities and First Nations to be equal participants in the New Economy.

3.2.1 New Economy Opportunities

3.2.1.1 New Industries

With Broadband, economic opportunities are predicted to flourish for rural and remote communities. Kevin Kelly (1998) states that “the new economy operates in a ‘space’ rather than a place, and over time more and more economic transactions will migrate to this new space.” Electronic commerce, also called e-commerce or e-business, was defined by the Government of Canada as “any transaction between businesses, or between businesses and consumers, that is made using digital technology” (Industry Canada, 2001). Through the Internet, enterprises can now function in the global market while still existing in a small, rural community. Customers can be found with a well designed website. Work can be created in a remote location and e-mailed to customers. Even payment can be done on-line (Thornburg, 2002). By conducting business over the Internet, companies have the opportunity to “see the entire planet as their market” (Thornburg, 2002).

Statistics Canada conducted an economy-wide survey on e-commerce in 2000 and determined that Canadian business sales over the Internet totalled \$7.2 billion, up 73% from 1999. They also found that e-business occurs predominantly in larger business and certain sectors (manufacturing, transportation, warehousing and wholesale and retail trade). Although this is the current trend, as rural and remote communities connect to the Internet with Broadband, smaller, community-based, rural businesses will have opportunities to reach customers outside their community (Industry Canada, 2001).

One great opportunity for rural communities and First Nations comes from the need for New Economy technology. Remote areas require access to high quality

telephone, television and Internet service. Communities can take advantage of this need and create their own companies that will offer these services to neighbouring First Nations and rural communities at a reduced cost with better quality service. *Nations Sphere*, an Aboriginal company that strives to provide “reliable and cost effective telecommunications solutions” (Nations Sphere, 2004), sees this possibility for First Nations communities. By operating the telecommunications company directly from the First Nation, employment and revenue remains in the company’s community.

With the Internet, services can now be offered to customers who do not live in the location of the company. Customers can contact companies to discuss their requirements and the company can reply with the necessary information, all through e-mail. Completed services can also be sent by e-mail, thus negating transport costs. Some of these industries include data processing, graphic design, website creation and the development of on-line training programs (Thornburg, 2002).

Call centres are another New Economy industry that can benefit small and remote communities. Because location is not an issue for call centres, they have proven to be a useful industry for communities with few other options. This became evident in Isle Madame, an island of 4,300 people in Nova Scotia. With the collapse of the ground fishery in the early 1990s, hundreds of jobs were lost. The newly created development association, Development Isle Madame Association (DIMA) worked hard to create new industries in the remote community. Recognizing that bilingualism was an asset to the community, DIMA looked into the call centre industry. The community now owns 90 per cent of the Tradewinds Call Centre, while Vocatex in Ontario owns the other 10 per cent. Twenty community members are employed to conduct international marketing for

Vocatex (Government of Nova Scotia, 2004; Cameron, 2002). Call centres are a real option for rural Manitoba communities, especially First Nations in which there are people who speak English and Cree.

Manufacturing is an industry that can now operate in rural areas. Through the Internet, companies can work with customers from around the world without ever having to meet in person. One example is the Huskvarna Viking Designer Series embroidery machine, which can receive embroidery patterns over the Internet and download them into the machine. Machine operators only have to change the colour of the thread when prompted by the embroidery machine (Thornburg, 2002). Final products are couriered to customers. This shows that the manufacturing industry is viable in remote locations.

The New Economy has transformed banking in rural areas. Services are now provided over the Internet, cash is accessed at Automated Teller Machines (ATMs) and loans can be received over the phone (Kelly, 1998). These services mean that a bank or credit union in one community or First Nation can provide service to neighbouring communities, without creating inconvenience for its customers or members.

The New Economy is slowly providing new health care opportunities for rural and especially remote communities. E-health refers to any health care services, including health education and information, which are delivered over a distance (Industry Canada, 2001). While there are still challenges with e-health, such as the inability to conduct x-rays or CAT-scans in real time, there have been advances that have provided residences of northern Manitoba with services they might not have otherwise received. Doctors in remote regions can consult with colleagues in urban centres by e-mailing x-rays. Video

conferencing allows diagnostic discussions from great distances. Patients can return home and have their conditions monitored through on-line homecare (Industry Canada, 2001). With the continued development of on-line healthcare services, improved access and quality of treatment will result in a better quality of life for rural and northern residents.

3.2.1.2 Education

The New Economy has an important role in education. From learning to use computers in the classroom to on-line learning to tele-learning, opportunities for rural communities and First Nations increase with computers and Internet access. The Government of Canada is very aware of the importance of the New Economy to rural and First Nations communities and has attempted to bring in these services.

During the mid to late 1990s, the Government of Canada launched two programs to bring Internet into northern communities and First Nations, with a goal of improving the education system (Belanger, 2005). The first program began in February 1995. The Community Access Program (CAP) was to provide 10,000 public access computers to ensure that all Canadians could have Internet access, as well as providing teachers in northern regions the ability to access distance education. All communities with populations of less than 50,000 across Canada were to be connected by March 2001 (Industry Canada, 1999). By 2000, there were 136 CAP sites in Manitoba, only 19 were in First Nations and only 6 were northern or remote First Nations (Belanger, 2005). Most of the CAP sites were in southern Manitoba, and community access was very limited because most were located in schools. Along with CAP, SchoolNet was created to provide all Manitoba with access to the Internet. Schools were given Pentium Personal

Computers (PCs), DirecPC equipment (satellite uplink equipment) and one year of free satellite time (Belanger, 2005). By 2000, 50 First Nations had applied to, and received equipment from, SchoolNet, although many schools did not have the capacity to operate the equipment or the infrastructure to run it (Belanger, 2005).

Although there have been attempts to bring computers and Internet access to rural communities and First Nations, many still do not have satisfactory infrastructure within which to operate. With Broadband Internet access, a sufficient number of computers and staff trained to use the equipment, community members will have access to many new learning opportunities. While rural communities and First Nations recognize that Internet access is fundamental to the education of their youth and community members, the lack of infrastructure continues to impede their participation in the New Economy.

3.2.1.2.1 Classroom Education

As industries and professions change, the need for computer literacy continues to be important to youth (LeBlanc, 1994). Many young people leave their rural communities and First Nations and require sufficient computer skills to find employment in urban centres. As well, as rural communities and First Nations embrace the New Economy, industries and opportunities in these communities will also require adequate computer training. It is important for educators to integrate technology into the classroom to ensure that their students are receiving the training they will need to function in the New Economy (Thornburg, 2002). Support needs to come from administrators and those who develop curricula to ensure that educators include technology in teaching. There are many useful ways to incorporate technology into the classroom. Students should conduct research on the Internet (as well as from books),

communicate with students from around the world, and use word processing, data bases, PowerPoint, photo manipulation and website creation for projects. As suggested by Kim Sigurdson, the president of Nations Sphere, an Aboriginal technology company, the Internet allows Aboriginal students living on a reserve to connect with other children in on a reservation in the United States or in the outback of Australia. They can recognize that there are other people around the world in similar situations and share common issues (K. Sigurdson, personal communication, April 14, 2004). Technology gives teachers an opportunity to expand their programs and provide students with a new outlet for their creativity.

3.2.1.2.2 On-line Education

On-line electronic learning, or e-learning, occurs when education or training is conducted over the Internet. Opportunities to receive education on-line continue to grow. In 2000, 57% of colleges and universities in Canada offered almost 3000 on-line courses (Industry Canada, 2001). As well, the private sector offers a plethora of training services through the Internet. E-learning provides high school students in remote regions the opportunity to take courses that are not offered at their smaller schools. Through e-learning, students, educators, employers and anyone with Broadband service can access courses and learning resources that would traditionally be out of their reach. E-learning can occur in different ways. Instructors can e-mail a course to a student and interaction only occurs between the student and instructor (rather than between an entire class and the instructor) by e-mail (Tiene and Ingram, 2001). This type of learning allows students to learn at their own pace. Some electronic courses are offered like traditional courses, with students meeting for “class time” in a chat room. Additional communication

between students or with instructors occurs by e-mail. Course work is sent by e-mail to the instructor by the required deadline (Tiene and Ingram, 2001). E-learning instructors often also post information on their websites, including course outlines and reference materials.

E-learning is also a useful tool for training staff. Many CED organizations do not have the resources to retain a staff person to train employees. Instead, many organizations access training on-line for their staff. This may be to learn new computer programs, to learn about what other organizations are doing or to receive on-line certification. One company, Wisekey (www.wisekey.com), offers an e-learning course on e-security, training staff to reduce costs from misuse of the Internet, theft of proprietary information and viruses (Wisekey, 2004). E-learning results in lower training costs, as organizations do not have to pay for travel or courses, as well as not having staff away from the office for days at a time. Another benefit of e-learning is that modules or portions of courses can be completed during slower periods of the day (Club Industry, 2004).

3.2.1.2.3 Tele-learning

Tele-learning occurs when a group of people from more than one location participate in a teleconference during which teaching and learning occur. A person or organization offers a learning opportunity and people or groups can call and participate. Vibrant Communities has taken advantage of tele-learning. This organization “provides a process and a working environment where diverse community leaders from across the country work together to share ideas, practices and policies that strengthen their community-based poverty reduction initiatives (Vibrant Communities, 2004). On April

15, 2004, more than 100 people from Victoria, British Columbia to Halifax, Nova Scotia to Madison, Wisconsin joined a tele-learning forum to discuss sustainable incomes. After welcoming everyone to the tele-learning forum, the interviewer introduced the panel of three presenters. Each presenter gave a 10-minute presentation, followed by a question and answer session. This forum was recorded and was made available the following day on the Vibrant Communities website (www.vibrantcommunities.ca) for 30 days. This tele-learning forum allowed colleagues from Canada and the United States to meet and discuss common issues without the impediment of time or cost.

Tele-learning is practical for CED organizations, rural communities and First Nations. Using tele-learning, CED organizations can participate in learning events without incurring travel costs or losing staff hours. Collaboration can also occur to share successes and create new ideas. Rural communities and First Nations can also benefit from tele-learning for many of the same reasons. Communication and sharing with communities or First Nations with similar resources, industries or locations can occur without the concern over expenses.

3.2.1.3 Natural Resources Management

The New Economy offers rural communities and First Nations the ability to inventory, manage and monitor their surrounding natural resources. Local CED organizations can also take on the role of natural resources managers. Natural resources management starts with the need to take an inventory of the resources in the community. This can be done in two ways. Either an organization can collect the data needed to create this database or the organization can solicit the assistance of community members to collect the data. The Internet is a useful tool to assist a community in collecting this

data. It can also be a useful way of connecting the community with a collective task (Fitzpatrick and Gill, 2002). Community members can then be involved in ongoing monitoring. One example is in Massachusetts, where volunteers are combating invasive, nonindigenous species, such as Purple Loosestrife. A webpage with photographs, descriptions and habitat information on these invasive species helps volunteers identify the species. The volunteers can then report the sighting before the species invades an area of native species (Durand and McGregor, 2002). Using a website where community members can input new information, these people will play an active role in monitoring their surrounding natural world. This information can allow for comparisons of natural resources in neighbouring communities.

Once a database of local natural resources is created, the community and surrounding areas can be mapped using geographic information system (GIS) software. GIS software is used to expand traditional databases. By layering information, communities can include roads, property boundaries, zoning rules, utilities, emergency response data (from such groups as police and fire departments) and historic sites (Roper and Muller, 2002). Using GIS mapping, communities can create sophisticated maps that can be manipulated, analyze collected data and envision new types of community planning (Roper and Muller, 2002). GIS should also be used for ongoing monitoring, as new information can be inputted to update local maps.

Manitoba Keewatinowi Okimakinak (MKO), through their Natural Resources Secretariat (MKO-NRS), is a leading First Nations organization that is using GIS. MKO-NRS created the Keewatinook Land Information System (KEELIS), which, for the last nine years, has gathered data on an area that encompasses one third of Manitoba (Poole,

1995). Information continues to be gathered by resource harvesters and managers in the MKO region, and is then shared with MKO staff trained in GIS (Fast, Eddy and Baniyas, 2001). Other information is currently being updated using Global Positioning Systems (GPS), another useful resource-management technology (Manitoba Keewatinowi Okimakinak, 2003). The KEELIS database includes mapping, environmental information and traditional knowledge drawn from map biographies from the MKO communities (World Wildlife Fund, 2004). KEELIS is used to support MKO and their member First Nations in negotiations with government for treaty land entitlement claims and land selection, with developers interested in forestry, mining and other resource development, as well as for monitoring wildlife movement, resource management and development and environmental impacts (National Aboriginal Forestry Association, 2004; World Wildlife Fund, 2004; Poole, 1995). For example, MKO-NRS is currently assisting the Swampy Cree Tribal Council in their negotiations with Tolko, a forestry company, regarding a number of joint ventures (National Aboriginal Forestry Association, 2004).

One useful program for land use planning and natural resources management is CommunityViz. CommunityViz is a GIS-based computer program that “allow(s) users to interactively sketch land use scenarios; evaluate them against community objectives and constraints; view comprehensive information on the past, present, and future impacts of their choices; and walk through realistic three-dimensional simulations of those scenarios” (Roper and Muller, 2002). The first component of the program is the Scenario Constructor. The community chooses the development scenarios and the resources it will impact, and the program is designed to evaluate the impacts of development options. The

community also chooses the indicators that will identify if a development scenario is feasible (Roper and Muller, 2002; CommunityViz, 2004). The second component is the Policy Simulator. By looking at legislative and budget issues, communities can see the cumulative effects of different options over time (Roper and Muller, 2002; CommunityViz, 2004). The third component of the program is the Sitebuilder3D Component. Communities input a proposed development and Sitebuilder3D shows the visual impact of this plan (Roper and Muller, 2002; CommunityViz, 2004). Some examples of how CommunityViz has been used includes:

- Resource Management Plan (Lakeview District, Oregon)
- Floodplain Naturalization (Illinois River Valley, Illinois)
- Regional Drinking Water Protection (Laramie, Wyoming)
- Smart Growth and Habitat Preservation (St. George, Utah)
- Public Participation (Verona, Wisconsin)
- Fire Risk Management (Missoula, Montana)

(CommunityViz, 2004)

The website for CommunityViz (<http://www.communityvizzes.com>) offers users assistance, various products and case studies.

The Internet can also be used as an educational tool for natural resources management. By promoting understanding and awareness of the interconnectedness of communities and their natural resources, citizens will be encouraged to protect their environment (Durand and McGregor, 2002). This interconnectedness includes teaching the importance of natural resources to the local economy. Educational tools can be designed specifically for teachers to educate their students and encourage them to become the next generation of environmental stewards. Educating students at school and at home, in conjunction with including the whole community in local data collection is the

first step in creating a community that is aware of, takes pride in, and protects its local environment.

3.2.2 The Broadband Initiative

In 2000, the Government of Canada initiated the *Broadband for Rural and Northern Development Pilot Project*, or the Broadband Initiative, which committed to providing all of Canada with access to Broadband Internet services by the year 2004. According to the National Broadband Task Force, Broadband is “a high-capacity, two-way link between an end user and access network suppliers capable of supporting full-motion, interactive video applications” (Industry Canada, 2001). Some applications, such as real-time audio-video, have large amounts of data to transmit and therefore require Internet connections with higher capacity (Industry Canada, 2003). To qualify as Broadband, according to International Standards Organization, the network must be capable of transmitting at least 1.5 megabits of information every second (Industry Canada, 2001). Broadband technology includes three options:

- Cable modems run through television cables that are designed to allow data to travel to and from the network;
- DSL technology travels through phone lines (but is not dial-up); and
- Fixed wireless functions from a base station which is generally a radio mounted on a local high point, and is transmitted to a stationary transmitter and receiver such as an antenna. Fixed wireless is often the only choice for rural areas. (Industry Canada, 2003)

The Government of Canada made the commitment of connecting all of Canada to the Internet, as they recognize the importance of effective Internet access to rural and First Nations communities. Broadband has the ability to offer new opportunities in areas of health, education and commerce, all of which contribute to an innovative and

successful community. These opportunities are especially important for rural and First Nations communities, where distance and smaller populations make access a challenge.

The Broadband Initiative was divided into two phases. All of the application deadlines had passed at the time of writing this thesis. The first phase was to provide seed funding to communities to develop a business plan. Through a competitive process, the Initiative selected proposals and successful communities were given up to \$30,000 or 50% of the cost of the project (whichever was less). The second phase was the submission of a business plan to another competition, after which successful communities may receive funding for up to 50% of the cost of implementing their business plan. It was expected that the private sector would assist with the other 50%. There were two rounds of applications:

	Round 1	Round 2
Seed Funding Phase (Phase 1)		
Community champions prepare a proposal to receive seed funding to develop a business plan		
Deadline for submission of seed funding proposal	Oct. 31, 2002	Mar. 28, 2003
Announcement of successful proposals	Jan. 13, 2003	July 10, 2003
Development Phase (Phase 2)		
Community champion develop a business plan (to serve as application for funding of business plan implementation)		
Deadline for submission of business plan	June 6, 2003	Nov. 20, 2003
Announcement of successful communities	Fall 2003	Winter 2004
Implementation Phase		
Successful community champions implement business plans	Post-announcement	Post-announcement

Table 1 – Broadband Initiative Application Process

For each proposal, there had to be a community champion. The community champion could be a government, an Indian Band or a legally incorporated, not-for-profit Canadian organization that would assist the community that was applying to the

Broadband Initiative. The role of the community champion included: identifying the needs of the community, engaging stakeholders including neighbouring communities, preparing financial analyses and providing project management. The community champion, along with the successful applicant community, was required to work with other communities participating in the Broadband Initiative to share knowledge and best practices (Industry Canada, 2003).

Business plans were expected to have a great deal of information. The Broadband website offered tips to applicants, which were divided into General and Technical Tips.

General Tips include the need for the demonstration or identification of:

- Community engagement
- Financial support from other sources
- Community needs
- Capability of the community champion
- Realistic assessment of total costs
- Assessment of risks and impacts
- Long-term strategy to sustain services

Technical Tips include:

- Realistic implementation plan
- Ability of the plan to meet community needs
- Demonstration of physical implementation comprehension

All of the details in these tips were provided to assist applicants create a thorough and successful application to the Broadband Initiative. As well, applicants were encouraged to contact the Broadband office in their province to discuss their business idea with a Project Officer (Industry Canada, 2003).

While the Broadband Initiative appears to be a true opportunity for rural communities and First Nations, the program does have its flaws. The Government of Canada pledged to connect the entire country with Broadband access by 2004. This

deadline has since been pushed back to 2005. Even with this extended date, it seems that it will be impossible for the Government to provide Broadband to the entire country. Although they are logical, the criteria of the Broadband Initiative have made it very difficult to actually reach all of rural and remote Canada. There is sometimes a lack of ability in communities to create a proposal and business plan, and as such, these communities could not apply to the program (M. Montreuil, personal communication, August 12, 2003). If a community could not find an organization to be community champion, they were not able to take advantage of the available government funding.

The lack of comprehensive coverage is evident in the following tables. The first table shows the response to the Broadband Pilot Program across Canada.

	Round 1 Phase 1	Round 2 Phase 1	Round 1 Phase 2	Round 2 Phase 2
Number of Submissions Received	222	91	83	107
Number of Proposed Communities	1149	906	768	1375
Number of First Nations Included	156	110	83	190
Number of Submissions Selected	89	65	33	TBA
Funding Allocation	\$2.4 M	\$1.7 M	\$44 M	TBA

(National Selection Committee Broadband Initiative, 2004)

Table 2 – Broadband Initiative Response Rate

Although each successful applicant encompasses more than one community (as few as 2, as many as 30), all of rural Manitoba is not covered. In Manitoba, the breakdown appears as follows:

	Round 1	Round 2
Phase 1		
Successful Manitoba Applicants	9	4
Successful Northern Manitoba Applicants	3	2
Successful Southern Manitoba Applicants	6	2
Phase 2		
Successful Manitoba Applicants	6	TBA
Successful Northern Manitoba Applicants	2	TBA
Successful Southern Manitoba Applicants	4	TBA

(Industry Canada, 2003)

Table 3 – Broadband Initiative: Successful Manitoba Applications

Only one document could be found that indicated the amount of funding provided. This document represents the First Round of the Development Phase. The breakdown for Manitoba was:

Proposals Selected	Total Funding	Number of Communities Represented	Number of First Nations Communities Represented
6	\$172,637	49	4

(Industry Canada, 2003)

Table 4 – Broadband Initiative: Manitoba Funding

While this is important and useful funding to the communities whose proposals were selected, the Broadband Initiative will not be able to provide Broadband access to all of Canada by 2005.

3.2.3 Manitoba Keewatinowi Okimakanak and Manitoba Telecom Services Public Consultations on Telecommunications in the North

In May of 2002, Manitoba Keewatinowi Okimakanak (MKO), which represents northern Manitoba First Nations, and Manitoba Telecom Services (MTS) met with nine northern communities to examine telecommunications in the North. This partnership was made because northern Manitoba receives its telecommunications service from MTS. Communities visited were Norway House Cree Nation, the City of Thompson, Nelson

House Cree Nation, Mathias Colomb Cree Nation, Red Sucker Lake Cree Nation, God's Lake First Nation, Garden Hill First Nation, Chemawawin Cree Nation, Opaskewiyak Cree Nation / The Pas. Meetings began with community tours of Band Offices and MTS service towers and satellite systems. Each meeting was different, but all included presentations by MTS to the Chief, Band Council and community members. Some meetings included a presentation of community concerns by a member of the community. After presentations, community members were invited to ask questions to which MTS responded (Henry, 2002). These meetings resulted in a report that was submitted to the Canadian Radio-Television Telecommunications Commission (CRTC) as a Service Implementation Plan (SIP) by MTS. The SIP was to start by improving telephone service, followed by, at a later date, improving Internet access (Henry, 2002; Manitoba Keewatinowi Okimakanak, 2002). While many of the issues that came out of the meeting were about telephone service, a significant number of the concerns related to Internet access.

Many of the following concerns were voiced over and over by members of the nine communities. Telephone access is deplorable in northern Manitoba, being compromised by factors that would never occur to someone in southern Manitoba (Henry, 2002). When there are too many people using telephones, it is not always possible to get an outside line. There is often "cross talk", when people can hear other phone conversations on their line, as well as voice distortion, humming sounds and echoes. Weather, such as rain or wind, can affect the quality of telephone services. As well, there is no cellular phone access in most communities, nor is there is option of calling features such as call waiting or call display (Henry, 2002). There are no MTS operators who can speak Cree,

as found by residents and confirmed by MTS. When residents call MTS with problems, they are often not addressed because of an inability to communicate in their language (Henry, 2002). At the public meeting, in response to complaints about phone lines being down for days, MTS suggested that residents call a service operator. Residents pointed out that this is impossible when lines are down, which further demonstrated that MTS does not realize how poor service is in the North (Henry, 2002). Many times during the consultations, it was clear that MTS was not aware of the magnitude of the service issues in the North (Manitoba Keewatinowi Okimakinak, 2002).

All of the telephone problems also relate to Internet access in the North, as all of the communities that participated in the May 2002 meetings only have dial-up Internet access. When phone lines are too busy, residents cannot log on to the Internet. Speed of Internet service is another problem. One participant said that it takes ten minutes to log on to the Internet and half an hour to receive an e-mail, assuming he is not cut-off altogether. Because residents have to access the Internet through long distance phone lines, costs are very high. Many residents brought up the fact that they are paying these very high costs for very poor service (Henry, 2002).

Community leaders are adamant about the need for high speed Internet and reliable telecommunications in their communities. Opportunities for participation in the New Economy are completely limited by the current limited service. Chiefs talked about the importance of improved service for tourism, business and social development. Teachers discussed the missed opportunities for youth learning. Health care professionals want better access to utilize tele-health services (Henry, 2002).

One suggestion offered in many communities was the possibility of training people in the community to provide service and repairs. MTS was not willing to consider that option, stating that their staff is sent to do repairs. Telephone service is the first step in the SIP, and Internet will be upgraded near the end of the 5-year SIP. This means that the earliest northern Manitoba communities could have upgraded telecommunications and Internet service would be 2007 (Henry, 2002).

3.2.4 A Proposal to Connect Northern Manitoba First Nations with High-Speed Internet by *Nations Sphere*

On March 1, 2004, it was announced that *Nations Sphere*, an Aboriginal communications company, will work with northern Manitoba First Nations to provide high-speed Internet to their reserves and surrounding communities (Santin, 2004). *Nations Sphere* is an Aboriginal company that strives to provide “reliable and cost effective telecommunications solutions”, as well as “the tools needed in rebuilding of Aboriginal communities” (Nations Sphere, 2004). *Nations Sphere* began when Kim Sigurdson and Bill Montour recognized that there was the need, the interest and the business case for private, First Nations-owned telecommunications companies. After partnering with the Winnipeg-based companies Novra (www.novra.com) and InfoMagnetics Technologies Corporation (www.imt.ca), *Nations Sphere* had access to affordable, locally made technology. Additional partnerships were also made with Sprint Canada (www.sprint.ca), Manitoba Hydro (www.hydro.mb.ca) and TeleWave Communications of Winnipeg (Nations Sphere, 2004; K. Sigurdson, personal communication, April 14, 2004). The plan for *Nations Sphere* is to work with communities to help them retain the jobs and wealth that are derived from services that

include high-speed Internet, teleconferencing, tele-health, distance education and a community-owned telephone system (Nations Sphere, 2004; K. Sigurdson, personal communication, April 8, 2004). Working with communities with inadequate or non-existent telecommunications infrastructure, *Nations Sphere* will connect these communities using satellite and land-based Broadband technologies, depending on the available infrastructure. *Nations Sphere* will also offer training to local residents to provide the staffing for the operation, including administrators, marketing and communications technicians (Santin, 2004; Nations Sphere, 2004; K. Sigurdson, personal communication, April 8, 2004). Using federal government funding, *Nations Sphere* will train at least three people for each position to ensure that there will be people in the community with the required skills to work at the new company. *Nations Sphere* will continue to work with and provide training to the First Nation until they are ready to function independently (K. Sigurdson, personal communication, April 14, 2004). Products and services offered by *Nations Sphere* include: Internet connectivity, distance education, Voice-over IP (Internet Protocol), tele-health, improved telephone systems, tele-justice (where applicable), custom governance and financial software, employment services, television and multimedia services, desktop hardware and a partnership program to help communities find industry partners (Nations Sphere, 2004; K. Sigurdson, personal communication, April 8, 2004). Through the *Nations Sphere* proposal, the costs to set up a telecommunications company are between \$200,000 and \$300,000. The Government of Canada would pay half of the costs, and the First Nation would finance the other half (K. Sigurdson and H. Lontas, personal communication, April 14, 2004). The new telecommunications company then markets themselves to their First Nation and

surrounding communities, offering services at a much-reduced price. Part of the reason First Nations can offer lower prices are because they are tax-exempt. Long-distance telephone costs are reduced through Voice-over IP. Voice-over IP allows users to attach a box to their computer, plug in their telephone to their computer and make long-distance telephone calls through their Internet provider. This means that all long distance calls cost the same as local calls (K. Sigurdson and H. Liontas, personal communication, April 14, 2004). As the new telecommunication company begins to make money, it can reinvest this money in different ways. Ideas include a community-based television or radio station, an in-school breakfast program or the purchasing public access computers, all of which would also create additional employment (K. Sigurdson, personal communication, April 14, 2004).

The new plan for northern Manitoba First Nations will tap into the fibre-optic network being constructed by Manitoba Hydro. This network will stretch 2,200 kilometres from Winnipeg to Gillam to service Manitoba Hydro's generating facilities and will be completed by May 2004. *Nations Sphere* intends to "buy bandwidth on the network from Manitoba Hydro and then construct a broadcast tower along the network nearest the First Nation" (Santin, 2004). *Nations Sphere* sells equipment to the First Nation that receives a signal from the Hydro network and the First Nation then distributes the signal within their community to residents, retailers and government agencies. With the help of *Nations Sphere*, the First Nation will also market their services to neighbouring communities. With this new service, First Nations will finally have access to high-speed Internet, including real-time video for distance education and health diagnostic services, reduced long-distance telephone rates and eventually television

(Santin, 2004; K. Sigurdson, personal communication, April 8, 2004). The First Nation will own all of the equipment and, with training, provides all of the staff, creating multiple positive economic opportunities for the community.

York Factory First Nation, in co-operation with Tataskweyak Cree Nation, intends to set up an operation by the fall of 2004 upon completion of the Manitoba Hydro network. As of March 2004, 1,200 kilometres of the network was completed, reaching to Ashern and allowing Brokenhead Ojibway Nation to connect as early as April 2004. The operation at Brokenhead could provide high-speed Internet and discounted long-distance telephone service to its 300 on-reserve residents, the surrounding population of 12,000 and the 10,000 summer cottage residents (Santin, 2004; K. Sigurdson, personal communication, April 8, 2004). At least 30 additional First Nations in Manitoba are interested in the Nations Sphere proposal (K. Sigurdson, personal communication, April 14, 2004).

There will be cumulative benefits for First Nations working with *Nations Sphere*. Upon creation of a new telecommunications company on the First Nation, residents will be trained and employed to work for the company. The First Nation, as well as surrounding communities, will have access to Broadband Internet service and reduced long-distance telephone costs. A member of the First Nation will do repairs efficiently and effectively. With Broadband and long-distance telephone service on the First Nation, new economy industries, such as a call centre, can become a reality. Tele-health and distance education will also be possible. The telecommunications company will make a profit that can then be reinvested in the community. This reinvestment can be in the form of new technology and subsequent new employment. Reinvestment can also be in the

form of community investment, creating programs and services that will directly benefit band members. With the plan from *Nations Sphere*, First Nations will receive employment, wealth creation, new business opportunities, and improved health care, educational opportunities and community services.

3.3 Summary

From theory to practice, CED is a useful tool for community renewal. Initial readings on CED provide a theoretical explanation of what CED can offer a community. By providing a tool that includes the economy, the environment and the people, renewal can occur in a holistic, sustainable manner. The use of the Neechi Foods' CED principles ensures that all three aspects are included in the CED process. This process begins with community planning, including consensus decision-making, followed by financing, implementation, evaluation and more planning. Many different types of organizations go through this process, including Community Development Corporations, single-issue organizations and infrastructure organizations. While these organizations face many challenges, they provide essential services to the communities in which they work.

The New Economy offers new opportunities for CED organizations, rural communities and First Nations. With access to computers and the Internet, CED organizations can approach new ventures, access new information, and utilize new tools for data management, planning and cash flow projections. The New Economy offers rural communities and First Nations new educational opportunities, new methods of disseminating community information, new possibilities for industries and economic ventures.

Rural communities and First Nations in Manitoba are not yet fully connected to the Internet. The Government of Canada pledged to provide access to Broadband Internet for all of Canada by the year 2004 through the Broadband Initiative. This project did not have the desired effects, as it only provided funding to 49 Manitoba communities, only 4 of which were First Nations.

In May of 2002, Manitoba Keewatinowi Okimakanak (MKO) and Manitoba Telecom Services (MTS) met with nine northern communities to discuss telecommunications in the north. From these meetings, it became clear that telephone and Internet service in the north is unacceptable. Although the communities recognize the importance of computers and the Internet to their communities, there still does not exist the infrastructure to participate in the New Economy.

A recent opportunity for northern Manitoba First Nations is the proposal by *Nations Sphere*, which would connect participating communities with Internet using satellite and land-based Broadband technologies. *Nation Sphere* would work with the First Nations so that they would own all the equipment and provide the staffing for the initiative. This proposal offers an opportunity for northern Manitoba First Nations and adjacent communities to become active participants in the New Economy, as well as provide a plethora of additional social and economic benefits.

Chapter 4 - Community Economic Development Organizations in Manitoba and their Participation in the New Economy

4.0 Results

Community economic development organizations in Manitoba are actively involved in the New Economy. On average, CED organizations in Manitoba have 14.4 computers.

Number of Computers	Number of Organizations
1	2
2	2
5	3
6	3
7	1
8	2
9	1
10	3
12	3
14	2
15	2
22	1
37	1
43	1
50	1
57	1
60	1
72	1
100	1

Table 5 – Number of Computers Used by CED Organization

At the highest end, 18% of the organizations have between 40 and 50 computers, while at the lowest end, 21% have only less than 5 computers. While this seems like a large discrepancy, the number of computers is reflective of the size of the organization. For example, Ma Mawi Wi Chi Itata, which has five locations, has sixty computers, while LITE (Local Investment Towards Employment) has two staff and two computers.

For CED planning, organizations are using computers mainly for word processing (100%), data management (76%), accounting (76%), publishing and media creation, including website development (53%).

Word Processing
Microsoft Office
Adobe Acrobat
Data Management
The Exceptional Assistant
P Census
Friendly Regional Economic Development
Microsoft Project
MYOB
Accounting
Simply Accounting
Publishing and Media Creation
Microsoft Publisher
Microsoft Visio
Macromedia
Corel Draw
Adobe Pagemaker

Table 6 – Computer Programs Used by CED Organizations

All of the respondents use Microsoft Office for word processing and spreadsheets, which indicates that organizations find it to be more economical to utilize the programs that come with their computers, rather than purchasing other forms of word processing software. Many CED organizations use TEA (The Exceptional Assistant) for data and client management, as well as FRED (Friendly Regional Economic Development) for statistics. All of the organizations that use computers for accounting use Simply Accounting, which implies that this program is affordable, user-friendly and of acceptable quality for small to mid-size organizations. Finally, there was a broad range

of programs being used for publishing and media creation. These included Microsoft Publisher, Adobe Pagemaker, and Corel Draw. No organizations indicated that they use geographic information system (GIS) programs, such as ArcView, which shows that the surveyed CED organizations do not participate in any form of natural resources management in their communities.

As CED organizations have become more reliant on computers and the Internet, this usage has resulted in continuing training opportunities for staff. Staff receives training for the programs they use in their jobs, and also in order to enable them to train other staff and community members. Although 12% of organizations expect new employees to have the relevant computer skills, 41% stated that they provide on-site training. This included staff training other staff, hiring an outside consultant to work with staff or utilizing the IT department of a sponsoring organization. The remaining respondents indicated that they would provide funding for staff to receive training away from the workplace.

Most organizations recognize the importance of computer literacy not just for staff, but also for the community as a whole. Therefore, with the rise in New Economy participation, public access computers have become prevalent in CED organizations. On average, there are 5.5 public access computers available to the public in CED organizations. Although they acknowledge the importance of public access computers, 29% of respondents, including CEDA (Community Education Development Association), cannot afford to offer this service to the public and have no computers available to the public. Another 24% provide only one or two computers to the public. This includes LEARN (Lifelong Education for Adults' Reading and Numeracy), Wheat

Belt CFDC and Triple R CFDC. These organizations recognize that, while this number of computers is not adequate to meet the demands of their community, it is all they can afford. At the other end of the spectrum, 12% of organizations offer between 10 and 20 computers for the public including Ma Mawi Wi Chi Itata, while another 9% have between 20 and 40 computers.

The Internet has become fundamental for CED organizations. All of the surveyed organizations were connected to the Internet, whether by high speed (71%), dial-up (18%) or cable (12%). One organization reported that while they are connected to the Internet, the connection is through the co-ordinator's personal home account. This demonstrates that the Internet is so critical to the functions of the organization that staff are willing to provide this service for the organization. All organizations indicated that most importantly, the Internet is used for research and communication, including e-mail and website creation. E-mail has become an invaluable tool for communicating with partner organizations. It is also useful for promotions and fundraising. The Internet is also used to find and submit forms, submit proposals and reports and for training. This includes helping community members submit forms online, such as for Employment Insurance (EI) and daycare subsidies. Finally, efficient research has become possible for CED organizations. It is now easier to explore a broad range of topics, including tools used by other organizations, success stories of other initiatives, new funding options and fundraising ideas.

A small number of surveyed organizations discussed other New Economy activities in which they participate. Promotions through different forms of media were used by 12% of organizations. Video conferencing has become more popular as a

communication tool, as seen by the 9% of organizations that find it useful. Finally, 9% of CED organizations offer courses or training on-line. All of these activities show how the New Economy has provided CED organizations with new tools and strategies to improve their functions.

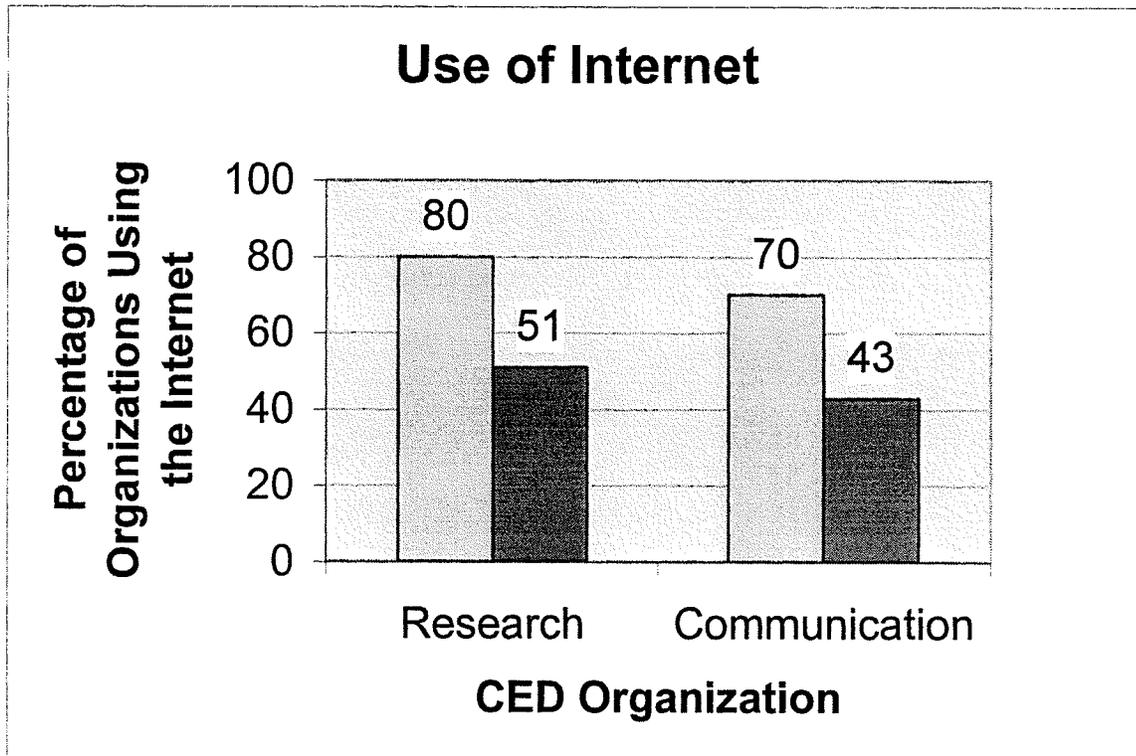
Although participation in the New Economy has become prevalent with CED organizations, barriers to participation still exist. The greatest barrier, discussed by 24% of respondents, is the cost of technology. This problem is consistent with Canadian Community Economic Development Network (CCEDNet) research that found a general lack of funding for CED organizations (2003b). Without sufficient funding, it is difficult for organizations to participate in the New Economy. Further barriers can be attributed to the lack of funding. 9% of organizations stated that their computers are out-of-date and do not perform to meet their needs. Another 9% commented on their poor Internet connections through dial-up and expressed a desire to upgrade to a better level of Internet connection. A final barrier, expressed by 12% of organizations, is a lack of time to learn new programs and receive training.

4.1 A Comparison of Rural and Urban Community Economic Development

Organizations and their Participation in the New Economy

When breaking down CED organizations into rural and urban categories, there are some large discrepancies, while in others there are a number of similarities. Some of the discrepancies could be hypothesized, such as the importance of the Internet to communication and research, while some of the similarities are quite interesting, such as the number of public access computers.

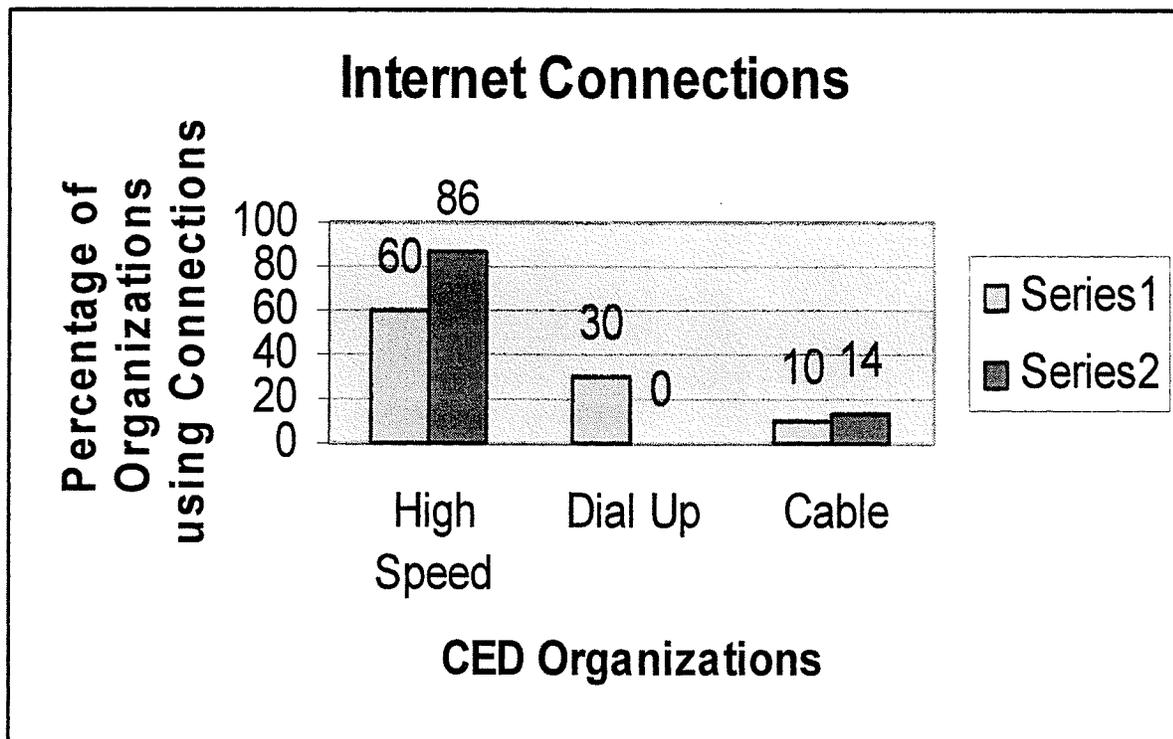
The first, most glaring, discrepancy between rural and urban CED organizations was the number of computers in each organization. Although the samples from both groups included small and large organizations, urban organizations had, on average, 32 computers per organization, while in rural areas there were only 11. While the types of programs used were comparable, uses for computers and the Internet varied. In urban CED organizations, computers and the Internet were predominately used for word processing. Fifty-one percent of urban organization used them for Internet research, and 43% for communication. While word processing was important to rural organizations, 80% conducted Internet research and 70% relied on computers and the Internet for communication. The following figure shows this discrepancy, with rural organizations as the first bar and urban organizations as the second.



Graph 1 – Use of Internet by CED Organizations

This comparison shows that urban organizations continue to employ other tools for research and communication, presumably due to less long-distance communication costs. As long-distance costs pose now unnecessary burdens on rural organizations, they can use the Internet to conduct that which previously had to be done over the telephone.

Another interesting comparison exists in the type of Internet connection used by rural and urban CED organizations. While 86% of urban organizations use a high-speed connection, only 60% of rural organizations do. No urban organizations use dial-up service, although 14% have a cable connection. In rural organizations, 30% use a dial-up connection, and 10% use cable. The following figure shows this discrepancy, with rural organizations as the first bar and urban organizations as the second.



Graph 2 – Types of Internet Connections Used by CED Organizations

This figure shows that high-speed Internet connections are the preference of CED organizations, while dial-up and cable connections remain the less expensive option for organizations that cannot afford high-speed connections. High-speed Internet connections are also more accessible for urban organizations.

Barriers to participation in the New Economy by CED organizations are very reflective of the location of these organizations. Barriers for urban organizations are the cost of technology and a lack of time to learn new programs. These barriers come from internal issues of organizations, such as a lack of funding and an excess of work. Conversely, for rural organizations, the barriers that exist are related to community issues. Barriers expressed in rural organizations include computer illiteracy in the community, lack of Internet access in the community, and poor Internet connections in the community. Cost issues were raised as well, including out-of-date computers and the cost of technology. This comparison is indicative of the differences in issues faced by rural and urban CED organizations and their participation in the New Economy.

4.2 Discussion

Participation in the New Economy is integral for community economic development organizations. Computer and Internet usage are fundamental for all aspects of CED organizations. This participation has resulted in the achievement of the structural changes defined by the Manitoba Research Alliance on CED and the New Economy: “a rise in general education levels; the development and availability of new information technology (IT); and an increase in "invisible" trade in services, mergers and acquisitions, and the flow of information” (Bosworth and Triplett, 2000). Each of these changes can be seen within CED organizations.

Education levels are rising as organizations continue to provide training for their staff. Employees have the opportunity to learn new programs, as well as new skills, through training offered by people and over the Internet. As well, this rise in education allows staff to train their colleagues, thus obtaining additional opportunities to learn such skills as teaching and leadership. Education levels are also rising within the community because of CED organizations and their connectivity. Public access computers have given community members the chance to learn how to use computers and receive training and services through the Internet. The Executive Director of Elmwood Community Resource Centre told a story about a local resident in her community. This man could read at a grade two level and was unemployed. After taking literacy courses at the organization, this man followed up by using the computer to find things of interest to him to read and improve his skills. Elmwood Community Resource Centre staff helped the man find courses on-line to eventually get his high school diploma. This man did the majority of his learning on-line, with the help of the staff at the organization, and has since found employment. This organization used their participation in the New Economy to improve the life of this resident. The American Library Association (ALA) (2004) found similar results in a study looking at the importance of public access computers. The ALA found that visitors to the library used the computers to access job banks, literacy classes, homework help and information on the government and its services. By providing access to computers and the Internet, CED organizations, including the ALA, are offering a fundamental service to their community that will continue to increase education levels.

The development and availability of new information technology is also rising. Organizations have become reliant on computers, computer programs and the Internet. This is especially evident for communication, client and data management and accounting. As organizations have the opportunity to switch from dial-up service to Broadband, the opportunity to access new technology will continue to grow. They will then be able to participate in the New Economy at a new level, including such activities as video-conferencing and on-line training.

Finally, there has been an increase in services, both for organizations and by organizations. Via the Internet, organizations can apply for funding, receive training, or learn from the successes of other organizations. As well, via the Internet, organizations can offer funding applications, provide information or help local residents in obtaining the assistance they need. One CED organization helps residents access Employment Insurance and daycare subsidies on-line. Staff not only helps residents fill out their applications, they show residents the possibilities available on the Internet. Information sharing between organizations has also become quite popular and useful through such routes as CED Across Canada (www.cedcanada.ca), a CED portal. E-mail trees and Listservs have become common methods of sharing information between organizations. This sharing provides organizations with access to success stories, best practices and other useful information from organizations around the world. While conducting surveys for the C CEDNet survey of CED organizations (2003b), the researcher found that the Internet has drastically affected how CED organizations share services. Organizations use the Internet to research new funding opportunities and to find other groups conducting similar work. Many organizations have also begun to offer services on-line to

their clients and partners. Survey participants often spoke of the importance of the Internet to their work.

The discrepancy of participation in the New Economy by rural and urban CED organizations is symptomatic not of the importance of the New Economy to these organizations, but rather the quality of service in rural and urban areas. In urban organizations, opportunities for participation in the New Economy are only growing. These organizations continue to increase their participation by offering new services on-line, taking advantage of on-line services, learning and utilizing new skills and programs and encouraging community participation in the New Economy with public access computers and training. Rural organizations are increasing their participation as well, but at a slower rate. This is due, in part, to their connectivity. With the Broadband Initiative, rural communities should soon be connected to the Internet with Broadband, but due to the failures of the Initiative, many areas will not have this opportunity. This means that CED organizations in these communities must function within the inadequate Internet service of their community. Similar problems were found in Minnesota (Bomash, Montogery and Rubinyi, 1996), where rural organizations could not provide or receive adequate services due to an underdeveloped Internet infrastructure. Distance is also a problem for many rural CED organizations, making the cost of purchasing more or newer computers a burden. Part of the strategy of the Government of Canada to connect the whole country to the Internet should include a provision for acceptable computers, as well as for an increase in public access computers. With greater equality in service in rural and urban areas, rural CED organizations will likely be as active participants in the New Economy as their urban counterparts.

4.3 Recommendations

As active participants in the New Economy, community economic development organizations are looking for new alternatives to facilitate this participation. The first five recommendations address the running of the organizations, and while the next two address the provision of services for the community.

The first recommendation is that organizations should find software that will assist in their daily functions. Some organizations are already doing this, but to function efficiently, it is necessary to find programs that will meet the needs of the organization. There were some programs that were used by a number of CED organizations. The Exceptional Assistant, or TEA, is used for client and data management. While this program is marketed to community development lending agencies, such as CFDCs, TEA allows organizations to track clients and their projects and create useful statistics (The Exceptional Assistant, 2004; Community Business Development Corporations, 2004). Another popular program is Friendly Regional Economic Development (FRED) for statistics, which can also be used to maintain and analyze community data. Simply Accounting was recommended by many organizations for organizational accounting. All of these programs are favoured by CED organizations because they are cost-effective, user-friendly and relatively easy to learn.

The second recommendation involves using computer programs for CED planning. Organizations conduct both financial and project planning and should be using computer programs to facilitate this process. CED organizations should utilize computer programs to conduct cash-flow projects. This will assist in longer-term planning, including assessing the need to access new funding or financing. Computer programs should also

be used for benefit-cost analyses. With these analyses, CED organizations can determine whether projects and other activities are cost-effective. Computer programs should be used to evaluate ongoing projects. This is often a difficult task, as it is often difficult to quantify the successes of outcomes, such as a safer community or better quality of life (Canadian Community Economic Development Network, 2003b). Using statistical programs, CED organizations can create qualitative statements that can be used to determine the success of programs.

The third recommendation is that CED organizations need to participate in other the New Economy activities, such as video-conferencing and on-line training. A small number of organizations are currently using these tools, but the majority are not. By expanding their participation into other New Economy activities, CED organizations will be able to reach a larger number of people and organizations and expand their efficacy.

The fourth recommendation for the running of CED organizations is the recognition of the importance of information sharing. The sharing of information is a major component of CED organizations and their participation in the New Economy. Organizations can now use the Internet to find other organizations that are conducting similar work and share success stories. One tool that should be used by all CED organizations is CED Across Canada, a CED Internet portal (<http://www.cedcanada.ca>). Upon entering, users are “welcome(d) to our online community, the virtual source for knowledge, information and collaboration related to Community Economic Development in Canada!” (CED Across Canada, 2004). This portal provides users with a multitude of services. CED 101 offers an introduction to CED. There is a Library of Topics in which users can offer information to be posted. There are 28 knowledge items (as they are

called on the site), which includes employment training, fundraising, housing, innovation, planning and evaluating, and social economy. There are also opportunities to volunteer on the portal as a content editor. There is a Coming Events calendar in which users can insert their events to inform and invite their colleagues. There are employment and educational postings. Users can also begin discussions on a topic and invite people to participate. As stated on the portal, the quality and quantity of information on the portal is dependent on the participation of the CED sector.

The fifth recommendation is for CED organizations to take advantage of the Internet as a tool to access new funding and financing. With the ability to search the Internet, organizations should be looking for new funding opportunities. In researching funders, CED organizations can find groups that support the specific work they are doing. Many funders offer grants outside of the city in which they are located. For example, the Muttart Foundation, based out of Edmonton, Alberta, provides funding for social service initiatives all over Canada. As well, many funders now offer on-line applications, which facilitates their delivery.

When offering services to the public, the first recommendation is that public access computers should become a priority for CED organizations. These computers provide an important service to the public and CED organizations should embrace their potential. They also create the need for more staff to train and work with the public. To do this, many organizations will require funding to purchase computers and connect them to the Internet, as well as for additional staff to work with the public. Therefore, funders, including government, must recognize the importance of public access computers and

provide additional funding to organizations that wish to provide this service to their community.

The second recommendation is that with more public access computers, CED organizations can offer additional assistance to their community. Many residents need help applying for government services, and with additional staff and computers, CED organizations can offer this help. To facilitate the processes, Human Resources Development Canada (HRDC), who provides Employment Insurance (EI), has made it possible to apply for EI on-line. At the end of May, 2002, HRDC launched Appli-web, an on-line EI application process that offers recipients greater choices of how they wish to receive services. Appli-web is available 24 hours a day, 7 days a week. The program also has a help feature to assist applicants in filling out their forms. This service is available at <http://www.hrdc-drhc.gc.ca/ei-ae/> and then click on the Appli-web icon (Government of Canada, 2002). Another service for local residents with which some CED organizations provide assistance is Child Care Online. This useful service can be accessed from the Government of Manitoba website at <http://direct.gov.mb.ca/bsi.cdc/html/internet/en/index.html>. At this site, visitors can determine how much of a subsidy they can receive with the Subsidy Eligibility Estimator, which asks questions about marital status, family's net annual income and number of children requiring child care. Visitors can then apply for a subsidy directly on-line. At the same time they can search for a licensed day care in their neighbourhood and find information on the facility and its employees (Government of Manitoba, 2004).

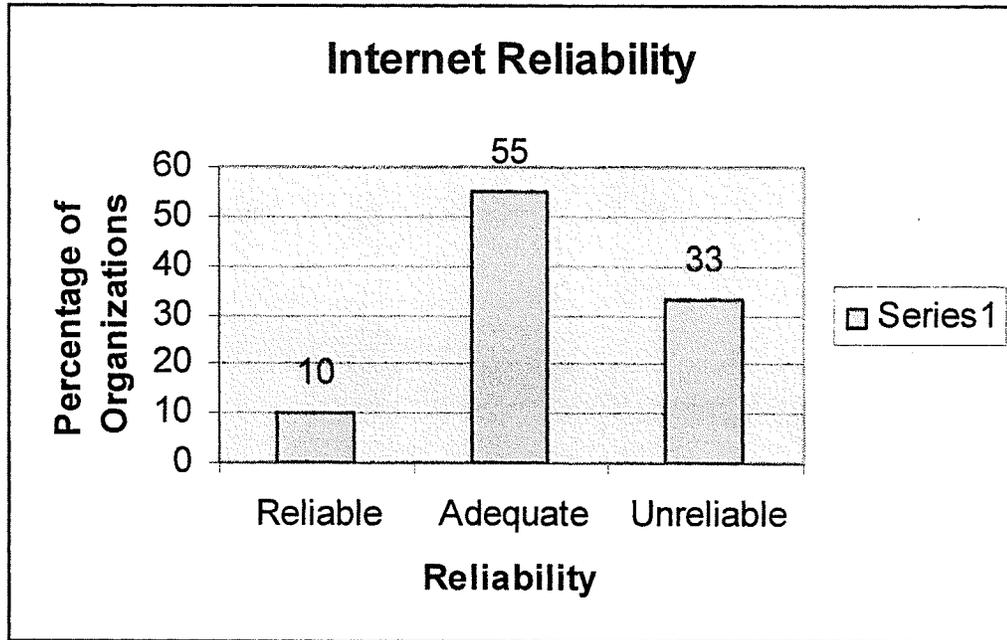
While it is fundamental for CED organizations to continue to increase their participation in the New Economy, it is just as important for them to assist their community members in becoming active participants as well.

Chapter 5 - Rural Communities in Manitoba and their Participation in the New Economy

5.0 Results

Rural communities in Manitoba are active participants in the New Economy. The New Economy has provided opportunities for improved education and training, as well as dissemination of community information and information sharing with other communities. Due to the remoteness of some communities, there still remain some problems for these communities, as was also reflected in the comparison of urban and rural CED organizations.

All of the communities surveyed are connected to the Internet, although the majority (95%) are connected through dial-up. Some communities have dial-up and high speed, as 15% are connected with high speed, including Beausejour and Lac du Bonnet. The greatest problem for rural communities is the reliability of Internet access, as seen in the following table. Users describe their access as reliable when it was available when needed, with no problems connecting to the server. Access is considered adequate when users could connect at most times, but often with some problems. These included difficulty connecting to the server or slow service due to too many users. Respondents who described their service as unreliable have problems including inconsistency when trying to connect to the server, often not being able to connect, and very slow connections. They also complained of often being disconnected from the server and a lack of access when phone lines were down.

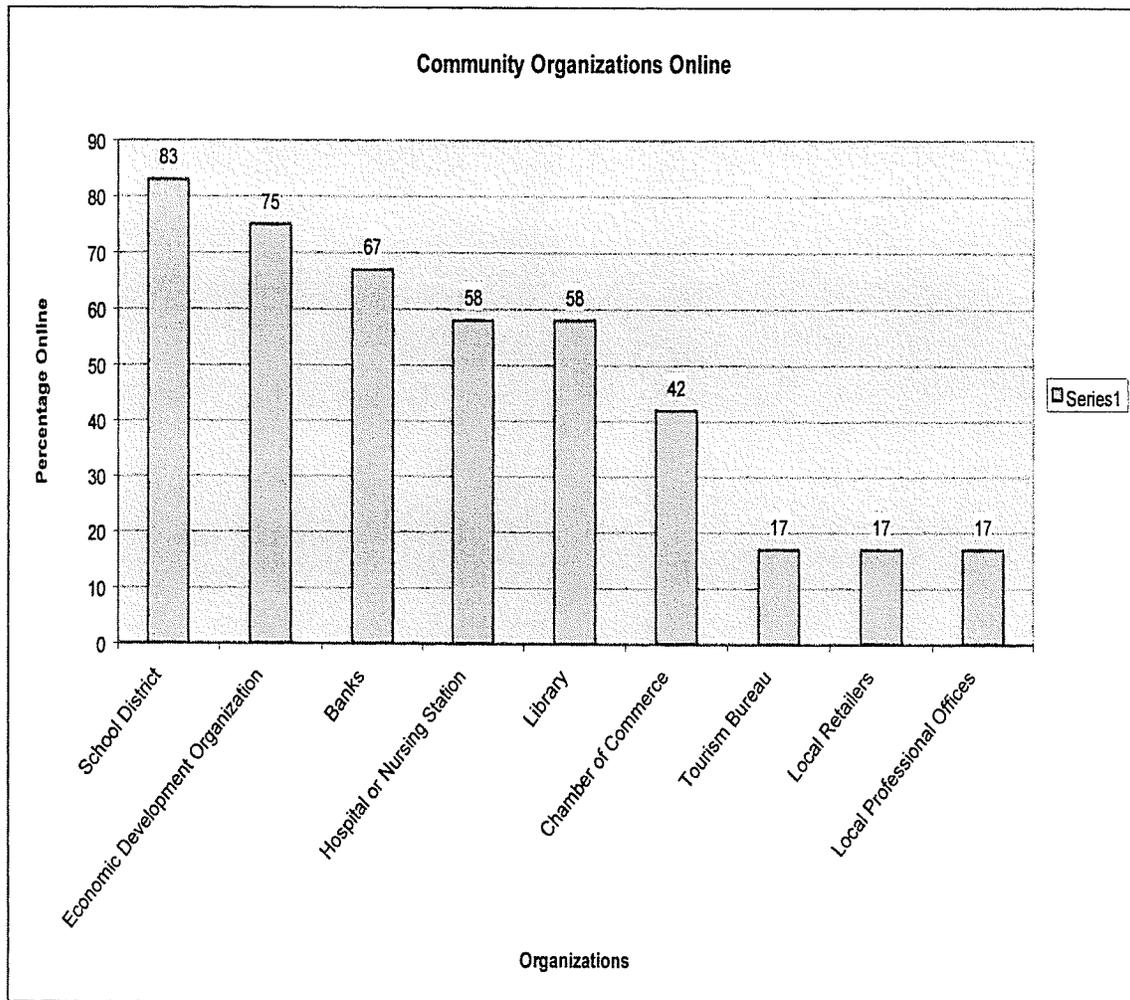


Graph 3 – Internet Reliability for Rural Communities

There are other barriers to participation in the New Economy for rural communities, most of which explains why service is only somewhat reliable. Sixty-seven percent of respondents cited inadequate technology in their communities, which would result in poor service. Another barrier is the cost of participation in rural communities. It is much more expensive for rural communities to participate in the New Economy compared to urban centres. High-speed access is often cost-prohibitive for rural communities and access to up-to-date, affordable computers is restricted.

Rural communities have begun to utilize computer and Internet technology to disseminate information about their communities to their community members as well as externally. Eighty-three percent of surveyed local governments have websites, offering a variety of information. The majority of information offered relates to government services, including mission statements, staff directories, community meetings, council

minutes, by-laws, permit and award applications and garbage and recycling schedules. Some government sites also offer community profiles, including community histories, and economic development information, including tourism and business directories. Other organizations also offer resources to their community. The following figure shows the percentage of community organizations that provide service and information through the Internet.



Graph 4 – Rural Community Organizations Online

There was no indication that any rural community organizations used GIS or conducted any type of natural resources management.

The New Economy has also become important to community members. Although only 16% of rural households have computers, and only 43% of those households are connected to the Internet, computer education is prevalent in the education system. 100% of respondents indicated that community schools have computers that are connected to the Internet for student use. Therefore, although children may not have computer or Internet access at home, it is an important part of their education. Technology is integrated into all aspects of the curriculum, from Kindergarten through to Senior 4 (Grade 12). Students receive computer education that includes software applications, keyboarding, Internet research and computer literacy. In addition to computer education, students use computers for Internet research, word processing and e-mailing. A very interesting progression for rural communities participating in the New Economy is the new courses now available to students due to the Internet. Sixty-seven percent of schools use the Internet to offer specialized courses or distance education courses, giving their students the opportunity to access courses they normally could not due to their location.

As there are only a small number of households with computers and Internet connections in rural areas, communities have continued to reinforce the importance of these tools by offering public access computers that can be used at no charge to community members. Ninety-one percent of communities offer, on average, 5 public access computers. Poplar River, which has just received funding through the Broadband Initiative, will be installing 35 new computers in the school that will be available for community use in the evening. Other locations for these computers include the library, the municipal office, the post office, the Adult Education centre, the Town Hall or the

campground. As well as providing computers for community members to access, 36% of communities offer Internet and computer application training for adults.

5.1 Discussion

Participation in the New Economy is very important to rural Manitoba communities in some capacities. Computers and the Internet have provided rural communities with new opportunities for the sharing and dissemination of information and for education and training. As communities continue to connect to the Internet, especially with improved service, opportunities will continue to grow.

The invisible trade of knowledge has been greatly improved in rural Manitoba due to increased use of computers and the Internet. The Internet has become a useful tool to share information with community members. It has become very practical to have all of the community information at one location so as it can be easily accessed. As well, rural communities are using the Internet to disseminate information about their community externally. Advertising, community histories and profiles, and the sharing of successes, community stories and best practices are new types information that are now shared all over the world.

The New Economy has been very beneficial for education and training in rural communities. Students at rural schools now have the ability to access courses that would not otherwise be available at their school. Through distance education and other Internet links, students can now access courses and other learning resources. Similar conclusions were found by Tiene and Ingram (2001) who state, “the communications potential of the computer...has really facilitated distance education efforts.” Tiene and Ingram found that flexibility of courses offered through the Internet allow students to receive a

comparable education to a course taught in person. As well, computers are a priority in schools. Because technology is well integrated into the education system in rural Manitoba, children have the opportunity to access computers and the Internet and learn important skills needed to succeed in the world today, even if they do not have a computer at home. This provides children with an education they have never had before. Public access computers are also important educational tools in rural communities. These computers do a tremendous service to their communities, giving all residents access to computer, the Internet and on-line services. The American Library Association (ALA) (2004) found that by offering public access computers, community members received many new opportunities through the Internet. This included conducting job searches, learning about community services, finding literacy classes, receiving homework help, research information on diverse topics and accessing government services. Public access computers are as important as computers and Internet connections in schools. Both of these services provide local residents with access that is not available in most households.

In as much as computers and the Internet are fundamental to rural Manitoba communities, there are still inherent problems facing these locations. Through the Broadband Initiative, all of rural Manitoba should be connected by service other than dial-up, but due to the failures of the program, 95% do not have the capacity to connect with more than dial-up. Some of these communities have been approved under the Broadband Initiative and will therefore receive Broadband connections once their business plan is implemented, but many will continue to rely on dial-up service. This

reduced service means continued problems with reliability of service, inadequate technology and inflated costs.

Another reason for reduced participation is what one respondent called “the rural mentality”. This respondent indicated that although computers and the Internet are available in their community, they still see themselves as an insular. They believe that putting information on the Internet will only serve their community, rather than attracting new business. While this is not the case in most communities, this mentality can be seen as a reason for reduced participation. This “rural mentality” can explain why only a small percentage of local retailers are on-line. It was hypothesized that with connection to the Internet, retailers could reach a larger consumer base and truly participate in the New Economy. In reality, these rural shops and services still rely mostly on local business. Local retailers in rural Manitoba are the one group that is not fully taking advantage of the potentials of the New Economy. The Centre for Rural Pennsylvania found similar results in a study entitled “Broadband Internet Service in Rural and Urban Pennsylvania: A Common Wealth or Digital Divide.” This research found that due to the limited Internet service in rural communities, business users were not using the Internet to its full capacity. Because of low speed and poor quality of Internet service, rural business are not capable of participating fully in the New Economy (Glasmeier, Wood and Kleit, 2003).

Even with the reduced service available to rural Manitoba, it is uplifting to see that rural communities are participating in the New Economy at the level that they can. Local governments and community organizations feel that, even with only a slow, dial-up connection, it is important to connect their community as much as possible. Three

communities indicated that they are in the process of getting their local government on-line, as they can no longer wait for better Internet service. Approximately half of the hospitals or nursing stations, banks and school district now offer service on-line. The level of participation in rural Manitoba shows that the New Economy is important to these communities, but due to inadequate Internet service and other local factors, participation still does not occur as comprehensively as it could.

5.2 Recommendations

While participating in the New Economy, there are six recommendations that will both assist and facilitate greater participation by rural Manitoba communities. The first recommendation is that rural Manitoba needs to become completely connected to the Internet with a Broadband connection. Funding for this initiative should come from both the provincial and federal governments. One way to access lower-cost, reliable high-speed Internet would be for rural communities to work with and partner with neighbouring First Nations who are working with *Nations Sphere*. These communities, working with the First Nations, would have access to high-speed Internet at a reduced cost. There would also be the benefit of supporting the economy of a neighbouring community. With connection to high-speed Internet, all students will have access to distant education courses, tele-health will be possible in all hospitals and nursing stations, companies can conduct business on-line and real-time video connections can be made across the world. For the communities that have begun some of these activities, the quality of service will be significantly increased with high-speed Internet.

The second recommendation is that community planning organizations and local governments should incorporate technology into their CED planning. This includes using

statistical computer programs to create a database of natural resources, and utilize GIS, which would allow them to map their natural resources. These tools would assist with natural resources management in communities. A database of human resources in the community could also be useful to identify possible new industry opportunities, as well as to address needs of the community.

The third recommendation is for local retailers to utilize the Internet to reach a wider customer base. Currently, most rural companies conduct business locally. With connection to the Internet, retailers can now reach customers around the world. While this may not be practical for such businesses as flower shops or maintenance firms, there is great potential for such businesses as crafters and tourism outfitters. By having products available on-line, potential customers can find what they are looking for with distance no longer being an issue. For tourism outfitters, the benefits of on-line advertising will result in guests from all over the world. This also extends to new industry possibilities for these communities. Communities can identify industries that match skills of community members and are not location-dependent and create new opportunities for employment and wealth creation. Many New Economy industries are possibilities for rural communities in which location is not important. Communities could offer telemarketing, graphic design or Internet service, all of which would provide employment in the community and offer services abroad.

The fourth recommendation is for local governments to become active on-line. Although most governments now host a website, as more community members become active Internet users, more services should be offered on-line. This site should include information such as hours of operation, mission statement, city official directory,

garbage/recycling schedule and recreation schedules. Residents should also be able to download forms, apply for permits and pay fines on-line. It would be beneficial to the community if the local government offered a location on-line for businesses and organizations to post volunteer and job opportunities. This would also encourage more residents to access this government site.

The fifth recommendation is for communities to commit to providing public access computers for their members, which will encourage and assist community members to become active users of computers and the Internet. These computers should be available in at least one location in each community, with at least one computer for every fifty people. Therefore, a community of 400 should have at least eight public access computers. They should be available throughout the day and in the evening so that everyone can have a chance to utilize them. There should also be at least one person who is proficient with computers and the Internet to assist and teach people and, as rural students are becoming proficient with computers and the Internet, this would be a logical employment opportunity for local students. Finally, courses should be offered on different topics and at different levels, including basic introductions, word processing, Internet research and seniors classes. Public access computers provide a great service to the communities they service. With public access computers, local residents can learn to use computers, receive training and access the Internet and all of its services. This can include education, communication, accessing government services, researching and purchasing on-line. The combination of community learning, greater access to the world and employment opportunities for teachers will be some of the many benefits from public access computers.

A final recommendation is for community planning organizations and local governments that will also benefit their community. Community planning organizations and local governments should access the CED Across Canada portal (<http://www.cedcanada.ca>). This portal offers many useful knowledge items for rural communities, such as co-operatives, environment, regional development, rural CED and tourism. There are also forums for discussions with other community groups and local governments that result in the sharing of information and development of new ideas. Upon meeting new organizations with whom information and ideas can be shared, community groups and governments can develop these relationships without the burden of travel and long-distance costs. By taking advantage of the improved Internet connection and develop relationships, these groups can now communicate and build relationships using such tools as video conferencing and text messaging.

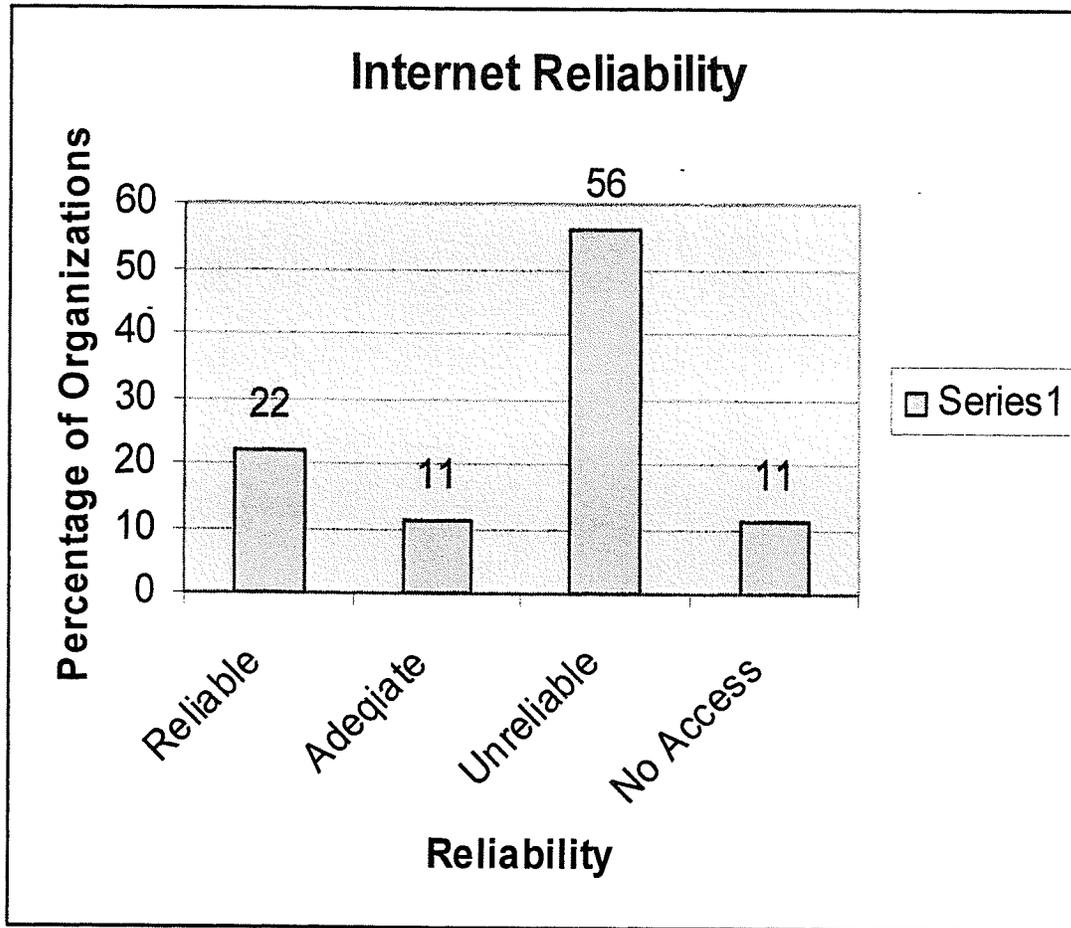
The participation of rural Manitoba communities in the New Economy is limited by their lack of Broadband access. With improved Internet connection, along with the availability of more computers, the above recommendations can be implemented to provide comprehensive service to rural communities and allow them to become full and active participants in the New Economy.

Chapter 6 - Northern Manitoba First Nations and their Participation in the New Economy

6.0 Results

Northern Manitoba First Nations have the poorest participation in the New Economy of all respondents to this project. While all urban and rural CED organizations and rural communities are connected to the Internet, 11% of northern Manitoba First Nations do not have Internet access. High-speed Internet access, through a satellite modem, is only available in Garden Hill First Nation, Wasagamack First Nation and Manto Sipi Cree Nation. The rest of the First Nations use dial-up connections, many through a community 1-800 number.

Unreliable Internet access is a prevalent issue for northern First Nations, even more than it is for rural communities. Manto Sipi Cree Nation, Fox Lake Cree Nation, Garden Hill First Nation and God's Lake First Nation all discussed the unreliable service in their communities. As in section 5.1, users describe their access as reliable when it was available when needed, with no problems connecting to the server. Access is considered adequate when users could connect at most times, but often with some problems. These included difficulty connecting to the server or slow service due to too many users. Respondents who described their service as unreliable have problems including inconsistency when trying to connect to the server, often not being able to connect, and very slow connections. They also complained of often being disconnected from the server and a lack of access when phone lines were down. The following figure shows the reliability of Internet access in northern Manitoba First Nations.



Graph 5 – Internet Reliability for First Nations

While reliability of the Internet is the greatest problem for First Nations, there are additional barriers to participation in the New Economy. Sixty-six percent of respondents cite inadequate technology as a real barrier. This includes having to use a 1-800 to connect to the Internet. As more people connect, service declines. As well, when phone lines are down, people cannot connect to the Internet. Access is another problem of 44% of First Nations.

Although it is a useful service, only one quarter of First Nations governments have resources available online. These sites offer government information, including

band council minutes and community meetings. Local organizations also do not tend to post information on the Internet for community or external use. A small percentage of communities (17%), in which computer usage is higher and Internet connections are better, have some local organizations on-line, including banks, school districts, nursing stations, libraries and tourism bureaus. There was no indication that any First Nations organizations used GIS or conducted any type of natural resources management.

The number of household computers in First Nations is comparable to the rest of rural Manitoba. Only 17% of households have computers, and only 47% of those households are connected to the Internet. Although there are computers in all of the First Nations schools, only 88% have an Internet connection, 44% of which are only connected in a computer lab, not in classrooms. As well, 44% of schools do not integrate technology into the curriculum, choosing to focus on more traditional teaching methods and topics. There is a small amount of computer training in First Nations schools, including software application (56% of schools), keyboarding, Internet research and computer literacy (11% each). Students who have access to computers use them for word processing, Internet research, e-mailing, and educational games.

Northern Manitoba First Nations do not have the capacity to offer many public access computers to their members. Only War Lake First Nation has public access computers, with 2 computers available, one in the band office and one in the school. While Mathias Colomb First Nations does not have official public access computers, their principal stated "When necessary, community members do have access to computers in the school. However, there are no regularly scheduled sessions."

6.1 Discussion

It is quite distressing to look at the participation of northern Manitoba First Nations in the New Economy. The most glaring point is that there are still communities with no Internet access. Not only do these communities lose out on the benefits of Internet access, but children do not have the opportunity to learn to their full potential. The potential economic and educational benefits of the New Economy simply do not exist for some northern Manitoba First Nations.

Even when northern First Nations do have access to computers and the Internet, they experience many ongoing problems that limit their participation in the New Economy. Because of their dependence on dial-up connections, First Nations cannot receive a reliable connection to the Internet, which is very limiting based on type of telephone service they receive. The 1-800 number that serves the whole community is often more of a challenge than a benefit to users. Whether it is too many users slowing down the connection or a downed phone line cutting off the connection entirely, connecting to the Internet through a 1-800 number is often very problematic. This poor service reinforces the need for better Internet service for northern First Nations, as proposed by the Broadband Initiative.

Reliability of the Internet connection, which goes along with the issue of a 1-800 number, continues to be a difficulty for northern Manitoba First Nations. While the statistics show that 56% of respondents have unreliable Internet, it can be hypothesized that this number is really higher. When discussing this issue with Ken Henry of MKO, he indicated that many communities have stopped complaining about their service because nothing happens when they do complain (K. Henry, personal communication,

July 25, 2003). This frustration, while understandable, does nothing to get the services improved in these First Nations. If their service provider does not hear any complaints and decides that the community is satisfied with their service, then they will make no effort to improve it. Mr. Henry noted community frustration is just one more barrier to the participation of northern Manitoba First Nations in the New Economy.

It is very difficult to deliver services on-line when access is so unreliable and this is reflected in northern First Nations communities. Most governments and local organizations do not bother to put information on-line, as residents do not have the ability to access the information and Internet access is slow and unreliable.

There are a multitude of educational opportunities for northern Manitoba First Nations from computers and the Internet, as seen in rural Manitoba communities. Northern First Nations students are not taking distance education courses and only a small number are conducting Internet research. While these few students are becoming active participants in the New Economy, many northern First Nations students are not receiving the benefits of these services. Because of their distance from MTS and their repair people, there are also potential training opportunities in these communities. If MTS was willing to provide the training, service and repair jobs could be given to local residents, thus providing new employment opportunities and improving service. This is the scenario proposed by *Nations Sphere*. *Nations Sphere* will provide First Nations with the infrastructure for telecommunications and then train local people to run the operation and service the equipment, thus improving telecommunications while creating jobs and wealth in the community (K. Sigurdson, personal communication, April 8, 2004).

In reality, the Internet is not an inherent part of the lives of most northern First Nations people. These residents are not reliant on e-mail or Internet research and they do not conduct all of their work on a computer. The dependence on computers found in southern, urban communities does not exist in northern First Nations. There is some connectivity, especially among the children at school, but the reliance is not there. A large part of this lack of reliance is due to the poor service, as well as to a shortage of skills. There is a desire, though, to become connected. This was expressed over and over during the MKO and MTS Public Consultations, especially in areas of education, health and economic opportunities. The excitement over the *Nations Sphere* proposal reinforces this desire for connection.

Many of the problems in northern First Nations could have been resolved had the Broadband Initiative been a success. These First Nations are the communities that could benefit the greatest from this access, as it can improve education and training in the community, offer new services, provide links with other communities and create new economic opportunities. Unfortunately, most of these communities did not have the ability to access the program and therefore could not receive the government grants to obtain Broadband connection. It is this flaw in the Broadband Initiative that has contributed to the deprivation of reliable, affordable Internet access from the people that need it the most. The service provided by MTS is another problem. Because of high costs, MTS is very slow to connect northern First Nations. As stated by one community resident, rather than spending so much money on advertising in the south, MTS should funnel that money into providing better service to their customers in the north (Henry, 2002). There is hope, though, in the proposal by *Nations Sphere*, to work with First

Nations communities to not only provide them with high-speed Internet, but also with training, employment and economic development opportunities.

The New Economy, as seen in rural Manitoba, offers many opportunities for communities outside of large urban centres, especially those in remote regions. All of the benefits of the New Economy - “a rise in general education levels; the development and availability of new information technology (IT); and an increase in "invisible" trade in services, mergers and acquisitions, and the flow of information” (Bosworth and Triplett, 2000) – would be so helpful to northern Manitoba First Nations. It is the multitude of barriers to participation that exist do not allow it. The cost of computers and Internet access, the unreliability of Internet connections, and lack of skills in the community have resulted in this cycle of non-participation in the New Economy by northern Manitoba First Nations.

6.2 Recommendations

Based on the research conducted, combined with the literature reviewed, five recommendations can be made. These recommendations will all require assistance with financing and training, and will help transition northern Manitoba First Nations into active participants in the New Economy.

The first recommendation is to connect all northern Manitoba First Nations with Broadband Internet service. Funding to support this initiative should come from both the provincial and federal governments. While currently these communities cannot access this service, there are new options available. Through their consultations with MTS, MKO has brought forward the concerns of local residents regarding telecommunications in their communities. With possibilities that have extended beyond the Broadband

Initiative, MKO and its member communities should work together to achieve their goals. As *Nations Sphere* requires additional funding partners, interested communities and local governments should partner to provide sufficient investment for these communities to succeed. This collaboration would result in Broadband Internet access and all of the services associated with it, including tele-health, distance education, video-conferencing and real-time video. Not only would communities finally have this reliable service, but they could also market it to neighbouring communities and make a profit from this new business. Another additional benefit of the *Nations Sphere* proposal is the training and employment component. As the system is installed, local community members are trained with the skills to run all aspects of the business, including administrators, marketing staff and communications technicians. This recommendation will result in a positive partnership between northern First Nations, their neighbouring communities, Manitoba Hydro (from whom *Nations Sphere* accesses some the Internet network) and local governments. It will also provide these First Nations with the chance to be active participants in the New Economy, while at the same time providing economic and social development opportunities.

The second recommendation is that community planning organizations and local Band Councils should incorporate technology into their CED planning. This includes using statistical computer programs to create a database of natural resources, and utilize Geographic Information Systems (GIS), which would allow them to map their natural resources. These tools would assist with natural resources management in communities. A database of human resources in the community could also be useful to identify possible new industry opportunities, as well as to address needs of the community. Technology is

also a useful tool for reporting. First Nations should be creating reports and updates on computers and sending them by e-mail to Indian and Northern Affairs Canada (INAC). Communication is facilitated through e-mail, text messaging and video-conferencing. These communication tools can be used to work with First Nations, Tribal Councils and INAC to share ideas, collect new information and work together.

The third recommendation is for local retailers to utilize the Internet to reach a wider customer base. Currently, most rural companies conduct business locally. With connection to the Internet, retailers can now reach customers around the world. While this may not be practical for such businesses as flower shops or maintenance firms, there is great potential for such businesses as crafters and tourism outfitters. By having products available on-line, potential customers can find what they are looking for with distance no longer being an issue. For tourism outfitters, the benefits of on-line advertising will result in guests from all over the world. This also extends to new industry possibilities for these communities. Communities can identify industries that match skills of community members and are not location-dependent and create new opportunities for employment and wealth creation. Many New Economy industries are possibilities for First Nations in which location is not important. First Nations could offer telemarketing services, television broadcasting or on-line education, all of which would provide employment in the community and offer services abroad.

The fourth recommendation is to ensure a sufficient number of public access computers in each First Nation. As part of the above-mentioned partnership, funding needs to be provided for public access computers. This recommendation is the same as for rural communities, as both rural and First Nations residents have fewer household

computers and require the greater access to these services. These computers should be available in at least one location in each community, with at least one computer for every fifty people. Therefore, a community of 400 should have at least eight public access computers. They should be available throughout the day and in the evening so that everyone can have a chance to utilize them. There should also be at least one person who is proficient with computers and the Internet to assist and teach people. Finally, courses should be offered on different topics and at different levels, including basic introductions, word processing, Internet research and seniors classes. Public access computers provide a great service to the communities they service. With public access computers, local residents can learn to use computers, receive training and access the Internet and all of its services. This can include education, communication, accessing government services, researching and purchasing on-line. The combination of community learning, greater access to the world and employment opportunities for teachers will be some of the many benefits from public access computers. As the community learns more about computers and the Internet, they will become greater participants in the New Economy.

The fifth recommendation for northern Manitoba First Nations is the need to integrate computers and the Internet into the education system. The reality of the world today is that children need to be able to use computers and the Internet to be successful. Almost half of the respondent schools do not integrate technology into the curriculum, and it needs to become a priority. Once high-speed Internet is a reality in these communities, schools should be offering older students the opportunity to take distance education courses. This will give students access to a comparable education as their colleagues in the south, as found by Tiene and Ingram (2001). Children also need to

learn how to conduct research on the Internet, how to keyboard, how to use word processing programs and how to use e-mail. These should all be taught in school. Although they are living in a remote community, with high-speed Internet, children should be communicating with children in other First Nations communities around the world, as well as with children in the south. These new ways of learning would allow the children to communicate with other children they might never reach otherwise and learn about cultures that they may never encounter in their remote communities. Tiene and Ingram (2001) observed that the Internet offers students the opportunity to learn about new cultures, take virtual tours of countries and festival and interact with other children from all areas of the globe.

In addition to the educational benefits, computers also offer new opportunities for traditional knowledge in the community. To integrate traditional teaching with new technology, students should work with local elders to put local history, local language and local stories onto CD-ROMs to ensure that this treasured knowledge is not lost. This integration of new and old is happening in Nunavut with the Nunavut Living Dictionary. The dictionary is filled with the Inuktitut language and allows people from all over the world to contribute to this teaching tool. It also allows people to work together to create new words as they are needed (Industry Canada, 2001). Another benefit of this partnership will also strengthen the relationship and the importance of respect between children and elders. While elders share their culture with the children, children can teach the elders about computers and the Internet and show the possibilities that now exist. It can be hoped that the public access computers will also play a role in this endeavour,

removing the barriers and providing the elders with the tools to access computers and the Internet.

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Canadian Community Economic Development Network - <http://www.ccednet-rcdec.org>

Community Futures Partners of Manitoba - <http://www.cfpm.mb.ca>

CommunityViz - <http://www.communityviz.com>

Manitoba Keewatinowi Okimakanak – <http://www.mkonorth.com>

Manitoba Research Alliance on Community Economic Development and the New Economy - <http://www.brandonu.ca/organizations/rdi/mra.html>

Nations Sphere - <http://www.nationssphereinc.com/>

Province of Manitoba CED Initiative - <http://www.cfpm.mb.ca/pdf/eugene.pdf>

Vibrant Communities – <http://www.vibrantcommunities.ca>

Appendix 1 - Questionnaire (Community Economic Development Organizations)

Organization Name _____

Name of Contact Person(s) _____

Telephone Number _____

Mailing Address _____

E-mail Address _____

Website _____

Computer Usage

How many computers does your organization have? _____

What computer programs does your organization use (ie. Word processing, spreadsheets, GIS, computer mapping, financial analysis, accounting, Income Tax, HR tools, data management, statistics, etc.)? _____

What kinds of computer training does your organization offer your staff?

How does your organization use computers and the Internet for planning your community economic development activities? _____

How many public access computers does your organization have? _____

Internet Usage

Does your organization have Internet access? _____

What type of Internet connection does your organization have (ie. dial-up, high speed, etc.)? _____

What does your organization use the Internet for (ie. e-mail, research, etc.)?

Other New Economy Activities

Is your organization involved in other New Economy activities or industries (ie. television, telemarketing, etc.)? _____

New Economy Barriers

Are there barriers to your participation in the New Economy (ie. Why does your organization not have computers? Why does your organization not use the Internet?)

If your organization does not have computers or Internet access, what types of services does your organization use instead of computer programs and the Internet?

Appendix 2 - Questionnaire (Rural Communities and First Nations)

Community Name _____

Name of Contact Person(s) _____

Telephone Number _____

Mailing Address _____

E-mail Address _____

Website _____

Telecommunications in your Community

Does your community have Internet access? _____

What types of Internet connections are available in your community (ie. dial-up, high speed, etc.)? _____

How reliable is Internet access in your community? _____

What types of barriers are there to Internet access in your community? _____

Is your local government online? _____

If yes:

What government resources are available online (ie. hours of operation, mission statement, city official directory, downloadable forms, applications for permits, fine payment, garbage/recycling schedule, recreation schedules, etc.)? _____

Please check the following organizations in your community that are online (using e-mail, the Internet, internal networks, etc.).

Chamber of Commerce..... _____

Local Economic Development Organization..... _____

Tourism Bureau..... _____

Hospital or Nursing Station..... _____

Banks..... _____

School District..... _____

Library..... _____

Local Retailers..... _____

Local Professional Offices..... _____

Other (please specify) _____

Other (please specify) _____

Other (please specify) _____

Approximately what percentage of households in your community has computers?

Of those households that have computers, what percentage are connected to the Internet?

Computer Education in your Community

Are there computers in your community schools? _____

Approximately what percentage of classrooms in your school are connected to the Internet? _____

Is technology integrated throughout the K-12 curriculum? _____

What type of computer training do students receive at school? _____

What do the students use computers for at school (ie. word processing, Internet research, e-mail, etc.)? _____

Are there public access computers (can be used at no charge) in your community?

If yes:

Approximately how many public access computers are there in your community? ____

Where are the public access computers located (ie. library, community centre, etc.)?

Are there Internet training or computer applications classes available in your community?

Appendix 3 - Response Rate

Participants were offered the following option on the consent form:

I ___do / ___do not want the name of my community or organization used in the final report. (If my community or organization name is not used, it will be referred to as “an organization” or “a community”.)

Many participants chose not to have their names included in the final report. As such, the response rate will not include the names of the organizations, communities or First Nations that participated. It will only include the number of participants. The names of the organizations, communities or First Nations that gave permission to be identified can be found in the Results and Discussion sections of this report.

Group	Number of Participants
Urban CED Organizations	17
Rural CED Organizations	15
Rural Communities	19
First Nations	16

Appendix 4 - Community Futures Development Corporation in Manitoba

Cedar Lake CFDC

Box 569
314 Edwards Avenue
The Pas, Manitoba R9A 1K6
Tel: (204) 627-5450
Fax: (204) 627-5460
Toll Free: 1-888-498-4175
E-mail: admin@cedarlakecfdc.ca

Dakota Ojibway CFDC

4820 Portage Avenue
Headingley, Manitoba R4H 1C8
Tel: (204) 988-5373
Fax: (204) 988-5365
E-mail: info@docfdc.mb.ca

Greenstone CFDC

228-35 Main Street
Flin Flon, Manitoba R8A 1J7
Tel: (204) 687-6967
Fax: (204) 687-4456
E-mail: greencom@mb.sympatico.ca

Heartland CFDC

11 – 2nd Street N.E.
Portage la Prairie, Manitoba R1N 1R8
Tel: (204) 239-0135
Fax: (204) 239-0176
E-mail: heartland@heartlandcfdc.com

Kitayan CFDC

345-260 St. Mary Avenue
Winnipeg, Manitoba R3C 0M6
Tel: (204) 982-2170
Fax: (204) 943-3412
Toll Free: 1-800-898-1974
E-mail: kcfdc@kitayan.ca

Neicom Developments

Box 10
12 Main Street North
Riverton, Manitoba R0C 2R0
Tel: (204) 378-5106
Fax: (204) 378-5192
E-mail: neicom@mts.net

North Central Development

Box 1208
#2 – 3 Station Road
Thompson, Manitoba R8N 1P1
Tel: (204) 67-1490
Fax: (204) 778-5672
Toll Free: 1-888-847-7878
E-mail: ncd@northcentraldevelopment.ca

Northwest CFDC

Box 188
499 Sherrit Avenue
Lynn Lake, Manitoba R0B 0W0
Tel: (204) 356-2489
Fax: (204) 356-2785
Toll Free: 1-888-696-2332
E-mail: northwestcfdc@northwest-cfdc.ca

Parkland CFDC

Box 516
421 Main Street
Grandview, Manitoba R0L 0Y0
Tel: (204) 546-5100
Fax: (204) 546-5107
Toll Free: 1-888-987-2332
E-mail: reception@pcfcd.mb.ca

Southeast CFDC

200-208 Edmonton Street
Winnipeg, Manitoba R3C 1R7
Tel: (204) 943-1656
Fax: (204) 943-1735
E-mail: scfdc@mb.sympatico.ca

Super Six CFDC

Box 68
TBJ Mall – Main Street
Ashern, Manitoba R0C 0E0
Tel: (204) 768-3351
Fax: (204) 768-3489
Toll Free: 1-888-496-8932
E-mail: supersix@supersix.mb.ca

Triple R CFDC

Box 190
220 Main Street North
Morris, Manitoba R0G 1K0
Tel: (204) 746-6180
Fax: (204) 746-2035
Toll Free: 1-800-275-6611
E-mail: tripler@triplercfdc.mb.ca

North Red CFDC (Formally Triple S CFDC)

355 Main Street
Selkirk, Manitoba R1A 1T5
Tel: (204) 482-2020
Fax: (204) 482-2033
E-mail: info@northredcfdc.com

Wheat Belt CFDC

141 Rosser Avenue
Brandon, Manitoba R7A 0J6
Tel: (204) 726-1513
Fax: (204) 727-5832
Toll Free: 1-888-347-4342
E-mail: bdc@wheatbelt.mb.ca

White Horse Plains CFDC

Box 66 Room 109 – 36 Centenaire Drive
Southport, Manitoba R0H 1N0
Tel: (204) 428-6000
Fax: (204) 428-6006
Toll Free: 1-888-947-2332
E-mail: info@whocfdc.ca

Winnipeg River Brokenhead CFDC

Box 505
4 Park Avenue
Lac du Bonnet, Manitoba R0E 1A0
Tel: (204) 345-2514 or 345-8691
Fax: (204) 345-6334
Toll Free: 1-888-298-9023
E-mail: info@webcfdc.mb.ca

Appendix 5 - Manitoba Keewatinowi Okimakanak First Nations

Barrens Land First Nation
Brochet, Manitoba R0B 0T0
Tel: (204) 323-2300

Chemawawin First Nation
Easterville, Manitoba R0C 0V0
Tel: (204) 329-2161

Fox Lake First Nation
Gillam, Manitoba R0B 0L0
Tel: (204) 486-2463

Garden Hill First Nation
Island Lake, Manitoba R0B 0T0
Tel: (204) 456-2085

God's Lake First Nation
God's Lake Narrows, Manitoba R0B 0M0
Tel: (204) 335-2130

God's River First Nation
God's River, Manitoba R0B 0N0
Tel: (204) 366-2084

Mathias Colomb First Nation
Pukatawagan, Manitoba R0B 1G0
Tel: (204) 553-2090

Mosakahiken First Nation
Moose Lake, Manitoba R0B 0Y0
Tel: (204) 678-2113

Nisichawayasihk Cree Nation
Nelson House, Manitoba R0B 1A0
Tel: (204) 484-2332

Northlands First Nation
Lac Brochet, Manitoba R0B 0N0
Tel: (204) 337-2001

Norway House Cree Nation
Norway House, Manitoba R0B 1A0
Tel: (204) 359-6786

Oxford House First Nation

Oxford House, Manitoba R0B 1C0
Tel: (204) 538-224

Red Sucker Lake First Nation

Red Sucker Lake, Manitoba R0B 1H0
Tel: (204) 469-5041

Sapotaweyak Cree Nation

Pelican Rapids, Manitoba R0L 1L0
Tel: (204) 587-2012

Sayisi Dene First Nation

Tadoule Lake, Manitoba R0B 2C0
Tel: (204) 684-2022

Shamattawa First Nation

Shamattawa, Manitoba R0B 1K0
Tel: (204) 565-2340

St. Theresa Point First Nation

St. Theresa Point, Manitoba R0B 1J0
Tel: (204) 462-2535

Tataskweyak Cree Nation

Split Lake, Manitoba R0B 1P0
Tel: (204) 342-2045

War Lake First Nation

Ilford, Manitoba R0B 0S0
Tel: (204) 238-4315

Wasagamach First Nation

Wasagamach, Manitoba R0B 1Z0
Tel: (204) 457-2337

Wuskwi Sipiik Cree Nation

Birch River, Manitoba R0L 0E0
Tel: (204) 236-4201

York Factory First Nation

York Landing, Manitoba R0B 2B0
Tel: (204) 341-2180