The networked community as economic engine: A new community development model

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The authors take the vision of community as economic engine several steps beyond current thinking. They introduce a model for electronic community networking that addresses local issues, provides an approach to local economic development, positions the community competitively, and opens the door to national and international business opportunities.

The model demonstrates the critical interdependence of the business, government and social sectors, based on the theory that the business sector must take on some social responsibility and the social sector must assume some business responsibilities in order to ensure the good of the overall community which together, they form. Government is presented as not just an enabler, but as catalyst as well.

The concept of organizational consumption of community resources is introduced and addressed in the context of "the community team". This same model is used to demonstrate the matrix approach to a community value network. In a practical application of their theory, the authors examine the role of the community network and outline a specific community economic development strategy based on the Internet. This practical approach is then taken an important step farther with the presentation of a three-part "Internetworking ventures model", where the economic power of the community network is clearly demonstrated.

The paper concludes with a report on a study done by the authors for Industry Canada which identifies the social and economic impacts and outcomes that community Internet access sites have on their communities. The study explores how this infrastructure, integrated with other local initiatives, is helping to move Canadian communities towards the new information society and economy.
the community, that is, its social capital or its leaders, the skills and compassion of its people, and its resources to deal with community issues.

Drucker does not take his analysis far enough. We are seeing the emergence of the social sector in society, but the answer to social, economic and cultural issues does not lie with any one sector as suggested by Drucker but rather rests with all sectors, each fulfilling a specific role but working in a coordinated way with each other. The different sectors of society are but different facets of the same community.

The relationship between governments and the social sector
As governments at all levels find it more and more difficult to deal with the social and economic issues, it becomes obvious that we can't turn to governments for solutions. People and communities want to, and will do it, for themselves. Citizens are beginning to see themselves as responsible for their own well-being and are no longer dependent on government for innovation and leadership. As citizens we can no longer accept personal rights and leave all responsibilities to government.

The opportunities and problems facing society today will be resolved at the community level, where the solutions will inevitably be found. These solutions depend on the right information being available to people at the community level. Community networking is essential to the community-based approach to social and economic problem solving.

Governments still have major roles to play. In the context of community development they must establish appropriate public policies, set standards, and they must provide finances to encourage community development and networking. In an information-based economy governments must create policies that encourage information technology companies to locate and grow in their areas and to support the development of home-grown talent and new ideas, including commercial and community-based information and communication infrastructures. The policies must attract or create information technology managers and workers. Information technology specialists are necessary for both the information technology industries and for community networks. A few skilled and motivated information technology people are critical to the success of a networked, community economic development model. A strong information technology sector must co-exist and collaborate with a good community network sector for either to be successful. This is a working example of the interlocking dialectic that characterizes the new societal convergence.
The importance of a community approach
So if the community is to be the source of social and economic solutions then what is a community? A community is defined by a bond that holds together human beings, whether by language, culture, history, experience or locality.

Communities consist of individuals formed into organizations. A community consists of many political, business, service and benevolent organizations from the three sectors, that allow individuals to exercise control and influence within their community. Organizations allow individuals to influence the direction in which the society develops. The community organization is the basic building block of government, of citizenship or social responsibility, and of business and economic activity. Since we are a very mobile society it is now organizations, rather than individuals or families, that provide the permanence and continuity for a community.

Organizations must work together if communities are to achieve any set of goals. Every community is comprised of groups or organizations where special interests are frequently at variance. Community does represent people coming together voluntarily to maximize their self interest. However, the interaction and networking with other members of the community brings people to the realization that their immediate self-interest generally depends on the common good and thus their self-interest becomes enlightened self interest.

Organizations are special purpose institutions. They tend to concentrate on one task. Only a clear, focused and common mission can hold an organization together to produce results. Individually organizations have only limited potential within a narrowly defined field.

A community development model: the matrix community model
The successful community depends on developing maximum community capacity and the maximum ability to respond to problems and opportunities. Individually most organizations consume more community resources than they produce. Together they will produce more community resources than they consume. The matrix community model recognizes that the future of every community organization is correlated to the others in the community and that common action and cooperation will yield better results. Each organization in the community represents a specialization and is an autonomous body. Individually they can pursue their specialized tasks. However, only by coming together in the community, as part of the community team, can these specialist organizations really serve the community.

The community of organizations, provides a matrix of specialized, autonomous organizations which belong to all three sectors of society. To deal effectively with
any specific community issue, using the community matrix model, means bringing the right set of organizations, with the right expertise, together to jointly deal with the problem or opportunity. Each of the organizations will have to think through their own role in dealing with the issue and develop their own strategies in tandem with the other organizations in order to resolve the problem or take advantage of the opportunity.

In the matrix community model one organization must manage the overall process on any given issue and this position of management should change depending on the issue. What is clear is that power and decision-making will shift from a top-down hierarchical model to one that is broad-based, participatory and non-hierarchical.

In this model the business community must take on some social responsibility and the social sector must take on some business responsibilities for the good of the overall community because together they form the complete community.

An electronic community network makes the job of coordinating community development and of maintaining community-wide communications possible. The electronic community network provides the necessary energy and glue to create community leaders and to re-energize the community for group action. It provides the tool which can lead to increased communication which will enable community consensus and coordinated, multiple-organization involvement. In the last few decades we have lost our traditional sense of community. Community networking gives us the opportunity to build a new sense of community.

**Networking**

Networking is about people — people coming together to exchange and share ideas, questions and answers. We all participate in a variety of networks involving a variety of forms, including direct human contact with our friends, colleagues and families, as well as electronic networking. Networking is a process, and in some circumstances process solutions are more relevant, cost-effective and long-lasting than content solutions. We want to address the process of community networking as a means of raising the standard of living in our own communities.

The most effective networking solution for community and economic development depends more on process and than on content. It is a process through which the community can cultivate human networks and human interaction. The electronic network is a technologically-enhanced extension of human networking that has the potential to profoundly change how we interact, by increasing exponentially the capacity for human interaction, and by adding value to information.
Value chain: the concept of value being added

In a networked organization or community, value is added by passing on requests for information the open network. Information value chains acknowledge the enhancing effect that the use of information technology and systems have on information. The information value chain transforms data into information and information into knowledge as people develop the concepts, add experience, and enhance the information as it moves along the chain. Value is generated through an ever-changing, open, community network. Information gains value when it is:

- networked: gains experiential value, both individual and group experience, by moving through a community network;
- packaged: organized, indexed and put in context;
- timely: up to date, available when needed;
- open: openly distributing information can increase its value;
- closed: when the information is proprietary.

Elements for success in a community network

The following elements are essential to the success of any community network:

- diversity in membership (government, business, social sectors);
- young/old; business/labour; male/female; ethnic diversity i.e. true community representation);
- an absence of alternatives (realization that the community has no choice but to work together);
- sense of genuine adversity (a common enemy: the economic situation).

Community-based economic development

The displaced fishermen in Atlantic Canada understand that economic development is the process of improving the standard of living (raising incomes) and increasing the well being of people. Today, shared interests, values and problems such as the demise of a traditional economic base, are bringing together the members of many communities in order to develop effective plans for economic and business growth and job creation.

Community Economic Development is a process by which communities can initiate and generate their own solutions to their common economic problems and thereby build long-term community capacity and foster the integration of economic,
social and environmental objectives (Community Economic Development Centre, 1996).

Local economic activity develops from the community in which it exists. It's primary financial interaction is local in scope. The exchange occurs between members who live in the immediate community. In local economic activity members of the community come together through shared interests and values, and attempt to find their own solutions to local economic problems, such as the shift or even the demise of a traditional economic base. Local economic development in a knowledge economy depends on several things:

- Human resources: a community partnership which begins by involving and empowering all sectors of the community in local economic planning is essential.
- Capital availability (finance): financing for small and medium-sized companies at the community level.
- Transportation and Communications: a strong local infrastructure, especially a communications and information infrastructure. This is an issue in non-urban areas everywhere.
- Information: local and open sources of information, such as, schools and libraries.
- Quality of life (sufficient, i.e. beyond subsistence).
- Access to technology.
- Tax and regulatory environment that allows the development of that infrastructure.

In today's technological environment there is a close link between community network development and economic development. The forming of a community network should be a central part of any community, municipal or regional economic development plan. The Internet, as an open and interactive network, brings back the ancient combination of community and marketplace. The agora, the marketplace in ancient Greece was a political and social gathering place as well as a marketplace. The real value of the Internet can only be tapped if all sectors of our communities, including business in the community, have an effective and accessible on-ramp to the Internet, thus inventing our own modern-day, technology-supported 'agora'.

**An economic development network: the networking ventures model**

An economic development network is a community network that focuses on business, financial, managerial, technical and entrepreneurial issues and activities
(Fenner, 1994). As a model it is equally valuable for social, or cultural
development. The concepts are the same, only the applications vary.

An economic development network facilitates information transfer — the
content — but it also facilitates the process of connecting individuals to the full
portfolio of resources available in the community. Community networks are about
cultivating human networks and human interaction even when the focus is
economic, social or cultural development. This is where the economic power of
community networking resides. The power is in the process. That is why it is
humanistic, as opposed to technological: the process is where people and
technology converge.

The Networking Ventures Program is a community-based, capacity-building
initiative, sponsored by the community, designed to identify business opportunities,
create new ventures, and increase local employment.

The Networking Ventures Program consists of three programs, four electronic
portfolios, and two targeted projects. The three programs are:

1. The opportunities catalogue: The opportunities catalogue is a
continually updated electronic document, which identifies local
business opportunities and the local resources available to act on
them. The focus is on ideas, talents, ventures, projects, and services
that are innovative, unusual and suggest alternative approaches.

2. The "how to" exchange: The 'how-to' exchange is a network of
people helping people which matches local expertise with local needs
for expertise. People register their talents, abilities, experience, and
interests they are willing to share, sell or exchange.

3. Entrepreneurial business formation and development: This program
provides a meeting place for prospective and present members of the
entrepreneurial community. It facilitates the application of local
expertise and investment to a beginning or developing business.

The four portfolios are:

1. Portfolio of investors: An electronic registry of individuals, groups,
institutions, and corporations who wish to invest in new or expanding
local entrepreneurial ventures.

2. Portfolio of entrepreneurs: A database of individuals with good
ideas who require financial and/or managerial support to begin
businesses.
3. **Portfolio of investments**: Established businesses that require more investment to improve and/or expand their operations.

4. **Portfolio of expertise**: A registry of people and organizations, with specific managerial or technical skills who want to make their expertise available to local ventures.

The two targeted projects are:

1. **Local business problem solving network**: A business network used to create on-line discussion groups aimed at solving local business problems or developing strategic directions for local economic development.

2. **On-line products to business project**: Businesses, through the Chamber of Commerce, local economic development board, community opportunities initiative or whatever is appropriate to the community, create an electronic inventory of business assistance, information products and provide on-line access.

The Networking Ventures Program recognizes that the local information infrastructure and the expertise in the community is important community capital. In the very near future, a networked business venture information infrastructure will be just as important as serviced commercial lots and tax incentives are today to attracting new business.

**Strategies for effective community economic development and networking**

Between November 1996 and March 1997 we conducted a study which examined the impact of Industry Canada's Community Access Program (CAP) on community economic and business development. CAP helps to provide rural and small communities with affordable public access to the Internet, as well as the skills to use it effectively. The program provides up to $30,000 per community for the development of a public access site. The following are some of the most successful economic development strategies as identified by the CAP coordinators interviewed for this study:

1. **Develop community-based leadership.** Strike a community economic development committee including representation from the 3 sectors to put together an economic development plan. The committee should be representative and accountable, community-based.
2. **Establish a local economic development network.** The steps to establish an economic development network include:

- identify existing telecommunications capabilities and skills;
- address local connectivity, and identify any impediments and barriers to its development;
- promote the existing and planned telecommunications infrastructure as part of the economic development strategy;
- develop an Internet presence, that is a Web page, that all the community can participate in, in a consistent manner.

3. **Build community capacity.** To be successful economically, communities must have the capacity to respond capably to demands and opportunities. In other words, each community has to build up the capacity of knowledge, skills and resources that are available in the community. This includes the development of a community information infrastructure, community connectivity and information technology skills so that the community is positioned to respond to high tech business and employment opportunities.

4. **Integrate local community activity.** Effective community action, whether by an individual or by an organization, is based on joint cooperation and activity. No one community organization has all the resources immediately at hand, therefore they should use all the appropriate resources available in the required to achieve objectives. The community matrix model demonstrates how to bring about community collaboration and integration. Any existing economic development initiatives must partner with local enterprise centres, economic development agencies, Chambers of Commerce or municipal councils.

5. **Increase inter-community cooperation and collaboration.** Most rural communities are not large enough to create the large economies of scale or to provide all the capacity required for significant economic activity. Local community economic development initiatives should link with those in neighbouring communities in order to create regional development initiatives so that the participants. These networked community initiatives can share expertise, costs, and products and services on a regional basis. The Strait East Nova
Community Enterprise Network in Nova Scotia is a good example of inter-community cooperation. It envisions thirteen distinct, community-based enterprise centres linked with a common information technology platform. It will bring local business and corporate interests to community development discussions on their responsibility to create work and to foster an information-based economy.

6. **Develop a local skills base.** One of the most important strategies in local economic development is to develop a local skills base. Economic development related to the Internet must be viewed as a two-step process. First, develop a local Internet presence and skill base that will serve as the infrastructure for further development. Second, put the skill base to work for business and economic development by building on that physical and skill base infrastructure. The following are key strategies for developing a local Internet skills base:

- involve as many people as possible in developing the local economic development network (the easiest way to learn about Internet technology is to be directly involved in the creation of a network);
- work with the schools and colleges to see that "technology as a foundation skill" is taught to students and adult learners and encourage the teachers to "integrate technology into the curriculum;"
- host business outreach programs, such as seminars and workshops on the Internet and small business development and applications;
- facilitate the development of a specific curriculum for introducing small business to the Internet for use in the community.

7. **Provide Web linkages to economic development information.** One of the strengths of the Internet is that it has the capability of providing extensive information on many topics. Local economic development initiatives should take advantage of this capability and ensure that their Web page links to:

- the best economic and business development Web sites, such as Industry Canada's Strategis, so as to make this information readily available to the community.
- Web sites containing employment and job information.
8. **Consider location carefully.** The facility in which the economic development initiative is housed, and the institution which administers the economic development network, will influence the culture and values of the initiative and the network which supports it. If the economic development network is connected through a school then it will serve a function that is primarily educational. If it is connected through a library then it will primarily serve an information function. If it is connected through an economic or business office then it will primarily serve an economic and business function. The optimum location for an economic development initiative and the economic development network is to be located and connected to all three. Ideally a community economic development initiative should have an economic or business site for the business component; a library site for the information component and an educational site for the training component.

9. **Maintain a clear and specific focus.** Community economic development projects cannot encompass all of the potential economic development opportunities imaginable without spreading community resources impossibly thin. Economic development networks should consider choosing one or two sectors of the local economy that have the greatest probability of success, rather than trying to deal with all possible options. A good example of this type of specialization is ElIDnet in Brooks, Alberta which maintains a clear agricultural focus.

10. **Develop new models.** There is insufficient information available on 'best practices' and 'preferred strategies' for using community networks for economic and business development. The current economic development that is occurring around community networks should be identified and analyzed. Economic development networks should begin to collect and share information on what works and what does not. Local economic development agencies should be funded to develop new models for community economic growth using the Internet. We need some pilot projects to demonstrate the benefits and impacts of Internet access and information technology skills on local economic and job development.

11. **Develop markets.** Local economic development initiatives should help to grow business markets. For example, building an economic development network introduces people to computing and network
technology. Some of these people will become interested enough to want to own a computer, and subsequently may buy one from a local computer shop thus contributing to the local economy. Economic development networks also open up world markets for local products and services. Areas which have been particularly successful in opening local products to a global market are tourism, especially in promoting tourist facilities, such as resorts and fly-in camps, and unique local products. Good examples for tourism are Canoe Canada Outfitters in Atikokan, and Okanagan Connoisseur Fine Foods in Lumby, British Columbia and the Long Bow maker in Miami, Manitoba for unique products.

12. *Use student employment programs to create network entrepreneurs.* Self-employment may be the best option for many new graduates in small and rural communities. Therefore student employment programs should facilitate the development of new entrepreneurs, especially in the area of local Internet businesses. Students should be trained in the use of the Internet, Web page creation, marketing and management through local employment programs. Once trained the students should go out to create their own Web page development and Internet training companies. They can define their own markets and determine their own fee schedule.

13. *Develop community-based exporting models.* To be successful, local economic activity must do more than re-circulate the existing money in the community. It must bring in new money, preferably from abroad and not just from the next community, or province. Otherwise the same money is circulating and no new wealth is being created. The level of wealth is not increasing and therefore the overall standard of living is not increasing in the community. To bring in new money a community must export something of value abroad, or attract new money or investment from abroad. Until now, exporting abroad was only possible for large companies. Small communities had no option but to go through large companies in order to export any local products or services. The Internet has changed all of this. The use of the Internet can help a small community export that which it has of value to distant markets. The small community can now effectively sell products and services to the global market. Some examples or small companies reaching global markets are the Trinity
Fjords (horses) in Lumby, BC and the Prairie Ostrich Breeders in Alberta.

Conclusion
Major Internet-based economic, business and job development in small communities will not be immediate and will require a long term effort. However, Internet access is already having an impact on rural economies. Many more people are now working in small communities rather than having to move to larger centres thanks to the new information technologies. The Internet has changed the economic playing field for people in rural communities in Canada.

References