



# **Innovation and CED:**

## **What They Can Learn From Each Other**

*by*

**Sherri Torjman and Eric Leviten-Reid**

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## ***Executive Summary***

The purpose of this paper is to explore the links between the concept of innovation and the practice of community economic development (CED). The paper first examines the practice of *community economic development* in order to clarify its meaning. It then considers the concept of *innovation* and its primary components: learning, clustering and managing the innovation process. The report explores the *mutual influence of these domains*: the potential impact of the concept of innovation upon CED practice and, conversely, the impact of CED practice upon the concept of innovation. Finally, the paper discusses the major *supports required for innovation* including an appropriate policy framework, human resource development and technical assistance, adequate financing and technological supports. It concludes with a broad set of recommendations. The Appendix presents selected *examples of innovative practice* within or linked to community economic development.

## ***Introduction***

This research initiative on innovation and community economic development was undertaken jointly by the Community Economic Development Technical Assistance Program (CEDTAP) and the Caledon Institute of Social Policy. It reflects a shared interest in strengthening the innovation capacity of the CED sector and in linking CED practice with the emerging public policy focus on innovation.

Two underlying questions informed the research process. The first is how to ensure that CED has the innovation capacity required to meet today's challenges. The second is how CED can contribute to public policy discussion on innovation. Three sources of information helped answer these questions.

First, an extensive *literature review* was undertaken. It explored a wide range of topics including innovation, cluster-based economic development, knowledge economy and learning, change management, comprehensive community initiatives, asset-based development, technology access, social entrepreneurship and CED practice. Summaries of an estimated 60 articles, reports and books addressing these themes were prepared.

Second, CEDTAP's regional coordinators organized and conducted *focus groups* in Atlantic Canada, Quebec, Ontario, Alberta and British Columbia. Seven focus groups were held, involving approximately 100 CED practitioners. These sessions provided an opportunity for practitioners to articulate their understanding of innovation, assess the capacity of the sector, suggest ways to strengthen innovation, and discuss the links between CED practice and the federal Innovation Strategy.

Finally, the research was informed by *examples of ongoing work* in CED. These examples illustrate emerging practices related to the theme of innovation, including efforts to bridge the technological divide, enable the unemployed and underemployed to secure decent work, and build inclusive and cohesive communities.

### ***Community Economic Development***

In recent years, nations in the industrialized world have undergone dramatic changes as they respond to major shifts in commerce and production.

The means of production have been altered fundamentally in most industries and sectors of the economy. The basis for economic wealth has shifted from a focus upon the manufacture of goods to the creation and application of information within the context of a knowledge economy. With education and skills development the key to economic security, individuals and communities are under significant pressure to re-tool and upgrade their capacity [Gurstein 2001: 6].

Technology has created profound shifts in the flow and management of information. Computers and machines have taken over much of the work that used to be done by human heads and hands. This substitution is by no means a new phenomenon; continual technological change is one of the defining characteristics of capitalist economies. But new technologies – especially those that are information-based – are transforming workplaces and are demanding ever-renewed and higher levels of knowledge and skill.

The liberalization of trade also has had a major impact upon the structure of economies. Recent international free trade agreements have modified substantially the way that many industries, both in Canada and abroad, do business. Most local economies throughout the country, and indeed throughout the world, are still adjusting to these structural changes.

Again, the shift towards the globalization of economies is not new. The movement of people and goods across borders has taken place for thousands of years. What *is* new – and therefore makes the phenomenon seem new – is the speed of change, hastened by technological innovation and the rapid and explicit expansion of markets opened up through liberalized trade.

From an economic, social and environmental perspective, globalization is a two-edged sword. On the one hand, it has generated new sources of wealth in many countries, which have seen an overall rise in living standards. It also has made clear the connections among nations and the inter-relations of geography and climate.



At the same time, globalization has given rise to unprecedented disparities. Some observers argue that it has encouraged a ‘race to the bottom’ in which the relentless corporate search for cheaper and leaner modes of production has resulted in the loss throughout the industrialized world of millions of decent jobs [Korten 2001]. It has created economic upheaval as a result of widespread unemployment and glaring inequalities of income and wealth, which in turn have led to concerns about social cohesion and marginalization.

These challenges are being widely felt throughout the developed world and nowhere more acutely than in the remote and rural regions of Canada, where communities that once depended upon natural resources are undergoing major transformation [Gurstein 2001: 6]. Communities which traditionally relied on outside capital for costly resource extraction, and for outside professional and managerial skills to organize and maintain this activity, are finding that this capital is no longer available now that their resource base is less competitive in the knowledge economy [Gurstein 2001: 6]. They must look inward to their own resources for both skills and capital if they are to survive economically.

Similar difficulties are being experienced in communities that once thrived on traditional manufacturing jobs. As such industries have relocated, closed or downsized, their laid-off workers have been thrust into a precarious labour market. In the emerging ‘new economy,’ there is a growing gap between good jobs that require high skills and that pay good wages and benefits, and bad jobs that need lower skills, involve part-time or irregular hours and offer few if any benefits. Many regions are responding to these challenges through a strategy known as ‘community economic development,’ commonly referred to as CED.

CED is not new. It has a rich heritage that extends to the social reform movements of the early 20th century. Such movements took shape in response to major dislocations associated with the rise of industrial capitalism – economic and social challenges that bear more than a passing resemblance to those we face today. Like CED, these movements sought to create societies that are both economically viable and socially just.

One outstanding example is the Antigonish Movement that flourished in Atlantic Canada from the 1920s to the 1940s. Combining the principles and practices of economic cooperation with those of adult education, the Antigonish Movement embodied many of the core ideas that define CED today. It advanced a vision of a nation committed to the common good, conceived human development in holistic terms, saw economic inclusion as a critical ingredient for a healthy society, embraced collaborative learning as the pre-eminent tool for countering social problems, and promoted the idea that local communities have both the capacity and the right to participate in shaping their own affairs.

Like CED, the work of the Antigonish Movement was both ethical and practical. It sought to mobilize people around the ideal of the ‘common good.’ At the same time, it set out to create the

tangible institutions that would bring life to that ideal. It wanted to build the ‘third sector’ as a counterbalance to the excesses of the unrestrained market and top-down, centralized government. It both resisted survival-of-the-fittest competition and promoted active citizenship.

The Antigonish Movement’s holistic perspective is summed up in the phrase its leaders used to describe its ultimate goal – “a full and abundant life for all.” In the words of founder Moses Coady: “The full life is the gradual realization of human potentialities.” It involves the “whole gamut of human possibilities – the physical, economic, institutional, cultural and spiritual” [Coady 1967: 111]. All members of society should have the opportunity to develop their unique talents and benefit from the rewards.

If the Antigonish Movement understood the ‘good life’ in broad terms, it paid special attention to the issue of economic inclusion. It maintained that a healthy political democracy requires that all citizens share in the governance of economic assets. In part, it believed this on the grounds of citizenship education: By governing economic resources in their own lives, citizens would acquire the knowledge and skills needed to contribute to debates on the economic affairs of society more generally. Co-operative economic structures allowed the average person to achieve a measure of economic ownership and participate more fully in decisions about economic issues.

Like CED today, the Antigonish Movement also believed steadfastly in the importance of education. It saw learning as the basic tool to overcome problems and improve the quality of life. At a time when opportunities for university education were restricted, it developed a broad-reaching adult education extension program. Moreover, it recognized that learning is fundamentally a social process. The Movement encouraged, through learning, the sharing of concerns and exploration of new possibilities.

Finally, the Antigonish Movement put into action the adage: “Local people know where the ice is thin.” It recognized the insights that community members bring to their affairs and the importance of communities determining their futures. It promoted two concepts familiar to CED practitioners – the principle of development from within and the right to self-determination. While these guiding principles continue to resonate with CED today, the context has changed and, with it, the techniques and strategies for pursuing this work. Indeed, CED is a continuously evolving practice.

Current approaches to CED in Canada find their origins in the late 1960s and early 1970s. During this period, marginalized communities across North America began to develop structures and processes for dealing with social and economic problems. Experimentation began with new multi-purpose development organizations, commonly referred to as ‘community development corporations.’ The leaders who helped form these organizations recognized that they needed to address an interdependent set of factors to enable communities to achieve social and economic well-being. Through these structures, local residents were brought together to design and pursue broad-based, long-term development strategies.

In its current form, community economic development can be described as a unique form of community practice that links economic and social development to improve a community's quality of life. 'Community' is an area of common interest, which may – but need not necessarily – be geographically bounded. It usually includes common language, values and norms [Gurstein 2001: 8]. CED can be defined as a comprehensive, multi-purpose social and economic strategy, conceived and directed locally, aimed at systematic revitalization and renewal [CCEDNet 2001: 1-2].

Community economic development starts with the premise that in order to be successful, economic development must have its roots in the community and must harness local resources and skills. It sees these characteristics as assets that represent an important source of wealth. This approach contrasts with traditional economic development, which typically tries to create employment and economic activity by bringing in financial resources and expertise from the outside [Gurstein 2001: 6]. One quality that distinguishes CED from other development approaches is that its primary focus is on building communities from *within*, while governments, including those at the municipal level, often look elsewhere for catalysts to economic development.

Community economic development respects the need for accountability to local citizens. It is guided by the principle of participation and seeks to engage community members in making decisions about local development and its economic, social and environmental impact. Another feature that sets aside CED from most mainstream business is that the former views economic development as a means of attaining objectives rather than as an end in itself. Profit is seen as an instrument of development rather than the objective of development.

But it is not only its perspective on profit that makes CED different from mainstream economic development. CED also is concerned with the equitable distribution of the benefits of economic activity. The goods and services produced as a result of CED, as well as associated profits, are to be shared among community members as equitably as possible. The benefits are intended to accrue to many rather than a select few.

In a nutshell, the goal of CED is to promote social well-being through the creation of *local economic opportunity*. CED creates economic opportunity by forming new businesses and/or by enhancing knowledge and skills to meet the demands of existing jobs.

With respect to the former, the businesses created through community economic development may operate as a sole proprietorship, partnership, co-operative or private company run by a board of directors. Community asset development and ownership are central to most CED organizations. In addition to creating businesses, community economic development activity may provide supports to individuals, groups or businesses through micro-loan funds and other forms of financing, training and technical assistance, resource centres, mentoring programs and marketing networks.

But there is also a crucial *social dimension* to the work. CED seeks to promote economic opportunity within the context of social needs and concerns. Like its economic component, the

social dimension can take several forms. Some CED efforts are geared towards specific groups that typically experience problems finding employment and often are marginalized from the labour market. These groups include aboriginal Canadians, young people, new Canadians, persons with disabilities, young single-parent women, individuals who have been in trouble with the law and older workers.

Other CED organizations and projects focus upon social needs by creating opportunities in rural or remote regions with a tenuous economic base. CED organizations help communities identify local prospects for development, create niche markets, promote local ownership and foster human resource potential. They seek to transform social needs into community assets and economic opportunities.

While CED organizations and projects share a common purpose, specific strategies vary enormously within and between communities and regions. For example, they may promote homeownership, micro-enterprise or self-employment, business incubators, consumer and producer co-operatives, structures that encourage savings and investment, land trusts, commercial and industrial development, community infrastructure improvements, training and technical assistance, and supportive social services. Activities typically are organized through nonprofit, community-based development organizations that promote “economic empowerment and economic transformation for the poor” [Rubin 1993: 431].

But while the practice of CED varies widely, some common elements characterize the field. Based on the past 25 years of experience in Canada, the following effective practices have been identified. Successful CED initiatives:

- Take a multi-functional approach to create a sustainable (economically, ecologically, politically and socially) development system within the community.
- Through strategic planning and other efforts, maximize the use of their limited time and resources in areas that will yield the greatest overall benefits.
- Develop plans that merge social and economic goals and build local capacity
- Are able to mobilize key sectors of the community around priorities.
- Focus their energies on harnessing internal assets (both financial and human) while also leveraging outside resources to achieve their goals.
- Establish a critical mass of co-operating organizations through which locally-based initiatives are implemented and evaluated [Centre for Community Enterprise 2000].

Because CED is a discipline that seeks to combine the essence of two distinct but related fields, it is somewhat more complex than either an economic or a social program. It could be argued that CED actually was well ahead of its time. It recognizes, and indeed embodies, the relationship between economic and social well-being – links now being made in the broader mainstream thinking and literature.

Since the publication of the Report of the World Commission on Environment and Development (commonly known as the ‘Brundtland Report’), efforts have been made throughout the world to shape decision-making within the framework of sustainable development – an holistic approach to improving the quality of life. It postulates that there are intrinsic links among economic, social and environmental well-being. All three dimensions of sustainable development are equally important. The environmental and social components of development cannot be planned as an after-thought or treated remedially simply by ‘cleaning up’ damage or loss after the fact [World Commission 1987].

Another body of research under way primarily in Europe is exploring the problems related to the profound economic changes of recent years, including job insecurity and the resulting marginalization of workers who have difficulty finding or retaining employment. There are also inequalities arising from rapid shifts in technology – which have created a ‘digital divide’ between those with technological skills and those without these skills, let alone access to computers and other information technologies.

There are concerns about the cohesiveness of societies in which a significant proportion of the population does not participate in the economic or social mainstream. Many studies now are finding that economic competitiveness and social cohesion are not incompatible. In fact, economic competitiveness actually requires a strong social base [Jackson 2000; Torjman 2002]. The OECD acknowledges in a recent report that:

Competition and structural change are not fundamentally incompatible with societal cohesion. On the contrary, they are a motor of the economic growth and prosperity on which cohesion can thrive. Reciprocally, a strong social fabric provides a secure basis for flexibility and risk-taking which are the lifeblood of vibrant economic activity and wealth creation [OECD 2000].

Increasing attention is being paid in research, policy and practice to the integration of economic competitiveness and social cohesion. At the microeconomic level, this focus is represented by the corporate social responsibility movement, which seeks to promote responsible corporate behaviour around employment standards and business practice [Torjman 2002]. There is growing awareness of the power of social investment to influence corporate performance. Investors can choose to support companies that pay attention not only to the financial bottom line but also to their social and environmental records.

It is clear that the theory and practice of community economic development have been at the leading edge for years. As it turns out, much of the emerging literature on innovation is also consistent with the principles and practice of CED.

CED effectively embodies the concept of innovation by seeking to create unique combinations of two agendas – economic development and social well-being. Yet there are many areas in which individual organizations as well as the field itself can enhance their innovative capacity. In addition,

there are a number of ways in which CED organizations and the area more generally can act as a catalyst for innovation in neighbourhoods and regions. So the concept of innovation has a bearing upon community economic development in one of two ways: It can improve CED practice and it can provide directions for how CED practice can encourage innovation.

But community economic development need not be simply a 'recipient' of ideas. It also can make a substantial contribution to the concept of innovation. The links between innovation and CED – and their mutual influence – are discussed below.

## ***Innovation***

The concept of innovation often is defined as the creation or generation of new ideas. But this conceptualization is too narrow. While innovation does refer to the creation of new ideas, it also involves the application of existing ideas in unique ways or to different fields. It is the creative application of ideas that results in new products, techniques, forms of organization and markets.

In the knowledge economy, the creative use of existing knowledge is as important as its production. In this sense, innovation can be better understood as the application of pre-existing possibilities and components [Lundvall 1992: 8]. It may involve the creation of an entirely new way of doing things or the adaptation of a model employed elsewhere.

The creation of new ideas or the application of existing ideas can assume many forms. The innovation need not be a scientific invention. Innovation can involve the introduction of a new product or the refinement of product quality. It might consist of a new way of treating a product commercially. Innovation can include the opening up of a market or source for raw materials. It also can assume the form of an intellectual advance or behavioural change – e.g., a revamped organizational structure [Sundbo 1998: 20-21].

The concept of innovation used to be understood largely as a specific event, created by factors internal to a given firm or organization. It was the result of an improvement in the factors of production inside the organization. Innovation is now understood to be a process of solving problems and typically is the product of an interaction between a given firm and other actors. It generally is enhanced through social exchange [Landry, Amara and Lamari 2001: 3] and is the result of ongoing processes of learning, searching and exploring [Lundvall 1992: 8].

Successful innovation typically integrates creative ideas from various realms of technology as well as workforce and organizational development, from within and across organizations. Regions and firms can apply new technologies without having to develop them locally [EDA 2001: 23] – which means that the prospects for innovation are virtually unbounded. But while the development of new or the application of existing technology certainly helps drive innovation, a sole focus on

technology is insufficient for competitiveness [EDA 2001: 7]. Learning is equally important. In fact, it is an intrinsic component of innovation in that it enables the application of knowledge:

Innovation is the introduction into the economy of new knowledge or new combinations of old knowledge. Defined in this way, innovation is a process. It refers not only to the first introduction into the economy of a piece of knowledge but also to its subsequent diffusion ... we regard innovations as 'learning results.' Learning leads to new knowledge and entrepreneurs of different kinds use this knowledge to form innovative ideas and projects, and some of these find their way into the economy in the form of innovations [Gregersen and Johnson 1999].

Innovation can be understood in both a narrow and broad sense. In the narrow sense of the concept, innovation refers to the efforts of individual organizations to search out and explore new products and methods – as in the work undertaken by research and development (R&D) departments, technological institutes and universities [Lundvall 1992: 12]. In its broad sense, innovation refers to all dimensions of the economic structure and the institutional context affecting learning, searching and exploring. The production, marketing and finance systems are all sub-systems in which learning – and thus, potentially, knowledge transfer and innovation – can take place [Lundvall 1992: 12].

This constellation of factors, taken together, is sometimes referred to as a “national system of innovation,” a concept predicated upon several assumptions [Lundvall 1992: 1]. First, knowledge is considered to be the most crucial *resource* in the modern economy and the most important *process* is learning [Lundvall 1992: 1]. Knowledge is crucial to create firm-specific competencies and learning is the process through which firms create and acquire knowledge. In the context of innovation, learning refers to building new competencies and acquiring new skills, not just gaining access to information.

Another important assumption is that learning is predominantly “an interactive, socially embedded process which cannot be understood without taking into consideration its institutional and cultural context” [Lundvall 1992: 2]. The interactive component means that national systems of innovation are basically *social* systems.

National systems of innovation also include the network of relationships among firms and the broader context which supports (or inadvertently inhibits) their innovative capacity. Studies of these systems point to the interdependence of economic, political and cultural factors as well as the increasing importance of proximity in influencing the innovation process [Wolfe 2002: 3]. Given the social nature of learning, it is deemed to work best when the partners involved are close enough to one another to allow frequent interaction and the ongoing exchange of information [Wolfe 2002: 5].

With innovation now understood as a complex, interactive learning process, both cooperation and trust are important factors in promoting competitiveness. Regional collective learning occurs in

places involving “the creation and further development of a base of common or shared knowledge among individuals making up a productive system” [Keeble and Wilkinson 1999: 296].

Trust is fostered through spatial proximity, which facilitates frequent, close and face-to-face interaction. This proximity fosters and enables learning through interaction. An effective way to achieve spatial proximity is through a process known as ‘clustering.’ Firms clustered in the same region often share a common regional culture, which facilitates the process of social learning.

Much of the early literature on innovation tended to focus upon national systems, partly in response to the concern that globalization might be undermining the ability of national governments to influence their sovereignty. But the focus has shifted in light of the fact that innovative capabilities effectively are sustained through regional communities of firms and supporting networks of institutions that share a common knowledge base and benefit from shared access to skills and resources.

The constellations of institutions at the regional level that contribute to the innovation process are referred to as ‘regional innovation systems’ [Wolfe 2002: 6]. Definitions vary, but generally are considered to be a set of economic, political and institutional relationships within a geographic area which generates collective learning, leading to the rapid diffusion of knowledge and practice. These qualities confer crucial advantages on local regions, which are in a position to achieve the right conditions for competition in the emerging global economy. Local economies thereby provide the base for learning and innovation [Wolfe 2002: 4].

Innovative capabilities are best sustained through regional communities that share a common knowledge base. The regional level is critical because proximity contributes to the knowledge and capacity for learning that support innovation [Wolfe 2002: 5]. Innovation therefore can be understood largely as a geographic process, facilitated by the spatial clustering of selected players within the same region [Wolfe 2002: 3]. National economies, in turn, can be conceptualized as the aggregation of regional economies [EDA 2001: 7].

While globalization poses challenges, it also creates opportunities related to the unique capacity of communities to act as centres of learning and innovation. Core factors include access to a pool of labour, support services for local industry, trust relations among networks of suppliers and buyers, and the interactive learning effects that emerge in a regional or local setting [Wolfe 2002: 4]. The process of creating skills and the important influences on the rate of improvement and innovation are intensely local [Porter 1998].

Successful regions have the capacity to adjust continually to changing circumstances. These regions identify and cultivate their assets, engage in collaborative processes and encourage a regional mindset that fosters such growth. Elements of innovation-led development include knowledge economy assets, collaborative institutions and organizations, community mindset and entrepreneurship [EDA 2001: 1].



In short, knowledge and learning within the context of clustering are the basic building blocks of innovation. *Knowledge* is crucial to the development of organizational competencies and *learning* is the process through which organizations harness and apply knowledge. Learning is facilitated and enhanced by close proximity, through *clustering* in both a geographic and functional sense. Learning and clustering, in turn, are fostered through *managing the process of innovation*. Each of these components is discussed below.

## ***Components of Innovation***

### ***a. Learning***

The wealth of nations used to be tied principally to the harvesting of natural resources. Today, another factor has become important: The wealth of nations is linked largely to their capacity to capture the wealth embodied in their human resources. The so-called ‘knowledge economy’ is built on knowledge, creative capabilities and connections. Its primary objective is to generate, retain and attract knowledge workers. Productive capability no longer depends entirely on capital and equipment; information and knowledge assets are increasingly important.

Success comes from harnessing the information and knowledge assets of a community [Jarboe and Alliance 2001: 1] and from nations’ ability to create and apply new knowledge. The most important asset in a knowledge-driven economy is people [EDA 2001: 13]; extensive investment is required in human capital – i.e., the “knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” [OECD 2001b: 18].

The knowledge economy has been bolstered by the rise of information and communications technologies, which both drive economic development and facilitate the exchange of information. In theory, all individuals and communities have the capacity to be active players in the knowledge economy [Goslee 1998]. In practice, sophisticated technologies have created a ‘digital divide’ in which some individuals and communities have access to various technologies and the skills required to use them and others do not. The digital divide reflects the gap between the ‘information rich’ and ‘information poor.’

The concept of knowledge typically is used as though it refers to a single entity – i.e., a piece of factual information. In practice, the concept of knowledge breaks down into several major categories. Recent OECD research on human capital identifies four major types of knowledge: know-what, know-why, know-how and know-who [OECD 2001b: 11]. Each type of knowledge is relevant for different purposes and may require a distinct methodology for its application.

‘Know-what’ refers to basic factual information, which can be disaggregated into its constituent parts and communicated as data. ‘Know-why’ implies knowledge about principles and laws of motion or change in nature, the human mind and society. Know-why effectively provides the explanations that lie beneath the factual data and seeks to elucidate why certain patterns of behaviour occur.

‘Know-how’ represents yet another category of information. It refers to the skills required to carry out certain actions or the ability to do something. Know-how is linked closely to the final category: ‘know-who.’ The latter involves information about who knows what to do and how to do it. It also involves the social ability to cooperate and communicate with different kinds of people and experts [OECD 2000: 15]. Know-how often is transmitted through apprenticeships, mentoring and community networks. Both know-how and know-who involve a social component.

Other explorations of the concept of knowledge differentiate between its ‘static’ and ‘applied’ components. The literature distinguishes, for example, between codified knowledge and tacit knowledge [Jarboe and Alliance 2001; Landry, Amara and Lamari 2001: 13].

Codified knowledge refers to formal knowledge, such as the material taught in formal educational institutions and the information that comprises the compulsory expertise and skill base of a given field. Codified knowledge generally is well documented and can be easily communicated – though not necessarily readily understood, in that it may be complex scientific or mathematical data.

Tacit knowledge, by contrast, is the understanding derived from experience and mutual learning, whether through a mentoring relationship or participation in a relevant network. Tacit knowledge is required to help customize products and services, and adapt to rapidly changing situations that are the hallmark of the information age [Jarboe and Alliance 2001: 7]. Tacit knowledge involves an intuitive and experiential form of expertise critical for making decisions and solving problems [Goslee 1998: 3]. Because tacit knowledge is embedded within a human and social context, it is often more difficult to transfer than codified knowledge.

While distinct, codified and tacit knowledge are highly complementary. Tacit knowledge complements formal knowledge by enabling its unique application. Tacit knowledge also facilitates movement beyond the current limits of formal knowledge. Creativity, initiation and innovation owe much to the ability to tap into a reservoir of tacit knowledge [Jarboe and Alliance 2001: 3].

New knowledge that an organization may want to apply is often tacit and first must be codified to make it transferable. This new knowledge is then internalized; people in the organization must learn to use it, which means that the knowledge must become part of the pool of tacit knowledge. In fact, most of the important knowledge transmitted between parties in the innovation process is tacit rather than codified and thereby confers an advantage on firms which participate in networks of exchange. The creation of new knowledge basically takes place through the continued

interaction between tacit and codified forms of knowledge, creating a dynamic spiral of knowledge conversion that leads to innovation [Jarboe and Alliance 2001: 7].

The codification of knowledge does not mean that the receiver of the knowledge can use it immediately and without incurring costs. The effect of codification is that relatively little investment is required in the relationship between the owner and the receiver of knowledge in order to convey its content. Another effect of codification is that the knowledge eventually will become diffused on a wider scale, which makes it difficult to use that knowledge as a basis for sustainable competitive advantage. In fact, because most knowledge ultimately will become more codified and be diffused in the many interactions within organizations, the best way for a firm to preserve its competitive advantage is to constantly create new knowledge [Jarboe and Alliance 2001: 8].

The distinction between codified and tacit knowledge is crucial. It means that innovation results not only from ‘hard’ information found in textbooks. It also requires the ‘soft’ information that derives from use of the material. More specifically:

Not all important inputs to the process of innovation emanate from science and R&D [research and development] efforts. We, thus, assume that learning takes place in connection with routine activities in production, distribution and consumption, and produces important inputs to the process of innovation. The everyday experiences of workers, production engineers and sales representatives influence the *agenda* determining the direction of innovative efforts, and they *produce knowledge and insights* forming crucial inputs to the process of innovation [Lundvall 1992: 9; italics in original].

In the era of the global economy, regional and local economies have become increasingly important because of their role in fostering innovation. Codified knowledge is widely available. Tacit knowledge, by contrast, is embedded in communities and is a crucial local resource. Communities and regions are at an advantage because they enable the transmission of tacit knowledge, essential for innovation.

While the phrase ‘knowledge economy’ is commonly used to characterize nations’ primary source of wealth, the term implies that knowledge acquisition is a primary goal. Yet the acquisition and application of knowledge must be understood as continual processes. Even the most specialized forms of knowledge are becoming a short-lived resource due to the accelerating pace of change in the global economy. It is the ongoing capacity to learn and adapt to rapidly changing conditions that determines the innovative performance of firms, regions and countries. In fact, the term ‘learning economy’ may be a more appropriate representation [Wolfe 2002].

Just as knowledge acquisition can be viewed incorrectly as a single act, learning used to be understood as a linear, unidirectional process – a one-way transfer from ‘teacher’ to ‘learner’ [Torjman et al. 2001]. The focus was upon the production and distribution of information. It was assumed that the recipient of information had learned the material simply by virtue of having received it.

Learning now is understood as a far more complex phenomenon. The translation of information into knowledge is a dynamic – and interactive – process that involves explicit engagement with the material [NCDDR 1996: 9]. Learners must engage with the information in some meaningful way, preferably through a mediating process that involves interpersonal interaction.

This process of engagement points to the important role of people as creators and carriers of knowledge. The transmission of knowledge “lies less in its databases than in its people” [Brown and Duguid 2000: 121]. Knowledge workers rely as much upon tacit knowledge as they do upon explicit or theoretical knowledge [Goslee 1998: 3]. Because of the human exchange dimension of learning, the concept of social capital is particularly relevant to the learning economy. The literature on human capital clearly recognizes that social capital provides the basis for learning within families, organizations and regions [OECD 2001b].

Social capital refers to the features of social organization, such as networks, norms and trust, which facilitate coordination and cooperation for mutual benefit [Putnam 2000]. It is the product of relationships, networks and norms that enable collective action [Helliwell 2001: 6]. While human capital is embodied in the knowledge and skills of individuals, social capital arises from the relationships among individuals [Coleman 1998: 100]. It is these relationships and networks that facilitate the transmission of tacit knowledge.

A key element that underpins the social capital of a region is trust, which is developed through prolonged processes of interaction. As relationships grow, a larger component of the knowledge shared and transmitted becomes tacit. And while electronic communications are important for promoting learning, they are no substitute for the “trust, sharing and intense interpersonal interaction essential for the creative process” [Goslee 1998: 3].

In fact, the creativity arising from interpersonal interactions has emerged as a central dimension of the knowledge economy. “Many say that we now live in an ‘information’ economy or a ‘knowledge’ economy. But what’s more fundamentally true is that we now have an economy powered by human creativity” [Florida 2002: 4-5].

Florida traces the rise of what he calls the “Creative Class,” a broad collection of people who engage in many different kinds of work – scientists and engineers, writers and entertainers, health care workers and various technicians. These workers have in common the fact that their main economic function is to engage in creative problem-solving involving the application of judgment and expertise. Creative work is transforming community life because creative workers do not simply follow available jobs but tend to go to places that offer diverse, stimulating and authentic environments. Today’s successful cities seek to become broadly creative communities – “not just centres of technological innovation or high-tech industry” [Florida 2002: 7].

The Creative Centres are not thriving for such traditional economic reasons as access to natural resources or transportation routes. Nor are they thriving because their local governments have given away the store through tax breaks and other incentives to lure business. They are succeeding largely because creative people want to live there. The companies then follow the people – or, in many cases, are started by them. Creative centres provide the integrated ecosystem or habitat where all forms of creativity – artistic and cultural, technological and economic – can take root and flourish” [Florida 2002: 218].

Florida also points to research on the “strength of weak ties” and “entrepreneurial social infrastructure” that argues for forms of social capital which involve large and diverse networks of relationships and are open to new people and ideas.

Companies and places that can provide this kind of environment, regardless of size, will have an edge in attracting, managing and motivating creative talent. The same companies and places will also tend to enjoy a flow of innovation, reaping competitive advantage in the short run and evolutionary advantage in the long run [Florida 2002: 40].

The mechanisms and strategies for fostering a creative economy vary from one country and community to another. In most European contexts, regional governments and their development-related agencies play a central role in animating the regional innovation system to stimulate the learning process. They effectively spark the transition to a learning region [Wolfe 2002: 9]. In North America, by contrast, social capital within an economic context grows out of collaborative networks of interacting firms, driven by mutual self-interest in maintaining an innovative edge [Wolfe 2002: 12]. Learning takes place through proximity and exchange, and is facilitated through the process of clustering.

### ***b. Clustering***

Clusters can be understood as geographic concentrations of interconnected companies and institutions in a given field. They include groupings of related companies, service providers, suppliers of inputs, customers and manufacturers of related products. Clusters also incorporate governments and other organizations such as laboratories, training institutes, universities and trade associations that provide specialized training, education, information, research and technical support [Porter 1998].

Clusters, perceived as reduced-national innovation systems, are the relevant environments in which firms and other types of organizations such as intermediaries or knowledge institutes operate and innovate. National, and for that matter regional, economies can be thought of as consisting of various mixes or blends of these innovation clusters [den Hertog, Bergman and Charles 2001: 406].

Because clusters involve the exchange of knowledge and skills, they are an efficient means of knowledge management [Jarboe and Alliance 2001: 8]. The geographic clustering of people, companies and institutions is a powerful mechanism for expeditiously transferring and augmenting

knowledge. The sharing of knowledge, skills and experience is easier when the components of the learning network are in the same place [Jarboe and Alliance 2001: 8].

The concept of clusters is rooted in the research and practice on sector strategies, which can be traced to the 1960s when US-based economic development practitioners recruited specific industries on the basis of regional comparative advantages [Ogkagaki, Palmer and Mayer 1998]. Following Japan's success with a national industrial policy in the 1970s and 1980s, many state and local governments implemented development strategies targeted on key sectors of their economy.

The strategies that formed the backbone of economic development have evolved since the 1960s, when recruitment and retention focussed upon mature manufacturing industries. The 1970s and early 1980s were marked by a shift to high-technology industries, while the focus changed to the recruitment of foreign firms in the latter half of the 1980s [Ogkagaki, Palmer and Mayer 1998].

In the 1990s, Harvard business professor Michael Porter pioneered another form of sector-based strategy that stressed the relationships between clusters of industries connected through vertical and horizontal relationships. Cluster strategy emphasized the importance of geography, informal relationships and supporting institutions. It often spanned several industries or sectors. The focus of economic development efforts shifted to clusters of industries that could gain advantage through co-location.

Successful clusters typically have long historical roots and the emergence of new clusters takes time. Usually industry-driven, cluster strategies seek to leverage the relationships between firms and related institutions in a given area to stimulate innovation and efficiency. Industrial networks, which are also industry-driven, formalize inter-firm collaboration in the areas of production, marketing, training, product development and technology transfer. Clusters also may be based on factors such as natural resources or geographic advantage.

The concept of clusters implies more than a passive grouping of common actors. It acknowledges that there are interactions and links within and among various streams of activity which comprise a given cluster. 'Synergies' arise from the exchange of knowledge, skills, human resources, ideas and financing within and between clusters. Interactions between actors in clusters are based on purchase and supply linkages, trade linkages and the exchange of knowledge.

The existence of clusters suggests that the major factors which determine competitive advantage lie outside the boundaries of individual firms [Wolfe 2002: 15]. The cluster approach reflects the systemic character of modern innovation, which depends increasingly on interactions among interdependent actors. In many regions, it is not individual firms but rather clusters of innovative organizations that are driving growth and employment. These groups of enterprises innovate through strong linkages with suppliers and customers. In fact, "cooperation in clusters has increasingly become a requirement for success" [den Hertog, Bergman and Charles 2001: 405]. These

clusters act as ‘magnets’ for new technology, skilled personnel and research investment. Many employment-related and training programs now recognize this reality; they identify key clusters and work with business to design customized training that responds to local workforce requirements [Torjman 2002].

Economic clusters emerge most often when there is a critical mass of firms allowing economies of scale and scope, a strong science and technology base, and a culture conducive to innovation and entrepreneurship. Clustering is considered a prerequisite to the emergence of regional innovation systems.

In short, regional innovation systems consist of three key elements. First, there are the firms within a region’s main industrial clusters, including their support industries. Second are the associated knowledge organizations that supply the clusters with information, new technology and skilled workers. The third dimension consists of the interactions between and among these actors. In order to seize opportunities, firms must be able to combine various specializations, resources, strengths and skills outside their control. This means that they rely heavily upon other firms. The knowledge-based economy is thus a *network economy* in which innovations typically are created at an inter-firm level.

There are many advantages to cluster-based development. Location within a cluster generally provides access to superior or lower cost inputs (e.g., machinery, components and personnel). It reduces the need to maintain costly inventory and facilitates communication among key suppliers. Each firm can focus upon its own areas of expertise, while drawing upon the capabilities of other organizations in the cluster for complementary activities. The cluster itself can act as a magnet for skilled labour – attracting a pool of talented workers who see a range of employment prospects.

Cluster participation provides firms and organizations with early information about technology trends, components and machinery capabilities, thereby identifying opportunities for improving or enhancing their own products or capabilities. The cluster is also a ready source of supply to enable participating firms to bring their product to market. Cooperation creates more opportunities for learning – an essential requirement for productivity improvements. It enables both risks and R and D costs to be shared. Cooperation helps reduce time-to-market for new products and processes [den Hertog, Bergman and Charles 2001: 7]. The organizations within a given cluster become, in effect, an ecosystem of firms [Wolfe 2002: 17]. Not surprisingly, this complex interaction of organizations that depend upon each other in diverse ways presents clear management challenges.

*c. Managing the Innovation Process*

Interactive learning and clustering must be harnessed in a purposeful way. “An innovative economy demands a systematic approach to innovation – a strategy that mobilizes new combinations of people, resources and ideas” [National Research Council website (a)].

While there is no single innovation process that applies across the board [den Hertog, Bergman and Charles 2001: 406], there are several generic factors that comprise the innovation process. These include creating a vision, identifying assets, framing opportunities and challenges, developing an action plan, mobilizing for implementation, and monitoring and assessing performance [EDA 2001]. It is of interest that these key steps to innovation are consistent with the strategic planning process described in the *Community Resilience Manual*, which seeks to enable the rebuilding of vulnerable communities [Colussi, Lewis and Rowcliffe 2000: 1-10].

*Creating a vision*

An organization or region that fosters innovative approaches to economic development must articulate a vision which sets out the objective it seeks to achieve. The creation of a vision typically is the result of a developmental process that reflects consensus among participants in the strategic planning process. The vision must be translated into action in the form of a strategic plan [EDA 2001: 39].

*Identifying assets*

The next important step in managing the innovation process involves identifying the assets of the organization or region in which the organization operates. While firms and regions have varying types and quantities of assets, they all have basic knowledge assets and the ability to develop them. These assets include workforce skills, knowledge and research, creativity, advanced telecommunications infrastructure, quality of place and financial capital [EDA 2001: 9].

The notion of identifying and building upon local assets is intrinsic to community economic development, which harnesses local assets in the combined interest of economic development and social well-being. Extensive work is under way to promote the regeneration of neighbourhoods through a process known as ‘asset-based community development’ [Kretzmann and McKnight 1993]. In this formulation, local assets include the skills of residents; the power of local associations; the resources of public, private and nonprofit institutions; and the physical and economic



resources of local regions. The practice of asset-based community development involves the completion of a capacity inventory to help catalogue local skills, abilities, interests and unique talents [Kretzmann and Green 1998].

The Appalachian Center for Economic Networks, which uses an asset-building approach to guide its work in rural communities, has identified the qualities that contribute to generating assets. *Collaboration* involves the transformation of economic and community relationships by bringing together a diverse range of actors in the creation of assets. *Embeddedness* refers to the connection of assets to one another so as to strengthen support for participating firms and individuals, and increase social interaction among diverse segments of the community – e.g., bankers and low-income entrepreneurs. *Innovation* entails building relationships with external communities and organizations in order to enhance exposure to new ideas and experiences [Appalachian Center for Economic Networks 1997].

### *Framing opportunities and challenges*

The next step in managing the innovation process involves a so-called ‘framing exercise’ – i.e., the development of a strategic plan of opportunities and challenges, based on a solid understanding of the local economy. It is at this stage that tacit knowledge becomes important – the real information as to what is possible to achieve.

The framing exercise involves telling a compelling story of the region’s economy, including what it is, what it can become and the key areas requiring attention and action. Having a common story that is both compelling and easily told is a necessary foundation for forging a common vision, and in turn, taking coordinated action [EDA 2001: 44].

The strategic planning process typically is opportunity driven. It targets and seeks to harness the assets of a region in order to build competitive positions in national and international market-places. It promotes innovative, often technology-related ideas in all realms of regional economic activity and not just in high tech. It facilitates relationship-building across the region, because collaboration is central to innovation. The process is ongoing and iterative, continually changing to mirror shifts in the economy [EDA 2001: 6]. An important element of strategic planning involves identifying the area(s) in which an organization or region may seek to specialize.

Not every region can be world-class in biotechnology and information technology. However, experience suggests that every region, no matter its characteristics, can plan strategically to translate its assets into greater wealth. Evidence suggests that every industry – whether ‘new economy’ or ‘old economy’ – can be improved (if not transformed) through technology, innovation and entrepreneurship. *Fundamentally, every region can be reinvented* (italics in original) [EDA 2001: 5].

In fact, innovation-led development implies that the way in which a region harnesses its assets is more important, in many respects, than the initial ingredients with which it starts [EDA 2001: 9].

One way to proceed in the search for ‘innovation niches’ is to determine the requirements – the goods, services and/or skills – of the major clusters in the local economy. The organization becomes, in effect, a supplier to these clusters.

Another possible area for substantive direction lies in the wealth of innovation around environmental protection and conservation efforts. The US-based National Center for Economic and Security Alternatives notes that innovations which combine ecological rationality and sustainability principles with local economic development, such as job creation, are beginning to blossom around the country.

The best of these experiments are practical examples of alternative institutions and projects that nurture ecological rationality while embodying such positive values as accountability to the community and democratic participation. Though often small scale and fragmentary, they help point towards elements of a grounded vision of how communities can step-by-step begin to implement a sustainable development strategy. More than theories about sustainability, many innovations are beginning to produce an actual enhancement of community life through better environmental quality, waste management, eco-efficient transportation, food of improved quality and sound practices of land management and use [National Center nd].

Environmental innovations include community-supported agriculture and green construction, such as alternative building design and materials for resource conservation and green building standards. Municipal environmental agendas incorporate transportation and land use planning for livable ‘walkable’ cities, anti-sprawl initiatives and municipal projects for energy, water and resource conservation. Green businesses include scrap-based manufacturing and eco-industrial parks, while community greening entails local land trusts, brownfield development and military base conversion [National Center nd].

There are also substantial opportunities for innovation in the field of energy in general and micropower in particular, given the worldwide demand for cleaner, affordable and stable sources of energy [White 2000]. “The worldwide move towards a micropower generation/distribution strategy provides the CED field with a significant way to link the capacity of our communities with the capital of infrastructure necessary to grow both the economy and the ecology of the places we call home” [White 2000: 14].

Other opportunities for innovation can be found by determining the precise areas of science and technology that would meet most effectively the needs of the given region or community. Another possibility is to identify ways to incorporate advanced technologies into existing products and processes [EDA 1999: 29]. Technology-based incubators, manufacturing extension services, investment in technology infrastructure and skills training all can play a role in revitalizing distressed areas [EDA 1999: v].

It is sometimes difficult for an organization to know the appropriate areas for applying new technologies within its own systems or a given cluster. Such determination often can be made by involving knowledge organizations, such as universities and local, provincial or national research

institutes. (The Appendix of this paper describes the role that the University College of Cape Breton and the National Research Council, for example, have played in this regard.)

But the ‘sophisticated technology’ route is not the only answer for all circumstances and for all groups and communities. Neither is it always the most desirable solution. There may be other areas in high demand, including human services. Many CED organizations have introduced innovations by becoming involved in areas – such as the provision of home care or child care – typically not considered within their mandate. Extensive work is under way in British Columbia, for example, around the development of co-operatives to deliver health care services [British Columbia Institute for Co-operative Studies 2000] and in Quebec around the provision of child care and other human services.

### *Developing an action plan*

The preliminary scoping of assets, opportunities and challenges helps set the stage for developing an action plan. A good plan builds on existing strengths and encourages investment in new areas. It identifies the short- and long-term actions for implementing strategies in the following areas: the key clusters on which the region will rely in the coming years, the means of developing and maintaining competitive advantage for these clusters, entrepreneurship and human capital development, knowledge development, physical infrastructure investments, local financial capital and the widening of economic advantage to disadvantaged groups [EDA 2001: 47].

Specific tools that build the assets of the community include revolving loan funds, small business incubators, workforce training programs, strategic infrastructure investments and business attraction programs. Collaborative tools include industry trade associations, entrepreneurship networks, and research and development organizations.

### *Mobilizing for implementation*

The process of innovation requires collaboration across boundaries, both geographic and functional. Leaders from business, universities and governments may need to find ways to collaborate across sector boundaries [EDA 2001: 10]. Successful implementation requires widespread participation in the process of designing new strategic initiatives. Economic development is virtually unsustainable in the absence of collaborative institutions and organizations that provide a forum and structure for ongoing discussion, mobilization and action. Developing a shared mindset among participants is crucial for success [EDA 2001: 24-26].

While diverse participants should be engaged in innovation, a successful process typically requires a champion to spearhead the initiative and shepherd it through its various stages. The champion assumes more than the role of a process manager; a true champion believes strongly in the value of the work and takes active interest in its successful achievement. A champion is crucial – whether the innovation takes place within an organization or a cluster of organizations engaged in local development.

Successful innovation depends not only upon the presence of a committed champion. It also requires that the structure of a given organization – and indeed of a region – allows for continual learning and interactive processes that enable innovation.

Within organizations, the interactive creation of knowledge cannot flourish in a rigid top-down and hierarchical approach to management, which is particularly unsuited to dealing with tacit knowledge. There must be a willingness on the part of organizations to resort less to ‘command and control’ forms of order and to rely more on consensus and inclusiveness in the policy-making process [Wheatley 1997]. As the importance of information and knowledge becomes increasingly recognized, organizations are restructuring themselves to better utilize these assets. “Empowerment, flattening and decentralization are all hallmarks of the modern enterprise” [Jarboe and Alliance 2001: 1].

The consensus approach to management requires a capacity for fostering social capital – the presence of networks that facilitate cooperation and coordination among individuals, firms and sectors for their mutual advantage [Wolfe 2002: 10]. Management approaches in which the middle level, in particular, plays an important intermediary role between the strategies and concepts from the top and the practices from the bottom are most conducive to knowledge creation. “This dynamic and interactive process of knowledge creation is the key to innovation” [Boekema et al. 2000: 8].

In order to promote an appropriate context for innovation, organizations must be more fluid, inclusive and responsive. They need to manage complex information flows, grasp new ideas quickly and spread these ideas throughout the enterprise [Kanter 1999]. Change-adept organizations share three attributes: concepts such as ideas and designs, competence or the ability to execute ideas, and connections or close relationships that enable the augmentation of resources and the leveraging of abilities.

Innovation is sparked by effective leaders with the *imagination to innovate*. They encourage the development of new concepts – ideas, models and applications of technology that set the organization apart from others. Effective leaders also have the *professionalism to perform*. They provide personal and organizational competence, supported by workforce training and development. Finally, effective leaders demonstrate an *openness to collaborate*. They make connections with partners who can extend the organization’s reach, enhance its offerings and energize its practices [Kanter 1999].

Effective leaders typically have an entrepreneurial personality and are ‘boundary crossers.’ They see infinite opportunity in the knowledge economy. They typically see the possibilities rather than the problems created by change [Dees 1998: 2]. Effective leaders engage in an ongoing process of innovation, adaptation and learning [Dees 1998: 6]. In fact, the most notable trait of great leaders is their quest for learning [Kotter 1998], which is facilitated within organizations by management styles that enable the flow of information.

Innovation requires new forms of behaviour both within and between organizations. The cluster approach to economic development is predicated upon collaboration, achieved primarily through networking and partnerships.

There are many benefits to bringing together a range of actors in collaborative arrangements. The collaborative process often leads to synergies, which help generate new ideas. Goods and services tend to be developed with a more accurate understanding of practical needs. Collaborative arrangements often help break down bureaucratic barriers and respond quickly to problems and opportunities. Successful collaborations can generate increased trust that can affect economic activity beyond the specific innovation initiative [Kwass and Siegel 1995].

The basic benefit provided by collaboration arises from “the recognition that no single party can achieve the same objectives of a project alone” [Kwass and Siegel 1995: 16]. In addition to different skills, “the partners also bring the different cultures of working... the exchange of knowledge will facilitate the sharing of new skills and capabilities” [Kwass and Siegel 1995: 16-17].

But collaborative efforts do not just happen on their own. They typically require some form of coordinating or governance mechanism to hold together all the diverse players. Some community-based or regional efforts, for example, are governed by a coordinating body in the form of a leadership roundtable or steering committee, which is generally multisectoral in composition. The body acts as champion of the issue, convenes key players, helps set a clear vision for the effort and associated strategic plan, and provides the liaison between the broader community and the designated initiative.

This leadership role also has been referred to as an ‘economic community’ that involves strong responsive relationships which afford companies and the community a solid, sustained advantage. These relationships are mediated by key people and organizations that represent diverse economic, social and civic interests. Economic communities have clusters as well as the mechanisms to engage their clusters and understand what they need from the community [Wolfe 2002: 26].

As in the process of learning, social capital is the key ingredient to the success of most dynamic clusters [Wolfe 2002: 27]. It is an essential part of the ‘glue’ that binds these clusters. The competitive advantages that flow from clusters are linked closely to the value of information and knowledge they are willing to share. The networks, relationships and associated degree of trust effectively comprise the social underpinnings of the cluster.

### *Taking action*

Cluster-based strategies usually start by analyzing a local economy, identifying key clusters and employing one or more of the following strategies: creating new relationships within or between related industries, developing specialized industrial parks, modernizing production technology, assisting new product development, targeting labour shortages through training, investing in research and development, financing investment in production technologies and addressing competitiveness issues. Training and technical assistance are commonly employed tools.

Cluster-based approaches add value by developing specialized knowledge including market trends, production technologies and the regulatory environment. They provide valuable goods and services to firms in the sector and drive the development of the support infrastructure. These strategies promote collaboration and disseminate useful information to encourage innovation.

### *Monitoring and assessing performance*

Managing innovation involves monitoring performance – whether of an individual firm or entire region – and determining progress relative to identified targets. Innovative regions seek continual improvement. “To be fully effective, the assessment process should aim to develop local capacity for continuous self-assessment and to create a tool for engaging a diverse group of participants in the broader planning and implementation process” [EDA 2001: 42].

While the US-based Economic Development Administration points to the need for metrics and performance evaluation [EDA 2001: 18], the success of local governance should be judged not only through measurable targets. Success also should be determined by whether the effort has been able to create networks and structures that can be sustained over time in order to tackle complex problems.

There is also growing recognition that tracking performance is important not so much for evaluation but for learning purposes. No learning can take place without continual assessment. The primary purpose of assessment is to learn – i.e., enhance capacity to produce intended outcomes. So the final step in managing innovation entails learning – also its primary point of departure. The innovation process is a system that both begins and ends – if it does indeed end – with learning at its core.

## ***The Links to CED***

There are two major types of links between innovation and CED.

First, the literature on innovation suggests various ways in which CED can become more innovative in terms of the substance and process of its work. Innovation means accentuating certain features already evident in CED. But it also means developing new capacities and skills.

Second, community economic development can drive innovation. CED can act as the catalyst that stimulates the innovative capacity of other organizations and regions. While there are noteworthy similarities between how CED strengthens communities and current approaches to local innovation, there are also important differences.

## ***Innovation Can Influence CED***

Both the literature review and focus groups made clear that there are several ways to promote innovation within CED. Innovation includes, but is not limited to, effective approaches to workforce development, the creative application of new technologies and novel ways of relating within and across organizations [EDA 2001: 7].

Workforce strategies are becoming more focussed upon clusters. Community organizations that provide employment services can enhance their effectiveness by building stronger links with firms in designated sectors and clusters. A deeper knowledge of the technical requirements of the cluster, including emerging skills, allows community organizations to better target their programs and services.

At the same time, closer working relationships between community organizations and private firms generate new strategies for enabling the transition to work, retaining employment and moving from entry-level to better paying jobs. Organizations with a deep understanding of the sectors in which they work are better positioned to identify and tackle the structural or systemic factors that create barriers to employment [Plastrik and Taylor 2001].

The literature on innovation also focusses upon the application of emerging technologies. Information technologies enable access to new information and promote communication links which facilitate the flow of ideas and encourage the creation of partnerships. Both individual CED organizations and the field as a whole can explore more systematically their capacity to acquire knowledge about the fields in which they are – or wish to become – involved. One option is to establish inter-organizational or intra-community networks to share learning.

Innovation also results from the application of new technologies to various processes or the training of workers to use those technologies. Technology research institutes, such as the National Research Council, and universities are essential players in identifying potential areas for such application – either within CED organizations or local regions. CED organizations, both individually and as a sector, should seek ways to apply new technologies to improve their effectiveness and identify new areas of economic opportunity.

Another important lesson for CED arises from the need to think regionally and to attend to the interdependence of various organizations and sectors in pursuit of a well-integrated set of economic and social institutions. As noted, all regional economies are composed of major clusters of economic activity. Within each cluster lie substantial opportunities for economic development – either through providing goods and services required by the cluster or through training workers to meet the knowledge and skill requirements.

The ability to identify clusters and their associated needs involves a keen understanding of the local economy. Regional infrastructure, such as transportation and the location of commercial and social services from grocery stores to day care centres and libraries, is also an important element in building dynamic and cohesive communities. In order to tackle issues at this level, it is becoming increasingly necessary to convene a multisectoral group on a regional basis that can identify current and emerging areas of economic opportunity.

A fundamental lesson from the literature points to the need to actively foster a culture of innovation within CED organizations. While change often is perceived as a problem because of the challenges it creates for marginalized communities, the innovation literature highlights the need to look for opportunities. It points to the importance of organizational structures that foster creativity, collaboration and learning. Such organizations must be flexible, outward-looking and capable of scanning the environment to identify emerging trends and design appropriate responses.

## ***CED Can Influence Innovation***

### ***a. Limits to the conventional views of innovation***

There are important similarities between the theory and practice of CED and innovation. Both focus on the local or regional level as the place where various elements come together to foster creative interactions. Both recognize the need to combine diverse elements in new ways to produce innovative outcomes. CED and innovation value social capital as the resource that enables collaborative work to achieve shared goals. Both seek to bring about new institutional arrangements that enhance capacity over the long term; they focus upon learning as the most critical process for economic and social progress.



At the same time, the innovation literature is more narrow than CED. While innovation is discussed primarily in technological and economic terms, community economic development takes a broader, more holistic perspective that includes the social and often environmental aspects of community life. Conventional approaches to innovation frequently concern themselves with achieving economic competitiveness and growth, leaving aside the issues of social inclusion, equitable development and quality of life or treating these concerns as side-effects of economic development rather than as a primary area of interest.

Perhaps the most important contribution that CED can make to the emerging innovation agenda is to broaden its scope to include these other dimensions. Based on experience in addressing social exclusion and creating healthy communities, CED can offer the field of innovation a range of strategies for sharing more broadly the benefits of economic development.

To the extent that the innovation literature does address questions of social inclusion, it typically focusses upon education and training. While vitally important, these strategies are only part of the answer. Other opportunities and obstacles need to be addressed. CED practitioners have long sought to develop supports to assist marginalized individuals and communities participate in economic and social life through basic education, housing, child care, transportation, food security, personal and community asset-building, and business development (co-operative, microenterprise and nonprofit), to name the most familiar areas of work. Based on existing 'know-how,' CED is well positioned to help regions adopt a robust strategy for equitable development.

A related concern expressed by some CED practitioners is that conventional thinking on innovation tends to focus narrowly on the growth sectors of the 'new economy' including, for example, high tech, photonics and biotechnology. But many Canadians are employed in traditional areas, like agriculture, resource extraction, government and public services, and commercial services, like retail and hospitality. More effort is required to apply strategies associated with innovation to sectors of the 'old economy' in which there may be more employment opportunities for individuals who lack the advanced education and skills typical of jobs in the new economy.

Recent research on regional economic development also requires broader thinking about the elements that support innovation. The traditional expectation that people flock to the available jobs no longer holds. In fact, many companies move to the skilled workers, who choose increasingly to move to communities seen as good places to live: places with character, distinct identities, stimulating environments, diverse but cohesive social relations and vibrant learning cultures [Florida 2000].

#### ***b. CED as catalyst of innovation***

While not identified explicitly in the literature, it is apparent that CED can act as the catalyst for innovation within any community or region. It can promote the thoughtful shaping of industrial

infrastructure – an important element of innovation [EDA 2001: 7]. For example, entrepreneurship or the generation of business opportunities through the application of ideas is a core dimension of innovation. Entrepreneurship, also a distinguishing feature of CED, refers to the capacity to grow jobs ‘internally’ rather than attracting them from outside [EDA 2001: 16]. This conceptual link means that CED organizations are already well positioned to help local regions identify potential areas for entrepreneurial activity.

Another strength of CED is its knowledge of local economies. This know-what, know-why, know-how and know-who are invaluable assets; the innovation process requires a solid understanding of potential opportunities for supplying goods, services and skills to major economic clusters.

CED organizations are the bearers of tacit knowledge. The expression “local people know where the ice is thin” refers to the fact that local people know how to make things work in their community. They understand not only its strengths and weaknesses – its assets and liabilities – but also its dynamics and sensibilities. Such knowledge resides in an intimate and practical familiarity with the people, places and history that define a community’s identity. CED organizations can draw on this tacit knowledge to apply useful ideas and share unique local approaches to social and economic issues.

Collaboration is another essential ingredient of innovation. CED already has much to offer in this regard: Working in partnership is well accepted in both theory and practice. In fact, CED organizations often play a catalytic role in communities by bringing together key partners around a given project. Increasingly, these partnerships involve diverse sectors – business, voluntary organizations, educational institutions, low-income groups and governments.

Finally, the main explanations for the dynamism of regional clusters derive from both economic reasons, such as the localization of economic activity, and sociocultural reasons, such as intense levels of inter-firm collaboration, a strong sense of common industrial purpose, social consensus, extensive institutional support for local business and structures encouraging innovation, skill formation, and the exchange of ideas [Amin and Thrift 1994: 12]. Clusters, which lie at the heart of innovation, embody unique combinations of economic and social process – just like community economic development.

### ***Supports for Innovative CED Practice***

Community economic development can contribute to the national innovation strategy and enhance its own capacity to engage in innovation. A number of supports are required for fostering innovation within CED, including a policy link between CED and innovation, enhanced CED infrastructure and local governance models as tools for building creative, inclusive communities. Each of these areas is discussed below.

### ***Public Policy Link***

The first support required by community economic development is explicit recognition in public policy. There is currently no federal policy framework that supports the work of community economic development. Although CED lies at or near the centre of public policy, especially in relation to the innovation agenda, it tends to be ignored as a primary resource for meeting the goals of innovation. Yet the federal government's consultation papers on skills and learning and on innovation frame the overall goal of innovation policy in terms that fit well with the broad aims of CED:

In the new, global knowledge economy of the 21st century prosperity depends on innovation which, in turn, depends on the investments that we make in the creativity and talents of our people. We must invest not only in technology and innovation but also, in the Canadian way, to create an environment of inclusion, in which all Canadians can take advantage of their talents, their skills and their ideas; in which imagination, skills and innovative capacity combine for maximum effect [Industry Canada 2002: 2].

Industry Canada's innovation paper, *Achieving Excellence*, points out the mutually supportive link between economic and social development. There exists "a 'virtuous circle' where good economic policy creates the wealth to address social priorities, which, in turn, fuels more innovation and economic growth" [Industry Canada 2002: 25]. *Achieving Excellence* also highlights the vital place that local communities occupy in the process of innovation:

A paradox of the global, knowledge-based economy is that sources of competitive advantage tend to be localized. Communities and regions across Canada use their knowledge resources to create economic value, and it is in communities that the elements of the national innovation system come together [Industry Canada 2002: 72].

The federal government recognizes the need to ensure that social well-being is protected in the course of developing an innovation economy. Governments have a responsibility to undertake certain stewardship functions that promote the public interest. Policies and systems that protect health, environment, safety, privacy and other rights are identified as crucial elements of an innovation policy. They "create the conditions necessary for Canadians to enjoy the social and economic benefits of innovative activities" [Industry Canada 2002: 62]. In their absence, a "public confidence gap" could arise which would undermine support for an innovation agenda [Industry Canada 2002: 21].

Community economic development is particularly well positioned to contribute to the innovation agenda. First, CED has expertise in achieving the dual goal of innovation: economic prosperity and social inclusion. Second, the primary arena for CED's work is precisely the setting in which the elements of innovation come together – local regions.

Canada's Innovation Strategy focusses largely on investments in training and education to ensure that all Canadians are included in the opportunities generated by an innovation economy.

While education and training are crucial to achieving economic and social inclusion, CED can point to a much wider range of strategies that enable marginalized individuals and communities to participate in all sectors of the economy.

A more robust agenda would involve measures to:

- Address basic needs for affordable housing, food security, basic education, child care and transportation.
- Build personal financial assets.
- Systematically identify and remove policy barriers to social and economic inclusion.
- Provide integrated employment support services to better link the unemployed to existing jobs.
- Work with employers to design hiring and employment practices that expand opportunities for the economically marginalized.
- Enable job retention and advancement, and provide adequate wages.
- Develop microenterprises, co-operatives and community businesses.
- Build community-based infrastructure to support the development process, including community investment and loan funds, land trusts, community technology centres, and research and planning structures.

CED pursues these and other strategies in ways that create more fully integrated local development systems and that build the capacity of community members to work together to tackle these issues. An explicit recognition of the unique experience and capacities that CED brings to the work of building creative, inclusive communities would open the door to more extensive collaboration with government around a set of common goals.

### ***CED Infrastructure***

In recent years, important steps have been taken to develop the national and regional infrastructure required to support community economic development: Two national structures have been formed.

The Community Economic Development Technical Assistance Program (CEDTAP) enables CED organizations to gain access to the expert technical support to undertake specific initiatives and build their long-term capacity. The Canadian Community Economic Development Network (CCEDNet) brings practitioners and allied agencies together to promote this field. It facilitates collaborative learning within the sector and calls for public policies that support community economic development. In some parts of the country, regional and local CED networks have been formed as have various types of financing structures, such as community development loan funds.

Despite these important beginnings, additional national and regional support structures are required for this field to realize its potential with respect to innovation.

In the US, an extensive system of national intermediaries has evolved to support local CED organizations. A report reflecting on the work of these structures observes that:

The last decade or so has proven that national intermediaries can be catalytic, and in some cases indispensable, to strengthening the whole range of community development activity. In these years, intermediaries have become increasingly effective at enlisting new sources of technical skills, brokering strategic partnerships, attracting new funders and investors, and planning more effective methods of program design and service delivery [LISC 2002: 7].

A study conducted by the Urban Strategies Council identified six core areas in which such intermediaries offer support to community-building organizations:

Knowledge and information development

- research
- documentation and analysis
- evaluation

Knowledge and information transfer

- knowledge dissemination
- networking
- clearinghouse
- communications and media
- promotion of technology

Direct assistance

- training
- less intensive technical assistance
- intensive technical assistance

Policy development and advocacy

- impact policy

Funding

Community organizing [Wilson, Pitt and Yee 1999: 4].

Three of these strategies – funding, knowledge development and transfer, and technology-focussed technical assistance – are of particular relevance to this discussion.

**a. Funding**

CED organizations are typically constrained by inadequate funding. One mature organization has estimated that it could absorb \$1 million per year for four years to pursue specific initiatives it already has identified [CCEDNet 2001: 11]. Although few CED organizations would be able to make effective use of funds of this scale, many operate below their current capacity due to difficulties in securing adequate financial capital.

CED organizations obtain funding from a number of different sources: governments, private foundations, social venture capitalists, community foundations, mainstream financial institutions, corporate philanthropies and private citizens. However, the majority of Canadian CED organizations, and virtually all such organizations larger than a certain size, depend on government funding [APEC and Bryant 1993]. This dependence has a profound influence on the orientation of CED, channelling the movement towards specific activities, such as training and enterprise development, and away from other objectives [Fontan 1993; Shragge 1993].

Supportive government policies are uneven across the country. The federal government, which played a pre-eminent role in supporting CED in the 1980s, has withdrawn most direct program support from the sector. While it continues to fund Community Futures Development Corporations, this program does not operate in all regions and does not serve urban centres. Moreover, the work of these corporations varies widely from one community to another. While some organizations pursue broad development agendas in the community economic development mode, others focus more narrowly on conventional small business development.

Provincial funding for CED also constitutes a patchwork quilt. Several provinces, notably Quebec, Nova Scotia, Newfoundland and Saskatchewan, have set up regional development structures called Regional Development Authorities or Economic Boards to oversee a range of programs. Often these structures pursue more conventional economic development strategies that do not attempt to integrate the social dimension important to CED or to focus on long-term community capacity-building.

Only Quebec has decentralized the regional model to the local level through the *Centres locaux de développement*. In fact, Quebec is the furthest along in terms of recognizing and providing support for what it calls the 'social economy.' Manitoba recently introduced a CED Policy Framework and designed a 'CED Lens' as a tool to help government officials design programs supportive of CED goals and initiatives. Saskatchewan has experimented with neighbourhood development organizations that receive multi-year funding to pursue broad community economic development agendas. Nova Scotia established a Community Economic Development Investment Fund, involving a tax credit that draws its inspiration from successful American models.

In some provincial CED initiatives, multistakeholder organizations have been created to develop enterprise opportunities and support local job creation. While the structures receive core

support, most of them are underfunded; they have limited or no access to technical assistance; they may be more oriented to business rather than the community; and their mandates may exclude leadership development and community capacity-building, although these skills are necessary for successful CED. Moreover, in some jurisdictions, provincial legislation and regulations may restrict the involvement of municipalities in CED.

Private and community foundations are gradually becoming important funding sources for CED, as are social investors and corporate philanthropies. Federal regulations defining charitable activities have been developed that permit such foundations to invest in CED. However, the resources of charitable organizations are limited. Most prefer to invest in the start-up phase of promising ventures in order to prove their value. Additional funding is required to sustain such initiatives as they pursue long-term goals. In many cases, CED ventures cannot be expected to become fully self-sufficient in the marketplace since part of their work lies in the realm of social services. Public investment is required to cover at least part of the costs.

Conventional private sector financing for CED ventures is even more difficult to obtain. For the most part, the commercial financial system, which is the primary source of credit financing in Canada, dismisses the CED sector. Almost all investment capital for CED in Newfoundland is public (and rather scarce), while in Quebec funding for community-based enterprises and small business has been made available from labour-sponsored, public, commercial, credit union and other local investment sources.

In response to this shortage of capital for community investment and equity building, more than 20 Canadian communities have created community loan funds, loan guarantee programs and other vehicles to support local entrepreneurship and economic activity. With few exceptions, the funds are modest and are directed towards poverty alleviation rather than broad-based community investment or asset building. Communities with dynamic credit unions like Winnipeg, Toronto, Vancouver, Victoria, Lac St. Jean and some in the Atlantic region have been able to access more substantial funds, occasionally for venture capital and investment in collective ventures, worker co-ops and conventional business. VanCity Community Foundation is the only foundation that lends funds (as opposed to making grants) for community development [Levine, Torjman and Born 2003].

In addition to the scale of funding, other financing issues are of concern. CED initiatives tend to be long-term and multifaceted. Available funding, particularly from government, tends to be relatively short-term and project-specific. The consequences are serious. Substantial time and energy are spent trying to secure the funding needed to achieve sustained benefits for communities. Promising initiatives too often are unable to realize their full potential because they never move beyond the pilot stage. Lack of stable funding makes it difficult to retain staff on a long-term basis. High rates of staff turnover undermine efforts to learn and pursue innovative action.

Recent research on the financing of comprehensive, long-term community building initiatives highlights two strategies – pooling resources from diverse funding bodies and shifting expenditure authority to local community-building agencies. The pooling of resources “can be across the departments of government and/or across sectors – government, charitable foundations, corporations, community organizations” [Hayes, Hipoff and Danesser 1995]. The shift of expenditure authority may be to a single multi-purpose community organization or to a local collaborative established as a funding intermediary for a multi-partner initiative. Funders tend to prefer such pooling arrangements because they effectively allow leverage of their investment. The scale of such initiatives makes it easier to justify and secure multi-year funding.

CED in Canada would be strengthened by the creation of a national funding collaborative which could gather the scale of resources the field requires and allocate them towards long-term initiatives focussed upon economic and social well-being.

***b. Knowledge development and transfer***

Learning has long been a basic tool of CED. But the recent explosion of knowledge in all fields, the emergence of the knowledge economy and the generally accelerating pace of change have raised the standards with respect to learning. In fact, some observers argue that the successful organizations of the next century will be those that excel at learning [Senge 1996: 4]. Within community development, learning has re-emerged as a focus of concern. So central is learning to meeting current goals that some have begun to speak of ‘learning-based community development’ [Faris and Peterson 2000].

While CED practitioners recognize the need to enable learning within their organizations and communities, efforts to enhance learning require time and resources. They also need an infrastructure to facilitate this process. Although larger CED organizations have some capacity to allocate resources that support organizational learning, many smaller organizations do not. In some communities, such as Toronto and Ottawa, local CED networks have been established to provide a range of services to their members, including learning opportunities.

Local networks are complemented by broader regional and national CED networks whose mandates include fostering learning within the sector. These wider networks significantly expand and enrich the range of ideas and approaches to CED that community organizations can consider. At the same time, local learning networks provide the face-to-face forums which allow practitioners to explore together the relevance of new concepts and strategies. They can use the ‘tacit knowledge’ of their own context to re-shape ‘codified knowledge’ for local purposes.

Of course, the reverse is also true. Local organizations and networks can reflect on their own methods, identify distinctive elements and formulate these as codified knowledge. While these



basic processes of collaborative learning already operate within the CED sector, they must be refined and strengthened. Initiatives in several areas would serve this purpose.

First, stronger links are required with universities and research institutes. Such structures are repositories of knowledge and sources of valuable research skills. Universities and research institutes specialize in creating and accessing knowledge but require community partners to translate such knowledge into action. Community organizations have distinctive insights as to how local challenges can effectively be addressed. But these organizations often lack the time or know-how for converting this implicit understanding into formal knowledge that can be widely shared. Focussed collaboration between knowledge institutes and the CED sector would serve the interests of both parties.

Second, there is a need to strengthen the sector's capacity for long-distance, collaborative learning. With new information and communications technology, it is commonplace for organizations to connect people at a distance for information-sharing and learning. There is now a significant body of ideas and practices that points to ways of mixing electronic and face-to-face modes of learning, types of technology, patterns of development that are typical of virtual learning communities and the art of facilitating such learning networks. In a huge country like Canada, effective long-distance, collaborative learning is a necessity. The CED sector must invest the energy and resources to master the technical and social dimensions of this learning.

More support also is required for two phases of the learning process associated with innovation: evaluation and dissemination. Experts on learning organizations and innovation, such as Peter Drucker and Peter Senge, hail evaluation as the key to innovation, but decry its use for the narrow purposes of assessing success or failure. Evaluation, they say, is for learning, particularly if it enables recognition of the gap between goals and actual achievement [Senge 1998]. Too often, CED organizations experience evaluation as a formality to be endured – a burden or threat. Learning-oriented evaluation aligns more closely with the aims of CED and supports more effectively its efforts at innovation [Torjman 1999].

Finally, once innovations are achieved, there typically is little support for dissemination. Funds generally are available to develop new techniques or strategies but not to assist in the demanding work of putting key insights to work in other contexts. The capacity within the sector to enable effective 'scaling up' also must be developed. There is a growing body of knowledge about the process of applied dissemination, but unrealized opportunity for reaping the full benefits from successful initial investment in innovative CED ventures.

### *c. Technology-focussed technical assistance*

Over the past decade, Canadians have experienced the burgeoning growth of the communications technology and use of the Internet for information and communication. However, the aware-

ness and use of these new technologies and services are polarized along social class and generational lines, creating a 'digital divide.' From 1997 through 1999, higher-income households were three times more likely than lower-income households to have access at home. By 1999, about two-thirds of upper-income households had access from home, compared to about one in four low-income Canadians.

Moreover, the National Broadband Task Force noted that 75 percent of Canadians, but only 20 percent of communities, have access to high-speed computer networks [Industry Canada 2002: 75]. Rural communities, in particular, are in danger of being marginalized through limited access to broadband services increasingly demanded by business. There are also concerns about the 'organizational divide' that limits the use of new technologies. The organizational divide refers to the culture and capacity of community-based organizations that constrain their use of new technologies. As one study observes:

The digital divide policy dialogue must go beyond the current access-centered paradigm. The next steps for IT policy and practice must support the creation of local content and build the technology capacity of community based organizations (CBOs) [Kirshenbaum and Kunamneni 2001: 6].

A recent study of community-based organizations in the US determined that most consider information technology to be a "necessary evil" rather than a strategic tool [Shorters 1999]. To overcome this problem, it has been suggested that a "culture of use" should be established within such organizations and the communities with which they work. The key is to strengthen the link between the evolving community technology movement and those engaged in various forms of community building: "In this space lies the potential of linking the legacy and power of the social justice field to the promise of cutting-edge technological innovations" [Kirshenbaum and Kunamneni 2001: 5].

Among the measures which could foster such a culture are the development of stronger and deeper linkages between technologists and community builders so that awareness of technology's impact is better understood by community organizations. Another measure involves creating an inventory of community-based applications, along with technology descriptions, that illustrate how information technology can be used as a tool for social change. A culture of use also can be encouraged by creating online and offline opportunities for community-based organizations to share knowledge and experience [Kirshenbaum and Kunamneni 2001: 28].

In Canada, the federal government has made a major investment in Internet access. The Community Access Program has made it possible for both rural and urban communities across the country to provide a substantial level of access for citizens. Recently, attention has turned from wiring and hardware to the actual use of technologies.

A study of the link between CED and Internet-based Community Learning Networks (CLNs) found significant potential for using these networks as tools to generate opportunities in the new economy. However, it also noted that "many of the CLNs reviewed did not indicate effective or

organic links with local CED activities” [Gurstein 2001: 12]. One conclusion of the research was that “simply training or sensitizing to technology is probably insufficient to facilitate New Economy economic activity – it is a ‘necessary’ but not a ‘sufficient’ condition, and for the CLN to be truly linked into New Economy activity there is the need for a direct linkage – for example, through specific training for particular types of employment or skills, or providing support for particular types of economic development activity” [Gurstein 2001: 12].

As with information technologies, bridges must be built between marginalized communities and the organizations that serve them, and technology centres and institutes. Many smaller communities lack the science and technology infrastructure that is important for participating in the evolving economy. According to a study published by the US-based Economic Development Administration: “Many distressed areas, especially rural areas, lack the infrastructure necessary to support technology-based business” [EDA 1997: 26]. It proposed three strategies that national governments could employ to help direct the benefits of science and technology to marginalized regions:

1. Learning: Fund pilot programs and demonstrations, the results of which can be shared with state [provincial] and local economic development practitioners to identify the science and technology programs most likely to have a positive impact upon distressed areas. These may include technology incubators, product development laboratories and testbeds, service centres and innovation centres.
2. Linking: Encourage strategic alliances or coalitions of higher education, government and industry with science and technology expertise to consider the needs of distressed areas.
3. Leveraging: Use federal dollars to encourage science and technology investments in distressed regions and to benefit marginalized people who otherwise might not receive attention and priority [EDA 1997: 36].

The Economic Development Administration identified additional measures that could be taken by public sector agencies with responsibilities for science and technology programming:

- Dedicate funds specifically for local science and technology planning that addresses the needs of distressed areas.
- Provide technical assistance to states and regions seeking to develop science and technology strategic plans.
- Increase the amount of technical assistance available to state and local technology and science policy-makers on the needs, problems and opportunities of distressed areas.
- Fund additional demonstrations of technology-based economic development in distressed areas with careful evaluation of the results.
- Collect and disseminate information on best practices to state and local policy-makers involved in technology, science and economic development [EDA 1997: 37].

### *Local governance structures*

Finally, there is a need to develop the structures, strategies and practices for community-based governance. In Canada and elsewhere, there is growing recognition of the critical role of such governance arrangements in bringing out the unique potential of individual communities. In its recent report on *Local Partnerships for Better Governance*, the OECD observes:

Improving governance – the way society collectively solves its problems and meets its needs – is at the core of the government strategies to reconcile economic prosperity, social cohesion and environmental progress. In a framework of good governance, government services across administrative levels coordinate their activities in order to enhance the global effectiveness of policies and minimize conflicting action. Civil society and the corporate sector are invited to participate in collective decisions and are encouraged to translate their involvement into concrete initiatives [OECD 2001a: 13].

While collaborative approaches to addressing difficult challenges used to be reserved for crisis situations, such as the sudden closure of a major local employer, these approaches increasingly have become standard practice. According to the OECD, the desire for sustained local participation in the decision-making process “has often come about as a reaction to the poor results attained by policies only weakly linked to local conditions. It has also been a reaction to the persistence of social exclusion and its associated problems, despite recent economic growth” [OECD 2001a: 13]. Partnerships in local governance typically are seen as a way to improve the quality of life for all community members. Through community-based governance, public, private and community resources can be targeted more effectively to local needs and opportunities.

Similar conclusions have been drawn around the process of innovation. Analysts reflecting on a major European initiative to support innovation among small and medium sized enterprises determined that “...there is no ‘one-size-fits-all’ policy system: It depends on the problems and opportunities to be addressed in the existing context” [Nauwelaers and Wintjes 2000: 11]. Moreover, the range of factors that support local innovation extends beyond the immediate activities of businesses themselves. For this reason, the research proposes that the concept of ‘cluster’ be broadened towards that of ‘development coalition’ and that the scope of innovation policy be extended to include “the social and cultural aspects of innovation, enhancing social capital as a key element of a well-functioning regional innovation system” [Nauwelaers and Wintjes 2000: 3]. The focus of government policy, they suggest, ought to be twofold: “to increase the availability of external resources and to develop the internal, absorptive and learning capacities” of the local system [Nauwelaers and Wintjes 2000: 3].

In order to effectively support the development of local innovation systems, an “interactive mode” of policy implementation is needed. This interactive mode means “not only that services should be designed and delivered in cooperation with the beneficiaries, but also that the policy implementers can be partners in the supported action or project, so that learning can happen both ways...what we call ‘communicative interaction’” [Nauwelaers and Wintjes 2000: 6]. Learning firms and communities require “learning government” [Nauwelaers and Wintjes 2000: 12].

The evolving policy process in relation to innovation parallels recent thinking in the community development field. In *Community Building Coming of Age*, the growing importance of local intermediaries is noted. These intermediaries serve as meeting places for local and non-local stakeholders, enabling them to examine the diverse and interdependent factors involved in creating innovative communities, and to coordinate their efforts around mutually determined goals. They also facilitate interactive learning among community development practitioners and policy-makers.

In part, the movement towards establishing local intermediaries reflects a need to create more specialized structures to support the work of community development organizations. Intermediaries are able to focus on certain functions such as research and learning, multistakeholder collaboration and systems reform, than are organizations engaged more directly in project development or service delivery.

However, the rise of intermediaries also reflects another trend in the work of community building: growing attention to the factors that contribute to social and economic exclusion. The term ‘community-based regionalism’ has been coined to refer to efforts that tackle the issues of equitable development at a broader level of action. “These efforts emerge from a common understanding that the future of low-income communities is tied to broader regional social, political and economic factors; and that improving the well-being of low-income neighborhoods requires understanding the regional context and taking action beyond a neighborhood or community level” [Kirshenbaum and Kunamneni 2000: 4].

Such thinking is not foreign to CED practitioners. In fact, one might argue that its emergence as a specific area of activity derives from the capacity and maturity CED has attained over the past 30 years. In any case, the rise of local community building intermediaries makes it possible to recognize a convergence between the agenda of CED and of more conventional programs for strengthening economic innovation. Such intermediaries can bring together diverse organizations and sectors around broad community-led agendas for building creative, inclusive communities.

## ***Recommendations to Enhance Innovation Capacity***

### ***National Innovation and CED Working Group***

The attention that innovation currently is receiving in public policy circles offers a window of opportunity for CED. The innovation theme touches many of the distinctive strengths of CED – its focus on the local or regional system as the place where the elements come together to generate creative action; its recognition of the crucial role local people can play in directing development processes; its attention to creating new institutional capacities at the local level; its appreciation of the role of social capital in enabling innovation; and its focus on the capacity to learn as the most critical process in the knowledge economy.

At the same time, the topic of innovation raises many challenges that CED seeks to address in support of marginalized individuals and communities. These issues include how to enhance the capacity for learning required by a knowledge economy; how to overcome the digital divide and enable communities to make effective use of new technologies; how to shape the labour market and create new enterprises so that ‘good jobs’ are available to all; how to maintain social cohesion in a world of rapid change; and how to develop strong and healthy communities that offer the combination of security and stimulation people need to lead productive and satisfying lives.

While policy agendas come and go, the underlying issues posed by the notion of innovation speak to the enduring concerns of CED. The field has both something to gain from addressing the theme of innovation and something to contribute. A National Working Group on Innovation and CED would help to focus resources and energy around an innovation agenda within the sector.

***Recommendation One:***

*Create a national working group on innovation and CED to spearhead efforts over the next year to advance an innovation agenda within the sector.*

*The mandate of this group would be to mobilize the sector to contribute to specific aspects of this agenda and to coordinate diverse efforts. An initial step would be to secure the funding required to pursue an innovation agenda.*

***An Agenda***

***Foundations***

CED is going through some important changes as it responds to the evolving economic, social and policy context. CED organizations are grappling with new issues – helping individuals and communities access and apply new technologies; supporting the unemployed and underemployed in their efforts to link to a changing labour market; helping communities find their niche in the knowledge-based, global economy; experimenting with asset-based development strategies; and finding new ways to meet social needs in the face of major social policy shifts. A number of CED organizations are also repositioning themselves to tackle issues on a more community-wide or regional basis and taking on roles as the convenors of multi-organizational and multisectoral responses to community challenges.

At the same time, important efforts are being made to establish national and regional structures that can support CED organizations in their work. These include the Canadian Community Economic Development Network, the Community Economic Development Technical Assistance

Program, and various local and regional networks that provide technical, financial and learning support for CED organizations and practitioners.

Despite these significant changes, CED remains one of the country's best-kept secrets. Government policy-makers often have only limited understanding and appreciation of community economic development and the role CED organizations can play in addressing important policy issues. The general public typically would not recognize CED as a centerpiece of community life. Elevating its profile among policy-makers and the public would help address the perennial obstacle CED organizations face in relation to their work: lack of adequate funding. In this time of change, it is appropriate for CED to re-articulate its vital role.

***Recommendation Two:***

*Strengthen the foundations for CED's role in innovation through the following measures:*

***Policy Vision***

*Prepare a response to the federal government's strategy papers on Innovation and on Skills and Learning that emphasizes the principles of equitable development and describes a more robust array of strategies for building creative, inclusive communities.*

This response should:

- Position CED at or near the centre of the public policy focus on innovation.
- Identify the significant areas of linkage between CED and current thinking about innovation.
- Challenge the relatively narrow technological and economic view of innovation and promote a broader vision that includes social inclusion, equitable development and environmental health as primary objectives of an innovation agenda.
- Highlight the extensive experience that CED brings to the task of integrating economic and social development, specifically in the context of local communities.
- Present an expanded strategy for economic and social inclusion by adding to the government's program for learning and training the range of techniques and activities used by CED practitioners.
- Propose steps for realizing a closer collaboration between the CED sector and government around the vision of building creative, inclusive communities.
- Emphasize the need to customize policies and programs according to the distinct needs of different communities and regions.

### ***Public Profile***

*Raise the public profile of communities economic development through a media campaign promoting a vision of creative, inclusive communities and examples of how these are being built through CED initiatives across the country.*

Such a campaign should:

- Address challenges and opportunities familiar to communities across the country.
- Use storytelling as the primary means for conveying the work of CED organizations, and for offering inspiring examples of community innovations and innovators.
- Highlight the involvement of people from diverse backgrounds and perspectives.
- Invite participation from community members interested in supporting such efforts in their communities.
- Address a broad audience.

### ***Funding Support***

*Establish a CED funding collaborative involving government, charitable foundations, social venture capitalists and corporations to help provide the sustained funding needed to initiate, develop and expand CED ventures.*

This initiative should:

- Build on current efforts within the sector to develop a funding mechanism to support CED throughout the country.
- Bring funders and CED practitioners together around a common vision of building creative, inclusive communities.
- Engage funders and CED practitioners in a collaborative effort to design the mechanisms for meeting the funding needs of the sector.
- Enable the pooling of funds from different institutions in order to pursue long-term, holistic CED agendas.
- Ensure that funds are administered in a manner that responds flexibly to the needs of different localities and regions.
- Support the mutual interest of funders and practitioners to experiment with new strategies and techniques, learn which strategies work effectively, and sustain and scale up successful initiatives.



## ***Key Areas for Action***

### ***Learning***

Personal and community learning have long been among the basic tools of CED practice. In an innovation economy, the capacity to learn and change is even more critical to sustained social well-being than it was in the past. Individuals, organizations and communities must adapt to basic shifts in the environment, such as the introduction of information and communications technology or the rise of the global economy. But they also need to adjust to the accelerated pace of change.

Innovative organizations, sectors and communities excel at learning. They have strong learning cultures, bring together people from diverse backgrounds to share experiences and ideas, and put in place the practical tools that support the learning process. CED organizations are particularly committed to ensuring that marginalized members can contribute their perspectives and insights to the process of community learning.

Stronger links must be made between formal institutional learning and informal community-based learning. Both large and small institutions of higher education can support community learning. In fact, smaller institutions often play an important role in supporting the development of local communities. Efforts of the University College of Cape Breton to help rebuild the economy of Cape Breton Island, for example, illustrate the potential contribution of such institutions.

There are many opportunities to build on the growing movement of learning communities, utilize information and communications technology to support learning, forge closer relationships with universities and research institutes, recast evaluation processes as tools for learning and innovation, and build capacity to scale up CED innovations.

### ***Recommendation Three:***

*Strengthen the learning capacity of the sector and the communities it serves through the following means:*

#### ***a. Learning Communities***

*Convene or participate in multistakeholder initiatives to promote learning communities and establish closer ties with emerging networks for virtual learning (e.g., Community Learning Networks).*

Such initiatives should:

- Foster strong learning cultures within communities.
- Strengthen the core capacity of communities to engage in collaborative learning and creative problem-solving.
- Maintain a broad focus with the development of high-tech skills as one component of a more extensive commitment to lifelong learning.
- Expand the use of electronic learning networks to support CED.

***b. Collaborative Learning among CED Practitioners***

*Promote the development of learning cultures and practices within CED organizations and support these learning processes with national, regional and local learning networks.*

This initiative would:

- Share insights and practices among CED organizations regarding the strategies they use to foster learning and change within their agencies.
- Establish a Pan-Canadian electronic learning network to facilitate collaborative learning among CED practitioners across the country.
- Support local and regional CED networks that create learning opportunities for network members.

***c. Research***

*Establish links with universities and other research centres to provide the ongoing research support needed to enable innovation in CED and document emerging CED practices.*

Such an initiative would:

- Connect CED organizations to a steady stream of knowledge and ideas for innovation.
- Create opportunities for innovative local practices to be documented and shared across the country.
- Encourage universities to undertake timely and relevant research of benefit to local communities.
- Promote the use of action research models that link learning with the practical work of community problem-solving.

***d. Learning and Evaluation***

*Form a learning and evaluation roundtable to consolidate practices through which CED organizations, funders and other stakeholders can use learning and evaluation to determine the effectiveness of initiatives and to apply lessons for generating innovations.*

This initiative would:

- Help build consensus around the role and function of evaluation as a tool to support learning and innovation.
- Streamline the methods appropriate for conducting learning-focussed evaluations of CED.
- Secure the funding to enable CED organizations to integrate learning and evaluation into their practice.
- Enhance the capacity of the sector to develop and share innovative solutions.

***e. National Dissemination Project***

*Establish a national dissemination working group to build the systematic capacity to move successful CED innovations to scale.*

Such an initiative would:

- Consolidate existing knowledge about the means for scaling up successful CED strategies.
- Carry out a pilot project intentionally designed and implemented as an opportunity to build sectoral capacity for scaling up successful strategies.
- Draw lessons to support additional efforts to bring CED innovations to scale.

***Cluster-Based Development***

Innovation has been described as “combinatory play” – it involves combining things in new ways to generate desirable effects [Florida 2002: 31]. Cluster-based development facilitates the innovation process. It brings together diverse knowledge and skills around a focussed area of activity, whether a familiar sector like agriculture, tourism, housing or part of the ‘new economy,’ like photonics or biotechnology. This critical mass of resources provides the capacity to generate new approaches.

The holistic orientation of CED can make it difficult for practitioners and organizations to develop the depth of knowledge in any given sector required to reach a high level of innovative

capacity. In order to achieve outcomes beyond the most basic, it is increasingly necessary for CED organizations to strengthen their sectoral expertise, particularly in the case of science and technology. It is essential to bridge the gap between CED practitioners and the world of science and technology in order to improve marginalized communities' access to these resources.

***Recommendation Four:***

*Enhance the innovation capacity of CED by deepening its technical and business expertise in targeted sectors of activity.*

***a. Cluster-Based Development***

*Form a national working group to adapt the concepts and practices of cluster-based development to marginalized individuals and communities.*

This initiative would:

- Document exemplary practices in Canada and abroad where the cluster-based development strategy has been applied specifically to create economic opportunities for marginalized individuals and communities.
- Identify specific sectors that lend themselves to CED initiatives for enterprise development.
- Support CED organizations in devising sector-based workforce development strategies.
- Disseminate these findings to CED groups across the country.

***b. Sectoral Expertise***

*Create one or more national working group(s) to develop the depth of expertise within the CED field needed to innovate in strategically selected sectors of activity – e.g., green economics, value-added food services and online publishing.*

Such an initiative would:

- Establish national and regional bases of sectoral expertise to support local CED initiatives in these sectors.
- Strengthen connections between CED practitioners and individuals with expertise in selected sectors.

- Experiment with ‘virtual clustering’ [Smith and Brown 2002] on a national and regional basis to help build a critical mass of expertise and capacity in fields where economic opportunities exist for marginalized individuals and communities.

### *c. Science and Technology*

*Explore the possibility of partnering with the National Research Council’s Industrial Research Assistance Program, and with other government and university-based science and technology institutes, in order to bring the benefits of science and technology to marginalized communities.*

This initiative would:

- Ensure that CED organizations are aware of the programs and resources that the National Research Council, Natural Resources Canada, Environment Canada, and other science and technology organizations offer to marginalized communities.
- Expand the number of communities receiving assistance from the National Research Council to develop new technology clusters.
- Explore additional ways that government and university-based science and technology institutes can shape their policies and programs to extend the benefits of science and technology to marginalized individuals and communities.

### *Community-Based Governance*

The federal government’s Innovation Strategy points out that the various elements of an innovation system come together in local communities. It also recognizes the need for federal, provincial/territorial and municipal governments to work with the private, academic and voluntary sectors “to build local capacity and unleash the full potential of communities across the country” [Industry Canada 2002: 21]. New community-based modes of governance are required to integrate a range of partners, including governments within community-led responses for building creative, inclusive communities.

CED organizations are well positioned to contribute to these community-based governance models. They can use their tacit knowledge of local community dynamics and their holistic perspective on community development to convene, animate and facilitate multistakeholder processes. They also can bring their special focus on equitable, inclusive development to ensure that all community members benefit from local innovation agendas. Finally, they can create co-operative and nonprofit structures for delivering human services that enable recipients to shape the design and implementation of those services.

***Recommendation Five:***

*Establish multistakeholder processes focussed on the broad goal of building creative, inclusive communities through the following means:*

***a. Multisectoral Partnerships for Equitable Development***

*Convene or participate in multisectoral partnerships with a mandate to plan and implement strategies for equitable development.*

Such an initiative would:

- Assume different forms depending on local circumstances – e.g., multi-purpose development organizations, multi-organizational and multisectoral networks, and government-sanctioned planning and development processes.
- Focus on institutional or systemic changes that enable equitable development.
- Support local governments interested in building creative, inclusive communities to take concrete action in pursuit of that vision.
- Make equitable development part of the emerging Smart Growth agenda.

***b. Local Intermediaries***

*Build the capacity of CED organizations to serve as local intermediaries that can play the role of convenor, animator and systems change facilitator for building creative, inclusive communities.*

This initiative would:

- Secure the policy support and financial resources needed to establish local intermediaries focussed on building creative, inclusive communities.
- Identify and share exemplary practices in pursuing equitable development on a regional or community basis.
- Identify and share exemplary practices for organizations playing the role of convenor, animator and systems change facilitator.

*c. Alternative Service Delivery*

*Promote cooperative and nonprofit structures as alternative service delivery vehicles in the human services sector.*

This initiative would:

- Create structures for meeting a variety of human services – e.g., child care and home care – in which citizens play an active part in shaping these services.
- Customize human services to meet the distinctive needs and aspirations of local communities.
- Create community-owned organizational and financial assets that can be used to serve other local purposes.

***Conclusion***

It is clear that the concept of innovation can inform the practice of community economic development. Closer links must be forged between science and technology research institutes and those engaged in building socially and economically inclusive communities. Community-based governance structures can help identify these opportunities and encourage these links. At the same time, CED can inform the concept of innovation. CED practice seeks to reduce social and economic exclusion and ensure that the benefits of innovation are more widely shared among all Canadians.

***Appendix***  
***Innovation: The Practice***

This appendix profiles a variety of community initiatives that illustrate the key themes in our discussion of the links between innovation and community economic development. Examples in the areas of learning, clustering and community-based governance are presented. Efforts to make use of new technologies and to strengthen connections between community groups and knowledge institutions, such as universities, are also discussed.

These examples in no way represent an exhaustive survey of the innovations taking place in community economic development. Rather, they are intended to highlight major directions being pursued in Canada and elsewhere.

***Learning***

***Learning communities***

Regions have emerged as the locus for the exchange of learning and resources [Landry, Amara and Lamari 2001: 3]. The OECD launched the learning communities movement, which has been informed by 30 years of research and development by UNESCO. The movement is active primarily in Western Europe, Australia and, more recently, British Columbia. Learning communities seek to integrate lifelong learning and community development.

As social learning, community development engages people. ... They learn through group activity to define problems affecting them, to decide upon a solution and to act to achieve the solution. As they progress, they gain new knowledge and skills [Faris and Petersen 2000: 107].

A learning-based approach to community development applies learning, using the community as the classroom or laboratory; it emphasizes experiential learning including apprenticeships, internships, and collaborative and peer learning. It mobilizes the resources of both formal and informal learning systems [Faris and Petersen 2000: 55].

The concept of the learning region has emerged to describe those places that offer the right institutional environment to encourage both private and social learning at the level of the individual worker, and within businesses, nonprofit organizations and government agencies [Wolfe 2002: 8]. Learning regions are characterized by a set of conditions, including a certain level of trust, that enable regional actors to learn and improve their performance [Geenhuizen and Nijkamp 2001: 41]. Another important dimension of learning regions is the transformation of knowledge – i.e., the flows between codified and tacit knowledge, and between different disciplines.



In learning communities, five sectors typically contribute to the learning process: civic or local government; economic (private and cooperative enterprise); public (libraries, recreation commissions, social agencies, arts councils, health bodies, museums); education (kindergarten to university) and the voluntary sector including individual citizens [Faris 2001]. Prior or current local initiatives are not replaced but rather built upon by the learning communities approach.

In Canada, the Learning Communities movement has been particularly active in British Columbia. Many coastal, rural and remote communities have borne the brunt not only of global market forces but also of diminishing natural resource stocks. Some communities have lost entire industries or have felt the effects of major industrial restructuring. All urban centres face deeply rooted, interrelated problems of poverty, under-education, inadequate housing, poor health and drug abuse for those who live in the shadows of their community.

Since 1999, the Office of Learning Technologies of Human Resources Development Canada, in conjunction with the BC government, has provided two-stage funding for several pilot projects under their Community Learning Network (CLN) Initiative. The first two pilot projects, Upper Skeena and Lumby, illustrate the practical nature of the learning communities approach to the unique needs of each community.

The pilot projects have supported a variety of initiatives, including Books for Babies to promote new parenting and basic literacy skills; service-learning projects for youth (ages 17-25), particularly those considered at risk; a Learning Shop that hosts learning events such as evenings of language and literacy, musical jam sessions for youth and new parent programs. Future projects will develop outcomes-based community competencies to enable recognition of knowledge and skill acquisition and Prior Learning Assessment. The use of learning technologies in Community Access sites and the Learning Shop have added value to this community-based civic and new literacy initiative [Faris 2001].

### ***Harnessing new learning***

Innovative communities also face the challenge of sharing their learning so that new strategies can gain wider application. The Vibrant Communities poverty reduction initiative is an important example of collaborative learning.

Vibrant Communities evolved from the Opportunities 2000 project, launched in 1998 by the Lutherwood Community Opportunities Development Association (CODA) in Waterloo Region. The project's primary objective was to help 2,000 households move out of poverty by the year 2000. In order to achieve this objective, Lutherwood CODA sought to mobilize the entire community in

creating opportunities to reduce poverty. These opportunities focussed on training, access to funds for business startup and the development of community enterprise. The partnerships included projects that helped meet basic needs, such as adequate housing, and that removed barriers to participating in the labour market, such as high transportation costs.

The project added a unique feature – a Leadership Roundtable composed of representatives from business, low-income households, government and social agencies. The Roundtable provided overall direction to the project. Its members promoted awareness of the dimensions of poverty and possible solutions. In various ways, the Leadership Roundtable asked the community: “What can you do to reduce poverty?”

As one of the partners, the Caledon Institute assumed responsibility for research, learning and dissemination. Caledon conducted research in support of the community’s efforts to identify effective poverty reduction strategies, documented the evolution of the project and its outcomes, and shared its lessons.

Throughout the project, Caledon facilitated a learning consortium consisting of 14 community organizations and social service agencies from across Canada. Consortium members observed the Waterloo Region initiative, offered feedback and guidance, and identified elements of OP2000’s work that could be adapted to their local contexts.

Building on the encouraging results achieved by Opportunities 2000, a new multi-site, multi-year initiative was established. Vibrant Communities is a Pan-Canadian Learning Partnership involving 13 communities committed to exploring comprehensive, multisectoral approaches to poverty reduction. Through the use of teleconferences, an interactive website, coaches and face-to-face meetings, representatives from these communities are exchanging skills, experiences and insights related to local solutions to reduce poverty.

While all Vibrant Communities members are participating in the Learning Partnership, five communities will receive additional financial and technical support to help them develop multi-year poverty reduction strategies. The practical experience gained through these ‘trailbuilder’ initiatives will provide material for the reflection of all Vibrant Communities partners. The initiative identifies itself as an action learning process: Concrete action will stimulate and inform dialogue and reflection; ideas and insights will refine practical strategies.

An extensive learning and evaluation process also is being developed to assist the Learning Partnership in distilling lessons from its collective experience. These insights will be shared with other organizations interested in community-based responses to the challenge of poverty.

## ***Clustering***

### ***Cluster-based training***

While clustering is an important strategy for economic innovation, some cluster-based work has paid special attention to the needs of marginalized groups and communities. The US-based Center for Community Change, for example, carried out a study on sector strategies to create employment for low-income and disadvantaged individuals. Their strategies focussed upon two distinct approaches to rural sectoral development – retention and development of an existing sector and the creation of a new sector [Ogkagaki, Palmer and Mayer 1998].

The study noted that rural areas face unique challenges with their fragile economic base, low population density and high poverty rates. Their distance often limits access to expertise, market opportunities and capital markets. As markets become more complex and specialized, small rural firms can benefit by being connected to larger markets. Business expertise in advertising, finance and marketing usually is concentrated in urban areas and is often difficult to find in rural areas.

Modernization assistance involves access to new technologies and training of workers in how to set up, operate and maintain these technologies. While it is a challenge to deliver all the elements of a workforce development program, sectoral programs should include job training, readiness, placement, school-to-work and support services.

Following a broad scan of rural sector strategies across the country, the authors chose four programs for closer examination – the Hosiery Technology Center in North Carolina, the Wood Products Competitiveness Corporation of Oregon, Ganados Del Valle of New Mexico and Alaska Village Initiatives. All four programs have succeeded in improving the competitiveness of local firms, fostering economic growth and increasing job opportunities for disadvantaged populations.

The Wood Products Competitiveness Corporation (WPCC) was initiated and originally funded by Oregon state in response to a job loss crisis in the wood products industry. The WPCC established a Secondary Wood Products Training System, now taught at three community colleges. The system includes entry-level training for high school graduates, enhanced entry-level targeted to welfare recipients, tailored courses for management, specialized training on machines and computers, and youth apprenticeships. The WPCC also created the Made in Oregon program, which helps leverage Oregon's environmentally friendly reputation as a marketing tool.

The Hosiery Technology Center (HTC) grew out of an industry association and is now a state-funded entity located in a community college. The HTC focusses on modernizing technology and upgrading the quality of the workforce. It develops new technologies in association with North Carolina State University. With close ties to the Carolina Hosiery Association, the HTC is linked to

firms in the industry and relevant state and federal agencies. It also encourages inter-firm communication through the online Hosiery Information Production Services. The HTC uses a just-in-time approach to train employees when there is a demand for certain skills. Classes in knitting, seaming, dyeing and machine maintenance are short-term and relatively small.

Ganados Del Valle (GDV) and Alaska Village Initiatives share an anti-poverty mission and operate within Native and ethnic communities. Community activists initiated the GDV to fight poverty and promote sustainable development. It helps micro-enterprises and co-operatives by providing generalized training in business development and financing through a revolving loan fund. GDV pursues a vertical expansion strategy in which staff conceptualize an idea, secure funds, and then hire and train community members to run the business. GDV developed, for example, a sheep growers' co-operative and a livestock loan program to expand and improve the quality of local sheep. It also advocates for grazing rights on federal lands and promotes an environmentally sustainable economy.

Alaska Village Initiatives (AVI) is a community development organization that seeks to improve the well-being of rural Alaskan communities. It created the Alaska Native Tourism Council, a co-operative marketing association that allows Alaska villages to fund joint marketing programs. AVI trains entrepreneurs through a combination of group workshops, phone contacts and on-site technical assistance. Training focusses on marketing, service delivery and working in a cash economy.

All these programs are driven by several common assumptions:

- The market has the capacity to generate jobs and create opportunities on a large scale.
- Mechanisms are required to ensure that low-income and low-skill workers can benefit from the employment opportunities that the market produces.
- Efforts to create jobs and opportunities for low-income people should focus not only on the neighbourhoods in which they live, but on a broader geographic area.
- The initiatives need to be large enough to have a measurable impact upon the communities.

The Partners for Jobs initiative is another example of cluster-based training. The initiative was created in August 1998 by the Chairman of the Regional Municipality of Ottawa-Carleton (now Mayor of Ottawa). Its mandate was to tackle the problems of unemployment and underemployment in the region. A multisectoral working group was organized that included representatives from all levels of government, anti-poverty groups, labour, social organizations, training bodies, key employment sectors in the region (i.e., technology, life sciences and tourism) and the Caledon Institute of Social Policy. Its work included market-relevant training; supports for self-employment and the creation of community business; policies to promote transition to work and job retention; and the collection of timely and relevant local labour market information.

The training focussed upon major clusters in the Ottawa economy including high tech, biotechnology, photonics and tourism. Training for the first three clusters targeted manufacturing positions. Partners for Jobs subsequently was rolled over into a region-wide employment partnership called TalentWorks and turned over for implementation to the Ottawa Centre for Research and Innovation. What began as a small project for training the hard-to-employ has evolved into a comprehensive initiative for addressing skill shortages in the major clusters of the local economy.

Another example involves the US-based Department of Energy laboratory operated by the University of Chicago, entitled Argonne National Laboratory. It formed a partnership with Bethel New Life, a community development corporation that serves a distressed neighbourhood in Chicago. The partnership was designed to determine whether science and technology can address the needs of an inner-city community. It established a job training program focussed upon science and environmental training; computers to enable access to the Internet; and surveyed abandoned industrial properties to clean up contaminated sites for future development [Economic Development Administration 1999: 33].

### ***Building on inner city clusters***

In *Jobs and the Urban Poor: Publicly Initiated Sectoral Strategies*, the authors assess the potential of sectoral economic development strategies for increasing employment opportunities for the urban poor [Kwass and Siegel 1995]. Based on a literature review, expert interviews and 10 case studies, the project attempted to assess the effectiveness of sectoral strategies as both a general economic development tool and a means to alleviating poverty.

The authors conducted in-depth case studies of 10 sector strategies in which the public sector played a major role. The projects selected were:

- The Industrial Networks Program of Louisville, Kentucky
- Minority Participation in Public Works Construction of Portland, Oregon
- New York/New Jersey Regional Alliance for Small Contractors
- Industry Action Projects of Massachusetts
- Garment Industry Development Corporation of New York
- Initiatives in the Advanced Transportation Sector of Los Angeles, California
- Philadelphia Recycling Consortium, Pennsylvania
- Skills Training in Manufacturing Metalworking of Milwaukee, Wisconsin
- Life Sciences Strategy of Baltimore, Maryland
- The Biotechnology Industry Initiatives, Massachusetts.

Most of the projects sought to improve the competitiveness of an existing sector, encourage the growth of an emerging sector or create opportunities for employment within a sector. While two of the projects focussed on creating jobs for non-traditional constituencies, targeting jobs for the poor usually became a goal only when it sought to promote sector growth or competitiveness as well.

Organizational structures varied widely among the selected projects. In an effort to respond to market forces, most projects involved strong industry participation. In mature manufacturing sectors in which it is essential to retrain dislocated workers, organized labour usually played an important role. Community-based organizations were often involved in creating linkages with low-income groups.

Job training and technical assistance were the most frequently used program tools. Although most of the job training did not target low-income individuals, the programs that did usually included outreach, technical training, child care and post-placement follow-up. The technical assistance programs mainly involved technology, but in some cases extended to marketing, financing and general management. Other key tools included private and public sector procurement to develop sectors, direct investment in facilities to support business development, and the attraction of targeted companies to the community.

When compared with traditional education and training programs, several initiatives were successful in upgrading skills and job placement, and improving job quality. The projects indirectly resulted in greater interest in the targeted sector's potential for economic development, and efforts to alleviate poverty.

Although none of the projects explicitly addressed urban poverty, sector strategies have the potential to be more effective than traditional anti-poverty tools. All anti-poverty efforts face similar barriers, including a lack of basic work skills and technical skills among the urban poor, a pool of dislocated and more highly skilled workers competing for the same jobs, a discriminatory and unsupportive work environment for women and visible minorities, and low-wage jobs that afford few opportunities for advancement.

Sectoral strategies offer several advantages over other anti-poverty models. With their comprehensive knowledge of a sector's needs, these strategies can help design more appropriate training. The collaborative process can overcome institutional barriers, such as discrimination or lack of informal job channels for the urban poor. The participation of community-based groups with greater insight into the needs of low-income individuals is often institutionalized in sector projects.

The study concludes that every community has a unique economic structure based on historical location advantages. Moreover, the factors of competitive advantage are changing rapidly, making it difficult to recommend appropriate sectors. Nonetheless, six sectors appear to have

particular advantages for development in urban areas – food, environmental technology, hospitality, health care, printing and graphic arts, and construction [Kwass and Siegel 1995].

### *Creating new economic clusters*

Rural communities are often at a disadvantage because they have neither the economy of scale to sustain their operations nor the aggregate demand to support their products and services. One option to promote their economic, social and environmental sustainability is to obtain additional mass and reduce their resource vulnerabilities [Douglas 1989].

Multi-community development is a ‘mass enhancing’ strategy [Douglas 1989]. By working with their neighbours, small towns can increase their store of resources and raise their effectiveness beyond that of towns acting on their own. The approach is innovative because small towns are encouraged to cooperate, rather than compete, with each other. By shifting from single to multi-community development, small towns can stem economic decline and lay the groundwork for more sustainable development.

A number of examples of small towns banding together in multi-community clusters are found in Iowa, with the first voluntary multi-community formed in 1986. The Area Community Commonwealth is a “35-square mile neighbourhood.” The average distance between the seven-community neighbourhood is 13 miles.

In Canada, the University College of Cape Breton is involved in efforts to create a critical mass through sectoral clustering. While sectoral clustering in the micro sense is evolving in the Atlantic Region, there must be concurrent research associated with linkages of the micro clusters to establish a needed critical mass. Current attempts at clustering typically focus on physical proximity. The University College of Cape Breton will provide research capacity in an attempt to create an Atlantic virtual cluster. This research seeks to develop the critical mass necessary for global competition and export. The ultimate goal is to provide a collaborative environment of private, public and University College interests in order to stimulate new micro clusters and regional innovation [Smith and Brown 2002].

In another example of the creation of clusters, the Government of Saskatchewan and the National Research Council formed a steering committee in 1996 to bring together leading representatives from the private sector, governments, universities and financial institutions. They sought to develop the infrastructure of an innovation system based on the province’s existing assets and economic base.

The main drivers of the provincial economy are the primary and traditional sectors of agriculture, mining, energy, forestry, tourism and information technology. The steering committee

explored how science and technology could enhance the work of these clusters. Geophysics and remote sensing technologies were considered for use in mining and in oil and gas exploration. Discussions also focussed upon applying biotechnology and other life sciences to agriculture, forestry, fisheries, health and environmental sciences [National Research Council website b].

Three areas were identified as relevant to innovation – biotechnology, information technology and communications, and advanced manufacturing. Biotechnology is the scientific and engineering activity that manipulates biological agents to produce new or improved goods and services. Information technology and telecommunications are products and processes that involve the collection, transmission and manipulation of information. These technologies will be used individually or in new combinations to address the needs of emerging industries in the province.

### *Applying new technologies*

Strengthening the links between community organizations and knowledge-based institutions, such as universities, is a critical ingredient for enhancing community innovation. An interactive partnership between these organizations can enable the effective application of technical and community expertise, including appropriate uses of new technologies.

The University College of Cape Breton (UCCB) has been involved in the application of technology with a community in the Puuc region of the Yucatan Peninsula, Mexico. The methodology for enterprise development consists of three elements. The process of technology transfer involved the acquisition of physical and organizational technology. Institutional linkages were used to incubate an enterprise based on this technology and to provide specialized support from consultants. A formula for commercial success involving finance, technology and education was applied.

The approach is inspired by an analysis of existing community business models, notably the Mondragon complex in Spain. In this approach, critical success factors include appropriation of technology, finance and human resources. With respect to the first area, the guiding principle is to seek the most appropriate world-class technology. The guiding principle in finance is that social enterprises need secure access to capital. The guiding principle for human resources is that every effort must be made to maintain a program of continual development of management and workforce skills.

The work in Mexico was built on the notion of institutional linkage – i.e., that several institutions linked together in a systematic fashion can do more than each of the institutions operating as isolated units. This model of economic development includes the university as an agent of technology transfer. It presumes that both technological innovation and social innovation are necessary for the socioeconomic survival of these communities.



Governments tend to think that a technological fix will cure problems, while community activists tend to think that good intentions and democratic participation are enough. It is now quite clear that one can't work without the other. Technology that blindly follows free market forces can destroy societies, while highly ideological movements without the powers of technology will be humanly interesting, but they will remain economically marginal [MacLeod, McFarlane and Davis 1996].

The basic strategy employed in the project was to encourage local self-sufficiency in food, while searching for new culturally and environmentally friendly businesses, considered necessary to bring in new money and jobs. The three-sided Mondragon triangle of technology, finance and human resources was used as a guide [MacLeod, McFarlane and Davis 1996].

For human resource formation and technology, links were made with several university departments. The School of Architecture at the University of Yucatan held a design competition. Architecture students designed the hotel complex to include an arboretum, botanical garden, restaurant, craft concessions and Mayan style cabins for tourists. Mayab University conducted a business feasibility study. Chapingo University assumed responsibility for designing an arboretum (tree park) and a botanical garden as part of a culture-based tourist attraction needed. The National Institute of History and Anthropology contributed advice on how to protect and enhance local traditional culture [MacLeod, McFarlane and Davis 1996].

The team negotiated with the Department of Biochemistry at the University of Yucatan to assist in classifying and interpreting traditional herbal medicines. The plan included the establishment of an herbal medical clinic in an interior area where there is neither doctor nor hospital in more than 10,000 square kilometers. Such a clinic could be an important experiment in alternative medicine.

This project demonstrates how the model of technology, finance and human resources can be modified to replace conventional profit-oriented corporations with community business, creating a powerful instrument for regenerating economically marginalized communities. The strategic mix of finance, technology and education – along with the creation of a dynamic system of mutually supporting institutions – were all essential elements in its success.

## ***Community-Based Governance***

### ***Acting as catalyst for innovation***

An increasingly important role being played by CED organizations is that of local intermediary. An urban Canadian model from Quebec, the *corporations de développement économique communautaire* (CDEC), provides a good example of the opportunities and challenges related to innovation [Fontan and Shragge 1998].

There are seven CDECs in Montreal, whose mandate is to make constructive interventions in and provide service to one administrative district of the city. The first four CDECs were created through a process of local organizing, while the later ones were initiated by government, but with structures that give control to the local community. By 1990, an agreement was reached by the municipal, Quebec and federal governments to fund these initiatives and grow their number. In 1990, the governments agreed on three objectives for the CDECs: to encourage training and integration of the local population into the labour market – “employability services;” to support businesses and entrepreneurs in their development projects to create or maintain jobs; and to develop a partnership between community organizations, businesses, unions and institutions as the most important way to achieve these goals [Shragge 1992].

The services are intended to develop individual capacities of different categories of unemployed workers to help them enter and remain in the labour market. The services include information and referral to appropriate programs, workshops on different aspects of employment, and training and educational programs. The CDECs’ employability programs have produced, on a small scale, better results than those administered by business, school boards and government agencies [Leduc 1994], partly because they have been able to bring together business, labour and the community to examine local labour market needs and training capacities.

The CDECs are also involved directly in business development in their respective districts. Examples of their practices include: providing advice to individual enterprises around developing business plans, seeking financial support particularly from government and building links among existing businesses. CDECs have developed innovative and experimental forms of entrepreneurship, such as production co-operatives and businesses that specialize in job training. CDECs also contribute to local economic planning, which includes consulting with the community and presenting policy proposals to the City of Montreal. These approaches maximize employment options and/or promote the development of social programs, such as nonprofit housing.

The third function of the CDECs is to build partnerships among representatives of business, labour, community organizations and institutions [Panet-Raymond 1992]. Each group on the board of directors participates in these partnerships. The results have varied; in some districts, for example, the CDECs have become a new voice for unifying economic actors and shaping the local economic agenda.

One major achievement of the CDECs is their innovative forms of socioeconomic development. Training businesses link social production with job skills development, loan circles forge solidarity and ecological co-operatives are a new model for sustainable development. These are community businesses – not-for-profit private companies – that enhance the social functioning of the community. Perhaps the most important achievement of the CDECs is their contribution to the democratization of economic processes at the local level.

*Using co-operative structures to enable participation in economic development and service delivery*

Co-operatives are community-based businesses which serve the needs of their members/owners. These may be consumer co-ops, worker co-ops, marketing co-ops, housing co-ops and producer co-ops. Although co-ops are not, strictly speaking, nonprofits, they are part of the 'social economy' which encompasses organizations intended to meet community needs in a democratic fashion [Quarter 1992]. Rather than copying conventional businesses, co-ops can emphasize the creative application of co-operative principles such as concern for community, democratic control and cooperation [Furstenburg 1985; Hanusch 1985; Briscoe 1987; Saxena and Craig 1990].

The earliest forms of public health insurance, public education and public housing in Canada were provided by co-operatives. These social innovations were later adopted by governments and transformed into social programs. The co-operative model is adaptable and can be applied to virtually any social or economic activity.

The Co-operative Alternatives for Public Services project is a partnership among the Canadian Co-operative Association, the *Conseil canadien de la coopération* and the Institute of Public Administration of Canada. Its goals are to document the involvement of the co-op sector in delivering public services, determine how co-operative models inform the debate on alternatives for public service delivery, identify pilot opportunities and develop a policy framework for raising the profile of co-ops as service delivery models.

The 'alternative service delivery' debate in Canada focusses not just on cutting costs and improving efficiency, or on privatizing government operations. There are concerns with service quality and taking advantage of new technologies to improve the delivery of public services.

Co-operative models make important contributions to the debate on alternate service delivery. First, they show that public goods are not exclusively the preserve of the state and the consideration of alternatives need not minimize the commitment to public goods. Co-operative models provide governments with ways to deliver services that are conducive to innovation, cost-effectiveness and local empowerment without sacrificing the values of community, consensus and shared responsibility.

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