Preface

PURPOSE OF THIS BOOK

Networked Communities: Strategies for Digital Collaboration focuses on communities that have—or want to have—digital broadband capability and are eager to make maximum use of that capability for their citizens. The stakes include increased economic development, organisational performance and improving quality of life. As communities undergo rapid change in the 21st century, their residents and workers are looking for ways to assure more positive outcomes. The authors provide success stories of community transformation that include elements of hope, and offer a framework for more active and informed development. Many communities are today connecting their local businesses and institutions into global broadband networks. This book suggests ways individuals, groups and organisations can contribute to the sustainability and well being of their communities while meeting their own needs.

The debate about the "how" and the "why" of networking communities has extended over many decades. In the late 1970s and early 1980s, there was much discussion in the United Nations and other international forums about a New World Information and Communications Order (NWICO) in which opportunities for easy exchange of information between and among all societies, both rich and poor, could be more equitably distributed using modern information and communication technologies. Under the auspices of UNESCO, Sean MacBride headed a multi-nation commission to consider recent developments in media and telecommunications in terms of their impact on national sovereignty, cultural identity and access to information. After a three-year study, MacBride and the commission released a much-dis-

cussed report through UNESCO Publishing (1980) entitled *Many Voices, One World*. It called for policy and structural solutions for democratizing communication flow and correcting imbalances in news coverage around the world. This debate helped to articulate and legitimize the idea of the basic human right to communicate.

In those early years, national governments were pressured to take action. The assumption was that only government could effect the kinds of changes needed to give all people a voice. Only governments had the authority to create infrastructure or had access to the resources that could make it possible for citizens to speak for themselves. In the new millennium, the New World Information and Communications Order debate is very much in evidence, but it now takes place under the conceptual umbrella of the Information Society, and more recently, the Network Society. A different set of assumptions has emerged about how to create a level playing field. National governments are still involved in this process, but more often as minor players. The locus of attention has shifted to non-governmental organisations, corporations and civil society. The focus of the renewed NWICO debate is on regions and communities and those multi-sector interest groups that embrace change at the community level. Today, greatest attention is given to the transformational power of the broadband Internet and the millions of new information and communication applications that are making change inevitable in local and global policy, infrastructure and practise.

This book is about communities making a conscious effort to ensure that they are not left behind in the new digital age, that they are positioned to join other "networked communities" in a new era of prosperity. Otherwise known as "wired communities", "smart communities", or "broadband communities", these geographic units can range in size from small to very large. For example, Pirai in Brazil has a population of 23,000, Evora in Portugal has 57,000, Waterloo in Canada has 115,000, whereas Taipei in Taiwan is approaching 3 million. The common denominator is that these communities have taken steps to make intelligent use of information and communication technologies (ICTs).

These communities have also broadcasted their accomplishments via the annual conferences of the Intelligent Community Forum (ICF), which take place in New York City. As consultants to the ICF, the authors have come to see the value in sharing their stories more broadly. In this book, the reader will learn how these and similar towns, cities and regions have reached a stage of digital development sufficient to be identified as an intelligent or "networked community".

INTENDED AUDIENCE OF THIS BOOK

The target readership of this book includes community leaders and stakeholders who are pondering the following question: "How can we achieve smart growth, promote green development, assure digital inclusion, build more transparent government,

stimulate innovation, generate jobs, educate and retain talent, and provide a future for our community over the long term?" This book provides an outline of an answer by discussing how learning about and becoming a networked community lead to a positive response to that question.

Our intended readership consists of individuals who value collective action today to assure the future well being of the communities in which they live and work. Users of this material can come from the public, private or not-for-profit sectors; they can be elected or un-elected, paid or unpaid, and can represent any walk of life. The main focus is on elected officials, such as mayors, county commissioners and township trustees, and will include civil servants, such as directors of planning and economic development. That being said, just as important are the interested representatives of local business enterprises, the chairs of local non-profit organisations and institutions of health and education, libraries and museums, and the academic community.

An underlying assumption of this book is that there are people in every community who care enough to inform themselves—either out of fear of impending disasters or promise of better futures—about opportunities for community renewal, and will be willing to collaborate with others to work for the common good. The authors believe that these people are in search of a unique vision of what their community can become in the future. Whether they are elected or self-appointed, these people are the stewards of the community; they are willing to spend time and energy doing something that is very difficult but could have major benefits for future generations.

While community leaders are the primary audience, the content of this book should also appeal to members of academia who are interested in what practitioners are doing to ensure their success. Because communities are complex social entities, many fields of study have a stake in understanding them, notably public management and administration, telecommunications and media, and social studies. The authors selectively draw on the scholarly literature, aiming for a balance between practical examples and stories of community efforts and accomplishments, and research and theory that help to explain the stories that are told.

The authors have shared their understanding of the digital challenges that 21st century communities are facing. Meeting these digital challenges inevitably involves investing in broadband capability, training new types of workers and developing applications that meet a new set of community needs and expectations. This book describes the contexts that have set selected communities on this path, the specific strategies they pursued and the outcomes they experienced.

The community leaders that are targeted are more likely to act on, rather than react to, challenges. They are likely to be guided by an intimate knowledge of the conditions of their communities, to spend time analyzing problems, talking and consulting with others, and looking beyond for models that might be adapted to local needs and ways. A change management framework introduced in this book

will help community leaders understand how digital community transformation takes place and how they can be more effective in bringing it about. These leaders can positively influence community development. This book can assist them in developing an appropriate mindset, a vision of the networked community and a specific set of strategies that will best serve their local interest.

Best Practise for Community Leaders

Think tanks and theoreticians have pointed to the global changes leading to knowledge-based economies and networked societies. Much less attention has been given to how these changes have influenced community structures and people at the local level. These futurists would likely be surprised to learn about the self-selected communities operating in networks that have quietly introduced a new dimension to the 1980s New World and Information Order.

On their own initiative, without waiting for definitive international government solutions, sometimes without the infrastructure support of transnational telecommunications corporations, communities have exercised their human right to communicate using the broadband Internet. The Internet allows them to get more of their needs met via the local-global applications of e-business, e-government, e-learning, e-health and practically e-everything else. The age of "many voices, one world" has arrived without fanfare.

This book attempts to put into perspective two sources of understanding: the conceptual and the practical. There is an academic literature from which the authors draw historical perspective, thoughtful analysis and contextual insights. There is also an experimental lab and idea incubator that is putting theory and historical judgment to the "test of reality". Elements of best practise have emerged out of the struggles of communities searching for a sustainable future, asserting their will to innovate, grow and change.

One of the key academic contributions of this book is to re-work a change management framework that can be used by community practitioners. This is a theoretical approach proposed by Professor Andrew Pettigrew, currently dean of the Faculty of Management at the University of Bath, England. This framework was the cornerstone of the prolific Centre for Strategic Management and Change, situated at the University of Warwick, of which Professor Pettigrew was the director. For a decade, Professor Pettigrew led major studies on the private and public sectors. The framework is simple and flexible, and helps to achieve clarity of mind when studying such complex and dynamic social phenomena as exist in local communities. The framework is described in Chapter 1.

The examples of best practise in this book are taken primarily from the applications submitted for the ICF Intelligent Community Award of the Year. Some background information on the ICF, a non-profit think tank and promoter of the broadband economy in local communities throughout the world, will help the reader to appreciate the value of these applications. The ICF aims to:

- Identify and explain the emergence of the broadband economy and its impact at the local level
- Research and share best practises by communities in adapting to the changing economic environment and positioning their citizens and businesses to prosper
- Celebrate the achievements of communities that have overcome challenges to claim a place in the economy of the 21st century (www.intelligentcommunity.org)

Through its activities and award programs, ICF creates a network of leaders in broadband applications at the community level. The Intelligent Community Forum was founded in 2003 by the board of directors of the World Teleport Association (WTA), an international trade association of teleports and related providers of broadband satellite services around the world. The original intention of the forum was to better integrate telecommunication facilities within communities as a means of supporting economic development and business opportunities via satellite.

The first true "intelligent communities event", which linked the emerging telecommunications revolution and the fledgling Internet to economic development, was held in Toronto, Canada, in 1995. This event, called *Smart95*, was developed by Toronto City official and ICF co-founder John Jung. For the first time, the telecommunications industry and the world of urban planners, political policy makers and economic development officials gathered under one roof to examine the impact of telecommunications on communities and economies.

In 2002-2003, Louis Zacharilla and Robert Bell joined Jung in establishing the Intelligent Community Forum with offices at the New York Information Technology Center in Lower Manhattan. ICF held its first "Building the Broadband Economy" conference in 2004.

The Intelligent Community of the Year is selected in the final stage of a 10-month award process that begins with selection of the Smart 21 Communities in November of the prior year. Each participating community must demonstrate, by completing a structured application form, that its strategy has produced measurable positive results. This form requires the responding community to give both qualitative and quantitative information on a number of topics, including its overall strategy; key people and organisations involved; the planning and collaboration involved; the connectivity and applications achieved; the digital users and knowledge workforce; job creation; digital involvement or democracy; and the marketing and economic development undertaken. While these applications are self-promoting, their contents are verified by knowledgeable members of the ICF and their extensive professional networks.

Guiding Methodology

The authors have been active participants in ICF activities since shortly after its founding. In recent years, the authors have served as correspondents, advisors and jurists in all stages of the community nomination and selection process. While this book is not a product of ICF, the conference venue provides a foundation for the synthesis of practical and academic knowledge that reflects both past and future trends. By sharing more broadly the stories and accomplishments of achieving communities, others will be able to better position themselves for future success. By means of *Networked Communities: Strategies of Digital Collaboration*, community leaders now have a way of envisioning what their communities might become and use this information to aid in their transformation.

Pettigrew's change management framework, which the authors have adapted, assumes it is possible for leaders of a given community to learn from the experiences of other communities. The authors have aimed for a better understanding of what happens when communities are networked. They have avoided any attempt to predict their development in a deterministic fashion. Community members transform their own communities according to their own priorities. The outcomes are often tentative, depending on circumstances. Because propositions about networked communities are not yet well developed, the authors allowed key concepts to emerge as they worked through the ICF archives, the published literature, the interviews and the conversations held with community leaders over the years.

The ICF communities constitute a purposive sample that we have used to illustrate important aspects of becoming a networked community. Triangulation was used in that the archival records were tested and one community compared to another over time, against the knowledge and experience of the authors. Coherence was sought through author discussions and sharing the scholarly literature of our diverse academic fields. In considering past and future trends, we sought a thread of continuity, in keeping with the importance of the global context with the New World Information and Communications Order extending into the 21st century, and the local context through the change management framework as applied to the purposes and dynamics of local communities.

The authors gave attention to the top seven communities of 2005-2008 because the documentation is considered of good quality and of sufficient detail. The ICF cases have the limitations of self-promotion as each community attempts to present a persuasive argument for becoming the winner of the award. On the other hand, the independent panels that ICF uses to assess applications help to validate the documentation provided by each community. Whereas Professor Pettigrew recommends comprehensive cases as the appropriate data collection for investigating change management, the authors are of the opinion that the stories contained in the ICF files serve our purpose. Those files, and the in-person presentations and discussions at the annual conferences, were often supplemented and confirmed by interview material

and telephone calls. The authors placed no constraint on themselves in bringing in relevant cases from the outside. In the end, our approach has been to take what is best of each community story with the aim of presenting "best practises" in digital community development.

With this book in hand, community leaders and stakeholders, guided by the experiences of networked communities, will more easily create a transformational vision for their own communities. The authors wish and hope for this outcome.

Exhibit A. Overview model
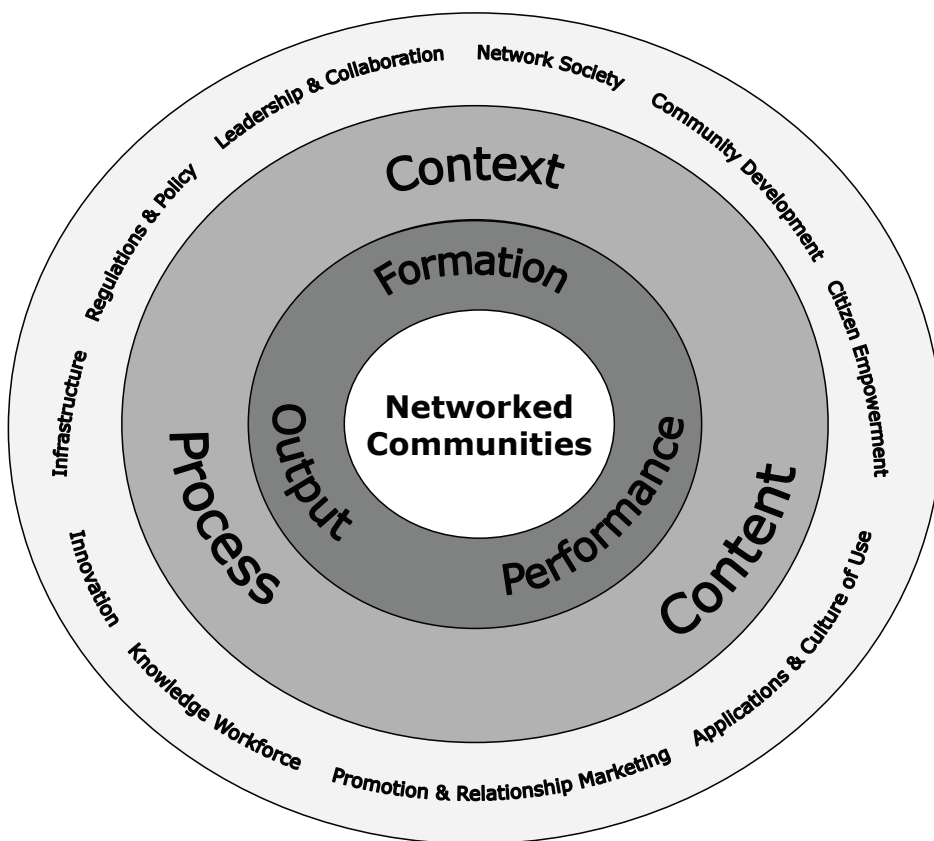
OVERVIEW OF THE CHAPTERS

This book is composed of eleven chapters that give guidance to local leaders whose ambition is to position their communities squarely within the Network Society. The Network Society is both a theoretical construct and an emerging reality in which communities use digital technologies and networks to create opportunities at the local level. The guidance given and the experience shared in this book relate to the transformational changes already being demonstrated in model communities resulting from advanced computing and telecommunication systems, regulation and public policy reform, and a new generation of knowledge workers who are creating applications and innovations of unprecedented variety and power. Community case studies and examples are used to illustrate the ways transformational leaders are emerging, citizens are being empowered, projects are being promoted and marketed, and outcomes are being measured so that communities are better able to compete, grow and prosper. Given the importance of measurement and evaluation for effective change strategies, this theme is included in each chapter.

Chapter I on *The Network Society* frames community development in terms of the human condition. Technology in any of its manifestations must be considered merely the tool that human beings use to better their condition. From the perspective of community, the whole point of a telecommunications solution is that the pace of human enterprise can be accelerated and the reach of human players can be extended outward for the benefit of all. Because information and communication technologies (ICTs) can be used to diminish as well as enhance what is best in human society, steps taken by communities to incorporate digital networking require the understanding and vigilance of the whole community. The chapter introduces a framework for the management of change through the formation and performance phases of community development. This approach is based on strategies used in networked communities around the world, strategies that are likely to have relevance for communities of differing size, culture and condition. The chapter also explains the role of measurement and evaluation in keeping community transformation efforts on target.

Chapter II on *The Technological Basis for Collaboration and Networking* describes the ways broadband communication is transforming countries as well as communities into information-centric societies. The chapter illustrates how telecommunications technologies that empower local users can spur social and economic change. Such technologies are creating unimagined opportunities at individual, organisational and collective levels of community and are shaping their futures. Also noted are the adverse and dysfunctional effects that can accompany these technological changes.

In Chapter III on *Regulation and Policy Reforms*, some of the ways that governments are fostering—but can also be hindering—the development of networked communities are described. Since both public and private sector participation is needed to create the networked community, local, state, and national governments should understand that they must be full partners if economic prosperity and a

higher quality of life are to be achieved. Although openness brought about by easy connectivity to the global Internet can sometimes be painful, as in dealing with unacceptable influences and content, some level of participation and cooperation is required for communities to participate in the Network Society.

Chapter IV on *Knowledge Workforce* provides the work-related context for the networked community. Both locally and globally, the cutting edge of the labour market includes jobs that require proficiency in the management and use of broadband networks and their related applications. Individuals with digital skills, training and experience will be much needed participants in the radical restructuring of work and life that takes place in networked communities. Under the right circumstances, such ICT-enabled personnel will be a key asset in making significant contributions to the development of these communities. A skill supply strategy ensures that IT skills are available when needed to support community development.

Chapter V on *Creating Applications and a Culture of Use* discusses actual case studies of communities using broadband communication networks to produce jobs, stimulate their local and regional economies and reposition for a more positive future. The interconnected technologies enable local citizens to collaborate with others to do things they would never have thought of before, including taking political action and developing new products and services. The international examples illustrate the ways the Internet has created global communities of interest that reach beyond national boundaries, allowing local entrepreneurs to search out new business prospects, permitting residents to go to school online, and encouraging users to participate in decision-making and join with others as stewards of their societies. Participating in the virtual marketplace and in the new global workforce has led to the creation of many next-generation applications.

Chapter VI on *Innovation—Creating Ideas* makes the point that, in the ideal networked community, innovation is a shared value. When communities think seriously about their futures, they come to accept change as inevitable and look to all citizens as potential contributors. A favourable environment for innovation does not happen automatically; it has to be created repeatedly. Positive factors include promoting incremental successes, resource sharing and tackling directly the sources of community resistance. Developing a culture of innovation is possible wherever education is encouraged, work and learning are integrated and made meaningful, and experimentation and risk are encouraged.

Chapter VII on *Strategies for Community Development* identifies the patterns of action that networked communities are employing to transform themselves. The authors have found that a culture of familiarity and daily use must emerge before a community can make maximum use of the broadband capabilities available. Adaptation to digital practise is a complex process that takes time. The strategies that seem to work best are those adopted by local players pooling local resources while reaching outside for global partners and input. In the Network Society, collaborators can come from almost anywhere in the world. Thus, a community with imagination and initiative has the means to create its own opportunities when it has taken the time to evaluate its strengths and devise plans to take advantage of its core capabilities.

In Chapter VIII titled *Citizen Empowerment and Participation,* the authors note how linking computers and telecommunications has led to the democratization of production, enabling ordinary citizens to market and distribute their own created products and services. The Internet has greatly stimulated the supply of goods and services globally, thereby increasing demand for local products. The broadband Internet has made it much easier for community members go online to form social and business partnerships to accomplish things they couldn't have imagined before. Thus, those who know how to do this can get more of their needs met, faster, more effectively. Local people become part of a larger workforce. Unfortunately, digital exclusion and limited access persist, keeping many citizens of the world from fully participating.

In Chapter IX on *Leadership and Collaboration*, community transformation is described as a process that involves vision and consensus building, goal setting, shared leadership and broad implementation. Community organisations, businesses, government agencies and the general public are all necessary participants for rebuilding communities. Those strategies that seem to work best involve shared leadership, in which the entire community collaborates to manage change. No one pattern of leadership applies to all communities. Working in teams is seen as an effective way of pooling talent and effort to implement networked community goals.

Chapter X on *Promotion and Relationship Marketing* describes how networked communities effectively promote and market themselves. Quality of community living depends on the quality of non-commercial as well as commercial relationships, relationships among individuals, organisations and government bodies. The authors find that global alliances increasingly enter into the mix of partnerships. Promoting and marketing a community require both transactional and relationship marketing, but the latter is the better framework for building sustainable communities. Through long-term relationships, personal and community investment take place.

In Chapter XI, *Conclusion,* the authors highlight the key points addressed in the book and share important insights. The core messages of the preceding ten chapters are summarized to help the readers digest the entire content of the book. Community leaders are left with the task of crafting strategies to transform their own towns, cities and regions into networked communities.

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