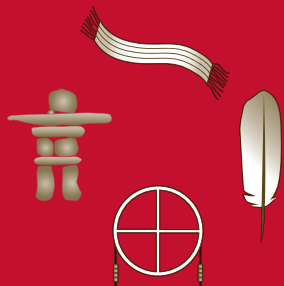**VOLUME FOUR**

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Aboriginal Voice
National Recommendations

From Digital Divide to
Digital Opportunity

March 2006

crossing boundaries
aboriginal **voice**

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The Crossing Boundaries National Council

The Crossing Boundaries National Council (CBNC) is a not-for-profit national forum whose mission is to foster the development of Canada as an information society through the transformation of government and governance. CBNC is co-chaired by the Hon. Rona Ambrose, Minister of the Environment, Government of Canada, and Dan Bader, Deputy Minister, Municipal Affairs, Government of Alberta. It is made up of about 40 members, including senior public servants and elected representatives from each of the 10 provinces and the federal government, as well as representatives from territorial and municipal governments and the Aboriginal community. The initiative is sponsored in part through a partnership with the Social Sciences and Humanities Research Council under its Initiative on the New Economy program area.

A full list of the Crossing Boundaries National Council membership can be found at *www.crossingboundaries.ca*. For more information on Aboriginal Voice please visit *www.crossingboundaries.ca/aboriginalvoice*.

KTA Centre for Collaborative Government

This project was undertaken in partnership with the KTA Centre for Collaborative Government and the Crossing Boundaries National Council. The KTA Centre for Collaborative Government was established in 1999 as a vehicle for a more independent approach to public policy research, dialogue and development. Since then, the KTA Centre has achieved a national reputation for its ability to bring together leaders in the fields of politics, policy and governance, and break new ground in connecting the ideas, the people and the practices that are transforming governance and government for the 21st century. For more information please visit *www.kta.on.ca*.

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Letter from Aboriginal Voice Co-Chairs

March 2006

Dear Sir/Madam:

On behalf of the Crossing Boundaries National Council, we are pleased to present you with *The Aboriginal Voice Final Report: From Digital Divide to Digital Opportunity*. This report is the culmination of a two-year national dialogue on how information and communications technology (ICT) can assist Canada's First Nations, Métis and Inuit peoples in fully participating in the knowledge economy and information society.

As a result of this engagement process we have come away with a deeper understanding of how ICT can help Aboriginal governments and communities meet critical social, economic and cultural needs. We were also witness to inspiring examples of Aboriginal communities, organizations, and, in particular, youth using this new technology in culturally expressive and creative ways to make a positive difference to their futures and to the national fabric of our country. We hope this report captures, even in a modest way, the spirit and enthusiasm of these path-breakers and the success stories that are emerging on a national scale.

The *Aboriginal Voice Final Report* offers a set of recommendations that we believe provide a solid framework for the further evolution of Aboriginal eGovernment. The recommendations are founded on recognizing the diversity of Aboriginal peoples and reflect the themes and ideas that consistently emerged from our forums.

As such, this report reflects a critical opportunity for Aboriginal peoples. The political and leadership challenge is to remove today's barriers of digital inequality and create an enabling future of digital opportunity. We hope that this report will contribute to a dialogue of action on Aboriginal eGovernment.

We invite your comments and questions concerning this report and our work. For more information about Aboriginal Voice or the Council, please visit our website at www.crossingboundaries.ca/aboriginalvoice.

Regards,

Tony Belcourt, President, Métis Nation of Ontario,
Crossing Boundaries National Council Member

Richard Jock, CEO, Assembly of First Nations,
Crossing Boundaries National Council Member

Vera Pawis Tabobondung, President, National Association of Friendship Centres,
Crossing Boundaries National Council Member

Mary Simon, Former Ambassador of Circumpolar Affairs,
Crossing Boundaries National Council Member

Executive Summary

Canada sits at the forefront of industrialized nations having access to and using information and communications technology (ICT). Federal, provincial and territorial governments have developed ambitious agendas to connect Canadians and use ICT to transform the way government delivers services and interacts with citizens. But where do Aboriginal Canadians fit into this picture? Aboriginal Voice was conceived to explore what this new technology means for Aboriginal Canadians and whether eGovernment is relevant to and fits the needs of Aboriginal peoples in Canada[1].

What Aboriginal Voice unearthed was not only a compelling storyline for Aboriginal eGovernment but a larger vision of new technology as an enabler, a potential platform to help Aboriginal peoples leapfrog social, political, and economic challenges to a brighter, more sustainable future infused with vibrant cultures and languages. To get there First Nations, Métis and Inuit communities and people have to cross a divide that limits their access to the infrastructure, resources and capacity needed to fully position themselves for participation in the information society and the economy that underpins it.

The demographics of a burgeoning young generation and the passing of elders, who are the gatekeepers of traditional Aboriginal wisdom and knowledge, add urgency to the Aboriginal eGovernment agenda. Another generation of Aboriginal young people cannot miss the opportunity of social and economic inclusion; and, as the most fundamental expressions of who they are, Aboriginal cultures must be preserved and renewed. Aboriginal Voice found that ICT has a vital role to play on both counts.

This report documents the story of Aboriginal eGovernment as told to us by the many forum participants and includes several practical examples that were showcased throughout the process. The recommendations represent a summation of their advice on the major themes and concepts of an emerging national Aboriginal eGovernment framework, beginning with four pillars:

- **Building sustainable capacity** by ensuring that Aboriginal governments, organizations and communities have the infrastructure, connectivity, skills and technological capacity to fully develop and sustain all aspects of eGovernment;

- **Making information a public resource** by using ICT to provide quality information that will assist Aboriginal peoples and their communities to participate in the knowledge economy, promote their cultures and identities, plan for their futures, and have easier access to services that are immediately relevant to them;

- **Improving service delivery** by using ICT to close service gaps and modernize Aboriginal service delivery so that it is better tailored to the needs of Aboriginal communities and citizens; and,

- **Increasing citizen engagement** by using ICT to enable Aboriginal citizens to more effectively participate in the governance and decision-making processes that affect them and hold governments to better account.

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[1] In this paper, "Aboriginal" refers collectively to the First Nations, Métis and Inuit. "Community" broadly refers to First Nations, Métis and Inuit communities across Canada, encompassing on reserve, off reserve, rural and urban populations as well as social and cultural communities of people such as youth or elders.

A second outcome that emerged from the process was an ICT agenda focused on social and economic inclusion, cultural renewal and the strengthening of Aboriginal governance and self-determination. These recommendations speak to Aboriginal leaders, federal, provincial and territorial governments and other key players committed to collaborating on a set of priorities that include:

- Rapid advancement of Aboriginal eLearning within a framework of lifelong and community learning;

- Using ICT to preserve, renewal and promote Aboriginal cultures and identity, and promote intercultural learning;

- Developing the ICT infrastructure, skills, and capacities for Aboriginal communities, businesses and individuals to participate in the New Economy, beginning with strengthening and developing traditional Aboriginal economic sectors; and,

- Building the ICT capacities of Aboriginal governments and organizations so that they can take a leadership role in developing eGovernment and fostering the partnerships that are required for its successful implementation.

The Aboriginal Voice process has taught us that ICT is about transformation: in the way governments function, in how the economy works, and in how we connect and interact in our daily lives. Over the past year and a half, national Aboriginal leaders, the Prime Minister and First Ministers from the provinces and territories have been working on a national agenda of transformation that seeks to strengthen and renew the relationship with Canada's First Peoples and bridge the gap in their quality of life. Aboriginal Voice participants see ICT, particularly the Internet, as offering Aboriginal Canadians and their communities a powerful set of new tools to rapidly advance these goals.

Recent national activities offer a favourable climate for Aboriginal eGovernment development. In particular, joint Accords signed between five national Aboriginal organizations and the Government of Canada can be conduits for ICT infrastructure and resource development. Steeped in the concepts of fundamental change and strengthening partnerships, these Accords provide a means to accelerate the goals of the national transformation agenda as it relates to Aboriginal peoples.

The incorporation of ICT into Aboriginal governance practices is fundamentally about transformation, and, therefore, the Aboriginal eGovernment recommendations within this report can serve to shape and influence policy thinking around the current transformation agenda and process. At the same time, as this report indicates, strong foundations already exist within Aboriginal communities on which to build.

Overview of the Process

The Crossing Boundaries' Aboriginal Voice initiative is a multi-stakeholder process involving several Aboriginal organizations, federal government departments, provincial and territorial governments, and the KTA Centre for Collaborative Government.

The purpose of the project was threefold:

- To create a forum for Aboriginal communities and organizations to have dialogues around eGovernment in a multi-stakeholder context;

- To raise the profile of Aboriginal ICT opportunities and challenges at both national and regional levels; and,

- To enrich and inform the dialogue and agenda of the Crossing Boundaries National Council by raising awareness of Aboriginal issues.

Since the National Forum in March of 2004, Aboriginal Voice has undertaken six cross-country forums in the Atlantic, Ontario, Alberta, British Columbia, Manitoba and the Northwest Territories. These forums brought together representatives from Aboriginal communities, governments, academia, and the private sector. The process has also drawn heavily on current research evidence, limited as it is, and on available best practices.

We have published two discussion papers. The first outlined some of the pertinent questions, challenges and priorities that emerged from the National Forum in Ottawa and served as a discussion paper for the regional forums. From the beginning, we identified the need to consider the impact of ICT on Aboriginal cultures and identities. Thus, the second publication, *Aboriginal Culture in the Digital Age*, was developed in conjunction with a Culture Working Group comprised of Aboriginal representatives and experts in the field. Both publications have been distributed nationally to the Crossing Boundaries and Aboriginal Voice networks.

Altogether, approximately 500 decision makers, practitioners and policy influencers have been involved in a national dialogue on Aboriginal eGovernment leading to this publication. These discussions formed the basis of the framework, or "storyline," for Aboriginal eGovernment and the themes and recommendations in the Final Report.

Aboriginal Voice has also partnered with the Social Sciences and Humanities Research Council (SSHRC) to develop an academic research initiative that will look at opportunities afforded by information and communication technologies to enhance Aboriginal social development and community capacity. The research process is set to begin in the first half of 2006.

Acknowledgements

We gratefully acknowledge the many people who have contributed to our learning. We would like to extend a special thanks to the following Aboriginal organizations for their guidance throughout the process: Assembly of First Nations, National Association of Friendship Centres, Métis National Council, Inuit Tapiriit Kanatami, Congress of Aboriginal Peoples, Native Women's Association of Canada, National Aboriginal Health Organization, and Pauktuutit Inuit Women of Canada.

We would also like to thank the various members of the Culture Working Group for their dedication to the development of our discussion paper, *Aboriginal Culture in a Digital Age*, which can be found on our website: www.crossingboundaries.ca/aboriginalvoice.

We also owe a great deal of gratitude to the Office of the Federal Interlocutor of Métis & Non-Status Indians, Indian and Northern Affairs Canada, Industry Canada, Human Resources and Skills Development Canada, Health Canada, Atlantic Canada Opportunities Agency, Western Economic Diversification, Canadian Heritage, Social Sciences and Humanities Research Council, the Provinces of Manitoba, Alberta and Ontario and the Government of the Northwest Territories for their involvement in and support for Aboriginal Voice. A special thanks to the EnCana Corporation for its support.

We would like to express our appreciation to Marcia Nickerson, Head of the KTA Aboriginal Practice Group, and Jay Kaufman, Principal of KTA Consulting and the KTA Centre for Collaborative Government for carrying out this engagement process and writing this report. We are also grateful to Karen Beitel and Jason Ryle for their contribution in organization and providing support for the many sessions.

Finally, we would like to thank all of the forum participants, especially the panellists and speakers, who contributed their not only their time and expertise, but invaluable comments and feedback that led to the development of these recommendations.

Introduction

In the 1920s a technological revolution changed the face of the international economy. It bridged vast distances and allowed people to conduct business at a pace never before possible. New industries emerged and with it, new skills. This new technology – the telephone – impacted the economy so significantly, that business practices changed almost overnight to accommodate it. Flash forward 80 years and the world finds itself again in the midst of such a transformation.

Whereas Aboriginal peoples were excluded from the Industrial Revolution, they need not miss the technology revolution.

Information and communications technology (ICT), particularly the Internet, is transforming our society into one which is dynamic, global, and knowledge-based. What does this new technology mean for Aboriginal Canadians? Aboriginal Voice was conceived to explore this question. What we discovered was that Aboriginal peoples and communities want to be involved in and fully benefit from this transformation. What we heard was that if harnessed appropriately ICT offers critical opportunities to strengthen Aboriginal cultural identity, promote sustainable community development and achieve greater self-reliance. The compelling finding is that Aboriginal Canadians have begun to embrace ICT as an essential tool in learning, improving services such as health care, and in creating a larger space of opportunity in the New Economy.

Build it and they will come.

Aboriginal eGovernment is an emerging reality within Canada. The many examples showcased throughout Aboriginal Voice offered vivid demonstrations of communities, where they have the necessary infrastructure and resources, grasping the potential of ICT to meet very real needs. The evidence so far is that ubiquitous access to technologies can have positive impacts on the social, economic, political and cultural workings of Aboriginal communities.

This report documents these benefits. It is also calls for rapid action. There is a real sense of urgency around the Aboriginal eGovernment story. Part of this can be attributed to the passing of Elders, who act as the gatekeepers of Aboriginal wisdom and knowledge, and, by means of oral traditions and custom, pass on cultural information and knowledge. ICT can play a critical role in preserving and renewing this knowledge to the benefit of future generations. At the other end of the age spectrum, the large and growing Aboriginal youth population holds immense promise. Young people are the navigators and pathfinders of the Internet age. The urgency here is to ensure these young people are given access to the technology, skills and knowledge required to secure confident and fulfilled futures. The goal of our recommendations is to create this opportunity for this generation of Aboriginal young people.

Foundations for Our Recommendations

Aboriginal cultures are alive, dynamic and diverse and experiencing a cultural renaissance that is strengthening and renewing their distinct identities. While there are commonalities amongst the cultures of First Nations, Métis and Inuit, each nation has its own history, tradition, values, and language that are the foundations for a way of living and of knowing. Cultural diversity is amplified by geography and dispersion of communities. For Aboriginal peoples in Canada, with a spirituality and consciousness deeply rooted in the land, there is a unique set of principles which guide relationships between individuals, communities, nations, confederacies and, increasingly, participation in the global village.

These are the underpinnings of Aboriginal social and cultural life, which, if they are to endure and flourish, must survive and find everyday expression in our contemporary technology-driven world. The diversity of Aboriginal populations is too great to have a one-size-fits-all model for Aboriginal eGovernment. Indeed, great potential lies in ICT's flexibility to tailor solutions to a community's specific social needs and possibilities.

The Aboriginal Voice recommendations are meant to outline a strategic direction for Aboriginal eGovernment and highlight areas of priority and investment. Our recommendations are interdependent and directed at Aboriginal leadership as well as governments, and include a call for action by all key stakeholders.

The Vision

EGovernment is about the way governments can use ICT to improve services to citizens, collect, manage, use, share and protect information as a public resource and enhance their relationship with citizens through more meaningful engagement. The emerging vision for Aboriginal eGovernment is a more expansive and compelling one. It is one of digital opportunity, where information and communications technologies are used in a responsible, inclusive and Aboriginal community-centred way to address critical cultural, economic and social needs of Aboriginal peoples in Canada. Indeed, the benefits of ICT to Aboriginal people may outweigh those of other Canadians. This technology transcends geography and size, allowing Aboriginal peoples and communities to connect with each other and do things in ways not previously possible. ICT offers Aboriginal governments and people a powerful new set of tools to preserve and revitalize their cultures and establish a stronger place within the Canadian national fabric.

The success stories of Aboriginal eGovernment, of which there are many, all point to collaboration and partnerships among governments, public sector agencies such as colleges and universities, and the private sector as an essential ingredient. But even more foundational, for eGovernment to be relevant in an Aboriginal context, and for Aboriginal peoples to play a meaningful role in its development, the approach taken has to be community focused. We call this Community-Centred Aboriginal eGovernment. The largest enabler for the success of Aboriginal eGovernment initiatives will be Aboriginal governments, communities, and organizations empowered to use the technology to meet their own needs and work together on common problems and issues.

Collaboration, partnership and community-centred eGovernment are all central to this vision.

Realizing this potential requires First Nations, Inuit and Métis governments, citizens and communities to have ready access, capacity and resources to use and benefit from ICT. A large digital divide exists between Aboriginal and other Canadians which, if not corrected, risks creating a knowledge and opportunity divide that will amplify and deepen existing social and economic inequalities. ICT is not a panacea - it is fundamentally an enabler. Using the technology to its potential will involve a transformation in the way Aboriginal governments, organizations and communities work in the future.

Aboriginal Voice Recommendations

Aboriginal eGovernment: A National Priority

Recommendation 1: Aboriginal eGovernment should be a priority on a national agenda of transformation.

Over the past year and a half, national Aboriginal leaders, the Prime Minister and First Ministers from the provinces and territories have been developing a national agenda that seeks to strengthen and renew the relationship with Canada's First Peoples and bridge the gap in the quality of life for First Nations, Inuit and Métis peoples. ICT, particularly the Internet, offers a powerful set of new tools to more rapidly advance these goals. The challenge is making this technology accessible to Aboriginal Canadians so they and their governments can fully benefit from its potential to help address critical cultural, economic and social needs.

Bridging the Digital Divide: A Commitment to Equitable Access and Sustainable Capacity

Recommendation 2: A national commitment by all governments in Canada is required to bridge the digital divide for Aboriginal communities and institutions within the next five years, and for all Aboriginal peoples within the decade. Achieving these goals entails high-speed broadband Internet access that is affordable to users, coupled with governments investing to create sustainable capacity within Aboriginal communities and organizations to maintain and support ICT systems and applications development.

Like the railway and telephone were to the industrial economy, so too is ICT to the knowledge economy and information society. Having technology on par with other Canadians will be essential to full Aboriginal participation in the country's future economic, social, cultural and political life. The ultimate success of Aboriginal eGovernment will ultimately be determined by how well and how quickly governments and the private sector tackle the gap in ICT infrastructure, capacity and access that exists between Aboriginal peoples and the rest of Canada.

This "digital divide" reflects the disparity – or scarcity – in connectivity, hardware, skills, and access to ICT that Aboriginal communities and citizens experience, much of it to do with geography and infrastructure and the dearth of initiatives to surmount these challenges. The picture of connectivity is highly varied both across the country and amongst the Fist Nations, Inuit and Métis. While the digital starting points may differ, like their rural and northern counterparts, urban Aboriginal peoples, for social and economic reasons, also find themselves on the wrong side of the digital divide. Surmounting the connectivity divide has two interconnected challenges: connecting communities and connecting citizens. Most progress is being made on the first challenge; in-home connectivity for most remains a distant reality.

Federal programs such as the Community Access Program (CAP), SchoolNet and BRAND (Broadband for Rural and Northern Development) play an important role in giving many Aboriginal peoples, particularly youth, access to ICT. The continuation of such programs, coupled with their expansion into untapped communities – Métis, urban and Inuit communities have had varying degrees of access to such programs – is a good foundation upon which to build, but it will require added investment, changing government departmental mandates and creating new forms of intergovernmental cooperation. Wireless technologies are allowing communities in the territories to get connected. Provinces like Alberta, through their SuperNet initiative, are making high-speed broadband connectivity available to Aboriginal communities. But much remains to be done.

Community connectivity in most instances means that the access point is institutional: located either in the school, band office, government office or health centre. Many efforts are being made to create broader access for community members; however, availability and in-home use of the Internet remains limited. Even where residential connectivity is less of a problem, affordability of computers and high Internet charges remain barriers. As we heard in our forums, Aboriginal young people see this as a big issue given the kind of access to computers their non-Aboriginal peers have in the home.

Successfully tackling these issues will require new thinking, innovation and investment. The Province of Saskatchewan, for example, is doing something similar to Alberta's SuperNet but plans to add a wireless overlay that will give most citizens living in rural and northern parts of that province access to broadband service. Aboriginal Voice participants strongly endorse approaching infrastructure, connectivity and access issues from the perspective of a "public utility". Cheap, easy to use, high-speed access to the Internet is today's equivalent of putting in place the telephone system in a past era. A "public utility" perspective essentially means two things for Aboriginal peoples and communities: assured access at reasonable costs to high-speed broadband service on par with other Canadians, and governments taking on the responsibility to ensure this outcome. Governments and the private sector need to engage in renewed efforts to find ways to level the playing field as it exists, between the North and South and between urban and remote communities.

Sustainable Capacity

Connectivity is only half the story; having sustainable human and financial capacity is the other half. Sustainable capacity means both bridging the infrastructure divide and having the necessary human and financial resources to support and develop ICT systems. High quality online service delivery, rapid access to and use of information, and meaningful interaction between citizens and governments requires a minimal level of ICT resources, skills and infrastructure that for most Aboriginal Canadians and communities are simply not a reality. Aboriginal Voice participants defined the key components of sustainable capacity to include:

- Broadband connectivity;

- ICT skills and literacy;

- Ongoing access to ICT technical capacity for maintenance and development of applications;

- Long term funding - both governmental and own source revenues - to support ICT infrastructure and developments; and,

- Knowledgeable local champions who can lead, advocate, engage and influence the community in determining its ICT future.

Recommendation 3: Aboriginal governments and their structures must be the central building blocks for an Aboriginal eGovernment agenda.

Currently Aboriginal eGovernment efforts and investments are largely housed within non-Aboriginal governments. This is not serving to build a robust Aboriginal ICT infrastructure base across Canada. Aboriginal governments and organizations require the necessary expertise and institutional resources so that they can shape and direct both the development of policies and strategies and the implementation of eGovernment activities.

Building ICT capacity in Aboriginal governments and organizations also serves as a foundation for modernizing service delivery and improving programs and services. Trained and qualified on-site technical support is essential for the maintenance of systems and the development of online applications. Governments should be including investment in ICT capacity as an integral component of their Aboriginal programming and funding in order for a critical mass of ICT resources to become available at the community level. Achieving

critical mass also requires better coordination across departments and governments. Sustainability will entail Aboriginal governments and organizations identifying and raising their own sources of revenues. We saw many examples where this is already taking place, for example, by charging for online services and technical support. In making capacity building investments it is essential for governments to ensure equity amongst First Nations, Métis and Inuit governments and organizations.

Targeted training strategies are also required to rapidly increase the number of Aboriginal ICT technicians and professionals and to get this capacity lodged in communities. Community colleges, in partnership with Aboriginal organizations and the private sector, can play a particularly important leadership role in contributing to this goal. Investing in ICT human capital development pays large dividends because it is these technicians who over time become the backbone for local Aboriginal ICT business development.

Once capacity is in place ICT platforms can be enriched and expanded through pooling of both technical resources and buying power to reduce costs and increase access to and the range of ICT services. The Regional Management Organizations associated with SchoolNet is a case in point. K-Net's Community Aggregated Network has created a regional video conferencing network that serves as an affordable video conferencing platform for Aboriginal communities and organizations on a national scale. These and initiatives like them require ongoing support. They show that it is possible to create dynamic and powerful Aboriginal ICT networks with capacity to support highly advanced ICT applications that can improve services, connect people and communities, increase productivity and reduce the high costs of travel that confront many Aboriginal governments and organizations. In other words, the business case for investing in sustainable ICT capacity is a good one.

A Community-Centred Approach to Aboriginal eGovernment

Recommendation 4: A Community- and Citizen-centred approach, driven by Aboriginal governments, should be adopted as the primary underpinning of Aboriginal eGovernment.

Time and time again we heard that a community-centred approach is fundamental to the vision of Aboriginal eGovernment. The goal of a community-centred approach is to have communities with sufficient knowledge and capacity to direct the process of ICT development to achieve maximum benefits. The basic premise is that communities are best suited to identify their own unique needs and the resources required to achieve their goals. Moreover, getting buy-in and support at the community level is critical to the success of Aboriginal eGovernment initiatives. This means reaching out in an inclusive way to all segments of the community. Aboriginal youth can, if trained appropriately, play a key developmental role in their communities, especially with elders.

A community-centred approach is also inherently sensitive to the diversity of Aboriginal cultures, and allows for Métis, First Nations, Inuit, Northern and urban communities to integrate ICT "at their own pace".

Developing community ICT awareness and capacity is central to Aboriginal communities and citizens becoming more open to the technology and seeing opportunities within a New Economy context. If communities are going to determine how and what ICT developments will best meet their needs and values then community members and leaders need to be educated to understand both the potential and risks of this technology. Through Aboriginal Voice we learned that with good community foundations in place, the use, application and benefits of ICT can accelerate and take off.

Many suggestions were made on how to lay these foundations, including:

- Educating community members and stakeholders on what ICT is and its benefits by demonstrating concrete, real-time examples of what ICT can do;

- Consulting on community needs and technology strategies in areas like health, social services and education and economic development;

- Performing environmental scans on a community-by-community basis to examine and share information about the infrastructure and current and potential applications;

- Holding training sessions to increase community ICT literacy and competencies as well as technical knowledge and proficiency;

- Establishing hubs within the community with computer access and mentoring;

- Sharing best practices and showcasing leading edge community applications through conferences and multi-stakeholder venues;

- Developing a community "ICT toolkit"; and,

- Integrating ICT into community and service planning.

Governments also have a key role in sharing information about programs in a more coordinated and effective way, in funding the inclusion of sustainable ICT capacity within the development of community plans, and in creating incentives for greater diffusion of technology at the community level. In the Territories, through the Northern Strategy, funding is being allocated to a Community Capacity Building Fund that will allow communities the flexibility to develop ICT physical and human infrastructure to meet their own needs. This and ideas similar to it are among the ways that governments can play an enabling role.

Aboriginal eLearning: An Aboriginal Priority

What does eLearning mean for Aboriginal learners and the Aboriginal learning cycle? We learned that it is no longer possible to separate ICT "tools" from the learning process – the two are now intertwined, part of a whole, integrated process. From the point of entry into school, students are routinely expected to use the world-wide web for information, skills and knowledge. Education and lifelong learning are without question the fundamental underpinnings of Aboriginal participation in the New Economy. The knowledge economy requires a great shift in learning, including developing a whole new range of literacies and capacities.

For Aboriginal peoples, technology offers huge opportunities to leapfrog cultural and learning barriers to transform the way that Aboriginal education and training is done, and how communities are empowered to participate in society. The need to increase Aboriginal educational participation, retention and graduation rates has been addressed at length. Aboriginal Voice participants see eLearning as providing a set of powerful new tools to help tackle these challenges.

Recommendation 5: Governments should make Aboriginal eLearning a national priority and facilitate and resource the building of a national online Aboriginal eLearning portal that would serve as a focal point for national eLearning networks tailored to the different needs of the First Nations, Métis, and Inuit peoples.

First Nations, Métis and Inuit educational and training organizations, need to be resourced to fully participate in this national initiative. Characteristics of a national eLearning portal and networks would include:

- **An open source resource web/network;**

- **National collaboration, with regard to more advanced communities and users acting as**

role models and mentors to those who need to build capacity; and,

- **Open source information and resources that would be accessible to all Aboriginal learning organizations, while maintaining the ability to allow communities to cater the information and applications to their learning needs.**

Integrating Culture and Learning

ICT can be used to integrate culture and learning in ways that are much more conducive and culturally appropriate for Aboriginal learners, possibly ensuring a more holistic experience. Indeed, mounting research shows there are strong linkages between culturally-relevant learning and successful learning outcomes.

At the Ontario eLearning Forum Eileen Antone, Associate Professor at OISE/UT, pointed out that Aboriginal perspectives on learning primarily involve education by example and experience, include storytelling, and continue from birth to death. Professor Antone made a powerful case for how eLearning, if properly developed, can help students learn in ways that are consistent with Aboriginal perspectives on learning by making strong connections to culture, language and identity through:

- Independent / interactive learning;

- Learning at one's own pace;

- Modifying terms based on cultural practices;

- Bridging learning of both content and skills (e.g. information management, time management, working independently);

- Developing student/teacher relationships at a gradual pace, while building trust; and,

- Adapting provincial science and math curricula to be more relevant and meaningful within their social and cultural contexts.

Building on Existing Foundations

Some very solid foundations for Aboriginal eLearning are already emerging and can be capitalized upon through an accelerated commitment to eLearning within a framework of lifelong learning. The Sunchild eLearning Community (*www.sccyber.net*) and the Keewaytinook Internet High School (*www.kihs.knet.ca*) are models of how technology can be tailored to fit the needs of Aboriginal students. Since 1999, these two online schools have delivered eLearning programs to First Nations students ranging from grades 7 through 12 as well as to adult learners, successfully improving the overall levels of education for First Nations peoples in Alberta and Ontario. We also saw the creative power and impact of eLearning tools in early learning with elementary school children in remote Inuit communities in the far north who were discovering the world in virtual space, developing stories using animation technology and adapting science and math so it was more meaningful and relevant to their social and cultural context. These are children who stay in school and love learning. Education models such as these have all been developed with keen consideration of the specific learning needs of different Aboriginal groups and communities, including their sense of time and relationships, and personal and family factors which might affect the learning process.

In instances where eLearning tools have been utilized in the learning process or to provide learning alternatives, school retention and enrolment rates have increased as a result. In the Sunchild example, eighty percent of students enrolled in their Grade 12 program graduate with many continuing to post-secondary education. Such examples underscore the importance of a school curriculum that is culturally and linguistically appropriate, especially in places where Aboriginal culture is overshadowed. eLearning allows children to stay within their communities, breaking the cycle and history of relocation (such as residential schools), which has had irreparable damage on community cohesion, family bonds and individual educational retention. By keeping young people in Aboriginal communities longer, they can mature and become better equipped to deal with social transitions and get an extended opportunity to learn about and actively participate in the cultural life of the community.

The results? Higher enrolment, retention and graduation.

A Framework for Action

While the goal of Aboriginal Voice was not to articulate a definitive framework for Aboriginal eLearning, some consistent themes emerged. The first is that a life-long learning approach is an effective way to visualize Aboriginal eLearning. Second, there is a need for equity of resources and opportunities for First Nations, the Inuit and Métis that is on par with mainstream education and training systems. Third, the approach needs to be a comprehensive one.

Five pillars of a comprehensive approach were identified which, while requiring specific goals, strategies and priorities, need to be seen holistically, working together to meet community needs. These are:

- In-school education and early years learning – having technology-rich environments from early learning onward and learning alternatives for young and adult learners;

- Transitions – using technology to ease the large social and cultural adjustments that many Aboriginal people go through as they move from elementary to high school, going to college and university, entering the mainstream workforce and moving to larger urban environments;

- Post-secondary education – tailoring learning and support to Aboriginal students and offering distance education opportunities;

- Skills development and training – enhancing ICT literacy and competency and online training and skills development including for the trades and within the Aboriginal business sector; and,

- Community learning – creating the community infrastructure for eLearning outside the formal setting of education and the workplace, including: literacy and mentoring programs, tools for leadership, entrepreneurship, community development and capacity building, access to virtual libraries and other knowledge resources, cultural and community information, and inter-community networking.

Developments are occurring on all of these fronts; however, in assessing the current state of progress, Aboriginal Voice participants saw the application of ICT to address Aboriginal needs in the post-secondary and skills area as lagging. Another more general challenge for Aboriginal eLearning is that it must be tailored to many different environments - from large metropolitan cities to small remote communities that are only accessible by air or winter roads. Meeting challenges requires innovation and tailored investment strategies. Finally, the existing foundations in Aboriginal eLearning need to be sustained and strengthened. We were told of many instances where current efforts were at risk for

the lack of sustainable resources. This is a challenge for the University of the Arctic, for example, which provides post-secondary access to all northern residents in order to find flexible ways of getting higher education that is relevant to them and where they live. A priority for governments should be to nurture and sustain the current Aboriginal eLearning platforms starting to bloom across the country.

Recommendation 6: Federal, provincial and territorial governments should commit to providing long term funding and support in order to sustain current Aboriginal eLearning infrastructure and initiatives.

Recommendation 7: Aboriginal organizations, governments, and post-secondary institutions should collaborate on an assessment and action plan on how ICT can be used to increase Aboriginal post-secondary participation and achievement.

Recommendation 8: Working in collaboration with Aboriginal leaders and organizations, federal, provincial and territorial governments should promote and invest in First Nations, Métis and Inuit Centres of Excellence for eLearning with a mandate to advance and share information and knowledge about best practices and facilitate their diffusion into education and training systems and into the community.

Recommendation 9: National and regional research granting agencies should invest dedicated resources to support the advancement and innovation in Aboriginal eLearning.

One of the best ways to preserve a culture is to disseminate it as widely as possible.

Preserving & Promoting Aboriginal Cultures

Given the propensity towards the isolation and fragmentation of Aboriginal peoples and disengagement from Aboriginal ways of life, connectivity offers the potential for enhancing cultural continuity and rejuvenating community ties. Why is cultural preservation and continuity so important? At one level the answer is obvious. A people's identity and cohesion are tied to their ability to retain and express their culture. The loss of one's culture implies assimilation into another. An important part of the history of Canada's Aboriginal peoples is about the resistance to such loss. The preservation and protection of Aboriginal languages, ecology and heritage is of utmost importance to sustaining Aboriginal cultures.

Cultural and Linguistic Continuity and Renewal

We are also discovering other powerful reasons why cultural and linguistic continuity and the strengthening of identity are critical issues. An accumulating body of evidence is demonstrating a direct correlation between a community's economic and social wellbeing and the cultural identity of its residents. Whether the emphasis is on the match between indigenous cultural understandings and institutions, or, the importance of the preservation and rehabilitation of threatened cultures, the core message associates strengthening the cultural fabric of indigenous peoples with improving a community's overall economic, health and social wellbeing.[2] We know, for example, that the incidence of youth suicide is dramatically reduced in Aboriginal communities that are empowered with a strong sense of identity, have control over decision-making and possess the ability to address community needs.

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[2] Stephen Cornell and Joseph Kalt, "Sovereignty and Nation-building: the Development Challenge in Indian Country Today", Harvard Project on American Indian Economic Development, 2001. Michael Chandler and Christopher Lalonde, "Cultural Continuity as a Hedge Against Suicide in Canada's First Nations", *Transcultural Psychiatry*, V.35, June 1998.

Recommendation 10: The Federal Government, in collaboration with national First Nations, Métis, and Inuit organizations, should develop and implement a national policy commitment to promote the preservation and protection of Aboriginal cultures and languages and ensure Aboriginal children, wherever they live, have opportunities to learn their culture and language. A critical component of this commitment is to fully employ, with appropriate safeguards, the potential of ICT to preserve, store, transmit and enable active cultural learning. Having provincial and territorial governments and education institutions and agencies as partners in this national project will be critical to its success.

Preserving Aboriginal Languages

If there is a starting point for cultural continuity, it lies in the preservation and learning of Aboriginal languages. As the primary articulation of culture, language connects individuals to their community. As vehicles for culture, Aboriginal languages reflect a worldview and connect individuals to a system of values. Language retention and new speakers have decreased dramatically in recent decades and cultural knowledge and traditions have become threatened. According to UNESCO (1996), approximately half of Canada's 50 Aboriginal languages are facing extinction or are endangered.

If used appropriately, ICT can play a key role in the preservation and promotion of Aboriginal languages in new and exciting ways. The Atlantic First Nation Help Desk offers one of several online Aboriginal language tutorials. In addition to interactive language lessons, there is a talking Mi'kmaq dictionary, books, songs and prayers. Microsoft has developed Windows in Inuktitut and is developing a Mohawk language version. In other cases, Aboriginal communities have taken the lead to ensure that their language application needs are met. For example, there are several Michif language online dictionaries and teaching aids geared towards the preservation and expansion of the Métis language.

We must keep in mind that Elders retell events in a language that is as rich in nuance as it is in detail. While it will never replace face-to-face contact with Elders, teachers and peers, ICT offers us tools to reinvigorate language usage, especially with the younger generations who, by and large, have experience with technology and a high level of comfort with it. Visual technologies such as videoconferencing can relay the facial expressions of a storyteller and the intonations of his or her words. Moreover, highly specialized computer programs have the capacity to analyse Aboriginal language structure, thereby eliminating the need for English translations. If ICT is to act as a medium for preserving and promoting Aboriginal languages and cultures, it needs to be developed in ways that accurately channel the animation and vibrancy of those traditions.

Ensuring Cultural Continuity

A second point of departure for cultural continuity lies in the preservation of cultural knowledge and its transfer to future generations. With the imminent passing of older generations, the risk of losing the history and traditional knowledge of Aboriginal peoples makes digital preservation of this knowledge a critical priority. ICT has a powerful role as well in ensuring that Aboriginal children and young people grow up in a culturally-rich environment that helps instil in them a sense of pride and knowledge about who they are. Instilling these early foundations of knowledge and understanding amongst Aboriginal young people will create a driving force in revitalizing and extending the reach of Aboriginal cultures.

The intergenerational transfer of culture has to start in the early years, by providing Aboriginal children wherever they live with opportunities to learn their culture and traditions. For example, the National Research Council partnership with the remote Quebec community of Kangiqsualujjuaq, the Communications Research Centre and Telesat, exemplifies the reach of ICT in the transfer of culture. Through the medium of videoconferencing children are being taught traditional throat singing by an

Inuit teacher based in Ottawa, to hone the traditional skill of drum playing, and participate in facilitated dialogues with elders across the North. Perhaps through promoting interaction between generations, learning can then become a two-way street; the younger generations can help to instil a sense of confidence in older generations around the uses of ICT.

The unlimited potential of the Internet makes it the ideal candidate for making Aboriginal cultural information easily and readily available. Already, inroads have been made in the online storage and access to histories, important documents and letters; artefacts can be archived into electronic databases; and, it is possible to map sacred sites in a protected manner to allow for virtual teachings and tours. Advanced language software offers great opportunities to collect, archive and access stories and other cultural information online. The recent launch of *www.metisradio.fm*, which archives historic recordings and solicits and promotes new artists across the Métis homeland, is an excellent example of how dispersed Métis populations are informed of cultural and political events – connecting community members' traditional cultural practices using a contemporary medium. Once posted and preserved digitally, the Internet and other communication technologies serve as powerful tools for intercultural learning, particularly among young people.

Recommendation 11: Working with the appropriate Aboriginal authorities, national and provincial archives and museums should accelerate the digitization of Aboriginal historical records and artefacts and make this information available online.

Recommendation 12: Financial and other resources should be made available for Aboriginal communities to collect and digitally preserve their histories and cultural knowledge for the benefit of the community.

Protection of Culture: Mitigating the Risks

Community Protocols

The collection and protection of cultural information and traditional knowledge is a priority, particularly in light of the aging population of "oral and knowledge keepers". Nevertheless, making Aboriginal information a public resource requires developing and respecting cultural governance mechanisms which need to be in place to facilitate the online collection, dissemination and use of cultural information. Establishing the appropriate governance requires the principle of community owner-ship, control, access and possession of community information to be respected. There is also a need to balance the "openness" of the Internet with protected and controlled community spaces. When information is made accessible, it is made subject to interpretation, translation and possibly misunderstanding.

The Mi'kmaq Ethics Watch, a governing board that defines the processes and outputs for using Mi'kmaq knowledge, has developed principles and guidelines to ensure that the ownership of Mi'kmaq heritage rests with the appropriate communities. By assuming a "gatekeeper" or a stewardship role, Aboriginal governments and institutions can turn attention to policy and planning efforts within the community to ensure the respect and safeguarding of traditional knowledge and community values. Communities and citizens must be well informed about protocols that are in place governing access to information and be able to identify the governing body that has authority so that there is a clear point of accountability for the security, quality and authenticity of information.

Recommendation 13: Aboriginal governments, organizations and communities should develop protocols to govern the online collection, dissemination and use of cultural information based on customary laws.

Reforming Legislation

Having recognized and respected community-based systems of information governance, while critically important, is not enough to deal with the challenge of a digital age when information is so easily captured and used by others for unintended purposes. Traditional knowledge is a case in point. Traditional knowledge is held by Aboriginal groups as a collective and is widely seen within the Aboriginal community as an expression of collective cultural rights. When it comes to knowledge and artistic creations, however, the current legal system moves in a different direction.

Existing laws grant ownership of knowledge in the forms of patents, copyrights or trademarks and are designed to promote innovation or artistic work by promising rights to economic returns to individuals and companies over a certain period of time. Because these laws do not encompass collective rights, collective privacy and collective ownership, they do not offer appropriate or adequate "digital rights" protection for traditional knowledge. Indeed, many see current legal regimes around intellectual property as creating a risk for Aboriginal communities that make their cultural knowledge openly accessible on the Internet.

Professor Marie Battiste notes that: "With respect to Indigenous knowledge, we stress the necessity of recognizing and respecting, in both national legislation and international law, the principle that any acquisition, publication, scientific use, or commercial application of Indigenous knowledge must be in accordance with the customary laws of the peoples concerned, as determined by them."[3] Such laws would go a long way to ensuring that when community knowledge has entered the public domain, those who access the information will adhere to a community's laws; and, if these laws are infringed, mechanisms will be in place to enforce them. In other words, local and national systems of law need to recognize and support Indigenous legal systems that may govern the use of traditional knowledge. Moreover, the focus of these laws should, in addition, include the general protection of Aboriginal culture and knowledge.[4]

Recommendation 14: Aboriginal peoples should develop models for intellectual property protection of traditional knowledge, traditional cultural expressions and folklore. These models should be recognized by governments and protected in law.

Aboriginal Participation in the New Economy

ICT has transformed our entire economic fabric: enterprises are being transformed; innovative and dynamic business opportunities are being created; local communities are finding niches and renewing themselves as economic players by connecting globally; new knowledge and skills have become the entry points for employment; and lifelong learning is a requirement for full participation in this New Economy. Communities that have created dynamic ICT and knowledge rich environments – information-centric communities - are positioned to do well as the New Economy unfolds. By transcending geography and time the Internet creates opportunities either to attract businesses where location is not an essential factor of production or to expand and develop the local business base through global reach.

[3] Marie Battiste, *Protecting Indigenous Knowledge and Heritage* (Saskatoon: Purich Publishing Ltd, 2000).

[4] Professor Shelly Wright, University of Sydney, Australia. http://www.ubcic.bc.ca/files/PDF/International_HR.pdf

Participants engaged in the Aboriginal Voice process agree that the New Economy represents a huge opportunity for Aboriginal economic and business development if the fundamentals of an e-based economy are put in place, particularly at the community level. These fundamentals include sustainable ICT capacity, a workforce and entrepreneurs that are ICT literate and skillful, and communities willing to support and invest in an ICT business base that can broadly contribute to more dynamic economic development. Indeed, ICT can play a large role in strengthening and expanding the traditional base of the Aboriginal economy such as in the tourist, resource and craft production sectors. Modern ICT-based service delivery systems and networks illustrate how public services can become platforms for business spin-offs that benefit local communities.

Recommendation 15: Aboriginal governments should be supported and encouraged to develop and integrate ICT initiatives into their long term strategic planning in order to:

- **Facilitate community economic and business development and entrepreneurship;**

- **Stimulate and sustain the development of an Aboriginal owned and controlled ICT business sector; and,**

- **Foster community/private sector partnerships that provide access to necessary expertise and resources to assist and help promote technology-based economic development and growth.**

Recommendation 16: Governments should provide assistance and create incentives for the Aboriginal business sector:

- **To adopt ICT into their production, business and service processes; and,**

- **To increase business intelligence gathering and product and service marketing capacity to better identify business opportunities and reach out to regional, national and international markets.**

Promoting Economic Self-Sufficiency

Aboriginal participation in the New Economy must be seen in the context of both individuals and collectives, and needs to take into account the diversity among First Nations, Métis, Inuit and their urban populations as well as the different ways in which Aboriginal peoples are engaged as consumers, business people and governments. For example, an Aboriginal individual may choose to participate as an entrepreneur in the broader economy, while Aboriginal communities or governments might implement initiatives that shape their internal economies based on cultural, political or social priorities. The benefits of Aboriginal participation in the eEconomy will vary according to local circumstances, opportunities and community priorities, but generally the incorporation of ICT into economic development strategies can produce, particularly over the longer term, new and expanded business opportunities, more and higher paying jobs and a more efficient infrastructure.

Building local ICT capacities and businesses also serves to retain financial resources that would typically leak out into neighbouring economies, thereby capturing money for reinvestment and building economic self-sufficiency. Investment in ICT-type business ventures, then, should be a priority for economic development – especially considering the limited number of economic opportunities in some Aboriginal communities.

Recommendation 17: Aboriginal governments, organizations, and business associations should play a facilitative role in developing business capacities by providing information, better aligning programs and resources, and helping entrepreneurs build networks and partnerships. This would include developing online information and services to support business and local capacity development.

Skill Sets for Today's Economy

Developing human capital is fundamental to participating in the opportunities afforded by the New Economy. Human resource development is a vital issue for Aboriginal Canadians and their communities. Having new ICT skills and literacy is a critical aspect, but it goes beyond just acquiring technical savvy. Strong communication skills (especially in the areas of partnerships and education), leadership and project management skills, and innovation and entrepreneurship are all part of the mix. The success of business ventures ultimately remains conditional on business skills acumen.

A human resource strategy that employs ICT to develop new knowledge and new skills is a key in this regard because it involves learning by doing. Online training is the principle method that companies now use for training and workforce development. Online training systems are very developed, including online workshops, seminars and tutorials, trades and adult learning. We were told that these tools are not being used extensively in Aboriginal training and workforce development strategies at this point.

Both governments and the business sector have an investment role in developing Aboriginal human resources and a facilitative role in helping bring partners and networks together with Aboriginal organizations to develop workforce strategies that position Aboriginal young people for the future.

The concept of Aboriginal governments and organizations as custodians of information also warrants consideration. Clearing houses, such as the Aboriginal Inclusion Network (www.inclusionnetwork.ca), an online employment company that matches Aboriginal employees to businesses, are repositories and disseminators of best practices for proposals, solutions, and learning. The Inclusion Network links Canadian employers to Aboriginal job seekers, over 300 Aboriginal employment centres, and post-secondary institutes across Canada. Aboriginal institutions can also play a role in developing business capacities by acting as facilitators by providing information, aligning programs and resources, and helping entrepreneurs build networks and partnerships.

Recommendation 18: Aboriginal organizations, governments, community colleges and the private sector should collaborate on a long term strategy to actively support and promote Aboriginal participation in the knowledge economy.

Recommendation 19: Aboriginal training and business organizations, in collaboration with the relevant agencies of government, should undertake an assessment and stocktaking of the potential role of eTraining in developing the Aboriginal workforce and business sector.

The Role of Leadership

Recommendation 20: Aboriginal governments should create an enabling environment that favours innovation and technology-based economic and business development.

Aboriginal political leadership has a critical role.

Aboriginal leadership can make in-roads by creating an enabling political and investment environment that favours the types of innovation and development required for participation in the New Economy. Pressing social demands, such as housing and health, make this challenging. That being said, local ICT champions – which may include service providers, community resource personnel, entrepreneurs and educators – can balance their ICT visions with the needs of the community. By consulting the community about their ICT plans, showcasing ICT best practice models, and highlighting economic success stories, champions can promote buy-in and ICT investments that will pay off in the long term for both individuals and communities.

Improved Aboriginal Services and Service Delivery

ICT is poised to become a major tool to enable First Nations, Métis and Inuit governments and organizations to improve services and fill service gaps. Canada may be at the forefront of developing eGovernment service delivery, but at the moment there are not many online services tailored to Aboriginal peoples. For example, computer-based case management systems that are a central feature in social service, health care and labour market programs are only now beginning to be developed as part of Aboriginal service delivery systems. This means, in effect, that Aboriginal citizens and communities do not receive the same quality or often the same scope of services that are routinely available to other Canadians.

A great deal of Aboriginal service delivery infra-structure has already been devolved to Aboriginal governments and organizations. The state of Aboriginal service infrastructure unfortunately lags behind that available to other Canadians, in many instances very far behind. These differences threaten to widen as federal, provincial and territorial governments, through initiatives such as Service Canada, make major investments in technology designed to create service delivery networks that will provide Canadians easier, one-stop access to services. There is a similar story unfolding in health care as Infoway begins to make huge investments in ICT over the next few years to improve the availability and access to health services. While these advancements are positive developments for most Canadians, Aboriginal-specific components are not visible, nor is the need for Aboriginal-delivered services at the community level.

Aboriginal governments and organizations are pivotal points for service delivery and require the resources to invest in ICT so that they can provide similar higher quality service systems and better access to a broader range of services for their citizens and clients. Using technology to upgrade and develop Aboriginal service delivery systems and infrastructure was identified as a major ICT priority by Aboriginal Voice participants. The evidence presented in the forums in areas like eLearning and eHealth also made a convincing case that investment in the application of ICT to improve and tailor service delivery to client needs will lead to better program outcomes for those that are being served.

Recommendation 21: Federal, provincial and territorial governments should commit funding and resources to enable First Nations, Métis, and Inuit governments and organizations to substantially improve their service delivery systems and infrastructure over the next five years with particular priority in the areas of health care, social and children's services and education. These strategies will need to be developed on a partnership basis so that they are appropriately tailored and respond to diverse needs and circumstances.

Service Delivery Networks

Aboriginal Voice showcased many examples on how Aboriginal governments and organizations are using technology to improve service delivery. Health is one example where progress is being made. A recent report from Health Canada contains strong quantitative and qualitative evidence which demonstrates that telehealth networks provide high quality clinical and community services to previously under-serviced Aboriginal communities. These online tools are offering more opportunities for health professionals and community members to share information and advice, improve their knowledge, and foster new ways of communication through e-mail, videoconferencing and chat rooms. For service professionals, particularly, who are often in high demand, having access to ICT creates more rewarding professional and work environments that lead to their wanting to remain in communities. The tools and mentoring that these online systems provide also makes upgrading of knowledge and skills within the community more accessible and affordable.

Achieving the necessary economies of scale and capacity may require a more regional approach.

Using technology to facilitate networking among communities is another way to meet the needs of communities and organizations. It allows them to collaborate on common issues through sharing of best practices, participating in real time problem solving and creating the economies of scale that make a broader and more specialized range of online services viable. The capacity to tailor services is especially important to growing segments of the Aboriginal population, such as youth and Aboriginal peoples living in urban centres, which may or may not have a connection or affinity with traditional communities.

A particularly interesting and dynamic perspective on service delivery is the fact that online networks allow for the self-generation of services. In the case of youth, for example, online help and counselling services have emerged from online networks such as the Aboriginal Youth Network (www.ayn.ca). The site is a one-stop service for information ranging from wellness issues such as quitting smoking, safe sex, traditional medicine to scholarships, internships and education and training programs for Aboriginal peoples.

Recommendation 22: Governments should invest resources to promote, support and facilitate the development of Aboriginal networks, including professional networks and communities of interest.

Integrating Online Service Delivery

The eService strategies of the federal, provincial and territorial governments are targeted at integrating services to make them easier to access and more relevant to the needs of citizens. The model is one of seamless service delivery. A core theme in the Aboriginal Voice discussions was the need to break down departmental and government silos to create more holistic, community-based continuums of services by giving First Nations, Métis and Inuit governments and organizations more control and flexibility to design, manage and tailor services to the communities they serve. There are over 200 different cross-governmental programs available to Aboriginal peoples. The question remains, what is the range of service that should be available online and how can these services best be accessed? Currently, the story is one of fragmented mandates with little focus on or investment in service integration. What is required is realigning programs, policies and existing funding to better cluster and integrate services so that Aboriginal governments are better positioned to become points for service integration.

There are already excellent examples where integrated online service delivery is successfully taking place. The Meadow Lake Tribal Council (MLTC), to cite one example, by way of a pilot project has worked with AIS (Aboriginal Information Systems) to develop the software needed to integrate services. MLTC's nine First Nations communities in northern Saskatchewan are integrating six programs: housing, child & family services, post-secondary, health, membership, and social assistance. All of the data collected for each program area is centralized on the basis of membership (through a "citizen's database") and the data is available to the First Nations with the appropriate security measures to ensure that only those permitted have access to the information that is required. The success of the initiative is driven in part by the fact the system was designed, developed and implemented by First Nations, which once again speaks to the need for initiatives to be community and Aboriginal government driven. The end result: the new system not only provides programmatic outputs (eg. Social Assistance cheques), it also generates the reports required for submission to federal government.

Aboriginal governments and organizations are in the best position to know where service infrastructure needs to be improved, what gaps in service exist and where integration of service can be most beneficial.

Information Resources in the Information Society

In the information society, it is imperative that Aboriginal peoples and communities have ready access to information. It is essential to their full participation in Canada's social and economic life as well as to increased control and jurisdiction over programs and services by Aboriginal communities. Better access to information would mean more direct participation of Aboriginal citizens in government decision-making and planning. Information is the glue that supports and binds the pillars of cultural development, good government, citizen-centred services, and economic opportunity.

Ownership, Control, Access & Possession

Aboriginal governments, institutions and organization have a key role in developing information that meets their own needs and the needs of their members. Federal, provincial and territorial governments are the primary holders of Aboriginal information. The ownership, control, access to and possession of this information is of vital concern to most communities and these issues are quickly becoming an impediment to having this information become a resource for policy planning, reporting and evaluation. Major data collecting institutions such as Statistics Canada have encountered major problems in collecting data within some Aboriginal communities because of these concerns. To begin, there is a need to determine what kinds of data will be shared and what rules will be in place to ensure that information is appropriately and ethically handled. This will ensure proper standards for data management and continuity for information holders. Having this framework is an important building block for Aboriginal participation in eGovernment and service delivery initiatives.

Recommendation 23: Federal, provincial and territorial governments should reach agreements on a framework for information governance negotiated directly with each respective national Aboriginal organization that can serve broadly as guidelines for the collection, dissemination and sharing of information and data.

Information Capacity

Aboriginal governments need to have access to extensive amounts of information to create sound comprehensive community profiles and plans and to allocate resources effectively. The information that is collected and shared needs to be relevant and used in the service of the community – that is, it should be outcome oriented as opposed to administratively focussed. Having high quality, relevant information available would serve to build the policy and planning capacity of Aboriginal governments and organizations. Information deficits are so large at this point for most Aboriginal communities

and organizations that the costs of turning this situation around are so high that building this capacity has to be regarded as a long term investment project.

Collection and evaluation of information at the community level requires resources to support a system of data collection and distribution and a workforce which is well-equipped and qualified to understand and use information and research. The ability to capture, aggregate, disseminate and easily access and use information from multiple sources is essential to informed planning and decision making on the part of governments and communities. More direct participation of Aboriginal citizens in government decision-making and planning requires increasing access to information that is user friendly.

Recommendation 24: Federal, provincial, territorial governments and Aboriginal political leadership should support the creation of information capacity that will allow Aboriginal governments and organizations to be more accountable to both their citizens (constituents) and to have a shared accountability relationship with their government partners. Aboriginal governments and organizations should commit to using ICT to provide information that strengthens accountability and participation of their members and citizens in governance and decision-making.

Integration and Streamlining of Information and Information Requirements

Integrating services in ways that better meet the needs of citizens requires the sharing and integration of information across program, departmental and jurisdictional boundaries. We were told time and time again that Aboriginal governments and organizations confront costly, complex and overly burdensome information demands that inhibit the integration of information and services. Moreover, these data requirements are said to be heavily administrative and do not support the move to results-based accountability that is being strongly urged by Aboriginal leaders and authorities like the Auditor General of Canada.

Changing the current situation is challenging but it can be done. We found evidence of this in the type of information sharing agreements and protocols that are being negotiated through Aboriginal self-government processes. The focus of these agreements is to develop and share information that is relevant to community members with a concurrent goal of strengthening the accountability relationship between them and their governments all the while meeting the accountability requirements of Parliament. Identifying common data needs and uses has served to eliminate some of the administrative burden and duplication for all the governments involved. With this direction in mind, federal, Aboriginal and provincial and territorial governments need to work in partnership to:

- Coordinate existing information and information sources;

- Develop mechanisms that allow for streamlining of information requirements and mutual accountability between governments; and,

- Ensure the protection of privacy.

Aboriginal Self-Governance and Citizen Participation

One of the great potential benefits often cited for ICT is eDemocracy – using the technology to better engage citizens in the public policy making process and in holding governments to account. While Aboriginal Voice participants saw this potential, our discussions highlighted some unique differences and challenges for citizen engagement and accountability in an Aboriginal eGovernment context. Many Aboriginal people live in communities where political discussion and activities are close to home. The way politics is conducted and decisions are made is often deeply connected to culture and traditional practices and, of course, there is great diversity among Aboriginal peoples in this respect. How does new technology fit with Aboriginal politics and traditional ways of making collective decisions? We did not emerge with good answers to this very important question. What we did hear is that Aboriginal governments and organizations most often do not have the scope of authority or resources necessary to effectively engage their citizens in a meaningful way. Federal and provincial governments are seen as the primary sources of authority and control over resources and how they are to be used. In other words, greater Aboriginal citizen engagement is directly tied to greater self-governance by Aboriginal peoples.

Having said this, there are many promising avenues for using ICT to better connect and engage Aboriginal political leaders with those they represent. Certainly, the Internet can be used as a vehicle for providing ready access to information and for increasing the lines of communication, especially with young people, who may be more willing to interact with their political leaders through a medium like the Internet. Political leaders also have an opportunity to use the technology to reach out to their constituents through online surveys and dialogues on issues of concern to them.

More immediately, ICT may be an effective tool for Aboriginal organizations involved in advocacy and political representation to become more effective through sharing of information, opening up internal processes for policy and decision-making and building coalitions of support on issues of common concern.

Aboriginal political institutions and organizations may well have a role in facilitating the introduction of technology within Aboriginal communities by becoming showcase examples of how ICT can be used to strengthen the political process. Political leadership, as we said earlier, is required for a successful Aboriginal eGovernment agenda. If Aboriginal leaders can embrace the technology for their own purposes the better the chances they will become champions for its broader application in helping tackle social and economic issues.

Federal, provincial and territorial governments also need to do a more effective job of engaging Aboriginal citizens on matters that directly affect or are of interest to them. There are some matters on which governments have a legal and ethical responsibility to consult Aboriginal communities and citizens. What role can ICT play in these consultation processes? What are the implications or limitations on the use of eConsultation tools with respect to the Crown's duty to consult? These are difficult questions. A starting point for greater Aboriginal citizen engagement would be to have Aboriginal political leaders and federal, provincial and territorial governments jointly develop consultation standards, guidelines and methodologies that promote greater Aboriginal participation in governance and decision making and determine what role ICT should play in these processes.

Recommendation 25: Governments and Aboriginal leadership need to build the organizational capacity, authority and resources necessary to engage and consult with Aboriginal citizens on policies, programs and services. These consultation resources should include the technological capacity to engage Aboriginal citizens, including recognizing their distinctive cultural and language needs. Governments should encourage pilot projects to assess the best way to engage Aboriginal citizens using online tools and methodologies.

Partnerships, Networks and Leadership

Collaboration and partnerships are underpinnings for effective eGovernment. Partnerships represent a way of realizing opportunities, mobilizing scarce resources, mitigating risk, staying abreast of new systems and applications, ensuring skills are developed and maintained, and up-to-date technologies are harnessed. Aboriginal Voice showcased examples of successful collaborations and partnerships in every area where Aboriginal eGovernment is evolving.

Fostering and deepening the environment for partnerships and collaborative networks will greatly facilitate the development and implementation of Aboriginal eGovernment. Our hope is that Aboriginal Voice has helped to facilitate this process. Our participants told us that a sustained commitment to collaboration and partnership development is required. Having a clear and focused Aboriginal eGovernment agenda and set of priorities would contribute immeasurably to this objective. Aboriginal-led multi-stakeholder vehicles can serve to bring together the necessary players, including government. It may be useful to consider national level mechanisms for this purpose. These mechanisms would need clear mandates and broad support from Aboriginal political leaders and federal, provincial and territorial governments.

Recommendation 26: Consideration should be given to establishing an Aboriginal-led national multi-stakeholder vehicle, that includes government and other key stakeholder representatives, with a mandate to champion, sustain and facilitate the implementation of Aboriginal eGovernment.

Aboriginal eGovernment will only move forward with momentum if there is a focal point for shaping and driving this agenda. We have said that political leadership is required. Aboriginal organizations and governments cannot do this alone, nor do they have the resources. Through Aboriginal Voice we observed many successes, but equally we saw many major institutional barriers to an effective intergovernmental and even interdepartmental agenda emerging around Aboriginal eGovernment. Joint leadership and commitment between Aboriginal leaders and governments has the potential to kick start and sustain an agenda that would see the power of today's information and communications technologies deployed to help Aboriginal Canadians realize their aspirations. We are hopeful that the recommendations of this report will make a contribution to this important exercise of leadership.

Recommendation 27: Governments should support a national conference of Aboriginal and government leaders to develop and chart out an action plan to support and achieve the goals of digital equality and opportunity.

Summary of Aboriginal Voice Recommendations

Building Sustainable Capacity

Recommendation 1: Aboriginal eGovernment should be a priority on a national agenda of transformation.

Recommendation 2: A national commitment by all governments in Canada is required to bridge the digital divide for Aboriginal communities and institutions within the next five years, and for all Aboriginal peoples within the decade. Achieving these goals entails high-speed broadband Internet access that is affordable to users, coupled with governments investing to create sustainable capacity within Aboriginal communities and organizations to maintain and support ICT systems and applications development.

Recommendation 3: Aboriginal governments and their structures must be the central building blocks for an Aboriginal eGovernment agenda.

Recommendation 4: A Community- and Citizen-centred approach, driven by Aboriginal governments, should be adopted as the primary underpinning of Aboriginal eGovernment.

Aboriginal eLearning

Recommendation 5: Governments should make Aboriginal eLearning a national priority and facilitate and resource the building of a national online Aboriginal eLearning portal that would serve as a focal point for a national eLearning networks tailored to the different needs of the First Nations, Métis, and Inuit peoples.

First Nations, Métis and Inuit educational and training organizations, need to be resourced to fully participate in this national initiative. Characteristics of a national eLearning portal and networks would include:

- An open source resource web/network;

- National collaboration, with regard to more advanced communities and users acting as role models and mentors to those who need to build capacity; and,

- Open source information and resources that would be accessible to all Aboriginal learning organizations, while maintaining the ability to allow communities to cater the information and applications to their learning needs.

Recommendation 6: Federal, provincial and territorial governments should commit to providing long term funding and support in order to sustain current Aboriginal eLearning infrastructure and initiatives.

Recommendation 7: Aboriginal organizations, governments, and post-secondary institutions should collaborate on an assessment and action plan on how ICT can be used to increase Aboriginal post-secondary participation and achievement.

Recommendation 8: Working in collaboration with Aboriginal leaders and organizations, federal, provincial and territorial governments should promote and invest in First Nations, Métis and Inuit Centres of Excellence for eLearning with a mandate to advance and share information and knowledge about best practices and facilitate their diffusion into education and training systems and into the community.

Recommendation 9: National and regional research granting agencies should invest dedicated resources to support the advancement and innovation in Aboriginal eLearning.

Preserving, Promoting & Protecting Aboriginal Cultures

Recommendation 10: The Federal Government, in collaboration with national First Nations, Métis, and Inuit organizations, should develop and implement a national policy commitment to promote the preservation and protection of Aboriginal cultures and languages and ensure Aboriginal children, wherever they live, have opportunities to learn their culture and language. A critical component of this commitment is to fully employ, with appropriate safeguards, the potential of ICT to preserve, store, transmit and enable active cultural

learning. Having provincial and territorial governments and education institutions and agencies as partners in this national project will be critical to its success.

Recommendation 11: Working with the appropriate Aboriginal authorities, national and provincial archives and museums should accelerate the digitization of Aboriginal historical records and artefacts and make this information available online.

Recommendation 12: Financial and other resources should be made available for Aboriginal communities to collect and digitally preserve their histories and cultural knowledge for the benefit of the community.

Recommendation 13: Aboriginal governments, organizations and communities should develop protocols to govern the online collection, dissemination and use of cultural information based on customary laws.

Recommendation 14: Aboriginal peoples should develop models for intellectual property protection of traditional knowledge, traditional cultural expressions and folklore. These models should be recognized by governments and protected in law.

Creating Opportunities in the New Economy

Recommendation 15: Aboriginal governments should be supported and encouraged to develop and integrate ICT initiatives into their long term strategic planning in order to:

- Facilitate community economic and business development and entrepreneurship;

- Stimulate and sustain the development of an Aboriginal owned and controlled ICT business sector; and,

- Foster community/private sector partnerships that provide access to necessary expertise and resources to assist and help promote technolog-based economic development and growth.

Recommendation 16: Governments should provide assistance and create incentives for the Aboriginal business sector:

- To adopt ICT into their production, business and service processes; and,

- To increase business intelligence gathering and product and service marketing capacity to better identify business opportunities and reach out to regional, national and international markets.

Recommendation 17: Aboriginal governments, organizations, and business associations should play a facilitative role in developing business capacities by providing information, better aligning programs and resources, and helping entrepreneurs build networks and partnerships. This would include developing online information and services to support business and local capacity development.

Recommendation 18: Aboriginal organizations, governments, community colleges and the private sector should collaborate on a long term strategy to actively support and promote Aboriginal participation in the knowledge economy.

Recommendation 19: Aboriginal training and business organizations, in collaboration with the relevant agencies of government, should undertake an assessment and stocktaking of the potential role of eTraining in developing the Aboriginal workforce and business sector.

Recommendation 20: Aboriginal governments should create an enabling environment that favours innovation and technology-based economic and business development.

Improving Service Delivery

Recommendation 21: Federal, provincial and territorial governments should commit funding and resources to enable First Nations, Métis, and Inuit governments and organizations to substantially improve their service delivery systems and infrastructure over the next five years with particular priority in the areas of health care, social and children's services and education. These strategies will need to be developed on a partnership basis so that they are appropriately tailored and respond to diverse needs and circumstances.

Recommendation 22: Governments should invest resources to promote, support and facilitate the development of Aboriginal networks, including professional networks and communities of interest.

Treating Information as a Public Resource

Recommendation 23: Federal, provincial and territorial governments should reach agreements on a framework for information governance negotiated directly with each respective national Aboriginal organization that can serve broadly as guidelines for the collection, dissemination and sharing of information and data.

Recommendation 24: Federal, provincial, territorial governments and Aboriginal political leadership should support the creation of information capacity that will allow Aboriginal governments and organizations to be more accountable to both their citizens (constituents) and to have a shared accountability relationship with their government partners. Aboriginal governments and organizations should commit to using ICT to provide information that strengthens accountability and participation of their members and citizens in governance and decision-making.

Citizen Engagement

Recommendation 25: Governments and Aboriginal leadership need to build the organizational capacity, authority and resources necessary to engage and consult with Aboriginal citizens on policies, programs and services. These consultation resources should include the technological capacity to engage Aboriginal citizens, including recognizing their distinctive cultural and language needs. Governments should encourage pilot projects to assess the best way to engage Aboriginal citizens using online tools and methodologies.

Partnerships & Collaborations

Recommendation 26: Consideration should be given to establishing an Aboriginal-led national multi-stakeholder vehicle, that includes government and other key stakeholder representatives, with a mandate to champion, sustain and facilitate the implementation of Aboriginal eGovernment.

Recommendation 27: Governments should support a national conference of Aboriginal and government leaders to develop and chart out an action plan to support and achieve the goals of digital equality and opportunity.

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