

**Information and Communication Technology in Aboriginal Communities in
Canada: Increasing Aboriginal Social Capital**

**A Discussion Paper
Executive Summary**

**Prepared by:
Javier Mignone, Heather Henley, Jason Brown,
John O'Neil & Wendy Ross**

**Funded by the Social Sciences and Humanities Research Council
Crossing Boundaries Research Initiative
Research Theme 2: Increasing Aboriginal Social Capital**

**The University of Manitoba
Faculty of Human Ecology
Winnipeg
June 2008**

The study produced a discussion paper on information and communication technology (ICT) as it relates to Aboriginal social capital. Increasingly, developments in ICT are having major impacts worldwide. In Canada, the last several years have seen a significant growth in ICT opportunities, particularly in relation to online capabilities. A diverse number of Aboriginal communities have been part of this process. There are numerous experiences where the growth in ICT appears to be having an important impact on socioeconomic realities. Nonetheless, there is still much that is unknown about how ICT affects community life both positively and negatively. Simultaneously, what is known as the digital divide is still far from being bridged. The notion of social capital has become one of the relevant tools for measuring the impacts of ICT in communities. Further, it can assist in the understanding of the prerequisites and investments that may enable the successful implementation of ICT in Aboriginal communities.

The study sought to address four main questions: Why social capital can be a useful notion in assessing the impact of ICT? How can ICT impact community social capital? How can the implementation of ICT be impacted by social capital investments? Does the type of ICT development matter in terms of social capital?

Building on prior work, the authors conducted an extensive review of the published and grey literature on social capital and on ICT implementation in Canada with a focus on Aboriginal communities. Together with the examination of existing literature, a series of phone interviews with 15 key informants from First Nations, Métis and Inuit communities and institutions in Canada were conducted to gather information on specific cases related to the development of ICT in Aboriginal communities. A first draft paper was written and distributed for feedback among 20 individuals from Aboriginal organizations, government agencies, and university units with experience in this area. Five roundtables were held in different regions of the country to gather further information, discuss real experiences and receive feedback of the draft paper. These roundtables were held in Sioux Lookout, Ontario (K-net); Cranbrook, British Columbia (Ktunaxa); Iqaluit, Nunavut (Qiniq); Edmonton, Alberta (Métis settlements); and Winnipeg, Manitoba (urban Aboriginal agencies). The roundtable sessions were organized to discuss the content and direction of Aboriginal community information and communication technology (ICT) networks in Canada. In early 2008 a one-day national symposium was held in Winnipeg, Manitoba, with the participation of 23 key stakeholders, experts and practitioners from Aboriginal organizations and other relevant entities, to discuss the document and identify priority issues.

The discussion paper begins with an overview of terminology and concepts, followed by a brief environmental scan of the situation of ICT in Canada. The paper then reviews the theory of social capital as it applies to Aboriginal peoples in Canada and presents the social capital framework that guides its examination in relation to ICT. The paper continues with a series of case descriptions of ICT implementation in First Nations, Inuit and Métis communities, and one specifically related to urban Aboriginal settings. The case descriptions were K-Net (Ontario), Métis settlements (Alberta), Qiniq (Nunavut), Ktunaxa Nation (British Columbia), and urban Aboriginal initiatives (Winnipeg). Using the case descriptions and the roundtable meetings as main background information, the paper discusses the potential opportunities offered by ICT in distinct fields to Aboriginal communities. It continues with an analysis of the potential impact of ICT on social capital using the study's framework. The central notion of social capital utilized by the study was the following: Social capital characterizes a community based on the degree that

its resources are socially invested, that it presents an ethos of trust, norms of reciprocity, collective action, and participation, and that it possesses inclusive, flexible, and diverse networks. Social capital of a community is assessed through a combination of its **bonding** (within group relations), **bridging** (between group relations), and **linking** (relations with formal institutions) dimensions.

When analyzing the potential for impact the paper provides evidence for the plausibility of impact, not evidence of impact per se. The study design and the data available did not allow for the latter type of evidence. Again with a social capital lens, the paper analyzes enabling and inhibiting conditions that seem to play a role in successful implementations of ICT in Aboriginal communities. The section concludes by revisiting ICT and social capital suggesting that both the *what* and the *how* of connectivity seem to matter from a social capital perspective. The paper concludes with a presentation of policy and research priority issues. In addition to the main document, there are a series of appendices providing more detailed information. Further to the study report itself, the research team created a website that is meant to be both a forum for ongoing examination and debate of these issues, and a clearinghouse of resources related to ICT and social capital for the use of Aboriginal communities, Aboriginal organizations, government, and researchers. The web link is the following: **www.communityICT.ca**

The case descriptions suggested numerous opportunities offered by ICT for Aboriginal communities in the areas of education, economic development, health, cultural continuity, governance, services, and socialization and leisure.

The study was able to assess the plausibility of the impact of ICT on communities from a social capital perspective, seeking to understand possible mechanisms through which ICT can impact relations within communities, between communities, and across communities and formal institutions. Specifically, given that social capital implies some form of investment it examines how ICT is a potential tool for strengthening communities' resources, networks and ethos.

The case descriptions seemed to support the idea that higher levels of bonding, bridging and linking social capital facilitated the establishment of Aboriginal connectivity networks. As evidenced by most of these cases, it has been (and is) a hard struggle to not only develop but to sustain the networks. They have to-date shown remarkable success in uptake, usage, membership, etc. Community leadership, an aspect of bonding social capital, was one of the key factors in their development. Learning from, and sharing with, other initiatives (bridging) also proved to be very valuable. Access to government programs and relations with corporations were very important. Nonetheless, these linking social capital aspects were (and are) somewhat unstable and present one of the potential barriers for sustainability.

The impact of ICT on Aboriginal communities was also evidenced by the case descriptions and other initiatives examined. For instance, ICT investments in remote communities dramatically increased their bridging and linking opportunities in areas such as business, education, and health. Potential for increased social capital within communities (bonding) and across communities (bridging) was reflected for example in online groups, the use of personal webpages, and efficient tools for self-governance.

One of the most interesting insights from the examination of the ICT initiatives is that despite the *what* of connectivity mattering, it is the *how* of connectivity that can significantly make a

difference in terms of community social capital. In other words, the “ownership of the means of production” (in our case the ownership of the networks) clearly relates to increased community social capital at the bonding, bridging and linking levels.

Although the paper does not discuss in detail “all” forms of ICT most of what was examined is applicable to current or future developments. What seems highly relevant is how ICT community networks are actually developed and implemented may establish a synergy of social capital as advantageous pre-requisite for their success and the success itself as strengthening the community’s social capital. This implies the consideration of power relations among Aboriginal communities and organizations, governments, and private and public corporations. Legislation that favours large private or public ICT corporations over community-based profit or non-profit entities, project-based funding sources that leave community networks at the mercy of government bureaucratic whims, public connectivity infrastructure investments particularly lacking for rural and remote areas, are all instances of power relations. In fact, these are particular aspects of the broader notion of Aboriginal self-governance. Considerations of ICT and Aboriginal social capital that do not consider these power relations as central to the analysis are missing the point, that strong social capital is not simply about social relations, but it is essentially about agency and self-determination.

The policy and research priority issues that emerged from the study and the symposium were the following.

That ICT infrastructure needs to be considered a right. As basic infrastructure for water and sanitation are a matter of equity, and services such as postal and health care are in essence guaranteed across the vast territory of Canada, current community social and economic development requires solid ICT infrastructure. It is clear that the lack of proper ICT among Aboriginal communities dramatically hinders any possibility of level the playing field in relation to community development and economic opportunities.

Another issue was that of *social enterprises and social economies*. Central to the successful implementation and positive impact of ICT in Aboriginal communities appears to be community ownership and implementation of the networks. As well, that the private business model does not work for social enterprises such as community owned networks. Serious efforts have to be directed to adjust legislation, norms, and funding models to serve these social economies.

The role of government is crucial to the above identified issues. There are a number of aspects where government at its various levels can play a positive role. Among these are to: move away from pilot project funding to longer term program funding approaches (adequate and reliable funding); reduce duplication and fragmentation of government departments as they relate to ICT development; increase necessary investments in ICT infrastructure at the community level; work closer with communities; assist in securing funding for community networks; establish legislation that at the very least levels the playing field for community enterprises vis-à-vis private corporations; allocate proper bandwidth and related fees in Canada (e.g., Telesat) for community and non-profit initiatives as compared to industry and other corporations.

Among the crucial investments in ICT for Aboriginal communities is that of *human resource capacity building*. These investments are intimately connected to community ownership and management of the networks, to the successful uptake of the technology, and to the enhanced use

of the different applications for cultural, social and economic opportunities. More so, ICT is an area where youth capacity building is of particular relevance and prospect.

Addressing the digital divide or digital inequality has significant differences if it relates to *urban or rural-remote settings*. Within urban environments, inequality in access to adequate connectivity relates mostly to lack of purchasing power of computers and network connections among urban low income Aboriginals. Programs that address this inequality need to focus on household investments and community access initiatives. In rural and remote Aboriginal communities, aside from the above mentioned issue, is that of community connectivity. ICT development and implementation has to be unanchored from the urban mindset and needs to be simultaneously re-developed from the rural and remote realities.

There is an obvious need for further *research*. One essential area is that of investigating the *how* of implementation and development of ICT in Aboriginal communities. The role of community-owned networks, the power relations among the different players (Aboriginal organizations, private and public corporations, government, etc.) must be more rigorously studied to enhance the understanding of the dynamics at play and to adequately guide future policies, programs and community initiatives. Further, the *impact* of connectivity in Aboriginal communities at various levels (social, cultural, economic) requires more in-depth and empirically based studies to assist Aboriginal communities, Aboriginal organizations, and government to better capture the effects of these new realities and better foster successful implementation, positive development, and further investments.

Finally, it must be emphasized that *ICT is in essence about relationships* at various levels, not merely about technology. Relations at the social and community level, both as a draw for its use and for the social effects it may have. Further, the increased social networking across Aboriginal communities in Canada and abroad facilitated by ICT is of remarkable significance. As well, it is about relations associated with technical knowledge, financial resources, legislation, and ownership. For Aboriginal communities to properly benefit from ICT development they need to have comparable leverage to that of the other actors given the power dynamics at play. This in essence is about agency and self-determination.