
Nunavut Broadband

Business Plan Submission for Implementation Funding



**Photo of Pangnirtung, one of
25 Nunavut Communities**

Submitted to:

Broadband Pilot Program Office

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1.3 Executive Summary

Why Nunavut

Immense geography – small population

Nunavut is Canada's newest territory, located in the central and eastern Canadian Arctic. At almost 2 million square kilometers, Nunavut is by far Canada's largest jurisdiction, covering 20% of Canada's land mass, with a population density of .0133 people per kilometre.

The 27,000 people of Nunavut live in 25 remote communities – with no roads linking them together. Eighty-five per cent of the population are Inuit. Nunavut spans almost the full width of Canada east to west, and from north to south, it is immense. For example, the distance from the northernmost community of Grise Fiord to the southernmost community of Sanikiluaq is equal to the distance between Vancouver, BC and Kenora, Ontario.

High cost for travel

The majority of travel between communities is done by expensive air travel, with flights regularly exceeding the cost of traveling from Toronto to Frankfurt. Weather delays and the sheer distance between communities mean many days traveling to attend meetings.

Because of our vast land, we must communicate at a distance on a daily basis – using whatever communication tools are available.

Communication costs are embedded in all of our activities. Nunavut stands to benefit from broadband more than any other jurisdiction in Canada.

Broadband connections between Nunavut communities and the south will play a critical role not just in communications, but for economic development, national security, and sovereignty as a whole.



*Pangnirtung, on Baffin Island, Nunavut
Photo credit: Chris Small*

Needs Analysis Calls for True Broadband

In the preparation of the Nunavut Broadband Development Corporation business plan, we conducted an extensive needs analysis. Everyone can see the obvious benefits of broadband in distance education and training, governance, land claim implementation, business development, marketing, tourism, arts, and family connections, given Nunavut's vast geographic area.

What is not obvious is the absolutely critical role broadband can play in providing access to communication tools that truly meet Nunavummiut (Nunavut residents) needs. Inuit have an oral tradition – they communicate best using visual and oral media. English, text-based Internet favour non-Inuit forms of communicating – forcing Inuit to adopt non-Inuit communication styles in order to benefit from slow-speed Internet.

Broadband supports oral culture

Broadband access will allow people to visually and orally connect in a way that slow, English text-based Internet connections simply won't allow. Inuit recognize the potential for visual two-way communication tools that would be effective in the management of Nunavut, and in the strengthening of Inuit culture.

As the majority of the population, Inuit need communication tools that will allow them to be effective in governing Nunavut, developing businesses, accessing education, and managing the amazing land and water of Nunavut.



*Martha Malliki and Carmen Kalluk
videoconference via satellite*

Need affordable, sustainable broadband with access to training

The key messages we received in our needs analysis research were:

- Nunavummiut will use broadband effectively – particularly higher end applications like desktop videoconferencing and document sharing;
- Broadband must be affordable to the end user – comparable to prices in southern Canada;
- Appropriate training and public access in communities is needed to make full use of broadband.

Building Nunavut's Broadband Infrastructure

Mandate

NBDC is a not-for-profit corporation with a membership representing community, private sector and citizen interests. The overall purpose of our non-governmental organization is to enable broadband services for use by Inuit and community organizations, NGOs, the private sector and citizens. Our first task is to assist in the development of the infrastructure. We will also work to stimulate made-in-Nunavut broadband applications, and the development of a Nunavut-wide training strategy.

Private sector delivery with local involvement

NBDC has calculated the demand for broadband, and has developed a plan with the private sector to build the infrastructure required. Particular emphasis has been placed on assisting local companies and organizations in Nunavut to be involved. We know for broadband delivery to succeed in our communities – we need to develop local expertise to support the network, the public using broadband applications, and local community economic development.

Public funds to kick start infrastructure

Our business plan outlines how we can build an adequate broadband infrastructure that meets Nunavummiut needs – at a reasonable cost. Once installed, our community organizations, Inuit organizations, businesses and residents will most certainly connect. Initial infrastructure funds will get Nunavut started on the broadband road, and the aggregate model will keep it sustainable.

The Best Solution for Nunavut

The RFP process

The NBDC ran an RFP asking vendors to submit bids for connecting communities to each other and the Internet backbone (Category 1- Satellite Services) and connecting within communities (Category 2- Community Broadband Services).

An independent Evaluation Committee was created to evaluate and review the proposals received. Each proposal was carefully evaluated on price, community and Inuit employment, and technical merit and scalability. The review was carefully documented, and will withstand scrutiny.

Lowest cost, best technology for Nunavut, with local participation

The winning Satellite Service bidder provided the lowest cost, and most scalable technology that will last over time to meet Nunavut's needs. The wireless solutions proposed for the Community Broadband Services make for manageable installation and maintenance. The selected bidder's established regional partners in Nunavut provide an excellent starting point for community broadband development.

A Sustainable Network

Local revenue sustains the project

The sustainability strategy does not rely on continuing government grants. Rather, it relies on aggregate demand from Inuit and community organizations, small businesses and the general public. It also relies on in-kind contributions from the winning vendor through the RFP process. Some



Inventive Inuit youth in Iqaluit. Photo credit: Kirsten Murphy

government funded institutions such as the local community college may also acquire services from the project but the sustainability does not depend on the government applications.

Conservative projections of the subscriber base require an initial capital investment from Industry Canada of less than \$300,000 per community, for a total of \$7,375,894 over 25 communities. This investment covers the capital and implementation costs of both the satellite transmission infrastructure and the wireless distribution networks in all 25 communities.

Given the initial investment, the plan is cash positive in the second year generating more than \$4,000,000 of positive cash flow for local ISPs in years 2 to 5. Based on the Icebridge model provided by Industry Canada, the project is breakeven in 10 years with no government revenue and in 5 years with a modest amount of revenue from the Government of Nunavut.

The winning Satellite Services bidder’s costs are almost half of those proposed by other bidders. The cost advantage results from the pooling and dynamic allocation of bandwidth capacity for all of Nunavut.

The following table summarizes the financial plan and the sustainability of the project.

Table 1.3: Summary of Sustainability

| Project Funding Summary | Year 1 | Year 2-5 | Total |
|--------------------------------|--------------------|-----------------|--------------------|
| Total Project Cost | \$10,673,920 | \$7,854,426 | \$18,528,347 |
| Total Revenue from Users | 1,680,592 | 12,035,495 | 13,716,087 |
| Total In Kind Contributions | 1,617,435 | 0 | 1,617,435 |
| Total Cash Contributions | 0 | 0 | 0 |
| BRAND Funds Requested | \$7,375,894 | | \$7,375,894 |
| Local ISPs Cash Flow | | \$4,181,068 | |

A well-managed project

The people assembled by NBDC for this project have extensive experience in the North and in Nunavut with technology and communications projects. Investments in this project will be well planned, properly accounted for and the expected deliverables will be achieved within budget, on time.

Within Nunavut, we have active support from virtually all the local ISPs and strong support from the land claim and economic development organizations.

In summary

The requested investment in Nunavut is sustainable, and will enable Nunavummiut to engage with each other and the rest of Canada. Industry Canada’s support will create significant social and economic benefits for the new territory. We urge you to look favourably on this application to the Industry Canada BRAND program.