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# Indigenous Connectivity Summit Community Report

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## Executive Summary

The Indigenous Connectivity Summit, held November 8 and 9, 2017, at Hotel Santa Fe in Santa Fe, New Mexico, was the first Internet Society meeting to focus on connecting North American Indigenous communities to the Internet. It drew more than 200 participants in-person and online for a two-day series of panels, presentations, and open discussions examining community networks in North America and abroad, including their impact on various communities. The Summit was preceded by a two-day training session for Indigenous people currently operating a community network and those planning to deploy one.

The event launched a critical dialogue about what connectivity means to Indigenous communities and how to ensure Alaska Native, American Indian, Inuit, First Nations, and Métis communities have affordable, high-quality, and sustainable Internet access. Speaker and participant testimonials highlighted the vital correlation between connectivity and socio-economic benefits, including self-determination and autonomy, culture and language preservation, economic development, health, education and employment. There was a general consensus that community networks are an ideal path for Indigenous communities to empower themselves and drive their own connectivity solutions.

The event generated key recommendations to promote sustainable connectivity in rural and remote Indigenous communities. These include the need for:

1. Creative connectivity solutions that focus on sustainability.
2. An enabling environment of supportive policies, funding opportunities and public education.
3. Capacity building and education within communities.
4. Easier access to spectrum for Indigenous communities.
5. Collaborative backhaul solutions founded on future-proof technology.
6. Research on the state of Indigenous connectivity across North America.

Videos of the presentations and discussion are available at Internet Society's livestream channel at [livestream.com/internetsociety/indigenet17](https://livestream.com/internetsociety/indigenet17).

## What is the Indigenous Connectivity Summit?

The Internet is a hallmark of human innovation, but many people in rural and remote regions across North America still struggle to get and stay online. The Internet Society held its first-ever Indigenous Connectivity Summit (ICS) November 8 and 9, 2017, in Santa Fe, New Mexico, to start an important conversation on how we can ensure Indigenous communities can connect themselves to the Internet.

In a two-day series of panels and presentations, this community-led forum featured success stories of Indigenous community networks in Canada, the United States, and abroad to inspire solutions to ensure Alaska Native, American Indian, Inuit, First Nations and Métis communities have access to affordable, high-quality and sustainable Internet. A pre-summit two-day training session was also held for Indigenous people currently operating a community network and those planning to deploy one.

Participants explored what Internet access means to Indigenous communities, examined challenges and proposed recommendations to help more Indigenous communities develop their own connectivity solutions. Between in-person and online participants, the event drew more than 200 community network managers/operators, Indigenous-owned Internet service providers, community members, researchers, policy makers and Indigenous leadership to join the conversation.

The Indigenous Connectivity Summit was an initiative of the Internet Society, the Internet Society New Mexico Chapter, the 1st-Mile Institute, New Mexico Techworks, and the First Mile Connectivity Consortium. Senator Tom Udall of New Mexico supported the summit as honorary co-host. He serves on the U.S. Senate Committee on Indian Affairs and on the Communications, Technology, and the Internet Subcommittee.



*Santurra*

**INDIGENOUS CONNECTIVITY SUMMIT**  
 SANTA FE, NM INTERNET SOCIETY NOV. 6-9, 2017

## For the Community, With the Community, By the Community



In a continent producing some of the world's leading advancements in information technology, Internet connectivity in Indigenous communities across North America is still often characterized by high costs, low speeds, data caps, and poor or non-existent service.

While a competitive landscape saw telecommunications companies bring access to most urbanized areas over the last few decades, many Indigenous communities have had to develop their own connectivity solutions in the form of community networks.

### What is a community network?

A community network is built and operated by citizens who want to connect their village, city or town to the Internet. They thrive on people working together, combining resources, organizing efforts and connecting themselves to close connectivity and cultural gaps.

The Indigenous Connectivity Summit highlighted the potential of community networks to provide Internet access where traditional or commercial networks do not reach or serve, or where they may not be economically viable to operate. The event featured presentations on community networks of all shapes and sizes, including digital library and education-based organizations, cooperatives, and non-profit corporations that bring a range of connectivity services to the areas they serve. Speakers shared important experiences related to their successes and the challenges and opportunities of taking connectivity into their own hands.

*"Our definition of community is you own it,  
you get a say in it, and you get the services you need."*

Luis Ryes, Kit Carson Electric Cooperative

## Connecting Indigenous Communities

For many rural and remote Indigenous communities, Internet connectivity is a lifeline that provides access to an increasing number of essential services online. Despite varying levels of connectivity, presenters at the ICS clearly demonstrated the Internet is a powerful tool that can help improve a wide range of social and economic conditions.

### Self-determination and autonomy

Community-driven networks are critical to self-determination as they empower Indigenous communities to connect themselves to the Internet on their own terms. Presenters broadly



agreed that when communities lead connectivity initiatives, they can ensure all citizens and stakeholders have a say in developing projects that address the unique goals and priorities of the areas they serve.

“(Internet connectivity) can’t be brought in from some society that says ‘this is what you need’... It has to come from the community.”

Matthew Rantanen, Southern California Tribal Chairmen’s Association

Presenters also noted the importance of connectivity to give communities digital platforms for self-advocacy. Several examples were highlighted where Indigenous communities were able to get around gatekeepers to deliver and access political content, and build online support for activism movements and efforts to protect Indigenous lands and rights.

### Culture and Language Preservation

Several panels and presentations provided testimonials of how Internet connectivity supported culture and language preservation within their communities, such as digitizing cultural objects, stories, songs and ceremonies for storage in spaces like digital libraries. Various speakers also noted the benefits of Internet in terms of language revitalization, particularly for those that have no written form, through educational apps, video tutorials, and Indigenous language keyboards.

Presenters highlighted the Internet’s usefulness as a publishing platform to promote awareness of Indigenous rights issues, combat cultural stereotypes, and promote understanding around controversial cultural practices. However, it was also noted that it is just as important to ensure protected cultural or sacred “items” remain that way. This can be achieved by focusing on network security, data storage/server locations, access permissions, and working with Elders to judge what content is and isn’t appropriate for public access.

Another aspect to this conversation was the impact of the Internet on culture and tradition. Several presenters noted the reticence of some community members to embrace the Internet for fear of how it will impact the community. One presenter noted that culture is always changing, and by taking ownership of connectivity solutions communities can work to grow culture in new and healthy ways.

“I find the word ‘traditional’ a loaded term. It tends to be perceived as something that is fixed in time. Indigenous people, especially mine who lived in the Arctic, are technologists. The only way we survived was by adapting.”

Madeline Redfern, Mayor of City of Iqaluit

## Economic Development and Employment

Presenters offered a broad view of the various ways connectivity can generate economic benefits in Indigenous communities. One stream explored the economic opportunities that come through use of networks, such as entrepreneurship and home business opportunities. One presentation highlighted that despite its connectivity challenges, Facebook entrepreneurship in Canada's Nunavut Territory supports the revitalization of cultural practices through the sale of traditional items to wider markets.

Speakers also explored the benefits of managing a network and the jobs it creates within a community. Several participants noted the Internet's potential to help users find more meaningful career opportunities, as opposed to local ones that may be detrimental to health and go against Indigenous ways.

**“The economic development is not just from using the infrastructure but about owning and operating it.”**

Rob McMahon, PhD, University of Alberta

## Health and Wellbeing

In an era where technological advances are revolutionizing healthcare delivery and transcending geographical barriers, lack of Internet connectivity is a common denominator often preventing Indigenous communities from accessing critical services. Given the disparity in health outcomes between Indigenous and non-Indigenous communities, several presenters viewed telemedicine and healthcare delivery as one of the most important benefits of connectivity. Others also noted the privacy benefits of online mental health and wellness services.

While connectivity can clearly help save lives and improve health outcomes, presenters highlighted the importance of due diligence regarding network security, and carefully reviewing fine print and agreements dealing with access and ownership of health information.

## Education

Perhaps one of the most promising benefits of connectivity is the opportunities for youth in terms of education and employment. Presenters shared several examples in which connectivity helped facilitate distance education in communities that did not have high school or post-secondary institutions. The ability to access education within the community meant students could complete their studies at home and maintain a critical connection with their family, community, and land.

**“Technology is an enabler.”**

Bill Murdoch

## Unique Challenges to Indigenous Connectivity

Delving into the successes of Indigenous community networks in North America and abroad was a key component of starting a dialogue about the urgent need to ensure all Indigenous communities can get connected to the Internet. Likewise, the ICS also examined the unique challenges of Indigenous communities to help inspire creative and sustainable connectivity solutions.



### Geography and Land Use

One of the main barriers to Internet service in rural and remote communities is expensive infrastructure, particularly in communities spanning vast land masses like Canada's Northwest Territories and Nunavut.

Right-of-way processes and land claim-agreements pose another challenge, particularly where agreements are still under negotiation. One Canadian presenter noted the difficulty of creating broad connectivity solutions for large areas that involved several different First Nations bands representing different needs and priorities. Similarly, some presenters noted missed opportunities for community development due to a lack of cooperation among institutions when one gets funding or permission to start an infrastructure construction project.

On the other hand, one Canadian speaker recounted an occasion where the federal regulator had failed to protect Indigenous rights when it allowed an incumbent to install a fibre optic line along traditional land on his reserve without consultation or consent from the band council.

### Regulatory/Policy Landscape

Navigating regulatory and policy landscapes in North America is complex, and varies to a large degree on aspects like geography, technology, spectrum, and political entities involved in acquiring various permissions for community networks.

A U.S. panelist noted that one of the underlying challenges is a regulatory priority of competition. He pointed out that one of the hallmarks of the Federal Communications Commission's Telecommunications Act of 1996 is the free market competitive theory idea that competition will drive deployment and push price of services down. While this has worked in certain tribal lands, it has not in many others.

### Technology and Sustainability

There was a general consensus among speakers that sustainability is one of the most complex challenges for community networks. For some, it is directly related to a lack of interest, education opportunities or redundancy required to ensure network continuity. Other presenters said they struggled to keep up with technology as community needs evolved and required greater access.

Financing is another common challenge to sustainability. Several presenters noted it is difficult to access financing from banks due in part to lack of education about technology and the value of community network business models. In addition, banks do not accept assets on reserve or tribal lands as collateral. While a large number of universal service access and other grants can help, pursuing various funding opportunities is lengthy and complex, particularly as many community networks do not have a full-time staff person dedicated to the role.

## Recommendations for Connecting Indigenous Communities



ICS presenters, panellists, and participants generated a wealth of testimonials proving the Internet's potential as a powerful tool for change. By drawing attention to unique connectivity challenges faced by Indigenous communities in North America and abroad, they were also able to offer diverse recommendations to help ensure all communities can get connected.

### 1. Creative, Sustainable Connectivity Solutions

One of the most resounding recommendations among ICS participants was the importance of long-term planning to ensure a sustainable community network. Assessing current and future connectivity needs and incorporating them into the business plan and technical solution are critical to the foundation of a successful community network. Others agreed another crucial aspect to longevity is managing a network as a business organization that can champion technology, develop strategic plans, and ensure succession planning within the community.

*“There is a technical task, there is a political and regulatory task, and there is an economic and sustainability task. Those three things need to be in harmony with each other to work.”*

*Peter Bloom, Rhizomatica*

### 2. Fostering an Enabling Environment

ICS participants clearly demonstrated the link between Internet access and social and economic development, particularly when Indigenous communities develop their own connectivity solutions. To help foster an enabling environment that facilitates the creation of more Indigenous community networks, participants suggested taking a resolution on tribal connectivity issues to senior-most councils and government officials in the United States and Canada. This could also be an avenue to promote Indigenous collaboration on issues that cross boundaries and tribal demarcations.

Presenters underlined the role of all citizens to help promote an enabling environment. This includes supporting educational opportunities within communities, advocating for infrastructure development, and participating in events and organizations that can promote supportive governance and policies.

### 3. Capacity Building Within Communities

Community networks offer tremendous potential in terms of economic development and employment within their regions. Building the talent base to run and maintain the network in-house is crucial to the sustainability of the organization. To encourage more communities and citizens to develop their own connectivity solutions, ICS participants identified the need for more capacity building opportunities. This can include developing toolkits and resources for community network start-ups, improving access to education opportunities and programs geared towards building and maintaining community networks, and promoting opportunities such as internships that can inspire youth to consider technology as a career path.



#### **4. Easier Access to Spectrum**

Facilitating Indigenous access to spectrum is an important way to empower communities to develop connectivity solutions. Licenses are marketable assets that can help community network organizations gain critical access to financing and funding opportunities. ICS participants highlighted the need to re-examine spectrum and frequency license policies to promote more access by Indigenous communities, particularly with respect to service areas covering Indigenous lands.

Several speakers also suggested that promoting the option of secondary market negotiations at fair market value could help Indigenous communities gain access to spectrum where a corporation already holds a licence and either does not provide service or the quality is very poor.

#### **5. Collaborative, Future-Proof Backhaul Solutions**

The Internet and how we use it are constantly evolving. When developing connectivity solutions to rural and remote areas, it is critical consider a region's present and future needs to build functional, robust and reliable infrastructure solutions that can stand the test of time.

ICS participants urged governments in North America to reiterate their commitment to “universal service” by enhancing support for initiatives that connect anchor institutions and rural and remote regions and key facilities. This can be achieved through collaborative partnerships and access to sustainable funding opportunities.

To promote connectivity infrastructure initiatives covering large land areas, participants highlighted the value of partnerships among Indigenous communities, organizations, and corporations with similar needs to help access funding opportunities and create economies of scale.

#### **6. Research Is Integral to Measuring Progress**

While the numerous testimonials of ICS presenters and participants provided a glimpse of the unique benefits and challenges of Indigenous connectivity in North America, participants noted a lack of research and metrics to measure progress.

It was suggested that Internet Society or another non-profit organization or educational institution take on a role to collect data related to connectivity in Indigenous communities in order to better analyze successes and areas for improvement.

## Acknowledgements

The Indigenous Connectivity Summit was an initiative of the Internet Society, the Internet Society New Mexico Chapter, the 1st-Mile Institute, New Mexico Techworks, and the First Mile Connectivity Consortium. Senator Tom Udall of New Mexico served as an honorary co-host.

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