



Research on Telecommunications Services in Northern Canada

Final Report

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March 2023

This public opinion research report presents the results of focus groups conducted by Environics Research on behalf of the Canadian Radio-television and Telecommunications Commission. The research study was conducted between October 2022 and February 2023.

Cette publication est aussi disponible en français sous le titre *Recherche sur les services de télécommunication dans le Grand Nord du Canada*.

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Canadian Radio-television and Telecommunications Commission
1, promenade du Portage
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Executive Summary

Background and Objectives

Background

The CRTC is currently in Phase II of a public process to examine the telecommunications needs of consumers and small businesses in Canada's Far North. Research in this second phase will build on learnings from Phase I, which found that telecommunications services in the Far North are of lower quality and less affordable than what is available in the South, resulting in possible exclusion from social and economic opportunities. During Phase II, the CRTC will explore potential solutions to improve affordability, reliability, and enhance competition in the Far North telecommunications marketplace. Phase II will also further reconciliation with Indigenous Peoples by enabling their participation, recognizing that the policy outcomes of this process will affect Indigenous communities.

Research rationale and objectives

Public opinion research has been identified as a way for the CRTC to supplement its existing datasets and expand its knowledge of the needs of Canadians living in the Far North. It will consist of qualitative research, which will build on previous research and the Phase I public record to obtain their views on what actions the CRTC should take to ensure that telecommunication services best meet the needs of communities in the Far North.

In Phase II of the proceeding, the CRTC wished to obtain views from:

- Indigenous residents in the Far North; and
- Non-Indigenous residents in the Far North.

The focus group discussions were designed to address the following specific research objectives:

1. To obtain views from residents of the Far North on what actions the CRTC should take to improve: affordability, reliability, and quality of retail services in the Far North; improve how telecommunications service providers engage with local Indigenous communities in the Far North; and improve competition and wholesale services;
2. To capture a broader range of views from parties who will be impacted by the outcome of the proceeding. This may include those who live in Indigenous communities, whose primary language is an Indigenous language, who have limited or no internet access, or those who may not otherwise be likely or able to share their views by means of traditional CRTC procedure.

In particular, as parties noted during Phase I, the participation of Indigenous peoples is critical to conversations about telecommunications services and related policy outcomes that directly affect them. To this end, the following considerations are at the core of the research approach:

- Take into account the Government of Canada's commitment to reconciliation with Indigenous peoples;

- Encourage participation from those who might otherwise not participate;
- Ensure the public record includes community-specific discussions of issues and possible solutions to be explored in Phase II;
- Occur in a culturally-safe and welcoming environment (for instance, one that includes face-to-face discussions, trusted moderators, and/or are held in an accessible, safe setting), which will enable participants to feel comfortable to share their views with each other and the CRTC.

Methodology

Environics Research conducted a series of eight (8) in-person focus groups across the three territories (three in each), and three (3) virtual focus groups in Cambridge Bay and Northern British Columbia, with adult residents between November 22, 2022, and February 21, 2023.

Date and Time	Group Location	Total Participants
November 22, 2022, 10:00 MST	Yellowknife, Northwest Territories	6
November 24, 2022, 10:00 MST	Hay River, Northwest Territories	5
November 25, 2022, 11:00 MST	Behchoko, Northwest Territories	5
November 28, 2022, 10:00 MST	Whitehorse, Yukon	6
December 2, 2022, 10:00 MST	Dawson City, Yukon	5
January 26, 2023, 12:00 MST	Carmacks, Yukon	7
January 17, 2023, 1:30 EST	Iqaluit, Nunavut	7
January 30, 2023, 4:30 CST	Rankin Inlet, Nunavut	7
February 21, 2023, 4:30 CST	Cambridge Bay, Nunavut (Virtual)	5
December 15, 2022, 1:00 MST	British Columbia (Virtual)	6
January 25, 2023, 10:00 PST	British Columbia (Virtual)	7

Each group lasted approximately 90 minutes and consisted of between five and seven participants (out of ten people recruited for each group). Sessions included Indigenous and non-Indigenous residents of each area. All sessions were conducted in English.

Across all regions, 66 individuals participated in focus groups; 27 individuals identified as Indigenous (First Nations, Metis, or Inuit), and there were similar proportions of men and women in attendance (32 women, 34 men). Participants ranged in age from 18 to 65. The research methodology was designed specifically to capture the perspectives of urban, rural, and remote communities, as well as to provide space for both Indigenous and non-Indigenous voices.

Statement of Limitations

Qualitative research provides insight into the range of opinions held within a population, rather than the weights of the opinions held, as measured in a quantitative study. The results of this type of research should be viewed as indicative rather than projectable to the population.

Contract Value

The contract value was \$188, 879.50 (including HST).

Key Findings

The Phase I report identified affordability, reliability, and quality of service as the three biggest problems faced by participants with respect to their telecommunications services in the north, with an emphasis on internet services. The Phase II research was designed to further explore these themes, as well as to delve into some potential solutions identified by residents in the Canadian North.

Participants in all focus groups were critical of their internet services; affordability was the most common criticism in each of the focus groups, however the quality and reliability of the networks were often major points of concern within communities as well. While home phones were mentioned in each discussion, many participants no longer use these services and had little to say about them.

A trend noted during focus group engagements involved the level of development within a community and the priority area noted afterwards. In Yellowknife and Whitehorse, participants were more concerned about the affordability of the services, while in other communities, boosting the quality and reliability of the networks was of greater concern. This pattern is related to fibre optic infrastructure; the communities with fibre optic had strong internet service packages available to them, though the costs attached to them were often prohibitively expensive. The presence of fibre optic or other high-speed networks in a community also influences the willingness of participants to consider purchasing Low Earth Orbit (LEO) services like Starlink; individuals in more remote communities were more likely to accept a high upfront cost for a fast and reliable connection; those in larger communities were less interested in LEO, and would prefer to see existing services improved and made more affordable.

Affordability

Affordability was the most common criticism from each of the focus groups. Participants often noted that the internet packages in their communities were substantially more expensive than those in the south, with many reporting that even when the basic monthly rate was manageable, additional data overage charges made their bills unaffordable at times. Further, many participants noted that a lack of reliable service (inconsistent networks and/or slow speeds) forced them to use mobile data on their cell phones in order to participate in the workforce or attend classes virtually, which added more costs. Participants also frequently commented on the impact of high prices on more vulnerable members of the community.

While affordability in general was a universal concern, specific issues varied based on network reliability and the presence of fibre optic infrastructure. In remote communities, participants were accustomed to high internet bills, but described their dissatisfaction with the value of the service relative to the prices they were paying (slow speeds, low data caps, poor reliability). High costs were often attributed to a lack of competition in the market and poor accountability for providers, which created the perception that service providers were disincentivized to improve their prices or the quality of service.

The price of internet services in northern Canada was often described with terms like expensive and prohibitive by participants in every community. Participants widely felt that giving any sort of subsidies to current telecommunications providers instead of directly to customers would not be effective, but that individual subsidies would permit individual customers to choose how to improve their internet services to meet their needs. For example, in Cambridge Bay and Rankin Inlet, participants said they were more likely to use a subsidy to offset the cost of installing an LEO service like Starlink, whereas in

Whitehorse and Yellowknife participants said they were more likely to use a subsidy to increase their current internet package to include higher speeds and/or unlimited data. These regional variances are important to consider in this context, as the unique needs of each community make it difficult to implement a “one size fits all” solution. However, there seemed to be a broad consensus that something in the range of \$50 to \$100 per month would provide real relief for those struggling to keep up with bills, and would open up possibilities for customers who felt they could benefit from an upgraded service package. The interest in individual subsidies, as opposed to provider-level subsidies, was also tied to a lack of trust in telecommunications companies and a concern that subsidies given to companies would not effectively result in relief for the consumer.

Quality and Reliability

Quality and reliability of the network was an important priority for participants. This was often linked to concerns about affordability; there was a general sentiment among participants that prices would be manageable if the services provided consistent speed and reliability in the network.

Reliability was of high concern for those who rely on the internet for remote studies. Student participants mentioned examples of disruption that included being disconnected from classes, difficulties completing coursework, and missing deadlines for important applications. Those who use internet for work talked about missing out on meetings, and losing sales when transactions couldn't go through. Many participants in the focus groups noted they were in the habit of keeping their cameras off and reducing screen resolution in order to reduce data use and lower the risk of disconnection and interruption during calls. Thus, even when they were able to participate in virtual activities, their participation was hampered due to inconsistent and unreliable connections.

Participants also noted that network quality and reliability issues were stifling to business and industry across all communities specifically because of the impact on banking services, health care access, social supports, and emergency services, with remote communities describing the most severe limitations. Individuals in smaller communities all described connectivity as a significant current challenge to the community as a whole, and a barrier to future economic development. Even in larger centres with fibre optic plans available, where network quality and reliability were somewhat less concerning to the participants, the reliability was still not comparable to southern communities and the high costs associated with the fibre optic plans were a challenge for individuals and businesses.

Competition and Choice

For participants, the key advantage of having more competition in telecommunications services is that it creates a degree of accountability for service providers by providing real alternatives and giving consumers the power to switch between companies in response to poor customer service. While participants were realistic about the challenges inherent in providing internet services to their Far North communities, they felt that competition and choice in the marketplace might help to stabilize prices for internet plans, lead providers to invest in better infrastructure, and force companies to audit their practices and provide better training to customer-facing employees.

The lack of competition in the north was viewed as a pivotal issue in all regions, however this issue was more prevalent in smaller communities. Individuals in the more remote communities described feelings of helplessness, because the internet is so critical but there are no realistic alternatives available. This

resulted in a more favorable view of Low Earth Orbit satellite technologies in these communities; participants are already used to paying high telecommunications bills and are more amenable to spending that money on a different service that promises a more reliable connection. In urban settings (Whitehorse and Yellowknife), the lack of competition was framed as a customer service issue rather than a network reliability concern, and participants felt that competition would incentivize telecommunications providers to improve their client relations.

Investments and Infrastructure

Some felt that investing in telecommunications infrastructure was an important consideration for their communities, especially Hay River where investment to make services faster, more reliable, and reduce outages was even more important than affordability to focus group participants. Some participants believed that as infrastructure becomes more advanced, services using the older technology will be made available at a lower price. In the more remote communities, however, investments in new infrastructure were often perceived in a negative light, as participants felt the high costs associated with developing advanced infrastructure would simply result in higher telecommunications bills. Participants often felt that investment would be better spent by addressing issues with existing services.

Political neutrality statement and contact information

I hereby certify as senior officer of Environics that the deliverables fully comply with the Government of Canada political neutrality requirements outlined in the Communications Policy of the Government of Canada, and Procedures for Planning and Contracting Public Opinion Research. Specifically, the deliverables do not include information on electoral voting intentions, political party preferences, standings with the electorate, or ratings of the performance of a political party or its leaders.

Stephanie Coulter
Senior Research Associate, Corporate and Public Affairs
stephanie.coulter@environics.ca

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For more information, contact the CRTC at: ROP-POR@crtc.gc.ca

Introduction

In November 2020, Environics Research (Environics) published a public opinion research report for the Canadian Radio-television and Telecommunications Commission (CRTC) examining the state of telecommunications services in Canada's North.¹ Throughout this project (Phase I), Environics conducted market research on telecommunications in the North which involved telephone interviews with one thousand (1000) participants and seven (7) focus groups conducted via teleconference. Specific objectives of the Phase I research included, but were not limited to:

- Assessing what role telecommunications services play in the lives of Canadians in Canada's North; and
- Assessing whether currently available telecommunications services meet the needs of Canadians living in Canada's North.

The 2020 report identified a number of common themes throughout Canada's North, which were summarized into the following categories:

- Affordability
- Quality and Reliability
- Competition and Choice

The themes from the Phase I report were examined in the context of solutions, and in 2022 Environics was contracted to conduct a second set of focus groups across the Canadian North. The study aimed to generate actionable solutions to the issues identified in Phase I, as well as test out some preliminary solutions (i.e. subsidies). Environics engaged with NVision Insight Group (NVision) to conduct a series of in-person focus groups in the Northwest Territories, Yukon, Nunavut, and virtual focus groups with residents of northern British Columbia. NVision is an Indigenous-owned consulting company with offices in Ottawa and Iqaluit, and has a wide network of Indigenous partners and facilitators across Canada.

Objectives

The CRTC collects and publishes detailed information on the state of telecommunications services in Canada in its *Communications Markets Reports*. To expand its knowledge of the needs of those living in Northern Canada, public opinion research was identified as one method for the CRTC to supplement its existing datasets, with a view to addressing potential issues with respect to the quality, availability, and affordability of telecommunications services.

¹ For the purposes of this current report, "Canada's North" refers to the Northwest Territories, Yukon, Nunavut, and areas of northern British Columbia. Note that the previous report referred specifically to Northwestel's serving territory, which included Fort Fitzgerald, Alberta, alongside the aforementioned regions.

Environics engaged NVision in the design process, to ensure the research met its intention of gathering the perspectives of Indigenous and Northern residents with regard to the themes identified in the Phase I report. Some specific objectives of the Phase II northern focus groups included, but were not limited to:

- Incorporate Indigenous worldviews and perspectives into the research process;
- Validate the themes from the Phase I report; and
- Narrow these into more actionable options.

About this report

This report begins with an executive summary outlining key findings and conclusions, followed by detailed findings. The detailed findings are structured first by geography, followed by theme. This structure aims to demonstrate the regional variance between communities and highlight individual experiences.

Each of the documents included in the appendices were developed collaboratively by Environics and NVision, and the discussion guide used by facilitators included references and descriptions of the United Nations Declaration on the Rights of Indigenous Persons (UNDRIP) principles, First Nations Principles of Ownership, Control, Access, and Possession (OCAP) and the Guiding Inuit Qaujimajatuqangit (IQ) Principles. The values expressed in each of the focus groups is further elaborated below:

United Nations Declaration on the Rights of Indigenous Persons

The United Nations Declaration on the Rights of Indigenous Peoples states that Indigenous peoples have the right to create and access media in their own language, (Article 16) and the right to participate in decision-making in matters affecting them (Article 18). The principles outlined in the Truth and Reconciliation Commission, state that “Reconciliation must create a more equitable and inclusive society by closing the gaps in social, health and economic outcomes that exist between Aboriginal and non-Aboriginal Canadians.”

First Nations Principles of Ownership, Control, Access, and Possession

To adhere to OCAP principles, we have committed to the following:

- Sharing the final report with you in a language and format of your choice (i.e. print or digital)
- Inclusion of Indigenous researchers, facilitators and community members in the development of this project
- Providing our contact information if you have any questions or concerns
- Preserving the privacy and security of all data collected

Guiding Inuit Qaujimajatuqangit Principles:

Facilitators were guided by Inuit worldview throughout this process, specifically referencing the framework of Inuit Qaujimajatuqangit (IQ), which is grounded in four big laws or *maligait*:

- Working for the common good
- Respecting all living things
- Maintaining harmony and balance
- Continually planning and preparing for the future

Use of findings of the research.

The information gained through this research will be used to inform the proceeding to review Northwestel's regulatory framework, to ensure the framework continues to align with the needs of Canadians living in the Far North.

Detailed findings

The findings in the following section have been organized by focus group location first, then by the themes identified in the Phase I report: Affordability, Quality and Reliability, and Competition and Choice. An additional category labelled "Other" has been included to describe topics that arose during open ended questions and comment sections, and general descriptions of the focus group participants and the services they use is also provided.

Northwest Territories - Yellowknife

All participants in Yellowknife subscribed to internet services, but none of the six participants had a landline phone (opting instead for mobile phones). Participants tended to use their internet services for television and social media, however several participants noted that their internet connection was required for their work, school, and extracurricular activities.

Participants expressed a reluctance when asked if their needs were being met by their current internet service. Many participants were paying for the most expensive package that was available, and even with these packages, there were caps on their service. Most relied on their mobile internet as an alternative at times when other members of the household were using the home internet. This was particularly problematic during the COVID-19 pandemic; many households had to schedule their internet usage to ensure that they weren't overburdening their system.

"It's hard to keep up when working from home, especially when our kids were doing school. I'd have to open and close things constantly; it was so slow that I couldn't have multiple windows open on my computer. Internet is a finite resource up here."

Participants firmly agreed that their internet services did not adequately meet their needs and emphasized that this was a Yellowknife experience, noting that residents of smaller communities face much more severe limitations on their services.

Affordability

Internet in Yellowknife was widely felt to be expensive and limited in its utility. Several members described having the most expensive package available which met their individual needs, however they still needed to be cautious of the data usage at certain times of the month (particularly when they were working from home and their children were taking online classes). The participants who couldn't afford the most expensive package described a much different scenario; individuals were unable to turn on their videos for work calls, and many had to dial in for online meetings because they were simply unable to connect. This was particularly problematic for people working from home, as they were unable to see presentations shared on virtual meeting spaces or talk face-to-face with colleagues.

“Asking if internet is affordable is like asking if groceries are affordable... it’s not, but you need it. There’s no alternative way around it.”

Participants were asked how much their monthly bills needed to come down before they could consider them “affordable.” While participants unanimously felt that bills needed to be reduced, suggested reduction amounts varied among participants. One participant pointed out that a 50% reduction in their monthly internet bill would make it more reasonable, but would still be high in comparison with rates for communities in the south. Other participants felt that the current costs would be more acceptable if the caps on their data usage were either increased or eliminated altogether.

The affordability of internet services was highly contingent on personal circumstances; individuals with children noted that internet rates were less affordable due to the higher data use within their household, leading to overage fees or more expensive packages. For several participants, paying more on a regular basis simply wasn’t viable, forcing them to limit or restrict their internet use in order to manage costs. Despite diligent efforts to manage their data use, most participants still experienced overage charges in the past year, with half of participants stating that they experienced these charges on a regular basis.

Quality and Reliability

While service quality issues were generally less severe for Yellowknife participants than those in other communities, participants did note interruptions and instances of poor quality that impeded their ability to work from home, and their ability to manage personal responsibilities such as checking in on Elders in other communities. One participant noted that when they encountered issues while using the internet for routine tasks like email and banking, they would use their mobile data and would end up incurring additional charges as a result. Another participant living just outside of Yellowknife’s core noted that outages where they live cause significant interruptions to their business. Participants also noted that when disruptions occur that require technicians to repair the service, outages sometimes last for an extended period (12 hours or more). Backing up important data to cloud storage was another frequent concern; some participants described scenarios where they were unable to recover files from broken or compromised computers due to uploading limitations.

Competition and Choice

A key benefit of competition, and a priority flagged by Yellowknife participants, was to break the monopoly on internet services held by Northwestel. Introducing additional service providers would create a more competitive telecommunication market in the north, and pressure companies to improve their client relations and the reliability of their networks. One participant provided the example of WestJet opening routes to the north, which broke the monopoly held by Canadian North and created a competitive market in airfare, resulting in lower fares and more route options for customers in the territories. Another participant noted that in the south, people have the power to switch to another, similar provider in response to poor customer service.

This interest in accountability stemmed from deep frustrations with Northwestel’s handling of customer issues. Most participants in the Yellowknife group had filed a complaint with Northwestel within the past year but few participants were satisfied with the customer service or the resolution process that followed their complaints. Participants were unsure whether this was an issue of training, capacity, or management, but they felt that competition might force the company to conduct internal audits and

improve their customer service and complaints processes. In addition to frustrating experiences waiting for technician repairs, participants also noted that billing issues were often routed through multiple levels of staff before issues were addressed.

“There should be some sort of consumer protection piece in place. The fact that there's this much discrepancy around the table speaks volumes about the state of telecommunications and internet service in Yellowknife.”

When prompted about the cost of having an additional service provider, several said that they would be willing to pay the same price for similar services from a competitor. Participants didn't generally have concerns about a new company using Northwestel's infrastructure, because accountability was their primary concern.

Other

One of the solutions proposed to improve internet services in Yellowknife was to provide more transparency about the inner workings of Northwestel, including training practices for technicians, customer service representatives, and accounting departments, as well as annual reporting on infrastructure costs and profits accrued by the company.

Competition and access to Northwestel infrastructure was identified as a net positive for Yellowknife, as it would allow for smaller, locally-based internet providers. Many participants felt that having a local provider structured as a public-private partnership would provide local representation for customer service issues, and inject profits into the community. The ideal scenario for several participants was to have a First Nations partnership with Northwestel (or other providers) as this would enhance reconciliation initiatives in the region by funnelling funds into Indigenous initiatives and suppliers.

Participants in Yellowknife did not view investment or innovation as priority items in terms of competition; the key priorities for participants were to reduce the cost of internet packages and improve customer services by having “boots on the ground” within the communities. As it stands, many of the service representatives that currently operate in communities, like technicians, often don't have the ability to address some common client issues (such as billing and accounting issues). As a result, residents often have to call corporate offices, which creates barriers for individuals who may not have access to a landline, or Elders who do not speak English.

Another topic discussed in the Yellowknife group was the limitations placed on younger generations. With so many jobs and training opportunities based in the virtual world (particularly in the aftermath of the COVID-19 pandemic), having limited or ineffective internet infrastructure puts northern and Indigenous youth at a disadvantage compared to their southern counterparts. In essence, this is an equity issue. Several participants agreed that improved internet services would create opportunities for those living in Indigenous and northern communities, for example, allowing more residents to access full time jobs with companies based in the south. If Northwestel (or other internet service providers) are able to develop a more affordable and high-quality network in the territories, there could be a shift in the labour markets and economies of the Northwest Territories.

Northwest Territories - Behchoko

All of the participants in the Behchoko focus group used Northwestel for their internet services. Most participants were using the internet for online courses, schoolwork, and research, and all reported using it for social media and entertainment. Only one participant noted that they had a home phone. Participants noted that many people in the community do not have laptops or tablets, so cell phones are the main method of communication and the primary tool for internet connection in their community.

In terms of meeting everyone's internet service needs, none of the participants felt that their needs were met by the services currently available to them. Most participants had a cap on the amount of data they could use in their plan and were not impressed with the speeds available to them. Other participants had unlimited plans, with the catch that their internet speeds would slow down after a certain use threshold, severely limiting the functionality of their service after that point.

Asked to rate how important internet services are to them, everyone noted that internet was important to their daily lives, mainly because of work, school, and online banking (due to a lack of banking institutions in the community).

Affordability

Participants were quick to point out that many residents of Behchoko used mobile phones for internet services, as the local mobility company (owned by the Tlicho Government) provides a data plan that is much cheaper and more flexible than home internet packages. These mobile plans cost approximately \$50 per month and include 20 gigabytes (GB) of data. Although mobile phones were not necessarily within the purview of this study, it is important to note that they are a primary source of internet access for residents of Behchoko. The prevalence of the mobile data plans was directly linked to the high costs of home internet by participants; several participants said that even with overage charges on their mobile data plans, their bills were often cheaper than Northwestel's monthly rates.

In terms of value for service, the participants with home internet service cited costs between \$150-200 a month for an unlimited data plan, an amount that was noted to be prohibitively expensive for others within their community. Participants expressed frustration that costs for internet services in Behchoko were so high compared to plans they saw advertised in southern communities.

Participants all agreed that in order for the price of internet to reach a more affordable level, monthly bills need to come down by anywhere between \$50 to \$100 per month. In an ideal situation, participants would like to see prices similar to those found in the South; however, it was acknowledged that even just having reliable, steady service would be worth paying more for.

A major issue identified during the focus group was the prevalence of lower income residents, often receiving social support benefits, due to high unemployment in Behchoko. Though the participants in the focus group were all employed, they expressed concern for other residents with low or fixed incomes who have a more difficult time paying the high cost for internet services. For certain vulnerable individuals in the community, this poses a serious issues as many services for northern residents are only available online (particularly in the post-COVID-19 environment). While the mobile data plans described earlier in the session may be an option for some, the data ceiling for these plans was not large, and overage charges can result in bills that are double or triple the usual monthly cost.

“It’s a sad reality when a person has to make the choice between their next meal or their phone and there are not many locations that offer free wireless around town.”

Many of the participants described having to limit their internet use in order to keep costs down – this was a common theme across most communities included in the study. A common practice reported by Behchoko participants was setting up an alert to warn when the data threshold is nearing; for some, an overage charge is enough to throw off their entire monthly budget. Beyond this, many participants stated they cannot risk having their internet or phone shut off, as it’s the only way to stay in touch with family members. This was particularly important to participants with Elders in their lives.

When asked about the potential to bring in an LEO service such as Starlink, participants in Behchoko were not optimistic about the upfront costs, especially if the services would operate at speeds similar to Northwestel, just with a substantially higher upfront cost.

Quality and Reliability

There was a general sentiment in Behchoko that the high prices for internet would be justifiable if the services provided consistent speed and reliability. Reliability was directly linked to reconciliation for some. In one example, an Indigenous student in the group described frequent outages during the school year, which caused them to miss classes. The participant noted that the plan they had was advertised as “high-speed”, but in reality it has rarely lived up to that name. Similarly, another participant described having difficulties with their coursework because multiple members of their household were taking online classes at the same time, which causes the network to crash and interrupt their connection. Others noted that they were in the habit of keeping their cameras off so they didn’t have to risk a disconnection. This limited their ability to fully participate.

Service reliability was particularly problematic in instances when technicians were unable to resolve issues in a timely manner. Numerous participants described experiences where the internet failed, and it took several hours on the phone with customer service to get through to the correct technician. One participant stated that between 5 and 8 calls were made to Northwestel this year alone, each to resolve a service impairment that was not the fault of the customer. Another participant described an instance where it took several weeks for a technician to arrive to fix an outage, due to limited resources available in the region. Participants recalled another major outage where the internet went down throughout the entire community for more than 12 hours, but no explanation for the issue was ever provided.

Competition and Choice

Participants were aware of a neighbouring community where Starlink recently became available, and reports from friends living there described the service as much faster than Northwestel. However, participants in Behchoko were wary of the costs associated with Starlink; the initial \$700 startup cost was seen as too expensive for many residents in the community, and the monthly fee was reportedly \$170 (which is higher than the some of the high-speed, unlimited data plans from Northwestel). Participants in Behchoko were not enthusiastic about another expensive internet provider in their region, seeing it as something that would mainly benefit those with higher incomes.

Despite participants’ reservations about LEO services, they did feel that additional competition and choice in the north would be beneficial if it resulted in lower prices for customers. Specifically, Behchoko participants felt a good benchmark for affordability would be reducing the Northwestel internet

packages from \$80 to \$50 (i.e. in line with the popular mobile phone plan). While greater choice in service providers, investment in infrastructure, and innovation were also noted to be important, these topics exist in the periphery until internet package prices become more affordable.

Behchoko focus group participants were also concerned that its monopoly in the internet services market means that Northwestel is overcharging people and suffering no ramifications for that. Behchoko participants also felt that a local service provider might provide higher quality services on-the-ground, perhaps resolving technical issues more efficiently.

When describing an ideal competitor for a service provider, participants mentioned that a public-private partnership or a joint venture between the Tlicho Government and Northwestel might be viable. Such a company could be a for-profit entity, and it could use the Northwestel infrastructure, as long as its key priority was to lower prices. While participants like the idea of a community-based joint venture or partnership, the structure was less important than its purpose and, ultimately, the cost to customers – in Behchoko, participants' main motivation to leave Northwestel for a competitor was price.

Other

Compensation for outages was an important topic in Behchoko; regardless of the specific form of the compensation (i.e. prorated bills, credits, etc.), the most important feature of a compensation structure was making it the provider's responsibility to resolve the issue and proactively compensate customers, rather than requiring individual customers to claim it themselves. Participants noted that it is a burdensome to reach Northwestel's customer service department and also noted that frequent or major outages represented Northwestel's failure to uphold their end of the service contract.

With several participants reporting frequent, extended outages in the past year (sometimes for 24 hours or more), the interest in market competition was at least partly driven by a desire to switch companies in response to poor customer service from Northwestel:

"With all the problems I've dealt with over the years, if another company were to come to Behchoko, I would switch to them in a heartbeat."

Northwest Territories – Hay River

Hay River participants were not especially concerned about internet speeds within their community; most found that internet services in Hay River were quite fast (Northwestel recently installed fibre optic lines in this community). Like other communities, the price of high-speed internet service was a concern. While the monthly cost for high-speed internet services (typically \$89 per month) was generally seen to be acceptable, the total household burden for telecommunications was quite expensive when home phones and mobile phones were included in the tally.

Most participants used internet services regularly, primarily for banking, emails, entertainment, and personal use. While most saw the internet as an important component of their day-to-day lives and did not find home phones to be important, one older participant preferred to use their home phone and rarely used the internet or mobile phone services (though they did have access to them).

Affordability

In terms of affordability, participants noted that their \$89 monthly internet bill, while broadly affordable in price, did not provide unlimited service. With Hay River's proximity to Alberta, participants could easily see much lower prices and better features offered to Alberta residents living relatively close by (i.e. as close as an hour and a half by car).

Personal income was an important consideration for Hay River participants discussing affordability of services. One participant noted that internet is often unaffordable for people making minimum wage in the community, as a result of the high costs of food and rent in Hay River.

Many of the participants from Hay River noted that they do not have issues with data caps because they were on unlimited data plans, or because their internet needs were limited. One participant, a retiree, mentioned that when their kids visited, the household would go over their data cap and their monthly bill increased by almost 100% through overage fees.

For those who rely on the internet for work and school, activities like participating in virtual meetings and conducting online research requires higher data caps and bandwidths than those provided by the lowest tier plans. One participant who works remotely described their internet costs as on the "edge of affordable;" while they were able to afford a lower tier plan, a higher plan that would be optimal for their work was out of their budget. Similarly, another participant who takes online classes managed with a lower tier plan, mitigating the limited bandwidth by turning off their laptop camera and switching their phone to airplane mode during class. These participants liked the idea of an individual subsidy that they could use to upgrade their service to a more functional plan.

When participants were asked how much the services would need to be reduced or subsidized in order to be considered affordable, the consensus was that a \$50 reduction monthly would go a long way to address affordability issues in Hay River. From their perspective, this amount was about the price difference between the plans they are on, and the plan they would prefer to be on. It was brought up that vulnerable members of the community, minimum wage workers, others with low incomes might benefit more from a needs-based subsidy based on income.

"We need the subsidy to be enough so vulnerable people can afford to buy other necessities such as food. This is particularly important during the bitterly cold winters here; people shouldn't have to make the choice between internet and heat."

Quality and Reliability

Participants did not have any specific issues with the quality of their networks; they were all satisfied with their fibre optic speeds, and the network was fairly reliable aside from the odd unpreventable outage (i.e. winter storms or other natural events). Participants in Hay River were not particularly interested in LEO services; over half saying they wouldn't even consider the option. This was linked to the availability of fibre optic in the region, which was already faster and similarly priced to the LEO packages (minus the upfront costs).

"The entire discussion has been about reducing internet prices; companies don't need more profits and revenues from us when they already get tax breaks."

Reliability concerns for Hay River participants were minimal, and none of the participants had complained about their internet service in the past year, however several participants were dissatisfied

with Northwestel's customer service processes. One participant was upset with the way Northwestel handled an outage that his daughter experienced; a flood took out one of the fibre lines, and it took several months to fix due to the limited number of technicians available to complete the work.

Most participants agreed that there should be some sort of compensation or credit available when internet services are unavailable and it is the fault of the service provider (negligence, inadequate resourcing, etc.); in these instances, service disruption comes across as a sort of contract violation. Participants were also in agreement that compensation should happen automatically, because there are many people who do not have the time or avenues to dial in to Northwestel, especially if there are multiple affected customers attempting to report issues at the same time.

Competition and Choice

For Hay River, one key advantage of having competition in the region is that it creates a degree of accountability for service providers. One participant used the example of TELUS and Rogers cellular networks in the south; people often jump between these providers due to service issues, despite the fact that many of their service plans are identical in terms of price and features. This analogy was applied to internet providers as well, and participants noted that if there was another provider in Hay River, they would be more inclined to switch between companies when they received poor customer service. Beyond this, it was suggested that more competition and choice would create a competitive market for internet services, which would lower the cost of internet plans, improve the quality and reliability of the network, and force companies to constantly audit, train and improve their customer-facing employees.

Investing in infrastructure to make services faster and more reliable was highly important to participants in Hay River; a perception likely influenced by the recent installation of fibre optics in the community. Participants expected that steeper competition could drive more infrastructure enhancements, and the previous generations of technology would become available at lower prices.

For this group, an ideal model for a competing internet company would be one operated by a First Nations government or community, however a joint-venture or partnership may make more sense to ensure the company has the correct technical expertise at the helm. One participant noted that a partnership model could help create accountability between the First Nations government and the internet service provider, and provide a better strategic direction for the company in the long run. Participants discussed the idea of a non-profit entity to provide internet services to communities, however they concluded it would likely be too difficult to structure, especially if the goal of competition is to increase investment in infrastructure.

Other

Participants all agreed that a subsidy would be a good pathway to reduce the cost burden of internet services, on the condition that the subsidy goes directly to individuals, and Northwestel is not given an opportunity to raise prices and thwart the effectiveness of the subsidy. Group members also expressed concern that subsidies given directly to Northwestel would not be passed down to the customer. While participants acknowledged they were speculating about these concerns, they noted that there remains minimal accountability for Northwestel, as they are the only internet provider in the north and there is no option for customers to leave for another provider or competitor.

Yukon - Whitehorse

Participants in Whitehorse each had home internet services, as well as mobile phones with data plans. Participants used these services for most of their day-to-day lives; work, banking, entertainment, email, online shopping, volunteering, professional certification, and staying in contact with friends and family in different provinces and countries. Some Whitehorse participants also reported using their internet services for their jobs or businesses.

Internet services in Whitehorse received mixed reviews; participants noted that when the internet was operating properly it was good enough to stream live sports, play video games, or participate in online courses; however, many had experienced outages without warning or explanation, sometimes lasting one to two days. Outages happened for a variety of reasons (e.g. accidental damage to lines, and in one instance someone was stealing copper from the wires), and often took time for technicians to locate and repair.

Internet and telecommunications were identified as important aspects to each of the participant's lives, with some stating that their livelihoods depended on it. The speeds were often frustrating and unpredictable, sometimes exceeding 100MBS for downloading, while at other times speeds are too slow to stream entertainment or connect to virtual meeting platforms.

Affordability

Participants' monthly bills ranged from \$140-180 for their internet services in Whitehorse, and none of the participants felt the value of the telecommunications services matched the price they were paying for them. Like those in other communities, adjusting behaviour to limit data use and avoid overages was common. One participant described the service as "affordable because it has to be", but only possible because of a well-paying job.

Participants were frustrated by the seeming lack of proactivity by Northwestel; for instance, the company didn't introduce unlimited plans until 2021 when the COVID-19 pandemic made this a more urgent need. Additionally, the unlimited plans are prohibitively expensive; none of the participants were able to afford to pay \$250 a month for unlimited data, despite several indicating that they had well-paying government jobs. One participant noted that in addition to the cost, there's no guarantee that the speeds will be as fast as advertised, and they're always concerned that their data will be throttled and reduced to unacceptable speeds.

The cost of living in Whitehorse is already high, making it difficult to fit internet services into the budget as well. Echoing frustrations heard in other groups, participants were particularly frustrated by their lack of power, because there are no other internet providers in the territory they can switch to.

Participants were unsure of a specific price reduction or subsidy amount that would move prices into the realm of affordable, but most participants estimated that a reduction of \$100-\$125 would bring services into a more reasonable price range. Each of the participants had experienced overage charges in the past year, ranging from \$35-\$100 above their usual bill. One participant stated they experienced these charges regularly, while another described mailing documents to people on a thumb drive because it was cheaper to send it through the mail than to buy additional data.

Quality and Reliability

With inconsistent speeds and outages occurring a minimum of two or three times a year, quality and reliability was a major concern for Whitehorse participants. Particularly in the workplace, outages were a source of stress and a financial burden for businesses when internet disruptions mean they can't process transactions or serve customers. Internet speeds were equally problematic, hindering full participation in activities like work meetings and online classes. One participant described frustrating experiences with virtual meetings where the screen would freeze and lag, causing them to miss important information. Participants described other problems, like missing out on concert tickets, not being able to provide Wi-Fi to guests of their business, and missing a deadline to upload an audition video to a college application.

Four of the five participants reported filing a complaint to Northwestel in the past year, and the fifth stated they had reported one prior to that but gave up when they didn't receive any help. During a recent outage in 2022, one of the participants was without internet service for three full days; following up with Northwestel later for compensation, nothing came of the complaint. These experiences led participants to think that compensation for major disruptions should be automatically applied to customer accounts, instead of forcing each customer to report issues separately.

Another recommendation to enhance network reliability was to bury the fibre optic cables. One participant noted that many of the cables are exposed next to the Alaska Highway, and that some outages could be prevented if the lines were more protected. One participant pointed out that having a single cable connecting the entire city is a risky practice in the first place, and the fact that it is above ground and consistently responsible for outages bordered on negligence in their eyes.

Participants felt that improved reliability and speed would be a boon to industry in Whitehorse, allowing residents to pursue computer-based jobs and business opportunities that would be more realistic without internet limitations.

"If there was reliable internet in Whitehorse, we could bring in some jobs in the technology sector... I'd love to start doing animation again, but this isn't possible without an affordable and reliable internet connection."

Competition and Choice

Competition was flagged by Whitehorse participants as a pivotal step. With just one major internet service provider in the community, many participants felt that having other companies in this sphere would push Northwestel to compete and be more proactive.

If a new company were to enter the internet services arena, it would begin the process of creating a competitive market. Participants saw private competition as a "tried and true" process that may have the best results, though they were also open to the idea of a municipality or First Nations operated utility company. Participants felt that even though other services would likely lease Northwestel's infrastructure, the competition would still be beneficial and lead to higher standards of quality and customer service. Regardless of the exact model used to bring competition to the market, participants ultimately wanted to see more accountability to the government and community, particularly since public funding is involved.

“If government funding or subsidies are given for infrastructure, I don’t think the infrastructure should be privately owned for profit... if public funding was used paid to for it, it should be owned by territory or city and leased out.”

All of the Whitehorse participants had heard of Starlink, and recognized the value of the service, especially for more remote communities outside of Whitehorse. Participants saw the entry of another internet provider in Whitehorse and the north in general as a step forward in terms of competition, but did not feel this particular option, provided by a company without any real presence in the community, was ideal for them at this time, due to the high upfront costs. One said it would take them months to pay off the \$700 starting cost for a service like Starlink, because so much of their monthly income goes towards rent, bills, and groceries.

Other

For Whitehorse participants, many of their issues pointed back to a lack of transparency and accountability on Northwestel’s part; there have been far too many outages and far too many explanations without long-term solutions. An improved communications plan or strategy to better inform the customer base about concerns like outages and infrastructure improvements might help ease tensions in the community.

Yukon – Carmacks

Participants in Carmacks each had home internet services and mobile phone services, and two had home phones. Four participants identified internet as a critical aspect of their day-to-day life, while two participants felt it was only somewhat important to them. Carmacks participants were most likely to use internet services for entertainment, email, work, school, and communication with relatives.

Affordability

Participants identified internet affordability as one of the most pressing issues in Carmacks. Between their landline connections and internet services, participants were paying between \$130-\$150 per month. With mobile costs included, some households were spending upwards of \$250 on their telecommunications budget alone. Most participants found the data limits restrictive at times; one individual described a sense of recurring stress that appeared around the end of each month while they waited for their data warning email.

Base prices for internet packages in Carmacks are not overly expensive according to participants (\$60-\$80), however every single participant mentioned that they had received overage charges within the past year, often multiple times.

Quality and Reliability

Services in Carmacks were described as slow by participants, noting that unlike some communities in the Yukon, Northwestel has not yet installed fibre optic in Carmacks. Participants indicated that their internet speed was 2.5MBs, with data caps between 10GB and 80GB per month depending on the plan. These slow speeds and caps are a point of frustration, especially considering Carmacks’ proximity to Whitehorse where high-speed services and better packages are available to residents. Lines to Whitehorse are in the works, but Carmacks residents won’t see any service benefits until they’re

complete; knowing that other communities are receiving better internet service while Carmacks waits is also a source of frustration.

Competition and Choice

Carmacks participants felt that competition is important, however the structure of any competitors or partnerships was more important than just creating competition for its own sake. Like other communities, Carmacks participants were irritated by bad experiences with customer service and internet outages. Some felt that competition might force improvements to the infrastructure and the service they receive. Participants noted that Northwestel needs a degree of accountability to communities to start earning some trust back, and that this is something that could be spurred by the presence of a competitor in some form. Also on the issue of trust, Carmacks residents pointedly did not trust Northwestel to act in consumers' interests in discussions about subsidies for lowering internet bills for individuals.

Other

Another topic raised in the Carmacks group was just how essential the internet is to people today in many aspects of their daily lives. Participants noted that given how critical this service is to the community and the individual people in it, there should be more effort to maintain and upgrade internet connections; in other words, it should be treated as an essential service.

Yukon – Dawson City

All of the participants in the Dawson City focus group had home internet services, and two participants had home phone services. Most participants noted that internet services played an important role in their lives; services were used for entertainment, work-related communications (email and virtual meetings), online shopping, communication with relatives in the south, and all banking and financial needs. Internet services were noted to be critical in Dawson City, primarily because there are no physical banks in the community; participants have to do all banking online, or go to Whitehorse six hours away.

Due to limited telecommunications infrastructure in Dawson, participants have had to adapt to ensure their needs are met. Yukon in general has high internet prices even compared to the other territories, and Northwestel has a monopoly. Mobile wireless is limited in its applicability in Dawson, as the service is inconsistent and often cuts out completely at night.

Participants expressed dissatisfaction with the current state of telecom services in Dawson; none of the individuals felt the cost of their services provided appropriate value for the cost. Costs were high for all participants (\$90 to \$150 for basic home internet plans). Participants also described having severe data limitations, and most received warnings about their data usage every month.

Affordability

Internet services in Dawson City are expensive in comparison to other regions; half of the participants in the group described internet as unaffordable, citing a lack of competition in the region as a primary reason for the high prices. As with other communities, participants discussed the trade-offs and data use tracking it requires to avoid costly overage charges.

Affordability was a concern for all participants in the focus group, and there was a general consensus in the group that reducing prices by 50% would bring them into an acceptably affordable range. Beyond a simple price reduction however, participants stressed that much of the affordability issue is tied to overage charges – for some, those charges begin as high as \$50 extra on a monthly bill for the slightest overage. One individual described it as a coin flip; they can either pay \$100 for the more expensive internet package from the outset, or risk going over their data allocation and being billed anywhere from \$50 to \$200. Participants also underscored that high internet costs are just one cost-of-living variable that residents have to juggle in a community where other necessities are also very expensive.

None of the participants felt they would be willing to pay a large upfront fee for the installation of LEO internet services; there was a clear consensus among participants that such a cost would be unreasonable to ask of a potential customer, even with the potential benefits of such a service.

Quality and Reliability

Like many of the communities included in the study, internet outages are a major concern in Dawson City. Participants reported experiencing multiple service outages within the past year, and some of these outages were severe. One participant recalled losing service for an entire week, and another said they lose internet access regularly, i.e. once or twice every week. Repeated outages cause serious issues for local businesses in Dawson City, and can cause the local economy to grind to a halt. The outages also affect people on a personal level in different ways. One participant described a frustrating experience trying to reschedule meetings when outages disrupted their workday during the narrow window of time when they could connect with overseas colleagues.

Frequent service outages in Dawson City have even larger, potentially dangerous effects in the community as well. Participants described the community as “entirely internet-reliant”, meaning that all forms of communications, supports, finances, and economics need stable connections in order to function properly. Most importantly, the entire community relies on virtual visits with doctors in the south for medical care, and often there are Elders and other vulnerable members of the community who can’t receive timely care because of internet disruptions.

Beyond reliability, participants were equally frustrated with their internet speed and quality. One participant talked about the stress and uncertainty that surrounds important tasks like post-secondary applications that require documents to be uploaded. Even with hours of time devoted to ensure the necessary items are uploaded on time, there is always a risk that this type of task will be disrupted by an unreliable connection or a sudden outage.

Compared to those in other communities, Dawson City participants were less concerned about receiving individual compensation for outages. For this group, it was more important to find a larger scale solution to the frequent outages and to hold Northwestel accountable for its sub-par service overall. The question of accountability needs to be answered, which participants believed is a critical step towards more reliable services.

Competition and Choice

For Dawson City participants, the issue of greater accountability was a key benefit of competition in the telecoms market. The group broadly felt that competition in the region would mean that companies will be incentivized to provide better quality service at a lower price, and that competition might also reduce

the need for a broader oversight committee because the market will help police them. Participants debated whether or not it would be truly feasible for smaller companies to operate and survive in Yukon communities, however the potential for competition to disrupt the current monopoly in northern internet services was seen as a benefit worth striving for. To this end, there was a consensus that a competitor would do best if it was set-up as a public-private entity, a publicly owned and operated company, or a non-profit organization at the community level. Some participants also felt it was important to recognize that any new competition would likely use pre-existing infrastructure, and therefore would not necessarily lead to service quality improvements unless new funds were specifically directed for that purpose.

Other

Considering the idea of a subsidy to lower internet prices in the north, participants expressed concerns about the structure and payout of the funds; the group agreed that funding should not go to or through Northwestel, because they feel the company lacks oversight or accountability to its customers. Participants did agree that internet service in the north needs to be subsidized somehow, but the structure of the payment is as important as the payment itself. Participants in this group felt that if the subsidy doesn't end up in the pockets of customers it will be a failure, and similarly, if Northwestel is permitted increase their rates by the exact amount of the subsidy payments to individuals, it is effectively worthless to customers.

Nunavut – Iqaluit

Participants in Iqaluit had a unique perspective on telecommunications, because they are the only territory with more than one internet service provider available to customers. In this group, two participants had internet, mobile and home phone services, while the remaining four only had internet and mobile phone services.

Overall, participants felt that internet services in Iqaluit met their needs. Participants used internet services primarily for work, school, connecting with friends and family in other communities, and entertainment. Five of six participants felt internet services were critically important to their day-to-day lives, and one participant felt it was only somewhat important.

Participants used two different internet services; 4 participants were with Northwestel, and the remaining two use Qiniq Services at home. The Qiniq Services were described as very slow, prompting some of the participants to use Northwestel services at their offices instead of working from home with Qiniq.

Affordability

Internet prices in Iqaluit vary between providers and packages. While participants noted that the costs for internet were quite high, they stopped short of calling the rates unaffordable. Monthly rates for household internet, as reported by participants, ranged from \$85 to \$130. While participants using Qiniq had lower costs than those with Northwestel, they tended to use the internet less, and for more casual purposes like social media and light browsing. Northwestel users on the other hand had much faster speeds and higher data limits permitting heavier use, but these features were reflected in higher bills.

Data limits were handled differently by the two providers; Northwestel gives customers 200GBs per month, with bandwidth throttled after 130GBs each month. Northwestel also does not allow data to carry over into the next month. Qiniq offers a more flexible format that allows customers to buy their data ahead of time and use it at their own pace, but the service is slower.

All participants track their telecommunications services, especially internet and mobile services because the overage fees for those services are very high, but some participants also tracked their land line use. Each of the participants said they had limited their internet use at some point, often every few months. One participant who subscribes to the Qiniq “pay as you go plan” mentioned that while the plan was useful for avoiding unexpected fees, service can be cut off unexpectedly when the pre-purchased data is used up.

Participants all agreed that internet fees were too high and welcomed the possibility of a subsidy to offset the cost. Focus group members agreed that any reduction of costs would be well received by communities throughout Nunavut, where the cost of living is the highest in the country. The structure of the subsidy is something that needs more consideration; one suggestion was to apply the subsidy directly to internet bills, so that the funding is applied in the right place. Overall, group participants agreed that internet services need to provide more value for cost through measures like reductions in service charges, faster bandwidths, and bundled offers.

Quality and Reliability

Participants described the networks in Iqaluit as unreliable. There are frequent outages in the community, which are sometimes caused by uncontrollable factors like power outages, sunspots, and poor weather. Like other northern communities, these service outages have broad community impacts, and Iqaluit participants felt there was a serious need for service standards and accountability measures.

Iqaluit participants suggested transparent reporting on outages and network improvements, investments in better infrastructure and maintenance to boost the quality and reliability of the network, and increased technician capacity within communities to cut down on response times during outages. The group also identified a need to improve communication between providers and communities about upcoming service outages and timelines for repair; it was suggested that radio and television partners would be a good way make these types of announcements.

When asked about potential compensation for individuals who experience outages, all participants agreed that compensation should be applied automatically as a credit or a price reduction on their next bill.

Competition and Choice

Iqaluit participants optimistically saw competition and choice as a force that could lower overage charges, provide consumers with more choice in terms of packages and bundles, and lead to increased bandwidth and speeds. Participants also noted that increasing the competitive market in Iqaluit could create the right market environment to bolster innovation and investments in infrastructure. After some discussion the group consensus was that an ideal competitive situation would involve partnerships with the Development Corporations of each of the Regional Inuit Organizations.

Group members noted that several communities in Nunavut have begun installing Starlink, but several participants worried that the upfront and monthly costs of this new service are far too expensive for

many Inuit residents, especially those living in smaller communities. For some, the upfront cost was an immediate dealbreaker, and others felt they would only consider using the service after seeing proof of its reliability in use. While this new development in the market is not necessarily unwelcome, participants felt that the key priorities need to be affordability, choice and competition, innovating new features and packages, and generating investments for infrastructure development.

Nunavut – Rankin Inlet

In the Rankin Inlet group, all participants had internet and mobile phone services, but none had landlines. According to group participants, internet services in Rankin Inlet did not meet their needs. Participants used internet services primarily for social media, connecting with friends and family in other communities, and entertainment. Each of the participants felt that the internet was somewhat important to their day-to-day lives, but stopped short of calling it critical. Most participants used Northwestel, and one used Qiniq at home.

Affordability

While base internet prices in Rankin Inlet aren't as expensive as other areas, participants felt the value they receive for the price is poor. Individuals reported paying between \$60 to \$80 per month, but the fastest speed reported was 10MBs (Northwestel). The cost of internet access in Rankin Inlet was described by participants as “expensive but affordable,” with the added caveat that prices should be reduced to better reflect the value of the service. Some participants noted they consistently went over their data ceiling and received overage charges, which ranged from \$50 to \$80 per month (on top of the monthly bill). Several participants felt that if their bills were reduced by 25% to 50%, the prices would be more acceptable relative to the value they get from the product.

Quality and Reliability

While the base price for internet was considered reasonably accessible to residents in the community, the speed and data restrictions were seen as a barrier to those relying on internet for crucial tasks like work and school. As noted in other communities; most participants found ways to cope with these limitations, such as turning off their cameras or reducing the resolution on their screens. Outages, while not unheard of, were not mentioned with the same urgency noted in some other communities.

Competition and Choice

Rankin Inlet is one of the communities where Starlink has recently become available and some participants were strongly considering the option. While the \$700 up front cost is a barrier for some, of greater concern is the reliability of the network, which remains unproven at this stage. The idea of faster, more effective internet was highly appealing in principle, but the \$700 upfront investment felt risky without certainty around the service's consistency and reliability.

In general, participants in Rankin Inlet had hopes, similar to other communities, that increased competition and choice would lead to higher speeds, better reliability, and more affordable packages among all providers.

Nunavut – Cambridge Bay

Participants in Cambridge Bay included customers of Northwestel, Qiniq, and Starlink, and most participants had a landline phone in addition to their home internet. Participants noted that Northwestel and Qiniq had some service gaps in Cambridge Bay, leading those who could not access these main providers to pursue other options, including Starlink or “hotspotting” with their mobile phone services.

Affordability

Affordability was a concern for all participants, regardless of their service provider. The data caps on Northwestel services were seen as restrictive; the package with the lowest monthly price was about \$135 with a 50GB cap on data. Other packages were very expensive and still quite limited; as an example, a plan for \$200 per month provided 200 GBs of data with just 15 MBPS download speed.

For participants with lower incomes, the preferred option was Qiniq network services alongside their mobile data plans, which allowed their telecommunications budgets to stay below \$100 per month with careful management. Some participants used their mobile data for internet activities requiring faster signals (i.e. video conferencing), and would save their Qiniq networks for things like browsing social media or sending non-urgent emails. A couple of participants used the internet regularly for work; these participants had installed Starlink for its unlimited data and high speeds. Some other participants were interested in Starlink, but felt they could not afford the upfront costs associated with installing the dish. One participant noted they were unable to install the Starlink dish on their house because they lived in subsidized housing; Nunavut Housing Corporation bylaws prevent tenants from installing these dishes on their properties.

Quality and Reliability

Northwestel and Qiniq customers in Cambridge Bay experienced minor outages on a regular basis, requiring individuals to reset their modems or routers on a regular basis (sometimes multiple times in a day). For some, these outages resulted in participants using their mobile hotspots for more consistent connectivity, especially when it came to sending emails for work. The participants with Starlink noted regular outages as well, however these outages were often resolved within a minute and did not come with the same delays as the other networks. Like participants from other communities, Cambridge Bay participants saw the reliability issues as adding insult to injury in light of the high prices for internet:

“It comes down to value for money. I don’t mind paying \$9 for a cucumber up here, but if I do, I don’t want that cucumber to be rotten in my hand. The same goes for internet; if I’m expected to pay \$200 a month, I want my services to be good quality.”

Competition and Choice

Competition and choice were flagged as an important issue to participants in Cambridge Bay. Participants here did not see Northwestel alone as the main issue, but felt that issues were rooted in the limited infrastructure in their community. Because of this, participants did not believe that more choice for its own sake would be helpful to them if it used the same infrastructure without serious upgrades.

Cambridge Bay participants did feel, like those in other communities, that more competition could lead to improvements in customer service and network reliability for clients, by giving customers the power

to move their business when they become dissatisfied. For this reason, most participants saw Starlink and other LEO providers as a welcome addition to the market. One participant described the current state of limited competition in the north as “stifling to business and industry” due to a perceived lack of urgency by Northwestel to resolve network issues.

Many participants felt that the high prices and poor quality of their internet connections resulted from a lack of choice among service providers. Although some customers in Cambridge Bay have a choice between Qiniq and Northwestel, the choice seemed hollow for reasons of affordability; essentially, if an individual could afford Northwestel and it was available where they live, they would use it, with Qiniq as a clear budget choice. While Starlink has added some more choice to the market, again, affordability was a major concern because of its upfront fees. Participants noted that if these three services were truly in competition with each other, there would be better packages and services as a result of pressure from the market.

Other

All participants agreed that any subsidy needs to be directed to customers rather than service providers. The purpose of a subsidy, to Cambridge Bay participants, is to allow individuals to make more meaningful choices for their own needs. Providing a \$50 per month subsidy, for example, would bridge the affordability gap for many participants by allowing them to upgrade to unlimited data packages, or it could allow them to save up for Starlink. One participant suggested that a one-time subsidy to cover the full upfront costs of Starlink would be the most appropriate course of action, as it would provide a more sustainable internet service for them moving forward.

“If we go ahead with subsidies, we need to make sure it goes directly to the customers; the last thing we need is another subsidy like ‘Nutrition North’, where huge amounts of money get sent up for food subsidies but no one sees the price difference on the shelf.”

Northern British Columbia (Virtual)

Participants in the two virtual groups for Northern BC came from a variety of backgrounds and communities (including Fort Nelson, Fort St. John, Atlin, Dease Lake, and Telegraph Creek), and all members had access to internet services in their home. Half of the participants used landline phones, and all participants except one had cell phones with wireless data plans.

Affordability

Affordability was a primary issue for all participants, with internet prices varying widely between communities. Most participants described their internet costs as unaffordable and felt that in order to bring the costs into an acceptable range they would need to reduce them by at least \$50 per month. As noted in other communities, many participants experienced multiple overage charges over the past year, with the extra fees ranging from \$50-\$100 on top of their monthly bill. These additional costs led some to restrict their internet use to avoid overage charges.

In general, focus group participants were not interested in paying large fees up front for an LEO service like Starlink, though a few felt they may be interested in learning more about the reliability of the network, the bandwidth speeds, and the monthly pricing before ruling it out. It was brought up that a

set-up cost would be more palatable if it were spread with a payment plan or a small fee on each monthly bill for an extended period.

Quality and Reliability

Unreliable networks were a common theme for Northern BC communities. All participants reported experiencing at least one outage in the past year, and several participants had experienced multiple outages over the year. One very frustrated participant said they would lose service once or twice a month, but could not afford to upgrade to a more reliable fibre optic package. Another participant shared an example where they had to forfeit several days of income because their internet cut out and took three days to be restored. In another instance, a participant lost their internet signal just as they were processing payments for a customer, and the system didn't reboot until the following day. Beyond full outages, inconsistent speeds were a sore spot for some, who mentioned instances where the internet would become so slow that it was equivalent to a complete outage.

The seriousness of outages and speed issues was not limited to individual inconvenience. As noted in other remote communities, internet reliability quickly becomes a community-wide concern when it impedes economic transactions and blocks communication with essential services. Alternatives like mobile access or landlines are not always available or reliable either. One particularly serious example came from a participant in Atlin, who noted that there had been several recent house fires in the area, where help was slow to arrive because of telecommunications service gaps.

Participants widely blamed Northwestel for their reliability issues. Considering potential steps or solutions to improve the state of internet reliability, one participant suggested that an official document be created to track these issues. Building on that, another participant recommended that tracking this could be tied to a set of service quality standards that could be used to hold Northwestel accountable when they fail to meet their obligations.

Competition and Choice

Competition and choice were priority areas for Northern BC participants in general. Participants felt that competition between providers could likely yield benefits to their communities by spurring providers to invest in reliability and offer more affordable packages. Some participants were less interested in the idea of competition, and more focused on getting internet packages down to an affordable level regardless of the actual mechanism for doing so.

Where competition is concerned, participants had mixed views of Starlink and other LEO services. While these were seen by some as good competitors to break up the Northwestel monopoly in northern BC, there were concerns about the prohibitive upfront costs and the environmental impacts associated with installation and eventual disposal of equipment. For those living in communities with fibre optic networks, LEO did not seem to be a truly competitive alternative to Northwestel's packages. Participants did note that for more remote residents, and for communities with less developed internet infrastructure, like Atlin, a service like Starlink is a more useful option.

Appendix A: Qualitative Methodology

EnviroNics Research conducted a series of eight (8) in-person focus groups across the three territories (three in each), and three (3) virtual focus groups in Cambridge Bay and Northern British Columbia, with adult residents between November 22, 2022, and February 21, 2023.

*Note that the group for Cambridge Bay was originally attempted in-person, but attendance at the session was poor due to severe winter weather conditions. The group was ultimately conducted by virtual conference.

Date and Time	Group Location	Total Participants
November 22, 2022, 10:00 MST	Yellowknife, Northwest Territories	6
November 24, 2022, 10:00 MST	Hay River, Northwest Territories	5
November 25, 2022, 11:00 MST	Behchoko, Northwest Territories	5
November 28, 2022, 10:00 MST	Whitehorse, Yukon	6
December 2, 2022, 10:00 MST	Dawson City, Yukon	5
January 26, 2023, 12:00 MST	Carmacks, Yukon	7
January 17, 2023, 1:30 EST	Iqaluit, Nunavut	7
January 30, 2023, 4:30 CST	Rankin Inlet, Nunavut	7
February 21, 2023, 4:30 CST*	Cambridge Bay, Nunavut (Virtual)	6
December 15, 2022, 1:00 MST	British Columbia (Virtual)	6
January 25, 2023, 10:00 PST	British Columbia (Virtual)	7

Each group lasted approximately 90 minutes and consisted of between five and seven participants (out of ten people recruited for each group). Sessions included Indigenous and non-Indigenous residents of each area, and were distributed as follows. All sessions were conducted in English.

Across all regions, 66 individuals participated in focus groups; 27 individuals identified as Indigenous (First Nations, Metis, or Inuit), and there were similar proportions of men and women in attendance (32 women, 34 men). Participants ranged in age from 18 to 65.

The research methodology was designed specifically to capture the perspectives of urban, rural, and remote communities, as well as to provide space for both Indigenous and non-Indigenous voices. The discussion guide was developed by EnviroNics Research, in collaboration with NVision and CRTC, building on what was learned in Phase I of the consultations.

Recruitment

EnviroNics developed the recruitment screener, working closely with NVision Insight Group to ensure the questions were culturally sensitive and appropriate. A draft of the screener was provided to CRTC for review prior to finalizing.

Recruitment was conducted using a networking approach. NVision leveraged its contacts with community organizations in each region, who were asked to share information about the study with residents and direct interested potential participants to contact NVision staff.

Potential participants were screened to ensure there was a balanced mix of gender, education, age, and Indigenous voices in each group. Individuals were also asked to identify their comfort level with voicing opinions in front of others, and were excluded if they were not comfortable with the format of the session. Standard GoC focus group participation exclusions were also in place; those who work in marketing research, media or employment by telecommunications companies, or the CRTC were not included in the sessions. Participants were offered honoraria to encourage their participation and thank them for their time; this included a \$200 honoraria in Nunavut, \$150 in Northwest Territories, and \$100 in northern British Columbia and Yukon.

All groups were audio-recorded for transcription purposes by the research team. During the recruitment process and at the start of each session, participants provided consent to such recording and were given privacy and confidentiality assurances. These recordings were deleted once transcribed, and all individual identifying information was cleaned from the draft notes to protect participants' privacy.

All qualitative research work was conducted accordance with professional standards and applicable government legislation (e.g., PIPEDA).

Moderation

Groups were moderated by a team of qualified, Indigenous moderators under sub-contract with Environics Research and NVision, using the approved discussion guide. All qualitative research work was conducted in accordance with professional standards and applicable government legislation (e.g., PIPEDA).

Statement of limitations

Qualitative research provides insight into the range of opinions held within a population, rather than the weights of the opinions held, as would be measured in a quantitative study. The results of this type of research should be viewed as indicative rather than projectable.

Appendix B: Qualitative Discussion Guide

NVision Insight Group and Environics Research

Focus Groups on Telecommunications in the Far North

CRTC – Discussion Agenda

1. Introduction to Procedures & Guiding Principles (10 minutes)

Welcome, everyone, and thank you for being here.

My name is _____, and I will be facilitating this focus group session today. A little more about me, I work with NVision Insight Group, an Indigenous consulting company with offices in Ottawa and Iqaluit.

This research is being carried out on behalf of the Canadian Radio-television and Telecommunications Commission (CRTC) to understand better the experiences of telecommunications service users in the Far North.

IF ASKED: *The CRTC is an arms-length agency of the Government of Canada that supervises and regulates telecommunications in the public interest.*

For this project, we are collaborating with Environics Research, an independent market research company, to gather perspectives from people living in the Far North about their experiences with internet and home phone services.

In November 2020, Environics carried out Phase I of this project which involved completing a market research project on telecommunications services in the Far North. Throughout Phase I, focus group participants identified several issues with internet and telephone services for residents of the territories and northern BC.

This focus group is part of Phase II of the CRTC's research project and is one of a series of eleven focus groups we are conducting with people living in the Far North. The aim of Phase II is to hear your opinion on potential solutions to the issues identified in the Phase I report. Specifically, we want to hear from users about what actions the CRTC can take to make the internet and home phone services more affordable, reliable and of higher quality, and competitive. The session should last about two hours, and in recognition of your time and participation today, each of you will receive financial compensation. This will be sent to you by (cheque, e-transfer, cash) in the next few weeks.

I encourage you to speak your mind and agree or disagree respectfully with each other. Your identity and anything you say here will remain confidential and anonymous. Nothing you say here will be linked to you by name in any reporting we do on this project.

I want to inform you that the session is being recorded for note-taking purposes. The recording will only be used internally to analyse the research and will not be shared or released to anyone else.

Before we begin, I'd like to direct you all to the handout we gave each of you. This handout contains a brief description of our research, a glossary of terms you may hear during this session, and the contact information for NVision Insight Group and Environics Research in case you have any follow-up questions. Before we do a round of introduction, does anyone have any questions?

Let's go around, and each introduces ourselves. First, tell us your name and then a little about yourself (*example, ice breaker questions: What's your favourite show/movie? How many hours a week do you spend streaming?*)

Thank you for sharing, everyone.

Guiding Principles

The United Nations Declaration on the Rights of Indigenous Peoples states that Indigenous peoples have the right to create and access media in their own language, (Article 16) and the right to participate in decision-making in matters affecting them (Article 18). The principles outlined in the Truth and Reconciliation Commission, state that "Reconciliation must create a more equitable and inclusive society by closing the gaps in social, health and economic outcomes that exist between Aboriginal and non-Aboriginal Canadians.

Telecommunications is a critical part of our lives today. It connects us socially, supports access to health information and expands our economic opportunities. It can also help us to preserve, share or teach others about Indigenous languages and cultures.

For these reasons, the CRTC is committed to hearing from you today.

In Phase I, the CRTC heard that solutions to meet better the needs of people in the Far North should be considered in the Indigenous context.

One overarching goal with this research, and the Telecom North proceeding in general, is to advance reconciliation with Indigenous Peoples. Indigenous societal values will be respected and practiced in this proceeding by integrating two guiding principles: OCAP principles and Inuit Qaujimajatuqangit Principles.

Guiding OCAP First Nations Principles:

First Nations principles of OCAP are standards that establish important ground rules for how First Nations data can be collected, protected, used or shared. Standing for ownership, control, access and possession, OCAP™ reflects First Nation commitments to use and share information in a way that benefits the community while minimizing any possible harm.

To adhere to OCAP principles, we have committed to the following:

- Sharing the final report with you in a language and format of your choice (i.e. print or digital)
- Inclusion of Indigenous researchers, facilitators and community members in the development of this project
- Providing our contact information if you have any questions or concerns
- Preserving the privacy and security of all data collected

Guiding Inuit Qaujimajatuqangit Principles:

We will be guided by Inuit worldview throughout this process. As such, this session will follow the framework of Inuit Qaujimajatuqangit (IQ), which is grounded in four big laws or *maligait*:

- working for the common good
- respecting all living things
- maintaining harmony and balance
- continually planning and preparing for the future

2. General (15 minutes)

As I mentioned, we will discuss issues around your telecommunications services. For the purposes of today's exercise, telecommunications services means your internet and home phone services. Internet is our priority for discussion, then home phones. We are not exploring changes to mobile wireless prices in this project but instead getting views on overall telecom spending on internet, home phone and mobile. Our scope excludes mobile phone services, television, and radio services, - unless it's in the context of using the internet to stream programming, etc.

So, let's go around the room again, and this time, I want everyone to please tell me what you have in terms of internet and home phone services, and what you use them for.

General internet and phone services questions:

1. Which telecom services does your household typically use in a month?
 - Internet
 - Home phone
 - Mobile wireless
2. Do these services meet your needs? (e.g., to attend school, work remotely, stream shows, stay in contact with friends and family, access essential services, etc.)
3. If you had to rate how important these services are to your life, would you say they were: very important, somewhat important, not very important, not at all important?
4. Who are your service providers?

5. Does the cost of your telecom services match the value you receive for the price you're paying?

Now, we will discuss the three most significant issues identified by participants in Phase I – Affordability, Quality & Reliability, and Competition & Choice.

3. Affordability (20 minutes)

In Phase I, the CRTC heard from participants that:

- All Canadians should have affordable access to telecommunications services, especially access to the internet.
- Plans in the Far North offer low value for money, especially internet access, compared to the south.

The CRTC is exploring the option of a new subsidy to make internet service more affordable for people living in the Far North. We want to better understand your thoughts about affordability and how a subsidy might make telecom services more affordable.

Questions:

- How much does your household pay for telecom services in a typical month?
- Would you say that the amount (\$) your household pays for internet and home phone services is affordable?
- Do you limit your internet use to manage internet service costs?
- Does the price of internet service make it difficult for you to use the internet for things like online work or school?
- How much would your monthly bill need to change to make internet service more affordable?
- Has the Covid pandemic changed how much your household spends on telecom services in a typical month? If so, how much has it changed by?
- Have you experienced an unusually high telecom bill in the last year? If so, how much higher than your usual bill was it?
- If there was a service provider that offered faster internet service but it came with an upfront cost of about \$700 would you consider it? What do you think about that kind of cost?

4. Quality and Reliability (20 minutes)

In the next section, we will look at the quality of the internet and phone services in your community, as well as the reliability of the networks. To refresh, “Quality” refers to the service quality of retail-services (For internet services, this may be measured in terms of upload and download speeds). In contrast, “reliability” refers to the frequency of service outages and

interruptions that stop you from consistently accessing internet and phone services (how often the internet or phone lines cut out).

The recent nation-wide internet outage has shown just how important connectivity is and the role that reliable networks play in ensuring continued access to important services.

Questions:

- Have you experienced a service outage or interruption in the last year? If yes, how did it impact you?
- Have you experienced a situation in the past year where the reliability of your telecom services was insufficient to meet your household's (or organization's) needs? (e.g. due to outages, service interruptions)?
- Have you experienced a situation in the past year where the speed of your internet services was insufficient to meet your household's (or organization's) needs? What were needs not met?
- Have you complained about your telecom services in the last year? What was the issue? Were you satisfied with how it was resolved? How can this process be improved?
- Can you think of anything that could ensure that customers receive higher speeds?

[NOTE FOR FACILITATOR – TRY TO GET SUGGESTIONS FROM PARTICIPANTS BEFORE OFFERING HYPOTHETICALS]

For instance, should a provider be required to provide a certain level or quality of service?"

Should, for example, the CRTC introduce quality of service standards and reporting for Northwestel internet services?

- What actions could ensure that there are fewer and/or less severe outages and service disruptions?

[NOTE FOR FACILITATOR – TRY TO GET SUGGESTIONS FROM PARTICIPANTS BEFORE OFFERING HYPOTHETICALS]

For instance: should the CRTC require Northwestel to undertake certain network improvements or to make investments in order to reduce duration and frequency of outages?

Should the CRTC require Northwestel to employ and train personnel in remote communities to better mitigate the length of outages and disruptions?

Should the CRTC require Northwestel to take certain measures to improve communication with customers affected by outages, such as:

- notifying them of outages in advance or as early as possible;
 - providing information on causes and measures taken to resolve them;
 - providing information on measures that will be taken to prevent future outages;
 - providing information about reimbursement, etc.?
- What actions could ensure that customers are adequately compensated for outages and service disruptions to services that they pay for?
 - Should the CRTC take actions to make it easier for customers to receive a refund, for instance, by requiring a provider to proactively refund customers for outages (without customers' request)?"
 - Can you think of any other actions the CRTC could implement to improve the reliability of Northwestel's network?

5. Competition and Choice (20 minutes)

In Phase I, the CRTC heard that people in the Far North want more competition for their internet services. The circumstances in the Far North make it challenging to support competition that will improve the affordability, reliability and quality of services.

Our goal is to learn why consumers want more competition concerning their internet services and to understand which potential benefits associated with increased competition are most important to them.

- What are some important benefits you see in having more competition and choice in the Far North?
- Which of the following benefits of competition are most important to you?
 - Lower prices
 - Greater choice
 - Investment (making services faster and more reliable, reducing outages)
 - Innovation (new or better packages that better meet your needs).
- What characteristics would your ideal competing internet service provider have and why?
 - Would it be owned by a First Nation or territorial government, a municipal government, a public-private partnership, or privately?
 - Would it be a for-profit or not-for-profit organization?
 - Would it use Northwestel's infrastructure or have its own?

Internet service providers may be either facilities-based providers, wholesale-based providers, or both.

Facilities-based providers own the physical infrastructure used to deliver internet services. It is often not economical for another service provider to build new infrastructure in communities that already have a facilities-based provider, since they need to recover the cost of building the

infrastructure while competing for customers, especially in the Far North where there is low population density, vast distances between communities, and harsh climate.

To increase competition under these circumstances, the CRTC can require facilities-based providers, like Northwestel, to offer wholesale access to their infrastructure, so that competitors can use that infrastructure to provide their own internet services. These are **wholesale-based providers**.

However, requiring companies to provide wholesale services may have a negative effect on their decision to invest in infrastructure. What this means is: if Northwestel is required to share its infrastructure with competitors, it may be less likely to improve it to be faster or more resistant to outages.

If competitors (or wholesale-based providers) are allowed to use Northwestel's infrastructure, internet services provided by new competitors might be very similar to Northwestel in terms of price, reliability, and quality. This is because competitors would be using Northwestel's infrastructure, with the same limitations (e.g. same download/upload speeds, same usage limits, same chance for outages to occur, etc.).

However, competitors' services could be different in other ways, such as different approaches to customer service and engagement, marketing and bundling of services.

[FACILITATOR – ALLOW PARTICIPANTS TO VIEW GLOSSARY, REPEAT INFORMATION AS NEEDED HERE.

Do you have any questions about the information I've just read to you?

- Would you want this kind of competition, even if it did not mean lower prices or improvements in internet service reliability and quality? Why? Why not?

Now I'd like to ask you about Low Earth Orbit Satellites, or LEOs:

- With a quick show of hands, how many of you have heard of Low Earth Orbit satellite technology? What about Starlink?
- What benefits will competition from Starlink or services like it bring to residents of the Far North? Which won't it bring? Why?

Ranking of key issues

The following issues were identified with northern telecom services in Phase I. Rate them in order of importance to you as a user, one being most important and four least.

- Affordability (reducing the cost of plans),
- Investment (making services faster and more reliable, reducing outages)
- Greater choice (more options for service providers)
- Innovation (new or better packages that better meet your needs).

6. Wrap up (5 minutes)

We have covered many topics today and we appreciate you taking the time and energy to give your opinion. Your input is very important and insightful, and we will ensure you receive a link to the final report submitted to the CRTC.

Before we leave today, I want to ask whether you have any last thoughts to give the CRTC about today's topics or questions, or about the work we are doing?

And to remind you again, the handout we gave you at the start of the focus group contains a brief description of the research we are conducting, a glossary of terms, and the contact information for NVision Insight Group and Environics Research in case you have any follow-up questions.

THANK YOU FOR PARTICIPATING!

Discussion Guide Companion – Glossary

Term	Definition
Affordability	Affordability is often subjective: what is affordable for one person, may not be for another. Alternatively, what a person may be able to afford can change over their lifetime. Affordability is generally tied to one's means (e.g. income, generational wealth, access to credit). When consumers consider what they can afford, they may examine both the price and value of an item or service. Affordability is not limited to upfront cost, but also includes ongoing costs.
Canadian Radio-television and Telecommunications Canada (CRTC)	The CRTC is an arms-length agency of the Government of Canada that supervises and regulates telecommunications in the public interest.
Facilities-based competition	A form of competition in which competitors use their own telecommunications facilities and networks to compete instead of leasing them from other carriers.
Far North (North, northern Canada)	For the purposes of this research, the Far North refers to all of the Northwest Territories, Nunavut, and Yukon, parts of northern British Columbia and Fort Fitzgerald Alberta.
Low Earth Orbit (LEO) Satellite	<p>A LEO satellite transport network will use a series of satellites orbiting close to Earth in a constellation, as opposed to current geostationary satellites, which follow a geostationary orbit at further distances from the Earth.</p> <p>LEOs have an orbit that is relatively close to the Earth's surface (e.g. between 500 kilometers and 2,000 kilometers). The trip around the Earth is shorter because their orbit is closer, so the latency is lower than LEO satellites than for those further out. They may have the potential to rival the fastest ground-based networks (fibre). They also travel faster, completing a full circuit of the planet in 90 to 120 minutes. That means each individual satellite is only in direct contact with a ground transmitter for a brief period. That is why LEO projects involve so many satellites and require so many in operation to ensure connection does not drop (e.g. redundancy).</p> <p>LEO satellite provider Starlink is entering the retail internet market and will be offering direct-to-consumer solutions for residents in the Far North.</p>
Network improvement	Initiatives taken to improve the reliability of networks to reduce the frequency of outages, which can be caused by factors such as weather, equipment issues, accessibility of terrain and facilities, and infrastructure.

Overage charge	A charge for exceeding an established limit on the use of a service.
Quality	Quality refers to retail-level service quality. In particular, for internet services, quality can be measured in terms of upload and download speeds.
Redundancy	Network infrastructure that provides an alternative or, back-up, path through which traffic can flow in case of network failures or outages.
Reliability	Reliability relates to the frequency of service outages and intermittent service interruptions that stop retail customers from being able to consistently access the services they need to support education, banking, telehealth, etc.
Satellite-dependent community	<p>A community that has no connection to terrestrially (land)-based telecommunications facilities for connection to the public switched telephone network and/or the internet, and that relies on satellite transport to receive one or more telecommunications services (such as voice, wireless [both fixed and mobile] and internet services).</p> <p>In contrast, a partially satellite-dependent community is a community that may have some form of terrestrially-based telecommunications facilities (e.g. micro-wave) for some telecommunications services (e.g. voice services) but no suitable terrestrial facilities for other telecommunications services (e.g. broadband internet service), which must be provided via satellite.</p>
South	All regions of Canada that are not part of the Far North. For the purposes of this project, the Far North refers to all of the Northwest Territories, Nunavut, and Yukon, parts of northern British Columbia and Fort Fitzgerald, Alberta.
Subsidy	Subsidy refers to a regime that the CRTC may create under section 46.5 of the Telecommunications Act in order to support continuing access by Canadians to basic telecommunications services.
Value	Value refers to the relationship between affordability, reliability and quality (along with other factors that may be relevant to a consumer).
Wholesale services	Provision of a telecommunications service or facility to a service provider, regardless of whether that service provider rebills the service or facility to another entity, or uses that service or facility internally to support the services it bills.

Appendix C: Recruitment Screener

November 2022

EnviroNics Research Group Limited

Focus Groups on Telecom Services in Canada's Far North

Canadian Radio-television and Telecommunications Commission (CRTC)

PN11618

Recruitment for Group Discussion

Respondent Name:

Home #:

Business #:

Group #:

Recruiter:

Group #	<u>Group 1</u>	<u>Group 2</u>	<u>Group 3</u>
Location	Yukon	Yukon	Yukon
Date	DATE	DATE	DATE
EST	TIME	TIME	TIME
Local Time	TIME	TIME	TIME
Language	English	English	English
Demographic	Gen Pop	Gen Pop	Gen Pop
Community	Whitehorse	Dawson	Carmacks
Group #	<u>Group 4</u>	<u>Group 5</u>	<u>Group 6</u>
Location	NWT	NWT	NWT
Date	DATE	DATE	DATE
EST	TIME	TIME	TIME
Local Time	TIME	TIME	TIME
Language	English	English	English
Demographic	Gen Pop	Gen Pop	Gen Pop
Community	Yellowknife	Behchoko	Hay River
Group #	<u>Group 7</u>	<u>Group 8</u>	<u>Group 9</u>
Location	Nunavut	Nunavut	Nunavut
Date	DATE	DATE	DATE
EST	TIME	TIME	TIME
Local Time	TIME	TIME	TIME
Language	English	English	English
Demographic	Gen Pop	Gen Pop	Gen Pop
Community	Iqaluit	Rankin Inlet	Cambridge Bay

Group #	Group 10	Group 11
Location	Northern BC (Virtual)	Northern BC (Virtual)
Date	DATE	DATE
EST	TIME	TIME
Local Time	TIME	TIME
Language	English	English
Demographic	Gen Pop	Gen Pop

12 recruits per session with the intent of having 10 show (In-person, groups 1 through 9)

8 recruits per session with the intent of having 6 to show (Virtual, groups 10 and 11)

The intent is to recruit individuals 18+ who live in the areas listed above, who come from a mix of education, socioeconomic statuses, urbanities (urban, rural), age, gender, and Indigenous or non-Indigenous identity.

The screener is designed in the typical script format used for focus group recruitment, but may be adapted for other recruitment channels as required. When recruiting, ensure that all relevant demographic information is gathered, and that the following characteristics and conditions are met before a participant is invited to attend a session.

Summary of screener qualifications:

Community: MUST LIVE IN ONE OF THE SPECIFIED COMMUNITIES

Age: ANY, MIX

Gender: ANY, AIM FOR 50/50 SPLIT

Indigenous Identity: ANY, ASK FOR INFORMATION PURPOSES ONLY

Income: ANY, MIX

Education: ANY, MIX

Employment Status: ANY, MIX

Occupation Exclusions:

EXCLUDE THOSE WHO WORK IN MEDIA, MARKET RESEARCH, ADVERTISING/MARKETING, PUBLIC RELATIONS, COMMUNICATIONS

EXCLUDE THOSE WHO WORK IN TELECOMMUNICATIONS, OR FOR CRTC / ISED

ALL OTHER OCCUPATIONS INCLUDING OTHER GOVERNMENT DEPTS. ARE OKAY

Consent: AWARE OF INCENTIVE AMOUNT, MUST CONSENT TO ATTEND, ABLE TO ATTEND SESSION ON TIME (15 minutes early) AND AT LOCATION IN-PERSON

Accessibility: COMFORTABLE SPEAKING IN GROUP, PLEASE NOTE ACCOMMODATIONS NEEDED

Confirm: COLLECT EMAIL ADDRESS AND PHONE NUMBER, NOTIFY THAT WE WILL CONTACT DAY BEFORE AS REMINDER

Hello/Bonjour, my name is _____ from Environics Research.

Would you prefer me to continue in English or French? [continue in language of preference or arrange call-back]

We are calling today to invite participants to attend an in-person focus group discussion we are conducting on behalf of the Canadian Radio-television and Telecommunications Commission, also known as the CRTC. The session will last about two hours and you will receive a cash gift as a thank you for attending the session.

This study is a research project, not an attempt to sell or market anything. Your participation in the research is completely voluntary and your decision to participate or not will not affect any dealings you may have with the government. All information collected, used and/or disclosed will be used to inform this research project only and administered as per the requirements of the Privacy Act.

May I have your permission to ask you or someone else in your household some further questions to see if you/they fit in our study?

Yes **CONTINUE**

No **THANK AND TERMINATE**

ASK ALL

1. What province or territory do you live in?

01 – Yukon

02 – Northwest Territories

03 – Nunavut

04 – British Columbia

05 – Other **TERMINATE**

2. We have been asked to speak to participants from all different ages. So that we may do this accurately, may I have your exact age please? _____. **WRITE IN [ENSURE GOOD MIX]**

Under 18.....1

18-24 years of age.....2

25-34 years of age.....3

35-44 years of age.....4

45-54 years of age.....5

55-64 years of age.....6

65-74 years of age.....7

75 years or older.....8

TERMINATE

[SKIP TO Q.4 IF PARTICIPANTS LIVE IN YUKON, NORTHWEST TERRITORIES OR NUNAVUT]

3. [If participant is from BC] We are looking to include people from specific towns in Northern British Columbia. What is the name of your community? List: _____ [TERMINATE IF THE COMMUNITY IS NONE OF THE COMMUNITIES LISTED BELOW]

NOTE TO RECRUITER: NORTHERN BRITISH COLUMBIA INCLUDES THE FOLLOWING AREAS - FORT NELSON, BLUEBERRY, BOB QUINN LAKE, DEASE LAKE, FORT WARE, GOOD HOPE LAKE, ISKUT, JADE CITY, LOWER POST, MOULD CREEK, MUNCHO LAKE, PINK MOUNTAIN, PROPHET RIVER, TELEGRAPH CREEK, TOAD RIVER, UPPER HALFWAY, WONOWON, ATLIN

4. [IF PARTICIPANT IS FROM YUKON, NWT, OR NUNAVUT] We are holding groups in-person in several communities in [NAME ONLY THE REGION WHERE THEY LIVE] Yukon / Northwest Territories / Nunavut. What is the name of your community?

List: _____ [TERMINATE IF THE COMMUNITY IS NONE OF THE COMMUNITIES LISTED BELOW]

NOTE TO RECRUITER: COMMUNITIES LIST
YUKON – WHITEHORSE, DAWSON, CARMACKS
NORTHWEST TERRITORIES – YELLOWKNIFE, BEHCHOKO, HAY RIVER
NUNAVUT – IQALUIT, RANKIN INLET, CAMBRIDGE BAY

5. With which gender do you identify? [AIM FOR 50/50 split]

Male	1
Female	2
Other	3

6. Which of the following best describes you? Are you...?
- 01 - First Nations
 02 - Inuk
 03 - Métis
 04 - Non-Indigenous Person

NOTE TO RECRUITER: INDIGENOUS=01-03. INUK IS THE SINGULAR OF INUIT (INUK REFERS TO ONE PERSON/INUIT REFERS TO MANY PEOPLE)

7. Are you or is any member of your household or your immediate family employed in:

	<u>No</u>	<u>Yes</u>
A market research, communications or public relations firm, or an advertising agency	()	()
Media (Radio, Television, Newspapers, Magazines, etc.)	()	()
A telecom company (e.g., Northwestel, Bell, Rogers)	()	()
CRTC or Innovation, Science and Economic Development Canada	()	()

IF YES TO ANY OF THE ABOVE – THANK AND TERMINATE

8. Including yourself, how many people live in your household? _____. **WRITE IN**
9. Which of the following best describes your employment situation? Are you... [READ LIST]

Employed full-time (35 hrs. +)
 Employed part-time (under 35 hrs.)

- Homemaker **SKIP TO Q.12**
- Student **SKIP TO Q.12**
- Retired **SKIP TO Q.12**
- Currently not working **SKIP TO Q.12**

TERMINATE IF OCCUPATION RELATES TO EXCLUSIONS IN Q.7

10. Could you please tell me what is the last level of education that you completed? **[ENSURE GOOD MIX]**

- Some High School only.....1
- Completed High School.....2
- Trade School certificate.....3
- Some Post secondary.....4
- Completed Post secondary.....5
- Graduate degree.....6

11. Participants in group discussions are asked to discuss their opinions and thoughts with a facilitator and with others in the group. The facilitator will work to ensure a safe and respectful environment for the discussion. Are you comfortable participating in a group discussion?

- Yes **CONTINUE**
- No **TERMINATE**

12. Do you need any accommodations to help you participate in a group discussion?

- Yes **TAKE NOTE OF ACCOMMODATION NEEDED**
- No **CONTINUE**

NOTE: TERMINATE IF RESPONDENT OFFERS ANY REASON SUCH AS HEARING, A WRITTEN OR VERBAL LANGUAGE PROBLEM, A CONCERN WITH NOT BEING ABLE TO COMMUNICATE EFFECTIVELY.

13. I would like to invite you to attend an in-person focus group session where you will exchange your opinions in a moderated discussion with other people from Northern Canada.

The group will take place on [DATE] at [TIME] at [LOCATION]. People who attend will receive [LIST INCENTIVE BY REGION – SEE BELOW] to thank them for their time, and there will be light refreshments provided during the session. Would you be willing to participate?

- Yes
- No **TERMINATE**

INCENTIVES VARY BY REGION:

Nunavut	\$200	Yukon	\$100
NWT	\$150	Northern BC	\$100

LOCATION LIST HERE

14. The session will be audio recorded and transcribed for analysis, but your participation will be anonymous. Do you consent to this?

Yes

No **TERMINATE**

15. Do you have an email address that we could send the date, time and location to you for your convenience? This email address will not be used for anything else aside from communicating with you about the details of this session.

Yes **ASK FOR EMAIL ADDRESS:** _____

No **CONTINUE**

16. Can you also give us a phone number so we can confirm the session with you? We will only call you about the details of this session.

Yes **ASK FOR PHONE NUMBER:** _____

No **CONTINUE**

NOTE: PLEASE TELL ALL RESPONDENTS THAT THEY WILL RECEIVE A CONFIRMATION CALL THE DAY PRIOR TO THE SESSION. IF FOR SOME REASON THEY HAVE NOT HEARD FROM US THEY SHOULD CONTACT US AT _____. IF THEIR NAME IS NOT ON THE ATTENDANCE FORM THEY WILL NOT BE ADMITED TO THE GROUP.