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THE CANADIAN NORTHERN CORRIDOR COMMUNITY ENGAGEMENT PROGRAM: RESULTS AND LESSONS LEARNED

Emily Galley, Katharina Koch, G. Kent Fellows, Robert Mansell, Nicole Pinto and Jennifer Winter

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FOREWORD

THE CANADIAN NORTHERN CORRIDOR RESEARCH PROGRAM PAPER SERIES

This paper is part of a special series in *The School of Public Policy Publications*, investigating a concept that would connect the nation's southern infrastructure to a new series of corridors across middle and northern Canada. This paper is an output of the Canadian Northern Corridor Research Program.

The Canadian Northern Corridor Research Program at The School of Public Policy, University of Calgary, is the leading platform for information and analysis on the feasibility, desirability, and acceptability of a connected series of infrastructure corridors throughout Canada. Endorsed by the Senate of Canada, this work responds to the Council of the Federation's July 2019 call for informed discussion of pan-Canadian economic corridors as a key input to strengthening growth across Canada and "a strong, sustainable and environmentally responsible economy." This Research Program will benefit all Canadians, providing recommendations to advance the infrastructure planning and development process in Canada.

This paper, "The Canadian Northern Corridor Community Engagement Program: Results and Lessons Learned", falls under theme *Social Benefits and Costs* of the program's eight research themes:

- Strategic and Trade Dimensions
- Funding and Financing Dimensions
- Legal and Regulatory Dimensions
- Organization and Governance
- Geography and Engineering
- Economic Outcomes
- · Social Benefits and Costs
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Dr. Kent Fellows Program Director, Canadian Northern Corridor Research Program

THE CANADIAN NORTHERN CORRIDOR COMMUNITY ENGAGEMENT PROGRAM: RESULTS AND LESSONS LEARNED

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KEY MESSAGES

- Canada's infrastructure gap in mid- and northern Canada is the result of complex and intersectional factors, stemming in part from the country's colonial history and approach to land management; piecemeal infrastructure development; underrepresentation of rural, remote, and Indigenous communities in strategic decision-making; and decades-long neglect of existing infrastructure networks.
- Cross-cutting factors exacerbating the infrastructure gap are a lack of cooperation across
 orders of government; infrastructure asset ownership and management; the state of
 repair of existing infrastructure; (in)accessibility and remoteness of communities; the
 availability of local skills and human capacities; capacity for climate change adaptation;
 and limited available resources that support energy security.
- Community infrastructure priorities fall into three areas: physical and digital connectivity, local infrastructure to support community well-being, and energy security and environmental protection. All three should be included in a long-term strategic and integrated infrastructure approach for mid- and northern Canada.
- The Government of Canada, in cooperation with provincial, territorial, municipal, and Indigenous partners, should invest in region-based assessments to determine specific local infrastructure priorities across mid- and northern Canada.
- The Government of Canada, in line with its consultations on the implementation of the United Nations Declaration on the Rights of Indigenous Peoples, should identify ways to incorporate the principles of Free, Prior, and Informed Consent in legal and regulatory frameworks related to infrastructure and natural resource development. Resources including but not limited to financial, legal, and logistical should be provided to Indigenous communities and rightsholder organizations to enhance their advocacy capacity for local and regional priorities.
- All orders of government need to actively support civic engagement amongst and by smaller and remote communities through allocation of resources to facilitate community participation in hearings and processes (e.g., impact assessments).

- Social benefit-cost analyses of infrastructure developments must consider intersectional vulnerabilities and equity-deserving groups, including Indigenous Peoples. Infrastructure deficits and development disproportionately affect Indigenous communities. Their meaningful engagement in future development is crucial to meeting Canada's legal and moral obligations to Indigenous Peoples and ensuring the success of future infrastructure projects.
- Community needs are diverse and include access to housing, education, and healthcare; upgrading and maintenance of existing infrastructure; and a larger role in future infrastructure development plans.
- Universal high-speed internet is necessary to ensure that all residents of Canada have equitable access to educational, employment, healthcare, and other services and opportunities that are increasingly found online.
- Climate change and its consequences for the environment in northern Canada, such as permafrost melting, will contribute to accelerated degradation of existing infrastructure; safety features to mitigate the impacts of environmental hazards must be incorporated into any infrastructure development or maintenance.

EXECUTIVE SUMMARY

The Canadian Northern Corridor (CNC) Research Program is an investigation of the feasibility, desirability, and acceptability of infrastructure corridors in advancing integrated, long-term infrastructure planning and development in Canada. The corridor concept involves a series of multi-modal rights-of-way across mid- and northern Canada connecting all three coasts and linked to existing corridors in southern Canada — for the efficient, timely and integrated development of trade, transportation, and communications infrastructure. Corridors are expected to make public and private infrastructure investments more attractive by reducing the uncertainty associated with project approval processes; sharing the costs associated with establishing and administering rights-of-way; decreasing negative environmental impacts; and moving to a more strategic, integrated, and long-term approach to national infrastructure planning and development. A key outcome of corridor development is decreasing the existing infrastructure gap that persists between Canada's northern and southern regions and communities. The causes of this gap are complex and will require a diverse set of tools and solutions to resolve; the CNC is a useful conceptual tool to initiate discussions on northern infrastructure and to identify feasible and lasting solutions to address Canada's infrastructure gap.

The CNC Research Program included a series of policy studies, stakeholder engagements, and community engagement involving participants from 18 communities across midand northern Canada. In this report, we present a summary and thematic analysis of the data collected during the community engagement sessions and community visits which took place from March to November 2022. The purpose of the community engagement was to hear the perspectives of communities that could be significantly affected by potential corridor development and the large-scale infrastructure that could accompany it. The CNC Community Engagement Program addresses three key questions: 1) What key gaps in infrastructure, infrastructure policy and infrastructure-related research persist from the point of view of communities and community members? 2) What potential impacts, challenges, and opportunities does the corridor concept present for those communities? 3) What factors would make corridor development acceptable, or unacceptable, for a given community and its members? To answer these questions, community sessions were structured around three core themes: infrastructure needs and priorities across mid- and northern Canada; challenges that are preventing communities and regions from achieving their infrastructure development goals; and the potential effects of infrastructure corridors on the community, both positive and negative.

Participants described a variety of infrastructure priorities and challenges which can be summarized as physical and digital connectivity; community well-being; and energy and the environment. Specific issues included poorly maintained roads and highways, unreliable communications infrastructure (particularly high-speed internet), the loss of rail services, dependence on expensive and non-renewable power sources, housing quality and quantity, access to medical and educational services, and the effect of climate change on existing transportation networks. Some key concerns, such as food security and physical connectivity, were prominent in more northern communities compared to their southern

¹ The Canadian Northern Corridor Community Engagement Program was reviewed and approved by the Conjoint Faculties Research Ethics Board (CFREB), University of Calgary (Ethics ID: REB21-1473) in accordance with the Tri-Council Policy Statement on the Ethical Conduct for Research Involving Humans (TCPS 2).

counterparts; diesel-reliant communities in the territories raised concerns about their energy security and the high cost of living while coastal communities focused on the maintenance or establishment of port infrastructure. We also found six cross-cutting factors exacerbating the infrastructure gap between northern and southern Canada:

1) infrastructure governance and ownership; 2) the state of repair of existing infrastructure;
3) the lack of accessibility (e.g., to services or communications infrastructure) and community remoteness; 4) the existence and availability of skills and human capacity;
5) local capacities for climate change adaptation; and 6) energy security and environmental sensitivity.

All participating communities described significant issues with the availability, affordability, and quality of internet connectivity. Digital connectivity enables participation in economic and social activities and, particularly for more remote communities, allows access to essential services such as education and healthcare. We heard how unreliable internet access can trigger cascading effects on community well-being, disrupting business operations and social interactions, and compelling residents to leave communities in search of educational and employment opportunities.

Participants raised many concerns regarding the potential development of a corridor, with environmental concerns taking centre stage during discussions. Community members described experiences and grievances related to past infrastructure and natural resource development in their communities and regions. Participants felt that too often infrastructure development catered to the needs of southern Canada, leading to a perception of northern resource exploitation that does not generate benefits for local communities. Research participants frequently expressed frustration with the lack of recognition of northern needs and interests by all levels of government and with the fact that decisions about northern development are often made in southern regions by policymakers unfamiliar with the North and without sufficient consideration of that region's environmental, economic, social, and cultural conditions.

Canada's northern infrastructure gap evolved over decades, and its causes are wideranging and intersectional, creating and perpetuating inequities between different regions of the country. These stem from Canada's colonial history and approach to land management, piecemeal infrastructure development, underrepresentation of equity-deserving groups in strategic decision-making, and decades-long neglect of community-level infrastructure. In addition to the persistent inequities between north and south, infrastructure deficits and development disproportionately affect Indigenous communities. Many of these same communities also lack significant local capacities, frustrating their abilities to meaningfully advocate and act on behalf of their interests and to engage meaningfully with non-Indigenous governments and development proponents on equal footing. Targeted support — logistical, legal, financial, and otherwise — for Indigenous rightsholders in some regions is necessary to ensure their capacity to participate in, and lead, future development opportunities.

Future large-scale infrastructure development could benefit from a region-informed approach. Communities often expressed similar infrastructure needs across provincial and territorial borders while lamenting a lack of inter-provincial and territorial cooperation. Bureaucratic red tape and regulatory requirements often curtail or prevent effective

collaboration, particularly between Indigenous and non-Indigenous communities. Regulatory processes and mechanisms are vital to protect the constitutional and treaty rights of Indigenous Peoples and to ensure a sustainable approach to both infrastructure and natural resource development. However, they should facilitate rather than undermine regional cooperation across provincial and territorial borders.

A region-informed approach to infrastructure development could entail region-based needs-assessments and a regional approach to assessment and development as part of a long-term, integrated national strategy. This would prevent a one-size-fits-all approach to development across Canada's diverse northern regions. Moreover, it would ensure effective participation of equity-deserving groups, and enable them to assert their regional priorities. A regional approach could also support greater local control of planning and strengthen communities' ability to make their perspectives heard in meaningful ways. It would also contribute to greater social and economic parity between regions and ultimately begin to close the infrastructure gap in Canada.

INTRODUCTION

The Canadian Northern Corridor (CNC) Research Program is an investigation of the feasibility, desirability, and acceptability of using the corridor concept to advance integrated, long-term infrastructure planning and development in Canada. The concept involves a series of multi-modal rights-of-way across mid- and northern Canada to facilitate efficient, timely and integrated development of infrastructure, including combinations of road, rail, transmission, pipeline, communications, port, and airport infrastructure. The concept combines both linear and point-to-point infrastructure and proposes a series of interconnected corridors across mid- and northern regions with the goal of connecting all three coasts and integrating with existing infrastructure in the south. We routinely use the term 'the North'; this denotes the territories (Northern Canada), and the middle and northern portions of BC, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, and Newfoundland and Labrador, sometimes referred to as 'mid-Canada' (Rohmer 1970; Koch 2021). The term 'corridor concept' indicates that the Canadian Northern Corridor is at a conceptual stage of investigation focused on informing future policy and infrastructure development, rather than assuring its development; its realization is not assumed, and investigation of the concept may determine that such a development, as currently imagined, is not feasible. Internationally, corridors are used to make moving goods and people more efficient and to support information communications technology (Öberg, Nilsson, and Johansson 2016; Gong 2019; Enns and Bersaglio 2020; Lesutis 2020; Satchwell 2023).

Corridors in Canada are not novel phenomena. In the 1960s, Richard Rohmer proposed a "Mid-Canada Development Corridor" (Rohmer 1970). Geographically, this corridor was delineated by the boreal forest, an area deemed ideal for human settlement due to its sub-Arctic climate. However, Rohmer's corridor was not realized; the main regions it covered were long regarded as a "remote fringe area," and no further development plans for a northern corridor had been made by the 1980s (Weller 1984). Nevertheless, corridor development in Canada's south progressed; Munzur (2021) offers an extensive inventory of Canada's main highways, ports, and airports (Figure 1). However, Canada faces myriad barriers and bottlenecks that negatively affect domestic supply chains and communities, due to infrastructure networks that are increasingly fragile as climate change and its effects erode existing assets (Boyle, Cunningham, and Dekens 2013; Pearce, Ford, and Fawcett 2020; Koch 2021). Furthermore, Munzur (2021, 6) emphasizes that:

Although Canada's history is punctuated with big and bold national projects, such as the Trans-Canada Highway and the Canadian Pacific Railway, a long list of stalled or cancelled stand-alone infrastructure projects can create frustration and lead to an erosion of public confidence in established processes among certain groups of stakeholders and members of the public.

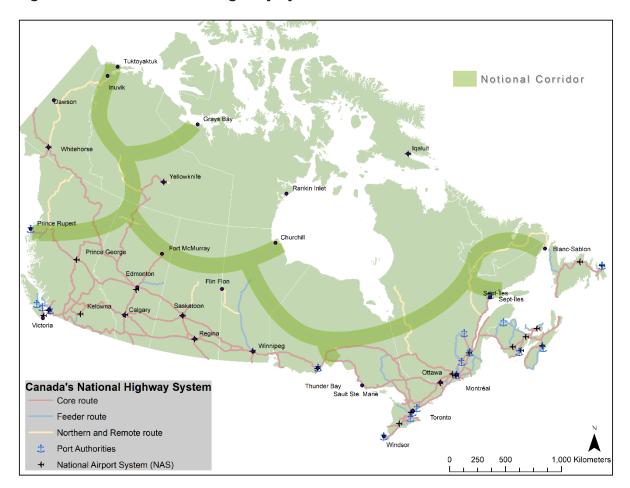


Figure 1: Canada's National Highway System

Source: Munzur (2021). Republished with permission.

A northern corridor would utilize pre-existing infrastructure assets; however, certain segments and connections may be new additions to Canada's infrastructure grid, creating specific questions and challenges in terms of their feasibility, desirability, and acceptability. Past development, such as the 'national' corridors established by highway and railway construction, have blazed pathways through Canada's vast geography without sufficiently mitigating the effects of settler colonial visions on Indigenous communities and their traditional networks of commerce and trade, wildlife migration, and sensitive ecosystems. While some development followed traditional Indigenous transportation routes — such as the Dempster Highway, which is based on a traditional dog-sled trail (Dana, Meis-Mason, and Anderson 2008) - in other cases it involved new routes, often with significant implications for Indigenous and other communities. For example, the construction of the Alaska Highway had a "significant impact on the settlement patterns in Whitehorse, shifting traffic and people away from the Yukon River," with great repercussions for Indigenous Peoples who left behind their traditional subsistence-based lifestyles (i.e., hunting and trapping) to seek employment in road construction and as wilderness guides (Sheppard and White 2017, 215).

The entire CNC Research Program involves studies on eight thematic issues (strategic and trade dimensions, legal and regulatory issues, organization and governance, geography and engineering, economic outcomes, social benefits and costs, and environmental impacts); 17 roundtables with stakeholders from federal, municipal, territorial, and Indigenous governments, industry, and NGOs; and 18² community engagement sessions held across mid- and northern Canada with the goal of sharing knowledge and gathering feedback from residents on the corridor concept.³ Here, we present a thematic qualitative analysis of our community engagement activities that took place between March and November 2022.

The CNC Community⁴ Engagement Program conducted as part of the CNC Research Program addresses three key questions: 1) What key gaps in infrastructure, infrastructure policy, and infrastructure-related research persist from the point of view of communities and community members? 2) What potential impact, challenges, and opportunities does the corridor concept present for those communities? 3) What factors would make corridor development acceptable, or unacceptable, for a given community and its members? The central component of the Community Engagement Program was a series of in-person and virtual visits by research team members and external consultants (Cascade Projects, an Indigenous-owned firm supporting our engagement efforts). A community engagement approach was chosen due to the potential impacts of corridor development on individual communities. Public consultations and community engagement initiatives have become more common for large projects; however, there is limited academic work addressing large-scale, national infrastructure development from a community perspective. Our community engagement research identified several infrastructure priorities related to physical and digital connectivity, community well-being, and energy and environmental infrastructure. Participants also raised concerns related to potential corridor development, such as negative environmental impacts and socio-cultural changes. While some participants were not directly opposed to development that would improve local and/or regional connectivity and enhance access to critical services such as healthcare and housing, they indicated conditions for development such as meaningful consultation processes and the involvement of Indigenous communities.

The following two sections offer further insight into community engagement as a research approach and provide an overview of the CNC Community Engagement Program. We then present a summary of key themes, followed by a more detailed and intensive presentation of the data in a "What We Heard" section, which collates participant contributions from the 18 communities we engaged. We then offer insights about the potential implications for infrastructure development based on participant perspectives and analyze the key challenges of connectivity and development in mid- and northern Canada. We conclude by discussing lessons for future engagement activities by governments, project proponents, and researchers, and suggest policy actions to improve infrastructure development in Canada.

We scheduled nineteen engagement sessions, but the Rankin Inlet session was cancelled while researchers were enroute, due to extreme weather that cancelled commercial flights into and out of the community.

³ Throughout this document, we use the terms 'barriers' and 'challenges' to categorize community perspectives. We use 'challenges' to refer to the issues and problems currently or persistently facing a community and 'barriers' for factors inhibiting or undermining a community's ability to address their stated challenges.

⁴ We use a geographical, or spatial, definition of 'community'; that is, a group of people occupying a defined space: a city, village, town, or hamlet. We also include in this working definition First Nations communities, while recognizing that such communities often occupy multiple settlements (e.g., the Dene Tha' First Nation in northern Alberta is comprised of three separate physical communities).

COMMUNITY ENGAGEMENT AS A RESEARCH APPROACH

Public consultation and engagement on the part of government, regulatory bodies, and project proponents is common in Canada, and its use is actively encouraged by organizations such as the OECD (2001) and the United Nations (2003). Certain forms of consultation, such as those required by the Duty to Consult (Government of Canada 2021b), or conducted as part of an environmental assessment (Government of Canada 2012), are administered in order to meet legal requirements. Others, such as those conducted in advance of new municipal strategies (Campbell-Arvai and Lindquist 2021), reflect a growing consensus that mechanisms to include the public in decision-making should extend beyond the confines of the formal processes of institutionalized democracy (Head 2007). Engaging with communities about issues that affect their members — such as natural resource development projects and major policy changes — can help achieve "effective and inclusive decision-making, form partnerships, increase adherence to policy, gain support for a project, and build capacity" (Boyle et al. 2022, 3). Additionally, it can ensure that a given project "meets the needs of the public," assigns "legitimacy to a project," and provides "a forum for the submission and inclusion of local knowledge" and "a more comprehensive consideration of factors on which decisions are made" (Fitzpatrick and Sinclair 2003, 162).

In formal academic research, participatory forms of research, including community engagement, have also become increasingly popular amongst both researchers and funders (McKenna and Main 2013), particularly within the humanities, social sciences, and health-related disciplines. The level of public involvement in a given project or program can vary greatly, from the public being simply informed about the research being done, to their involvement in the creation of data, to their working alongside researchers to shape research design, questions, and outputs. This last and deepest level of involvement is found in Community-Based Participatory Research (International Association for Public Participation n.d.; Israel et al. 2012). In this context, community engagement (CE) can be hard to satisfactorily define. However, broadly speaking, CE "centres on the involvement of community members in policy and project planning, delivery, or evaluation processes through co-production between the professional sector and civil society" (Boyle et al. 2022, 3).

In the case of the Canadian Northern Corridor Community Engagement Program, we chose a community engagement approach due to the potential significant impacts on individual communities that could come with both corridor development and associated large-scale infrastructure projects. Public consultations and community engagement initiatives have become more common for large projects, such as the creation or expansion of mining operations (Natural Resources Canada 2016), and national development strategies (e.g., the Canada Green Buildings Strategy or the National Adaptation Strategy). There is limited academic work addressing large-scale, national infrastructure development from a community perspective, where research team members travel to individual communities to interact directly with participants. Public consultation on national topics is more commonly executed through a combination of knowledge mobilization tools, such as websites and advertisements, or through public comment periods. However, knowledge mobilization does not allow for the two-way exchange of knowledge between researchers and participants, and public comment periods are criticized for their inaccessibility,

exclusion of certain demographics (e.g., those unaccustomed to technocratic processes) and kinds of knowledge (e.g., Indigenous ways of knowing), and for how marginalized voices can be overlooked in the volume of data collected (Morrell 2013).

By employing more direct forms of community engagement, the CNC Research Program's goal is to amplify the voices of individual communities and their members. With too small a scope to realistically achieve representativeness in the data, the research team instead focused on soliciting a wide diversity of opinions, perspectives, and experiences from community members (Patton 2002), to highlight as many issues regarding corridor and infrastructure development as possible. This is also why we have chosen to present our participants' contributions with minimal interpretation in the "What We Heard" section. Where possible, researchers have attempted to capture exact words, phrases, and statements to better allow participants' voices to be heard and to minimize researchers' own voices in the data. Participant contributions are unattributed for the sake of individual anonymity and to allow participants to share their perspectives more freely.

COMMUNITY ENGAGEMENT OVERVIEW

The CNC Research Program included an engagement component to identify community priorities for and concerns about infrastructure development, and to identify the challenges and conditions that have contributed to Canada's current infrastructure deficit. Additionally, we aimed to investigate those issues that disproportionately or uniquely affect mid-Canada and northern communities and are often missing from the policy agendas of southern policy and decision-makers.

We present an aggregate analysis of data collected at 18 community engagement sessions (seven virtual and 11 in person) which took place between March and November 2022.5 The research team engaged in community selection based on three key features: geography and proximity to the notional corridor routes and major infrastructure projects and industries (Figure 1); strategic port accessibility, which are critical transportation and trade nodes; and population size, ensuring a mix of small rural areas and larger nonmetropolitan population centres. Given the significant Indigenous population in the Canadian North, we also aimed to engage at least one Indigenous community in each province and territory. Based on these criteria, the CNC research team and our partners at Cascade Projects⁶ created a list of 50 potential community engagement sites, which was eventually narrowed down to 19 target communities. Of this list of 19 "preferred" communities, 12 agreed to participate in the engagement program; alternatives were found for the remaining seven sites (Figure 2). Alternative sites were selected from the initial list of 50 communities. In some cases, representatives of communities not included in this initial list reached out to the research team to express interest in participating in engagement activities. Where a given community matched the original selection criteria, that community was chosen as an alternative site (e.g., Hay River).

⁵ The Canadian Northern Corridor Community Engagement Program was reviewed and approved by the Conjoint Faculties Research Ethics Board (CFREB), University of Calgary (Ethics ID: REB21-1473) in accordance with the Tri-Council Policy Statement on the Ethical Conduct for Research Involving Humans (TCPS 2).

⁶ Cascade Projects is an Indigenous-owned and -operated consultancy contracted by the CNC Research Program to support the program's stakeholder and community engagement activities (Cascade Projects n.d.).

The most significant discrepancy between the initial and final community lists is in the number of participating Indigenous communities. This was due to a combination of circumstances encountered during pre-engagement contact with community representatives. In some cases, communities were not interested in engaging with the research team for unspecified reasons. Others described a lack of alignment with community priorities, a lack of capacity within the community to engage in a research project, and existing or recent involvement in other research programs. There were also issues related to administrative and promotional challenges (e.g., the research team was limited by the research ethics protocol in its ability to directly contact the members of Indigenous communities) as well as in accessing timely feedback from Indigenous organizations such as Tribal Councils. Ultimately, no First Nations communities were directly involved in the engagement process, a limitation of this portion of the Research Program. However, three Inuit communities — Tuktoyaktuk, Kugluktuk, and Rankin Inlet did agree to participate. Furthermore, in other communities, such as Thompson, MB, and Île-a-la-Crosse, SK, session participants were either predominantly or exclusively First Nations or Métis. The sessions in Timmins, Thunder Bay, Churchill, Happy Valley-Goose Bay, and Kenora also involved participants who self-identified as First Nations or Inuit. Figure 2 depicts the communities we engaged.



Figure 2: CNC Community Engagement Program Geographic Overview.

Notes: The engagement session in Rankin Inlet was scheduled but cancelled due to inclement weather which suspended commercial flights in and out of the community.

Source: Map created by K. Koch using Esri, ArcGIS Pro, version 2.9.0 and data from Natural Resources Canada (2022); Statistics Canada (2022). Contains information licensed under Open Government Licence — Canada.

Due to the pandemic and related travel restrictions, the team conducted the first four community engagements virtually. Subsequent virtual engagements in Quebec were to accommodate French-English translation (i.e., live interpretation), and the Hay River (Northwest Territories) session was also virtual due to delays in the territorial licensing process⁷.

Table 1: Community engagement overview.

Date	Community	Format
March 2 nd , 2022	High Level, AB	Virtual
March 10 th , 2022	Thunder Bay, ON	Virtual
March 26 th , 2022	Timmins, ON	Virtual
March 30 th , 2022	Prince Rupert, BC	Virtual
April 25 th , 2022	Thompson, MB	In person
April 28 th , 2022	Churchill, MB	In person
June 16 th , 2022	Sept-Îles, QC	Virtual
August 29 th , 2022	Whitehorse, YT	In person
September 7 th , 2022	Fort St. John, BC	In person
September 12 th , 2022	Happy Valley-Goose Bay, NL	In person
September 15 th , 2022	Chibougamau, QC	Virtual
September 20 th , 2022	Kenora, ON	In person
October 6 th , 2022	Grande Prairie, AB	In person
October 11 th , 2022	Hay River, NT	Virtual
October 13 th , 2022	Île-à-la-Crosse, SK	In person
October 19 th , 2022	Kugluktuk, NU	In person
October 26 th , 2022	Tuktoyaktuk, NT	In person
November 1 st , 2022	Rankin Inlet, NU	Cancelled due to weather
November 8 th , 2022	Corner Brook, NL	In person

Across all communities, 220 participants registered for the community engagement events, with 180 registrants participating. Both virtual and in-person engagement sessions followed the same meeting agenda (Table 2), with minor adaptations to accommodate different venues and settings. During virtual sessions, participants were first invited to introduce themselves while in-person sessions commenced with a registration period including refreshments. Facilitators would introduce the purpose of the engagement session followed by a presentation from a University of Calgary researcher and a Q&A session lasting between 10 and 60 minutes. Cascade Projects facilitators would introduce key questions followed by a discussion. Though 20 minutes were allotted to this time, facilitators did not rigidly apply this limit to ensure participants had enough time to raise all issues they felt were relevant. Facilitators adapted to circumstances and were flexible regarding how closely the discussion adhered to the planned course of questions. In situations where

Yukon, the Northwest Territories, and Nunavut all require researchers to submit their project plans to a territorial oversight body for a review of methods, ethics protocols, and other details, with particular concern for research team interactions with Indigenous Peoples and Indigenous communities. The CNC Community Engagement Program obtained research licenses from all three territorial governments.

participants were critical of the concept or research, or had concerns and interests not directly tied to the planned session agenda, such flexibility was exhibited. This sometimes led to discussions not directly related to the research questions, but rather to the broader experiences with infrastructure, community development, governance, and natural resource development in the region. The goal was to not impose the research team's assumptions on participants and to allow space for participants to lead the discussion according to their priorities.

Table 2: Sample Engagement Agenda Structure.

ACTIVITY	Time Allocated
Registration and Refreshments	10 mins
Getting Started — Overview and Introductions	15 mins
Understanding the CNC Research Program and the Concept — including Q&A.	25 mins
STRETCH BREAK	10 mins
 Topic 1: Thinking about Connectivity — Your Needs and Priorities What are the priorities for infrastructure planning and development in your community/region? 	20 mins
Topic 2: Strengths and ChallengesWhat challenges might keep your community/region from meeting its infrastructure needs or achieving its goals? What is working well?	20 mins
Topic 3: Potential Impacts • In what ways do you think the Canadian Northern Corridor could impact your community/region and its needs?	20 mins
Reflection and Final Thoughts	Remainder

Note: Meeting logistics were adjusted based on whether the engagement was virtual or in-person.

Each community session was attended by two research team members from the University of Calgary (a presenter and a notetaker) and two discussion facilitators from Cascade Projects. Following each individual engagement session, participants were invited to provide their feedback about the meeting via post-event surveys. Each community also had a dedicated page on the engagement program's Bang the Table⁸ site, where participants could access information about the research program and leave comments, raise concerns, and start discussions with the researchers and other community members. Community sites were left open for 30 to 60 days after the formal engagement session, and both session participants and community members unable to attend a session were invited to access and engage with their respective community pages. When research team members were able to travel to communities for the engagement sessions, they prepared field notes to help elaborate on and contextualize the issues raised by participants during engagement sessions. We use field observations to independently verify facts and offer contextual clarifications when necessary.

⁸ Bang the Table, acquired by Granicus after the start of the engagement program, is an online engagement platform.

The research team also prepared back-to-community (BTC) reports, which summarized data collected during engagement sessions; these were then distributed to participants in each respective community. These were not shared publicly, although we had no control over the distribution of reports once they were delivered to community members; in fact, participants were encouraged to share their community's BTC report with other interested parties as they deemed appropriate. Sessions were not recorded; instead, one of the researchers was assigned the role of notetaker. In some cases, words, phrases, and statements by participants that were accurately captured by the notetaker are used in this report to preserve participants' voices.

The session and field notes were systematically categorized with the support of qualitative research data analysis software NVivo 12* to help extract key excerpts from the material and identify key themes. We now turn to summarising our results.

RESULTS SUMMARY

Our community engagement research across mid- and northern Canada identified several infrastructure priorities (Table 3). We heard about many different needs and challenges, such as digital connectivity, housing quality, and access to clean drinking water and have summarized community needs into three broad areas: physical and digital connectivity; community well-being; and energy and water infrastructure. We also identified several cross-cutting factors that undermine communities' abilities to achieve their infrastructure priorities.

Participants routinely highlighted a lack of intergovernmental cooperation, which creates friction and competition for funding resources. In contrast, participants emphasized that collaborative processes across and between governments would be a more effective approach to addressing community and regional priorities. Furthermore, the current state of repair of some infrastructure assets, including housing and roads, creates safety issues for community members and commercial and tourist traffic. Many northern and remote communities still do not have access to internet speeds that meet the Canadian Radiotelevision and Telecommunications Commission's basic service requirement (50 Mbps download/10 Mbps upload with unlimited data), emphasizing the digital inequality experienced by many northern and rural residents.

Remote communities often struggle with a shortage of local skills and capacity, compounded by challenges in attracting and retaining new skilled residents. One factor that affects every aspect of infrastructure, both existing and future, is climate change and its consequences. Climate change adaptation, such as flood-mitigation programs, will be crucial to improving the resiliency of northern communities. Moreover, with many communities relying on imported fossil fuels, a certain level of energy autonomy (e.g., through locally generated renewable energy) would improve northern energy security and help reduce greenhouse gas emissions, contributing to Canada's emissions-reduction goals (Government of Canada 2022a).

Table 3: Infrastructure priorities across participating communities.

Infrastructure Priority Areas				
Physical and digital connectivity	Community well-being	Energy and environment		
Digital connectivity and broadband Reliable mail services Railways Bridge maintenance Marine transportation and ports (sea lift and river transportation) Road safety Air infrastructure	 Housing quality and availability Utility costs Food security Medical services, including mental health and addictions services Education, including trades and post-secondary institutions Human resources and capacity Access to culture and maintenance of traditional practices Traditional languages Emergency response and search and resource (SAR) 	 Clean drinking water Wastewater and sewage facilities Clean energy (particularly in diesel-reliant communities) Reliable power supply 		
Cross-cutting factors inhibiting or supporting priorities				
Infrastructure ownership and managementState of repair	(In)accessibility and remoteness Skills and human capacity	Climate change adaptationEnergy security and environmental sensitivity		

Although we began community discussions based on the premise of a northern corridor, conversations often centered around local community priorities and challenges related to community well-being, climate change, and the environmental consequences of natural resource and infrastructure development. Using these frames, we identified several key concerns and benefits from a potential northern corridor and infrastructure development more generally (Table 4).

Table 4: Key concerns and potential benefits from infrastructure development in mid- and northern Canada

Infrastructure development in mid- and northern Canada			
Key Concerns	Potential Benefits		

- Concerns regarding infrastructure development and its impact on wildlife, the boreal forest, permafrost, and aquatic ecosystems.
- Infrastructure development for the benefit of the resource extraction sector, in particular oil and gas companies.
- Cascading effects of infrastructure development (such as a road) and resulting commercial activities (logging, mining, etc.).
- Negative experiences with past infrastructure development (benefits were promised but never reached communities).
- History of broken promises and a general lack of trust resulting from Canada's settler-colonial history and the treatment of Indigenous Peoples.
- Loss of traditional ways of life due to accessibility; influx of alcohol and drugs into communities with consequences for the social well-being of community members.
- Infrastructure development that doesn't meet the needs of communities.
- Increased connectivity places a strain on local services and resources, such as housing.
- Losing community life and cultural values including language.

- Streamlined ecological footprint with a multi-modal corridor approach.
- Improved road and cellular communications make travel between communities safer.
- Skill and labour retention and decrease of 'brain drain' in communities.
- Improved access to services (e.g., healthcare, employment, education).
- Maintenance of close connections between communities and safeguarding cultural heritage.
- Economic growth through commercial activities (i.e., tourism and exports of goods).
- · Attracting new businesses.
- Potential lower costs of living due to improved accessibility.
- Improving local and regional resilience (e.g., food security).
- Integrity of supply chains.
- Increase in Canada's international competitiveness.
- Canada as a strategic actor in the Arctic.
- Increase in competition for shippers/haulers leading to lower transportation costs.

In addition to the practical challenges related to potential corridor development, such as financing and engineering, participants across all communities indicated reservations regarding infrastructure development that would mostly serve the private sector. Indigenous participants in particular spoke at length about the effect of previous infrastructure and resource developments in their communities and voiced concerns about the negative effects of a potential CNC on the environment and their traditional land use.

While some participants were not directly opposed to development that would also secure access to critical services such as adequate housing, healthcare, and education, they indicated that development should be done "in the right way," which means adequate consultation processes and the participation and flexibility of Indigenous rightsholders to propose their own initiatives within their communities. However, to become project proponents, community members acknowledged the need for more support to increase their own capacity.

WHAT WE HEARD

This section details the conversations that occurred during the eighteen community engagement sessions. We keep our interpretation and analysis of the data to a minimum with the goal of retaining as many of the participant's own words, phrases, and expressions as possible. Capturing a broad range of perspectives and voices was a key motivator in the Community Engagement Program and we have chosen to maximize the inclusion of participant contributions in this report. Our summary and discussion of the issues raised by participants and implications for policy can be found starting on page 58.

1. INFRASTRUCTURE NEEDS, DEFICITS, AND PRIORITIES IN NORTHERN COMMUNITIES

Participants identified several key gaps in existing local, regional, and national infrastructure that they perceived as negatively impacting the quality of life and economic viability of their communities. These deficits include both physical infrastructure, such as communications networks and road access, and soft infrastructure, including healthcare and educational resources. In this section, we discuss the following: *Communications Infrastructure*, including internet and cellular connectivity and mail delivery; *Transportation Infrastructure*, divided into *Roads*, *Rail*, *and Bridges*, and *Air Travel*, *Marine Transportation*, and Ice Roads; Housing Quality and Availability; and Soft Infrastructure and Access to Services, including healthcare and educational resources.

Communications Infrastructure

The quality, availability, and accessibility of communications infrastructure — including internet access, cellular coverage, and mail services — were matters of concern in all 18 communities; in particular, access to reliable and affordable high-speed internet. Even in more urban and developed towns and regions (e.g., Thunder Bay or Whitehorse), internet quality was frequently described as poor and unreliable, with slow speeds detrimentally affecting households, businesses, and governments alike. One participant in Timmins described how even local municipal council meetings require two simultaneous connections — one telephone and one internet — to ensure a consistent connection for attendees. In Grande Prairie, the local Chamber of Commerce had planned an event (unrelated to the CNC Research Program) to take place virtually during the COVID-19 pandemic but changed it to an in-person event due to poor internet connectivity in the area. Participants in the virtual sessions were frequently unable to use their cameras due to a lack of internet capacity. Speed was also an issue. This was the case for both more remote communities and those not far from larger towns and cities; participants from these peripheral areas reported experiencing vastly inferior internet speed and quality compared to their larger urban neighbours.

In many communities, the cost of internet services continues to rise while quality and speed remain poor. The cost to communities of connecting their residents to high-speed internet services can be prohibitively high even where they are theoretically accessible. For example, there is already a trunk line for fibreoptic internet in northern British Columbia

and there are plans for one through the Northwest Passage⁹ but communities in the Peace Region and on the Arctic Coast cannot necessarily afford to build the links needed to connect their residents to these mainlines. Satellite internet is a potential alternative, but the cost can be too high for many households and less expensive alternatives like landline-based connections offer inferior service. Where households are unable to afford internet access at all, they may rely on institutional access, such as through schools and libraries. However, many communities lack public institutions such as libraries, and schools are only accessible to students. Unforeseen circumstances may restrict access for students. One participant in Tuktoyaktuk described their daughter's dependence on her phone to attend lessons and complete homework during COVID-related school closures. The participant had to repeatedly top up the daughter's internet plan, which quickly added up, with \$20 buying less than an hour's access.

Where communities do have reasonable connectivity, outages can be common; participants attributed this in part to the absence of redundancies in key infrastructure. For example, many communities' connectivity in Yukon relies on a single fibreoptic line which runs along the Alaska Highway; damage to this line, which is a routine occurrence, can mean extensive outages in both Yukon and northern BC. Satellite outages in places like Kugluktuk are also common.

Participants described the consequences of this lack of access to high-speed and -quality internet. Slow, poor quality, or non-existent internet connections can prevent community members from accessing online educational, training, and employment opportunities, forcing them to either forgo those opportunities or to leave their communities to access them. This presents not only an additional cost barrier, but also separates individuals from their families and support systems, something described as particularly difficult for young Indigenous people: "... young people have a hard time being away from family and community and also adapting to the South." Similarly, government services have been increasingly moved online, leaving those without reliable internet unable to access them. The lack of high-speed access makes attracting and retaining both businesses and new residents difficult, affecting economic development. Some participants described the sense of isolation that can come with not being able to connect with the outside world, or even with the rest of one's province or territory. Ensuring reliable and equitable access to online educational and employment opportunities could keep people who want to stay in their communities over the long term. Instead, there is a growing digital divide between communities and households that can access high-speed internet and its attendant opportunities and services and those that cannot.

Most communities that reported experiencing poor internet access also deal with poor, or absent, cellular coverage. This was described as not only an inconvenience, but as a serious safety issue in regions where communities are connected by long stretches of remote highway with no cellular service. These roads typically lack amenities or services including gas stations, rest stops, or pay phones, putting road users at risk of not being able to contact emergency services in case of accidents. In Thompson, some community members shared that they felt compelled to purchase signal boosters or other tools that allow them to retain service on greater stretches of highway, but this can be a significant expense.

Participants spoke of the undersea fibre-optic cable as already being in existence. However, this section appears to be the third phase of a three-phase project by Alaska-based telecommunications company Quintillion to connect Alaskan communities on the Arctic Ocean to both Asia and Europe.

Low population density and remoteness were acknowledged as reasons for poor internet and cellular service. Participants also blamed telecommunications monopolies and lack of investment by both business and government. Internet service providers may be uninterested in building or expanding telecommunication infrastructure in regions with small potential customer bases and a low potential return on investment. Participants felt that large service providers often talk about expanding their services to more remote and rural regions when seeking government support, but then fail to follow through, while government fails to hold them accountable. Many argued that expanding digital communications infrastructure would require focused intervention and investment on the part of government due to the lack of financial incentive for the private sector to do so.

Participants also discussed the reliability and cost of mail services, particularly for remote and fly-in communities. Mail may be delayed days, or even weeks, depending on weather and aircraft status. In places where many residents are dependent on government support, delays in the mail can leave people unable to pay bills or buy groceries. In Kugluktuk, one session attendee said that local elders are supposed to receive cheques from their territorial association at the beginning of each month; however, in October, when the community session took place, cheques had not been received until the 19th. Delays in receiving this money can leave elders unable to pay for expenses like groceries and utilities. Residents in remote and northern communities are charged the same rates for things like express services as those in southern communities but receive inferior service in terms of delivery times and guarantees. As one participant shared, "we don't get the service, but we pay the same rates."

Transportation Infrastructure

Existing transportation infrastructure is failing to meet the social and economic needs of many communities we spoke with. This was the case even for relatively accessible communities, including Kenora, Fort St. John, and Thunder Bay, all situated along major highways. For more remote communities, poor transportation infrastructure was described as reducing access to services, the attraction and retention of residents and businesses, and, in some cases, the future viability of the communities.

Roads, Rail, and Bridges

Discussions on the state of existing road networks focused on two key concerns: quality and quantity. Even major routes and highways, such as Highway 16 in northern BC or parts of the Trans-Canada highway in northern Ontario and on the island of Newfoundland, were routinely described as being in "terrible" condition and chronically in need of repair. More rural routes frequently remain unpaved, and sections of paved routes are often in poor condition; one participant in Manitoba described the region's rural roads as being "like a camel's back." Routine maintenance is often neglected, whether due to lack of interest or resources. Long stretches of remote highway are, more often than not, devoid of services such as rest stops, gas stations, or a cellular signal. Session participants described an eight-hour stretch between Thunder Bay and Winnipeg without a single pull-out or truck stop outside of a settlement, which makes the drive particularly perilous in the wintertime for both commercial truckers and other travellers. Participants in Thompson and Fort St. John described similar conditions in their regions.

Major regional routes, such as Highway 97 in central and northern BC and Highway 101 in northern Ontario, were described as lacking basic safety features such as paved shoulders or dividers. The absence of passing lanes was felt to make some major routes unsuitable for industrial traffic or large transport trailers, which nevertheless must navigate them. At the time of the research team's visit, there was a petition¹⁰ circulating in Thompson to bring attention to the dangers and shortcomings of Highway 6, which connects the community to Winnipeg and southern Manitoba. The highway's lack of features such as passing lanes, rumble strips, rest stops, cell service and winter maintenance is contributing to high rates of accidents and deaths. Thompson's own MLA, Danielle Adams, died in an accident along this route in December 2021 (Peters and Blunt 2021).

In rural and remote regions, where many of the communities we spoke with are located, travellers share narrow, poorly maintained roads with industrial traffic such as logging trucks and mining equipment. Not only are there safety consequences of these conditions, but these vehicles are particularly hard on road surfaces, increasing maintenance costs. At the same time, many local and regional roads have been built specifically to accommodate resource projects and are the only roads available to local residents in a given region. In Île-a-la-Crosse, community members described one of the consequences of this circumstance: when resource operations shut down, road maintenance ceases and roads may be decommissioned, leaving residents to navigate increasingly decaying and dangerous routes. This dependence on resource extraction projects to create road networks was described in Labrador as well.¹¹

The quantity of roads and extent of existing road networks were also discussed in several communities. More specifically, community members consistently cited a lack of redundancy in existing transportation networks as leading to connectivity issues, even for communities on major highways. Many communities rely on the integrity of a single highway or rail line to stay connected to surrounding communities or to access services and markets in southern regions and cities. A similar lack of redundancy in river crossings (i.e., bridges) routinely results in transportation and supply-chain interruptions: bridge closures due to accidents or weather-related damage can result in long delays. Participants provided a number of examples, including the 2019 to 2020 Chuckegg Creek Wildfire that cut off the only paved route between Alberta and the Northwest Territories; the 2021 British Columbia floods that damaged rail infrastructure and resulted in empty grocery shelves in many northern communities; a 2016 closure of the Trans-Canada bridge over the Nipigon River in Ontario, which required travellers to reroute through the United States; and, perhaps most famously, the eighteen-month shutdown of the rail line to Churchill following severe spring flooding in early 2017. In Kenora, a participant described the 2022 flooding that cut off Red Lake and its neighbouring communities as requiring impractical detours; one such detour involved travelling down a railbed (by what means was unclear).

In Thunder Bay, Ontario, participants pointed out that, while the city sits along the Trans-Canada Highway, there are few to no alternative routes in the case of a highway closure. This means that a heavy snowfall or serious accident can "cut [the community] off from one

¹⁰ Closed in summer 2022, the final petition included more than 5,500 signatures and included an incomplete list of accidents and deaths on the highway (Redman 2022).

¹¹ Or, as one participant noted, for royal visits, giving rise to a local joke that the Queen needed to come back for another visit so the province would finish paving the roads.

side of the country". Route 97, the main artery between northern and southern BC, similarly lacks alternative, parallel routes. More concerning to participants, Kenora, Ontario sits at a pinch point on the Trans-Canada Highway. There are no alternative routes north or south of the community, a lack of redundancy that can effectively cut the country in half in the event of a closure, which community members described as routine due to accidents, wildfire, and severe winter weather.

Rail transportation of goods and people was discussed in many communities, both those with and without rail lines. Rail was seen as an appealing alternative to dependence on car travel and potentially a more efficient way of transporting goods. Participants cited the lower environmental impacts of rail travel and the potential for passenger rail as an alternative to expensive air travel. It would also provide an alternative for those who do not own personal vehicles. However, access to rail services is limited: of the eighteen communities we spoke with, passenger rail services are only available in two: Prince Rupert and Churchill. Rail infrastructure is present in other communities — in fact, most we spoke with had some kind of existing rail line and several had previously had access to passenger services — but is presently only available for freight operations.

Participants described problems of capacity, expense, and redundancy with those freight operations. As with roads and highways, there is a lack of redundancy in freight lines, resulting in routine bottlenecks and delaying goods' shipment; this can have particularly negative effects on industries like mining, which are largely dependent on rail transportation. In Chibougamau, participants noted how the region's limited rail infrastructure is causing significant inefficiencies¹³ in exporting mining outputs from northern Quebec, undermining potential profitability. Accidents or damage to the line can mean significant shipping delays. Similarly, a fire on a bridge over the Peace River near Latornell, Alberta in October 2022 shut down rail traffic for nearly a week. Capacity issues also persist in Fort St. John, where participants described how a shortage of available rail cars on the main freight route through northern BC limits the quantity of goods that can be imported to and exported from the region. In Thunder Bay, one participant compared the minimal rail options available in northern regions to the density of trains and routes in southern Ontario and eastern Quebec.

Since Greyhound Canada closed its operations in 2021,¹⁴ many communities have also lost access to bus services. Where new private services have emerged or expanded to fill the gap, ticket costs can still put bus travel out of reach. These circumstances perpetuate the need for private vehicle ownership. Those who are unable to afford a vehicle must rely on alternatives like hitchhiking, a high-risk activity, particularly in remote areas like northern BC and Ontario. Many participants acknowledged that low population density and long distances between communities in most northern regions deter private companies from investing in mass transit in these regions.

¹² Kenora and Timmins are both within about an hour's drive from the nearest passenger depot (Redditt and Foleyet stations, respectively).

¹³ Participants did not elaborate on the nature of these inefficiencies.

¹⁴ A limited number of cross-border bus routes still operate in Ontario, Quebec, and BC (Greyhound n.d.).

Air Travel, Marine Transportation, and Ice Roads

While most communities we visited do have access to year-round ground transportation options — paved or all-weather gravel roads, or rail — several rely heavily or completely on alternatives such as air and water transportation, and all were in regions where neighbouring communities were similarly dependent. For example, while High Level, AB is well connected by paved highways, several communities in the region, such as Fox Lake, rely on ice roads in the winter and boat transportation in the summer months. However, during shoulder seasons, when ice bridges are not yet stable and the river isn't open enough for watercraft, it can be challenging to bring essentials like groceries and medications into the community. Furthermore, winter and ice roads generally have short seasons — in northern Ontario, for example, the useful season of such routes may only be six or eight weeks — and the effects of climate change are making seasons less predictable and routes less reliable.¹⁵

Other communities described being heavily dependent on barges, ferries, and other watercraft for the transportation of both goods and people. Hay River, NWT is a key supply point for communities further north in the territory that depend on barge shipments during the open-water season to keep their residents supplied with necessities. However, the territory does not have the financial capacity to routinely dredge the river¹⁶ which raises the risk of the waterway becoming unnavigable during low water levels. Participants expressed worry that as climate change brings warmer summers and changes to precipitation patterns, this may become more common. Low water levels are already affecting communities elsewhere: a participant in Timmins described how a community in northeastern Ontario that used to rely on barge shipments has not been able to receive any shipments for the past ten years due to dropping water levels along the barge's route. Arctic communities dependent on sealifts and barge shipments also depend on having a long enough season of open water for ships to safely make the trip.¹⁷

In Corner Brook, NL, participants described their reliance on inefficient marine transportation for the distribution of goods amongst the island's communities. Foodstuffs typically arrive in Newfoundland at Port aux Basques, and then are sent overland to St. John's for processing and redistribution. As a result, goods are brought "through the longest route possible". Many goods would pass through Corner Brook on their way to the warehouse and distribution center in St. John's before being shipped back to Corner Brook. This has obvious consequences for price, availability, and freshness. Participants attributed this to a lack of land-based trade routes across the island including the closure of the island railway, which shut down in the 1980s. This loss has also affected the island's agricultural sector: "so much of our agriculture has gone fallow because, when we lost the train, it's become much harder to get our goods to market".

On Quebec's North Shore, poor connections between the region's ports and highways are perceived as limiting potential economic activities in the area. There are currently three active ports in the region — Saguenay, Trois-Rivières, and Sept-Îles, all Canadian Port

¹⁵ For a discussion on the decreasing ice-road season in northern Ontario, see CBC News (2023).

¹⁶ Dredging was previously funded by the federal government (Williams 2022).

¹⁷ Timely sealifts also depend on extended periods of good weather, predictable open water seasons, and the conditions in communities where shipments originate. For example, missed barge deliveries in 2021 were attributed in part to flooding in Hay River and Inuvik (Blake 2022).

Authorities¹⁸ — but the North Shore's main highway connecting these ports, Route 138, does not cover the entire coast region. Participants in Sept-Îles felt that this lack of land-based transportation infrastructure is undermining the region's economic potential and inhibiting its import and export capabilities. Expanding ground-based transportation infrastructure would likely involve the construction of several bridges to connect coastal communities, but there is a perception that government is reluctant to undertake such projects. Participants pointed to the expensive bridges connecting Prince Edward Island and the Île d'Orléans, QC, to the mainland, regions that were perceived to be of higher value due to their tourist appeal. However, despite reportedly high public support, there is still no bridge across the Saguenay River. Such a bridge would better connect both the North Shore, as well as northeastern Quebec and Labrador, to the rest of the country.

A community member in Thompson pointed out that, while the roads in the region might be in bad condition, at least a road meant that you could, theoretically, reach a remote, road-connected community for the cost of gas. With no road, the only option may be to fly. However, airfare costs are high, particularly from more remote and northern areas, placing air travel out of reach for many northern residents. Corner Brook residents reported paying as much as \$1,000 to travel between the island and mainland Labrador, while participants in Churchill observed that it can be less expensive to fly to Europe from most parts of Canada than to fly to Churchill. The cost, or absence, of transportation options to some remote communities can result in individuals becoming stranded: people who travel to larger centres seeking services or employment find they are unable to return home. As anecdotal evidence, a participant from Thunder Bay described the case of an individual who was transported to a hospital in Winnipeg as a result of a medical emergency. Upon discharge, the individual had no financial resources to return to Thunder Bay, as they had been transported from Ontario to Manitoba without their personal effects, including their wallet. A lack of support services can mean a disproportionate number of these regional migrants end up unhoused in their new communities.

A loss of routes to rural and remote communities has also resulted in higher costs of travel: in Labrador, a person used to be able to fly from Nain in northern Labrador to Kuujjuaq on Quebec's North Coast a couple of times per week. Now, one would have to fly from Nain to Happy Valley-Goose Bay to Halifax to Montreal, and then to Kuujjuaq. Far-flung Inuit communities are often connected to each other by family, and barriers to travel between them have social, cultural, and economic consequences. Many participants attributed both the loss of routes and the high costs of remaining routes to limited competition within the Canadian aviation industry and the consequent monopolization by a small number of airlines following deregulation in the 1980s. A participant in Happy Valley-Goose Bay described this as having cost the Canadian North "mega, mega bucks". A reliance on air transportation as a means of shipping essential goods, the only way of transporting goods to roadless communities when sealifts and barges are unavailable, perpetuates the high costs of groceries and other basic goods in northern communities.

¹⁸ Canadian Port Authorities are established by the federal minister of transport but operate as arms-length, self-supporting bodies. Not all ports in Canada operate as port authorities (Transport Canada 2020).

Housing quality and availability

Many participants connected the quality and availability of housing in their communities to both the current state of local and regional infrastructure as well as future infrastructure development. In both larger communities and small towns, participants routinely described a lack of affordable housing and its negative effects on local social and economic development. In High Level, for example, participants pointed to a lack of housing as a limiting factor on the community's ability to both attract new workers and retain newcomers. In Kenora, session attendees described how a lack of housing options means the city is unable to retain medical professionals, eroding the region's healthcare services. They shared anecdotes of nurses recruited to the community who left soon after arriving due to their inability to find housing. One attendee shared that they had met someone working in a local care home who was living in the care home themselves for lack of an alternative. In Happy Valley-Goose Bay, one person shared that for many young people from the region's remote Inuit communities, leaving home for an education or employment opportunities can mean never returning, as there would be no place for them to live.

When housing is available, the cost can be prohibitive; even in Arctic communities, rental costs can rival those in large cities. In Tuktoyaktuk, participants described monthly housing costs of anywhere from \$500 to over \$2000; the cost of utilities, including heating oil, can add additional thousands of dollars a month. Attendees in Tuktoyaktuk shared stories of local elders using their own limited funds to support their children and grandchildren's households; conversely, other elders reported struggling to afford their household costs but being reluctant to ask their families for help. While government-subsidized housing can help some residents, there are not enough subsidized units to meet local needs. At the same time, new, market-priced units are being built in the community; however, these units are typically out of reach for locals who already struggle to afford housing.

Participants described the quality of available housing as inadequate, particularly but not exclusively in remote communities. This was attributed in large part to the use of designs and materials intended for more southern climates; the rigours of a northern climate can wear these materials out much faster, increasing the cost of maintaining homes in northern communities. In Churchill, participants described how many local homes had been built during the 1970s according to southern standards, and how community members are now stuck trying to maintain these homes without access to appropriate materials. One participant related how they hadn't had hot water in their home for several months in the fall and winter because they were unable to acquire the parts needed to fix the problem. Limited, or non-existent, road access was also cited as an obstacle to both home construction and maintenance; reliance on ice and unpaved roads, with respective seasonal and weight limitations, can restrict both the transportation of home-building supplies as well as the size and amount of modular housing that can be brought into remote communities. A lack of local homebuilders and pools of skilled labour in smaller and more remote communities was also described as an impediment to expanding the housing stock.

¹⁹ In a report entitled "Sick of Waiting," former MP Mumilaaq Qaqqaq showcases the abysmal living conditions of many residents in Nunavut (Qaqqaq 2021).

Soft infrastructure and access to goods and services

The high cost of goods and poor access to services were common topics of discussion amongst all participating communities. For more remote communities dependent on barge shipments and sealifts in the summer and air transportation for goods and people the rest of the year, the cost of basic goods like food and clothing can be exorbitant. The cost of groceries is compounded by a wide-spread paucity of local food production, making these communities dependent on imported fresh and packaged foods.

For many communities, the supply chain ensuring needed goods arrive in a predictable and timely manner is fragile: weather affects when and whether air or marine shipments occur, and serious disruptions to road or rail can mean extended periods of suspended shipments. In northern BC, participants pointed to the serious flooding in the southwest of the province in 2021, severing supply lines to northern communities and resulting in bare grocery shelves. In Corner Brook, sailings delayed due to weather can quickly mean shortages there and on the rest of the island. For the most remote communities, the consequences can be particularly drastic. For example, when the rail line connecting Churchill, MB to the rest of the country was damaged by floods in 2017, goods had to instead be brought into the community by air and ice road for eighteen months. This reduced availability and increased prices of goods, constituting a serious financial burden for residents, some of whom were forced to leave the community permanently as a result.

Participants in most communities also described poor, and often diminishing, access to medical services. Participants from Prince Rupert to Corner Brook reported having to travel to larger communities for even basic, primary care, while one participant in Happy Valley-Goose Bay shared how they were "so sick" of people asking who their doctor is, as they, like so many community members, could not maintain one ("no one stays. They're here for a year and then they leave"). Many session attendees felt that existing local healthcare services are quickly being eroded by communities' inability to attract and retain medical professionals, something in which infrastructure deficiencies were felt to play a large role: housing shortages, high cost of living, and the difficulty and expense involved in travelling to and from many remote and rural communities make it difficult to entice new residents. Professionals, such as doctors, nurses, and teachers, who leave to pursue other opportunities are hard to attract back to northern communities, increasing the deficit in healthcare services and resources.

Attendees also recounted their perception of deliberate and increased centralization of medical services by provincial governments, concentrating even basic services in regional centres like Terrace, BC and cities like St. John's; poor transportation infrastructure between communities can make accessing these services challenging. For more remote communities, air travel might be the only way to access medical care of any kind, which can be expensive and leave patients in difficult circumstances without access to their support network. While patients may be flown out at the expense of the public healthcare system, depending on the seriousness of their needs, family members are not. A session attendee in Happy Valley-Goose Bay shared that their grandchild had been born seven weeks early and that, while the child was flown to St. John's for treatment, his parents had to organize and pay for their own travel to join him. There is also poor support for out-of-town hospital patients once they're discharged: participants shared anecdotes about patients being left

to find their own way back to their communities after treatment. The lack of healthcare resources extended to an absence, or insufficiency of, mental health and addiction services.

Educational resources were frequently described as deficient, particularly opportunities for post-secondary education. Limited local opportunities paired with limited access to online learning platforms due to poor internet connectivity means that community members either have to forgo post-secondary training or education, reducing their economic opportunities, or must leave their communities, families, and social support systems. Due to reduced employment opportunities back home, many young people who leave to pursue their education elsewhere never return to their home communities, undermining the local labour force and resulting in a diminishing pool of skilled labour needed to support local development. One participant in High Level thought that expanded educational options in the community would give young residents "a reason...to be educated, to be engaged in the work force, and to stay home".

Overall, participants described large gaps in both transportation and communications infrastructure; issues with housing, cost of living, and service access were described as being both a result and consequence of these deficits. Unreliable or absent travel infrastructure was described as a barrier to attracting new business and investment and as a limiting factor on local and regional economic opportunities. Transportation issues were also described as a problem for attracting and retaining new residents and limiting the capacity of existing residents to access and maintain employment. One participant in High Level described many of their region's potential assets, including its residents, as "stranded resources" trapped by poor infrastructure. In Alberta and Ontario, participants felt that better connective infrastructure would be necessary to maintain the viability of smaller rural and remote communities.

Participants largely attributed current infrastructure issues to a severe lack of financial resources and government indifference. Many stated that the nature of infrastructure funding, particularly from the federal government, is competitive, pitting smaller communities against cities in a zero-sum game in which rural communities and regions lose out due to their low population densities and the perceived lower priority given to rural regions by governments and policymakers. This sentiment is illustrated by an anecdote from Thompson where a participant described meeting with the provincial minister of infrastructure. During this meeting, the need for improvements such as rest stops to the region's major artery, Highway 6, was brushed off as being a matter for the private sector rather than government. Given the dependence of so many northern Manitoba residents on the highway, this was seen as a dismissal of the region's safety needs and efforts to attract business and tourism to northern communities.

2. CHALLENGES AND BARRIERS FACED BY NORTHERN COMMUNITIES

In addition to identifying current infrastructure gaps in their communities and regions, participants discussed several barriers and challenges affecting maintenance and integrity of existing infrastructure as well as any future potential corridor or infrastructure development. Challenges are the issues and problems currently or persistently facing a community while barriers are factors inhibiting or undermining a community's ability

to address their stated challenges. In this section, we discuss geographical challenges, including remoteness and the cost of infrastructure maintenance in northern climates; and demographic and human resource challenges, such as the lack of skilled local labour. We also detail issues of northern alienation raised by participants, including discussions of social and political marginalization, the exploitation of northern resources, and southern policymakers' poor understanding of northern needs. The section finishes with participant perspectives on government as a barrier to desired northern development.

Geographical challenges

Participants often pointed to geography when discussing challenges to infrastructure maintenance, expansion, and development. Long distances between communities, and between communities and major urban centres, make travel and transportation expensive for vehicle owners and businesses. Residents without access to private vehicles are often left with no options, limiting their ability to access services or travel safely. Small populations spread over large regions offer poor potential returns on investment for the private sector, and geographic isolation can make northern communities a hard sell to new residents.

Participants outlined the elevated cost of building and maintaining infrastructure, from roads to housing, in northern regions; one High Level attendee working in municipal development estimated that northern municipalities must allocate 30 to 40 percent more funds to equivalent infrastructure compared to their southern counterparts. This is due to the cost of importing building materials, alongside the sometimes extreme seasonal and diurnal freeze-thaw cycles that can result in significant wear on materials like concrete and asphalt. As we describe in the preceding section, building materials designed for long-term wear in southern Canada can wear out in the North in only a few years, increasing the cost of building maintenance.

A shortage of local expertise and labour means that communities often must import southern contractors and workers to execute new projects; these transient workers may not have a good understanding of the demands of building in a northern setting. For example, participants in Churchill used the newly constructed Marine Observatory²⁰ as a clear illustration of this issue. The observatory building was built close to the shore of Hudson Bay; this is an exposed site where the building is subject to particularly harsh conditions. The new road leading to the observatory was built in a location, and in such a way, that it easily accumulates snow drifts; the building's pipes run under the Churchill River and remain frozen until late spring. As a result, proposed scientific research contracts have been turned down due to the observatory building being unusable. Southern contractors may also not account for the demands of a northern climate on their own equipment, resulting in cold-dead batteries, cold-thickened oil, and plastic parts made brittle and breakable by the cold. Any inevitable equipment failure means waiting for parts and expertise to arrive from the south.

Local and regional geography can also determine how, whether, and in what direction development is possible. Increasingly unstable permafrost is already undermining connective infrastructure and structures in the Arctic with implications for future

The Churchill Marine Observatory was established by the University of Manitoba to support and facilitate researcher access to Artic and marine ecosystems, including Canada's only Arctic deep-water port (University of Manitoba 2023).

development. One participant in Kugluktuk shared that train infrastructure could be an ideal alternative to road development in the territory but conceded that much of the land might be already too unstable for that to be a viable option. In Yukon, participants pointed to places in the territory where roads are being converted back to gravel (from being paved), as this is easier to maintain when the ground becomes unstable. In more remote communities, such as Tuktoyaktuk and Churchill, waste management is complicated by both frozen soil and the cost of exporting waste out of the communities over long distances.

Demographic and human resources challenges

One of the most common challenges facing communities we spoke with was that of attracting and retaining new residents and workers. Attracting new community members from southern regions to northern communities is challenging given the relatively high cost of living (particularly in more remote regions) and the comparative lack of amenities such as high-speed internet. A lack of job opportunities also discourages southern migrants and may impact the ability of a household to stay in a northern community long term: people may be reluctant to move to, or stay in, a community if their spouse is unable to find employment, even if they themselves are gainfully employed. Residents may also leave to pursue educational or employment opportunities and decline, or be unable, to return.

A participant in Timmins shared that the inability to attract or retain the "right" people can mean either hiring the "wrong" people, i.e., those underqualified for the job, or leaving jobs vacant for long periods. This was seen as a particular issue for the municipal and mining sectors in the region. This lack of local capacity is paralleled by a corresponding deficit in community members able to take on other necessary roles in the community, such as unpaid work with non-profits and charity organizations. Existing residents end up taking on "five different hats," performing multiple formal and informal jobs in the absence of sufficient human capital, which can lead to burn-out amongst the community's most active and capable members.

There is also the issue of transient workers. Where local capacity or expertise is unavailable, communities may have to import professionals and workers from elsewhere. However, participants felt that such people rarely stayed in the community long term and so did not contribute to local capacity-building. This was particularly an issue in natural resource communities, where resource projects typically bring in large numbers of temporary workers to supplement local labour during development and construction phases. While these projects can bring significant amounts of money into a region's communities, some participants felt that they could also negatively affect longer-term development by monopolizing local resources and labour and increasing crime rates.

Northern exclusion and alienation

Across the communities we spoke with, participants consistently expressed feelings of being ignored, marginalized, and misunderstood by southern Canada and by decision-makers largely based in southern Canadian cities. Participants discussed numerous challenges relating specifically to these perceived defects in the relationship between north and south.

Poor understanding of northern needs

Many participants felt that neither the federal government nor their respective provincial governments²¹ have a good understanding of the needs and priorities of northern communities or an appreciation of the unique challenges of living in the north. They ascribed this to a generally poor understanding of northern life on the part of the southern Canadians, whom they see as dominating governing bodies. Aspects of living in northern regions that participants felt are poorly appreciated by southern residents include their diminished access to goods and services, the high cost of living, the high costs of gas and heating oil, severe winters, the long distance between communities, a lack of educational opportunities, and even a lack of options to leave towns. One participant in High Level described southern residents having "42 ways of getting anywhere," while many northern communities lack even a single year-round, ground-based route out of town. Participants from Quebec to BC to the Northwest Territories felt that "the South doesn't understand the needs of northerners."; a participant in Timmins opined that "southern Ontario probably thinks we all live in igloos." Worse, some felt that southerners are actively hostile to northern interests: one attendee in Fort St. John described how northerners are sometimes dismissed as "a bunch of rednecks voting Conservative," despite northern regions being the source of the resources — including energy — that support southern cities. The result of this is that some participants in the provinces felt that they have more in common with their counterparts in the territories than those in the southern parts of their own provinces.

A limited understanding of northern Canada was attributed to both lack of interest and lack of information; one participant in High Level pointed to the poor quality of data generally available on northern regions, singling out Statistics Canada in particular for its "deplorable" data quality. This has compelled some regions to collect and collate their own data, such as the 2021 State of the Region Report compiled by the Alberta Northwest Species at Risk Committee covering Clear Hills County, the County of Northern Lights and Mackenzie County (Alberta Northwest Species at Risk Committee 2021). Lack of data regarding population density and housing costs were two areas where a lack of highquality data was cited as preventing infrastructure development and investment. Poor data can also undermine northern policy creation, though this was also blamed on a qualitative disconnect between northern Canadians and southern policymakers. For example, in Churchill, participants pointed to federal regulations that require watercraft to maintain a certain distance from beluga whales; however, this was considered to be an unrealistic standard in a place where whales are readily attracted to boats. As one attendee shared, *"as soon as you put your boat in the water, the whales come."* In Happy Valley-Goose Bay, a participant pointed to how they could no longer hunt geese in the spring; they conceded that communities were unlikely to starve without the goose hunt but stressed that it's an important part of local culture.

Ultimately, many participants felt that policies designed by governments based in the southern parts of the country are imposed on northern communities, regardless of whether they're appropriate, and that policymakers are failing to consult with, and listen to, stakeholders and experts who live in the North, instead relying on southern models and assumptions. This results in northerners trying to "fit square pegs in round holes — we have

²¹ Participants in the territories generally spoke more of a disconnect between their regions and the federal government rather than between the southern and northern parts of the territories themselves.

to MacGyver [policy]." A "one glove fits all" approach was described as at best ineffective and at worst damaging. What is needed instead are regulations that are sensitive and appropriate to northern communities' geography and day-to-day reality.

Marginalization of northern interests

Many participants felt that the geographical isolation of their communities was mirrored by an isolation from political and policy decisions made in provincial and territorial capitals largely located in the southern regions of their respective jurisdictions. In Ontario communities, southern Ontario — home to both the provincial and national capitals — was perceived as the provincial seat of power, and it was felt that northern Ontario in general "gets forgotten by both Toronto and Ottawa." Participants felt that their communities' needs go unheeded by the provincial government and that decisions made by Queen's Park²² reflect "what's good for southern Ontario" without consideration for more northern and remote regions. These feelings were echoed in northern Alberta, where participants expressed frustration at the perceived political dominance of Edmonton and Calgary at the expense of other communities: "When [people] hear about Alberta, they think Calgary. But what about us?" In Manitoba, one participant described Winnipeg²³ as "the enemy of the North," and others agreed that the provincial government appears uninterested in either the problems or potential of northern Manitoba. "There's no immediate concern for the North" on the part of politicians and policymakers; for them, "Manitoba only exists at the perimeter of Winnipeg."

Northern needs and priorities were often seen as being dismissed by southern decision-makers. In Whitehorse, one participant pointed out that a recent major Rogers Communications outage in southern Canada²⁴ resulted in a CRTC inquest; in northern communities, outages are routine, but are just dismissed as being part of living in the North. In Tuktoyaktuk, participants described how Sachs Harbour²⁵ missed out on its annual barge delivery of goods, something participants felt was at least in part due to the reliance of the territorial government — responsible for the planning and operation of barge deliveries — on advisors and organizers based in Hay River and Yellowknife rather than those living in the Arctic.²⁶ In Happy Valley-Goose Bay, session attendees shared how they felt that Newfoundland "looks down" on Labrador and doesn't really consider it an equal part of the province. As a result, Labradoreans have "spent years hoping for something from those ignorant people down in the Confederation Building,"²⁷ but continue to have their priorities neglected.

Overall, northern voices, experiences, expertise, and needs were broadly felt to be dismissed or given lower priority than their southern counterparts; one participant in Whitehorse

Queen's Park, Toronto is the seat of the Ontario provincial legislature; the term is often used to refer to the provincial government more generally.

²³ 'Winnipeg' is often used to refer broadly to Manitoba's provincial government and policymakers.

²⁴ In July 2022, a nearly 12-hours internet and cellular outage impacted millions of Rogers customers across the country (Gilfillan 2022).

²⁵ Sachs Harbour is located on Banks Island in the Inuvialuit Settlement Region. The missed delivery required goods to be shipped by air instead at significantly higher cost (Blake 2022; Ulrich 2022).

The Northwest Territories minister of infrastructure, Diane Archie, reassured the community that goods would be flown in at no additional costs and without increasing the prices of the transported goods (CBC News 2022).

²⁷ The Confederation Building in St. John's is the seat of Newfoundland and Labrador's provincial legislature.

described a "southern hegemony" amongst Canada's policy- and decision-makers, who treat northern communities and jurisdictions like "backwaters" to the rest of the country. As a result, the North continues to be left out of conversations about national policy despite "lip service" about northern inclusion. The same participant questioned, "what is it going to take for the rest of Canada to consider the North as part of the conversation?"

Exploitation of northern resources

Many communities, particularly in natural resource regions, described feeling underappreciated by southern Canada for their contributions to the country's economy. In northern BC, an attendee pointed out that the oil produced in the Peace Region²⁸ is a significant contributor to Canada's wealth. Similarly, participants in Sept-Îles felt that their region contributes disproportionately to the provincial and national economies as the second-largest export region in Quebec, and yet only has 0.4 percent of the province's population.²⁹ Despite the dependence of Quebec's metropolitan regions — such as Montreal, Quebec City and Outaouais — on hydroelectricity produced in the North Shore region, participants felt residents in these cities often don't understand, and so don't appreciate, where their power comes from.

This is a common refrain we heard from many participant communities: that the North is seen as a site of wealth and resource extraction for the south, while relatively few benefits accrue to the residents of extractive regions. Participants in Chibougamau felt that southern Canada sees the North as a resource region, where investments may go to things like new dams while roads remain dangerous and difficult to navigate and infrastructure falls into disrepair. In northern Saskatchewan, participants in Île-a-la-Crosse pointed to the region's persistent poverty despite being rich in natural resources; little, if any, of the income from natural resource exploitation, including forestry and mining, has made its way to the region's First Nations and Métis communities. The forestry industry was singled out, with one attendee noting that despite the sector's profitability in northern Saskatchewan, no one attending the community session had seen any benefits from the industry, and industry has made no meaningful investment in the region's communities. Meanwhile, resource harvesting disrupts local trapping, hunting, and other traditional activities. Participants also felt that the lack of profit-sharing, keeping the region resource-rich but economically poor, ensured that the region and its residents remain vulnerable to outsiders looking to exploit northern Saskatchewan's natural resources.

In Happy Valley-Goose Bay's session, participants described a long history of outsiders exploiting Labrador's natural resources. They pointed specifically to the region's hydroelectricity projects, such as Churchill Falls, whose output is largely exported from the region even while many northern Labrador communities remain dependent on diesel generators for electricity. The project has "killed off Grand Falls," ⁵⁰ required the flooding of large tracts of forests and resulted in methylmercury contamination of surrounding waters (Anderson 2011). Mining projects such as that at Voisey's Bay were also discussed for their failure to bring benefits to nearby communities or add any value to the copper and cobalt being extracted from the site. Participants connected the lack of revenue from resource

²⁸ Fort St. John is located in this region in northeastern British Columbia

²⁹ This statement was provided by a participant, and the research team was unable to verify or refute its accuracy due to a lack of readily available intra-provincial trade data.

³⁰ An older name for Churchill Falls and one still favoured by some residents.

extraction being returned to Labrador communities with the region's infrastructure deficits and felt that Labrador's resources are being exploited for the benefit of southern interests — and companies — at the expense of the region's residents. One participant concluded that they were "getting pissed off about the idea that the North exists to serve the South." A participant in Kenora echoed this grievance, sharing that southern Ontario "takes everything out of here and gives nothing back." In Alberta, someone asserted that "the North has been supplying the South with a lot of things," and that it's past time for northern communities to get their fair share of benefits.

Lack of investment in northern communities and regions

Many communities felt that there persists a lack of investment on the part of government in infrastructure for northern regions and communities. Some participants contrasted spending on northern infrastructure with that spent in their provinces' southern regions. For example, in Fort St. John, participants pointed to the quality and quantity of highways on Vancouver Island in comparison to northern BC despite the less-significant economy of the former. In Grande Prairie, attendees described the investment in natural resource development around Edmonton, while the Grande Prairie region, home to large natural gas reserves, does not receive the same level of support. When northern regions do receive investment, it can sometimes be resented by those outside the region: in Sept-Îles, participants shared that the construction of Route 138 along portions of the North Shore resulted in complaints from people elsewhere in Quebec, who felt that the road's price tag was excessive for the number of people it would serve.

When money does go to northern regions, it is often drastically insufficient relative to the need, as southern decision-makers routinely fail to recognize the increased cost of infrastructure construction and maintenance in the North. Participants also pointed to a lack of appreciation for the size of many northern regions and municipalities and the corresponding size of investment needed to effectively connect communities. Attendees saw reluctance on the part of government to invest in their regions, which was having a knock-on effect of undermining potential future infrastructure development or investment by private businesses. After discussing the region's infrastructure deficits and the difficulty of addressing them, one participant in Whitehorse opined that things were in such poor shape that the region was "not even at the level that southern money would look at this place as somewhere to invest."

The role of government in perpetuating and reinforcing identified challenges

Participants identified several ways in which they felt that governments — provincial, territorial, and federal — are standing in the way of local and regional interests and efforts to achieve identified development goals.

Government as an obstacle to development

In many cases, participants saw existing government policies and processes as significant obstacles to desired development, especially when it comes to interjurisdictional collaboration. A participant in High Level shared the following example: the communities of Beaver River First Nation, located approximately 50 km from High Level, received federal funding for a water treatment plant but did not receive corresponding funding to repair or

replace the Nation's water cisterns, which were reducing water quality. Mackenzie County supported the plan that the funds for a water treatment plant be redirected to link the Nation's communities to Mackenzie County's existing distribution system. However, the federal government would only approve funds for the treatment plant. Conversely, the province would provide funding for a distribution system, but only if there was an extended boil-water advisory. These circumstances combined to prevent the County and the First Nation from collaborating on an effective solution to the latter's inability to access potable drinking water.

This participant offered the above example in the context of the current efforts of another First Nation, Tallcree, to receive water services, a process described as being similarly stifled by jurisdictional issues between federal and provincial governments. In one instance, there was a successful collaboration between a municipality and a First Nation, wherein High Level's drinking water infrastructure was expanded to nearby Dene Thá communities. However, this was accomplished through grant money from the United Nations Declaration on the Rights of Indigenous People (UNDRIP) rather than funding from a Canadian government or agency. A similar expansion of sewage infrastructure is now needed, but no programs currently exist that would allow the municipality and the First Nation to jointly fund this project. This participant explained that "we work with our neighbour" but sometimes "government gets in the way."

Whitehorse participants also described interjurisdictional issues, and the specific failure of the federal government to facilitate interjurisdictional collaboration. Whitehorse is currently facing the possibility of losing its current tidewater access in Skagway, Alaska. Yukon has previously relied on this access to export ore; however, Skagway is in the process of decommissioning its port in favour of serving more cruise ship traffic and moving its ore terminal to Haines. Despite discussions between the territorial government and the port to find a solution, none has yet been found. Participants felt that, given the importance of maintaining the territory's tidewater access, federal and state officials should be taking a more active role in discussions rather than "leaving Whitehorse to handle it on its own."

In Labrador, participants described a provincial government that is bureaucratic, slow-moving, and lacking a culture of innovation. All these factors undermine local and regional development goals. Past experiences with development in the province show a repeated failure on the part of the provincial government to start, but not complete, major projects, while still leaving behind significant environmental damage. One participant pointed to the fragmented and siloed nature of government portfolios, which can both inhibit collaboration across jurisdictions and undermine communications between government and communities. In Kenora, participants felt that the municipality's persistent focus on tourism is undercutting local social and economic development. In Thompson, an attendee employed in education described how a great deal of work has gone into expanding educational access in the region and bringing opportunities and resources to the same level as those available further south, but that efforts have been "limited by the dinosaurs in Winnipeg."

In Tuktoyaktuk, participants felt that governments are failing to hold construction companies accountable for local infrastructure projects that run over time and budget. For example, session attendees pointed to a new addition to the local high school which has been in progress since 2018 and is still nowhere near completion; local housing projects were routinely subject to similar delays. While participants criticized contractors for their

lack of reliability, the government was faulted for failing to enforce the timelines of contracted projects. Participants also questioned governments' ability to respond to emergency situations while consistently failing to act proactively to address issues before they become urgent. One person pointed to how quickly the federal government had acted to mobilize funding and resources for Ukraine and Ukrainian refugees and couldn't understand why it seemed necessary to wait for something bad to happen before addressing concerns on home soil.

Representation and funding

Many participants described feeling like they and their communities lack a meaningful voice in both provincial/territorial and federal governments, attributing this to insufficient representation. Small populations were seen as the main reason for this, particularly where those populations are spread over large areas.³¹ Rural and remote communities were seen as having little voting power and as having their interests routinely dismissed in favour of more populated regions. One participant in Thunder Bay described the community as effectively not having a voice in Toronto and that the region's lack of representation in Queen's Park is its "biggest political disadvantage." Participants in Timmins felt that governments are more likely to put money into communities and regions that will help them retain seats, and that having a representative in the ruling party will get a community more attention and access to funds. In Grande Prairie, participants felt that the concentration of votes in Calgary and Edmonton have resulted in a lack of rural voices in provincial policymaking. Elsewhere, session attendees felt like these circumstances are being aggravated by poor relationships between constituents and their representatives: in Tuktoyaktuk, participants complained that the community's MLA had yet to visit or hold a public meeting in Tuktoyaktuk or any other community in the Inuvialuit Settlement Region they represent.

As funding for local and regional development comes principally through provincial and territorial governments, a lack of voice at this level of government, and poor relationships between constituents and representatives, can seriously affect potential development: "they are the ones with the power and authority to find money for different projects . . . they're holding back progress for smaller communities" shared a participant in Tuktoyaktuk. Larger projects may also require federal support. For example, one participant in Sept-Îles, in describing the possibility of linking the North Shore region by road to Labrador, pointed out that the region itself simply does not have the resources or "political clout" to pursue such a large-scale project on its own.

In Grande Prairie, participants agreed that rural and northern municipalities and regions typically lack the financial resources needed to act on behalf of their own interests; without meaningful representation, those interests become neglected. In Tuktoyaktuk, participants felt that, despite communities' best efforts to communicate their needs to government, their voices are still not being heard or respected, and that "whenever we bring [issues] up, we get tossed under the table." Participants in Churchill suggested that small communities, particularly those in remote areas, need someone to help the community navigate and work with different levels of government and to manage government bureaucracy: "We need someone who can help us speak on the same level as the government." This resource would better enable communities to speak on their own behalf and be heard by policymakers and

³¹ For example, Mackenzie County, where High Level is located, is the largest county in Canada at almost 80,000 km².

politicians. When funds are made available, there are often strings attached: an attendee in Whitehorse described the position of the federal government as "our way or the highway," resulting in inefficiencies and misdirected funds.

3. PERSPECTIVES ON INDIGENOUS PRIORITIES, DEVELOPMENT, AND CAPACITY

In this section, we cover issues described as being unique to or disproportionately affecting First Nations, Métis, and Inuit communities. The main issues discussed by participants include racism, the legacies of past development, perspectives on future potential development, and development capacities within and between Indigenous communities.

Both Indigenous and non-Indigenous communities and participants routinely mentioned that all the issues raised during the community sessions — poor connective infrastructure, lack of access to key services, the exploitation of resources without shared benefit, interjurisdictional roadblocks, etc. — are experienced with greater severity by Indigenous communities. For First Nations, Métis, and Inuit communities, lack of access to educational, employment, and healthcare resources was described as particularly acute. As an example, in Thompson and Timmins, participants described how residents of the region's remote First Nations communities migrate to larger centres in search of educational and employment opportunities as well as services such as healthcare. However, even these larger communities are often lacking in the kind of supportive resources needed by these newcomers, who then become more vulnerable to homelessness, violence, and substance abuse. A lack of affordable transportation options can also prevent them from returning to their home communities. Thus, while all residents of these communities suffer from poor access to services, Indigenous Peoples suffer the greatest consequences.

In Timmins, participants also felt that the local police do not always demonstrate a good understanding of the circumstances that can lead to homelessness and substance abuse, and often resort to cookie-cutter approaches that do nothing to address root causes. Participants did not feel that available services and processes to handle local social issues properly consider the community's northern context, which includes a large Indigenous population with unique and unaddressed needs. In several communities, participants also pointed to the specific vulnerability of Indigenous women and girls, including a lack of affordable transportation and housing, and of resource development operations with their associated transient labour and man camps. Participants pointed to racism, the legacies of past development, and a lack of local capacity as issues that disproportionately and negatively affect Indigenous communities and individuals.

Racism

Some participants spoke explicitly about the racism experienced by Indigenous communities and individuals. In discussing the disproportionate burden of social ills borne by the First Nations residents of the community, participants in Timmins attributed this in no small part to issues of systemic racism. Racism was described as an "underlying issue" in Timmins and one that residents were failing to "own" and talk about. One participant described the failure of the settler³² community to engage with issues of racism against

³² This was the term used routinely by participants, and so we also use it to refer to non-Indigenous communities and governments.

Indigenous Peoples and how the same community remained poorly educated about Canada's history of colonialism and trauma faced by Indigenous Peoples, e.g., treatment by the federal government. This participant expressed that both systemic racism and the reluctance to confront it remain a significant barrier to collaboration between settler and Indigenous communities on priorities such as social programs and local infrastructure.

In Kenora, one participant noted that while the municipality focuses on tourism as a key driver of the local economy, little attention is paid to the even more significant economic contribution of the money flowing into Kenora from the 12 First Nations communities in the region. They described how difficult it can be to be a First Nations consumer in Kenora due to persistent racism. They shared that when the Wabaseemoong First Nation north of Kenora was experiencing a COVID-19 outbreak early in the pandemic, members of the Nation were denied service in Kenora, and rumours were spread about members spitting on groceries. Racism in the area remains "rampant," but without First Nations money, "Kenora would be in trouble."

The legacy of development

Communities like Île-a-la-Crosse described how a history of natural resource exploitation in northern Saskatchewan has done little to nothing to enrich the region's Métis and First Nations communities. Previous waves of development in the region have not only failed to benefit Indigenous communities but have actively harmed them. As an example, participants described the loss of language amongst the region's communities, including their own. One participant shared that "Most of us [here] have some capacity to speak, but those younger, they don't have that. Before the road went in, [and] industry came, everyone was fluent. It's cultural genocide." This experience was credited as one of the reasons for the high amount of distrust amongst Indigenous Peoples when it comes to new projects and a feeling that Indigenous communities are considered a barrier for project proponents to overcome: "we're merely in the way of what they're trying to achieve, while the corporate world [decides] what's good for us."

In Thompson, participants discussed instances, both historic and contemporary, wherein settler governments have made promises to, or agreements with, First Nations governments or communities but failed to follow through or act according to either the spirit or the letter of a given agreement. For example, agreements exist recognizing the existence and use of traditional territories in northern Manitoba, but associated obligations have not been fulfilled. A prime instance of this was Article 6 of the 1977 Northern Flood Agreement, created to compensate First Nations in northern Manitoba who lost communities, sacred sites, and hunting, fishing, and trapping territories following the construction of the Churchill River diversion. Article 6 of the agreement guarantees clean drinking water to affected First Nations. Land transfer agreements have been made with government and industry, but foot-dragging by both actors has led to delays, and First Nations communities in Manitoba continue to miss out on development opportunities and economic activity. The flooding required by new hydro projects also displaced First Nations communities. Given this experience, one participant asked, "can you blame us for not trusting the government?"

In Happy Valley-Goose Bay, participants described the lack of power that Indigenous communities often have when faced with unwanted development, citing the proposed expansion of the Baffinland development in Nunavut as an example.³³ Participants spoke of how governments will talk a lot about the importance of consultation with Indigenous Peoples, but that agreements always seem to come out in the government's favour. One participant at this session described how a local women's centre had warned of the potential negative social consequences of the Muskrat Falls³⁴ project and how their warnings had proved prescient. They then questioned why other communities, particularly those on Labrador's remote north coast, would want to open themselves up to the potential negative consequences of corridor development. In Kenora, participants shared another contemporary example of how Indigenous communities are left out of decisions about development and land use. CP Rail returned a piece of land to a partnership of First Nations and the City of Kenora. The city still holds this land — Tunnel Island — in trust due to a lack of agreement on a shared vision, leaving it in developmental limbo (University of Manitoba Natural Resources Institute n.d.). However, when it was suggested that the land just be completely given back to First Nations, "that didn't go over well," with people questioning what First Nations would then do with the land and opining that they "didn't want it to go to waste."

In Timmins, session attendees expressed concern about potential incursion on traditional Indigenous territories and the involvement of Indigenous communities in potential corridor development. Participants described a poor local understanding of the meaning of treaties or the significance of being treaty people with a corresponding exclusion of Indigenous Peoples from discussions about development. One participant framed it as: "[Indigenous] people are often not invited to the table. If they are, they're not heard. If they're heard, they're not in a place of influence."

Attitudes towards future development

Given the legacies of past development on Indigenous communities, questions regarding future development were approached with wariness by some participants. Given this experience, and the Canadian Northern Corridor Research Program's affiliation with the University of Calgary, ³⁵ one participant in Kenora expressed concern that corridor development could just be another way of putting in more pipelines and expanding resource extraction operations. They noted that while a corridor might make sense from a geographical perspective, its development risked taking the historic approach of large infrastructure projects which have treated the land they're built on as "empty land — no one lives there," resulting in the displacement of communities.

Baffinland Iron Mines proposed an expansion of its operations in Mary River, Nunavut. The expansion was heavily opposed by residents, and it was not given permission to proceed by the Nunavut Impact Review Board.

³⁴ Muskrat Falls is a hydroelectricity installation on the Lower Churchill River. The project has been highly criticized for poor oversight and insufficient testing of the economic assumptions used to justify its construction (LeBlanc 2020).

Many participants strongly associated the University of Calgary with the oil and gas sector, resulting in a routine assumption that the research team would be biased in favour of the fossil fuel industry.

In Thompson, several participants expressed that local Nations may be interested in certain developments "as long as our people are taken care of," and that development is pursued while keeping in mind that "Mother Earth is dying." One participant described their Nation as being "open for business," so long as their processes are respected, and the Nation and its members benefit from any development. However, within the same session, other participants remained distrustful of any potential development led by non-Indigenous governments or other outsiders, pointing out that First Nations have always gotten the "shit end of the stick" when it comes to development and dealing with settler governments.

Participants in Île-a-la-Crosse were similarly leery of any development plans brought in by outsiders and felt that corridor development seemed like just another potential project that would leave communities out of key discussions. They agreed that discussions about, and research into, economic development need to take place, particularly given the quantity of untapped natural wealth in northern Saskatchewan. Many participants clarified that there is interest in development in the region, but that development must take place on the terms of the region's communities and prioritize local interests over those of outsiders. One participant shared that "we're coming out of a colonized context, and now those same people want to bring solutions that are going to harm us even more;" however, "we never get to be part of these discussions we need to be a part of it." A participant described the situation of needing development but being rightly concerned about potential effects as a catch-22: "we want the jobs, we want that better life. But we want to stay intact as a people." Another attendee agreed that they want to see economic development for the benefit of the community's children, but that they also need to see "our language and our culture and our rights respected."

Ultimately, one issue all participating communities agreed upon was that corridor development would not be viable, either from a practical or an ethical perspective, without the participation of Indigenous communities. Most participants endorsed the necessity of Indigenous leadership in any potential corridor or large-scale infrastructure development. This is due to the fact that corridor development would take place on the traditional territories of First Nations, Inuit, and Métis communities, ³⁶ and the potential negative consequences of development that would likely disproportionately affect Indigenous communities.

In High Level, participants were clear that any corridor development would require the participation and buy-in of the region's Indigenous communities, as well as consideration of treaty rights and traditional land-use patterns. They stated that many Indigenous communities in Mackenzie County are working hard to maintain their cultural and linguistic heritages; if corridor development opens the area and new populations move in, particular attention and support would need to be given to cultural and social practices, such as language education in Indigenous communities, to ensure their survival.

In Whitehorse, participants described participation by Yukon First Nations as "absolutely essential" for any potential corridor development. Potential corridor routes would depend heavily on First Nations' land-use plans and claims, though participants noted that involvement in a corridor project would be particularly important for those Nations

³⁶ Some participants specifically referenced treaty territories, unceded territories, etc., while others described all of Canada as occupying ancestral Indigenous lands.

whose land claims have yet to be settled (an opinion echoed in other communities). Some of the potential negative social and economic effects of corridor development could also be mitigated by First Nations ownership of infrastructure, which would allow First Nations to have greater control over the pace of development and to manage projects according to their own communities' capacities. Ultimately, participants agreed that nothing could happen in Yukon without First Nations engagement and project co-development.

Participants in Fort St. John shared the ways in which First Nations and local or regional governments have successfully collaborated on some projects, including a partnership between the City of Fort St. John and Doig River First Nation to create an urban reserve within the city. Indigenous and non-Indigenous governments often still work separately, particularly on large projects such as land-use plans. However, participants felt that if they continue to work together on smaller issues and build trust between communities, then they will eventually be able to tackle bigger issues together. In this context, Indigenous participation in a corridor project is non-negotiable; as one participant said, "I hope that goes without saying nowadays." Participants emphasized that it would be key that Indigenous governments are not treated as additional stakeholders in a corridor project, but as rightsholders and decision-makers on the same level as non-Indigenous governments.

Developmental capacities

Though participants were in agreement about the necessity of First Nations', Métis, and Inuit engagement in a corridor development process, there were also serious concerns regarding the capacity of Indigenous communities to be involved and to advocate on behalf of their own interests. Many Indigenous communities face the same issues when it comes to infrastructure maintenance and development as non-Indigenous communities, often with the added challenges of greater remoteness and, in the case of First Nations, limitations on how reserve lands can be developed. One participant in Timmins described how, for First Nations in particular, the operation of existing infrastructure networks and the potential for expansion are limited by federal government processes and restrictions on development on reserve and Crown lands. For example, winter roads must be planned for up to a year ahead of use, but the federal funding schedule doesn't always align with affected communities' needs and priorities. And for First Nations communities facing a deficit of reserve lands, efforts to access Crown lands are hampered by red tape; processes for infrastructure development on both reserve and Crown lands can take five years or longer.

In Thompson, participants described how the differences between First Nations and Métis relationships with the federal government affect potential development. First Nation reserves are considered Crown land, and so are subject to federal processes and restrictions. In contrast, Métis communities³⁷ operate like municipalities and land can be owned outright, allowing greater freedom to develop community lands and access larger and more diverse funding streams. Participants felt that this difference has contributed to the significant economic discrepancies between First Nations and Métis communities in their region. Participants also acknowledged that First Nations in different provinces and territories may have greater practical authority over their lands than others. Participants

Métis settlements are a form of local government unique to Alberta. There are geographical communities elsewhere that may be predominantly Métis or who identify their communities as Métis communities, but they do not have status outside of their province's municipal governance frameworks.

in Thompson pointed to the Sahtu and Tłicho First Nations in the Northwest Territories as examples of Nations that have been able to stand against unwanted development like dam-building and hydraulic fracturing for oil and natural gas.

Conversely, a participant in Île-a-la-Crosse noted that there are discrepancies between how First Nations and Métis are able to make their voices heard. They felt that First Nations hold a greater amount of leverage when it comes to negotiating with the federal government due to their treaty rights, and that Métis communities "should have the same negotiating power as anyone else in Saskatchewan." They argued Métis need to receive greater recognition and be major players in future development. Another participant added that many Indigenous communities, particularly Métis communities such as Île-a-la-Crosse, are still struggling to understand and assert their Section 35 rights.³⁸

Participants in Île-a-la-Crosse spoke extensively about the lack of capacity in the First Nations and Métis communities of northern Saskatchewan. They described a need for community empowerment and to create spaces and capacity for collaboration amongst communities because "Indigenous People [and] citizens of the North have to come together and maximize what we get [out of development]." This will require increased involvement of northern Saskatchewan's Indigenous communities and their residents in political decision-making and in discussions about development in the region. Participants felt that in order to be able to discuss something like corridor development in any meaningful way, the Indigenous communities of northern Saskatchewan first need the resources and opportunity to have conversations amongst themselves about potential development.

However, this capacity — to have communities meet and discuss priorities, concerns, and processes — is currently missing. One participant described how northern Saskatchewan is simultaneously resource-rich and economically poor, making the region vulnerable to outsiders looking to exploit its natural resources, while its communities "don't even have the time to talk amongst ourselves, to come up with our own strategies and solutions to our own issues." Opening the region to further development, which participants worried corridor development would do, will only cause communal harm if communities don't have the resources available to voice their perspectives and priorities.

One participant expressed that to meaningfully engage in the consultation processes that would come with development, and for Indigenous rights-based groups to counterbalance the influence of interest-based groups (such as project proponents), the region's communities need to "get together and get our ducks in a row" before projects proponents arrive and start pushing their own agendas through. They stressed the importance of communities' ability to consult with each other without the interference of outside bodies and interests. These opportunities must be made available to communities "before we can even talk about the feasibility of things like [a corridor]."

The difficulty is that "nobody is willing to sponsor these conversations here." Participants suggested that any further engagement on infrastructure development (including any future discussions about potential corridor development) must include support for community conversations independent of any formal engagement with researchers or consultants. This could also include sponsoring independent experts (i.e., independent of

³⁸ Section 35 of the *Constitution Act (1982)* recognizes and affirms the rights and status of Indigenous Peoples in Canada (Government of Canada 2021a).

any research team, project proponent, etc.) to ensure participating communities have the necessary tools to assert their perspectives and argue for their rights and interests. For example, one participant asserted that communities have to find ways to protect themselves and their interests, which in Western society usually means making legal agreements. As an economically poor region, communities in northern Saskatchewan don't typically have the legal resources needed to defend themselves against powerful outside interests. Without appropriate support, communities and their interests "are going to be displaced by people with better English and better lawyers."

Another attendee suggested that there should be support provided to communities to train their own experts (i.e., through support for education and training), who could then act as communities' lawyers, lead environmental assessments, etc. Someone else described having the opportunity to "develop our own visionary model," which would require developing communities' capacities, and doing so soon: "we don't want to be left behind, developing a model while they're breaking ground in northern Saskatchewan." Similarly, another participant stated, "We know this is coming, so help us get ready and help us protect what's left of our society." These concerns about capacity were echoed in other communities, though not discussed as thoroughly. For example, in Tuktoyaktuk, participants were clear that their community could not and should not have to pursue its social and economic development goals on its own. They noted funding and capacity-building support are needed and necessary for meaningful discussions and collaboration between communities and different levels of government.

Elsewhere, some participants felt that the potential for Indigenous communities to speak and act on their own behalf are being actively undermined. For example, in Thompson participants felt that settler-colonial procedures, such as non-Indigenous governments granting hunting permits on traditional territories without discussion or consultation with First Nations, undermined the Nations' authority and their rights to manage their own land. One participant described the federal government as intent on keeping First Nations as wards of the state despite the latter's interest in independence and self-government. In Happy Valley-Goose Bay, participants described how non-Indigenous governments often seemed to pit Labrador's Indigenous groups³⁹ against each other to undermine potential unity and continue to exploit the land. Attendees felt that pulling the three main groups together to work towards their mutual interests could have an immeasurable impact on the region's future development: "Labrador would be laughing. I just can't imagine what would happen if we could get these groups to agree."

4. INTEREST IN AND CONCERNS ABOUT POTENTIAL CORRIDOR DEVELOPMENT

While many participants described clear potential benefits from corridor development, there was also a great deal of caution and skepticism, often within the same community. Even participants and communities who expressed enthusiasm about the potential for large-scale corridor or infrastructure development shared several important concerns regarding development processes and the management of local and regional impacts. Below we describe participants' positive perspectives emphasizing the potentially beneficial aspects of corridor and infrastructure development; negative perspectives

³⁹ The main Indigenous groups in Labrador are the Inuit, the Innu, and the NunatuKavummiut. The NunatuKavummiut, or Southern Inuit, do not have federal status.

reflecting key concerns and potential issues that may come with large-scale development; and what would need to be addressed for communities to support successful corridor development.

Positive perspectives on corridor development

Environmental

Participants felt that there were aspects of corridor development that would address environmental concerns. Consolidating multiple forms of linear infrastructure into a streamlined footprint could reduce the ecological footprint of infrastructure development and preserve both agricultural lands and wildlife habitats. The potential for restored or expanded rail networks would reduce transportation emissions and have a more modest environmental impact than expanding road networks.

Connectivity

Many participants centered on ideas of connectivity when considering how corridor development might benefit their communities. Improved road and cellular communications infrastructure would make it easier to move about a given region and would also make travel safer for residents, tourists, and commercial traffic. Participants also saw improved connectivity as a way of keeping more residents in their communities and preventing brain-drain. In Thunder Bay, participants suggested that improved internet connectivity and reliable access to affordable air travel could support the growth of the local knowledge economy. Specifically, Thunder Bay's proximity to Toronto by air, combined with the growing popularity of remote work, could allow more residents to live in Thunder Bay while maintaining employment in southern Ontario. Community members in Corner Brook felt that a corridor, or network of corridors, that better connects central Newfoundland and supports development in rural communities would help preserve shrinking communities by increasing access to economic and educational opportunities and thereby retaining more residents, particularly young residents. One participant added that "the quality of life is incredibly attractive in Newfoundland and Labrador . . . but they have to have the right amount of connectivity."

Participants in more remote communities, such as Kugluktuk, raised the potential for improved access to air travel. Specifically, they agreed that more affordable airfare and improved routing would enable easier travel to southern centres for healthcare, employment, education, and other services and opportunities, and would allow for more travel between the territory's communities. Being able to maintain close connections with family and community is of crucial social and cultural importance, particularly for the territory's Inuit residents. Corridor development could support better connections between remote and northern communities in other regions as well, contributing to better regional connectivity.

Improved transportation infrastructure linking rural and remote communities to more populated regions could also encourage more people to visit or even move to those communities. In Sept-Îles, participants felt that if more people had the opportunity to see what the North Shore region has to offer and see what kind of life can be had there —

that "il y a un vie à faire là" — then the region could experience needed population growth. Increased tourist access was discussed in many communities, including Thunder Bay, Kenora, and High Level. In Prince Rupert, participants suggested that the community could, with appropriate support, become a stop for cruise ships. Amongst other things, this could help boost the market for locally caught seafood, which is currently largely exported.

Other communities also discussed the potential for new avenues of economic growth that could come with appropriate corridor and infrastructure development. In High Level, participants recounted Mackenzie County's status as an agricultural area and suggested that improved transportation infrastructure could allow the region to expand domestic and international agricultural exports. They also argued that greater government investment in the region's infrastructure via corridor development could create an incentive for more investment by the private sector. This idea was echoed in Kenora where participants remarked on the likelihood of improved infrastructure encouraging more developers and manufacturers to move into the area, and the reduced costs that could come with more efficient transportation of goods could also foster greater diversification in the local economy by encouraging new businesses to establish themselves in the region.

In Chibougamau, participants described how limited rail infrastructure is holding back the region's mining sector. Improved transportation infrastructure would increase the efficiency and profitability of existing nickel operations and encourage interest in the region's other metals and strategic minerals, creating greater export opportunities. In Hay River, participants noted that better connections to places like Fort McMurray and upgraded rail infrastructure could facilitate more efficient transportation of products like grain and potash to southern Canada, while improved energy infrastructure could connect the Northwest Territories to the continental power grid and bring desired natural gas north from High Level.

In Happy Valley-Goose Bay, one resident suggested that focusing on the development of a corridor for communications infrastructure would be both beneficial to, and popular with, Labradoreans. They asserted the value of supporting and fostering certain media that could take advantage of expanded infrastructure — namely, radio — describing how good media and a strong communications network can be a strong social glue, particularly in a region where the population is spread over such a large area. The participant shared how they used to listen to Kahnawake radio⁴¹ while living in Montreal and how members of Kahnawake First Nation had told them how valuable it was for the community to be able to maintain their own radio station and newspaper. The participant pointed out that, while many people will argue that radio isn't that important now, given what's available via the internet, not everyone has internet access, and illiteracy remains a significant issue in Labrador. More localized communications networks would also support the dissemination of important information, such as impending development projects, and might allow for greater connections between northern communities within and outside of Labrador. Increased connectivity could support regional unity and enable communities to "better stand up to the South and not be overrun by developments we don't want."

^{40 &}quot;There is a life to be made there."

⁴¹ K103.7 is a community radio station owned and operated by the Mohawk community of Kahnawake near Montreal.

Many participants felt that the increased connectivity and new economic opportunities that could accompany corridor development could have the overall effect of improving the quality of life in northern and remote communities. Greater connectivity could lower the cost of living by making the transport of goods easier and more efficient, and a lower cost of living could act as an incentive for retaining existing residents and attracting new ones. Corridor development could support much-needed economic diversification and bring services, including education and healthcare, in the North to parity with those available in the south. More transportation options, including passenger rail, could reduce car dependency and facilitate travel between communities, supporting important social and cultural linkages and making it easier for community members who leave to stay in contact with family and community support systems.

Resiliency and security

The idea of corridor development as a potential factor in building local and regional resiliency in the North was a common topic of discussion, with a specific focus on agriculture and food security. As we describe above, communities such as High Level noted their regions' existing agricultural capacities and suggested that corridor development could enhance these, allowing them to play a greater role in "feeding the North." The re-establishment of previously existing transportation infrastructure, such as the railway in Newfoundland, could reinvigorate flagging agricultural sectors. Some places, like Labrador, were described as having great but untapped agricultural potential. New transportation networks, and enhanced redundancy in existing ones, would support food security by ensuring the integrity of supply chains. For example, in Corner Brook, participants described the island supply-chain's reliance on a single major port in St. John's. That port was described as having minimal capacity for expansion due to spatial constraints; to keep Newfoundland an attractive and viable place to live, a greater network of ports — for example, in Corner Brook, Marystown, Argentia and Long Harbour — will be needed.

Elsewhere, participants suggested that corridor development could foster economic diversification, allowing many communities and regions to reduce their dependency on extractive resource cycles and stabilize local economies. At the same time, where natural resource extraction remains desirable or necessary, corridor development could help build greater security and resiliency into transportation routes. In Thunder Bay, one participant gave the example of Enbridge's Line 5, which currently transports large volumes of crude oil and natural gas liquids from Western to Eastern Canada. However, the line runs through the US,⁴² raising concerns about energy security and the potential for the US to close the line. To illustrate this danger, the participant described recent issues regarding the section of pipeline that runs under the Straits of Mackinac.⁴³ A pipeline through northwestern Ontario would help address these concerns.

Corridor development was also described as potentially fostering security in both an international and more local context. In Grande Prairie, participants saw value in corridor development as part of the large-scale, strategic infrastructure needed by the country to stay internationally competitive. In Kugluktuk, participants felt that it would be to

⁴² Enbridge's system exits Canada in southern Manitoba, where Line 5 then runs through Minnesota, Wisconsin, and Michigan before reconnecting with facilities in Sarnia, Ontario.

⁴³ As of early 2023, the state of Michigan was engaged in a lawsuit with Enbridge to have Line 5 closed due to safety concerns regarding the aging pipeline.

the benefit of the whole country to be concerned with northern infrastructure development given the recent focus on the strategic value of the Canadian Arctic: "the Arctic is a strategic place, and you can't have a strategic place without some level of infrastructure."

Participants in High Level described a different sort of security that could result from corridor development. They described how a national corridor vision would support the creation of a coherent regional development strategy; give residents the security of knowing what kind of development could happen and what wouldn't be permitted; and consolidate the ecological footprint of infrastructure development, protecting the natural spaces that participants found such an appealing part of living in the North. They also described the appeal of planning for "multiple generations."

Negative perspectives on corridor development

Environmental

Environmental concerns were common amongst the communities we spoke with. Many participants were worried about how corridor and infrastructure development would affect wildlife and wildlife habitat. The potential effects on caribou migration and calving grounds were specifically noted in Alberta, Nunavut, the Northwest Territories, and Ontario. Participants in Whitehorse described how the lack of active rail lines has limited the expansion of forestry operations in the territory to the benefit of the region's caribou populations; corridor development that revives the use of Yukon's railways could foster growth in the forestry sector and undermine the health of caribou herds. In Churchill, participants outlined the potential effect of port expansion on area whale populations. In Grande Prairie, attendees discussed how a corridor could provide an advantage to predators, negatively affecting prey species. A participant in Tuktoyaktuk gave the example of increased caribou harvesting seen along the territory's ice roads and wondered what the effect of more all-season roads could be.

In Thompson, one participant described how their community⁴⁴ already has a recurring problem with southern hunters flying north to harvest "massive" numbers of caribou on the community's traditional territories. Unlike the community, these hunters are not using the caribou as a food source, resulting in great waste, and amounting to what the participant described as theft of both a local food source and a cultural resource for First Nations communities in the region. A further concern is the potential effect of corridor development on the ability of northern residents to access country foods. Multiple communities shared how important hunting, trapping, foraging, and fishing are for meeting the nutritional needs of their members. As a participant in Churchill described, a visit to the local grocery store to see the cost of fresh food makes it clear why so many residents still rely on the land to feed their households. In addition, for Indigenous communities, access to traditional lands and the ability to access the plants and animals thereon has a critical cultural and social dimension that many worried would be threatened by corridor development.

Some participants also worried that corridor development would lead to the expansion of oil and gas infrastructure to the detriment of the environment; one participant in Churchill felt that the oil and gas industry would "love to grab on" to corridor development for its

⁴⁴ This participant was from a remote community in northern Manitoba and had travelled to attend the session in Thompson.

own interests. Participants worried about the increased risk of oil spills and gas leaks that expanded infrastructure in remote and northern regions would bring. There was also concern about the potential for marine spills should oil be channelled through renewed port facilities. Another major concern was that corridor development would be focused on, or even encourage, increased natural resource extraction, exacerbating climate change and its accompanying destructive consequences. In Newfoundland, a region with a long history of mining operations, participants worried about impacts such as the deforestation that came with quarry development; one participant asked, "how much more of the natural environment [will] be destroyed because of projects like this?"

Finally, a participant in Kenora raised several practical environmental issues that could come with corridor development, including the potential for expanded transportation infrastructure encouraging more diffuse development. This could present an increased risk to life and property in regions vulnerable to wildfire. Moreover, low-density development would increase the existing challenges of service delivery, which the participant had already described as strained in their region. Expanding rail services in remote areas could itself increase the risk of wildfires where sparks from passing trains ignite nearby brush. Conversely, the herbicides used to keep tracks clear of brush come with their own set of problems, including environmental contamination and risks to human health. One attendee in High Level described a need for a "balanced working landscape" that balances development opportunities with strong environmental protections.

Past experiences with development

In many communities, past experiences with large-scale infrastructure development made them wary of the prospect of corridor development. In several cases, communities had not seen the benefits of development promised by project proponents, developers, and operators. Specific examples participants gave were jobs and investment in local communities. In Happy Valley-Goose Bay, participants noted that mining projects such as Voisey's Bay haven't resulted in significant employment gains for Labradoreans. In northern Manitoba, communities' experience with Manitoba Hydro⁴⁵ made some participants leery of large-scale development. In Île-a-la-Crosse, attendees reported seeing little benefit from the large forestry and mining operations in their region. For example, when new mines were opened in the 1980s, the project proponents promised a certain number of local jobs. These initial jobs did materialize, but when substance abuse among workers⁴⁶ led to job losses, outsiders were brought in to support mine operations. Moreover, the legacy of addiction persists in the region, while communities lack resources such as treatment facilities to address it.

Participants in the Île-a-la-Crosse described a history of broken promises from industry in the region. Examples include investment in local communities that never meaningfully materialized, and Impact Benefit Agreements benefitting industry more than communities:

⁴⁵ The Manitoba Hydro Churchill River Diversion involved flooding large swathes of northern Manitoba, resulting in loss of access to traditional territories and displacement of communities.

The link between commercial resource extraction and its negative effects on the well-being of Indigenous communities has been investigated extensively across Canada (Booth and Skelton 2011; Brisbois et al. 2019; Mitchell 2019; Nightingale et al. 2017). Continuous settler-colonial practices that undermine traditional Indigenous cultures, languages, and practices, coupled with natural resource extraction, which contributes to rapid social and environmental changes, place communities and their well-being at an increased risk due to the influx and abuse of legal and illegal substances.

"They're like pimps, and anything that goes back to the community is based on crumbs from the profit." One attendee connected these broken promises with researcher questions during the engagement session about community needs, describing them as the same kind of questions they'd heard before from resource projects: "What do you want — education, jobs, roads? Every industry has come in and said these things and not delivered."

Many participants were particularly concerned that corridor development would be primarily oriented towards natural resource exploitation rather than community interests. In Corner Brook, participants noted that mining and mineral extraction have historically driven development in Newfoundland without any long-term strategy for economic, social, or environmental sustainability. In Happy Valley-Goose Bay, attendees were concerned that if corridor development were to focus on the expansion of resource extraction activities, it would fail to address Labrador's pressing social, economic, and environmental priorities. In Tuktoyaktuk, participants acknowledged that development in the region, including the Inuvik-Tuktoyaktuk Highway, was primarily driven by interest in resource extraction rather than concern for community development: "that road wasn't built for us; it was built for our resources."

Communities were often concerned about the changes that could come with the expansion of "Roads to Resources" in their regions. As we discuss above, expanded road networks come with significant negative environmental consequences. In Kugluktuk, participants described known issues that have come with new roads in the North, including the increased harvesting of caribou using ice roads around Yellowknife, road development in the Kivalliq region disrupting caribou movements, and the new social and cultural challenges the all-season road to Inuvik brought. In Tuktoyaktuk, participants shared that while the new highway has brought more tourism dollars to the community, it has yet to foster significant local development and has allowed for an easier flow of drugs and alcohol into the hamlet. Serious social issues, including a high suicide rate, have also persisted, leading participants to feel that the alleged benefits of increased connectivity had not materialized.

In Churchill, where many participants recalled the flooding and resulting community dislocations that have accompanied hydropower development in the province, one attendee described how "we've been bounced around by inconsiderate industrial people." Another was concerned with development, whether of a corridor or specific infrastructure projects, being pushed through regardless of community consent or interest. They felt that, too often when people talk about bringing new things to Churchill, it rarely seems to be something that would be to the community's benefit; large projects are taken up by decision-makers and others in positions of power while the community "just gets crushed." One participant at the same session, who identified themselves as being a relative newcomer, described coming from a region that "never says no" to a mega-project and that has seen serious negative consequences from pursuing "jobs for jobs' sake" without considering long-term social and environmental effects.

⁴⁷ The "Road to Resources" was a program initiated in the 1950s by former Prime Minister John Diefenbaker, framing his vision of a road to the Canadian Arctic (Kent 1982).

Distrust

Previous experiences with infrastructure and natural resource development contributed to many participants' feelings of distrust and wariness towards potential corridor development. As we describe above, some participants questioned whether corridor development would be pursued with the goal of connecting communities or just to access new natural resource areas. Others wondered whether the corridor concept was a meaningful or effective way to address the priorities relevant to their communities and suggested that interest in, or endorsement, of corridor development would likely be politically motivated. One participant pointed to one of the major motivations behind building the railroad in Canada — concerns regarding American expansionism — and wondered if something similar was behind the contemporary corridor concept. In Kenora, an attendee felt that while a corridor might make sense from a geographical perspective, its development could risk repeating the country's historical approach to large infrastructure projects, which have treated the lands they are built across as "empty," resulting in, among other things, violent displacement of communities.

Another Kenora participant asserted that existing corridor projects, such as those in China and Australia, 48 do not present an appealing precedent: "China isn't a good example of what we should be doing [and] in Australia, there's been a lot of protest." They continued, sharing that, "as a First Nations person . . . I'm skeptical and suspicious" of potential corridor development and wondered, "now what treaty right am I going to have to try and defend if this happens?", pointing to the success of local First Nations in protesting the proposed Energy East pipeline project and their experiences with Ontario Power Generation. 49 Ultimately, some participants felt that their feelings and concerns about development didn't really matter. A participant in Thompson expressed that "the government's gonna [sic] do what the government's gonna do," and that projects like corridor development would happen regardless of affected communities' support or lack thereof. In Kenora, an attendee worried that corridor development would open the doors for future projects to circumvent or override local interests.

Social issues

Participants expressed concerns about the negative social effects that corridor development and subsequent infrastructure construction could have on their communities. A key concern was the potential influx of new people, both new residents and transient labour. The increased connectivity that would accompany corridor and large-scale infrastructure development could bring new workers and residents, who could support local and regional development goals, to remote and northern communities. At the same time, participants were concerned that influxes of new residents would exacerbate alreadytight real-estate markets and high home and rental prices, which would risk pushing out existing community members. Population growth, particularly over a relatively short period of time, would also put pressure on already stretched social, educational, and healthcare services; in Grande Prairie, one participant described how "government is already trying desperately to raise service availability." Smaller communities would struggle even more

⁴⁸ The participant did not clarify which project in Australia they were referring to; in the case of China, they were referring to the Belt and Road initiative, which involves international infrastructure investment by the Chinese state.

⁴⁹ First Nations groups in Ontario, alongside environmental NGOs, have criticized Ontario Power Generation's plans to dispose of nuclear waste on First Nations lands (Ontario Clean Air Alliance 2012; CBC News 2018).

to cope with new population growth; even where an increased population means more tax dollars, it takes time for those tax dollars to make their way into government coffers and for government in turn to expand services.

In Île-a-la-Crosse, participants expressed concern over the community being overwhelmed by newcomers following the economic opportunities that would arise with corridor development or other large-scale projects. This was echoed in others' concerns about losing certain highly valued aspects of their communities to rapid population growth. In Timmins, an attendee described the city as close-knit, "where everyone knows each other," and worried about maintaining that closeness with immigration and demographic change. In Grande Prairie, one participant mused that a lot of small communities in the area like themselves the way they are and might not be interested in greater connectivity if it would change that. Participants in Churchill described a place where residents could leave their car keys in the ignition without concern for theft, and one whose remoteness is part of its appeal; greater connectivity could change the "rhythm" of the community and change the local culture, "the things we find so special about Churchill." One attendee shared that the high level of trust between neighbours in the community was exactly why they had chosen to live in Churchill after having grown up in a large Canadian city.

While many communities acknowledged that they likely don't currently have the labour needed to support corridor and large-scale infrastructure development, they were uncomfortable with the idea of transient labour forces. Like new residents, temporary workers would increase pressure on healthcare, housing prices, and law enforcement. Many participants acknowledged the known issues surrounding man camps, including the increased presence and use of alcohol and drugs. They also raised concerns over the increased risk of crime, particularly crimes directed at women and girls and more specifically the dangers to Indigenous women and girls. Transient labour and man camps are issues that communities associated with natural resource operations — mining, forestry, and oil and gas — were particularly aware of, having first-hand knowledge of their effects. Some communities, including Prince Rupert and Kenora, felt that the need for man camps would be a deal-breaker for any future development.

In a related vein, many participants were concerned about the potential issues increased connectivity could bring beyond demographic changes, including easier access to drugs and alcohol; this concern was particularly acute for remote communities already struggling with widespread substance abuse issues. Some participants felt that greater access to previously remote communities would lead to increases in crime in general, and one participant pointed to the potential for increases in drug and human trafficking. In Kenora, participants worried about what increased tourist access would mean for communities already struggling with serious infrastructure deficits. In Prince Rupert, attendees expressed concern about how increased access to wilderness areas would affect local fish and wildlife. Many participants expressed that being able to 'get out in nature' was one of the appeals of living in remote and northern communities, and worried about how corridor and infrastructure development could reduce that access.

In Whitehorse, participants discussed how large-scale development can result in atypically large amounts of money flowing into communities unaccustomed to wealth, with corresponding social effects. Negative social effects were also associated with the end of these periods of increased economic activity when the flow of extra money stops. In this light, participants in Hay River asserted that an expansion of social services and access to healthcare needs to occur in tandem with corridor development, or the development of any major infrastructure. Economic opportunities will not be enough; workers, both new and amongst existing residents, need social support as well.

Other considerations regarding corridor development

Conditions for achieving successful corridor and large-scale infrastructure development

Participants discussed several conditions that they felt would have to be met in order to maximize the potential success of corridor development. Most communities agreed that a project of this scale would require a great deal of leadership by the federal government and buy-in from provincial and territorial governments; some participants were particularly skeptical about the possibility of the latter. Federal leadership would be particularly important in creating a shared, long-term strategy for corridor and infrastructure development to ensure, amongst other things, that routine changes to government do not derail development. This is because corridor development will require a long timeline and sustained support to be successful. Federal leadership will also be key to bringing together the varied interests of different stake- and rights-holders. As participants in Chibougamau noted, each new project has its own needs and priorities, and proponents will support infrastructure that specifically aligns with their particular needs, resulting in disconnected infrastructure planning and development. What this means is that corridor development cannot depend on private initiative or investment and must be led by government.

It will also require widespread acceptance and recognition that potential benefits will accrue to the whole country, not just the North. The "buy-in" of southern Canadians and "southern taxpayers" will be crucial; this could involve framing corridor development as something like a "nation-building concept" addressing the interests of all Canadians and being pursued in "the name of the common good." Establishing a comprehensive, integrated, and national vision prior to execution would increase the kind of credibility required to complete such a large-scale project. In Chibougamau, participants felt that a key part of promoting corridor development would involve conducting extensive feasibility studies to measure and quantify the potential economic importance and impact of corridors. One attendee noted the need to demonstrate feasibility and to discuss and analyze foregone economic opportunities due to the lack of something like a corridor in a given region. They asserted that where feasibility has been demonstrated, and a strong economic argument for a corridor has been made, people will come around.

Participants also emphasized the role of the federal government in reducing the existing regulatory burden, which they saw as undermining both potential infrastructure projects and the kind of interjurisdictional collaboration that would be needed to execute such a large-scale vision. While it was agreed that regulation is generally a good thing and ensures the protection of both people and the environment, participants in Fort St. John argued that regulatory redundancy, such as having to go through parallel processes with different

levels of government, can deter investment and hinder economic development. Despite Canada's wealth of resources and stable political climate, investors may still choose to take their money elsewhere if regulatory processes are less onerous: "our advantages [are being] lost to redundancy." Participants expressed that supportive regulation would be key to accomplishing a large, multi-jurisdictional project like a corridor, namely a regulatory framework that everyone concerned can understand and work with. Moreover, determining a set of common regulations for corridors would provide infrastructure developers with a clear path with minimal interjurisdictional hassles. Participants felt that planning from the outset what a corridor will look like physically is less important than building out appropriate and effective theory and regulation.

Some communities pointed to specific approaches that should be employed in corridor development to ensure that the outcomes are sustainable and equitable. In Île-a-la-Crosse, participants asserted that the only way to safeguard communities' interests in corridor and infrastructure development is to pursue development from a rights-based approach that's driven by northern people, for the benefit of northern people. The kind of social licence⁵⁰ needed for future large-scale development will require finding a balance between the economy and the environment (a sentiment echoed in other communities) and "it's northern people who really have to give that social licence."

In the same session in Île-a-la-Crosse, attendees also felt that the potential for significant environmental impacts from corridor development (and any resulting infrastructure and resource development) will require higher environmental standards than currently exist. Communities should be able to set their own environmental standards, as those currently set by the federal and provincial governments are "too lax." In Happy Valley-Goose Bay, participants were also concerned with environmental oversight, pointing to the current difficulty with getting cumulative environmental effects reports for smaller projects, let alone something on the scale of a corridor. In Thompson, several participants stated that so far as potential development in the region goes, even new mining developments could be acceptable to residents so long as they're done in a safe and environmentally sound manner. This would require "hawks" responsible for closely monitoring mining operations, and strong regulations to back them up.

Several communities also discussed the need to address potential corridor development, and infrastructure development more broadly, from the perspective of regional interests and needs. In some communities, there was a strong regional identity that did not always align with existing jurisdictional borders and policies. For example, participants in Kenora, which is in the northwest corner of Ontario, described their community as having a stronger cultural and economic relationship with Manitoba than with its own province. This relationship was brought into sharp focus early in the COVID-19 pandemic, when provincial border closures prevented Manitobans from travelling to their cottages while residents of Kenora couldn't travel to Winnipeg (the closest urban centre) to access goods and services. Local residents also used to be able to travel to Manitoba for certain medical services, but are now forced to go to Thunder Bay, a 5.5-hour drive compared to two hours to Winnipeg. Participants in other communities in the northern parts of the provinces expressed that they identified more strongly with other northern communities than with more southern

[&]quot;The term 'social licence to operate' (SLO) developed out of recognition by mining companies of the ongoing risks of operating without approval from the local community or key stakeholders" (Collins and Kumral 2021).

communities in their own provinces. Participants felt that this shows the importance of understanding regional, rather than provincial, perspectives when it comes to policy and development.

In other communities, participants were interested in the idea of regionalism but felt that poor connective infrastructure is undermining its potential. For example, in Corner Brook participants shared that regional decision-making would be crucial for ensuring that Newfoundlanders benefit from future development, but that this approach is currently difficult as the island's towns tend to think of themselves as discrete entities rather than as part of a larger region. Better connectivity could foster stronger regional identities: "When people see themselves as connected . . . then decentralization happens." Corner Brook participants advocated for a regional approach to development, asserting that eastern Quebec, Labrador, and Newfoundland should be treated as a unit when considering connective infrastructure, given the ways that development in one province or region affects residents in bordering regions. Participants in Sept-Îles agreed that the lack of a continuous connection between Quebec's North Shore and Labrador is undermining the potential for regional collaboration. In Churchill, participants described the region's past experiences with development to emphasize the necessity of regional collaboration and leadership to ensure equitable future development.

The necessity, feasibility, and potential weaknesses of corridor development

Some communities and participants who expressed favour for corridor development also shared concerns regarding its necessity and viability. Some discussions centered around the wisdom of developing new corridors rather than improving existing infrastructure and adapting existing corridors. For example, in Thunder Bay, participants noted that there already is an east-west corridor in the region containing road, rail, and power lines, and that expanding or adapting this existing right of way would minimize the environmental impacts that would come with new construction. Moreover, participants expressed that adding new linear infrastructure when existing roads and rail are already undermaintained and have significant quality issues was a poor economic investment. In Churchill, participants similarly argued that the existing corridor — the rail line — needs investment and attention. In Whitehorse, a participant felt that while consolidating infrastructure into a multimodal corridor might be a good idea from an environmental perspective, it wouldn't address the current issue of a lack of redundancy, which might be better addressed by multiple routes.

Other participants wondered if multi-modal corridors might be something of an outdated concept: a Churchill attendee asked how necessary it really is to build new networks of powerlines or fibreoptic networks when there is potential in the not-too-distant future for small-scale nuclear reactors and satellite internet is already gaining ground. Local and regional energy microgrids were also discussed as an alternative to connecting remote regions and communities to larger energy networks. In Whitehorse, a participant suggested that rather than expanding existing land-based transportation routes, government should perhaps look at innovative alternatives like airships instead. In Happy Valley-Goose Bay, monorails were suggested as a potential alternative to road and rail where difficult or unstable terrain makes developing the latter challenging.

There were also questions regarding the feasibility of corridor development, particularly regarding geographical and financial challenges. In Kenora, participants questioned the feasibility of a corridor project that would require the support of so many different Indigenous groups, using as an example the decades-long process that was required to twin the Trans-Canada highway through the Kenora region. Though underway as of 2022, the development process took 20 years to complete.⁵¹

In Timmins, participants discussed how the effects of climate change are already being seen on existing connective infrastructure (e.g., the effects of increased flooding and wildfire damage and permafrost melting), with implications for both maintenance and expansion, leaving many communities struggling to keep up with the costs of repair. One participant at that session raised a related point that "there's an implied economic assumption tied to [corridor development]"; namely, that of "business as usual." With climate change, energy transitions, and the potential for more decentralized infrastructure (like regional energy grids), how would corridor development align with so many "moving pieces"? In Whitehorse, one participant noted there are already places in Yukon where paved roads are being replaced with gravel, as the latter is easier to maintain as the ground becomes unstable due to permafrost loss. Given the expected increase in disruptive events because of climate change, attendees in High Level felt that co-locating key infrastructure in a shared footprint could make it more vulnerable to events like wildfire.

Participants also expressed concern regarding the size of a national corridor project, both in terms of scale and cost. In several communities, participants felt that the scale of the concept would make it easy for community-level priorities to be subsumed by a national-level strategy. In Churchill, there was seen to be a risk of neglecting the "microscale" and failing to consider the potential effects of corridor development on individual communities. In Kenora, participants suggested that any potential corridor strategy needed to be "regionalized" to allow communities and regions the capacity and leeway to address their most relevant concerns. A related concern was the potential cost of a national corridor project; some participants pointed to Canada's small population relative to its area, suggesting that the potential financial burden of such a large project would make it infeasible. As we discuss above, participants pointed out that the cost of building anything in northern Canada is high compared to the country's south — even gravel roads can cost millions of dollars — correspondingly making it hard to justify the cost of a national corridor network.

In Whitehorse, participants described how social licence for large projects in the region has historically been based on natural resource extraction. However, with issues like climate change and national security coming more to the fore, these, along with social prerogatives, will be what drives or inhibits large-scale development. They agreed that there are potential social benefits to a corridor as well as the possibility of reducing the negative environmental effects of infrastructure development, but worried that there is not a clear economic argument for corridor development. New infrastructure in the North is often built for the purpose of resource exploitation — particularly mining — and it is the expected profit generated by accessing new resources that justifies, and pays for, the new infrastructure. This means that unless natural resource development is an integral part of a corridor strategy, there likely isn't a strong economic argument to be made for such

⁵¹ The participant drily noted that, given this timeline for potential corridor development, "so maybe in 20 years, I'll be standing here with my protest sign!"

a project. On the other hand, some communities, like Happy Valley-Goose Bay, felt that premising corridor development on resource exploitation would be a dead end so far as social licence is concerned. In Kugluktuk, one participant described a corridor whose primary purpose is natural resource development as "a bit backward," and that a focus on resources was short-sighted, when economic diversification should be the long-term goal.

However, several participants pointed to the potential social or moral imperative that could drive a corridor project. In High Level, participants conceded that there is likely a poor "business case" to be made for corridor development and that the "economics don't play out," as is often the case for development in northern regions with small populations and low return on investment. Instead, the "social economics" would have to "take the front seat,", acknowledging that the benefits of attracting and keeping residents and businesses by offering a quality of life and access to services comparable to southern Canada would outweigh strictly monetary returns.

Participants in Grande Prairie agreed that, in the short-term, more than strictly economic factors need to be considered and "the economics will come afterwards." For example, bringing northern internet access up to par with southern norms would allow northern residents access to the same online educational and employment opportunities as southerners, an area in which they are currently disadvantaged. Participants argued that a long-term perspective will be important when considering the potential pay-off of corridor development, which might have to take a "build it and they will come" approach: having a framework developed in advance of infrastructure development could help speed up the construction of actual projects, while building out key connective infrastructure will encourage development in currently un- and underdeveloped areas. One person gave the example of building new energy infrastructure in the Northwest Territories, ⁵² describing how it won't be paid off for many decades but addresses an immediate need and is part of a longer-term vision for the region. They added that if corridor development were to be driven by, and pursued in the name of, a social imperative rather than a strictly economic argument, strong leadership by the federal government would be particularly crucial.

There were concerns about the idea of setting aside land for a corridor; one participant in Kenora asked how a blanket approval for infrastructure development could be granted and how land could be set aside without a clear idea of what it would be used for. Another attendee at that session noted that priorities change, and wondered what would happen when conflicting priorities or opportunities arose in the future. This was echoed elsewhere, with participants in Sept-Îles discussing the complicated and competing demands involved with potential corridor development, including in their region protection of the river and the surrounding environment, equitable economic development, and the protection of Indigenous lands and rights.

Finally, many participants acknowledged that different communities have different infrastructural needs and will be interested in different levels of connectivity. For example, in Kugluktuk, session participants were divided regarding the need for greater road connectivity in their region given the potential effects on wildlife, but all agreed that more reliable and affordable high-speed internet is needed. Similarly, in Thompson, one attendee suggested that "it would be ideal to have roads to all out communities in the North";

⁵² The participant did not specify the project they were referring to.

another countered, asking "do those communities want those roads?" In Happy Valley-Goose Bay, a participant stated that better connectivity will look different for different communities; some places may not want to be connected by road or rail but do need better access to services. And in Whitehorse, Hay River, and High Level, participants felt that some communities value their smallness and remoteness and may not want corridor development to occur in their areas. Participants in Timmins described a potential reluctance on the part of some residents in their own community to accept the kind of significant changes that corridor development could bring.

Conversely, some communities were explicitly interested in the prospect of corridor development and the opportunities it could bring. In Grande Prairie, participants were eager to be involved in potential developments, pointing to the decline Peace River⁵³ has experienced by being closed to new business, resulting in those businesses choosing to settle in Grande Prairie and Fort St. John instead. There was also great interest in Fort St. John, where one participant expressed that "there shouldn't be anyone who can't see the potential benefit of something like this." In Hay River, participants were concerned that some communities, including their own, could be bypassed by corridor development, turning existing communities into ghost towns. In both cases, participants were clear that they wanted their communities to have a say in what development would happen in their region and in how their residents might benefit from it. As a participant in Timmins noted, even if the potential benefits of development in a given region are realized, there's no guarantee of an even or equitable distribution of those benefits. Many communities currently lack the resources to advocate on their own behalf to ensure that their interests are not dismissed and that they receive their share of benefits.

5. DEVELOPMENTAL POTENTIAL OF NORTHERN COMMUNITIES AND THE CANADIAN NORTH

Participants across the communities we spoke with described great potential in their communities and regions, and in northern Canada more broadly, for social and economic development. In this section, we share participant perspectives on the scale and nature of development that could be achieved in northern communities with appropriate vision and support.

Participants often described their regions as natural resource powerhouses, but more importantly as untapped stores of skills, labour, and expertise with a great deal to offer other northern regions and the rest of Canada. For example, in Corner Brook, participants described the untapped wealth of knowledge in smaller communities, where the experience of working close to the land and sea possessed by many locals gives them a deep knowledge and perspective on issues relevant to infrastructure development, such as environmental changes and impacts. Participants felt that there's "no such thing as unskilled labour," and that it's important to find space for this kind of knowledge in the province's development vision.

Several larger communities described their existing status as de facto regional hubs and their potential to become vibrant and productive northern urban centres. In High Level, participants emphasized the community's location at the crossroads of provincial highways

⁵³ Peace River is a community in Alberta about 200 km northeast of Grande Prairie.

35 and 58⁵⁴ and its status as a rail hub and energy hub. High Level serves as a grain terminal for the surrounding region and is connected to Hardisty, AB (home of a large tank farm and a nexus of oil and natural gas pipelines) and Norman Wells, NWT (an oil extraction site). Thunder Bay sits on the Great Lakes-St. Lawrence shipping route and has connections to major forestry and mining regions, making it well-positioned to be a hub for domestic and international trade. Participants in Fort St. John noted the unique density of natural resources available in the Peace Region, including natural gas, oil, and forest products. With the construction of the Site C hydro dam, the region will become an "electricity capital" able to provide power as far away as California.

Other participants described the potential of their communities to become hubs for trade and transportation. In Thompson, participants noted that northern Manitoba has a great deal of unexplored natural resource potential, including deposits of lithium, a key component in electric vehicle batteries. One participant in Grande Prairie described the region as a Goldilocks zone in the context of climate change and how the community could become a destination for climate migrants as more southern regions become less habitable. Participants in Tuktoyaktuk described existing port facilities in their community, which, paired with the new Inuvik-Tuktoyaktuk Highway, puts the hamlet in a position to become a supply point for other communities in the Beaufort Delta: "I really believe Tuk could do a lot for the rest of the Northwest Territories because of where we're located." In Churchill, some participants saw the community's port as being well-positioned to be part of the supply chain for communities in Nunavut: instead of shipping goods from Eastern Canada, they could be sent by rail to Churchill and then sent to the Arctic by sea. This could extend to housing, whereby modular homes could be prepared in Churchill and shipped north. This would have the added benefit of growing the pool of skilled labour in the community and increasing local employment. Such an arrangement could be part of developing a closer relationship between Churchill and Nunavut, particularly the Kivalliq region just up the coast of Hudson's Bay.

These last two examples point to another common thread in our discussions with communities: northern resiliency and self-sufficiency. Many participants emphasized the need, and potential, for northern regions and communities to support each other and to build their shared capacity for self-sufficiency. Communities like Hay River, Fort St. John, Prince Rupert, and High Level described their existing role as a nexus between southern and northern regions and how, with appropriate infrastructure investment, they could expand their connections to remote and northern regions, opening access to stranded natural and human resources. Improved connective infrastructure throughout the North wouldn't just mean a greater ability to receive goods and services from the south; it would enable greater resilience within northern Canada itself by, amongst other benefits, reducing dependence on southern transportation and trade routes.

Greater capacities for agriculture and food production were highlighted as a key part of building northern resiliency and self-sufficiency. In some places, such as Churchill and Prince Rupert, this could involve an expansion of infrastructure such as greenhouses to supplement imported and expensive fresh produce. Some communities are already in agricultural regions, which some participants expected would expand as climate change

⁵⁴ Highway 58 is the only major east-west route in northern Alberta, while Highway 35 is one of only two paved roads connecting the Northwest Territories to southern Canada.

brings longer growing seasons to northern regions. In High Level, participants described how improved transportation infrastructure could allow the surrounding region of Mackenzie County to expand its agricultural exports, including to northern Canada. Expanded agricultural and transportation capacity could also reduce the cost of animal feed and support meat production; this could, in turn, reduce the region's, and the North's, dependency on imports from southern Canada: "our region could help feed the North." In other places, like Corner Brook on the island of Newfoundland, participants described how their region had formerly had greater agricultural capacities that were undermined by the loss of the island's railway; this left farmers on the island's west coast unable to get their goods to market.

Multiple communities discussed the need to re-establish lost infrastructure and invest in existing infrastructure to support local and regional resiliency. Participants in Thunder Bay, Prince Rupert, and Churchill routinely felt that their existing port facilities are underused and lacking in much-needed investment. In Thunder Bay, session attendees described how the port on Lake Superior is used for shipping grain and renewable energy infrastructure (e.g., importing equipment for wind and solar energy farms), but with appropriate investments and upgrades it could become part of an energy corridor, shipping Canadian oil and gas to European markets. Prince Rupert already plays a limited role in transporting goods in and out of northern BC; strengthening Prince Rupert's capacities as a marine hub between northern and southern BC could increase resiliency and security in the supply chain. Many participants in Churchill described a central role for a revitalized port in Churchill's future. One participant described a "future Churchill" as looking much like a "Churchill 50 years ago," with dozens of grain ships passing through the port every year and reliable train service several days a week. They described Churchill as having been part of a corridor in the past and that, with the community now in control of the port and rail line, there is an opportunity to revitalize that corridor.

However, many participants noted that without greater investment, northern regions will continue to fall short of their development priorities and goals. Appropriate funding and investment are currently lacking for even some of the most basic development projects. For example, in Tuktoyaktuk, a large amount of scrap metal currently sits on community lands. With appropriate support, this metal could be removed and recycled, generating some additional income for the community. Additionally, support for tourism infrastructure in Tuktoyaktuk would both allow it to better take advantage of the flow of visitors from the Inuvik-Tuktoyaktuk Highway's completion and help the community cope with the impacts of increased visitor numbers. Participants in several communities, including Fort St. John, Whitehorse, and Sept-Îles felt that their regions "punch above [their] weight" in terms of their contributions to provincial, territorial, and national economies, but receive comparatively little back in terms of investment in infrastructure and social development. A participant in Fort St. John opined that the province of BC, and the country as a whole, will inevitably have to "look north" and recognize the current economic importance of the region and its future potential, asking "what does it take for the government to acknowledge that?" Ultimately, many participants expressed skepticism regarding governments' willingness to invest in northern communities and their development potential.

DISCUSSION

Through the community engagement process, the research team heard many diverse sentiments and perspectives regarding infrastructure and related issues in northern communities. Here, we summarize the issues raised and discuss three key, interrelated themes that emerged: the persistent inequities between northern and southern Canada; the disproportionate effect of infrastructure deficits and development on Indigenous communities; and the potential for a regional approach to corridor and infrastructure development.

There are persistent inequities in infrastructure access and development between northern and southern communities in Canada

Research participants routinely felt that the value of their regions is often reduced to their natural resource wealth such as fossil fuels, minerals, forestry products, and hydropower. Consequently, they felt that their communities and regions continue to be stripped of their wealth without any compensating benefits accruing to the local population. At the same time, communities are left to grapple with the drastic social and environmental changes resulting from resource extraction activities including displacement, unstable local economies, increased crime and poverty, poor individual and community health outcomes, and loss of access to the land. Participants attributed this situation in no small part to the persistent marginalization of northern and rural voices and perspectives in business, politics, and policy, referring to the reliance of key decision makers — themselves largely based in southern regions and communities — on southern-informed interests, norms, and assumptions. Participants routinely stated that northern voices and perspectives are rarely given the same platforms and weight as those of the more populous south. As a result, participants felt that great inequities persist between communities in northern and southern Canada in terms of access to resources, services, and opportunities resulting in frustration, anger, and resentment.

The inequities described by participants between Canada's north and south were recognized by the Government of Canada in its 2019 *Arctic and Northern Policy Framework* (ANPF):

For too long, Canada's Arctic and northern residents, especially Indigenous people, have not had access to the same services, opportunities, and standards of living as those enjoyed by other Canadians. There are longstanding inequalities in transportation, energy, communications, employment, community infrastructure, health and education. While almost all past governments have put forward northern strategies, none closed these gaps for the people of the North, or created a lasting legacy of sustainable economic development. (Government of Canada 2019, 2).

The ANPF, which sets out a long-term strategy for development in Canada's North and Arctic, was lauded as a major accomplishment due to its co-development approach between diverse stakeholders, including the three territorial governments; over 25 Indigenous partners representing First Nations, Inuit, and Métis; and the governments of Manitoba, Quebec, and Newfoundland and Labrador. Everett (2022, 178) notes the ANPF

is the first update to Canada's northern strategy in a decade, and, in comparison to previous strategies which took a top-down approach, the ANPF "includes the views and priorities of northerners within regional decision making." The ANPF is accompanied by several partner chapters that discuss regional circumstances, priorities and challenges for local communities and their infrastructure.⁵⁵

However, despite its recognition as a unique strategy, "critics have questioned the hasty release of what seems to be a partially-developed document, coming just a day before the federal government announced Canada's 2019 federal election" (Kikkert and Lackenbauer 2019, 1). Lackenbauer and Kikkert (2022) assert that the policy does not represent a significant change of direction, as it fails to establish practical priorities for federal policy implementation or provide resources for development, which are crucial for addressing the infrastructure gaps across mid- and northern Canada that the ANPF identifies. Infrastructure gaps, particularly across northern Canada, are well documented: the National Aboriginal Economic Development Board (2016) identified serious issues with port facilities, runways, roads, bridges, telecommunications and other infrastructure in northern Canada; Nunavut Tunngavik's (2020, 12) report details large gaps in housing, sanitation, and drinking water access, describing the territory's infrastructure as "operating close to or beyond its projected useful lifespan"; and the Canadian Climate Institute found that northern Canada's already fragile infrastructure is not prepared to weather the challenges that will come with increased climate change (Clark et al. 2022). Policy strategies intended to close these gaps, such as the ANPF, remain vague and ambiguous, leaving northern communities' needs unaddressed.

Participants noted that it would benefit northern residents and southern Canada to bring northern infrastructure to parity, as far as is practicable, with southern Canada. As described above, northerners often feel that the North is viewed as a treasure chest from which southern interests can extract great wealth without contributing to northern communities. However, in doing so, participants felt that not only are they currently being cut a raw deal, but that much is being left on the table. By failing to support development in northern regions, southern interests leave great potential pools of skills and expertise untapped, undermining the potential of the North to become a prosperous economic region in its own right. Economic productivity in the territories is undermined by poor infrastructure; Fellows and Tombe (2018) project that lowering trade costs in the territories, including improving northern transportation infrastructure, could add \$6.5 billion to the national GDP and increase territorial GDP by \$4.7 billion. Many participants were eager to see the North become more self-sufficient and less dependent on the south — many spoke of northern sovereignty, of being less under the control of southern policymakers and bureaucrats, and the capacity to act meaningfully on the interests of northern residents but emphasized that the serious infrastructure gaps present a nearly insurmountable obstacle to reaching this goal.

⁵⁵ ANPF partner chapters were provided by Inuit Tapiriit Kanatami (Inuit Nunangat Chapter); the Government of Northwest Territories; the Government of Nunavut; and a pan-territorial chapter provided by the governments of Nunavut, the Northwest Territories and Yukon (Government of Canada 2022b).

Infrastructure deficits and development disproportionately impact Indigenous communities

Governments, non-governmental bodies, and researchers widely acknowledge that there is a wide and persistent infrastructure gap between Indigenous and non-Indigenous communities in Canada (The Canadian Council for Public-Private Partnerships 2016; Nunavut Tunngavik 2020; First Nations Financial Management Board 2022). The infrastructure deficit amongst First Nations alone is estimated to be at least \$25 billion, with some estimates running even higher (The Canadian Council for Public-Private Partnerships 2016). Nunavut, with an 85 percent Inuit population, has no regional power grid, meaning all 25 of its communities are dependent on diesel power plants. Moreover, an estimated 85 percent of the territory's water treatment infrastructure is in poor condition, and 41 percent of housing needs major repair (Nunavut Tunngavik 2020). The First Nations Financial Management Board (2022) has detailed how fragile infrastructure systems are contributing to poor social, economic, and health outcomes for First Nations communities.

Nunavut Tunngavik (2020) describes the ways that infrastructure gaps overlap and reinforce each other in Indigenous communities. For example, the higher cost of off-grid electricity makes wastewater treatment more expensive; this can make developing more housing challenging, resulting in overcrowding and a deteriorating housing stock. Inadequate transportation infrastructure makes it difficult to import needed building supplies for repairs and new home construction. Inadequate access to high-speed internet can mean an inability to access educational and employment opportunities. Forgoing education can lead to poor economic outcomes, compounding existing individual and communal issues of poverty and contributing to insufficient pools of local skilled labour. Similarly, Indigenous youth are often required to move away from their communities to access educational opportunities, sometimes as early as secondary school, leaving behind important familial, communal, and cultural support systems. The risks these young people are exposed to in having to leave home for school are discussed in devastating detail by Talaga (2017), who documents the dangers of being young, Indigenous, and far from home.

Conversely, Indigenous communities often bear most of the negative effects of large-scale development. Canada's history is replete with development projects that have displaced communities, including flooding communities and lands by the Churchill River Diversion for hydroelectric development in northern Manitoba, seizure of Inuit lands for military infrastructure in Labrador, and expulsion of First Nations from the Cypress Hills in Saskatchewan for railway construction. Projects have also been guilty of poisoning Indigenous populations, as in the infamous case of Grassy Narrows, a First Nation in northern Ontario that experienced devastating mercury poisoning stemming from pulp and paper operations in the region. Culturally and nutritionally significant traditional lands have also been damaged, destroyed, and confiscated in the course of large-scale development; this last can be seen in British Columbia's forestry sector's long history of harvesting through clear-cutting, opposition to which made international headlines during the War of the Woods in the 1990s.

Participants described how large-scale development has also routinely brought crime, substance abuse, and violence to their communities, while damaging traditional social and cultural life. Indigenous communities experience significant vulnerabilities that non-

Indigenous communities largely do not. For example, as recounted by the Truth and Reconciliation Commission of Canada, the residential school system inflicted on First Nations, Métis, and Inuit communities undermined family and community structures; targeted Indigenous cultural practices, spiritual beliefs, and languages for destruction; and subjected individuals to trauma and abuse. Family these consequences are long-term and are still experienced by Indigenous individuals and communities today. The National Inquiry into Missing and Murdered Indigenous Women and Girls revealed to Canadians the disproportionate rate at which Indigenous women and girls experience violence and death, and the inadequate responses of governments and the criminal justice system. Large development projects are already known to have disruptive impacts on associated communities (e.g., Ruddell 2011); the existing vulnerabilities of many Indigenous communities put them at greater risk for negative effects associated with development (DesBrisay 1994).

What distinguishes Indigenous communities from their non-Indigenous counterparts in the potential and realized effects of development and underdevelopment is the intersection of remoteness, infrastructure deficits, and the legacies of colonialism in Canada. These legacies are far too broad and complex to examine in detail in this report, from flawed treaty processes and the legacy of residential schools to contemporary anti-Indigenous attitudes and the *Indian Act*. However, their inclusion is essential in approaching any future type of infrastructure development, which must consider the intersectional inequalities that specifically affect Indigenous communities, and must assess the vulnerabilities that could be either mitigated or exacerbated by certain types of development.

Many Indigenous participants indicated that their communities are interested in development that could bring benefits and prosperity to their members, and participants (both Indigenous and non-Indigenous) universally agreed on the necessity of meaningful engagement with Indigenous communities for corridor and other large-scale development. Participants called on the need for greater Indigenous leadership on development issues. Given the effects of development and underdevelopment on Indigenous communities, it is morally and practically necessary to prioritize and defer to Indigenous communities, government, and leadership in the planning and execution of infrastructure projects and workable, sustainable, and equitable strategies for infrastructure development at local, regional, and national scales. There are many examples of successful large-scale development led by Indigenous communities. These include Wataynikaneyap Power in northern Ontario, which is constructing transmission lines to connect remote First Nations communities to the provincial grid and to power future development projects in the region; Kiashke Zaaging Anishinaabek (Gull Bay) First Nation's solar energy generation and storage microgrid; and Tsawwassen First Nation's wastewater treatment system, which Baird and Podlasly (2020) estimate creates more than \$2.5 billion of economic development on the Nation's lands. Facilitating further leadership will involve, amongst other things, increasing local capacity; this could include providing funding and opportunities for collaboration between Indigenous communities and organizations that will enable meaningful participation and engagement with potential future development opportunities.

The Truth and Reconciliation Commission's reports can be accessed via the National Centre for Truth and Reconciliation (<u>www.nctr.ca</u>).

The National Inquiry into Missing and Murdered Indigenous Women and Girls final report can be found at www.mmiwg-ffada.ca.

Future large-scale infrastructure development, and potential corridor development would benefit from a region-informed approach

The community engagement process revealed the tension inherent in governing and administering Canada's diverse geographic, economic, and cultural regions. As we discuss above, many participants felt a deep divide exists between northern and southern Canada, but participants also noted other 'regionalities.' For example, in Kenora, participants described how their region in northwestern Ontario often feels greater affinity with Manitoba than the rest of their own province. This connection is practical as well: it's easier for area residents to travel to Winnipeg for goods and services than to Thunder Bay (or even further south), while Manitobans frequent the cottage country surrounding Kenora. Participants in Grande Prairie and Fort St. John described themselves as part of the Peace Region, and those in both Quebec and Newfoundland and Labrador felt it would make sense to approach contiguous areas of Quebec and Labrador as a single region when considering potential development. Many participants felt that these existing regional connections have been neglected or under-valued.

Along with these perceptions of existing regions outside of formal provincial and territorial definitions, there was concern that the existing corridor concept is too large from both theoretical and practical standpoints. Many participants articulated the need for a national infrastructure strategy and understood that the corridor concept offered one potential framework for this. However, they were concerned that a national-scale infrastructure plan would risk neglecting more regional and local concerns vis-à-vis infrastructure development. Some communities already expressed feeling overlooked by their respective provincial and territorial governments, and worried that a high-level conceptualization of development would perpetuate or worsen that neglect. Participants identified the idea of sweeping pre-approvals, with implications of a macro-scale review and approval process that would override more micro- and meso-scale concerns as one such problem with corridor development. Canada is a collection of informal but unacknowledged regions in addition to formal jurisdictional geographies. Accordingly, a national vision for corridor development risks ignoring relevant regionalities. The existing concept was seen as too large, because it appears to envision development only on a national scale rather than allowing space for the assertion of regional interests and priorities.

Taken together, this leads to the potential appeal of a regional approach to development integrated into a larger, national strategy. An approach to corridor or large-scale infrastructure development that allows for the assertion of regional priorities and the addressing of regional-level needs could be more effective than a one-size-fits all approach and could also support greater regional control of planning and strengthen communities' abilities to make their perspectives heard in meaningful ways, contributing to greater social and economic parity between regions. A similar regional development approach was adopted in the European Union (EU) with the goal of reducing regional economic and social inequities across EU member states (European Commission 2023). The EU's cohesion policy became a key instrument in addressing uneven levels of wealth, unemployment, and capital investment between regions. Structural funds are deployed within programs that are supported by a multi-annual framework based on socio-economic analysis, and by the formulation of a clear strategy with priorities and objectives, which are prepared

by the regions themselves (Brunazzo 2010). These programs are screened and adopted by the European Commission, and most funds are delivered to regions affected by specific problems (e.g., those experiencing industrial decline and higher unemployment rates than the EU average). Regional development programs are co-funded by several institutions, including the European Commission and national governments. In addition, partnerships are fostered between all governmental levels, including regional and local organizations. Program delivery is regularly evaluated for its effectiveness, and plans are adjusted as socio-economic and geopolitical circumstances change.

One of the challenges to this approach is that regionalism is often viewed as a negative force in Canadian society and politics, one that has contributed to both Quebec separatism and Western alienation. Wright (1993) argues that avoiding strong regionalisms is what holds together a country of such diversity; see also Buckner (2000); Montpetit, Lachapelle, and Kiss (2017). Furthermore, regionalism can be rooted in a variety of economic, social, and cultural sources, stemming from "different causes in different regions and at different levels of analysis" (Cochrane and Perrella 2012, 830). Taking the above examples, Quebec separatism has historically been fuelled by the position that Quebec is a unique society, distinguished by language and culture from the rest of Canada but subject to Anglo-American political and economic forces (Changfoot and Cullen 2011). Western alienation on the other hand, has been attributed to the perceived neglect of the interests of the western Canadian provinces — British Columbia, Alberta, Saskatchewan, and Manitoba — by a federal government more concerned with Eastern Canada or, more specifically, Ontario (Berdahl 2021).

However, region-specific economic development bodies already exist in the form of seven federal regional development agencies, responsible for overseeing and supporting economic growth and diversification in their respective regions. These include Prairies Economic Development Canada, the Federal Economic Development Agency for Northern Ontario, and the Atlantic Canada Opportunities Agency.⁵⁸ Regional strategic environmental assessments, undertaken jointly by provincial, territorial, and Indigenous governments with responsibilities for a given region, have been identified as an important potential tool to better assess cumulative and long-term impacts of large-scale development projects (Canadian Council of Ministers of the Environment 2009).⁵⁹ Participants in Nunavut, Yukon, and the Northwest Territories routinely described ways that the territories could act more collaboratively as a single region to pursue their shared interests. Those in contiguous, cross-border regions (Quebec-Labrador, Ontario-Manitoba, Alberta-BC) often felt their interests would be better addressed beyond intra-provincial restrictions.

More recently, the Impact Assessment Agency of Canada initiated a regional assessment in the Ring of Fire area, working with the province of Ontario, Indigenous groups, federal authorities, non-government organizations, and the public to determine appropriate activities, outcomes, and boundaries of the regional assessment. The assessments are studies in "areas of existing projects or anticipated development to inform planning and

The other four agencies are the Canada Economic Development for Quebec Regions (CED), the Canadian Northern Economic Development Agency (CanNor), the Federal Economic Development Agency for Southern Ontario (FedDev Ontario), and Pacific Economic Development Canada (PacifiCan).

⁵⁹ An example of a RSEA is the 2014 Environmental Stewardship Initiative which is "a \$30 million collaborative partnership between the Province (BC), First Nations and industry to produce high quality, accessible and trusted environmental information to ensure a positive environmental legacy" (Northeast Roundtable 2020).

management of cumulative effects and inform future project impact assessments" (Impact Assessment Agency of Canada 2021). Regional assessments are supposed to help the federal government better understand the regional context and priorities and provide more comprehensive analyses to help inform future impact assessment decisions (Impact Assessment Agency of Canada 2022). However, multi-level governmental regional assessments, jointly undertaken by federal, provincial/territorial, Indigenous, and municipal governments are not routinely undertaken in Canada.

Taking a regional approach to development could facilitate more effective, efficient, equitable and, for communities, meaningful development in a process that lets more residents feel heard and their communities' needs prioritized. For example, the formulation of a nation-wide digital infrastructure framework could help improve broadband speed and availability across Canada. This framework could incorporate several strategies to deliver funding programs informed by region-based assessments to address local needs and priorities. Through these assessments, communities themselves could advocate for their digital requirements, and the federal government could offer targeted funding support and enable cooperation between government and private stakeholders to support regions that face severe challenges, for example those that don't meet the current service objective of 50 Mbps download/10 Mbps upload and unlimited data plans.

CONCLUSION: LESSONS FOR FUTURE ENGAGEMENT AND RECOMMENDATIONS

LESSONS FOR FUTURE ENGAGEMENT

Over the course of the community engagement process, the research team identified some key lessons regarding future engagement around infrastructure and corridor development. In some cases, these lessons were new and unexpected; in others, they reflected some of the known weaknesses of the CNC Research Program. All lessons point to ways to improve and strengthen future community engagement processes to produce meaningful outcomes for researchers and community participants, as well as governments and project proponents.

ENGAGEMENT WITH COMMUNITIES

As we discuss in the "What We Heard" section, participants universally agreed that any potential corridor or large-scale infrastructure development would require engagement with Indigenous communities and governments, and space for Indigenous leadership and the assertion of Indigenous rights, interests, and priorities. This requires policymakers, proponents, and developers to be thorough and proactive in their engagement efforts and be willing to bear the costs of meaningful engagement. This would include activities like travelling to all affected communities, regardless of their remoteness, or covering the costs of community members to come to engagements elsewhere; ensuring that Indigenous languages are an integral part of the engagement process; and sponsoring independent experts, such as lawyers or engineers, to support communities during the process. It could also include sponsoring community conversations independent of formal engagement with researchers or consultants. This was one of the key suggestions made by participants in Île-a-la-Crosse, who pointed to the need for communities to talk amongst themselves without the interference of outside interests or voices.

Engagement with affected non-indigenous communities would also have to start early in any development process — "while [the corridor] is still an idea and not a full-fledged project." Just as importantly, engagement would need to be ongoing, rather than one-off instances, and be part of building relationships with communities. Participants noted that, in most cases, discussions and consultations with communities only happen once a project is underway and after proponents make substantial financial investments, limiting how much influence communities have in project design and execution. A universal theme was that communities need to be consulted in advance of project conceptualization: "the community has to be engaged way before you even start to think of, 'we're going to build a road.' Once you get to that statement, you've already spent a lot of money. And maybe the community doesn't want it, or they want something different." Early consultation would also reduce the potential for costly project changes later in the process. One participant summarized that "early and often" would have to be the by-words of future engagement.

Participants also emphasized openness, transparency, and "intellectual honesty" as necessary and crucial to ensuring community buy-in and benefit. Establishing credibility would involve discussing the pros and cons of potential development, as well as managing public expectations in a sensitive and sincere manner. For example, letting people know that their ideas may not ultimately be incorporated into a project but ensuring that they know why this might be the case and that their perspectives are still being considered.

All of this applies equally to future research engagement as it does to engagement more directly targeting corridor and infrastructure development. Communities should be brought into the research process as early as possible, ideally during the period of project design. Early and ongoing involvement in the research process fosters transparency and trust between researchers and community members and allows the latter a role in framing research questions and engagement strategies. This also fosters a sense of ownership and control for participants. For researchers, open, trusting, and longer-term relationships with communities can result in higher quality data and greater credibility, and the potential for future collaborations with those same communities.

Researchers must also invest in reaching more, and more remote, communities to maximize the inclusion of all voices. Though the goal of the research team in this instance was diversity rather than representativeness, several participants expressed discomfort with the engagement program's narrow reach and expressed frustration at the exclusion of so many communities that could be affected by corridor development. This illustrates the importance participants themselves placed on representation, indicating that this should also be a priority for researchers. The inclusion of more communities in future engagement processes would also support the involvement of more marginalized communities and individuals who do not always have access to engagement opportunities with researchers, developers, or policymakers.

Trust and capacity-building

Local capacity to participate in engagement related to potential corridor or infrastructure development was an issue for several communities. At the most basic level, processes and mechanisms are needed to help participants become familiar with research and engagement materials prior to the start of any formal engagement processes. This could include easier access to, or the direct provision of, relevant and accessible materials (e.g., research documents translated into local languages and free from excessive or unnecessary jargon) or planning multiple engagement activities that would give participants the time and opportunity to acquaint themselves with relevant materials.

More meaningfully, future engagement — whether for research or development purposes — should find ways to contribute positively to community capacities beyond the project at hand. Community capacity is the ability of a community to articulate, advocate for and act in its interests and according to its self-defined priorities (Chaskin 2001). This depends significantly on the collective skills and resources of a community's members. Community engagement processes can support local capacity-building through a variety of methods including, but not limited to:

- Offering training opportunities, either in skills needed during the engagement process or in other locally desired areas;
- Employing community members who already possess relevant skill sets, such as organizers and translators at fair and mutually agreed-upon rates;
- Fostering relationships between the community and external experts to support the community in addressing local deficits in expertise;

- Offering services to support local projects or priorities (e.g., helping a local organization access and navigate funding opportunities, volunteering expertise to a local initiative); or
- Providing funding to support local initiatives like the community conversations discussed above.

The key aim of local capacity-building is fostering a mutually beneficial relationship between researchers and communities, which is crucial to successful and meaningful community engagement. However, this is a form of engagement that requires long timelines and significant funding, both of which the current Research Program did not have access to.

Language

Some of the words and terms employed by the research team were seen as problematic or inappropriate by some participants, particularly amongst those who identified as Indigenous. ⁶⁰ In particular, the term 'consent' was used, both in materials and in presentations, during early engagement sessions when researchers were going over the program's ethics protocols. In Institutional Research Ethics Board processes, "consent" is the common term used to denote a participant's agreement to take part in a research project and to frame the conditions under which they do so. However, for Indigenous communities in particular, the term also has significant and complicated nuances, given its association with the concept and practice of consultation for infrastructure projects. One participant described the use of the word as "under-handed" and as the kind of thing community members are used to looking out for when dealing with project proponents, as proponents will often try to get away with using "sneaky" language and techniques in their dealings with communities. The research team amended this language in later engagement activities.

RECOMMENDATIONS FOR IMPROVING INFRASTRUCTURE DEVELOPMENT IN CANADA

Based on the preceding research and discussion, we offer the following policy recommendations to address some of the key issues raised.

• Mid- and northern Canadian communities are diverse. To address local infrastructure needs and gaps, we suggest a regional needs-based assessment approach be taken to identify differences and commonalities of infrastructure priorities among these communities. Regional needs-based assessments capture local contexts and help inform a more nuanced national policy framework of best practices. This will help inform future infrastructure development projects, and limit the harms experienced by communities and their most vulnerable members. Similarly, impact assessments of proposed infrastructure projects should reflect a regional design that includes the perspectives and concerns of all potentially affected communities. The federal government, in cooperation with municipal, provincial, territorial, and Indigenous partners, should invest in a region-based assessment to determine local infrastructure priorities across mid- and northern Canada.

⁶⁰ We use the term identified here, as the only way researchers were able to identify a participant as Indigenous was through that participant's disclosure during engagement activities.

- · Community members often stated that they lacked the capacity to advocate for their own interests. This may be due to the absence of resources or expertise required to be effective in this role. Training opportunities to support community members can help them navigate the regulatory and legislative landscape related to infrastructure and natural resource development. As such, these opportunities must be a priority to help communities advocate for and support their interests and priorities, thus ensuring more equitable and inclusive projects in the future. Shared ownership agreements between communities and the public or private sectors may also be a tool to ensure local needs are addressed while distributing the burden of funding more evenly among community members. This is particularly important for remote and Indigenous communities. Resources and guidance must be provided to communities to enhance their capacity
 - as advocates for local priorities at provincial, territorial, and federal levels.
- The United Nations Declaration on the Rights of Indigenous Peoples Act (UNDRIPA) came into force in June 2021. Presently, the Government of Canada is working in consultation with First Nations, Inuit, and Métis groups and leaders to develop an action plan for the implementation of UNDRIPA (Government of Canada 2023). During this process, and to support the calls to action⁶¹ identified by the Truth and Reconciliation Commission and the recommendations provided by the National Inquiry into Missing and Murdered Indigenous Women and Girls, 62 all orders of government should pay particular attention to the principles of FPIC and consider the ways they can be incorporated into legislative frameworks to support Canada's path to reconciliation with Indigenous Peoples.

The federal government, in line with its consultations on the implementation of UNDRIP, should identify ways to incorporate the principles of Free, Prior, and Informed Consent into legal and regulatory frameworks for infrastructure and natural resource development.

- Federal, provincial, territorial, and municipal decision-makers should consider enhancing analyses of infrastructure projects to include equity as a key objective. Understanding the effects of infrastructure development and related land-use decisions on communities must include vulnerable populations. Analyses should focus on identifying intersectional vulnerabilities that could be mitigated or exacerbated by certain projects and types of development. For example, planning all-season roads should consider the economic benefits (e.g., enhancing transportation efficiency), the environmental impact, and the potentially adverse outcomes for populations dependent on an intact ecosystem for subsistence-based lifestyles and food sovereignty. Social benefit-cost analyses of infrastructure developments must consider intersectional vulnerabilities and equitydeserving groups, including Indigenous Peoples.
- Despite Canada's diversity, a common priority expressed across all communities was the need for access to affordable and reliable internet. The digital divide in Canada is a long-standing challenge, and the COVID-19 pandemic brought this issue into stark relief.

⁶¹ To redress the legacy of residential schools and advance the process of Canadian reconciliation, the Truth and Reconciliation Commission (2015) has provided several Calls to Action.

The National Inquiry into Missing and Murdered Indigenous Women and Girls (2019) has published a master list of report recommendations organized by theme and jurisdiction.

⁶³ Social benefit-cost analyses involve the evaluation of the potential social benefits and costs of a given project "in order to assess the validity of the project and to make decisions regarding [its] implementation" (Petohleb Černeha, Klun, and Devjak 2013, 59).

During restrictions on personal mobility due to public health measures, the internet became essential for accessing public services such as education and healthcare, and for staying connected with loved ones. The development of a corridor or corridors should incorporate digital infrastructure that is reliable and affordable. While governments have already devised several strategies to address the digital divide in Canada, internet access should be considered an essential service; without it, community well-being can be significantly undermined. A framework should incorporate diverse strategies to deliver funding programs based on regional assessments and the identification of local digital needs and priorities. Communities require access to reliable and affordable internet access, which requires key support from governments.

- Remote communities sometimes struggle to participate in democratic processes, such as impact assessments and government hearings. Funding mechanisms already exist to support public engagement and Indigenous consultation during an assessment at several key stages, including planning, impact assessment and the participation in review panels. Additionally, funding should be provided to remote and Indigenous communities for the purpose of fostering participatory processes. Community-driven research and development are crucial, and support robust engagement initiatives, and thus outcome measures. For instance, communities can contribute essential knowledge at the planning phase of project-specific regional or strategic assessments while ensuring stewardship of data and information. This approach also helps to improve bilateral relations and garner trust among involved parties. Federal, provincial, and territorial governments should support civic engagement among smaller and remote communities by allocating funding to participation in democratic hearings and processes (e.g., impact assessments).
- Climate change and its environmental consequences for northern Canada, such as permafrost melting, will contribute to accelerated degradation of existing infrastructure. Innovations to help mitigate the impact of climate change on critical infrastructure is crucial. Outdated infrastructure in poor repair, such as roads and bridges, pose health and safety hazards to community members who rely on these routes. Accidents could be prevented if project planning, for example for a road, incorporated sufficient safety features, such as shoulders and rest stops for drivers. These are of particular importance when inclement weather conditions turn travelling into a hazard. In addition, research participants stated that environmental hazards, such as wildfires, could be prevented with sufficient maintenance. The example of clear cutting along railway lines to prevent sparks from igniting brush was provided. With climate change potentially triggering more devastating environmental disasters in the future, such measures will improve both infrastructure and community resilience. Safety features and maintenance to mitigate the impacts of environmental hazards must be incorporated into any infrastructure development or maintenance.

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