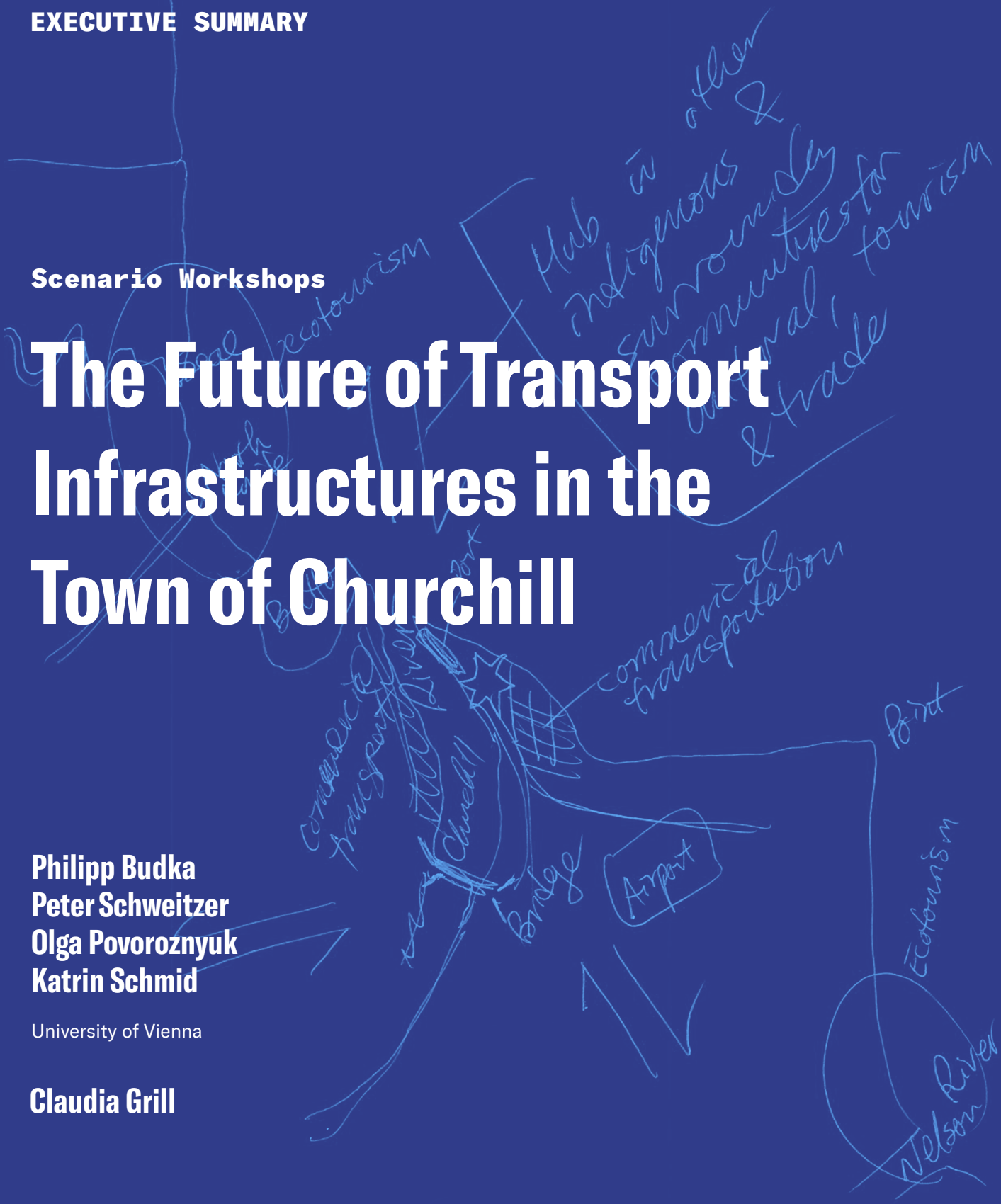
EXECUTIVE SUMMARY

Scenario Workshops

The Future of Transport Infrastructures in the Town of Churchill



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Infra North | Building Arctic Futures

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INTRODUCTION AND CONTEXT

InfraNorth

The Arctic is increasingly attracting global attention because of geopolitics, (re-)militarization, re-source extraction, tourism, and calls for environmental protection in the face of rapid climate change (Evengård et al., 2016). Many of these activities necessitate the construction or upgrading of transport infrastructures. The European Research Council (ERC) Advanced Grant project "Building Arctic Futures: Transport Infrastructures and Sustainable Northern Communities – InfraNorth" explores how people in the (Sub)Arctic use and are affected by transport infrastructures.

Why Churchill?

The community of 870 people (Statistics Canada, 2023) is notable for its distinctive transport infrastructure. While the town is not accessible by road, it is home to Canada's sole Arctic deep-water port, which is linked directly to the North American railway system. The section of railway connecting Churchill to the town of The Pas and further south is the Hudson Bay Railway.

Churchill also has a large airport, which was built by the Canadian and American military during World War II. After the military left, the airport became important for tourism, which made Churchill the "Polar Bear Capital of the World." Since 2021, and for the first time in history, the Hudson Bay Railway and the Port of Churchill have been owned and operated by a consortium of 41 northern communities, the Arctic Gateway Group (Budka, 2023).

View of Churchill, August 2023. Photo by Philipp Budka.

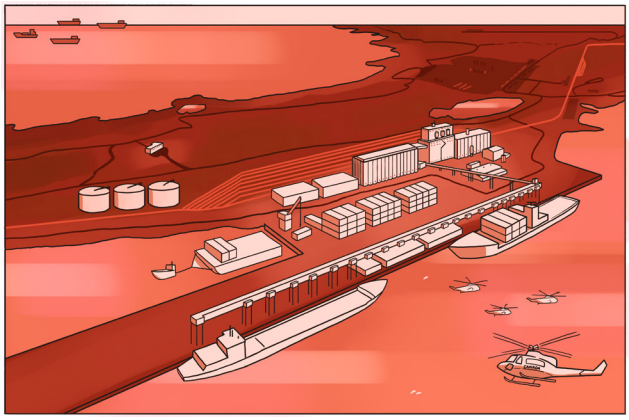
SCENARIO WORKSHOPS

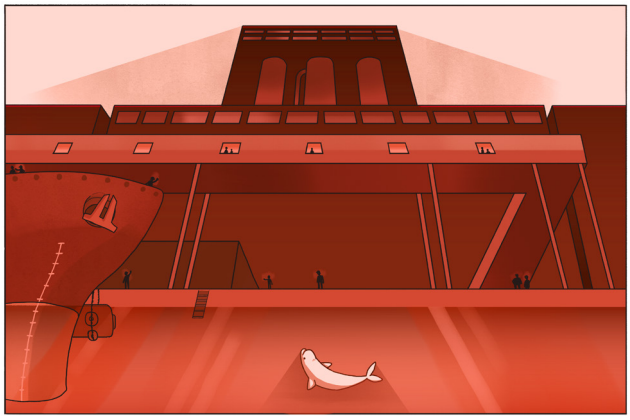
The InfraNorth project, in collaboration with the International Institute for Applied Systems Analysis (IIASA), developed four future scenarios to explore possible and desirable futures of transport and community development in Churchill. Each of the scenarios described futures up to the year 2050. The process started with developing narratives describing the respective scenarios. To create plausible scenarios, these narratives included global, national, regional, and local perspectives on transport infrastructures by building on ethnographic fieldwork data. It was important to focus on what the scenarios contain as well as on what they do (Strelkovskii et al., forthcoming). What questions do they raise? What discussions and reactions do they provoke?

The scenarios were the basis for two workshops in Churchill in August 2023. The two-and-a-half-hour workshops were organized with the support of the Town of Churchill and in collaboration with local facilitator Claudia Grill and artist Nickia McIvor who visualized the scenario narratives. The first workshop brought together local residents, and the second workshop was for transportation professionals.

Scenario 1: Resource Base

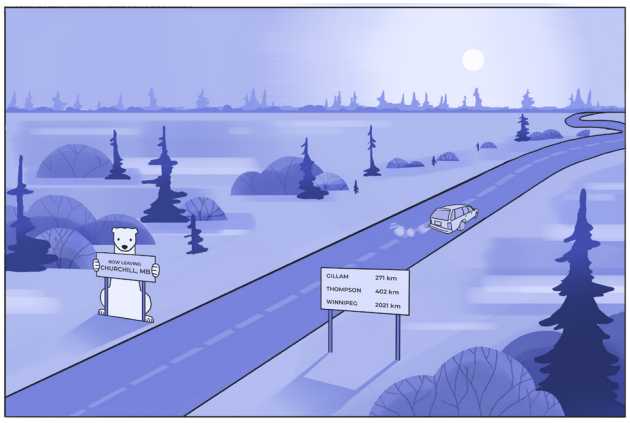
Illustrations by Nickia McIvor





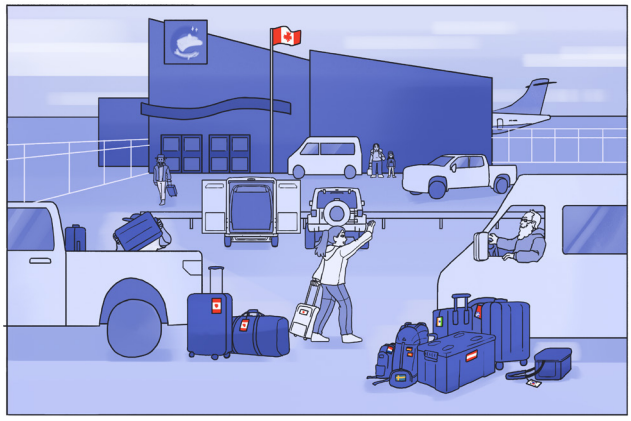
Churchill has become a resource base, where pipelines transport oil and similar products to an upgraded and extended Port of Churchill for global export. Due to decreasing sea ice on the Hudson Bay, the shipping season is extended to six months per year. This, however, results in a decline in wildlife and, therefore, tourism. The town's overall population is increasing, and the biggest employers are the healthcare sector, the port, and the military, which is back due to geopolitical developments.

Scenario 2: Growing Transportation Hub



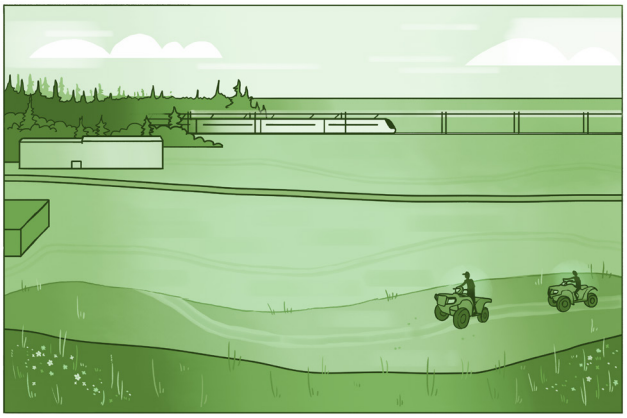
Churchill's port has been upgraded and extended to export grain to Europe and Africa, ship more bulky goods and containers, and handle increasing barge and energy carrier traffic. The Hudson Bay Railway is double-tracked, and a road was built connecting

Illustrations by Nickia McIvor



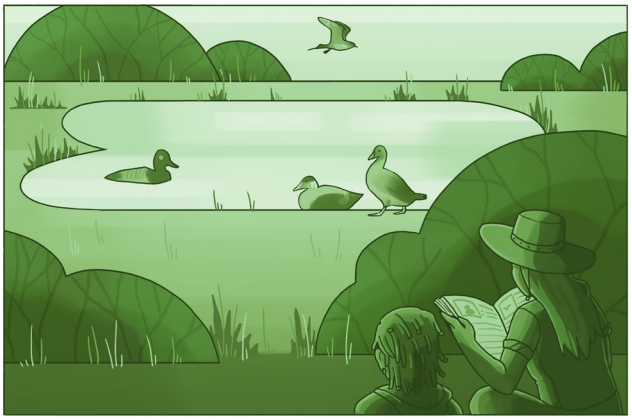
Churchill to southern towns and centers. The tourist season is continuously extended, and the airport is increasingly used. With cargo transport and tourism as pillars of economic growth, people move to Churchill to find jobs.

Scenario 3: Ecological Sanctuary



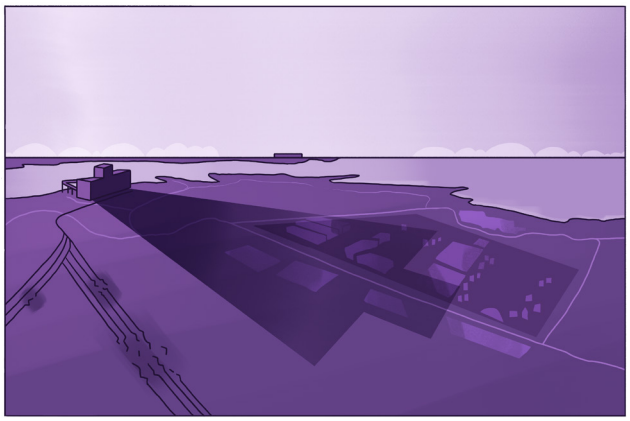
Canada has issued a ban on the construction of new pipelines and mining sites; existing national parks have been extended, and no-shipping zones have been established. This resulted in fewer ships calling at the Port of Churchill. At the same time, the town is looking for ways to increase sustainable ecotourism,

Illustrations by Nickia McIvor



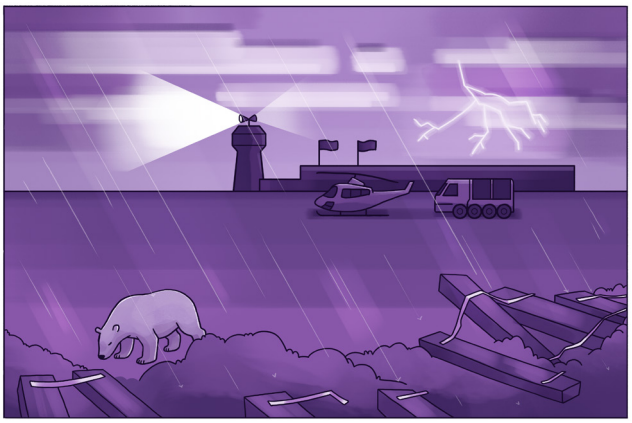
which has become Churchill's main economic pillar. The network of trails around the community are extending, and train travel via the upgraded and electrified Hudson Bay Railway is prioritized over air travel. The overall population declines and varies between high and low tourist seasons.

Scenario 4: Abandoned Land



The climate crisis is accelerating, resulting in rapid permafrost thaw and an increase in extreme weather phenomena. Polar bears and other wildlife are gone; and so is the tourism industry. Large sections of the Hudson Bay Railway are destroyed due

Illustrations by Nickia McIvor



to flooding. The unpredictable sea level makes the use of the Port of Churchill impossible. As the popu-lation declines, only the military has established a local presence for geopolitical reasons.

The Churchill workshops were well attended. At the start of the public workshop, 14 people were there, and 16 at the start of the workshop for professionals. The attendees enthusiastically discussed and evaluated the four possible future scenarios. Some of them told us that the workshops let them share thoughts with people they don't usually discuss with.

In the first part of the workshops, the participants discussed and evaluated the scenarios presented by InfraNorth.

In the second half of the event, participants sketched and shared their desirable futures. They envisioned what they would like to see in the future for themselves and for Churchill and its transport infrastructures. This task led to lively discussions and sharing of personal thoughts and ideas.

RESULTS

All discussions held during the workshops were recorded and subsequently transcribed for analysis. This analysis was conducted using two distinct methods: ethnographic content analysis (Hammersley & Atkinson, 2019) and thematic analysis (Braun & Clarke, 2008). Both methods are highly flexible in their ability to analyze qualitative data.

Evaluating Possible Futures

Capacity of Transport Infrastructure

One of the principal themes that emerged from the analysis was the capacity of local transport infrastructures to adapt to potential changes in shipping a variety of products, such as fossil fuels. Some workshop participants identified the dependence of Arctic communities on government subsidies for transport infrastructure as a significant issue in this context.

Role of Tourism

Another significant topic was the prospective role of tourism in a town that has become renowned as the "Polar Bear Capital of the World," and the manner in which this will be influenced by climate change and alterations to transportation infrastructure. Some participants were opposed to the construction of a road that would connect the town, whereas others viewed this as a necessary development to strengthen the town's tourism industry.

Impact of Climate Change

The impact of climate change, including permafrost thaw and changes in the break-up of sea ice, was a further important topic. Some participants emphasized the acceleration of climate change and the related irreversible damage to the tundra. Nevertheless, there was no consensus as to whether this was due to human impact or natural fluctuations.

Population Development & Community Sustainability

Other prominent themes that emerged from the discussions included population

development and community sustainability. Some participants expressed concern that Churchill could eventually disappear due to economic and population decline. Consequently, residents engaged in debate about economic and population growth through job creation.

Articulating Desirable Futures

In both workshops, participants sketched, drew, and discussed their desired futures for transport infrastructures in Churchill. In addition, participants filled in a questionnaire survey at the end of the workshops to anonymously share their ideas.

In their sketches, attendees expressed the desire that Churchill become a regional transportation hub once again. This would be achieved not only by building on the commercial shipment of goods and the increase of trade, but also by expanding the tourism sector and by increasing cultural exchange with neighbouring Indigenous communities. Particularly tourism was identified as a key economic driver for the community and its residents.

Conducting the scenario workshops. Photo by Philipp Budka.

Continuity

In response to the survey, attendees indicated their preferences for a future scenario in which small businesses and tourism are the primary drivers of the economy. In this scenario, the transportation of fossil fuels and the return of the military are not anticipated. The majority of participants expressed a desire to see a future Churchill where the shipping of grain and containers will again be a central aspect of the transportation business. In such a scenario, the existing infrastructure will continue to serve as the community's primary transport network. The railway is considered to be of particular importance for future transportation.

DISCUSSION

Infrastructures are inherently future-oriented, and this needs to be properly addressed (Gupta, 2018). One effective approach is to conduct future scenario workshops. The scenario workshops in Churchill facilitated an open discourse about the community's transportation future.

To facilitate further discursive exchange within the community and potentially beyond, we suggest the organization of similar events in the future.

For the purpose of social science research, the scenario workshops proved to be a valuable additional ethnographic tool for the better understanding of local infrastructural realities and futures (Budka, forthcoming).

ACKNOWLEDGEMENTS

We would like to express our gratitude to all participants of the scenario workshops in Churchill. We are indebted to the Town of Churchill, particularly Jessica Power and Jasmin Lundie, for their invaluable support. We also extend our appreciation to Nickia McIvor for her exceptional scenario visualizations. Furthermore, we are grateful to our colleagues at IIASA, particularly Nikita Strelkovskii, Dmitry Erokhin, and Nadejda Komendantova, for their contributions to the scenario narratives. This executive summary is part of the InfraNorth project and has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 Research and Innovation Programme (Grant Agreement No. 885646).

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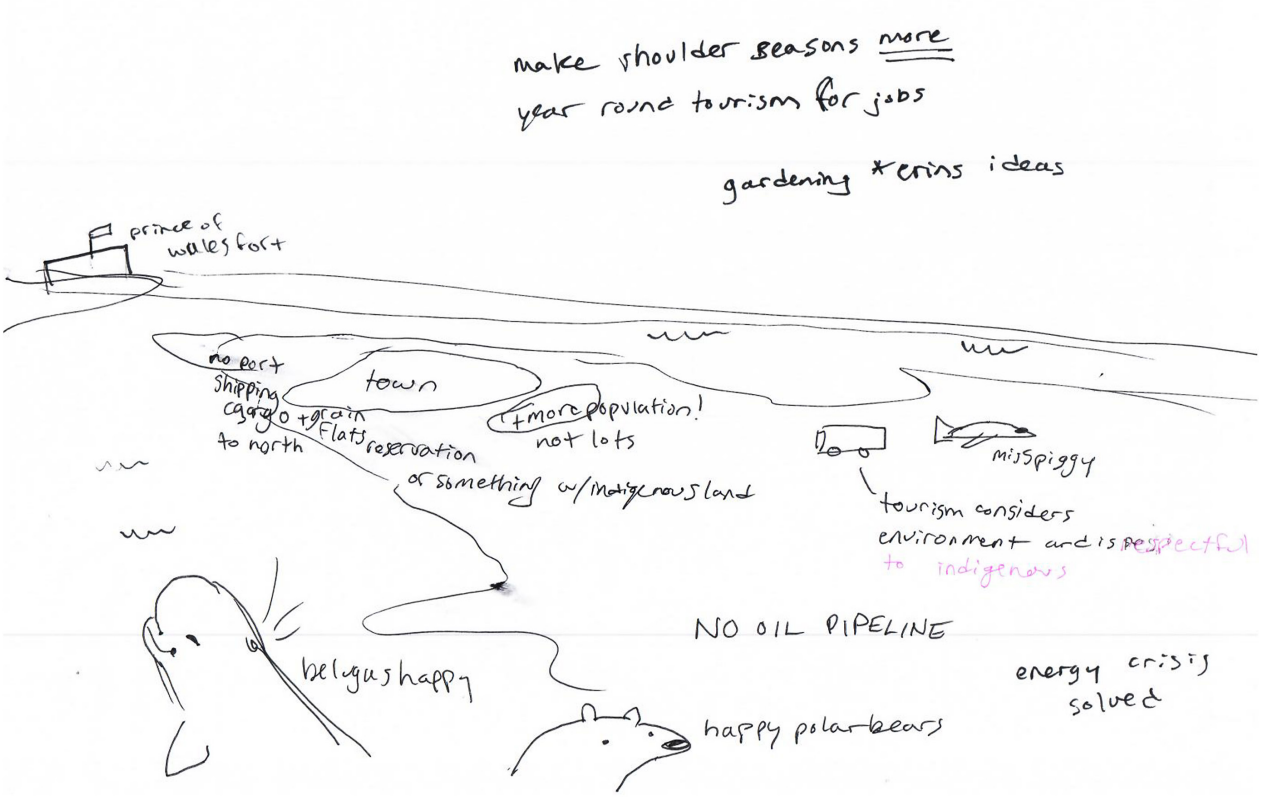
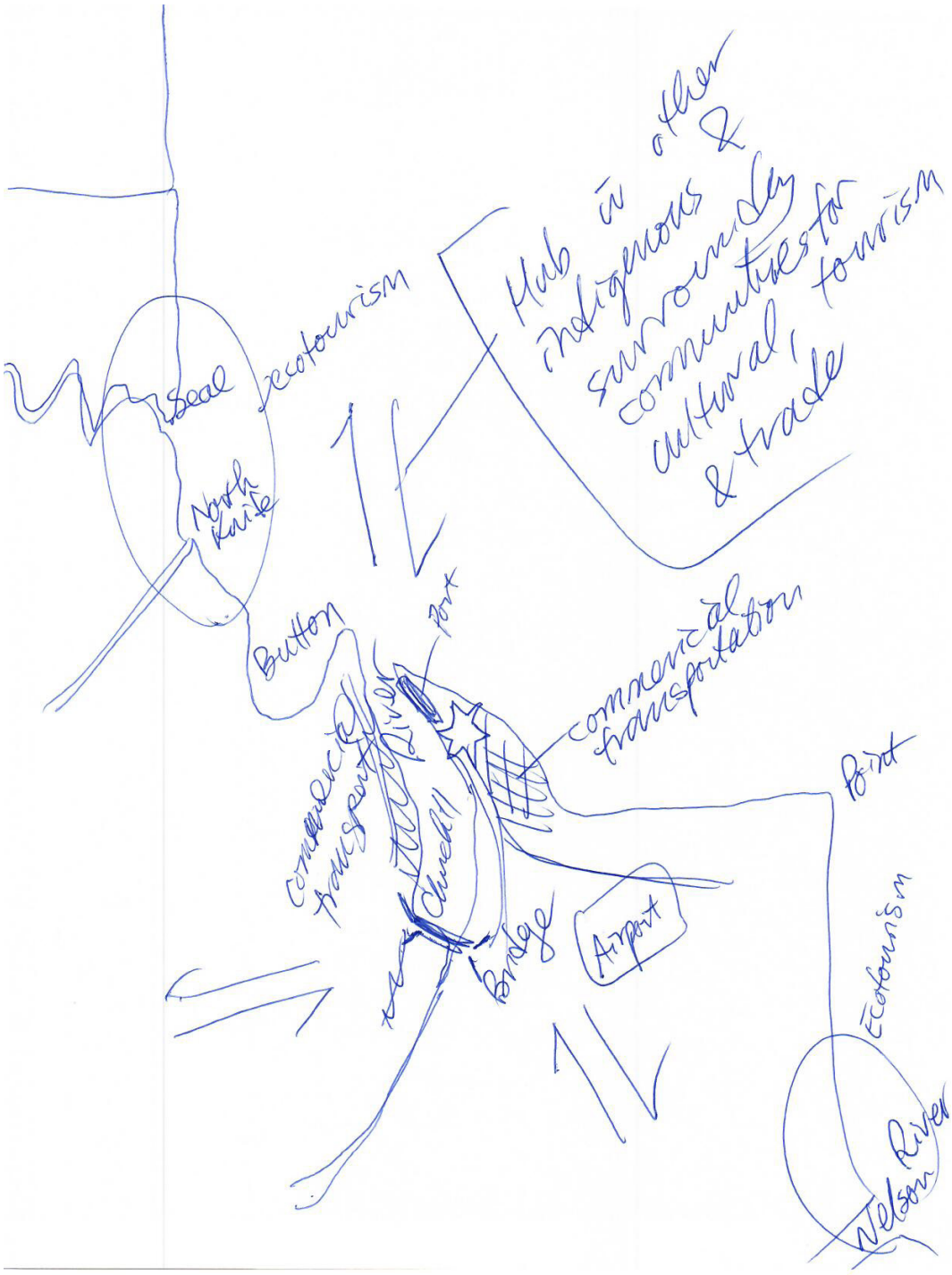
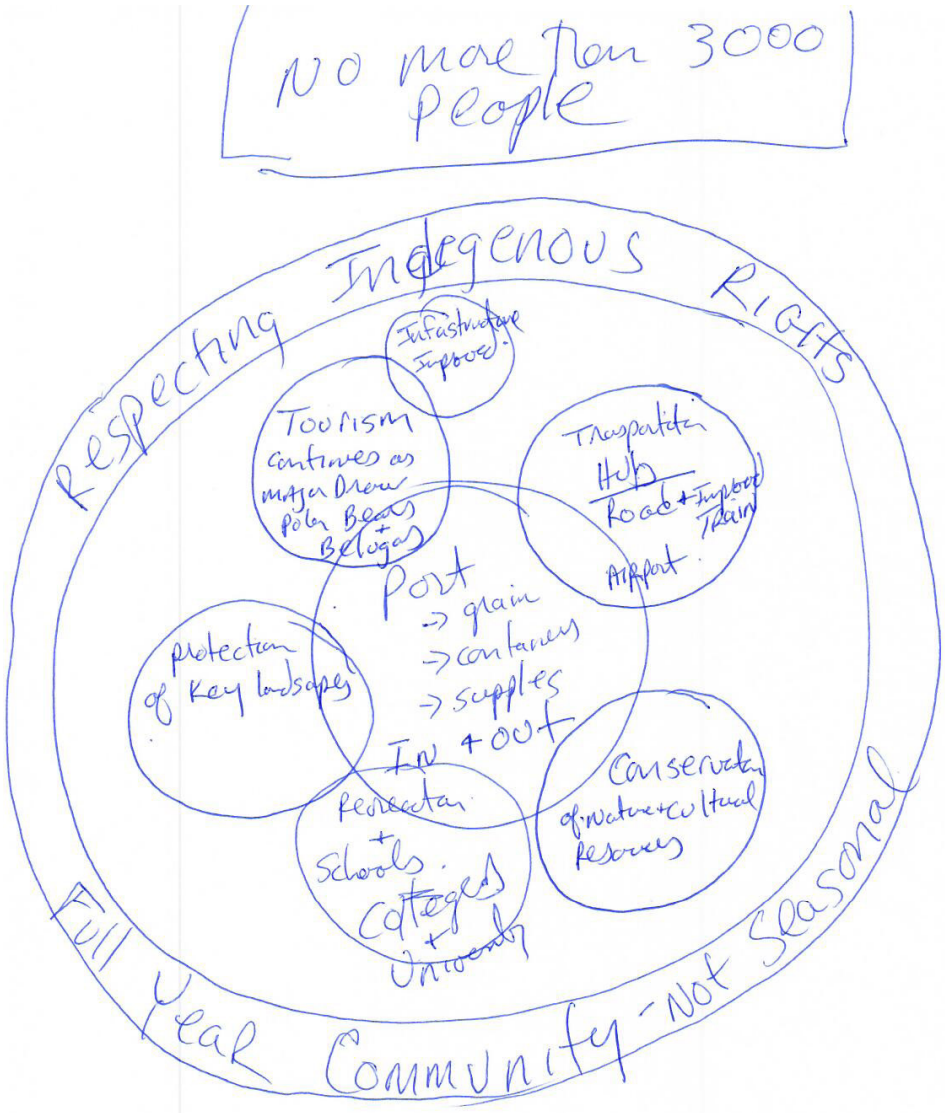
APPENDIX: DESIRABLE FUTURES

The following pages contain a selection of three illustrations created by workshop participants who were tasked with imagining desirable futures for transport infrastructure in Churchill.




Hub in other & Indigenous surrounding communities for cultural, tourism & trade
Seal
ecotourism
North Knife
Button
Port
commercial transportation
commercial transportation
River
Channel
Point
Bridge
Airport
ecotourism
Nelson River



military training School / Northern Base

ABOUT INFRANORTH

The ERC Advanced Grant Project “Building Arctic Futures: Transport Infrastructures and Sustainable Northern Communities” (InfraNorth) is being realized at the University of Vienna and runs from January 2021 to December 2025. It explores how residents of the Arctic engage with transport infrastructures and their intended and unintended local consequences.

Our challenge is to understand whether existing and planned transport infrastructures support permanent human habitation and sustainable communities in the Arctic, or whether they will strengthen a trend of substituting permanent residents with “temporaries” like shift workers, tourists, and military personnel.

Or put in another way: What is the role of transport infrastructures in sustaining northern communities?

InfraNorth adopts a relational affordance perspective, which documents the entanglements of local residents and transport infrastructures. Our approach combines ethnographic fieldwork with mapping, future scenario workshops and archival research. Quantitative population data and a survey about the role of transport infrastructures are used to upscale our research from local communities to regional and pan-Arctic levels. In doing so, InfraNorth contributes locally informed results to critical conversations about Arctic futures.

InfraNorth - Building Arctic Futures

SCENARIO WORKSHOPS

In collaboration with

International Institute for Applied Systems Analysis (IIASA)

Supported by

Town of Churchill

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