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Title: *Northern Innovation in Scandinavia: Lessons for the Circumpolar World*

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Innovation in science and technology is currently transforming our modern economy and societies in unprecedented ways. Information and communication technologies, biotechnology, medical devices and more are having a major impact on the economy worldwide. These discoveries and developments have accelerated oil and gas exploration, transformed mining activities and forestry operations and alerted the very foundations of commerce and industry. Innovation policies were developed by national governments to further invest in this progress, to encourage investments in the private sector and enhance the partnership of industry and research institutions to create the foundation for a knowledge and innovation economy.

The project is focusing specifically on northern innovation and postulates

a) the North is not fully engaged in the national and international innovation initiatives and in the development of applications in science and technology for its region and

b) a lack of national investments in northern science and technology applications is visible.

Regions like the Provincial North in Canada are due to their remoteness, limited population numbers, lack of infrastructure and institutions that would drive a knowledge economy and innovation initiatives mostly focused on other sectors. Massive resource development like in the oil sands in Northern Alberta, uranium in Northern Saskatchewan or the "Ring of Fire" in Northern Ontario are creating increasingly economic interest in this region. However, for a sustainable future, a more diversified economy has to be created and a participation in innovation and the growing knowledge economy is necessary for its communities. Northern Scandinavia with its innovation centres such as Luleå (Sweden), Tromsø (Norway) and Oulu (Finland) is a model region that shows that an active engagement and participation in the science and technology innovation-based economy in the North is possible. The transformation of mining towns like Kiruna (Northern Sweden) to develop a more diversified economy that is increasingly engaged in the knowledge economy provide lessons for other Northern regions. The project is based on a multi-year, international and multi-institutional collaborative research project on northern innovation. It tries to identify some of these lessons and develop recommendations for the circumpolar world in particular to identify the ways and means of



strengthening Northern engagement with innovation generally, and to explore ways in which emergent technologies in fields as diverse as health care, education, energy offsets, governance, mineral exploration and development, and food security might significantly alter, in a positive way, the life opportunities for residents of the Far North.