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ARCTICCONNECT: A PLATFORM FOR KNOWLEDGE SHARING AND COLLABORATION

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ArcticConnect, housed at the Arctic Institute of North America (AINA), at the University of Calgary, is a network-enabled platform (NEP) for realizing geospatial referencing of information about the Arctic system derived from research, education, and private sector activities in the Arctic and Subarctic. An innovative platform for Arctic research and information sharing, ArcticConnect builds on existing data and information from around the pan-Arctic. ArcticConnect pools biological, ecological, technological, and social data from disparate sources ranging from human observations, sensors, research stations, to publications, grey literature, and historic archives. This will enable data sharing and collaborative analysis at multiple scales. ArcticConnect will also enable display of heterogeneous data and information within a coherent geospatial platform consisting of four major components:

- Arctic Web Map (AWM) will provide a web-based mapping tool based on accurate polar projections. This Arctic-specific web mapping tool will offer researchers scientifically accurate map projections for visualization and analysis, a function that is critical for Arctic system research but missing in existing web mapping platforms; it will also provide a visually appealing tool for education and outreach to a wider audience. This mapping tool will be open access, collaborative, and usable by other Arctic mapping platforms.
- Arctic Sensor Web (ASW) will enable research stations around the pan-Arctic to connect their sensors, including those that provide near real-time data, to a cloud service for visualization, information sharing, and collaborative analysis.
- Arctic Scholar (AS) will enable researchers, educators, interested private sector entities, government agencies, and the general public to access and share Arctic data and information contained in assorted formats including publications, grey literature, research licenses, photo   archives, art, field notes, and project metadata from arctic field stations.
- Arctic BioMap (ABM) will enable members of the scientific community and northern residents to contribute observations on arctic wildlife for the purpose of biodiversity and wildlife health monitoring, assessment, research, management and education.

ArcticConnect is unique because it captures data at multiple scales generated from a host of sensors, from human observers, from field experiments and research stations, from satellites and from publications, reports, photographs and even artwork. It will enable networking and interoperability of disparate datasets, and make information available across multiple applications and devices.   It will also act as a base that can accommodate the networking and collaboration of other Arctic data and information platforms.