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Theme 1: Design, Optimization and Implementation of the Observing System

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Poster title (brief) Optimizing Arctic Observing Through Interoperable Information Sharing Across Networks

Abstract - text box

A fundamental challenge exists for assessment, planning, integration, and synthesis: the diverse and distributed nature of observing networks and observing systems. For example, which networks and monitoring sites are capturing measurements necessary for any given analysis? Are there disciplinary or geographic gaps? Overlaps? What are the current capabilities? At this time, it is impossible to strategically assess across relevant networks. True, recent efforts have made headway (e.g., by SAON CON, EU-PolarNet, INTAROS, AOV, AOOS, and others). However, most inventories and portals are limited in scope, and almost none share information in a way that can be harmonized and aggregated for a necessarily comprehensive perspective. A solution is that networks share vital observing-related details that go beyond the dataset level. To this end, we recommend formation of an "Observing Network Interoperability Working Group", established with broad representation and the goals of: 1) refining and promoting community-based standards for "network-level", "project-level", and "site-level" metadata; 2) adoption of controlled vocabularies for SBA's, EV's, and other metadata elements; and 3) establishment of compatible web service endpoints to make such metadata Findable, Accessible, Interoperable, and Reusable (FAIR). Indeed, instead of reinventing the wheel each time, many networks would appreciate taking advantage of established approaches to more efficiently populate databases, aggregate metadata for identified target audiences, or showcase organizational contributions. In these ways, coordination and collaboration can reduce effort while helping to integrate the summed contributions of multiple networks.