Polar Connections Interoperability Workshop

The importance of data and its proper management are increasingly being recognized by

governments, the science community, and society. The polar science community has unprecedented opportunities for science based on open, networked, digital, and ubiquitous communication technologies. This presents an urgent need for the community, Arctic residents, and other stakeholders to establish a clear global vision, strategy, and action plan to ensure effective stewardship of and access to valuable Arctic and Antarctic data and information resources. This includes meeting the needs of society and science through promotion of open data and effective data stewardship, establishing sharing and interoperability of data at a variety of levels, developing trusted data management systems, and ensuring long-term data preservation.

The International Polar Year 2007-08 initiated significant momentum with respect to polar data management. More recently, a number of meetings and reports have clarified the issues and priorities in this domain. Specifically, the Second Polar Data Forum held in October of 2015, the Arctic Observing Summit (<http://www.arcticobservingsummit.org/aos-2016-conference-statement-0>) and a soon to be published report from the European Space Agency’s Polaris project have made significant contributions to the field. In all cases, data and system ***interoperability***has been identified as one of the primary goals and challenges of interest to the broader polar and global community. Interoperability can be defined as properties of data and information systems that allow them to work and share with other information products or systems, present or future, without unintended restrictions. Moving towards interoperable polar information systems that are connected to the global information system is important and urgent considering the rate of environmental and social change being observed in the Polar Regions.

Data and information systems are evolving rapidly and there are many interrelated , maturing and new models and paradigms (e.g. Cloud Computing, Big Data, Semantic Web). Understanding and harnessing the most appropriate models and paradigms is a high priority for the polar data community and decisions made now may have implications for decades to come.

The Arctic Data Committee (http://arcticdc.org), a body of the International Arctic Science Committee and the Sustaining Arctic Observing Systems Program and the Standing Committee on Antarctic Data Management, along with Polar View Earth Observations and other co-sponsors[[1]](#footnote-1) are proposing the Polar Connection Interoperability Workshop. In response to recommendations from the community, this workshop will bring together representatives from Arctic communities and Indigenous organizations, polar and global data centers, standards bodies, researchers and other relevant stakeholders to make tangible progress on establishing interoperability strategies and mechanisms. The workshop will focus on a set of key themes that will be addressed by small working groups tasked with providing concrete strategies, recommendations and technical advice. Thematic areas currently identified include:

1. *Cloud data and computing platforms*
2. *Data discovery and metadata*
3. *Data as a Service*
4. *Semantic interoperability*
5. *Representing and sharing Indigenous Knowledge and community based observations*
6. *Data representation and visualization*
7. *Establishing sustainable systems (business models)*
8. *Connecting to the global data and information ecosystem*

Participants will be required to review a set of background material to ensure that they are familiar with the current state of the art and can work productively during the workshop. To promote efficiency and effectiveness and in keeping with logistical constraints, participation will be limited and will be based on invitation and nomination. Results of the meeting will be formalized and widely promoted to inform future development of a polar data system that is an integral part of the global system.

Although a decision has not been taken, the workshop will be tentatively held at the European Space Research Institute, Frascati, Italy in mid-late fall 2016. The workshop will be held in conjunction with the third meeting of the Arctic Data Committee.







[Additional Logos Here as Confirmed]

1. At the time of writing representatives from the **GEO Cold Regions Program (GEOCRI),** the Open Geospatial Consortium, the European Space Agency, and others have been approached about co-sponsorship and have responded with great interest. [↑](#footnote-ref-1)