



Carleton
UNIVERSITY

Geomatics and Cartographic
Research Centre

CCADI



A Brief History of the Polar Data Ecosystem: past, present and future

Peter L. Pulsifer (Carleton University, NSIDC U Colorado)

Chair, IASC-SAON Arctic Data Committee (ADC)

Sandra McCubbin (GCRC, CCADI)

Marten Tacoma, Stein Tronstad (ADC Co-Chairs)

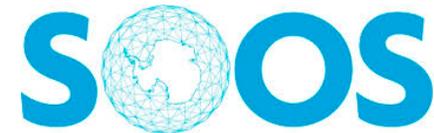
Pip Bricher, SOOS

Anton Van de Putte, SCADM

Many others



CFI FCI



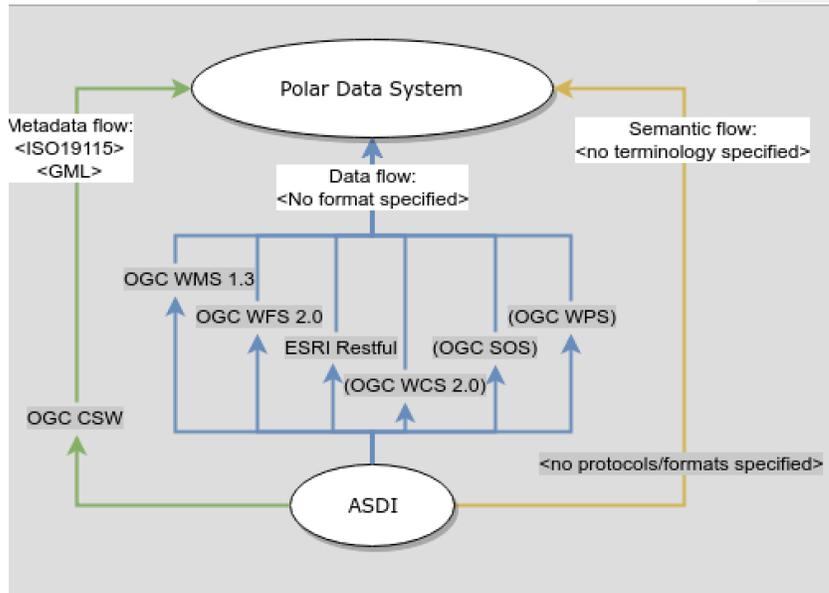
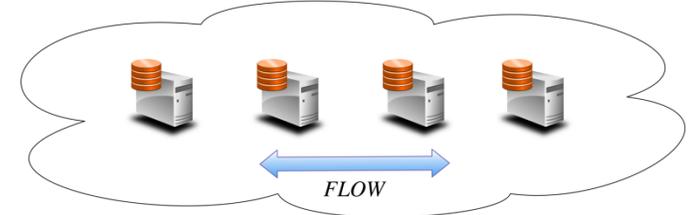
SOUTHERN OCEAN OBSERVING SYSTEM

Polar Data Systems



- Policy & Decision Makers
- Researchers
- Indigenous Organizations
- Communities
- Other Projects
- International Community
- Funders

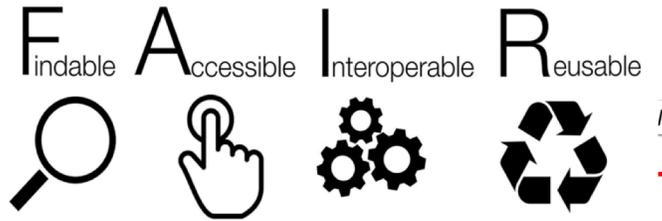
USERS



Notes

- No specific information on how but indication on relationship USGS, SWEDEN, IHO, NR explanation provided
- ASDI addresses governance relationships and standards.
- Comment on ISO19115 key readable in photo.
- Photo identifies GML for dis metadata exchange, but no comment on metadata and not put in context.
- For OGC WPS projection su listed.
- SKART is listed for embedd pages under data flow, but n references given.
- Protocols etc listed in parantheses are plans.
- Relations to INSPIRE and GMES are indicated in image, but not explained.
- Seems like ASDI hub services are offered through ASDI GeoPortal.

A screenshot of the schema.org website. It features the 'schema.org' logo, a 'Welcome to Schema.org' message, and a brief description of the project as a collaborative community activity for creating data vocabularies. It also includes a 'get started' link.



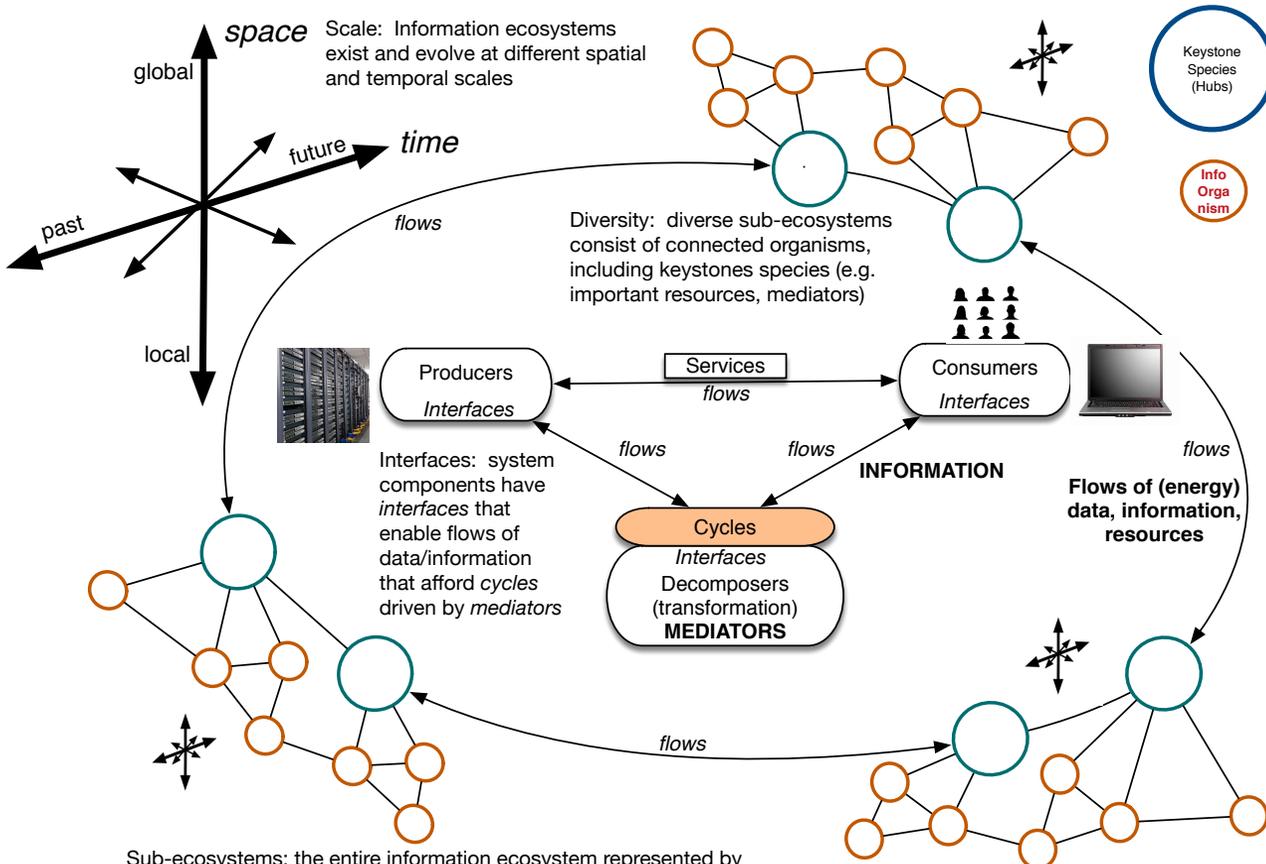
NG

Google Dataset Search Beta

Try [boston education data](#) or [weather site: noaa.gov](#)

[Learn more](#) about including your data sets in Dataset Search.

Polar Data Ecosystem



Sub-ecosystems: the entire information ecosystem represented by Figure 12.1 is composed of sub-ecosystems (represented by individual network diagrams) with their own space-time dimensions. Information and resources may flow between ecosystems.

“a system of interrelated and interdependent human actors, institutions, norms and practices (including standards), technologies, information objects, relationships and the broader socio-technical environment in which [the ecosystem] exists”



Understanding the Arctic and broader polar environmental and social systems requires constant monitoring and access to the best available sources of data and information. This is particularly challenging in the Arctic region due to the complexity of the region in the face of significant environmental, economic and societal change. Identifying, documenting and, understanding the Arctic component of the global information system will allow us to target gaps in information resources, as well as guide the ongoing development of the increasingly interconnected global information system in support of governance, research, livelihoods and myriad other applications.

The Mapping the Arctic Data Ecosystem project aims to use the established conceptual framework of information ecology (IE) as an analytical tool to help organize ideas and comprehend complexity of the Arctic Data Ecosystem. Here we define a data ecosystem as a system of interrelated and interdependent human actors, institutions, norms and practices (including standards), technologies, information objects, relationships and the broader socio-technical environment in which it exists. This website provides interactive visualizations of different elements of the Arctic and Antarctic data ecosystem(s). This initial prototype allows users to filter and visualize a database of nodes and relationships in the data ecosystem. As the database grows, additional analysis functions will be added.

Task lead: Peter Pulsifer, NSIDC/ELOKA, University of Colorado, USA

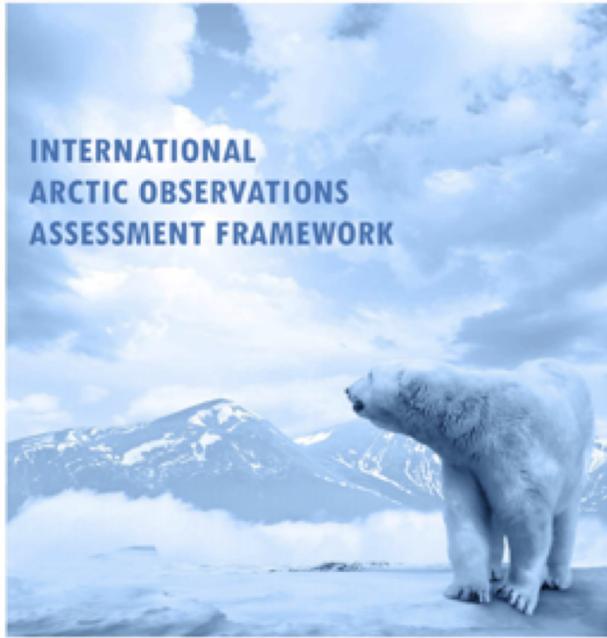
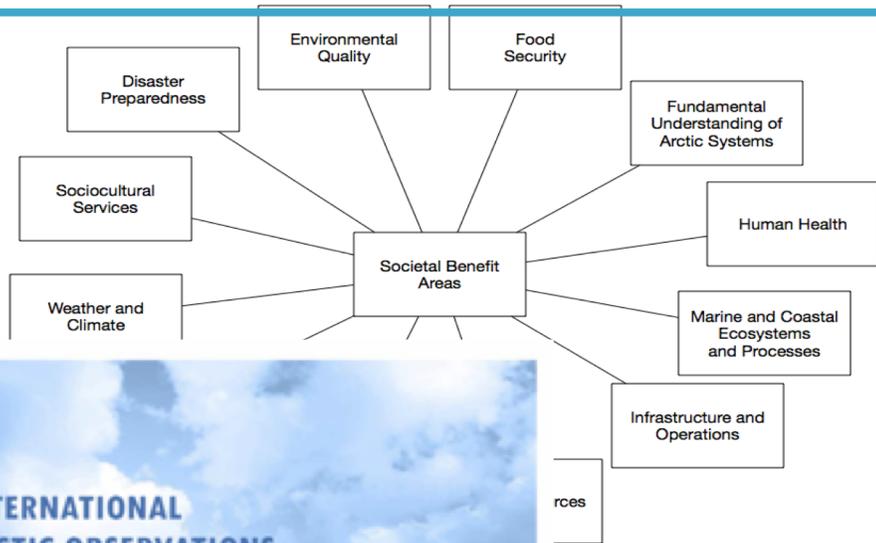


The Mapping the Arctic Data Ecosystem project is led by the Arctic Data Committee and is developed through partnership with other organizations.

The Arctic and Polar data ecosystem is made up of many programs, projects, organizations and communities at many scales from international to local.

Pulsifer, P.L. Kontar, Y., Berkman, P.A., Taylor, D.R.F. (2019). Chapter 12. Information Ecology to Map the Arctic Information Landscape. In Sustainability of Shared Marine Regions. Volume 1. Governing Arctic Seas: Regional Lessons from the Bering Strait and Barents Sea, edited by Oran R.Young, P.A. Berkman, P.A. and Alexander N. Vylegzhanin. Springer. In-Press

Societal Priorities, Observing & Data



Observations Assessment Framework. IDA Science and Technology Policy Institute, Oslo, Norway, 73 pp



Arctic Observation Value Tree Analysis
- assessment for physical and oceanic variables

Mikko Strahlendorff, FMI
thanks to IDA STPI and SAON input

<https://www.skepticalscience.com/>





Polar Data Organizations

Cooperation from Local to Global

Global

Local

Logos:

- GEO
- RDA (RESEARCH DATA ALLIANCE)
- GCW (Global Cryosphere Watch)
- SCADM
- GEO COLD REGIONS
- YOPP (YEAR OF POLAR PREDICTION)
- AOS (ARCTIC OBSERVING STRATEGY)
- SOOS
- esa
- ARCTICDATA COMMITTEE
- IASC SAON
- INUIT
- ARCTIC PORTAL
- Norwegian Meteorological Institute
- EU ARCTIC PROJECT CLUSTER
- UArctic
- NIOZ
- IARPC COLLABORATIONS
- EU-PolarNet
- INTAROS
- POLAR DATA CATALOGUE
- CCADI
- NIPR
- Research Institute of China
- FMI
- NSIDC
- SMARTICE
- Carleton University Geomatics and Cartographic Research Centre
- NORDECO
- PISUNA
- ELOKA
- sd
- SICU

Photographs:

- Large conference room with many people seated at tables.
- Meeting with people around a table.
- Group photo of a large number of people standing together.
- Meeting around a table with a whiteboard.



<http://arcticdc.org>



Picture by NASA / Kathryn Hansen

ADC News & Events

Polar Data Forum III - November 2019 - Helsinki, Finland

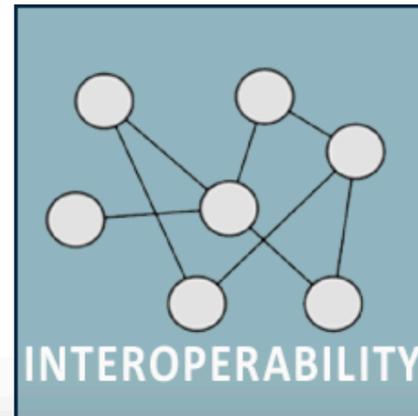
13 Mar 2019

Polar Data Architecture workshop 28-30 November 2018, Geneva, Switzerland

24 Aug 2018

Arctic Observing Summit, 24-26 June 2018, Davos, Switzerland

3 Nov 2017



SCADM - SOOS

The image shows a screenshot of the SCAR website. At the top left is the SCAR logo, which includes the text "INTERNATIONAL SCIENCE COUNCIL" and "SCIENTIFIC COMMITTEE ON ANTARCTIC RESEARCH" around a map of Antarctica. To its right is the text "Scientific Committee on Antarctic Research". Below this is a navigation bar with a search box labeled "Custom Search" and a menu with items: HOME, ABOUT US, SCIENCE, POLICY, PRODUCTS, and CAPACITY BUILDING. A dropdown menu is open under "PRODUCTS", listing "SCAR Library", "Data & Databases", and "Maps". Below the navigation bar is a row of content tiles: "SOOSmap" (with a map of Antarctica), "DueSouth" (with a map of the Southern Ocean), "Data Portal" (with a data visualization), "Get Involved" (with "Regional Working Groups" and "Indian Sector", "West Antarctic Peninsula and Scotia Arc", "Antarctic Peninsula and Sub-Antarctic Islands Working Group" listed), "Calendar" (with a calendar grid), and "News" (with "WASPA Workshop" and the text "Next WASPA Regional Working Group Workshop will be held as a side meeting at SCAR2020 on 1st August 2020, in Hobart, Australia.").

SCAR Scientific Committee on Antarctic Research

SOOS SOUTHERN OCEAN OBSERVING SYSTEM

Custom Search

HOME ABOUT US SCIENCE POLICY **PRODUCTS** CAPACITY BUILDING

SCAR Library
Data & Databases
Maps

Publications, links and data of interest to the Antarctic data community.

+ Publications

+ Data

<https://www.scar.org/data-products/maps/>

[aq/data/soosmap](#)

SOOSmap

DueSouth

Data Portal

Get Involved

Regional Working Groups

Indian Sector [More Info](#)

West Antarctic Peninsula and Scotia Arc [More Info](#)

Antarctic Peninsula and Sub-Antarctic Islands Working Group [More Info](#)

Calendar

News

WASPA Workshop

Next WASPA Regional Working Group Workshop will be held as a side meeting at SCAR2020 on 1st August 2020, in Hobart, Australia.

Polar Cyberinfrastructure & Orgs

- [EU-PolarNet](#)
- [GCW](#)
- [Arctic SDI](#)
- [INTAROS](#)
- [Polar View](#)
- [GEOCRI](#)
- [AMAP, \(AC WGs\)](#)
- ...

The collage features several key elements:

- Polar Data Catalogue:** A website interface with a search bar and a list of data sets.
- Polar View:** A web-based map interface showing the Arctic region with various data overlays and a sidebar with search and filter options.
- Antarctic Master Directory:** A website interface with a search bar and a list of data sets.
- Arctic Data Center:** A website interface with a search bar and a list of data sets.
- Memorandum of Cooperation:** A document titled "Memorandum of Cooperation" between the SCAR Standing Committee on Antarctic Data Management and the IASC-SAON Arctic Data Committee. The document outlines the mandate of SCADM and the purpose of the ADC.
- Arctic Data Committee:** A banner for the Arctic Data Committee with logos for IASC SAON, ESA, WMO OMM, SCAR, Polar View, EU-PolarNet, SPOOS, GCW, GEO GROUP ON EARTH OBSERVATIONS, polar tep, YOPP, and IARPC.

Screen capture complements of Polar View

<https://www.polardata.ca/>

<https://gcmd.nasa.gov/KeywordSearch/Home.do?Portal=amd>

<http://nsidc.org>

Indigenous Knowledge and Information Systems

- Growing group actively working to share Indigenous Knowledge, information and data
- Progress needed on bridging worldviews, concepts and semantics represented in information systems
- Indigenous Peoples must lead engagement and work with their knowledge – information sovereignty important

<http://www.inuitknowledge.ca/>

<http://www.arcticcbm.org>

<http://itqa.ca/>

<http://www.inuitcircumpolar.com/community-based-monitoring.html>

<http://nunaliit.org/>

<https://www.smartice.org/>

<http://trailmarksys.com/>

<https://arcticeider.com/siku>

Global Cyberinfrastructure & Orgs

- [WMO](#)
- [GEO](#)
- [GOOS](#)
- [IODE](#)
- ...
- [RDA](#)
- [WDS](#)
- [CODATA](#)

GEO GROUP ON EARTH OBSERVATIONS

Search Results: Number of results: 4211

Filters: KEYWORD, FORMAT, SOURCE, PROTOCOL, ORGANISATION

Resource preview not available: Monthly average polar sea-ice concentration - USGS-D05-27 (Organisation: NASA Global Change Master Director)

Resource preview not available: IDCSIA - IceBridge L4 Sea Ice Freeboard, Snow Depth, and Thickness (Organisation: NSIDC)

Visible 1-10 of 4211

GEOS Portal

Network diagram showing connections between organizations: GEO BON, BLUE PLANET, GECO, GFOI, GEO-GNOME, GSNL, GEO-DARMA, Regional GEOS, GEOGLAM, and GEOS.

OceanDataPortal
Seamless access to ocean data

Home Overview News Partnership Centre Information Data access Data Network Training FAQ Contacts

- WELCOME TO THE WMO CO

WORLD METEOROLOGICAL ORGANIZATION
WEATHER CLIMATE WATER

Home

Planning & Monitoring
PROGRAMMES
GFCS
AMCOMET
Publications
Library
Learning
Meteterm
Youth

This website now *extranet.wmo.int* launched. Below other useful links

WMO Tech

- Commission f
- Commission f
- Commission f
- Commission for Basic Systems - CBS
- atology - CCI
- rology - CHy
- ruments and Methods of Observation - CIMO
- mmission for Oceanography and Marine Meteorology - JCOMM

Latest news

IODE OCEAN DATA PORTAL

HOME COMMUNITY DATA SERVICES DISCLAIMER

Search

Latest updates

- 11 TSP Data - Southern Ocean, July 2019
- FS_20 Aug 2017 01:50:05 GMT
- Surface Drifter Data
- FS_20 Aug 2017 01:50:14 GMT
- Recent Canadian CTD and bottle profiles
- FS_20 Aug 2017 02:00:01 GMT
- Atlantic Line Monitoring Program (ALMP) data
- FS_20 Aug 2017 01:51:04 GMT
- 11 TSP Data - Atlantic Ocean, September 2019

RDA

ABOUT RDA GET INVOLVED GROUPS RECOMMENDATIONS & RECORDS RDA FOR DISCIPLINES PLANNERS EVENTS NEWS & MEDIA PARTNERS

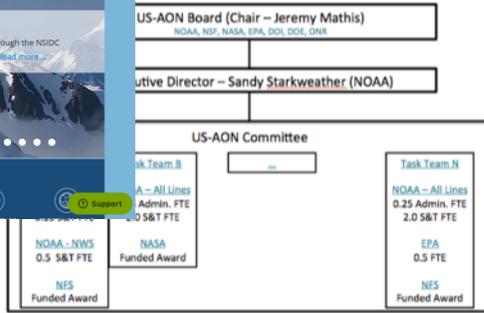
News

- Call for the RDA Europe Science Workshop 2018**
14 October 2016
The RDA Europe project is involved in co-organising the series of RDA Europe Science Workshops. Read more
- Building the European Open Science Cloud - a reality by 2020**
12 October 2016
The High Level Expert Group on the European Open Science Cloud (HLEG-OSCC)
- 1st RDA WDS Collaboration Meeting 8-9 June 2016, Nottingham, UK**
08 Jun 2016, 09:00 to 09 Jun 2016, 18:00
RDA WDS Collaboration meetings have been held since the first RDA Working Group were formed. Read more
- 1st RDA WDS Collaboration Meeting 8-9 June 2016, Nottingham, UK**
14 Jun 2017, 09:00 to 15 Jun 2017, 18:00
The Science Information Lab and the Digital Repository of Ireland are pleased to announce that they will host

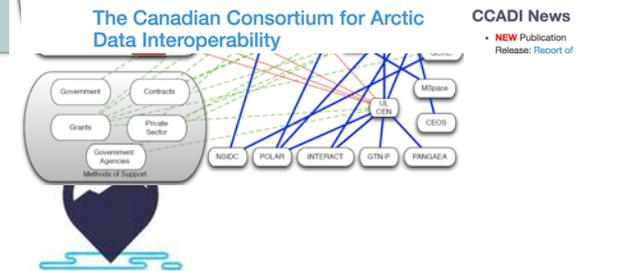
Request for comments

Q: Schrodinger Exchange Working Group Call for Comments
To sign up for an 07 October 2016

Regional and National Organizations (examples)



Many other agencies: **CCADI**, NRCan, EC, DFO, etc.



INTAROS



BLUE ACTION



Polar Data Events

Following conversations at the Polar Data Planning Summit in Boulder, and the Polar Data and Systems and Architecture Workshop in Geneva in 2018, we are pleased to announce that the Third Polar Data Forum (PDF III) will be hosted by the [Finnish Meteorological Institute](#) at their Dynamicum campus in Helsinki from November 18th to 22nd, 2019. PDF III will be co-organized with regional partners including the [INTAROS project](#) in conjunction with the [EU Arctic Cluster](#), the [Royal Netherlands Institute for Sea Research](#), and other European organizations. The Forum will be co-convened by the [IASC-SAON Arctic Data Committee](#), [Southern Ocean Observing System](#), [Standing Committee on Antarctic Data Management](#), the [World Data System](#) and other organizations engaged in polar data management.

PDF III will be a two day conference style meeting in support of information exchange, with the remainder of the week using a "hackathon" format that will build on the development work done in Boulder, Geneva and other related meetings.

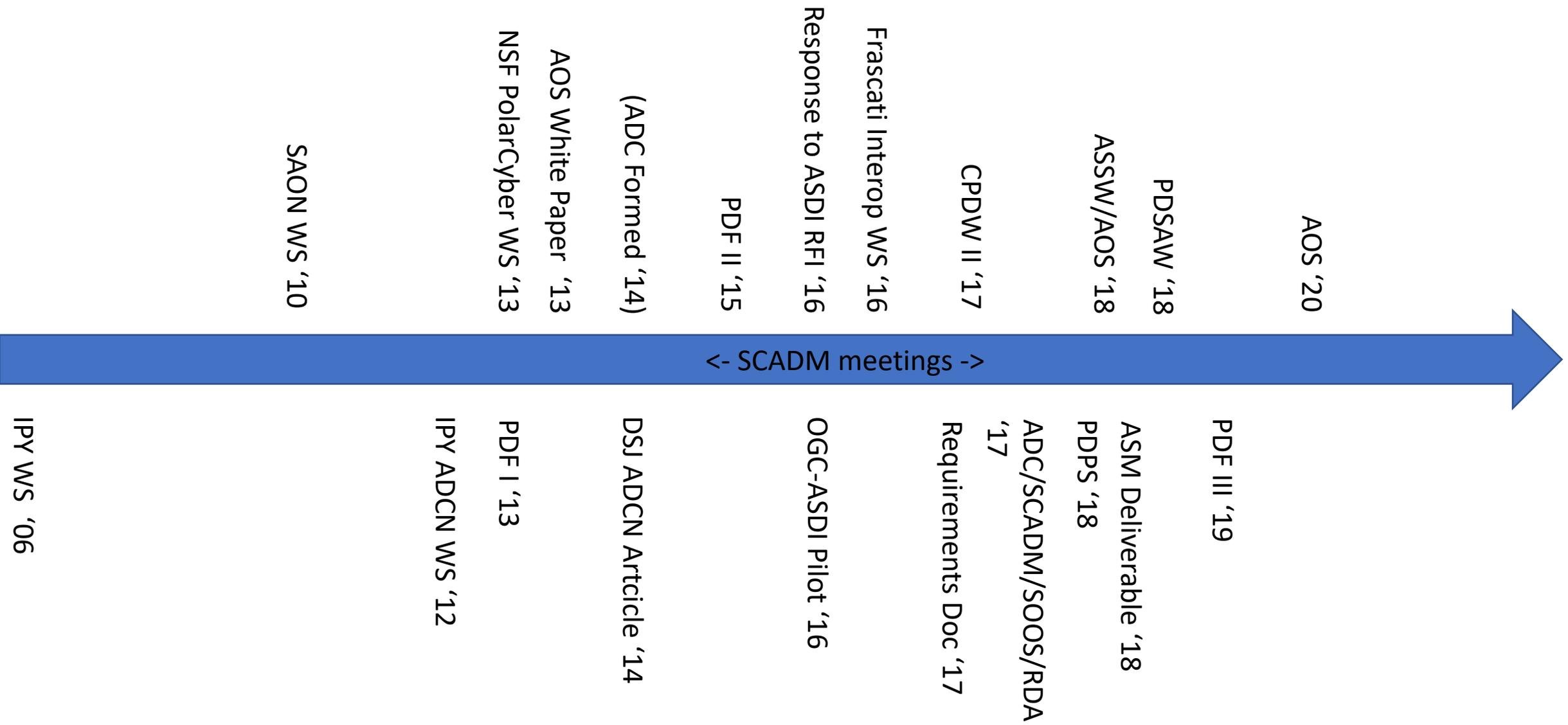
Third Polar Data Forum

- Week of 18 November 2019, FMI HQ, Helsinki, Finland
- 2 days plenary ; 3 days "hackathon"
- Convened by ADC, SOOS, SCADM, WDS, CCADI, AOS, GCW others
- Hosted by FMI, NIOZ, INTAROS, others
- General knowledge sharing +
- Concrete activity/progress on:
 - Federated search
 - Semantics
 - Data interoperability
- Aiming for detailed materials for AOS, ASSW, ICASS, ASM III etc.



<https://polar-data-forum.org>

Key Event Timeline



ASM2 Deliverable Statement

Sub-Theme 2: Implementing and Optimizing a Pan- Arctic Observing System



Arctic Observing Summit (AOS) 2018 Statement and Call
August 24, 2018

Working Group 4: Participants of this group will focus on the role of **data management** in system implementation.

Co-chairs: Dr. Peter Pulsifer (National Snow and Ice Data Center); Dr. Oystein Godoy (Norwegian Meteorological Institute)

Rapporteur: Dr. Anja Rosel (Norwegian Polar Institute); Ms. Shannon Christoffersen (University of Calgary).

Thematic Working Group members: Dr. Paul Berkman (Tufts University); Dr. Maribeth Murray (University of Calgary); Dr. Roberta Pirazzini (Finnish Meteorological Institute); Ms. Sarah Marie Strand (The University Centre in Svalbard); Mr. Mikko Strahlendorff (Finnish Meteorological Institute); Dr. Taneil Uttal (National Oceanic and Atmospheric Administration).

Title: Developing an architecture for an international, interconnected arctic data system

Funding Programme and/or Organisation

Sustaining Arctic Observing Networks (SAON)

Coordinating organisations and main contact person

Description of the deliverable

- The Arctic Data
- Standing Comm
- Southern Ocean

Main contact person
Colorado, Boulder,

Arctic societies, science and services are entering a new era that increasingly require cross-cultural, interdisciplinary integration of data to provide critical understanding and products. These needs require an integrated Arctic data system that is not only part of the global system, but which also allows exchange and usage of data between disparate data systems. Such a data system will allow enhanced understanding that is critical for mitigating risk to humans and infrastructure, reducing costs of adaptation and development, and supporting much needed research that spans disciplines and knowledge systems, including science and Indigenous Knowledge.

Data are an integral element in the observing system value chain. Without a data system that makes well documented data accessible, many kinds of observations are ephemeral and their value is limited. As such, we must ensure that the overarching observing



Analysis of Events

Reports Analysed to Date

- Report 1: IPY Data Management Workshop (2006)
- Report 2: SAON Data Management Workshop Report (2010)
- Report 3: IPY Arctic Data Coordination Network Workshop minutes (2012)
- Report 4: Report on Workshop on Cyberinfrastructure for Polar Sciences (2013)
- Report 5: International Forum on Polar Data Activities in Global Data Systems Communique (2013)
- Report 6: Second Polar Data Forum Communique (2015)
- Report 7: Data Management for Arctic Observing: A Community White Paper (2013)
- Report 8: Response to the Open Geospatial Consortium Request for Information on Arctic Spatial Data by the Polar Data Community (2016)
- Report 9: OGC Arctic Spatial Data Pilot Phase 1 Report (2016)
- Report 10: Polar Data and Platform Interoperability Requirements (2017)
- Report 11: Developing an architecture for an international, interconnected arctic data system, SAON (2018)
- Report 12: Report of the 2nd Canadian Polar Data Workshop (2017)
- Report 13: Summary Report: Polar Data and Systems Architecture Workshop (2018)
- Report 14: Polar Data Planning Summit - Context and Scenarios Minutes (2018)

Matrix and Other Analyses

			Re po rt 1	Re po rt 2	Re po rt 3	Re po rt 4	Re po rt 5	Re po rt 6	Re po rt 7	Re po rt 8	Re po rt 9	Re po rt 10	Re po rt 11	Re po rt 12	Re po rt 13	Re po rt 14
Non-Technical	Themes	Subthemes														
	Community Building		x	x	xx	x	x	x	x	xx	xx	x	x			
		Data Managers	x	x	x				x	x						x
		Inclusion	x	x	x						x					x
		Shared Terminology			x						x		x			
		CaaS								x	x					
	Education, Outreach, and Culture Change		x	x	x	x	x	x	x	xx				x	x	
	Funding		x	x	x	x	x	x	x	xx			x			x
	Engaging Arctic Indigenous People				x			x	x	xx			xx	x	x	
	Governance		x	x	x	x		x		xx			xx			x
	Best Practices		x	x	x	x		x							x	x
	Understanding Stakeholder Needs								x					x	x	
Technical	Themes	Subthemes														
	Interoperability		x	x	xx	x	x	x	x	xx			xx	x	x	
	Standards		x	x	xx	x	x	x	x	xx			xx	x	x	
	Data Access		x	x	xx	x	x	x	x	xx			xx			x
	Data Archiving		x	x	xx	x	x	x	x	xx			x			
	Data Discovery		x	x	x	x		x	x	xx			x			x
		Metadata	x	x	xx					x	xx				x	x
	Data Publication and Attribution		x	x	xx	x	x	x	x	xx						
	Data Integration		x		x	x		x	x	xx			x			
	Data Quality and Integrity		x	x	x	x			x	x						x
	Data Rescue		x	x				x	x	xx						
	Controlled Semantics and Vocabularies		x		x				x	x						x
	Architecture															
	Data Platforms									x	xx					
		CaaS								x	x					
		DaaS			x				x	xx						x
		IaaS			x				x	x						

Key Themes Identified

Social and Organizational

- **Community Building and Coordination** (includes sub-themes, e.g. Data Managers, Mediators, Coordinators)
- **Funding**
- **Engaging Arctic Indigenous Peoples**
- Governance
- Education, Outreach, Culture Change

Technical

- **Interoperability**
- **Standards**
- Data Access
- Data Discovery (federated search)
- Data Archiving

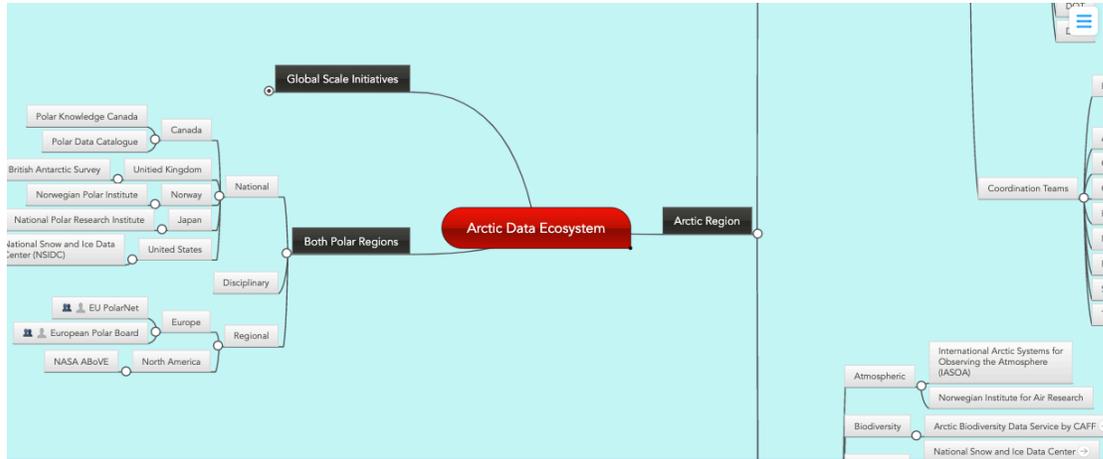
Next Steps

- Development as AOS White Paper
- Discussion on 11-21 at PDF III in Policy, Context session
- Journal article(s)
- Influence development of data ecosystem mapping

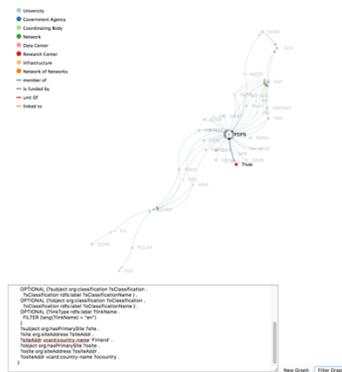


Analyzing the Ecosystem

From Diagram to Database

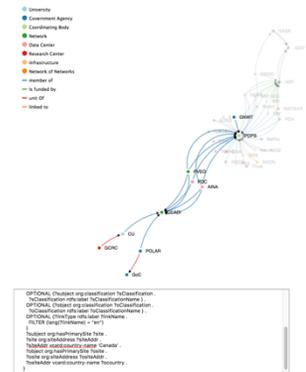


<https://arcticdc.org/products/data-ecosystem-map>



```
OPTIONAL {?subject org:classification ?cClassification .
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}
```

- University
- Government Agency
- Coordinating Body
- Network
- Data Center
- Research Center
- Infrastructure

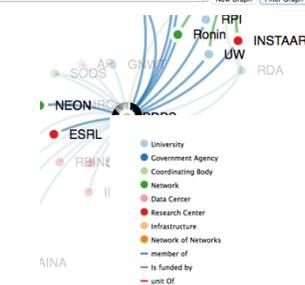


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OPTIONAL {?object org:classification ?oClassification .
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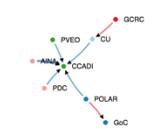
- University
- Government Agency
- Coordinating Body
- Network
- Data Center
- Research Center
- Infrastructure
- Network of Networks
- member of
- is funded by
- unit of
- linked to



```
OPTIONAL {?subject org:classification ?cClassification .
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OPTIONAL {?object org:classification ?oClassification .
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?subject org:hasPrimarySite ?site .
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?siteAddr vcard:country-name "Canada" .
?object org:hasPrimarySite ?osite .
?osite org:siteAddress ?ositeAddr .
?ositeAddr vcard:country-name "Canada" .
}
```



- University
- Government Agency
- Coordinating Body
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- linked to



```
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?sClassification rdfs:label ?sClassificationName .
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OPTIONAL {?linkType rdfs:label ?linkName .
FILTER (lang(?linkName) = "en")}
?subject org:hasPrimarySite ?site .
?site org:siteAddress ?siteAddr .
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}
```

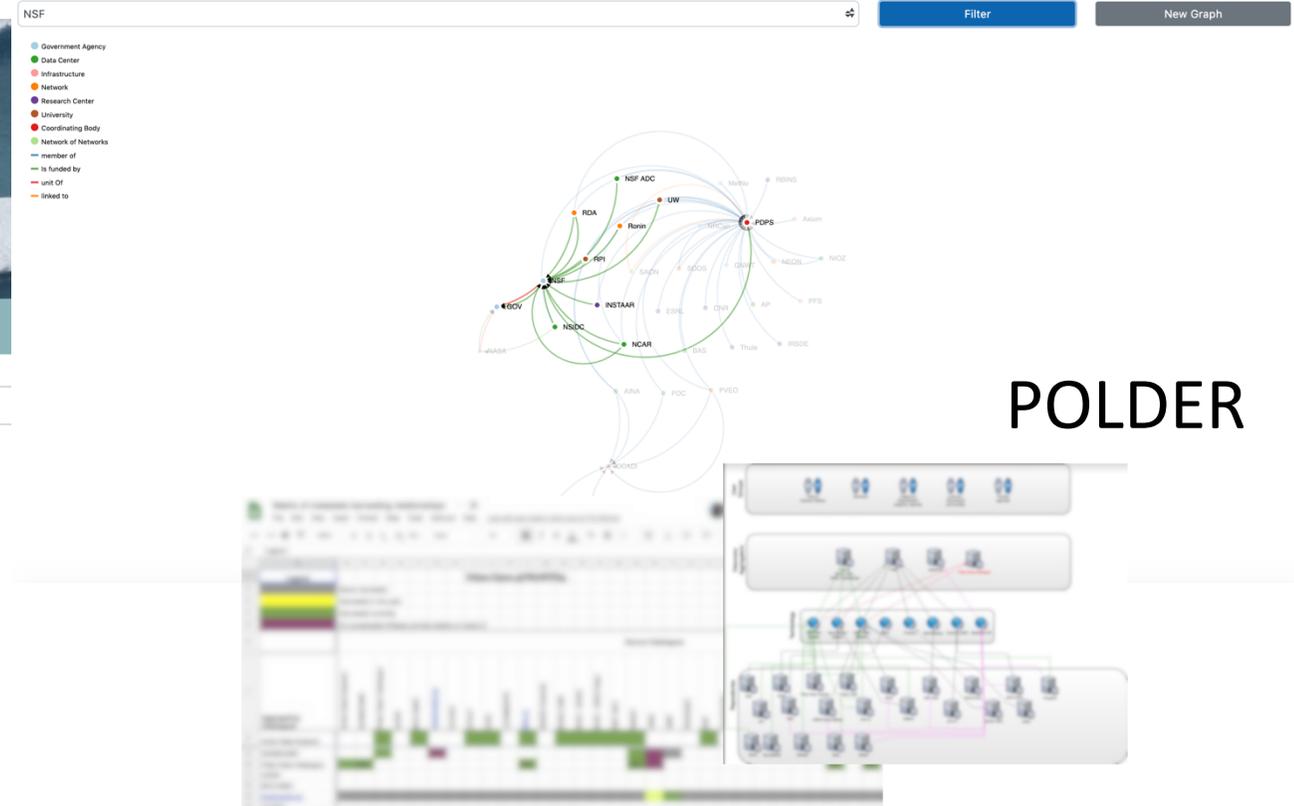
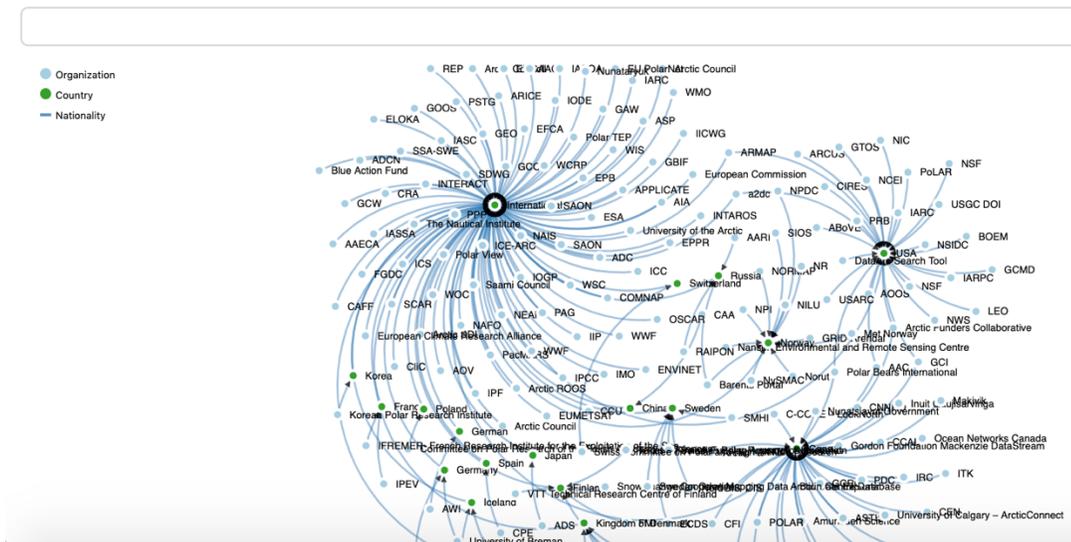
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OPTIONAL {?subject org:classification ?cClassification .
?cClassification rdfs:label ?cClassificationName .
OPTIONAL {?object org:classification ?oClassification .
?oClassification rdfs:label ?oClassificationName .
OPTIONAL {?linkType rdfs:label ?linkName .
FILTER (lang(?linkName) = "en")}
?subject org:hasPrimarySite ?site .
?site org:siteAddress ?siteAddr .
?siteAddr vcard:country-name "Canada" .
?object org:hasPrimarySite ?osite .
?osite org:siteAddress ?ositeAddr .
?ositeAddr vcard:country-name "Canada" .
}
```

New Graph Filter Graph

Combining Analysis with Mapping the Arctic Data Ecosystem project Visualization and Analysis Tool



Home Harvesting Graph Organization Relationships Graph Nationality Graph About



Pulsifer, P.L. Kontar, Y., Berkman, P.A., Taylor, D.R.F. (2019). Chapter 12. Information Ecology to Map the Arctic Information Landscape. In Sustainability of Shared Marine Regions. Volume 1. Governing Arctic Seas: Regional Lessons from the Bering Strait and Barents Sea, edited by Oran R.Young, P.A. Berkman, P.A. and Alexander N. Vylegzhanin. Springer. In-Press

Software Development by Brendan Billingsley



Next Steps: charge for PDF III

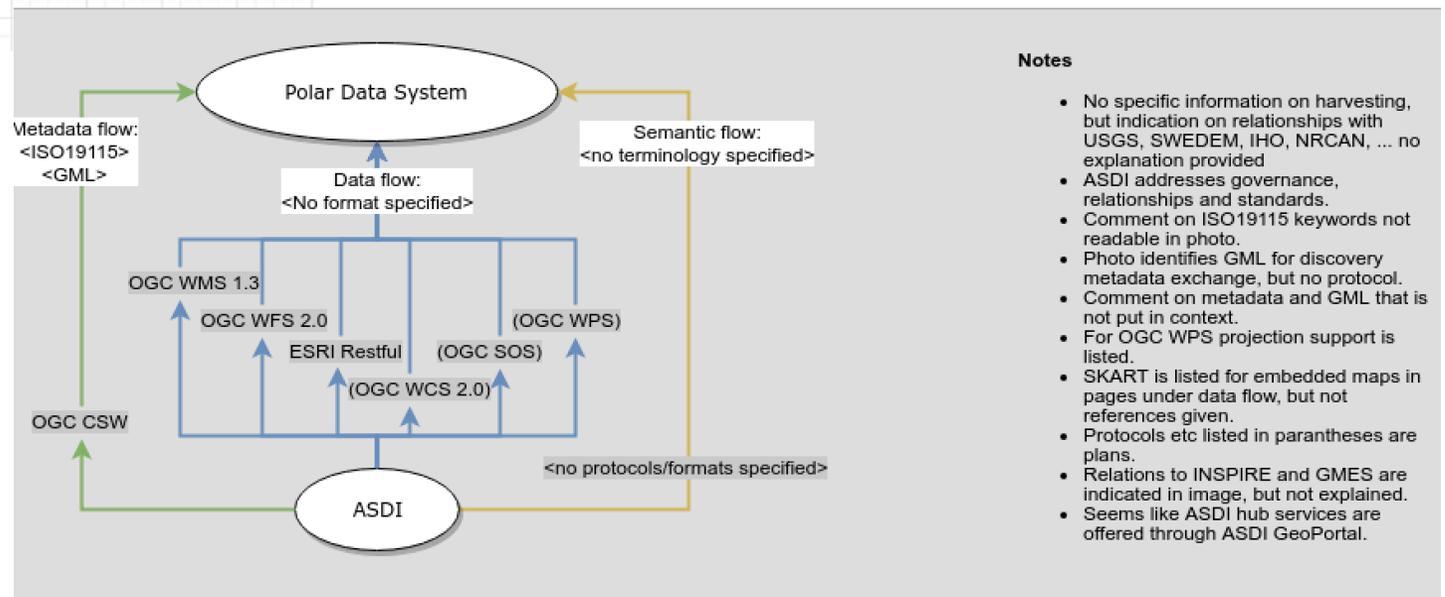
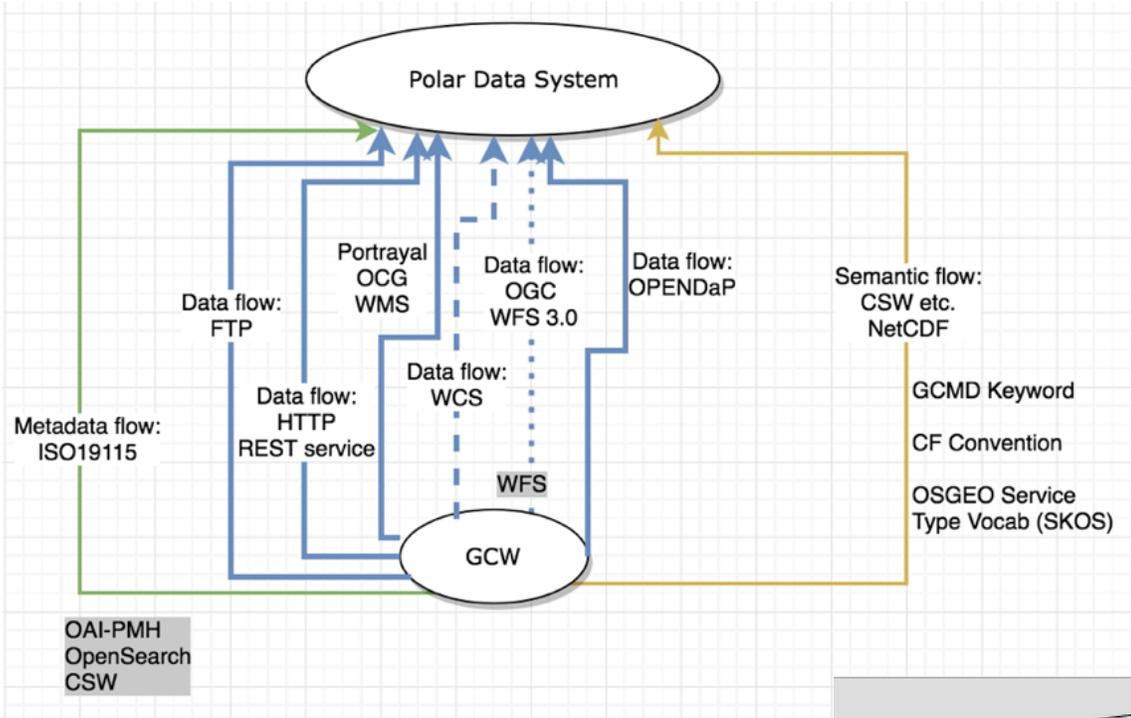
Moving Forward as a Polar Data Community (PDSAW, Geneva, 2018)

- Continue **frequent national and international community collaboration** using emerging, successful model;
- develop **more substantial resources to support collaboration** through dedicated working groups;
- expand the **current broad collective vision**, while **implementing that vision in small increments**, developed by focused clusters of partners;
- **leverage existing, successful programs**, and resources to expand collective capacity and inform design;

Moving Forward as Polar Data Community cont.

- cultivate a **culture that explicitly allocates resources to enhance and expand the broader data system** (infrastructure and more focused systems) at the proposal and design phase of funded projects and programs;
- ensure that **all relevant actors are included in (but not necessarily driving) the design and implementation** process, including Indigenous Peoples and their organizations in the Arctic, the Antarctic science community, and the broader global data community;

Technical: interoperability, standards etc.



Notes

- No specific information on harvesting, but indication on relationships with USGS, SWEDEN, IHO, NRCAN, ... no explanation provided
- ASDI addresses governance, relationships and standards.
- Comment on ISO19115 keywords not readable in photo.
- Photo identifies GML for discovery metadata exchange, but no protocol.
- Comment on metadata and GML that is not put in context.
- For OGC WPS projection support is listed.
- SKART is listed for embedded maps in pages under data flow, but not references given.
- Protocols etc listed in parantheses are plans.
- Relations to INSPIRE and GMES are indicated in image, but not explained.
- Seems like ASDI hub services are offered through ASDI GeoPortal.

Active Collaboration Needed ENGAGE



Based on past meetings, workshops and conferences, several workshop activities and hackathon themes have been proposed.

If you are interested in attending one or more of these events, please register for the 3rd Polar Data Forum using the registration links on the [program](#) page. For more information about a specific workshop or hackathon, please contact the convener of the event. Contact information is provided in the details section for each event.

Enhancing Polar Federated Search

A two day hackathon focused on reducing fragmentation of data discovery through enhancement of federated search and alignment of metadata standards and schemas.

OVER TIME!

Not Just for Techies

Polar Data Forum
Let polar data holders get together and make more use of data.

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Policy, Broader Context and Scenarios

[Home](#) → [Workshops & Hackathons](#) → [Policy, Broader Context and Scenarios](#)

For more information on this workshop please contact [Peter Pulsifer](#)

Convening bodies: Arctic Data Committee, Southern Ocean Observing System, Standing Committee on Antarctic Data Management

Duration: one day

Background

A number of recent conferences, workshops and meetings have confirmed that there are many national, regional and local projects and programs that are active in polar data management and stewardship and that also have a mandate or desire to contribute to regional or international coordination of efforts and activities. Many of those initiatives have resources available and are



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Get notified

Upcoming Events and Objectives

- DSJ Special Issue
- Arctic Observing Summit, March 2020 (Iceland): white paper, publication
- T-MOSAIC
- Antarctic Treaty Consultative Meeting, May/June, 2020 (Finland)
- Arctic Science Ministerial, November, 2020 (Tokyo, Japan, Iceland)
- ICASS 10, June, 2020 (Russia)
- ...



Thank you!