

White paper with recommendations for strengthening international polar observations

G. Lymer, H. Savela, R. Badhe, P. Elshout, J.R. Larsen, S. Scory, V. Spadetto

EU-PolarNet2 WP6 - European Polar Coordination Office, University of Oulu, Finland

European Polar Science Week, Copenhagen, 4th of September 2024



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101003766



Existing initiatives observing Polar regions



+ 100 Polar initiatives!
identified in the white paper

Existing initiatives observing Polar regions

Polar observation, data collection and research organisations

Intergovernmental organisations

Organisations of Arctic Indigenous Peoples

Data committees

100+ Polar initiatives!
identified in the white paper

Agencies and organisations with interest for climate

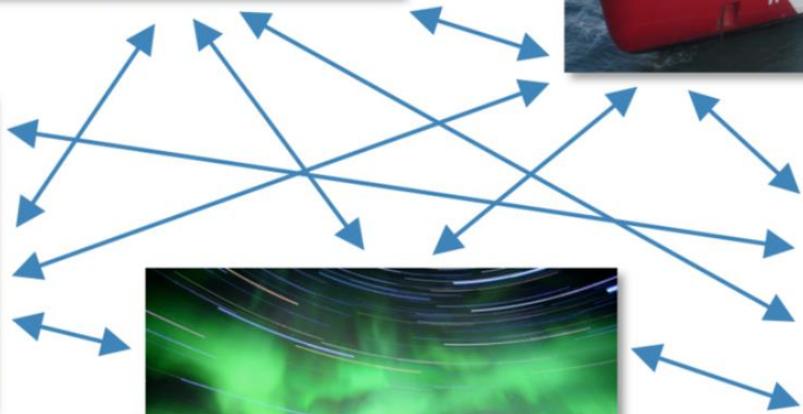
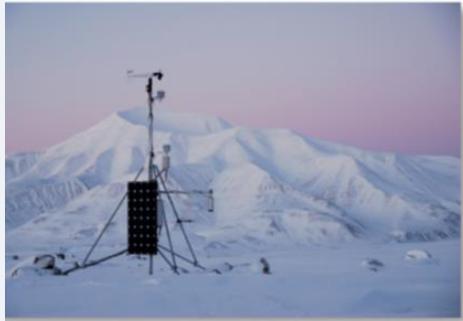
Education and outreach organisations

National research and funding agencies

Non-governmental organisations and agencies



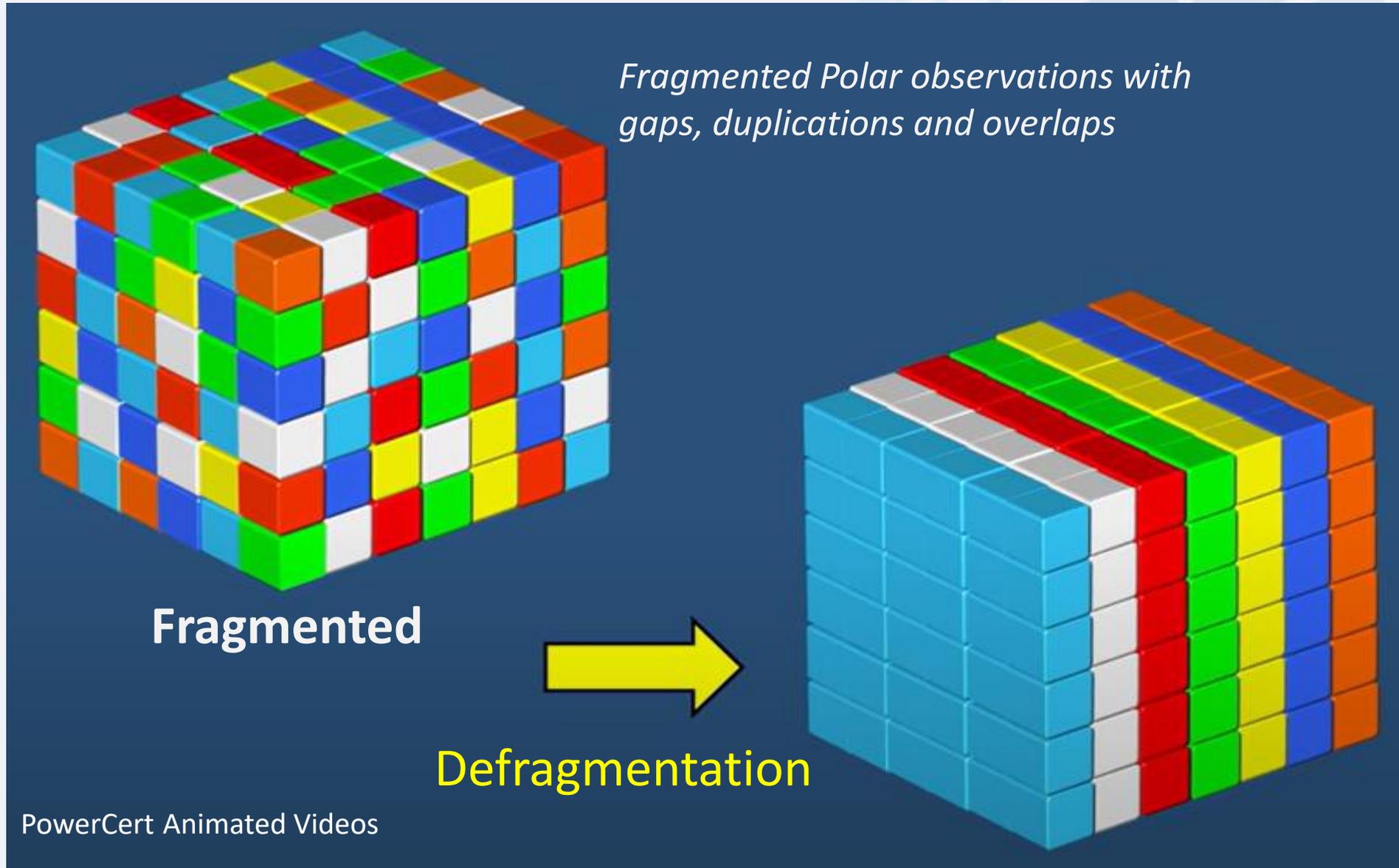
Prospects for improvement in observation of Polar regions



Polar observations are currently sparse, with observing networks fragmented and lacking large-scale coordination

POAwg: Polar Observing Assets working group - Registry of Polar Observing Networks
Polarobservingassets.org

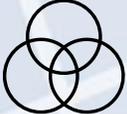
Prospects for improvement in observation of Polar regions



Prospects for improvement in observation of Polar regions



Polar spotlight. K. Roef

- Climate system understanding 
- Prioritisation in observation & research 
- International collaboration
- Inclusivity 
- Data harmonization & standardisation
- Long-term funding €
- Economic returns € €

(Dobricic *et al.*, 2018)



EU-PolarNet

*Gael Lymer, Hannele Savela, Renuka Badhe,
Pjotr Elshout, Jan René Larsen, Serge Scory,
Vanessa Spadetto*

Deliverable No. 6.7

**White paper with recommendations to accelerate
the development of a sustained and fully
integrated Polar observing system**

**For strengthening
collaboration among
international scientific,
stakeholder, rightsholder
and funding communities
to advance polar
observations and support
optimally advised decision-
making processes**



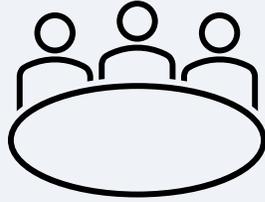
EU-PolarNet

<https://zenodo.org/records/10929817>

Formulating the recommendations, a collective process

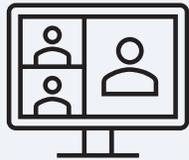
1) Consultations

EU-PolarNet2
WORKSHOP
(June 2022)



Writing
team

Direct / Virtual
meetings



Reviewers

Stakeholders and experts in science, data, funding, international relations, policy, and dialogue with Indigenous Peoples

2) Literature



D6.4

*Minutes
of a Workshop
with Coordinators
of European Polar
Observing
Systems*

- EUPN2's deliverables
 - Existing polar initiatives;
 - Councils of Indigenous people;
 - European Commission and the EU;
 - The Arctic Council
- etc...

3) Participations to targeted events

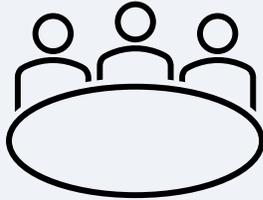
2023 SOOS Symposium ; 2023 Arctic Futures Symposium

Formulating the recommendations, a collective process

1) Consultations

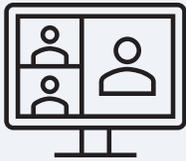
EU-PolarNet2
WORKSHOP

(June 2022)



Writing
team

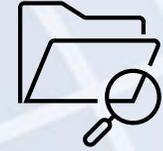
Direct / Virtual
meetings



Reviewers

Stakeholders and experts in science, data, funding, international relations, policy, and dialogue with Indigenous Peoples

2) Literature



D6.4
*Minutes
of a Workshop
with Coordinators
of European Polar
Observing
Systems*

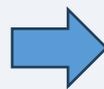
- EUPN2's deliverables
 - Existing polar initiatives;
 - Councils of Indigenous people;
 - European Commission and the EU;
 - The Arctic Council
- etc...

3) Participations to targeted events

2023 SOOS Symposium ; 2023 Arctic Futures Symposium

Collected information adapted into actionable policy-level recommendations

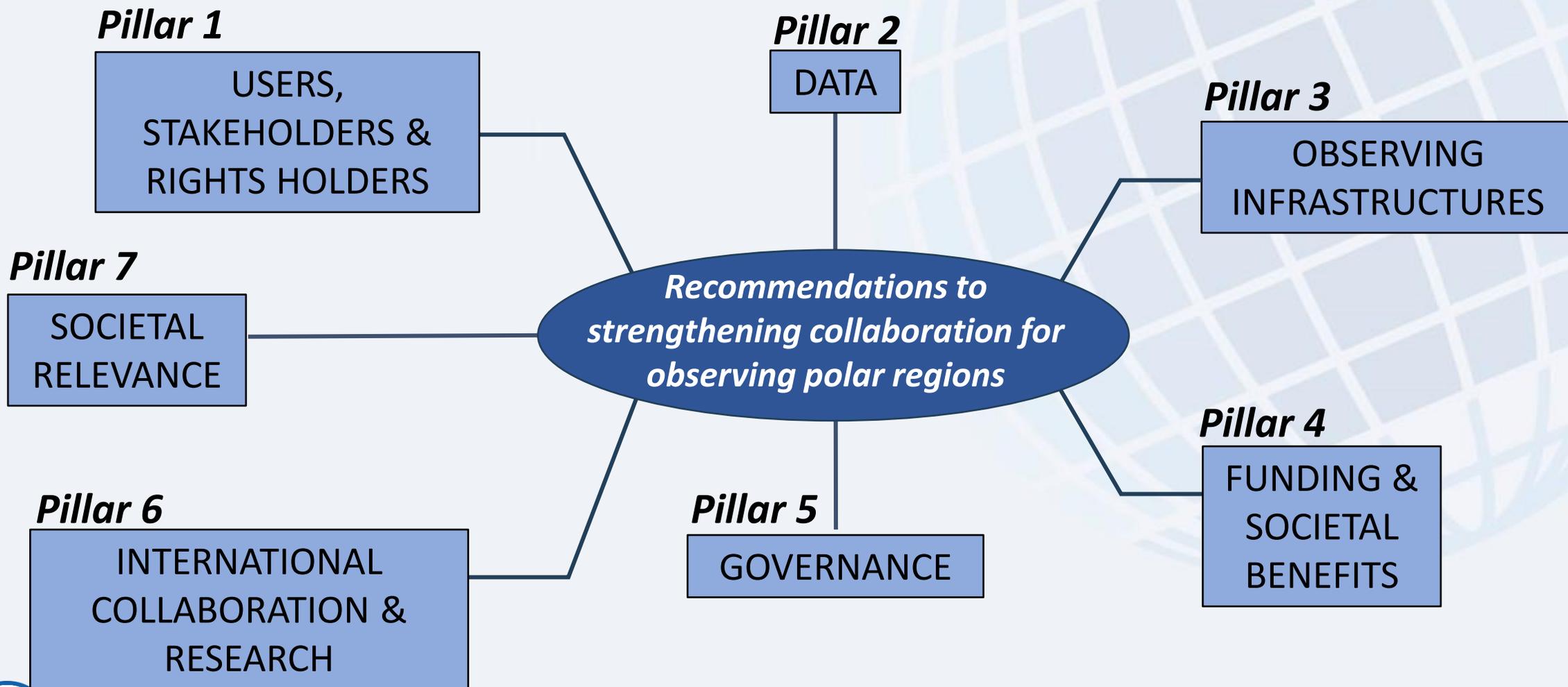
>1 year process
100 persons



European, non-European, national, and international decision-makers, funding agencies, academia, NGOs, and others involved in polar observation development

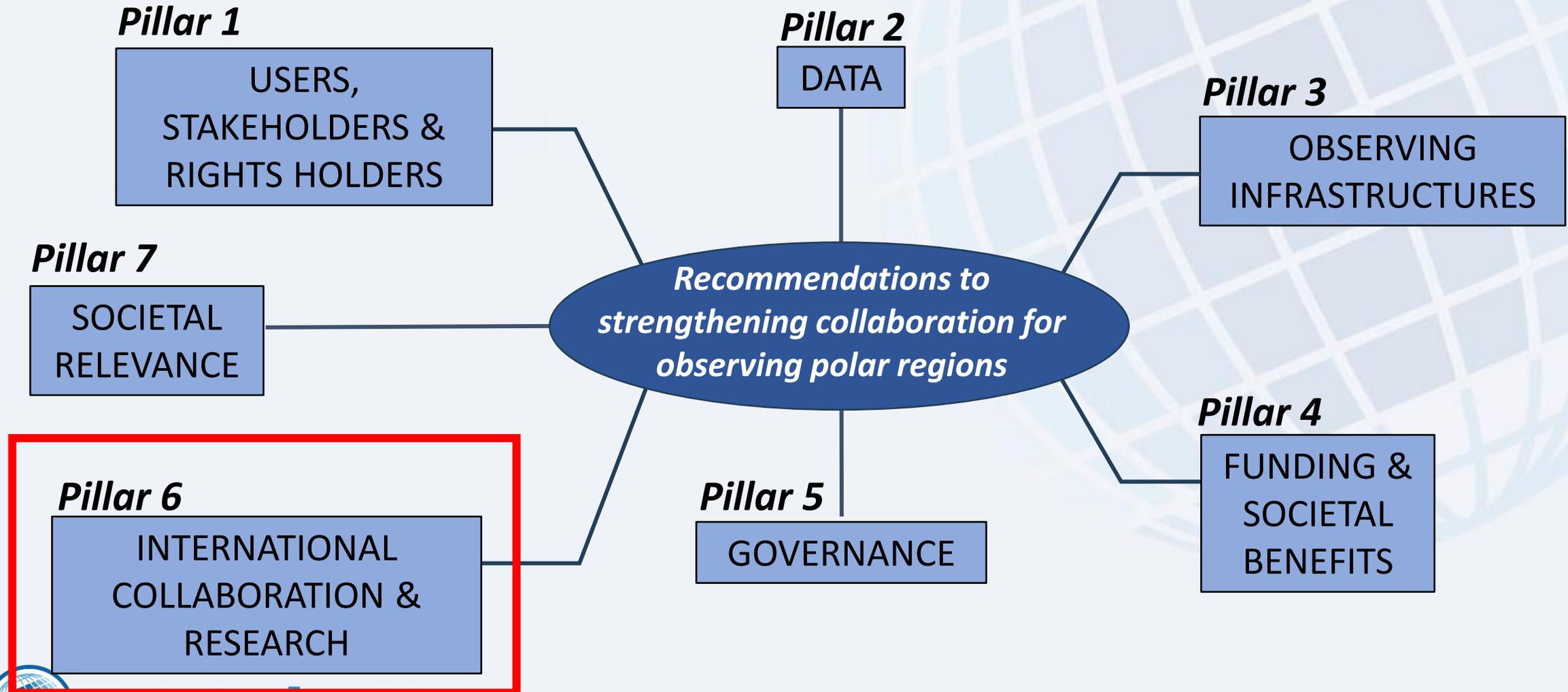
80+ actionable policy level recommendations within 7 pillars

Bring existing polar initiatives and their best assets together, to build on their respective strengths, expertise, experience, knowledge, and networks.



80+ actionable policy level recommendations within 7 pillars

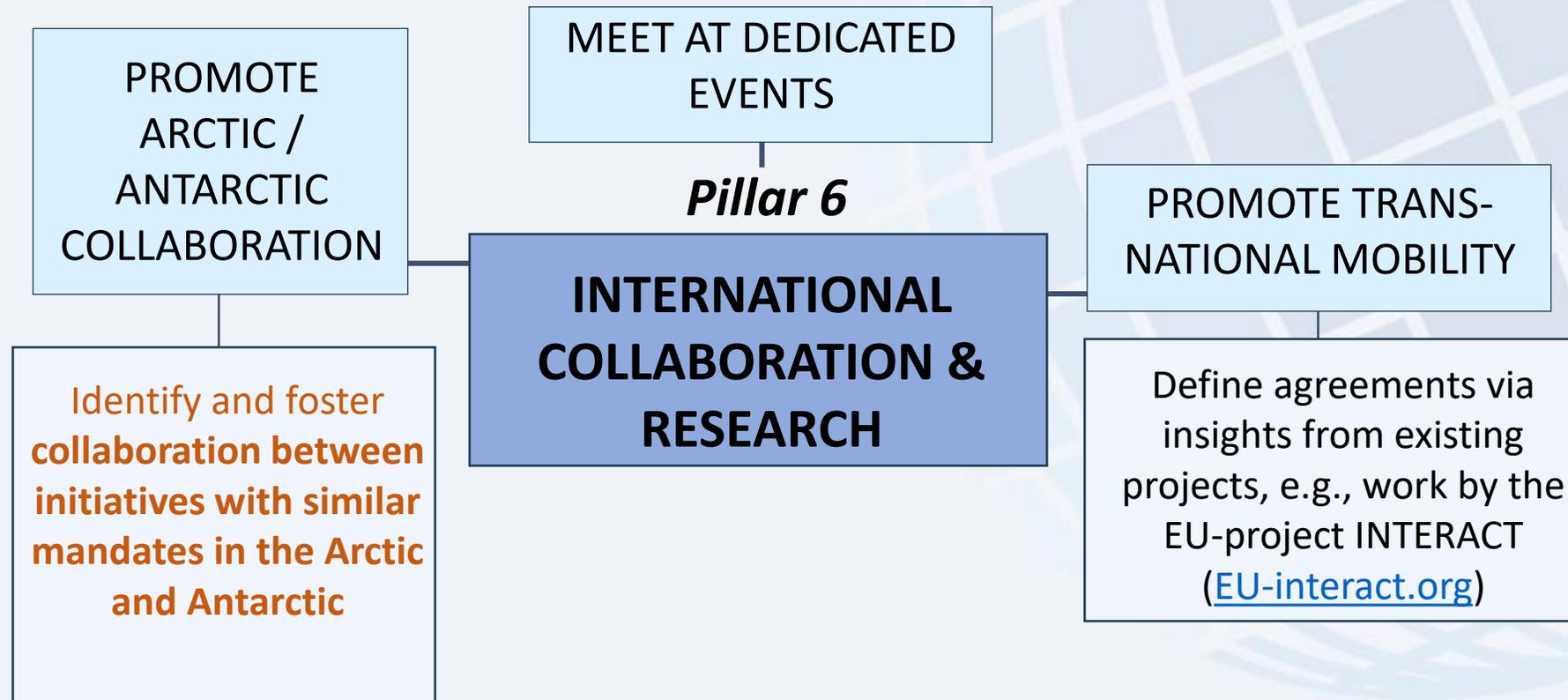
Bring existing polar initiatives and their best assets together, to build on their respective strengths, expertise, experience, knowledge, and networks.



80+ actionable policy level recommendations within 7 pillars



80+ actionable policy level recommendations within 7 pillars



80+ actionable policy level recommendations within 7 pillars

Provisional mapping of Arctic and Antarctic initiatives provided in the White paper!

PROMOTE ARCTIC / ANTARCTIC COLLABORATION

Identify and foster collaboration between initiatives with similar mandates in the Arctic and Antarctic

Antarctic	Arctic	Global
<p><u>INST</u>abilities and Thresholds in <u>ANT</u>arctica (INSTANT)</p> <p>Tropical Antarctic Teleconnections Action Group (TATE)</p> <p>Antarctic Permafrost, Soils and Periglacial Environments Expert Group (ANTPAS)</p> <p>Near-term Variability and Prediction of the Antarctic Climate System (<u>AntClimnow</u>)</p> <p>Biogeochemical Exchange Processes at the Sea-Ice Interfaces Action Group (BEPSII)</p> <p><u>AntArchitecture</u> Action Group (internal architecture of ice)</p> <p>Antarctic Sea-ice Processes and Climate Expert Group (<u>ASPeCt</u>)</p> <p>Forum for Research into Ice Shelf Processes Expert Group (FRISP)</p> <p>International Partnership in Ice Core Sciences Expert Group (IPICS)</p> <p>Ice Sheet Mass Balance and Sea Level Expert Group (ISMASS)</p> <p>Paleoclimate Records from the Antarctic Margin and Southern Ocean (PRAMSO)</p> <p>RINGS Action Group (ice sheet margin)</p> <p>CLIVAR/CliC/SCAR Southern Ocean Region Panel Expert Group (SORP)</p> <p>Integrating Climate and Ecosystem Dynamics (ICED)</p>	<p>AMAP/CEG</p> <p>IASC/CWG</p>	<p>CliC, WMO</p>
Antarctic Tourism Action Group (Ant-TAG)	(AECO)	
Policy-Law-Science Nexus Action Group (PoLSciNex AG)	PAME	(UNCLOS)
Standing Committee on Antarctic Data Management (SCADM)	ADC	WDS

80+ actionable policy level recommendations within 7 pillars



+80 actionable policy level recommendations within 7 pillars

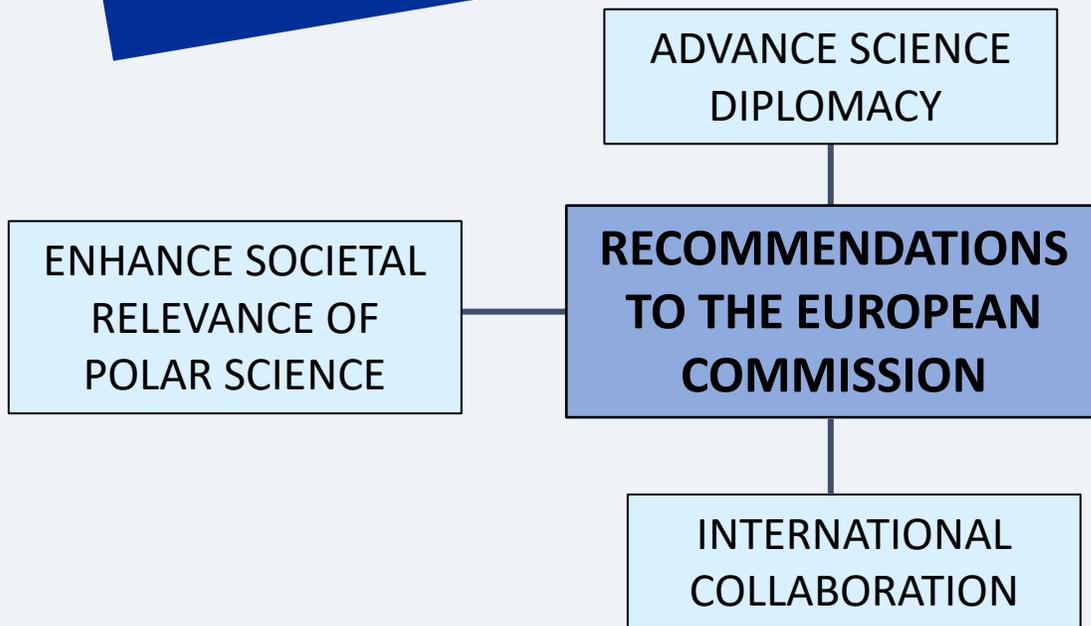


80+ actionable policy level recommendations within 7 pillars



Specific recommendations to the European Commission & EU decision makers

➔ Strengthening the EU contribution in polar observations



Some examples:

- Establish EU-funded calls for polar and climate-related projects.
- Strengthen relations with Indigenous Peoples > improve their access to polar funding.
- Develop an EU polar policy, led by an EU Polar Special Envoy.
- Invest in large-scale international polar infrastructures in the context of the International Polar Years 2032-2033.
- Create a sustainable EU presence at both poles through scientific programs hosted by Member State stations and EU-managed facilities.

Take home messages

- Actionable, **concrete** recommendations
- **Strengthening polar observations** by leveraging natural shared interests between the polar regions
- **Coordinated system** for inclusive and sustainable, transnational polar observation and research **of high societal relevance**, to support well-informed decision-making processes
- Inspiring prospect for policymakers worldwide to **join forces** and **foster international collaboration** and connections with local communities
- **Implementation** of the recommendations should **start now** while progressively adjusting the level of collaboration

THANK YOU FOR
YOUR ATTENTION

