

# Coordinating and co-designing the European Research Area

Carlo Barbante,  
ISP-CNR, University of Venice



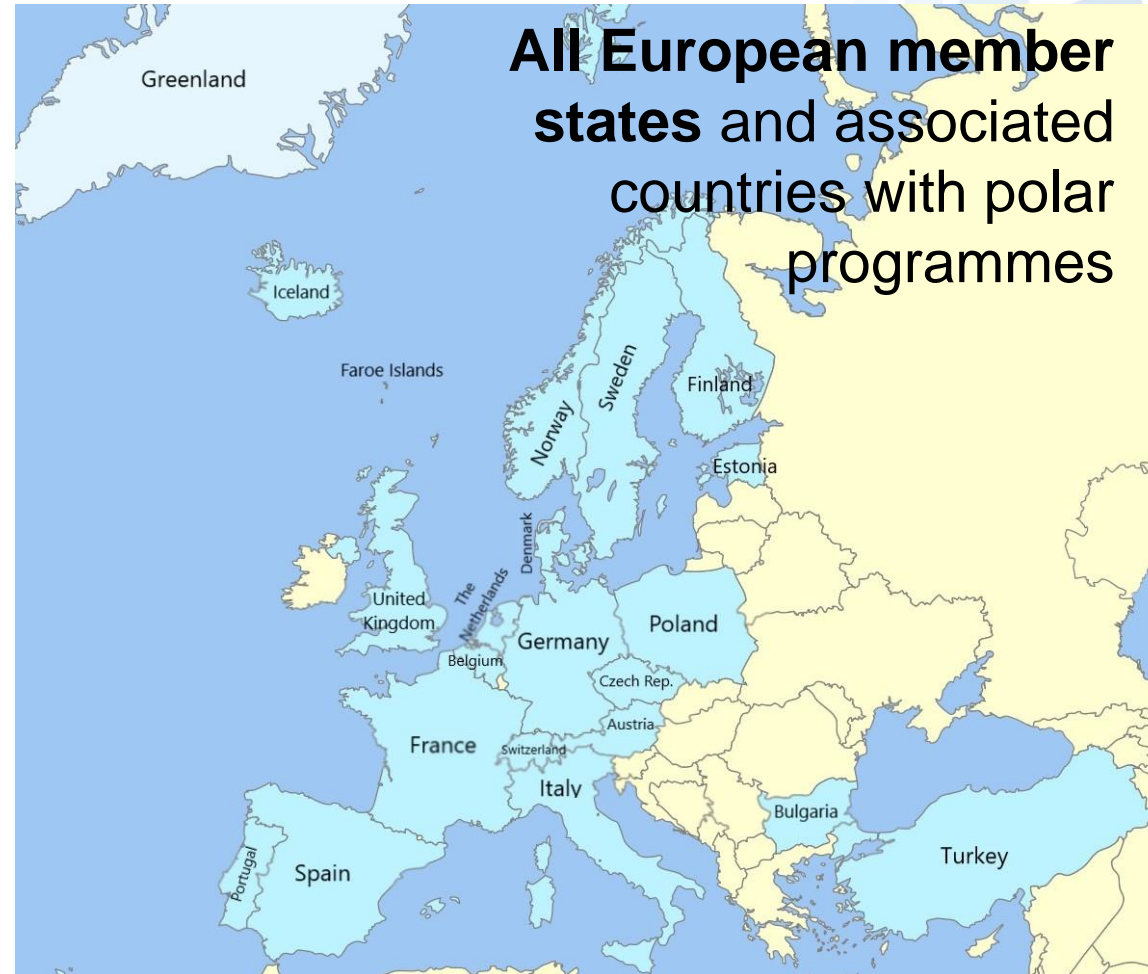
# EU-PolarNet 2



World's **largest consortium** of expertise and infrastructure for polar research

## Consortium

- 25 consortium members
- 21 European countries



**Coordination and Support Action**

**Funding:**

€3,299,253.75

**Duration:** 4 years

(01.10.2020 – 30.09.2024)

**Project**

**Coordinator:**

AWI (Nicole



[www.eu-polarnet.eu](http://www.eu-polarnet.eu)

# The ambition of EU-PolarNet 2



- To establish a sustainable and inclusive **platform to co-develop and advance European Polar research actions**
- To give evidence-based **advice to policymaking** processes
- To sustain the platform in a **European Polar Coordination Office (EPCO)** after EU-PolarNet 2 ends



## Objectives

- 1 Advance European and International polar research coordination across all disciplines
- 2 Provide strategies for meaningful stake- and rightsholder involvement
- 3 Support the development of transdisciplinary and transnational Polar research actions
- 4 Interact with national funding agencies to develop synergies and optimise the use of resources
- 5 Provide evidence-based policy advice to decision makers
- 6 Support the implementation of sustained observation systems in the Arctic and Antarctic
- 7 Create a permanent European Polar Coordination Office (EPCO)

# Polar research coordination



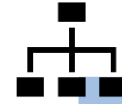
Informing

Provide easily discoverable and up-to-date information on national research activities



Liaising

Develop stronger linkages with relevant international partners and programmes



Coordinating

Coordinate the EU Polar Cluster and the European Polar research



# Polar research coordination

CATALYST

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## Stimulating Research and Collaboration in the European Polar Research Community

"A positive attitude causes a chain reaction of positive thoughts, events and outcomes. It is a catalyst and it sparks extraordinary results."

[Sign In To Catalyst](#)

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[Polarcatalyst.eu](http://Polarcatalyst.eu)

[Latest Resources](#)



# Stake- and rightsholder involvement in the research prioritisation



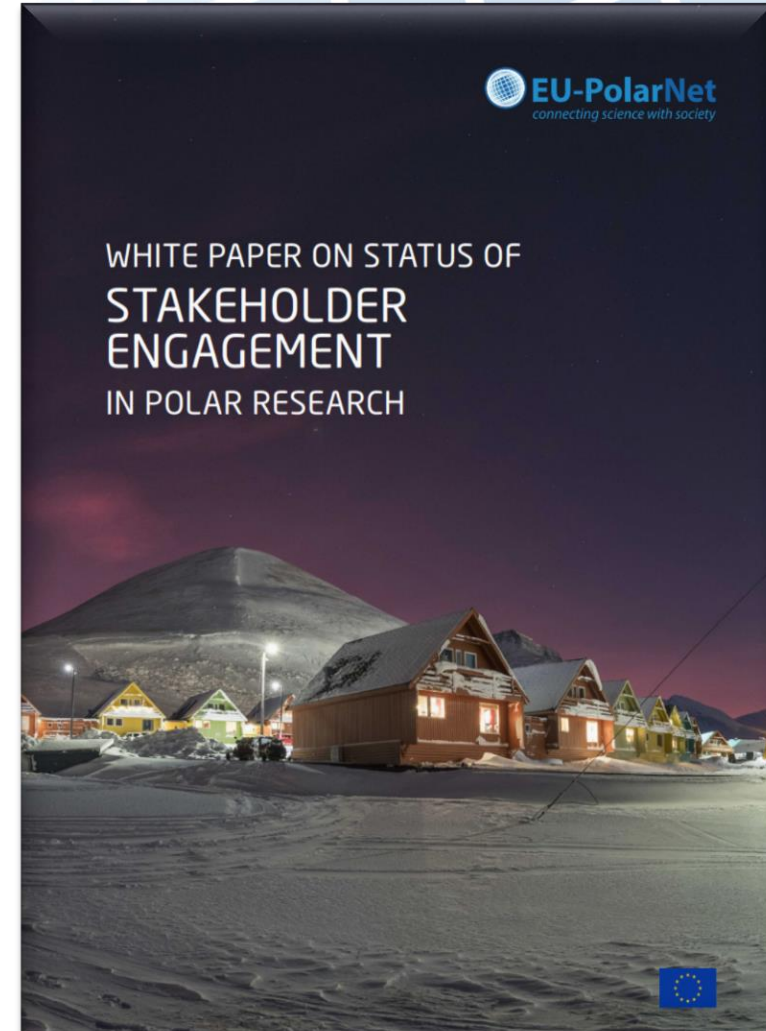
## Co-develop

Collect research and innovation needs from stake- and rightsholders as input in the research prioritisation process



## Built capacity

Capacity building strategies for polar stake- and rightsholders, including ECRs, by development of a repository for meaningful stakeholder involvement.

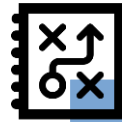


# Research prioritisation based on the EPRP



## Prioritising

Implementation of a Polar Expert Group (PEG) who will specify and customise the research themes and formulate initial research actions to be carried out in the future.



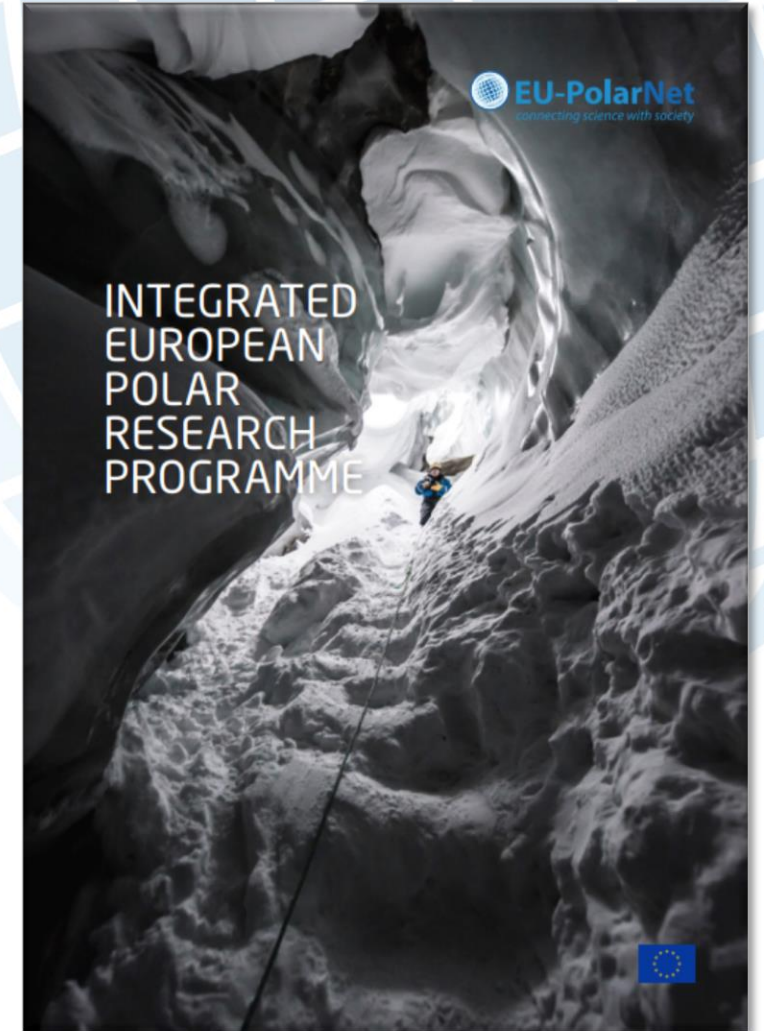
## Specifying

Further specify research themes in transdisciplinary workshops with stake- and rightsholders



## Providing

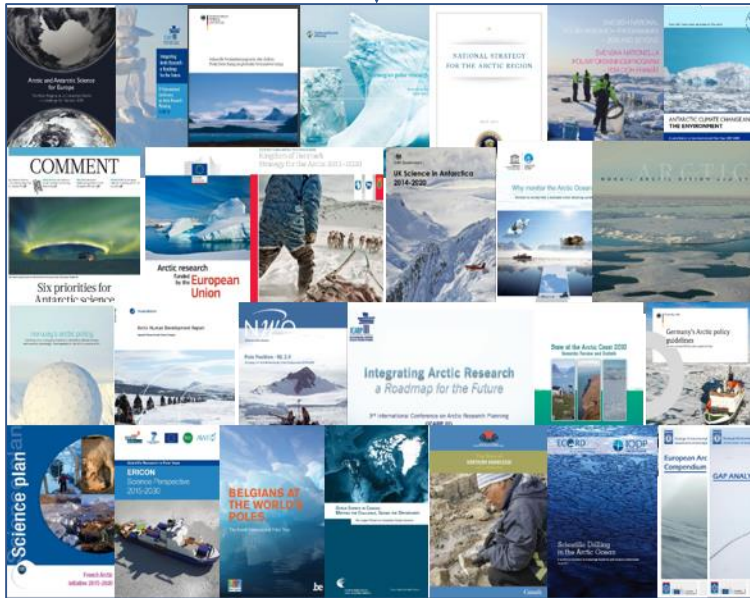
Provide service contracts as seed money to develop research ideas of European interest and high societal relevance





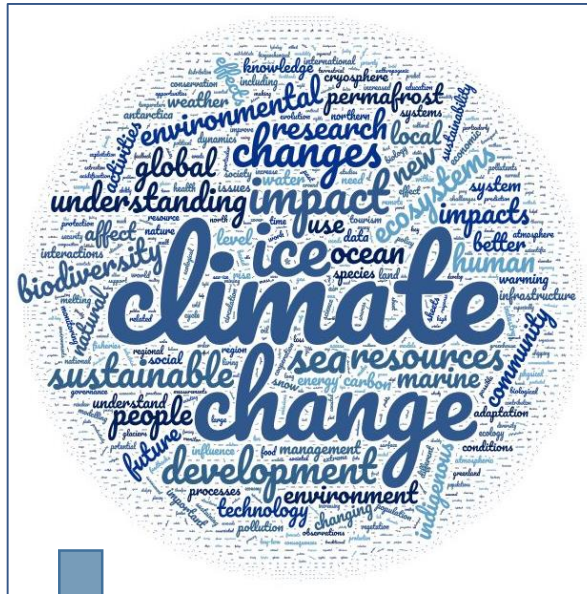
# Research Planning Efforts

Distilling what is already there....

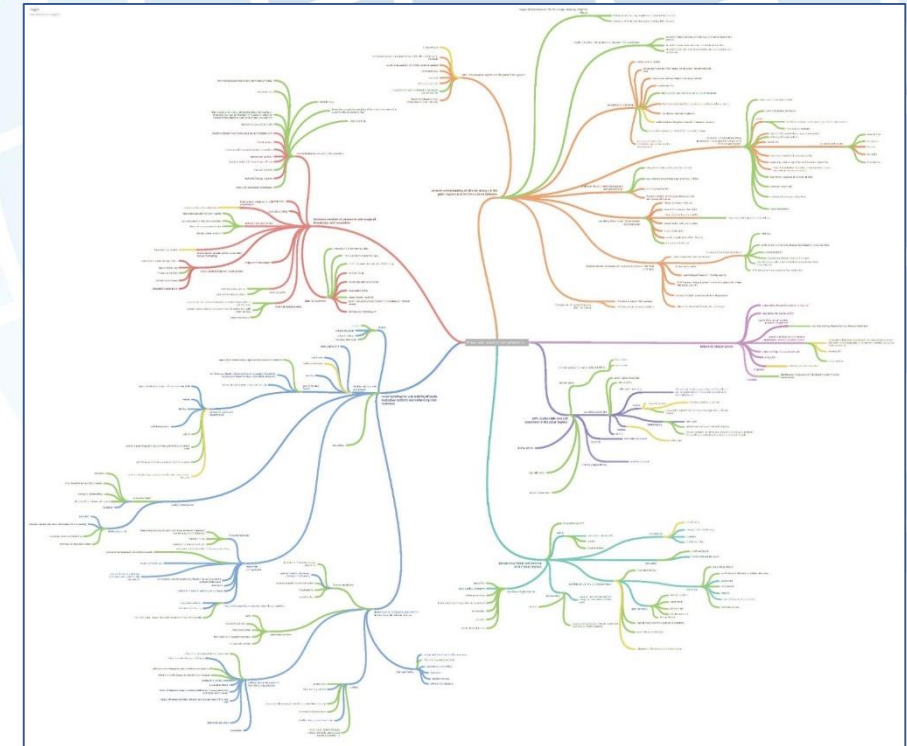


...and extracting key priorities.

Getting stakeholder input.



Clustering input into research priorities.



Getting stakeholder input.

Writing the Research Programme.

# Calls for Services to identify important research themes (bottom-up)

Seeking bottom-up input for the further development of European Polar research actions by providing calls for services

Establishment of application process

Three calls for services (Arctic & Antarctic)

Evaluation, granting of service contracts

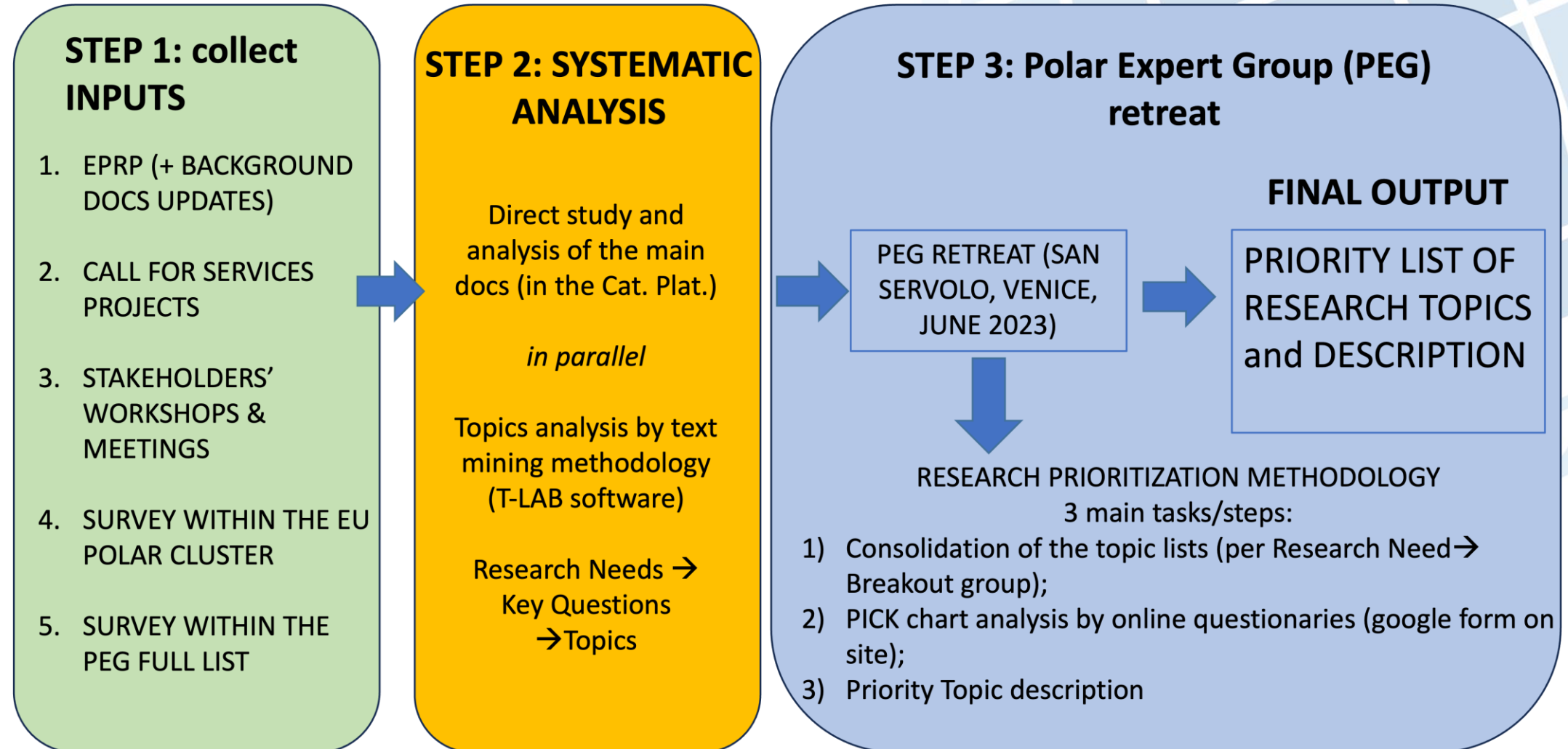
Reporting of service calls results by the projects

Research prioritisation



# Prioritization of Polar Research

## A THREE-STEPS METHODOLOGY



## 1. Polar Climate System

- Ice sheets and interactions with ocean and atmosphere: unravelling instabilities, implications for future sea-level rise and climate scenarios
- Advancing Understanding of Polar Amplification and Climate Feedbacks: Addressing Key Uncertainties for Enhanced Knowledge of Future Climate and Weather
- Ocean-sea ice controls of polar climate variability, feedback mechanisms and impacts on global climate
- Land-coast-ocean continuum dynamics as a key component of freshwater and carbon fluxes
- Long-term carbon dioxide and biogeochemical cycle dynamics and their feedbacks in polar regions. Unravelling the climatic significance and future implications.
- Polar climate extremes: Quantifying and projecting hazards, feedbacks, risks, and impacts for improved resilience

## 2. Polar Biodiversity and Socio-Economic Systems

- Changing species distributions in the polar seas
- Changing water cycle: effects on biodiversity, ecosystem productivity and human subsistence in the polar areas
- Cumulative impacts of climate change on biodiversity structure and function in polar ecosystems
- Revision of conservation measures for the polar ecosystems in the face of climate change, increasing human pressures and shifts in global geopolitics
- Development of an integrated biological-chemical-physical long-term observing system: a “Polar System of Systems”

## 3. Human impacts on polar system

- How to understand the cumulative impacts of human activities on the environment, biodiversity and ecosystem functioning in the polar regions in the frame of climate change, with special attention for polar tourism, renewable energies, transport, polar operations
- How to ensure economic growth in the Arctic takes place in a sustainable manner and within the framework of ecosystem-based management
- How to improve international and national law and governance systems and their implementation for improving and securing environmental protection and peaceful cooperation in the Arctic and the Antarctic
- How to develop indicators for assessing the state of the environment and for long term monitoring of observed change in the polar regions and impacts of polar operations.

## 4. Prospering Communities in the Arctic

- Food and water security in the Arctic
- Permafrost thaw and One Health
- Indigenous societies, governance and rights.
- Sustainable economic development and energy transition.
- Demography and migration, equality.

# Cooperation with funding agencies to discuss research ideas



## Mapping

Mapping the landscape of Polar research funding in Europe to better understand its coordination and cooperation potential



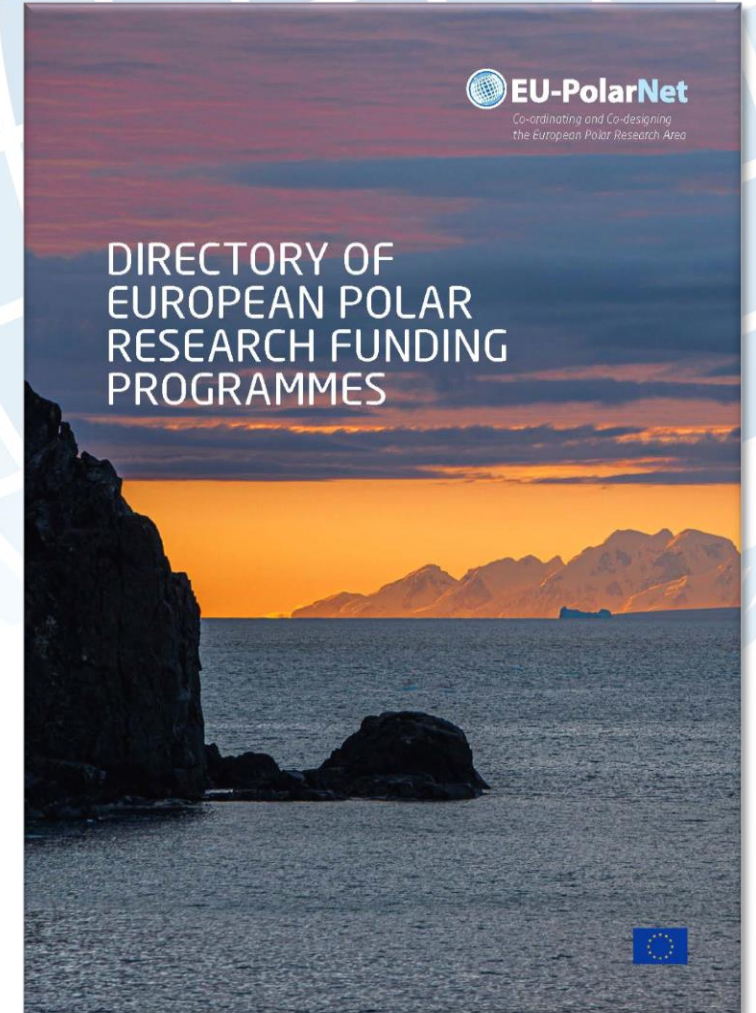
## Networking

Increasing the cooperation with Polar research funders by organising a regular exchange of information, dialogue and meeting



## Acting

Selecting pilot studies and develop them further in cooperation with funding agencies and polar operators





# Policy advice, interaction & dissemination

Providing



Providing evidence-based advice to policymaking processes

Translating



Translate the research prioritisation outcome into policy briefings

Supporting



Support to the international commitments of the EC



*Policy Briefing: Recent changes in the Antarctic and their impacts on Europe, Brussels 2023*



*Webinar: Governing and Protecting the Antarctic and Southern Ocean, Mai 2023*



## Polar Observation Tool

Coordination of European Arctic & Antarctic observations . Procedure to gather information on Polar observing capacities



## Modular toolkit

Combining successful tools of all WPs. Defining the role, structure and operational process of the EPCO.

### Ready to implement European Polar Coordination Office (EPCO) package

#### Modular toolkit

##### Cooperation Tools

Webinars, newsletter, catalyst platform

##### Stakeholder Involvement Tool

Online repository for stakeholder involvement and capacity building

##### Research Prioritisation Tools

Polar Experts Group and best practises for research prioritisation

##### Research Optimisation Tools

Network of funders and operators, model for infrastructure/logistics coop.

##### Policy Advice Tool

Capability for policy advice, incl. PAB

##### Polar Observations Tool

Procedure for observing capacities

+

#### Operational planning for EPCO

Mission statement

Terms of Reference

Governance structure

Financial plan

Initial work plan

Process to identify host institution

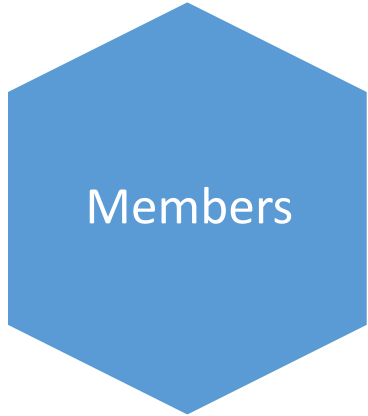




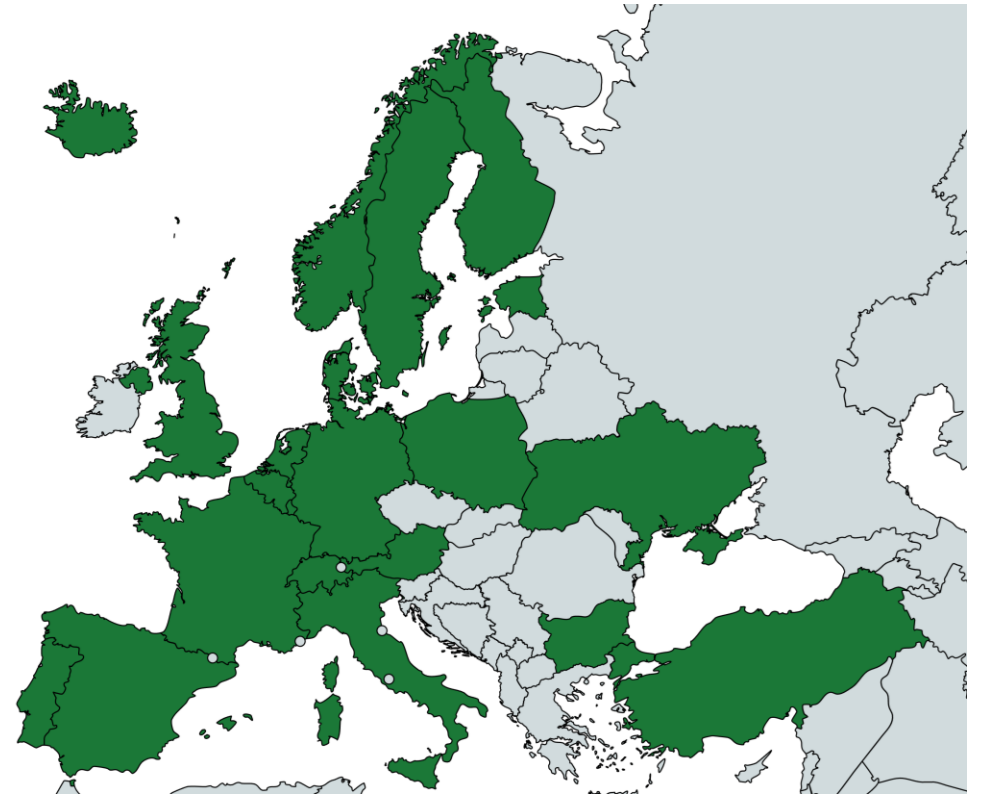
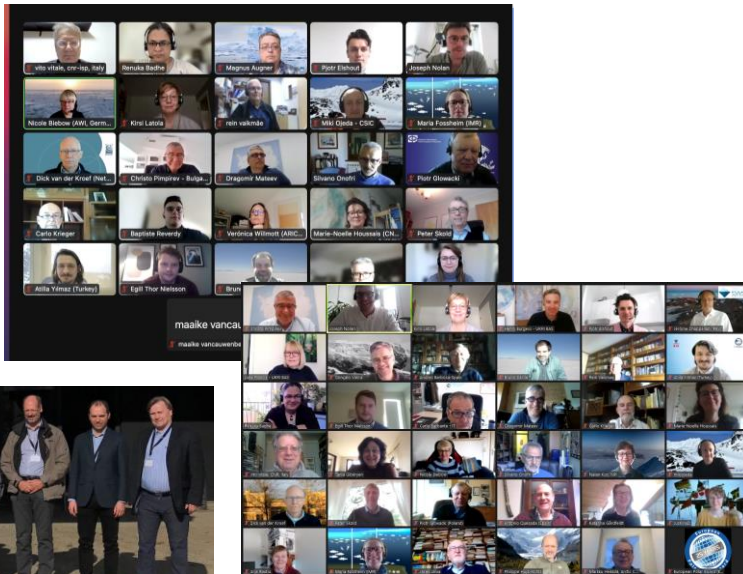
# EUROPEAN POLAR BOARD



# EUROPEAN POLAR BOARD



- 30 Members from 21 countries in Europe
- Member-led and Membership based organisation



# What is the EPB to its Members today (2022-23)?



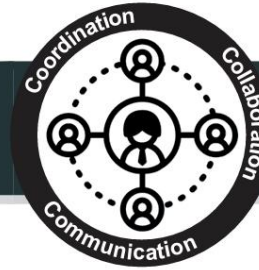
# Strategy 2023-2027



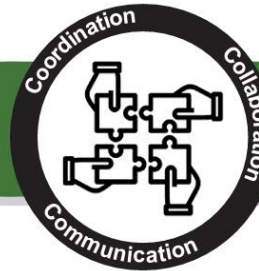
**EUROPEAN  
POLAR BOARD**

The Voice of European Polar Research

**Strategy  
2023 - 2027**



**Coordination**



**Collaboration**



**Communication**



**EUROPEAN  
POLAR BOARD**



# Coordination

EPB seeks to be the knowledge-sharing forum for members and the wider European polar research community by supporting scientific cooperation and information-exchange in research, logistics and infrastructure



EPB discussion meeting on COVID-19 disruption to polar fieldwork and responses by Members

**EUROPEAN POLAR BOARD**

**Avian Influenza:**  
*Information webinar for EPB Members*

23 August 2023

More resources on Avian influenza here

The new EU Arctic Policy and Research and Innovation

24 November 2021

10:00 CET

www.polarcluster.eu

EU Polar Cluster

European Polar Board



# Collaboration

EPB seeks to foster the strong member network and find synergies with existing and new organisations to identify opportunities and tools for collaboration in flagship polar research projects



## ALL-ATLANTIC OCEAN RESEARCH ALLIANCE

Creating an Atlantic Ocean Community by Implementing the Galway and Belém Statements



**ICARP IV**  
INTERNATIONAL CONFERENCE ON  
ARCTIC RESEARCH PLANNING

- *Infrastructure*
- *International Cooperation*
- *Environmental Impacts of Polar Research*







# Communication

EPB seeks to promote and optimise communication tools and platforms for members and the research community to encourage knowledge-sharing, provide sound policy advice, and strengthen networks for the next generation in Polar research.



Third Arctic Science ministerial Webinar Series



## European Polar Board EPB

@europeanpolarboardepb4099 · 124 subscribers · 106 videos

The European Polar Board (EPB) is an independent organisation that focuses o

[europeanpolarboard.org](http://europeanpolarboard.org)

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Co-hosted by Iceland and Japan

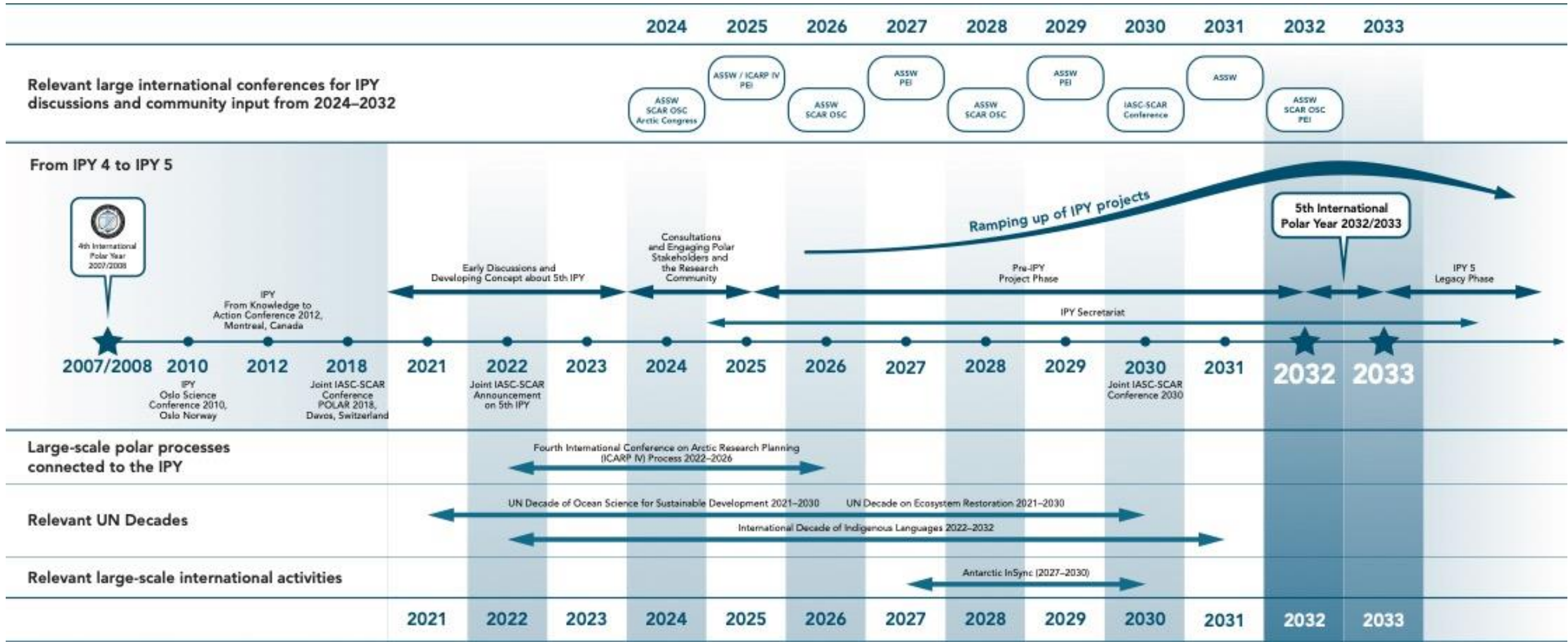
This webinar series is a cooperation between the ASM3 Organizers in Iceland and Japan and the European Polar Board.



## Synthesis Report on the Environmental Impacts of Research and Logistics in the Polar Regions



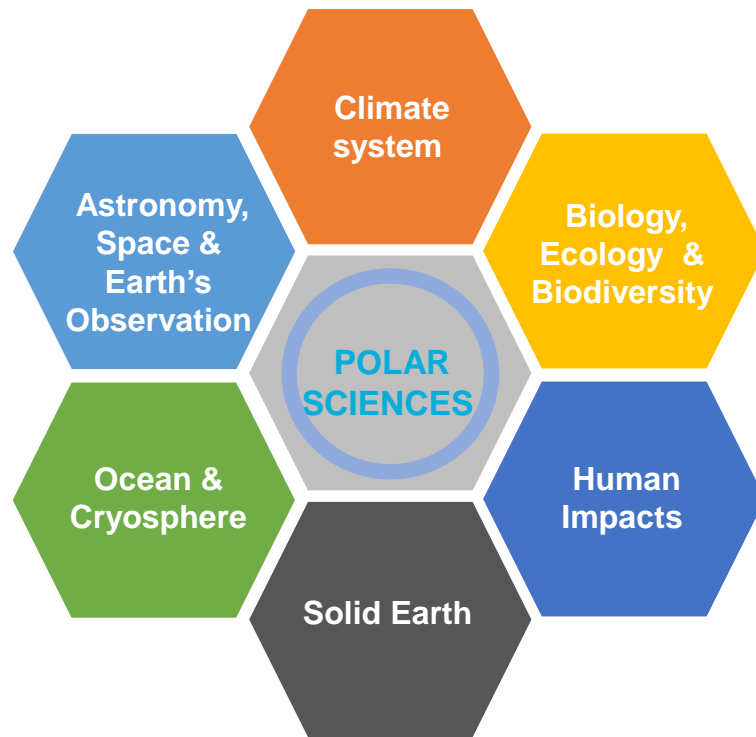
# 5<sup>th</sup> International Polar Year 2032-33 - Initial Concept Note





# Dottorato di Interesse Nazionale in Scienze Polari (DIN-SP)

## *Il programma ed il modello organizzativo*



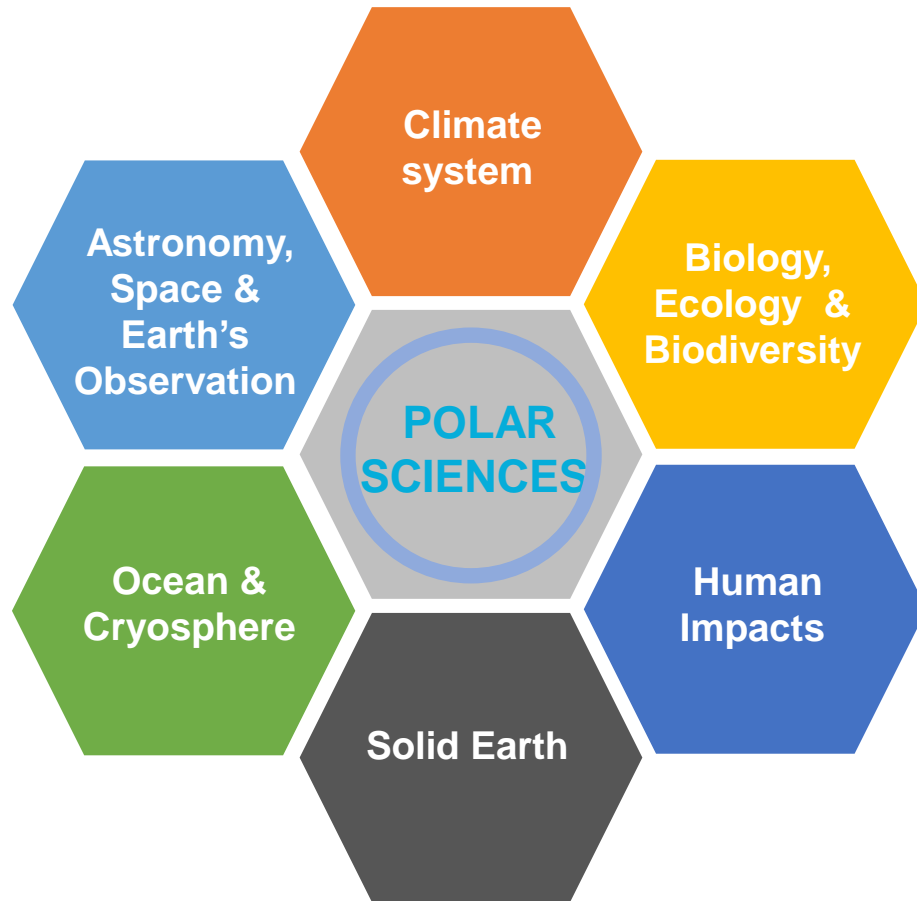
**Carlo Barbante, Barbara Stenni**

*Università Ca' Foscari Venezia*

[barbante@unive.it](mailto:barbante@unive.it)

# I Curricula

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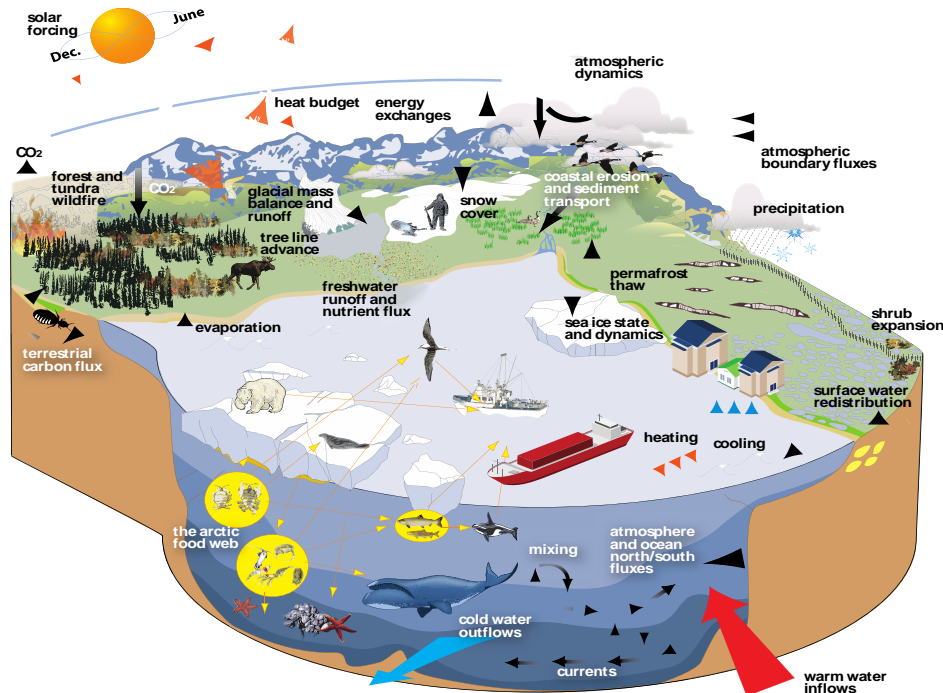
1 Tema centrale comune

6 curricula

- Inter-disciplinari
- Multi-disciplinari
- Trans-disciplinari



# L'idea



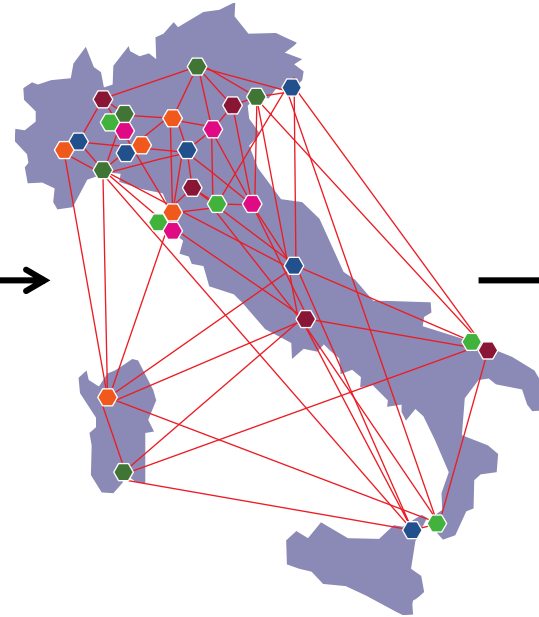
## Dottorato di interesse nazionale:

- Target: non solo per la carriera accademica
- Metodo: multi-, inter-, trans- disciplinare
- Struttura: rete di ricerca
- Innovativo
- A scala Nazionale

# L'evoluzione del progetto



EoI

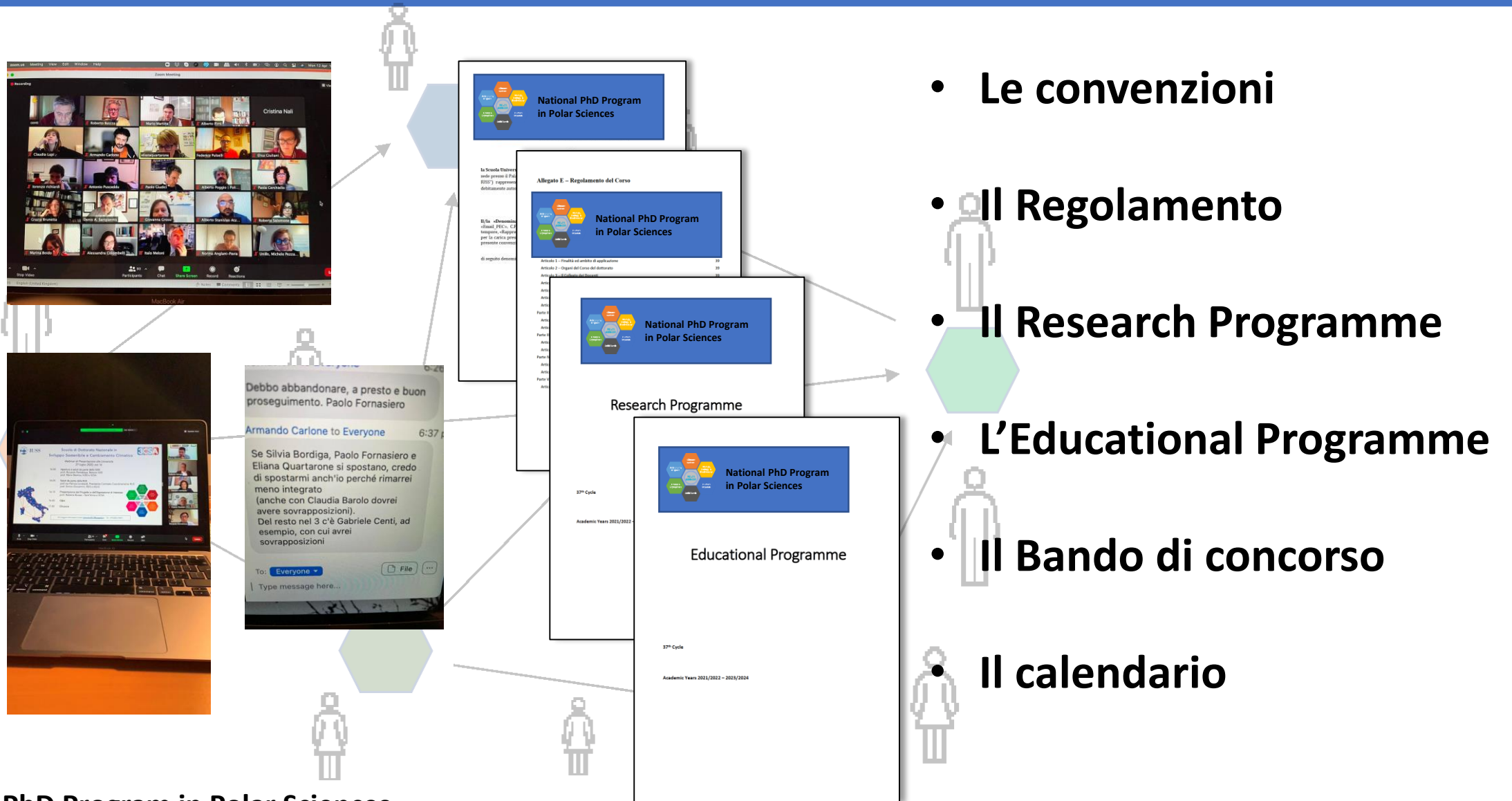


2021



2023

# La co-progettazione





# La rete delle Università/EPR

20 Università/EPR

20 Dipartimenti

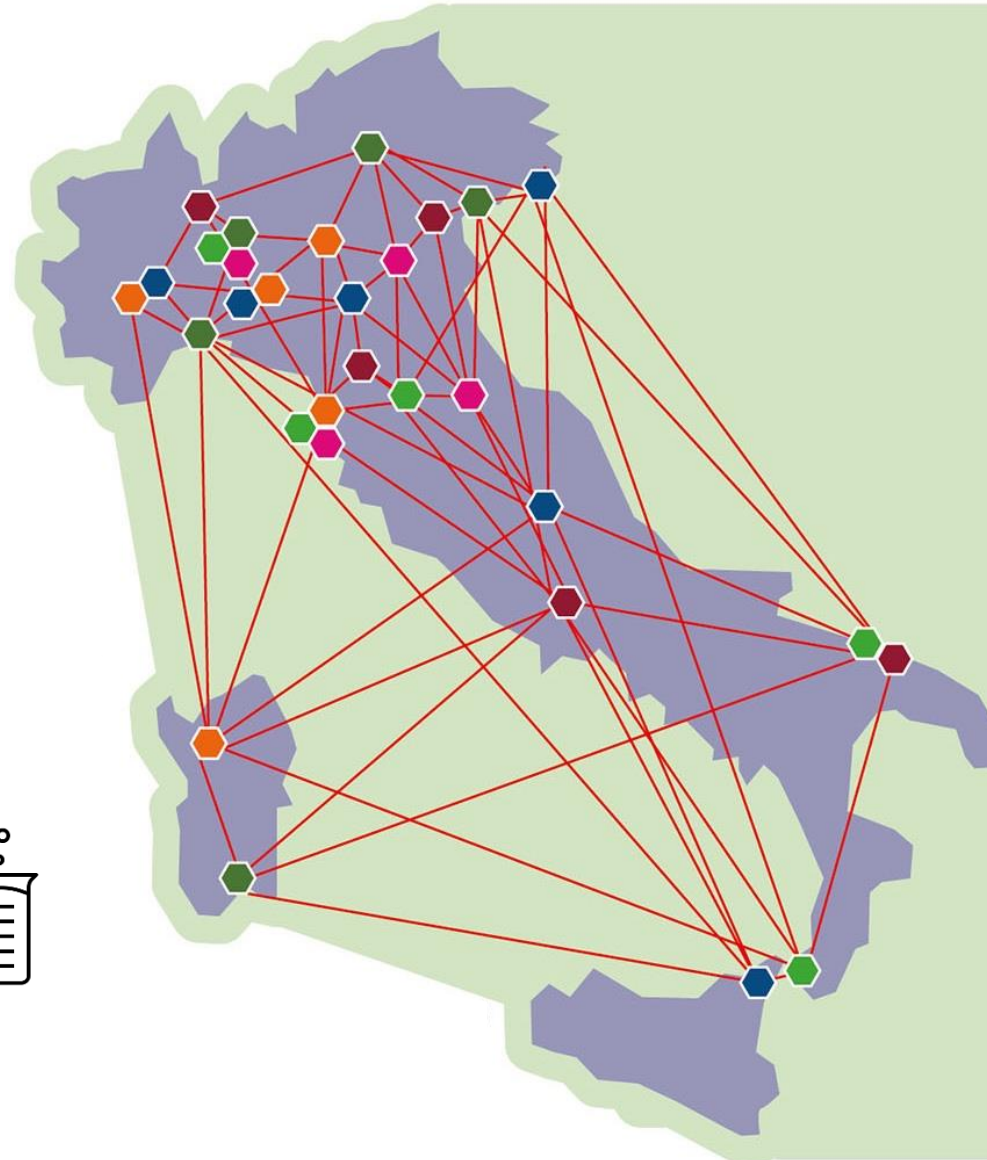
60+ professori e ricercatori

Risorse di calcolo

Laboratori

Sistema bibliotecario

Infrastrutture didattiche



UNIVE

UNIPI

UNISI

UNINA +

INGV

OGS

CNR

UNIGE

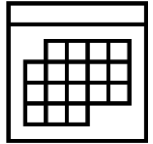
UNITS

UNIMI

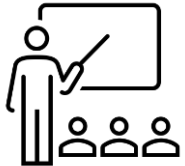
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# Key facts

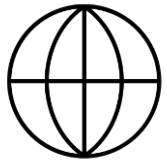
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**3 anni di durata**



**160+ ore di formazione**



**6 mesi di ricerca all'estero**



**30+ borse di studio (ca 1/3 su temi liberi)**

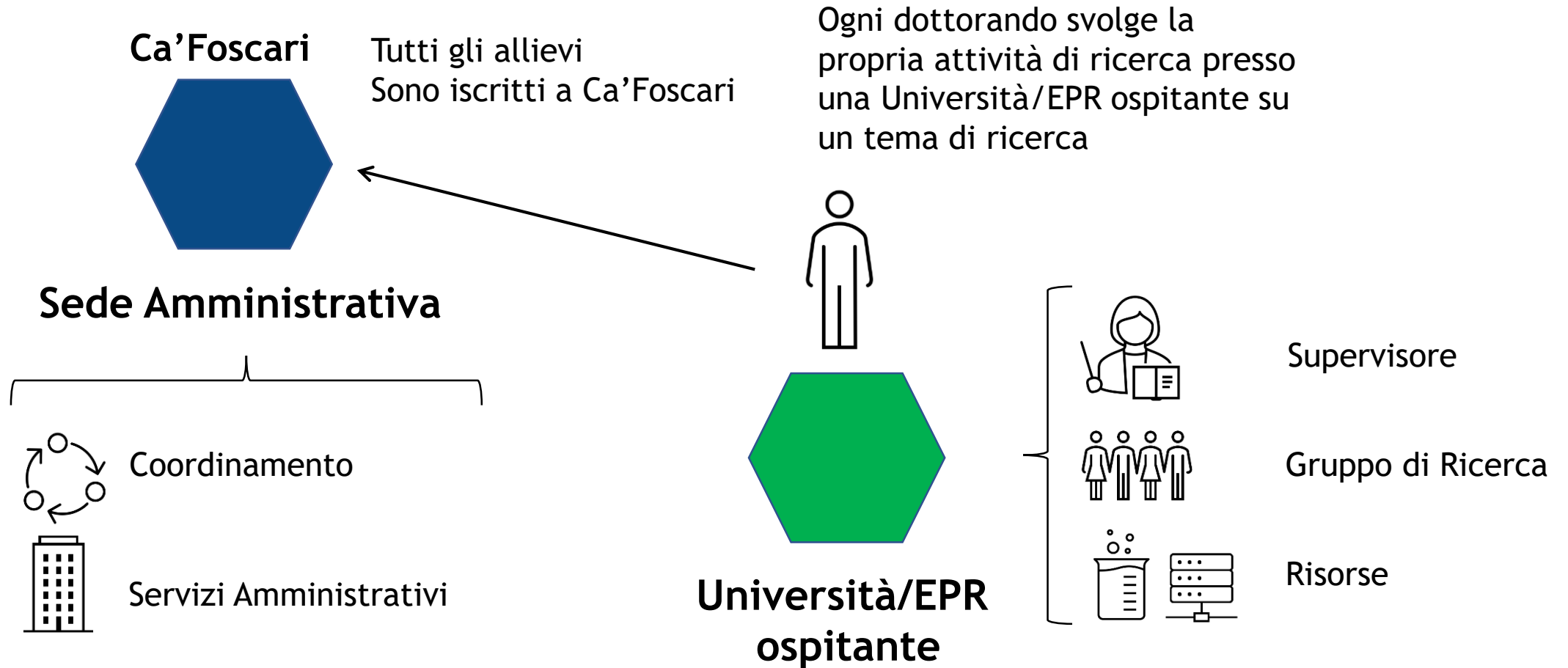


**60+ professori e ricercatori coinvolti**

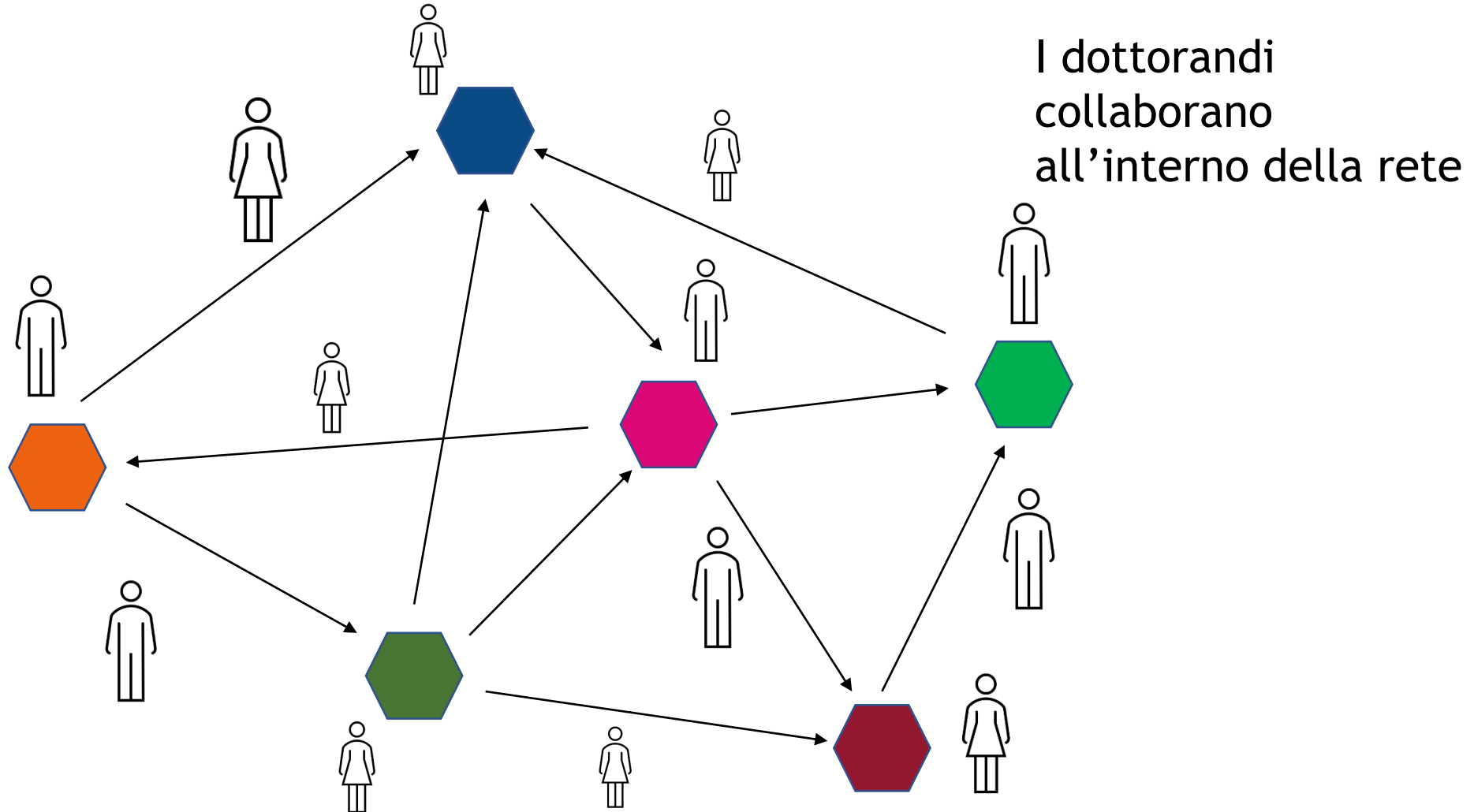


**> 2.5 M€/anno nel sistema della ricerca polare**

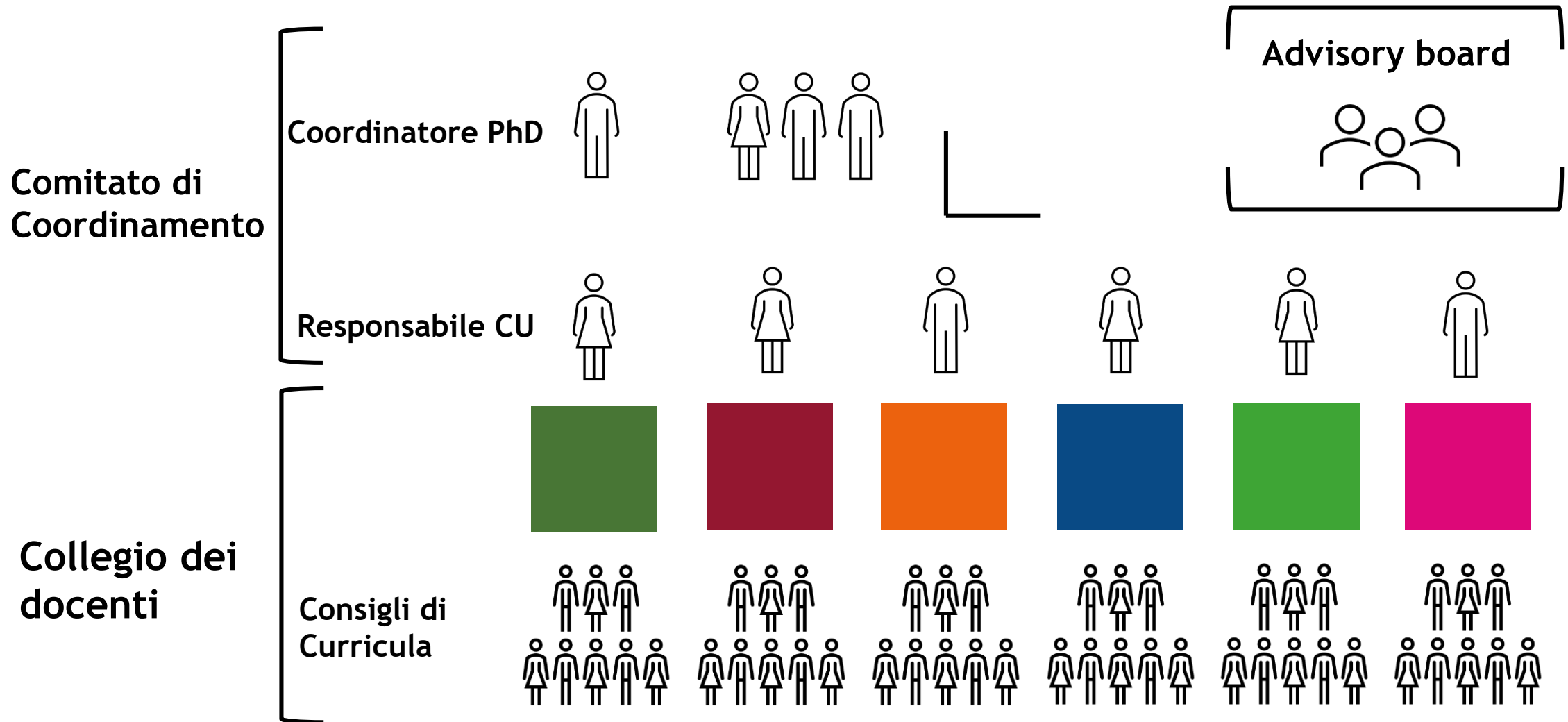
# Organizzazione del corso



# Organizzazione del corso



# Governance



# Governance

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- **Consigli di curricula (responsabili provvisori)**
  - Biology, Ecology and Biodiversity (Simonetta Corsolini, UNISI)
  - Human Impacts (Silvia Illuminati, UNIAN)
  - Solid Earth (Carlo Baroni, UNIPI)
  - Ocean and Cryosphere (Giorgio Budillon, UNINA Part)
  - Astronomy, Space and Earth Observation (Federica Marcucci, INAF)
  - Climate System (Barbara Stenni, UNIVE)

**Avvio** 01 dicembre 2023

**Prossimi passi:**      \* 40° Ciclo (AA2024/25)  
                             \* **Workshop 24-26 gennaio 2023**

# Educational Programme

**Comune**  
(horizontal)

**Polar Sciences**

**INTER-Disciplinary (MD)**  
events to expose all the  
PhD candidates  
to the complexity of Polar  
Sciences(48+ hours)

**Curriculare**  
(vertical)

Climate  
system

Biology, Ecology  
&  
Biodiversity

Human  
Impacts

Solid  
Earth

Ocean &  
Cryosphere

Astronomy,  
Space &  
Earth's Obs.

**Curriculum (CU)**  
events to train PhD  
candidates  
on tools and topics  
common to  
the scientific curriculum  
(75+ hours)

**Disciplinare**  
(focus)



**Thematic and Disciplinare (TC)**  
courses suggested by  
the supervisors and  
offered by the host  
university/EPR (64+ hours)

# L'espressione di interesse per il 40° ciclo (AA 2024-25)

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- Proposte dei temi di ricerca da parte dei docenti e ricercatori delle Università ed EPR italiane
- Selezione basata su criteri di qualità scientifica e coerenza con il programma del dottorato nel rispetto delle diversità e secondo principi di inclusione
- Finanziamenti da diversi soggetti. (Bandi PNRR)
- **Scadenza 15 gennaio 2024**