Collaborating towards a pan-Arctic Observing System of Systems: the Arctic PASSION project

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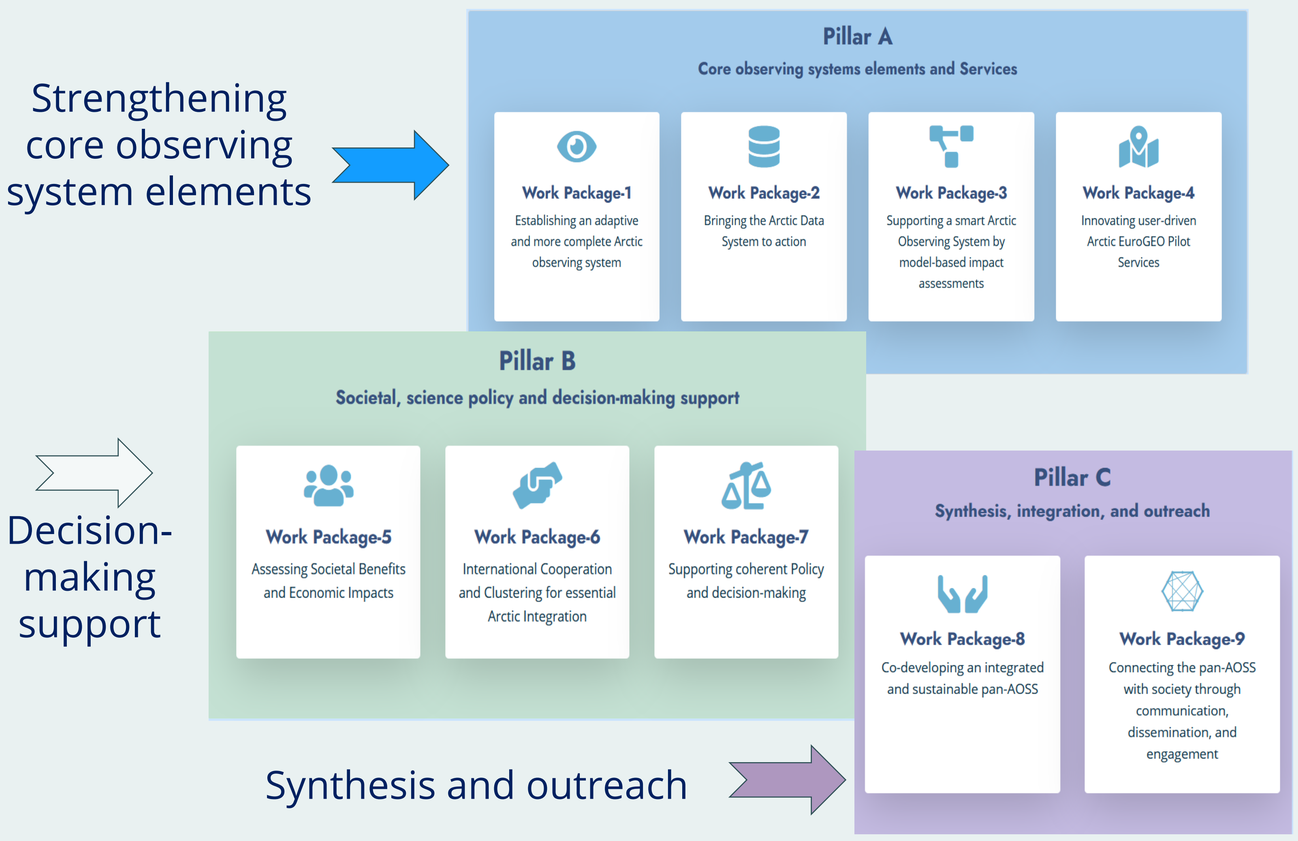
Context:

The ongoing climate change and its impact in the Arctic call for a less fragmented and better integrated Arctic observing system. We are in need of :

- the best available data and knowledge to make knowledge-based decisions
- a well coordinated, user-driven integrated observing system of system based on a more holistic approach
- less fragmentation, enhanced data interoperability, and inclusion of consented Indigenous and local knowledge
- equity in access to and in shaping of the observing system

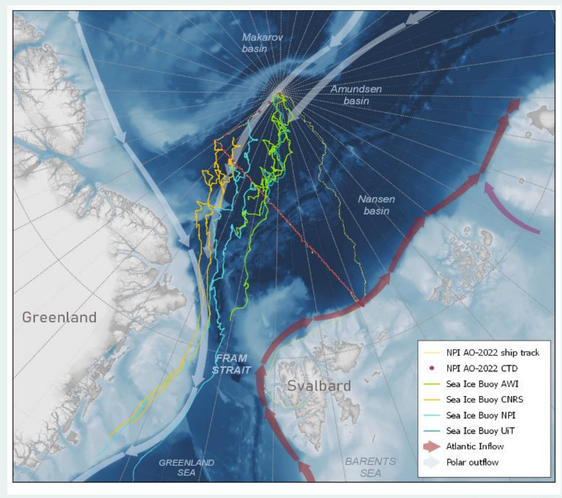
The Structure of Arctic PASSION



Co-creation with Arctic communities

Marine Examples:

- New multi-disciplinary moorings
- New sensor and instrumentation developments for the marine sphere and the atmosphere
- Deployment of drifting buoys
- Development of the A-DBO as a comprehensive marine observing system
- Building unified snow/ice interface detection for IMBs
- Building of a microwave observation operator for sea ice
- Improving monitoring of glacier runoff and calving front positions
- Advancing the Synoptic Arctic Survey SAS, including preparation for SAS II



Sundfjord, NPI

New user-driven services

S. Olsen, DMI

- ‘Event Database of CBM Using Oral Histories, IK and LK’
- 'Pan-Arctic requirements-driven Permafrost’
- ‘State of the Arctic Environment’ (Information hub)
- ‘Integrated Fire Risk Management - INFRA’
- Local Atmospheric Pollutant Forecast Service’
- ‘Improving Safety for Shipping in the Polar Seas Service’
- ‘CBM for Arctic marine climate change, noise pollution impacts on marine living resources’
- 'Lake Ice Service for Arctic Climate and Safety’

Institutional partners

Coordination: AWI, Sea Ice Section (M. Karcher)
EU- H2020, 2021 – 2025, 18 countries
35 partner organizations and 6 Indigenous Communities
www.arcticpassion.eu

AWI sections contributing:

- Sea Ice Physics
- Physical Oceanography
- Permafrost
- PANGAEA
- APECS
- Arctic Office

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