

Workflow in INTAROS

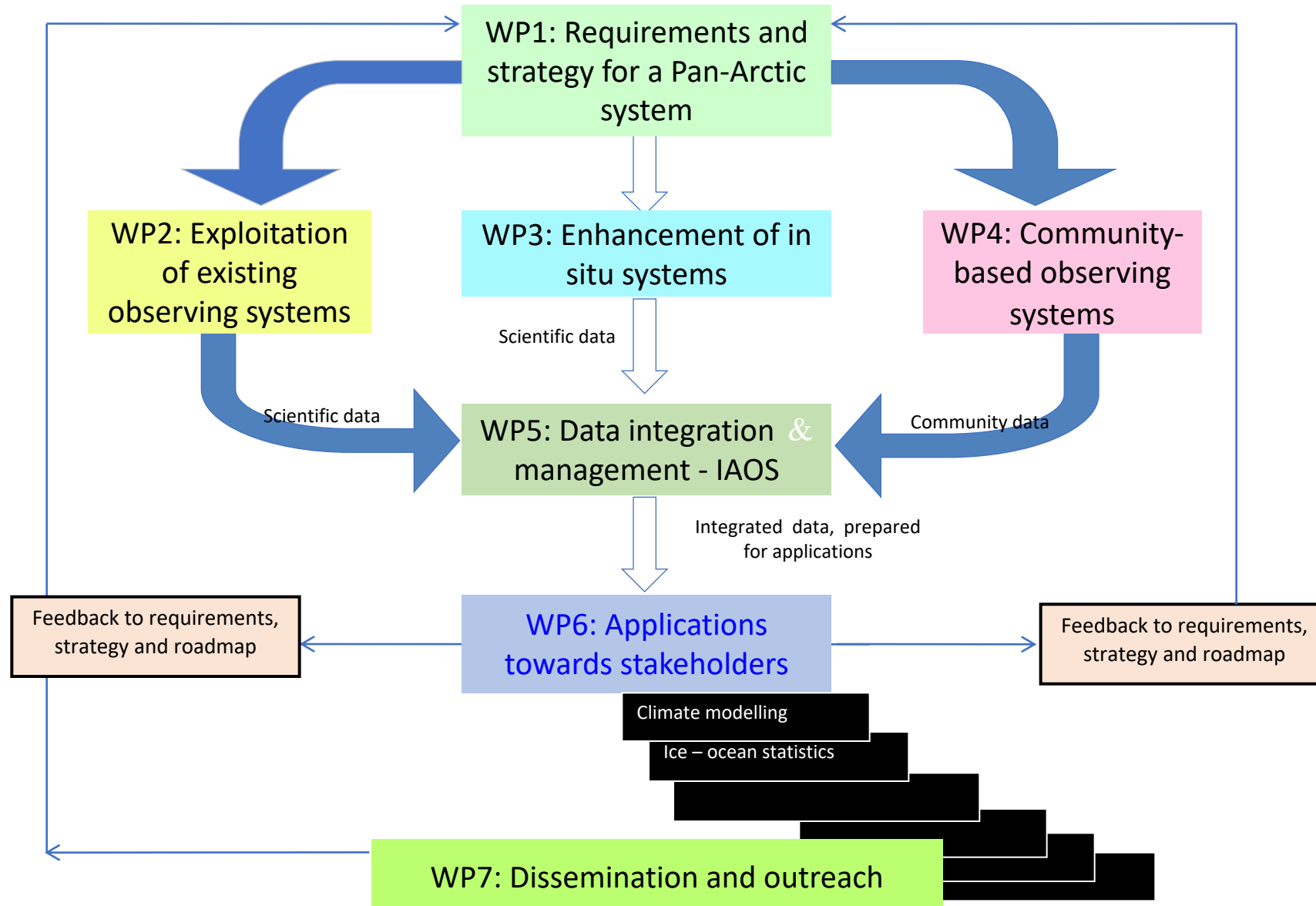
Discussion

Where are we with respect to the specific objectives?

How is the work flow between the Workpackages?

Where are the bottle necks?

INTAROS Workpackage structure



Refresh Specific objectives 1-2

- Specific objective 1: Establish a Pan-Arctic forum to support formulation of agreements and collaboration between organization involved in developing Arctic observing systems across EU member states, non-EU countries and transnational organizations. A Pan-Arctic Observing Forum will be formalized in collaboration with established transnational networks and organizations. Members of the Forum will be stakeholders from different communities including science and private sector. This is addressed in WP1.
- Specific objective 2: Develop a Roadmap for future implementation of a Sustainable Arctic Observing System (SAOS). The Roadmap will be based on the synthesis of results obtained from the entire INTAROS project assimilating recommendations from organizations and programs involved in the Forum (WP1).

Refresh Specific objective 3

- Specific objective 3: Exploit existing observing systems and databases of atmosphere, ocean, cryosphere, geosphere and terrestrial data as the backbone of an integrated Arctic Observing System (iAOS) platform. It is essential for iAOS to build on present observing systems developed over several years and operated with funding from countries and international agencies to ensure that the iAOS is maintained as a platform for SAOS. This is addressed in WP 1 and WP2.

Refresh specific objective 4-5

- Specific objective 4: Contribute to fill gaps of the in situ observing system by use of robust technologies suitable for the Arctic. There will be an emphasis on using multidisciplinary autonomous systems, building on observing technology suitable for the Arctic, which can be operated year-round with a minimum of human involvement. This is addressed in WP3.
- Specific objective 5: Add value to observations through assimilation into models. Generation of 3D gridded datasets, incorporating observations while constrained by the dynamics of the model, adds value across key regions where observations are sparse in the ice-ocean, atmosphere, and ecosystems. This work is addressed in WP6.

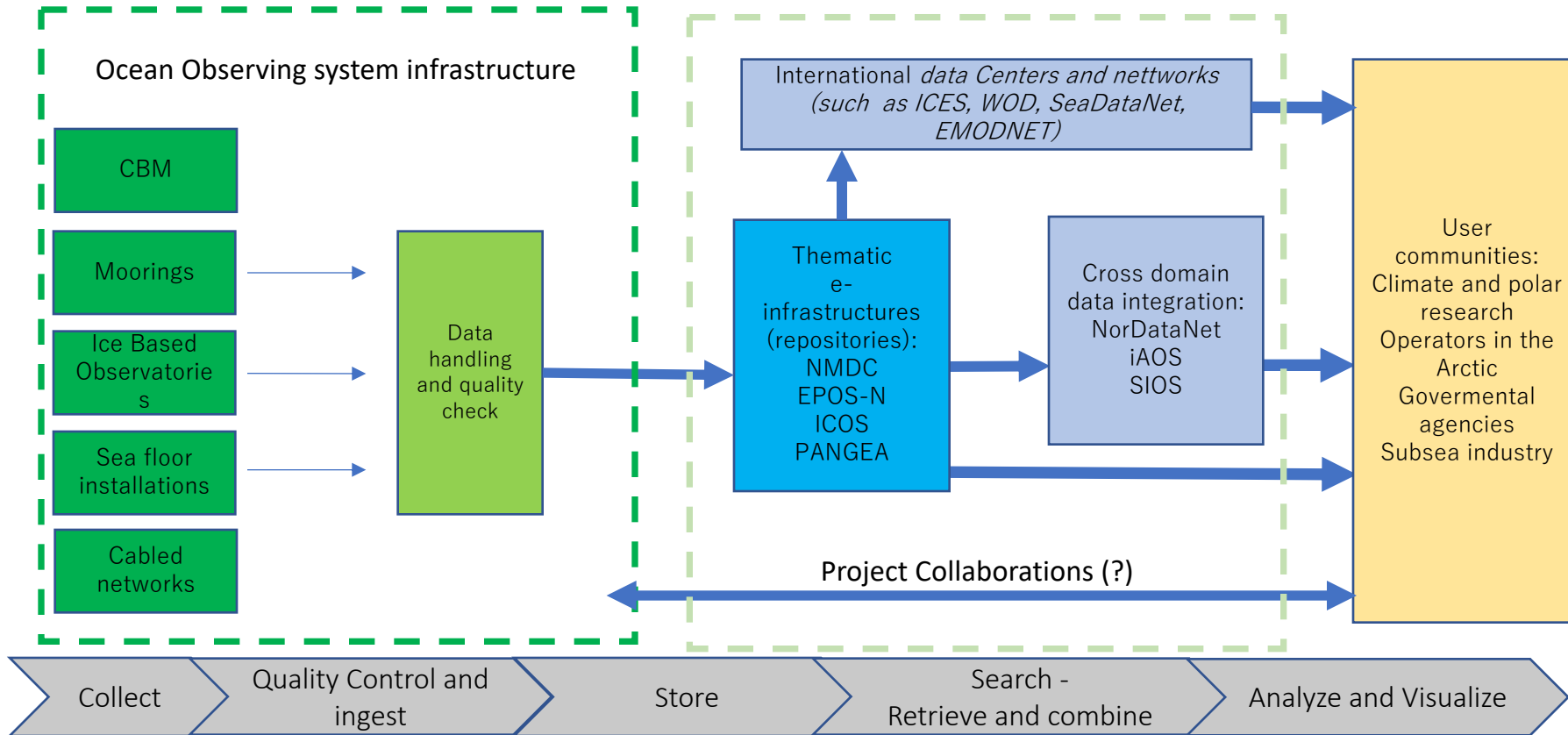
Refresh specific objectives 6-7

- Specific objective 6: Enhance community-based observing programmes by building capacity of scientists and community members to participate in community based research. A model of how Arctic communitybased observing programmes can connect and cross-fertilize with an iAOS will be developed. **The model will be used to incorporate community-based observations from selected communities into existing databases.** This work is addressed in WP4.
- Specific objective 7: Develop and implement the iAOS platform for integration and analysis of multidisciplinary with distributed data repositories. The iAOS platform will be user driven and will include tools for data discovery, aggregation, analysis and visualization. The iAOS will be developed in agreement with international standards for interoperable services, ensuring compatibility with similar data management systems. This work is addressed in WP5, with input from WP2, WP3 and WP4.

Refresh specific objectives 8-9

- Specific objective 8: Demonstrate benefit of the iAOS functionality to selected stakeholders. Prove the value of the iAOS towards selected stakeholders in eight tailored applications: (1) Climate model studies, (2) Improved ecosystem understanding and management, (3) Ice-ocean statistics for risk management, (4) Natural hazards in the Arctic, (5) Improve understanding of greenhouse gas cycle, (6) Cross-fertilizing community based observing systems with science-driven observations, (7) Support for marine and maritime industries, and (8) Support for fisheries and environmental management agencies. This work is addressed in WP6.
- Specific objective 9: Develop professional skills in using the iAOS platform and new data products within industry, education and science. Expertise and competence for those working within this subject area, including major stakeholders, will be developed through summer schools, training programs, scientist exchange programs, and publications in science and popular science. This work is addressed in WP7.

Data Production Chain for Ice/Ocean



Interactions and links between workpackages

- The observation/observing focused Work packages (WP2-4): What data is collected/prepared, what repositories are used, and visible in WP 6? How to stimulate data publications and DOI numbers?
- WP 5: How does WP 5 support the WP2-4? E.g. what is the progress in the Working group.
- WP 5: How does WP 5 to support WP 6?
- WP 6: How does WP 6 plan to exploit the data from WP2-4 through WP 5?
- WP 6: Publications to demonstrate the iAOS?

Data publications

- Paper focused on presenting content and structure of datasets
- A way to **get (more) credit for your data!**
- A way to **increase reusability!**
- Some data journals:
 - [Data in Brief](#), short paper, 60 days review, cost 500 USD
 - [Geoscience data journal](#), medium length, 100-160 days review, cost 1500 USD
 - [Earth System Science Data](#), long paper, 160 days review, cost currently waived
- All journals **requires DOI for the dataset**, assigned by a data centre
- Some sample data papers:
 - [GPS data from sea ice trackers deployed in Fram Strait in 2016](#)
 - [How confident are predictability estimates of the winter North Atlantic Oscillation?](#)
 - [From pole to pole: 33 years of physical oceanography onboard R/V Polarstern](#)

DOI (Digital Object Identifier)

- Unique identifier of datasets, papers, source code, etc.
- Examples of (a few) data repositories assigning DOIs:
 - [Zenodo.org](https://zenodo.org)
 - [PANGAEA](https://pangaea.de)
 - [Norwegian Marine Data Centre](https://www.nmdc.no) (NMDC)
 - [Mendeley Data](https://www.mendeley.com)
- Sample datasets:
 - [SPICES – Sea ice edge maps from the Fram Strait](https://zenodo.org/record/1000000) (Zenodo.org)
 - [UDASH dataset](https://pangaea.de) (PANGAEA)
 - [N-ICE2015 datasets](https://www.nmdc.no) (NMDC)

