

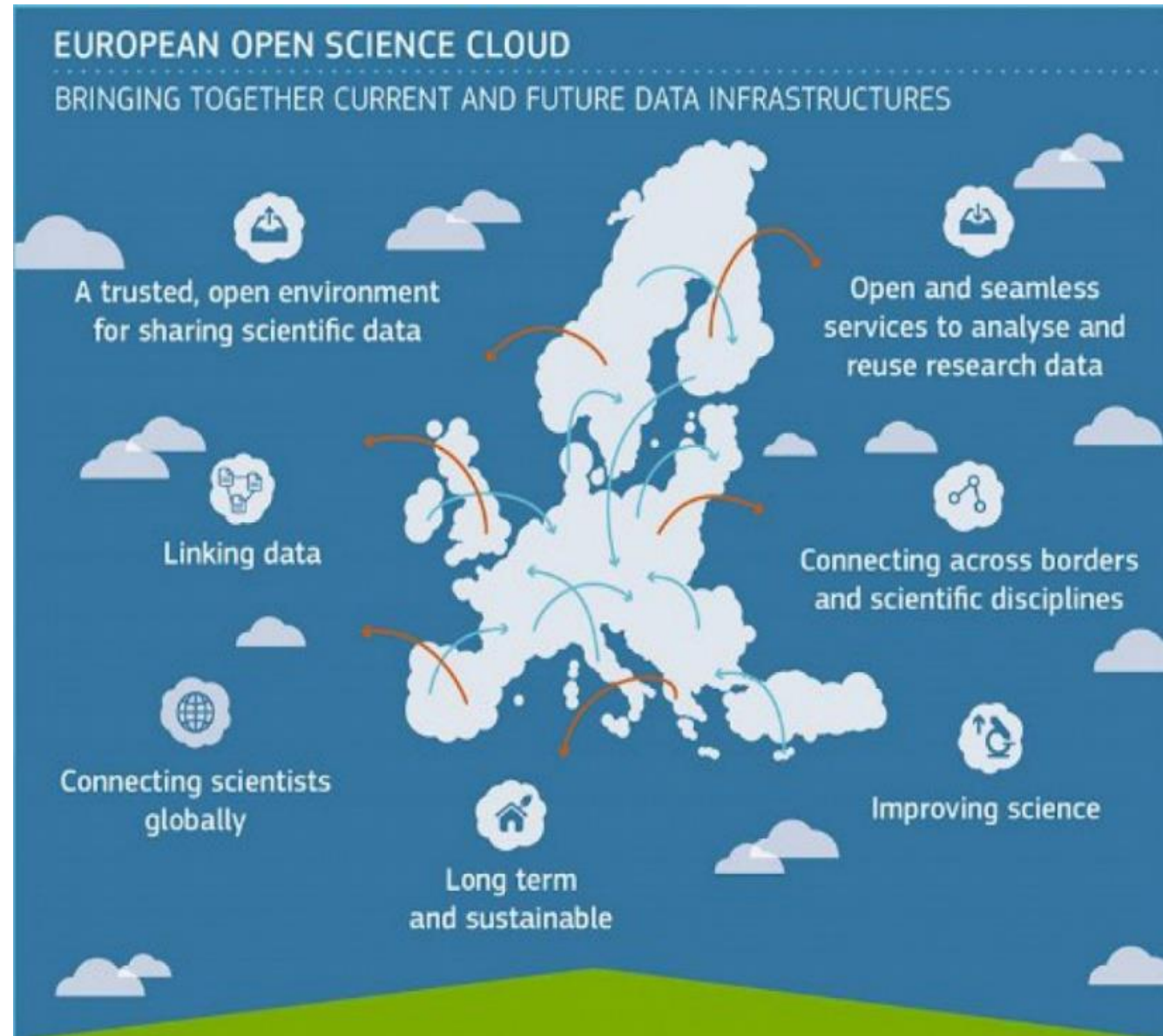
EOSC-Nordic

Constructing the European Open Science Cloud via regional building blocks

by Lene Krøl Andersen
Project manager of EOSC-Nordic

The vision of EOSC

*To enable a “**trusted, virtual, federated environment in Europe to store, share and reuse digital outputs from research (including publications, data, metadata and software) across borders and scientific disciplines**” (SRIA)*



EOSC Partnership timeframe

The set of activities to be performed in the period 2021-2027 will result into the definition of a Strategic Research and Innovation Agenda (SRIA)

Stage 1: period 2021-2023

Creating the **European Open Science Cloud operations (EOSC-Core)** to provide authentication & authorization infrastructure (AAI) and other necessary core functions of the Minimum Viable EOSC.

Stage 2: period 2024-2025

Expanding the Minimal Viable EOSC with **access to added value services, applications and tools (EOSC-Exchange)** supporting the full cycle of scientific workflows.

First pilots / demonstrators on linking EOSC beyond the research communities with the wider public sector and the private sector from 2024 onwards, for addressing societal challenges

Stage 3: period 2026-2027 and beyond

Deployment of the **Web of FAIR Data and related Services**, including the EOSC-core, EOSC-Exchange and other framework conditions for interoperability and machine-actionability of data. This Web of FAIR Data and Services is part of a developing global Open Science Commons.

Continuous support to enhancing the ecosystem of the Web of FAIR data and related services for the research community.

EOSC Association

- The Partnership will operate through a new Association (Belgian **AISBL**)
- Established on 29 July 2020
- 4 founding members: [CESAER](#), [CSIC](#), [GÉANT](#) and [GARR](#)
- Around 200 organisations have expressed interest to enter into an EOSC Association membership
- A General Assembly will ratify the admission of additional members and will proceed to the formal voting of Board and President

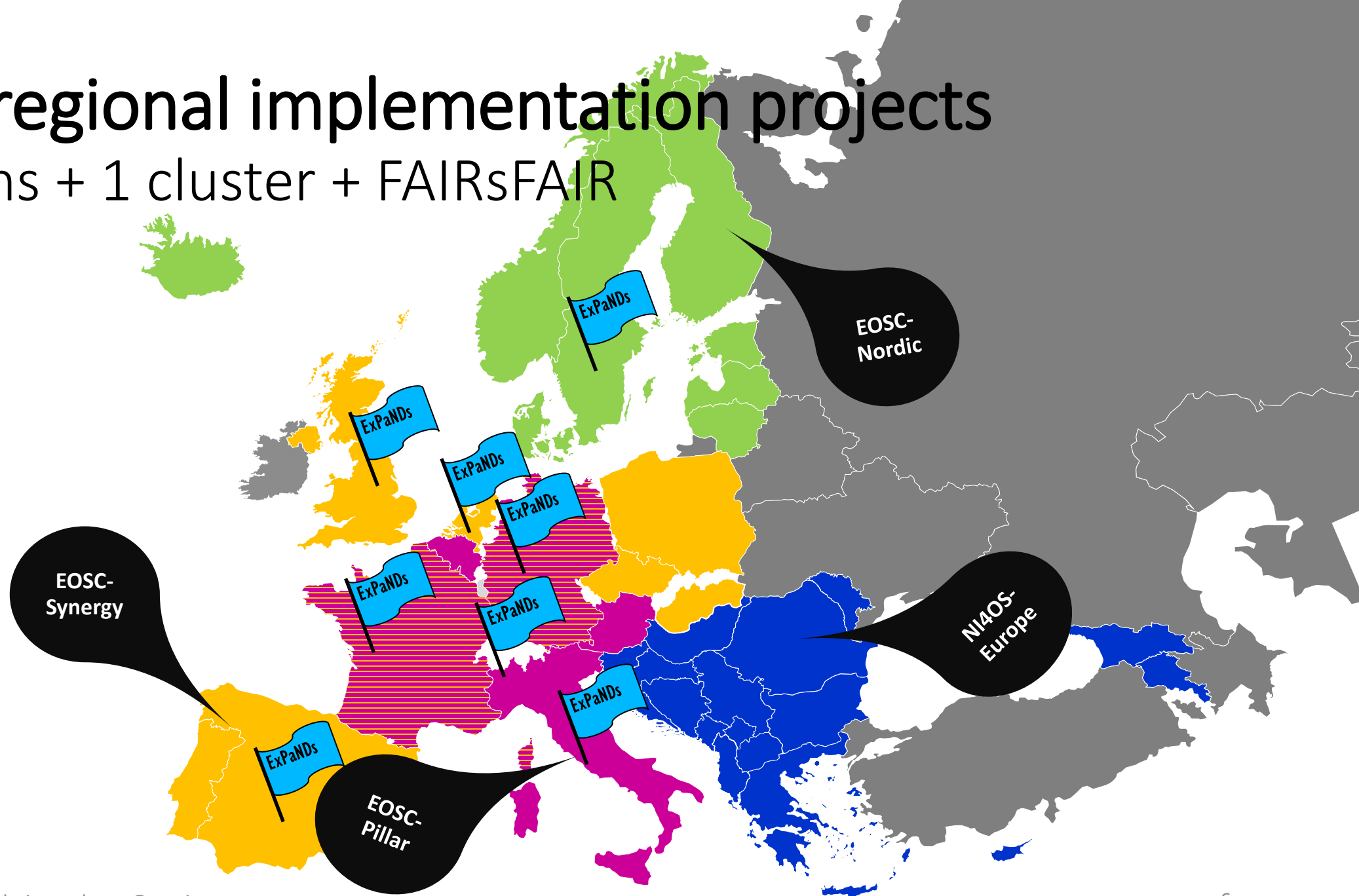


EOSC Association main duties

- Bringing together key stakeholders in the EU research environment to agree strategies for the advancement of Open Science;
- Collaborating with the EC & MSs on activities to establishing a Partnership and developing a SRIA for Open Science for the European Research Area;
- Maintaining alignment between the operations sponsored by the Association and the EC's Open Science strategy;
- Identifying key infrastructure requirements for the capture, storage, processing and sharing of data;
- Promoting FAIR data and the coordination of standards development and adoption;
- Enabling key services to promote broad and secure access to data resources and data processing services;
- Coordinating and fostering technical environments and promoting the skills that enable the federation of existing and new scientific data infrastructures
- Facilitating communication, outreach and engagement with its internal & external members and society as a whole

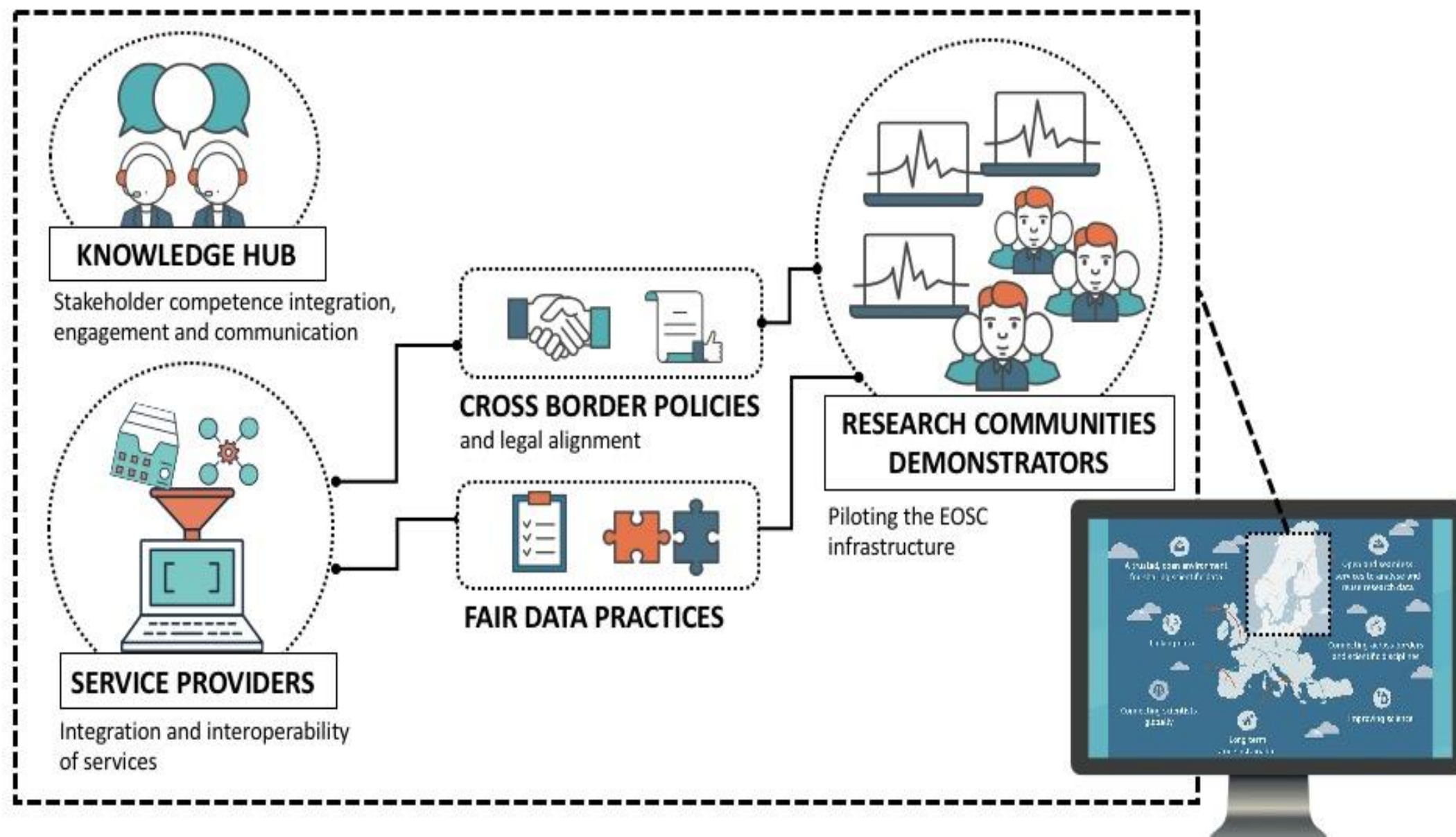
EOSC regional implementation projects

4 regions + 1 cluster + FAIRsFAIR



EOSC NORDIC

CATALYSING THE TAKE-UP OF EOSC IN THE NORDIC REGION



The Case for a Coordinated Nordic Effort on EOSC

- 1) **Open Science Programmes** are strong in the Nordics and many actors are **already involved in EOSC related initiatives**
- 2) There is a good **history of Research & Policy collaboration** across the Nordics upon which we can build
- 3) We can achieve more by working together rather than separately (**Nordic Added Value**)





Call: INFRAEOSC-05-2018-2019

Participants: 24

Budget: 5.9M€

Coordinator: Gudmund Høst, NeIC Director

Project period: Sep, 2019 – Aug, 2022

24 Participants – 10 countries – now more than 200 participants

Iceland

- UNIVERSITY OF ICELAND

Norway

- NORDFORSK
- UNINETT SIGMA2 AS
- NORWEGIAN CENTER FOR RESEARCH DATA

Denmark

- DENMARK TECHNICAL UNIVERSITY
- UNIVERSITY OF SOUTHERN DENMARK
- DANISH NATIONAL ARCHIVES
- UNIVERSITY OF COPENHAGEN
- CAPITAL REGION OF DENMARK
- NORDUNET / AS

Netherlands
GoFair

Germany
DKRZ

Sweden

- UNIVERSITY OF UPPSALA
- SWEDISH RESEARCH COUNCIL
- UNIVERSITY OF GOTHENBURG

Finland

- CSC – IT CENTER OF SCIENCE
- UNIVERSITY OF HELSINKI
- UNIVERSITY OF TAMPERE
- UNIVERSITY OF EASTERN FINLAND
- FINNISH METEOROLOGICAL INSTITUTE

Estonia

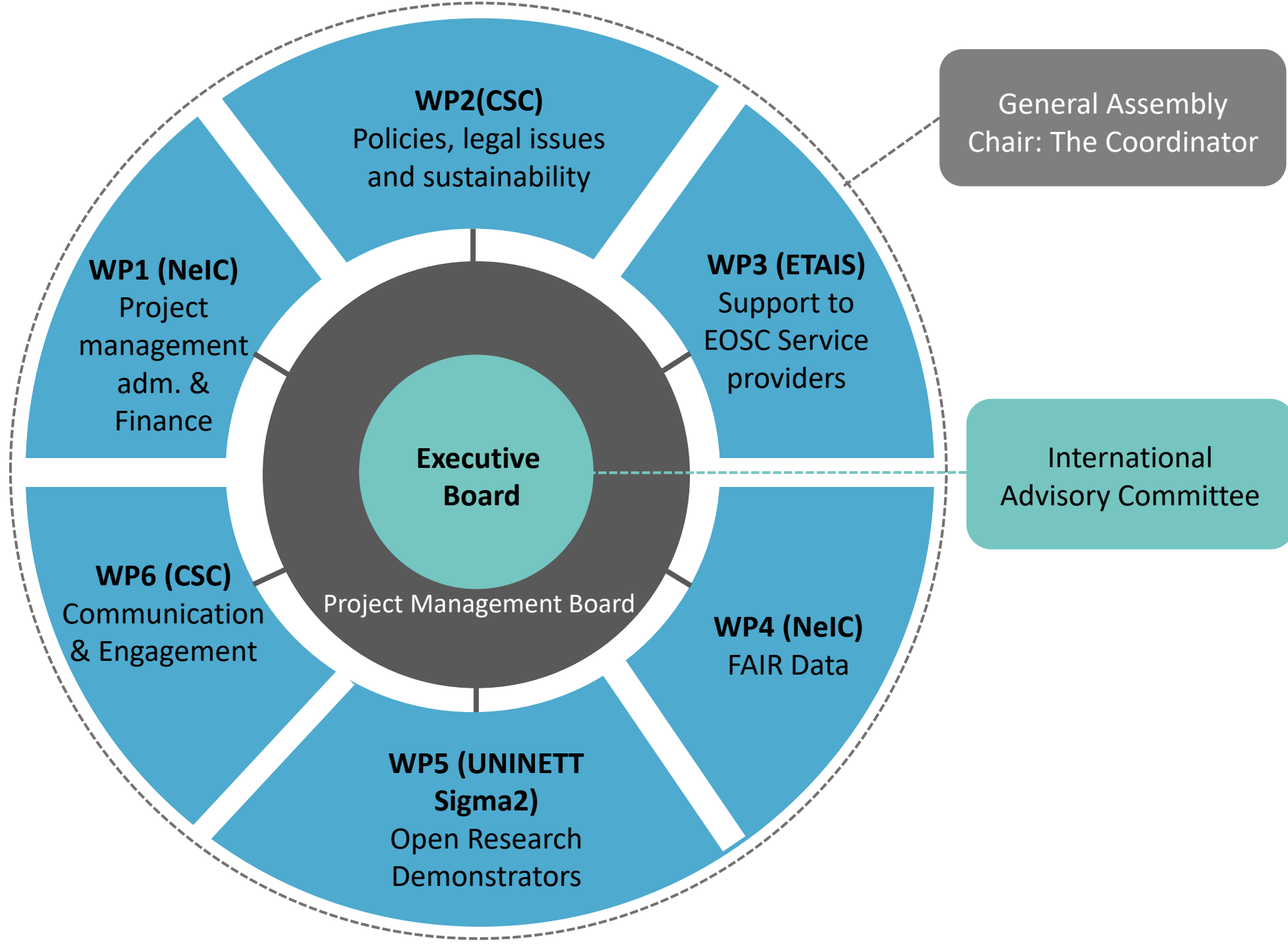
- UNIVERSITY OF TARTU
- NATIONAL INSTITUTE OF CHEMICAL PHYSICS AND BIOPHYSICS

Latvia

- RIGA TECHNICAL UNIVERSITY

Lithuania

- UNIVERSITY OF VILNIUS



International Advisory Committee (IAC)

Experts to advise and support the Executive board of EOSC Nordic



1. **Ana Proykova**
Professor, Atomic and Molecular Physics, University of Sofia **(Bulgaria)**
2. **Francoise Genova**
Senior Researcher at Strasbourg astronomical data centre **(France)**
3. **Wilco Hazeleger**
Dean, University of Utrecht, **(Netherlands)**
4. **Ingrid Dillo**
Deputy Director, Data Archiving and Networked Services (DANS) **(Netherlands)**
5. **Daniel Mallmann**
Head of Data Services, Juelich **(Germany)**
6. **Andrew Treloar**
Director, The Australian Research Data Commons (ARDC) **(Australia)**
7. **Christine Kirkpatrick**
Executive Director, National Data Service **(US).**

POLICIES, LEGAL ISSUES AND SUSTAINABILITY

IN A CROSS-BORDER ENVIRONMENT



POLICIES AND PRINCIPLES

Identify & map the **open science policies** & resource provisioning principles applied in the Nordic and Baltic countries.



SERVICES AND RESOURCES

Investigate **models, roles and responsibilities** for the coordinated provisioning and delivery of **EOSC services and resources** at national level



LEGAL CHALLENGES

Identify current and potential **legal hurdles** associated with the sharing of data and resources across national borders. Suggest solutions.



COORDINATE AND ALIGN

Discuss and coordinate policy activities, and advise on directions the national initiatives should take to align with relevant EOSC policies.

INTEGRATION AND INTEROPERABILITY

OF PROSPECTIVE EOSC SERVICE PROVIDERS IN NORDIC AND BALTIC COUNTRIES

Integration

Identify existing Nordic generic and thematic service providers.

Support integration and discovery of their services via the EOSC portal

EOSC

Interoperability

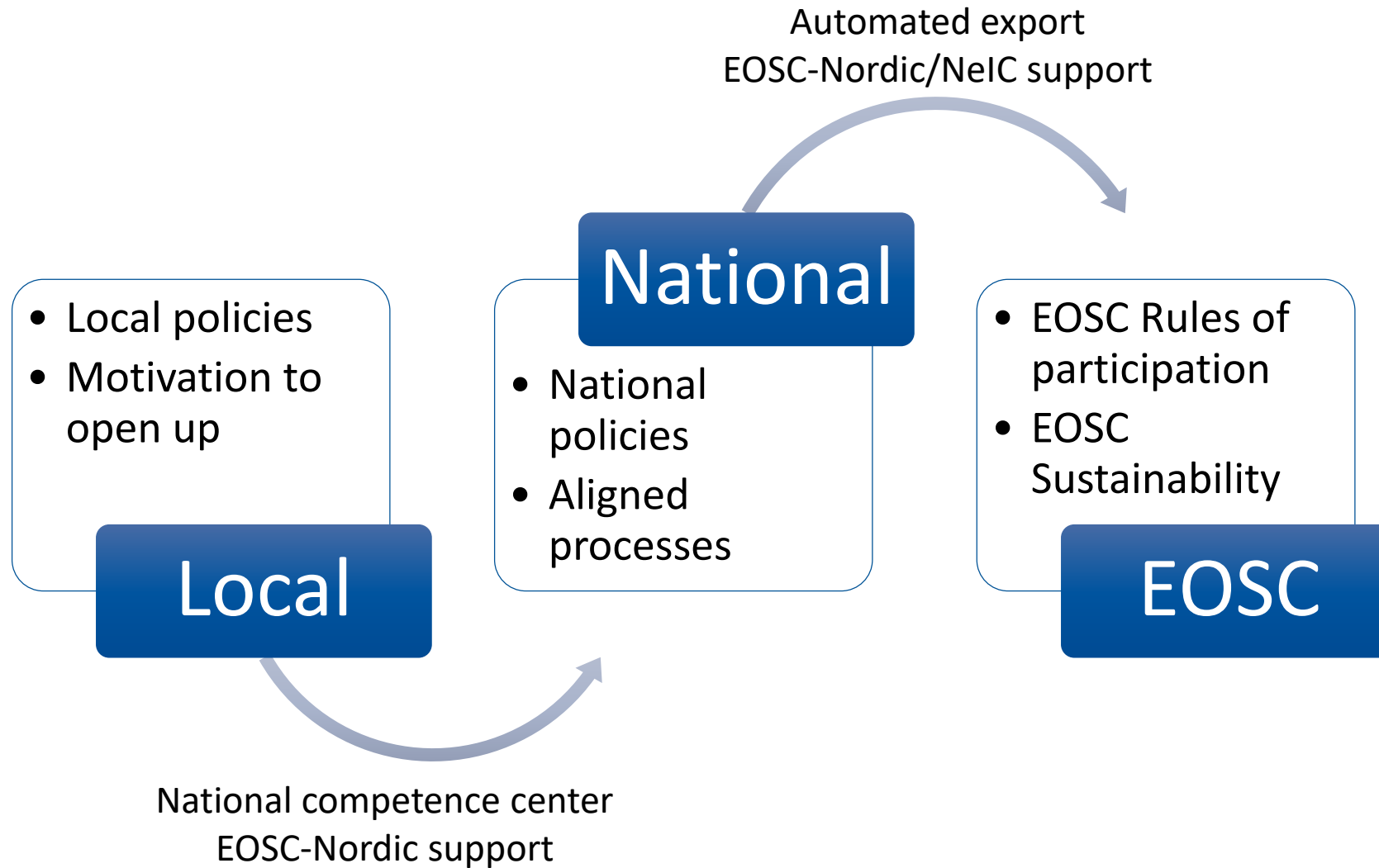
Foster organizational, semantic and technical interoperability of service providers.

Propose improvements of the interoperability approach within EOSC.

Local/national services

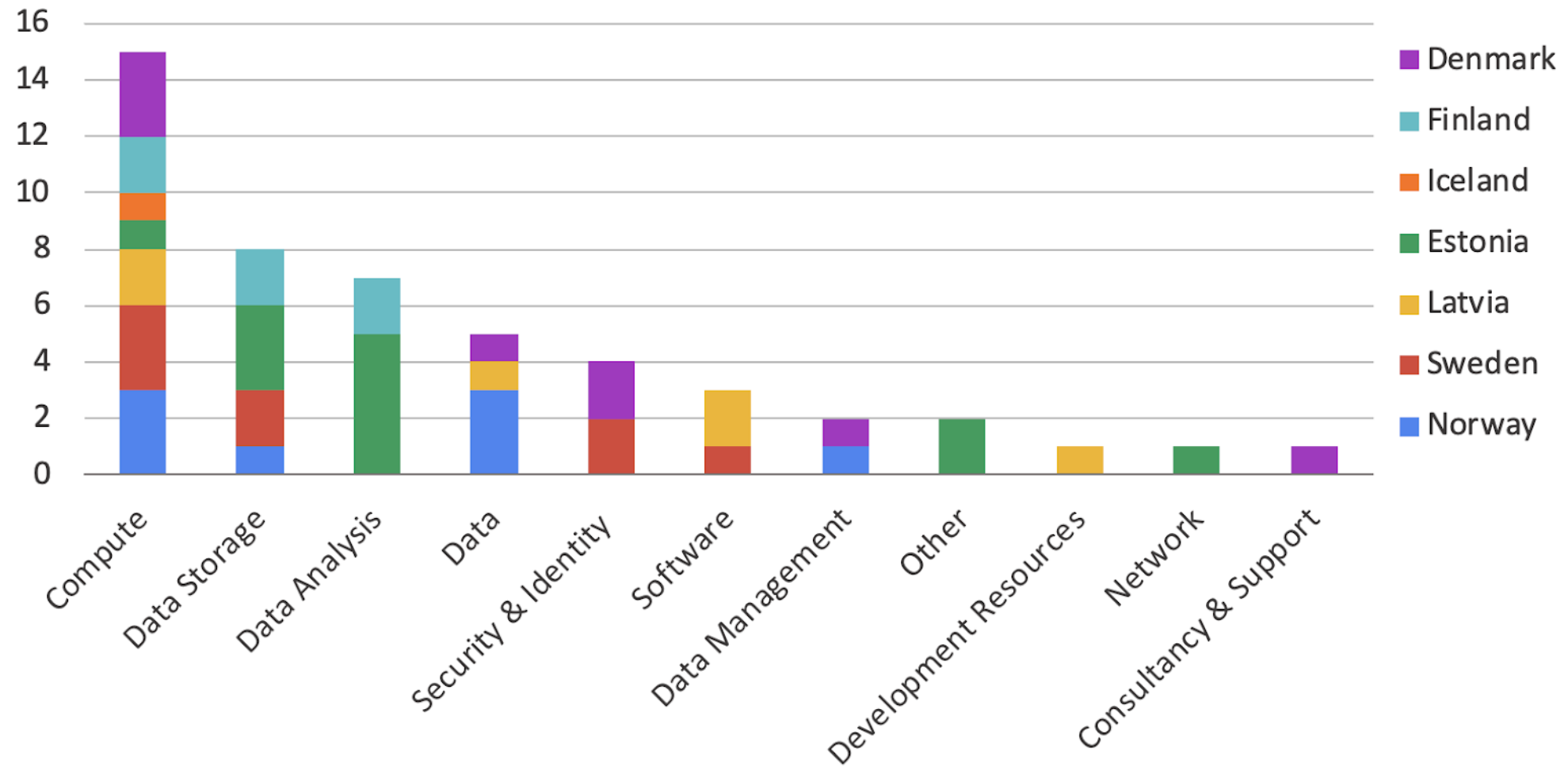


EOSC-Nordic approach to EOSC service publishing



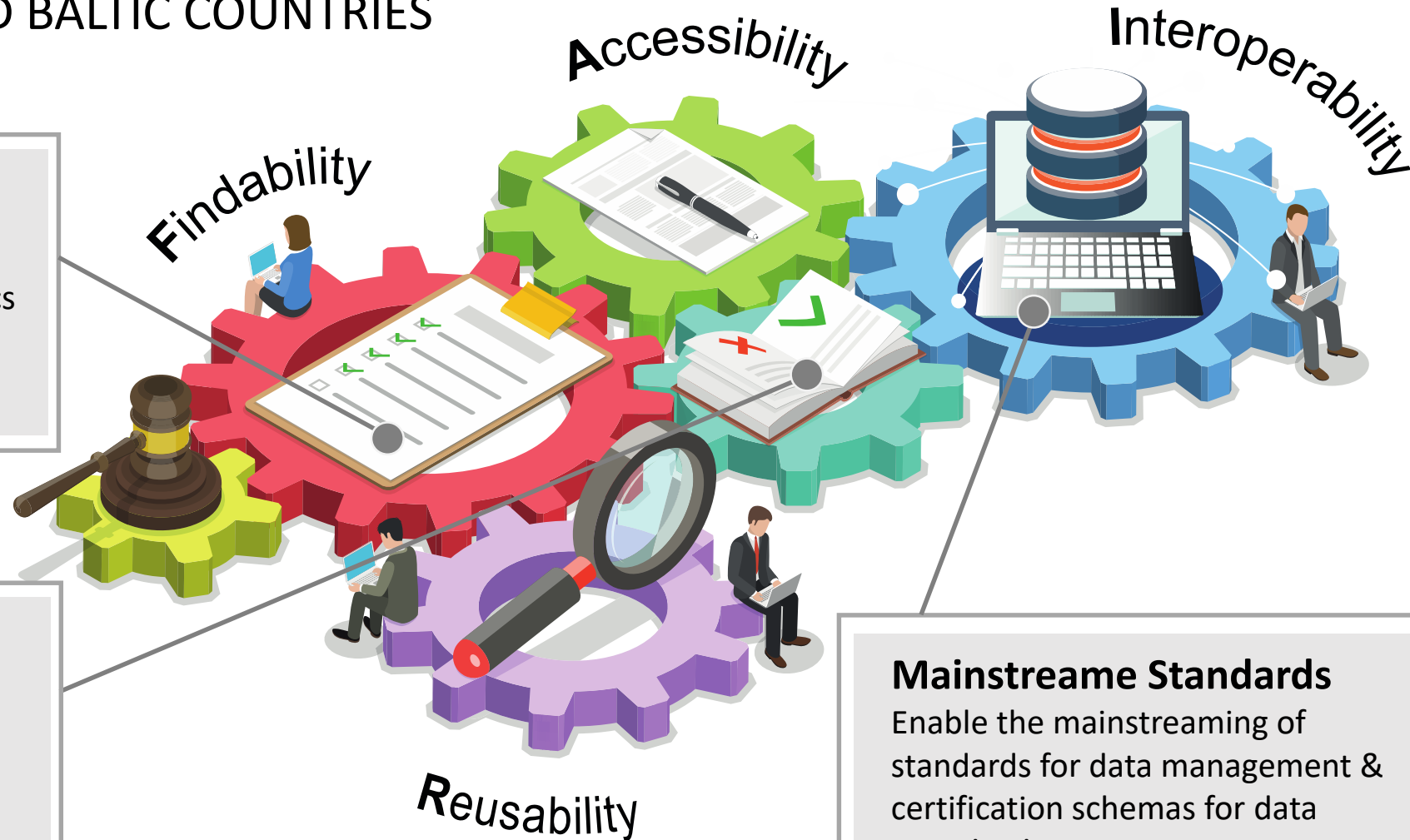
Results of the first round of service discovery

Service Category per Country



DEVELOPING FAIR DATA PRACTICES

ACROSS THE NORDIC AND BALTIC COUNTRIES



Investigate Practices

Investigate and inform about the state of FAIR practices in the Nordics and the Baltics, looking at national policies and practices.

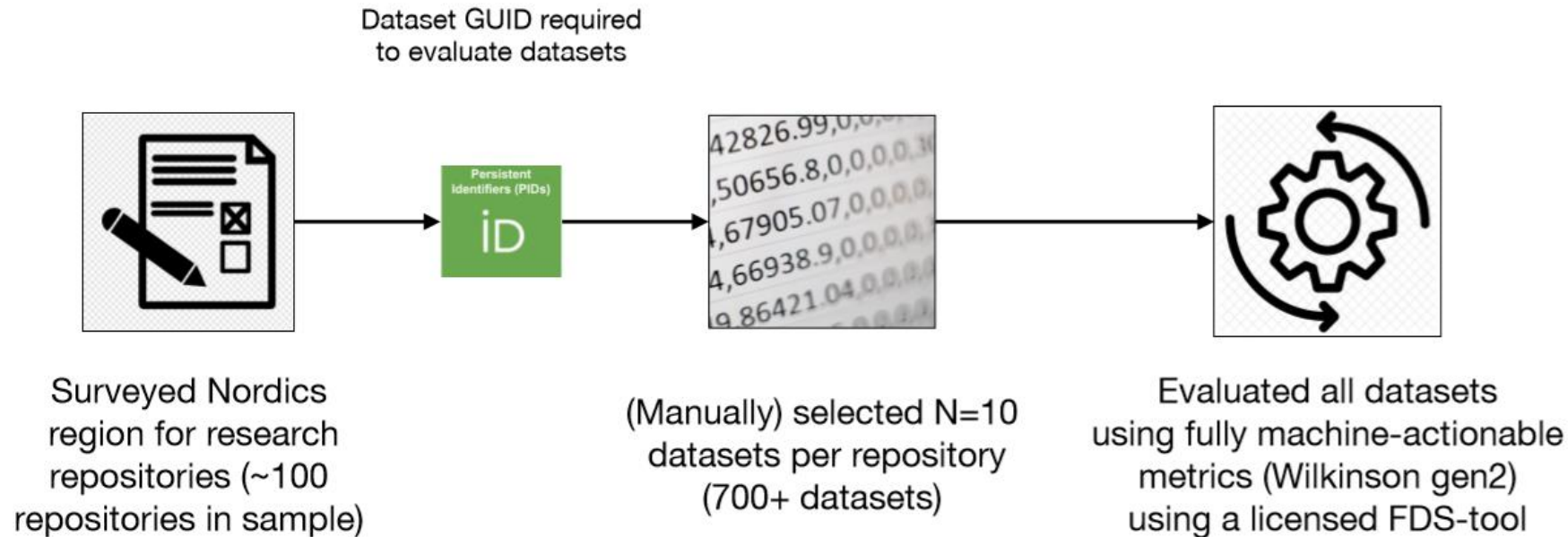
Develop Incentives

Develop and promote incentives for the uptake of FAIR data practices across national scientific communities

Mainstream Standards

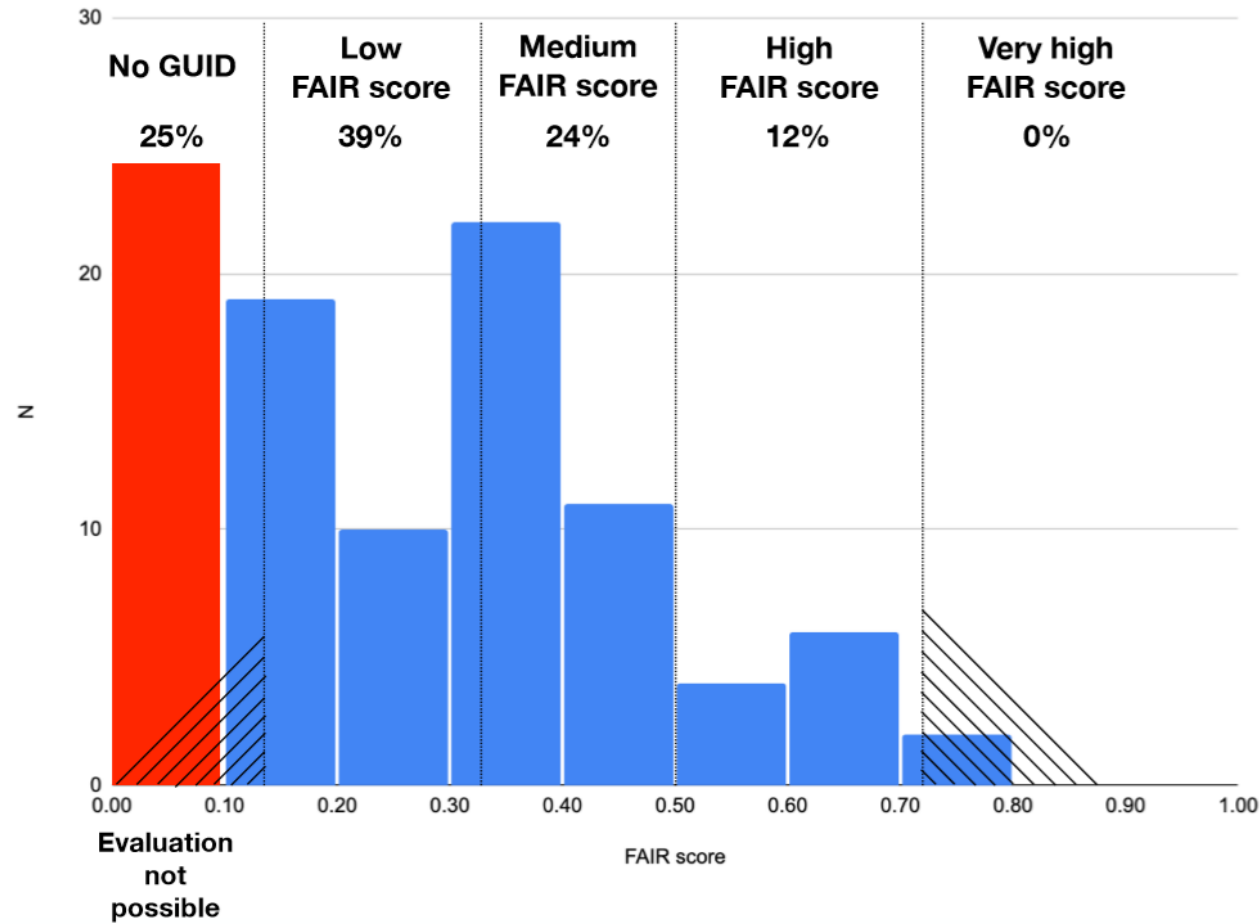
Enable the mainstreaming of standards for data management & certification schemas for data repositories

WP4 first year activities



FAIR uptake

FAIR scores from 1018 PID+URI datasets



20 July 2020

98 repositories (74 evaluated)

DEMONSTRATING THE POTENTIAL OF EOSC

USING THE NORDIC AND BALTIC COUNTRIES AS A TESTBED ENVIRONMENT.

DISCOVER AND RE-USE RESEARCH DATA

Foster the discoverability and re-use of research data. Harvesting metadata in the future EOSC **metadata catalogue**.

SENSITIVE DATA AND ORCHESTRATION

Piloting an orchestration mechanism that brings national secure servers together, allowing the analysis of sensitive data without moving data away from the custodian.

ANALYSIS AND POST-PROCESSING

Integration of community specific portals with large scale computing facilities and pilot usage of computing resources across borders

DATA MANAGEMENT SHARING AND ARCHIVING

Facilitating cross-borders data sharing by enabling data management on a distributed environment.



The EOSC-Nordic Knowledge Hub – a virtual Help center

Knowledge Hub

We have collected all our useful resources and information into this Knowledge Hub. Here's a short description of each section to help you find what you're looking for.



Materials

Key documents of the project (Reports, recommendations & guidelines)

[Read more](#)



Users and organisations

Find out what EOSC-Nordic can offer for you

[Read more](#)



Training Library

All sorts of training events and materials

[Read more](#)



Services

The services available and a guidance how to register a service

[Read more](#)



Support

Browse FAQs or send over your request via our Service Desk

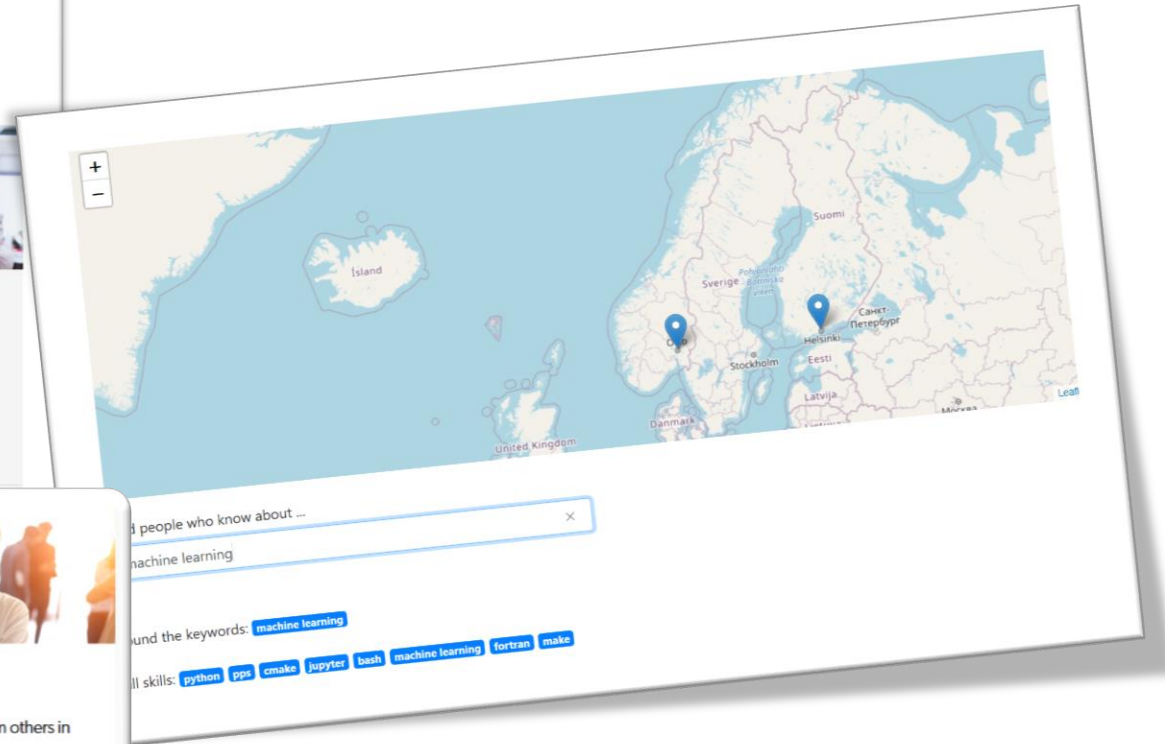
[Read more](#)



Community

Connect with peers and learn from others in your field

[Read more](#)



Thank you

- EOSC-Nordic website: www.eosc-nordic.eu
- Keep yourself informed via the EOSC-Nordic newsletter:
<https://www.eosc-nordic.eu/newsletter/>
- Contact: Lene Krøl Andersen, email: lene.krol.andersen@deic.dk