Supporting Scientific Service Providers in Estonia and Nordics

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About ETAIS

- Estonian Scientific Computing Infrastructure (ETAIS) is a National Research Infrastructure of Estonia

- Provides infrastructure and support services to the research communities and R&D companies

- Consortium of 4 partners including largest universities in Estonia: UT, TalTech, KBFI, HITSA/EENET

- Partner in EOSC-Nordic

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Main users

Organizations

- Estonian Biobank
- NICPB HEP
- UT FST
- UT ISC
- EKRK
- TTU Marine Institute

Consortiums

- BBMRI ERIC
- ELIXIR
- SIME
- CLARIN ERIC
- CERN
- EGI
- Copernicus

Others

- Perkin Elmer
- Asper Biotech AS
- Cybernetica AS
- Praxis
- Hackathons
- "Long tail"

Estonian Scientific
Computing Infrastructure

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)**

24 Participants

Iceland
- UNIVERSITY OF ICELAND

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

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

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

Sweden
- UNIVERSITY OF UPPSALA
- SWEDISH RESEARCH COUNCIL
- UNIVERSITY OF GOTHENBORG

Netherlands
GoFair

Germany
DKRZ

EOSC NORDIC

OBJECTIVE 1

Support coordination, harmonisation and alignment of Nordic and Baltic national policies and practices related to the provision of horizontal research data services with EOSC

OBJECTIVE 2

Increase the discoverability of Nordic & Baltic services. Extend and expand their use by making them accessible through the EOSC portal

OBJECTIVE 3

Promote and support the uptake of FAIR data practices and certification schemas across the Nordics

OBJECTIVE 4

Accelerate the progress and attractiveness of EOSC by piloting & delivering innovative solutions developed and tested in a useful and functional cross-border environment

OBJECTIVE 5

Provide a Knowledge Hub to deliver training and technical support to new service providers and communities willing to engage with EOSC during and after the project lifetime

MAIN OBJECTIVES

1
2
3
4
5

POLICIES, LEGAL ISSUES AND SUSTAINABILITY
IN A CROSS-BORDER ENVIRONMENT
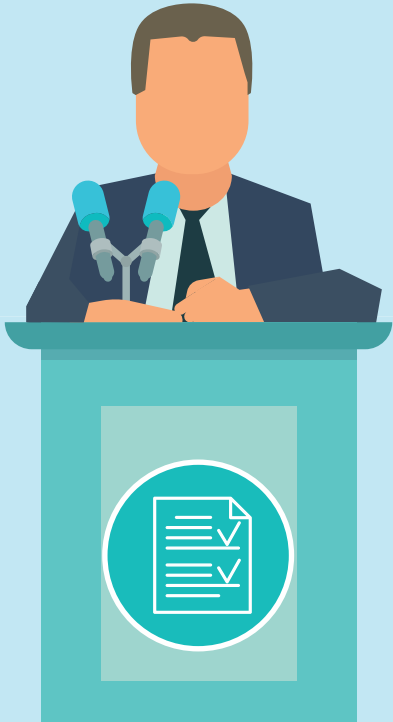
POLICIES AND PRINCIPLES

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 resource**s 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.

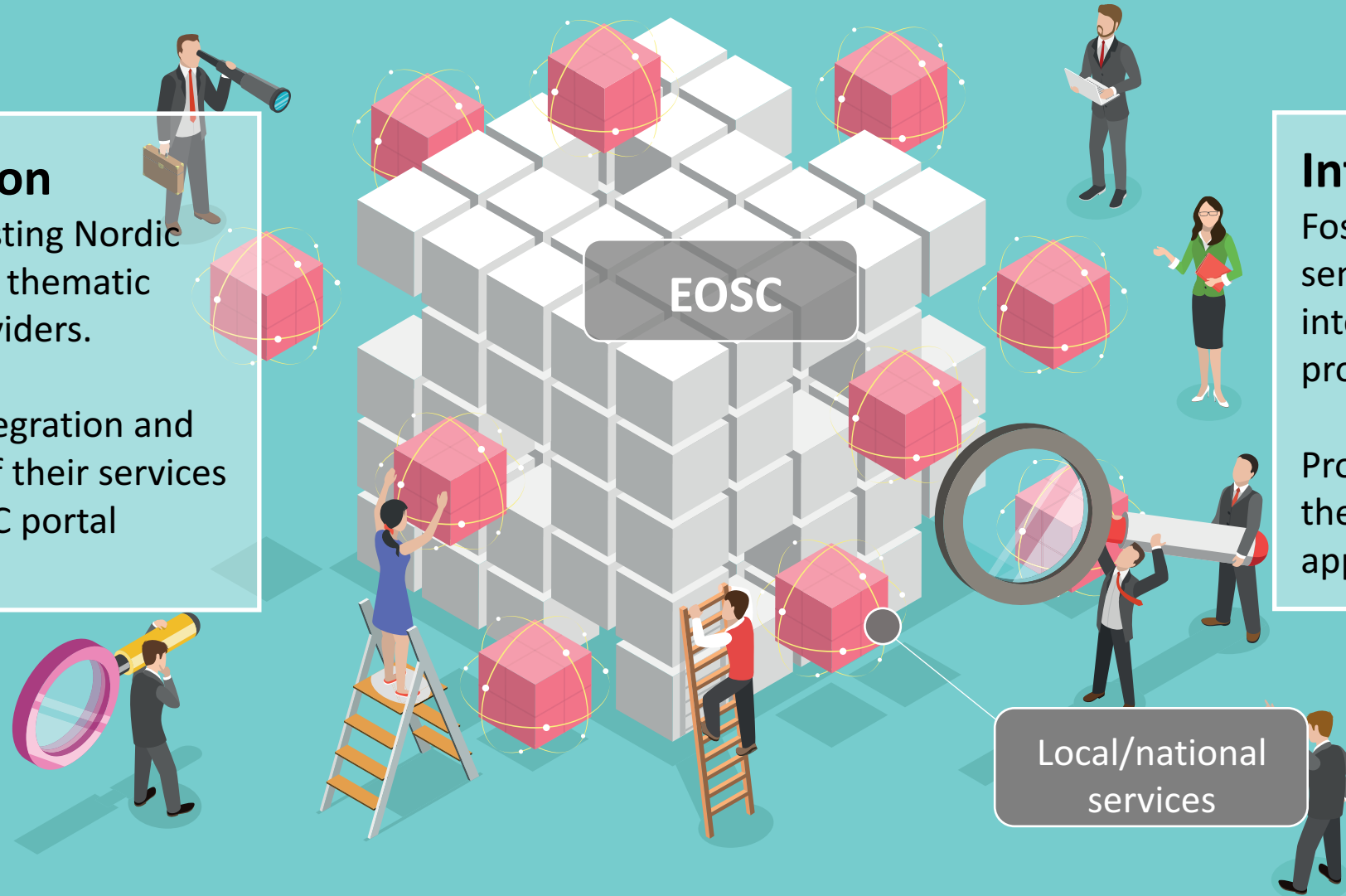Support integration and discovery of their services via the EOSC portal

Interoperability

Foster organizational, semantic and technical interoperability of service providers.

Propose improvements of the interoperability approach within EOSC.

EOSC

Local/national services

WP3 – Support to EOSC service providers

T3.1 Integrating service providers & services in EOSC

- Identification & description of EOSC prospective service providers & candidate services

- EOSC service compliance checklist and capacity maturity model

- Support to the integration of mature services into EOSC portal

- Support to aligning with EOSC service management & operational

T3.2 Improving service interoperability across EOSC

- Organisational, semantic and technical interoperability of services

- Connecting services to EOSC through the interoperable approach

- Federating services and databases

DEVELOPING **FAIR** DATA PRACTICES

ACROSS THE NORDIC AND BALTIC COUNTRIES

Findability

Accessibility

Interoperability

Reusability

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

Mainstreame Standards
Enable the mainstreaming of standards for data management & certification schemas for data repositories
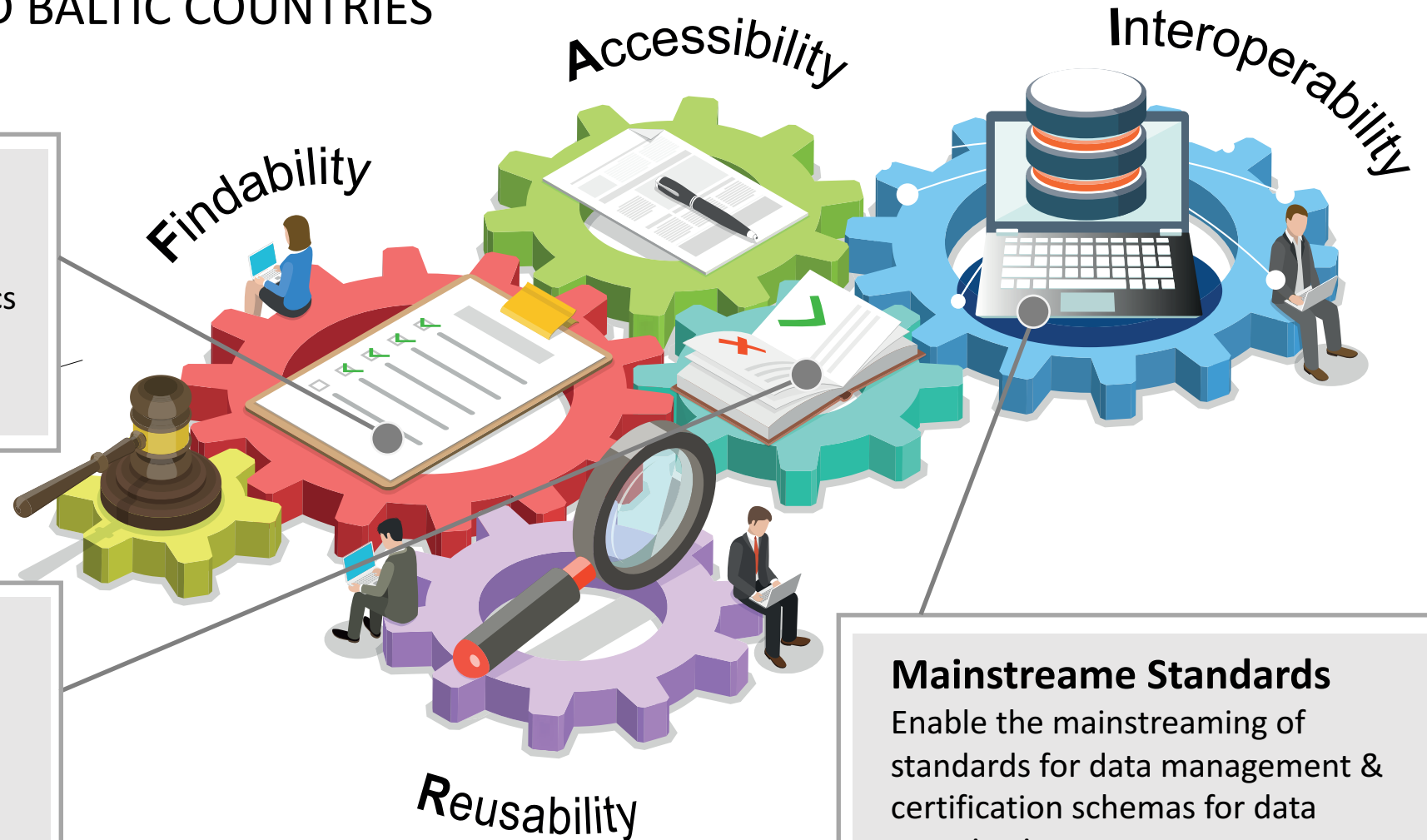
WP4 – FAIR Data

T4.1 State of FAIR practices in the Nordics

- Overview of Nordic data repositories and their functionalities

- FAIR Gap Analysis

- Boosting FAIR metric scores

T4.2 Support to the adoption of standards and certification

- Selection of data repositories for the advancement of FAIR data standards and certification

- Support for adoption of FAIR data standards

- Support for adoption of FAIR certification schema

T4.3 Incentives for the uptake of FAIR practices

- Mapping of policy implemented incentives within the Nordic and Baltic members states

- Identifying effective incentives that increase uptake of FAIR practices

- Dialog with stakeholders and policy makers

DEMONSTRATING THE POTENTIAL OF EOSC

USING THE NORDIC AND BALTIC COUNTRIES AS A TESTBED ENVIRONMENT.

ANALYSIS AND POST-PROCESSING
Integration of community specific portals with large scale computing facilities and pilot usage of computing resources across borders

DISCOVER AND RE-USE RESEARCH DATA
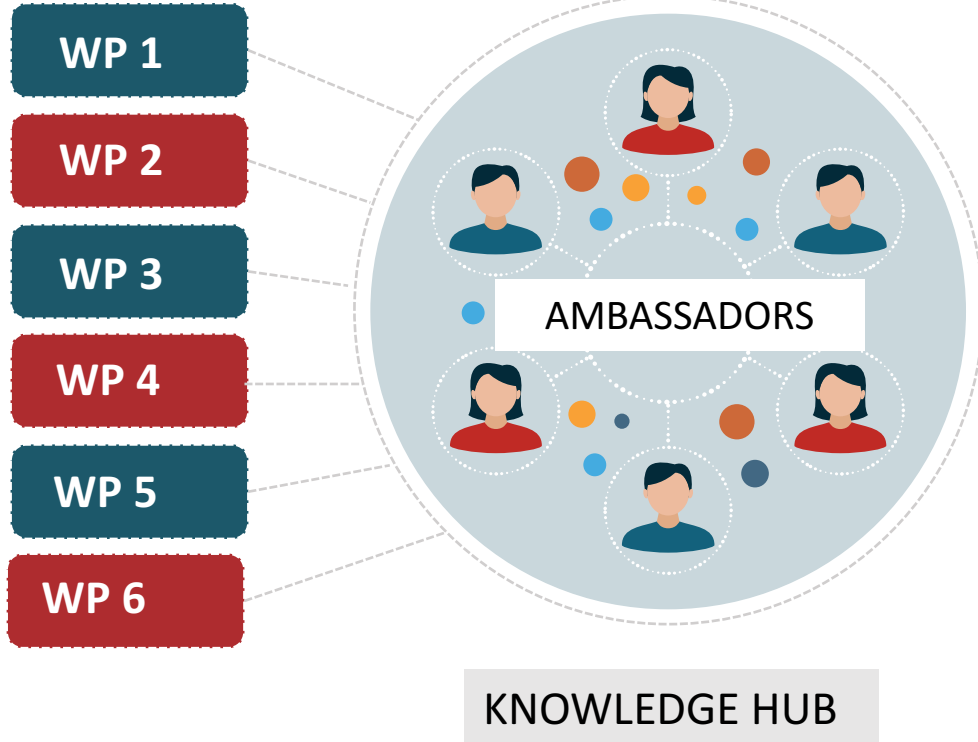Foster the discoverability and re-use of research data. Harvesting metadata in the future EOSC **metadata catalogue**.

DATA MANAGEMENT SHARING AND ARCHIVING
Facilitating cross-borders data sharing by enabling data management on a distributed environment.

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.

EOSCpilot
The European Open Science Cloud for Research Pilot Project

INTEGRATION AND DISSEMINATION

THE KNOWLEDGE HUB MODEL

EOSC WORK PACKAGES

WP 1

WP 2

WP 3

WP 4

WP 5

WP 6

AMBASSADORS

KNOWLEDGE HUB

REGIONAL COLLABORATIONS

INSTITUTIONS

TRAIN THE TRAINER EVENTS

INTERNATIONAL ORGANISATIONS

WORK PACKAGES

WP6
Communication and
Engagement

WP5
Open Research
Demonstrators

WP4
FAIR Data

WP3
Support to EOSC
Service providers

WP2
Policies, legal issues
and sustainability

WP1
Project management
adm. & Finance

EOSC NORDIC
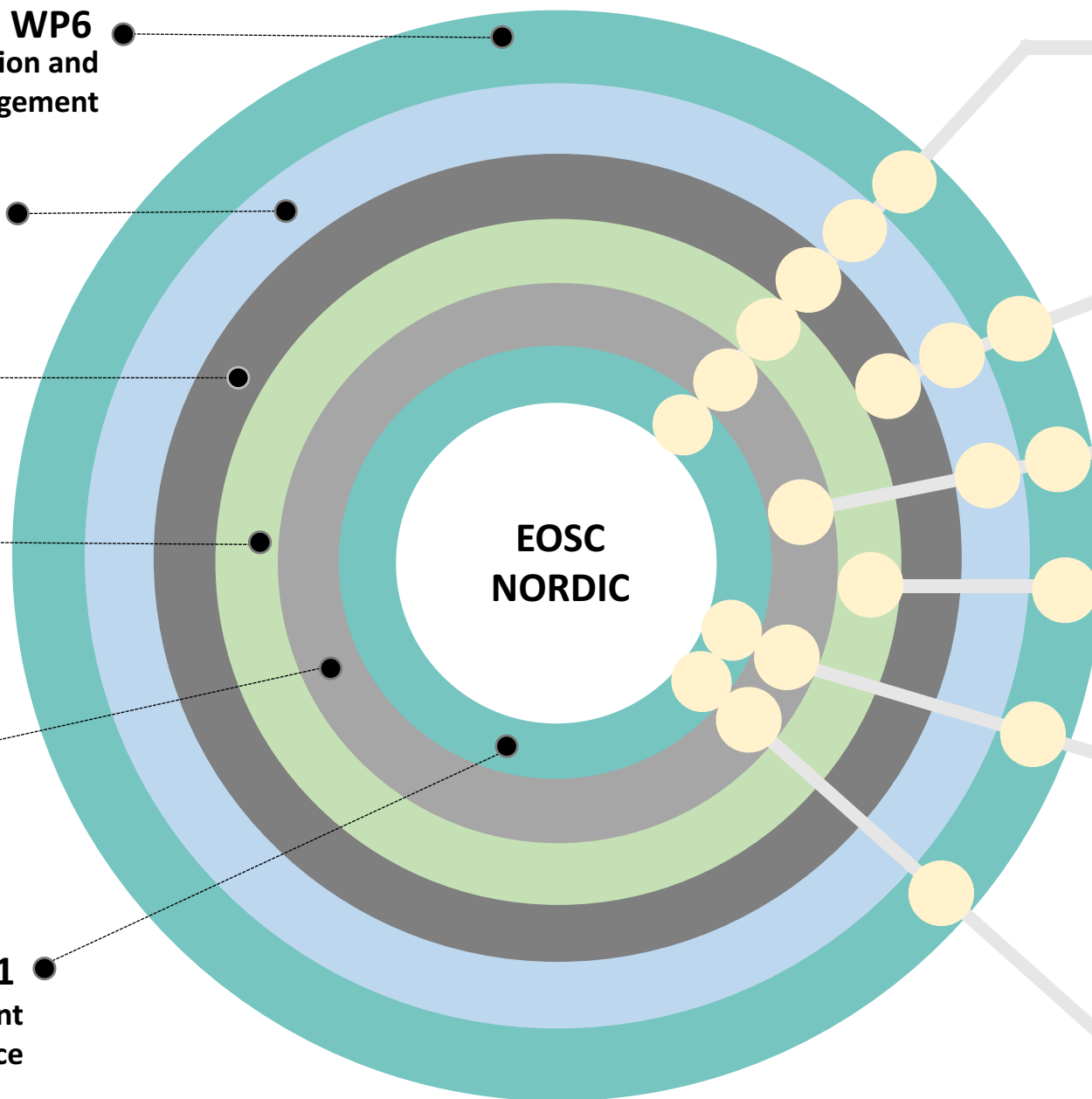
STAKEHOLDERS INVOLVEMENT

e-Infrastructure- and
service providers

Data repositories

Research communities
and institutions

Universities & Libraries

Research Councils and
Funding Agencies

Governmental agencies
and Ministries

Thanks!

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WP2 – Policies, legal issues, and sustainability

T2.1 Open science policies & resource provisioning in the Nordic and Baltic countries

- Open science policies in the Nordic and the Baltic countries

- Resource provisioning & access policies

T2.2. Opening up and delivering services in a cross border environment

- Assessment of cross-border collaboration models

- Legal issues

T2.3 Fostering a coordinated policy approach towards

- Ensuring engagement and commitment from policy-makers

- Making the case for a Nordic-Baltic collaboration

- Sustaining the coordination of national initiatives

WP5 - Demonstrators

Task 5.1 Discovery and Re-use of research data in EOSC

- Discovery and re-use of Nordic community specific data in EOSC
- Semantic mapping procedures and quality standards

Task 5.2 Analysis and Post-processing across borders

- Cross-border data processing workflows
- Code Repositories, Containerization and "virtual laboratories"
- Platform as a Service for Scientific Cloud Computing and Cloud Native Execution mechanisms

WP5 - Demonstrators

Task 5.3 Data management planning in a distributed environment

- Integrated Data Management Workflows
- Machine actionable DMPs

Task 5.4 Sensitive Data

- Cross borders orchestration of sensitive data clouds
- AAI and operations procedure for a Nordic eHealth Cloud

WP6 – Communication & Engagement

Task 6.1. Engagement and communication Strategy

Task 6.2 Web portal, communication tools and branding

Task 6.3 Communication and dissemination Lead:

- Targeted Content Generation
- Digital Presence
- EOSC-Nordic & Third Party Events

T6.4 Knowledge Hub, Capacity Building and Training

- Knowledge hub Coordination and Strategy
- Knowledge hub content generation
- Training events M1-M36