

D1.3: Report on the interactions, synergies and cooperation with EOSC related initiatives and their outcome

Author(s)	Lene Krøl Andersen
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Author(s)	Lene Krøl Andersen
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EOSC-Nordic has been built upon both existing and new collaboration networks. The INFRAEOSC-05-2018-2019 funded project, i.e., *EOSC-Synergy*¹, *EOSC-Pillar*², *EOSC Nordic*³, *NI4OS-Europe*⁴, *ExPaNDS*⁵, *FAIRsFAIR*⁶, and *EOSC Secretariat.eu*⁷ made a joint contractual agreement with the EC ensuring cross-regional harmonisation and collaboration addressing the following areas; *FAIR; Landscaping; Service Onboarding; National Policies & Governance; Training & Skills and Communications & Events*. This collaboration led to a list of recommendations for the EOSC Association.

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1 The Collaborating Landscape of EOSC-Nordic

EOSC-Nordic builds upon the Nordic-Baltic, regional research infrastructure collaboration organisation; The Nordic eInfrastructure Collaboration (NeIC), which is also the coordinating organisation behind the EOSC-Nordic 24 partner consortium.

The overview of the EOSC-Nordic collaborating landscape is illustrated in Figure 1. The NeIC funded project communities were chosen as the foundation for the EOSC-Nordic demonstrators (Figure 1: NeIC project box) and thereby strategically integrated from the very start of EOSC-Nordic. The three other regional EOSC implementation projects (NI4OS Europe, EOSC Pillar and EOSC Synergy) made a joint contractual agreement with the European Commission ensuring cross-regional harmonisation and collaboration ([EOSC-Nordic D1.4](#)). During the project lifetime of EOSC-Nordic, the respective expert teams have bridged into many pan-European and also global collaborations. The 'International' and the 'Pan-European' Collaborator boxes in Figure 1 list the primary and key collaborating projects and organisations.

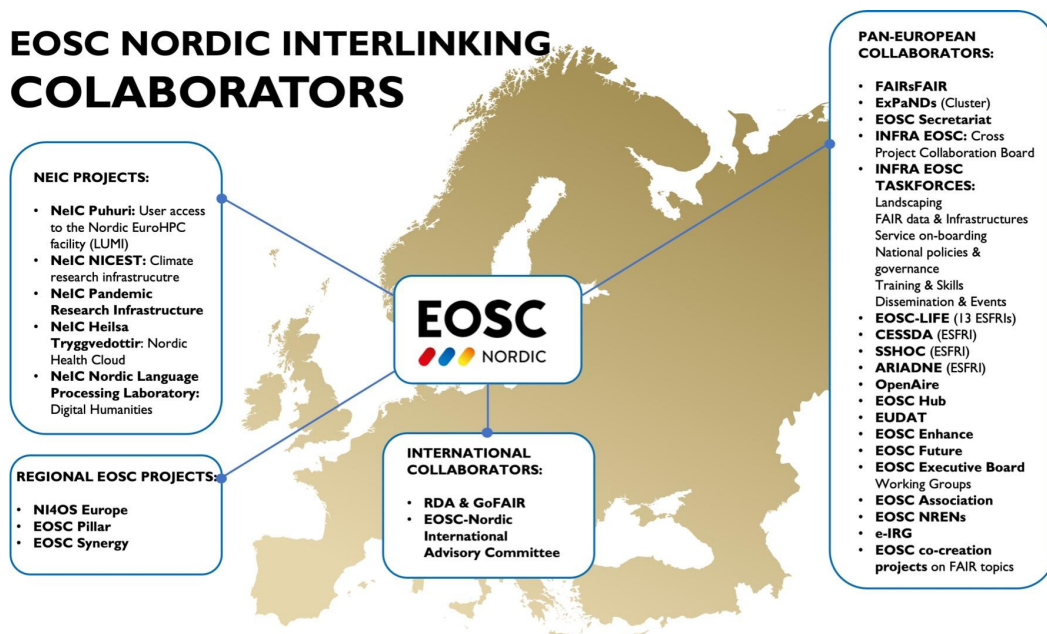


FIGURE 1: THE EOSC-NORDIC PRIMARY, COLLABORATING LANDSCAPE

2 EOSC Cross-Regional Collaborations

The contractual and cross-regional collaborations were organised into six areas of collaboration topics (i.e. Task Forces) dedicated to discuss and provide solutions for commonly identified issues and joint ambitions in building the EOSC. The six cross-regional areas of collaboration were:

1. FAIR
2. Landscaping
3. Service Onboarding
4. National Policies & Governance
5. Training & Skills
6. Communications & Events.

In practical terms; Task Forces were established for each cross-regional area of collaboration represented by dedicated project members from each of the EOSC implementation projects (i.e. INFRAEOSC-05-2018-2019). Furthermore a Cross-Regional Collaboration Board was established and represented by the Coordinators and Project Directors/Managers of the corresponding projects.

The cross-regional areas of collaboration activities are described in the following subsections.

2.1 The Cross-Regional Task Force on FAIR

The cross-regional task force on FAIR, collaborated on the following joint activities:

1. Review and standardisation of FAIR policies in order to enable FAIR-aligned services and repositories;
2. Analysis of FAIR guidelines and standards to enable adoption in the light of the local and disciplinary context;
3. Evaluation and development of FAIR technical aspects including metadata frameworks, interoperability, service infrastructure, FAIR software;
4. Assessment, extension or establishment of FAIR certification schemes for repositories and services. The uptake in communities and on national levels is of special importance;
5. Development and adaptation of FAIR assessment tools. These tools include, but are not limited to, Data Management Plans (DMPs) , licences and datasets.

2.2 The Cross-Regional Task Force on LANDSCAPING

The cross-regional task force on LANDSCAPING, collaborated on the following joint activities:

1. Define common targets and methodology for the National Initiatives landscaping activities;
2. Design the survey in a way that will allow to obtain structured and comparable data for each country, also taking into account existing mapping exercises (e.g. eIRG);
3. Involve the relevant stakeholders (including Research Infrastructures (RIs), the EOSC Executive Board (EB) and the EOSC Governance Board (GB)) in the design process and provide updates on

the activity while collecting feedback from them to integrate the effort with EB/GB landscape activities;

4. Contribute to decide on the methodology for extending the survey to countries outside the geographical scope of the projects;
5. Collaborate with the expert hired by secretariat to/ with the contribution of the expert hired by secretariat, integrate the results of the different surveys in order to create a European-level map;
6. With the contribution of the expert hired by the Secretariat, to create a summary report of the resulting data including visualisation and/or infographics at the European level to communicate the results.

2.3 The Cross-Regional Task Force on SERVICE ONBOARDING

The cross-regional task force on SERVICE ONBOARDING, collaborated on the following joint activities:

1. Discussing the procedures and solutions for service onboarding thus to facilitate the “flowing” of services “stemming” from involved projects and potentially existing catalogues into the “overall EOSC Service Catalogue” and vice-versa;
2. Discuss the service description templates to possibly identify a shared one or to define translations from the “local templates” into the EOSC Portal one, leveraging the current status of the art (i.e. the service description template adopted in EOSC Portal);
3. Discuss models for interoperability for the regional/thematic service catalogues into the EOSC central one (i.e. the catalogue hosted by the EOSC portal). Discuss the impact on validation models, the different aspects and how this can be applied in a distributed environment;
4. Discuss the opportunities for integration with services and support activities from the EOSC Federating Core, the benefits these bring and the obligations they imply.

2.4 The Cross-Regional Task Force on NATIONAL POLICIES & GOVERNANCE

The cross-regional task force on NATIONAL POLICIES & GOVERNANCE collaborated on the following joint activities:

1. Advise on processes to engage policy makers and influence national policies to foster the uptake of Open Science (OS) practices and support the realisation of the EOSC vision;
2. Collate and discuss on operational policies in the participating countries (e.g. procurement of services, funding, usage models);
3. Collate and discuss on national policies, Open Science declarations & roadmaps against the EOSC roadmap;
4. Review and, where relevant, endorse and amplify recommendations emerging from the individual projects

5. Propose to the Cross Project Collaboration Board the organisation of a Europe-wide and all Task Forces (TFs)-engaging event and cover in it the policy aspects.

2.5 The Cross-Regional Task Force on TRAINING & SKILLS

The cross-regional task force on TRAINING & SKILLS collaborated on the following joint activities:

1. Deciding on common:
 - a. Training Aims
 - b. Training Themes
 - c. Tools and Methodologies to be used to fulfil the activities
 - d. Training Approaches
 - e. Targeted Stakeholder
 - f. Timeline for training activities and events
 - g. EOSC related Skills;
2. The work of the Taskforce relied on existing material and expertise coming from other initiatives, projects, institutions operating training activities;
3. The Taskforce investigated possible solutions for a shared Training Resources Catalogue structured in a commonly agreed fashion, relying, when applicable, on existing standards and best practices;
4. Synchronised common training events by relying on the specific expertise offered by each project. The events were shared through the EOSC calendar (administered by EOSC Secretariat) maximising the outreach and participation at pan-European level.
5. Development of an Expert Map showing the landscape of pan-European SKILLS for EOSC

2.6 The Cross-Regional Task Force on COMMUNICATION & EVENTS

The cross-regional task force on COMMUNICATION & EVENTS collaborated on the following joint activities:

1. Information sharing between projects and identification of points of collaboration
 - a. Project objectives and brief overview.
 - b. Identification of areas for collaboration on communications and events;
2. Mutual sharing and distribution of project news/results through project websites and social media channels
 - a. Sharing of news and results relevant to TF activities
 - b. Cross referencing or publication of each other's news/results when relevant or appropriate
 - c. Re-tweeting/sharing posts by each other's projects related to news and results;
3. Collaboration at events including workshops, conferences, information stands and webinars

- a. Creation of a private events calendar to be shared by TF members where all planned public events are taking place
 - b. Invitations to projects and effort by projects to invite representatives from other INFRAEOSC-05-2018-2019 5b call projects to give presentations or to act as /panel members (if possible/relevant to workshop) and also participate in corresponding events of these projects.
 - c. Cross promotion and publication of Re-tweeting/sharing posts by each other's projects;
4. Alignment on EOSC-related common messaging in particular in relation to eventual outputs from the EOSC Executive Board Communications Task Force.

3 Recommendations to the EOSC Association

If you want to go fast, go alone; but if you want to go far, go together...

This African saying also goes for EOSC! Constructing an operational pan-European Open Science Cloud takes time, but can bring a united Europe very far!

The outcome of the EOSC collaborative activities across countries, communities, governance and project structures resulted in a list of recommendations to the EOSC Association. Those recommendations are listed below and also described in more detail in the following and linked [INFRA-EOSC 5b Collaboration Report](#) (made by the EOSC Secretariat).

3.1 Align Common Practices

A best practice that emerged clearly in almost all the Task Forces is the following:

- **Agreeing on common practices and tools is an essential step** for smoothing the EOSC development. Most of the Task Forces decided to pursue this objective by organising meetings dedicated to **present and discuss solutions and best practices adopted by the different projects to address specific concrete topics**. This approach was very fruitful since it fostered new ideas and alignment. In some cases, this exchange resulted in **joining forces** to develop shared solutions and tools. A similar approach, appropriately generalised, might be implemented by the Association working groups to reach consensus and to smooth the development of compatible solutions at EU-level. In particular, **countries and regions that have not consolidated solutions for EOSC yet could benefit from common practices already experimented with in other countries**.

3.2 Progress Monitoring via EOSC Readiness Indicators

The Landscaping TF produced two reports on identifying EOSC Readiness Indicators by engaging stakeholders in the discussion and in the validation of them. In January 2021 the most recent report

was published: “Second Working Proposal for Living Indicators to Monitor MS Progresses Towards EOSC Readiness”²⁵. The KPIs and statements contained in this report cannot be considered fixed yet due to their dependency upon the EOSC guidelines and business model (*in prep*). Further discussion and planning is required at governance and EU levels to define them and particularly to define roles and responsibilities and accepted forms of evidence to support evaluation decisions. The next step is to develop an Indicators Framework for monitoring, based on the work done so far.

Monitoring living indicators has necessarily to be a continuously on-going activity during the EOSC Association lifetime. The long-term objective of the TF is to identify a monitoring model that is sustainable. To this aim, the Landscaping TF has proposed to start the implementation of a Proof-of-Concept framework implemented through a dashboard. The dashboard is going to be developed thanks to a co-creation budget from the EOSCsecretariat.eu project. Regarding the continuation of this activity, the Task Force would like to recommend that:

- Once established and fine-tuned, it would be a natural step to **hand-over the monitoring process to the EOSC Association** to ensure the continuous monitoring of the evolution of landscape indicators. The EOSC Association is seen as the most appropriate entity responsible for monitoring readiness, i.e. collecting the data, comparing and validating the indicators, and maintaining the infrastructure.

3.3 Enhancing FAIR Activities

The FAIR Task Force:

- highly recommended to **maintain, within the EOSC Association, a clear and pragmatic way of working around FAIR development** like the productive collaboration with the EOSC Working Group on FAIR. The FAIRness of research output, including data, software, and work processes, depends on diverse FAIR-enabling organisations and services, as well as a FAIR attitude. **To enhance this FAIR culture, a clear structure within the EOSC Association is essential.**
- Since the formulation of the FAIR data principles, much attention has been paid to measuring the degree of FAIRness. From the various initiatives working on automated assessment of the level of FAIRness of data and/or repositories, such as FAIRsFAIR, EOSC Nordic and EOSC Synergy, the conclusion can be drawn that “numbers need a narrative”. Automated testing depends on clear, machine-assessable criteria. Some aspects (rich, plurality, accurate, relevant) specified in FAIR principles still require human mediation and interpretation. For instance, data providers being assessed will want to understand the outcome of the assessment. **Therefore, it is recommended to address how to combine better automated assessment with human mediation.**
- The draft EOSC Rules of Participation state that “EOSC data align with FAIR principles”. In this context, FAIR data assessments will be essential. It is thus worth noting the perspective and advice **to facilitate convergence around common tools.**

3.4 Service & Data Pre-Boarding

The countries and regions would need to build up strong community engagements to create a more integratable process for the European Service Platform. To this aim:

- Consolidation should start with a discussion of **pre-boarding of data and services** at the local level. The pre-boarding of data and services at the national and regional level should not be ignored as they will need to work well before a joint European consolidation can work properly. Reaching a good operational status will require a few years of tuning. Call5 projects are working in this direction. Establishing a synergic plan of activities with the Association would undoubtedly help speed-up this onboarding process.
- The introduction of Incubators for services at local level can bring higher value on the service offer also at EOSC level.

3.5 National Policies & Governance

Open science policies, including regulations on Intellectual property rights (IPR) and the General Data Protection Regulation (GDPR), are not harmonised in the Member States. Call5 projects suggest addressing this point in future activities of the EOSC Association. They could proactively contribute to reaching this aim by:

- Helping to **catch possible mismatches or interferences at the national level** on implementations issued by the Association and to be adopted by EOSC. Members of the Policy and Governance Task Force have a good overview of the landscape in the respective countries and bring experience having worked in various working groups during the Association development.
- Drawing from experience from the national context in countries, like the Nordic and Baltic regions, Call5 projects might inform the EOSC Association **on the implementation of policies in different national or regional contexts** and on how **the division of responsibilities are managed between RI's, e-infra's and other organisations** that are part of the scientific landscape.
- The projects participating in the Policy TF are studying **aspects of policies and governance of relevance to EOSC business models and to the Rules of Participation**. The TF plans to consolidate those outputs to help provide a more complete landscape picture in these areas to benefit the EOSC governance.

3.6 EOSC Training & Skills within EOSC

As a result of the other TF activities, the Training and Skills TF has been engaging the community on training related aspects. The TF organised a workshop in October to discuss interoperability issues for training catalogues. One of the workshop outcomes was the willingness to set up a venue for collaboration and communication to and from the EOSC governance.

Besides, several TF members have been involved at various levels in the EOSC Executive Board Working Groups on Skills and Training.

Given the premises above, the Training and Skills TF would like to recommend the need for:

- A **venue for communication and feedback towards the EOSC Association**. This would be a fruitful way to enhance and continue addressing Training and Skills related topics.
- **Continuing in the framework of the new EOSC Association the activities initiated by the Working Group on Skills and Training**. Several topics were discussed but there is still the need to continue the coordination at EOSC-level on important topics such as the **EOSC Competence Centers set up and networking**, the **federation and interoperability of training catalogues**, and **Data Stewards training and uptake**.

3.7 Awareness Raising

Alignment across Call5 on awareness raising activities has been significant. A key objective for the Communications and Events TF was to ensure joint messaging between the projects in particular on the topics in common, such as those of the TFs.

This included a joint policy brief¹⁷⁹ where Call5 projects provided a position paper on each projects' expectations of, and contributions to the EOSC. The document also featured recommendations for the interim EOSC Executive Board and interim governance. From the perspective of the EOSC Executive Board, receiving recommendations from 5 projects in one single concise source (such as the position papers) had much more value and impact than receiving 5 different and uncoordinated statements from projects.

Similarly, joint workshops were also a platform where alignment and joint messaging to the community could be achieved. The workshops either took place at public events (such as the EOSC-hub Week 2020) and served to disseminate to the broad community. Private workshops, such as the FAIR TF workshop for the EC in November 2020, proved to be an extremely valuable and efficient dissemination channel to the EC.

The TF has also collaborated on establishing tools for grassroots engagement. As a follow-up to their surveying activities of institutions, several of the projects (funded through the INFRA-EOSC 5b Call) implemented programmes that enlisted various "EOSC promoters" or "EOSC ambassadors" to promote EOSC pro bono on an institutional level. They were provided communications tools such as standardised presentations, flyers and posters and were provided support on how to communicate EOSC to stakeholders at a grassroots level. Indeed, this is a good example of the role that the TF has played in aligning the INFRA-EOSC 5b Call projects on messaging around EOSC and governance topics so that the communications teams were aware of sensitivities around the EOSC "brand". Based on this past experience representatives of the Call5 dissemination TF suggests the following actions:

- To effectively inform the EOSC Association of activities and outputs, the Call 5 project Task Forces should provide **brief joint recommendations reports** to the Association and its eventual Working Groups (WGs). These should focus on the topics of each TF and be tailored to the requirements of the WGs.
- The TFs could also inform the Association and WGs of results and recommendations at **dedicated private meetings**. This could include presentations of results by TF representatives at Association WG meetings.

- **Joint public webinars** should also be organised on the topics of the TFs which should present outputs, and discuss recommendations. This would ensure engagement of a broad section of the EOSC community, given the broad geographical nature of the projects and could be a valuable input for the Association WGs.
- Moving forward, the EOSC Association can **coordinate messaging and roll out EOSC promoters or ambassadors across all countries** with the help of EOSC-focused projects or national open science platforms. In exchange, these promoters are given recognition as contact points within their institution and as key figures in promoting open science and EOSC.