



CSC – IT Centre for Science

Project Charter, version 3.0

EOSC Federation: EOSC Finland Node

1. Project Summary

As a national node the designated community for the EOSC Finland Pilot Node is the Finnish research community and especially its end users. CSC – IT Center for Science is contributing to the EOSC Federation by providing core capabilities and coordinating the building of the national node for Finland. The node is developed in collaboration with the Finnish Ministry of Education and Culture, the national Open Science Coordination and other national stakeholders that are engaged within the EOSC Finnish Forum¹ and the interim governance mechanism.

The EOSC Finland Node will bring together Finnish and EOSC research data services following relevant national reference architectures². Resources will be accessible via a user-friendly entry point. Services will be accessible for Finnish researchers via the Haka federation, and resources that are part of EOSC Exchange will be integrated with MyAccessID. Federated datasets, data services, and training resources will be discoverable via the EOSC EU Node resource hub. In coordination with the LUMI AI Factory access to large datasets will be offered and collaboration with industry is aided. As the main contractor of the EuroHPC Federation (EuroFP) tender, CSC will promote interoperability and seamless access between the EOSC Federation and the EuroFP and provide a gateway to Finnish research resources.

The use cases and deliverables have been updated for this version of the project charter covering the third phase of the build-up process, running to the end of February 2027. The value proposition has been clarified. EOSC Finland seeks to create value especially through building a strong, user-focused national collaboration and by engaging in the build-up activities as well as multi-node collaborations.

2. Value Proposition

Main Goals for the Federation, foreign users and other EOSC stakeholders

- Easy access to Finnish datasets and research services to support individual research work and collaborations with Finnish researchers.
- Better interoperability and seamless end-user experience in cross-node use.
- Offering Finnish knowhow and skills by sharing knowledge and documentation.
- EOSC services that seek to increase international adoption, can attract Finnish users by offering something not nationally available.

¹ EOSC Finnish Forum web page <https://avointiede.fi/en/networks/eosc/eosc-finnish-forum>

² Reference Architecture for Research Data Management (DAHA), 2025. <https://wiki.eduuni.fi/x/ggooF> ; Reference Architecture for Open Science and Research, 2024. <https://doi.org/10.23847/tsv.942>

- Potential to increase international collaboration in general, e.g. research collaboration requests through data sharing.
- Opportunity to avoid unwanted and unintentional redundancy or duplication of resources across Europe.

Main Goals for the Finnish researcher

- The primary motivation and driver for the EOSC Finland node and its collaboration in the EOSC Federation the benefit of Finnish researchers – the work is being paid by the Finnish Ministry of Culture and Education.
- The EOSC Finland Node serves the interests of researchers by:
 - Making their research outputs and datasets more FAIR (Findable, Accessible, Interoperable and Reusable), thus increasing the impact of their research
 - Facilitating international collaboration within the realm of the EOSC Federation through shared access, authentication and identity management as well as coordinated support and discovery services.
 - Making datasets of other researchers more accessible to Finnish researchers, thus enabling new research or increasing the productivity of their research work
 - Making discovery and use of foreign research services that are not nationally available easier than before, thus enabling new research or increasing the productivity of their research work
 - Increasing the abilities of Finnish researchers to produce outputs that are prone to have a bigger impact through the FAIR-by-Design approach, e.g. through increased uptake of world class RDM training offered by the RDM Competence Center

Main Goals for Finnish research service providers

- Offering opportunity to increase uptake of nationally shared research services and resources
- Preventing formation of unnecessary (national) service duplication (efficient use of public money)
 - This includes promoting and ensuring interoperability with mature foreign research infrastructure services, especially domain specific infrastructures, where the local service offering is not strong
- Improving user support for adoption of national services (e.g. exploring the adoption of AI for adoption support, as human support resources are limited)
- Where meaningful, to increase service impact and attract increased foreign use through enrolling services in the EOSC Exchange

Needs addressed

- FAIR-supporting and user-centric services that facilitate the research process
- RDM competence development

- Availability of unique, large size and restricted datasets
- Stronger federating capabilities

Key Benefits

- Demonstrating the value of a national Finnish node for the EOSC and nationally
- Increasing discovery and availability of FAIR data and FAIR-supporting services
- Testing interoperability between EuroFP and EOSC Federation
- Bringing the EOSC Federation close to the private sector and their RDI collaboration with research performing organisations thanks to the connection with the LUMI AI factory

Who Benefits

- Finnish researchers who can discover and access resources in a more seamless way both in Finland and in EOSC
- European researchers who can access Finnish datasets, services and RDM training resources on top of the other resources made available through the EOSC Federation
- European researchers and businesses that can access large size or restricted datasets
- European researchers who need to access and process sensitive data
- Finnish organisations willing to contribute to the EOSC Federation via a national node
- Stakeholders that will benefit from the integration of the EOSC Finland node in the LUMI AI factory ecosystem

3. Use Cases

The use cases cover two types of use cases: 1. Scientific use cases, that are done in close collaboration with researchers to develop solutions that support their work, and 2. Technical use cases, which focus on strengthening federating capabilities and FAIR-by-Design workflows. For each use case related EOSC projects, nodes and capabilities are mentioned.

Use Case ID	Use Case Description	Federation Contributions & Value to Users
Scientific Use Cases		
EOSCFI-UC-SC-1	Exploring easier transfer opportunities and access to stable datasets, while improving the discoverability and availability of datasets across different storage locations. Small subsets of pre-processed, stable LLM data stored in LUMI-Object Storage. Services involved in the use case: - Increased dataset visibility through Dataset-as-a-Service (DaaS). The procedure for re-creating the HPLT data (High Performance Language Technology) will be made available via Dataset-as-a-Service (DaaS) as a use copy. Language Bank of Finland will store the script and descriptive metadata. - Mounting snippets of large LLM datasets through Fairdata Download Service (FDS) as an RO-Crate (dataset packages, incl. data + metadata). - Data transfer to Leonardo supercomputer (EOSC Node-IT) Participating nodes: - EOSC Node Finland - EOSC Node Italy	Federation contribution: - Discoverability and availability of previously not accessible major datasets via the EOSC Federation. - Multi-node workflow Value to users: - Sharing the processing pipelines instead of all the actual data teaches other researchers how to re-create the data. This fosters reproducibility and open science. - Enabling efficient access to very large datasets by allowing users to mount dataset packages and interact directly with selected files and metadata, without downloading the entire dataset. - Cross-border collaboration (multi-node) in European AI research is essential for training models effectively and enabling access to diverse, high-quality datasets and computing resources. Relevant capabilities: - Federated AAI - Federated catalogues (including Dataset-as-a-Service, i.e. data made available in HPC environment, RO-Crates)

EOSCFI-UC-SC-2	Defining specifications for long-term preservation of dynamic data snapshots (environmental measurement data) by identifying needed database updates and enabling integration and interoperability of services. Services involved in the use case: • Improved data harvesting opportunities for the research infrastructure eLTER, by transferring measuring data from SmartSMEAR database (onboarded service) to B2SHARE (EOSC Eudat) • Creating snapshots of SmartSMEAR within the Fairdata services by recycling the metadata through Metax into B2SHARE. • Exploring the potential of making use of the SILTA service for metadata transformation. The service allows generic mappings, which has its benefits in reduced future maintenance needs. SILTA can also be used to compare and map relationships between Metax and B2SHARE metadata structures. This use case is related to EOSC EDEN and EOSC FIDELIS. Participating nodes: • EOSC Node Finland • EUDAT EOSC Node	Federation contribution: • Enabling easier discovery, access, and reuse of trusted datasets across systems and borders via the EOSC Federation. • Multi-node workflow Value to users: • Improving long-term access, interoperability, and reuse of environmental measurement data across research infrastructures. • Reducing manual work via shared metadata mappings, improving compatibility between services, and supporting more sustainable and maintainable integrations over time. Relevant capabilities: • Federated AAI • Federated catalogues • Future horizontal federations for data management resources (dynamic data citation, long-term preservation, later RO-Crates)
EOSCFI-UC-SC-3	Multi-node collaboration, where EOSC Node Finland's role is to foster interoperability between data and compute (EuroHPC). This is concretely accomplished by: • Providing access to LUMI for running the processing job, and • Creating the metadata and publishing the data while in HPC environment (DaaS). GÉANT and PaNOSC are collaborating on the scientific use case. Germany enables and executes the workflow through the EU Galaxy service across the EOSC Nodes,	Federation contribution: • Enabling seamless cross-border workflows where data, compute, and analysis services work together across multiple EOSC Nodes and infrastructures. • Multi-node workflow Value to users: • LUMI enables direct processing of large datasets within LUMI supercomputing environment without unnecessary data transfers and allows publishing and

	SURF/Netherlands provides the cloud computing resources to run the analysis using Jupyter Notebook, and EUDAT stores the research output data and makes the data accessible to/from the LUMI supercomputer. Participating nodes: • EOSC Node Finland • EOSC Node GÉANT • EOSC Node EUDAT • EOSC Node SURF/Netherlands • EOSC Node PaNOSC • EOSC Node Germany	describing the results while in the HPC environment. • The integration between Galaxy, Jupyter Notebook, EUDAT, and LUMI supports more scalable, reproducible, and collaborative research workflows, while reducing technical barriers between data access, computation, and publication. Relevant capabilities: • AAI Federation • Horizontal Service Federation (workflows)
Use Case ID	Use Case Description	Federation Contributions & Value to Users
Technical Use Cases		
EOSCFI-UC-TECH-1	This use case especially is planned to support the federation of EOSC Node Sweden and will follow the schedule of EOSC Node Sweden. Federating EOSC services enabling access to FAIR life science datasets (e.g. SciLifeLab), execution of scientific tools and ML models via hosted platforms, and interoperable data sharing through connected storage systems, such as SUNET Drive across the EOSC Federation. This use case is connected to EOSC-CONNECT. Participating nodes: • EOSC Node Finland • EOSC Node Sweden • CERN • Life Sciences Connect • PaNOSC	Federation contribution: • Providing researchers with seamless, federated access to FAIR life science datasets and analysis services across the EOSC ecosystem via the EOSC Federation • Multi-node workflow Value to users: • Reducing technical and administrative barriers in data-intensive research by connecting compute, data, and storage services. • Tools like SUNET Drive support secure and interoperable data sharing, making collaboration across institutions and countries more straightforward and reproducible. Relevant capabilities: • AAI Federation • Horizontal Service Federation (storage, workflows)

EOSCFI-UC-TECH-2	This use case especially is planned to support the federation of EOSC Node Switzerland and will follow the schedule of this node: Advancing the EOSC Federation by enabling interoperable resource catalogues and cross-border service provisioning through Waldur, while supporting FAIR-compliant research metadata organisation across domains using MarmotGraph. This use case is connected to EOSC-CONNECT. Participating nodes (and other partners in EOSC-CONNECT): • EOSC Node Finland • EOSC Node Switzerland	Federation contribution: • Making research services across EOSC more interoperable and easier to access across borders. • Exploring to Waldur and the MarmotGraph with regard to use in EOSC, e.g. catalogue federation • Multi-node workflow Value to users: • Users can discover and provision distributed research resources via unified, interoperable catalogues powered by Waldur. • FAIR-compliant metadata organisation across scientific domains is improved using MarmotGraph, helping researchers structure, connect, and reuse data more effectively.
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In-scope for the EOSC Finland Node and use cases

- The Finnish work with the EOSC Federation is based on the Global Open Research Commons³ reference model and the national reference architectures, which means that questions of governance, quality and user centricity and a broad engagement among research performing organisations is a high priority
- The user interface and user experience of the EOSC Finland Node as an entry point to the national and EOSC Federation
- Providing core federating capabilities via the Node: single-sign-on AAI integration, federated service and data catalogues, helpdesk for users, monitoring, usage reporting, as requirements are produced and agreed upon within the federation
- Participation in development and testing of core federating capabilities for the EOSC Federation: AAI, resource allocation and credit concept model for services and resources as needed
 - CSC resource allocation concept model can be shared as a reference: services, user project governance model, accounting (“billing units”), allocations, usage reporting

³ Treloar, A., & Woodford, C. J. (2024). Global Open Research Commons: Creating an International Model for Improved Interoperability and Collaboration. Data Science Journal, 23(1), 56. <https://doi.org/10.5334/dsj-2024-056> See also Treloar, A., Woodford, C., Genova, F., Harrower, N., Scharnhorst, A., Teperek, M., Tsang, E., Doran, M., Ferrari, T., Gregory, K., Grossman, R., Hoogerwerf, M., Hugo, W., Jetten, M., Matas, L. J., miedema, . margriet ., Macneil, R., Newbold, E., Parland-von Essen, J., ... Nyberg Åkerström, W. (2026). Making the Global Open Research Commons Truly Global: A report from the Lorentz Workshop, July 21-25 2025. Zenodo. <https://doi.org/10.5281/zenodo.18383293>

- National rollout and strengthening of FAIR-supporting capabilities as described in national policies, e.g. reference architectures
- Stakeholder support: European researchers, Finnish researchers, Finnish organisations willing to onboard resources in the EOSC Finland Node (e.g. Finnish universities, national data infrastructures, RI national nodes)
- Horizontal capabilities supporting data transfer and multi-node workflows as well as storage (EFFS)

Out of scope for the EOSC Finland Node and use cases

- The EOSC Finland Node will sustain in production only the resources and workflows that have proven to bring added value to stakeholders. Experiments done during the build-up phase that do not generate impact for Finland or for the EOSC Federation will be dismissed.
- Most services will be provided in the first phase as-is, for example with their current access and usage policies as set by the funders that may have restrictions in scope of support, geographic reach or target audiences.

4. External Dependencies & Key Risks

As the EOSC Finland Pilot Node is in production and aiming for audits, there is a separate internal risk management process in place. In this section we describe risks relevant to successful implementation of this project charter.

External Dependencies & Risks	Actions	Deadline
AAI Management challenges for user experience (e.g., Haka, MyAccessID, EOSC AAI) caused by multiple identification systems used in parallel.	Careful planning of user paths & GUI. Ensuring sufficient transparency towards the end user, MyData approach rather than guessing, even if this causes extra steps during registration etc. Raising this in relevant groups.	M19
Management of personal data on EOSC Federation level not sufficiently documented or contracted.	Raising this in relevant groups. Delaying federation for some specific capabilities might be necessary, e.g. helpdesk.	M19
Metadata is insufficient or too poor quality on EOSC Federation level to implement user-centric approach	Quality assessment before any automated metadata ingestion. Manual curation and possibly enrichment e.g. for service metadata (for instance translation)	Continuous
Insufficient stakeholder uptake or commitment	Updating the Communication and engagement strategy and plans	M17

5. Contributions

Access policies and restrictions for the resources of the EOSC Finland Pilot node

Policies regarding services and data:

- Existing access and use policies for services using quota or billing units require a Project Manager affiliation with a Finnish RPO approved by the Ministry of Culture and Education.
- Access to datasets or metadata is generally not restricted based on affiliation. Overall open access policies for research data are widely mandated, and restrictions exist only where necessary.
- More detailed policies:
 - <https://research.csc.fi/terms-of-use/>
 - <https://research.csc.fi/free-of-charge-use/>
- Services onboarded to the EOSC Finland Node have their respective policies, e.g. the Language Bank of Finland <https://www.kielipankki.fi/language-bank/terms-of-use/>, Geodata download service <https://paituli.csc.fi/home.html>
- The EOSC Finland Node's Onboarding Guidelines 1.0 are available in both English and Finnish: <https://doi.org/10.5281/zenodo.20023634>; a new version is due by M22.
- Only qualified services with clear policies, terms of use and service description, will be onboarded according to the principles of the EOSC Finland Onboarding Guidelines and the EOSC Federation
- Regarding datasets, see the policies for CSC services for research, including the data management policy and PID policy: <https://research.csc.fi/policies/>
- Service agreements will be done separately for each Dataset-as-a-Service, as open as possible and as restricted as necessary.

Included resources:

Data sources

Data catalogue (Metax):

- User interface <https://etsin.fairdata.fi/>
- Data CC0 (including reference datasets), API available

Research information (research.fi):

- User interface <https://research.fi/>
- Needs contract but is free. OpenAIRE has an agreement and access to this dataset. API available

Service catalogue (data.csc.fi):

- User interface <https://eosc.fi/>
- CC0, API available

Node Exchange

- A set of free resources will be offered to the EOSC Federation as a pilot for the production phase, both onboarded and offered by CSC

Deliverables during 2nd phase

ID	Deliverable Name	Type	Deliverable Description	Deliverable Owner
1	Project charter 3.0	Report	Version 3.0 of the EOSC Node Finland project charter	CSC
2	EOSC FI scientific use case report	Report	Covering three scientific use cases, describing their activities, expected benefits for researchers and the Node, and the technologies, services, and workflows supporting them	CSC
3	Federation in production	Product	EOSC Node Finland is in production as part of the EOSC Federation	CSC
4	Updated onboarding guideline	Document	Version 2.0 of Node onboarding guideline	EOSC Finnish Forum

6. Timing and Milestones

- **Start Date:** 17.3.2025.
- **Expected Duration:** 3 years organised in phases;
 - Phase 1, M1-M12 (March 2025 to February 2026)
 - Phase 2, M13-M24 (March 2026 to February 2027)
 - Phase 3, M25-M36 (March 2027 to February 2028)

Re-productisation of the node will be done as the EOSC Federation goes into production.

A separate plan for the 3rd phase will be made based on assessment of the development during the 2nd phase.

Key Milestones for 2nd Phase

ID	Milestone Description	Target Delivery Date
MS1	Services onboarded onto EOSC Finland Pilot Node and Finnish node exchange is agreed upon	M19
MS2	Reconstruction of the node: AAI user paths implemented, eosc.fi catalogue update and website redesign ready for publication	M19
MS3	Monitoring in production	M20
MS4	Helpdesk in production	M20
MS5	Report on of cross-node use cases	M24

7. Contact & Submission

Role	Name	Email
Coordinator	Jessica Parland-von Essen	jessica.parland-vonessen@csc.fi
Deputy Coordinator	Josefine Nordling	josefine.nordling@csc.fi
Operation Manager	Tommi Suominen	tommi.suominen@csc.fi
Deputy Operation Manager	Lassi Lager	lassi.lager@csc.fi
Security Officer	Urpo Kaila	urpo.kaila@csc.fi
Communication	Ulriika Vihervalli	ulriika.vihervalli@csc.fi
Legal/privacy officer	TBD	privacy@csc.fi until specified

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