

Provider Forum Workshop to discuss collaboration on the upcoming HE calls

8 - 9 October 2024, Clarion Hotel Arlanda Airport, Sweden

Agenda & event information: <https://indico.neic.no/event/274/>

HE Work Programme 2025 (draft):

 HORIZON-INFRA-2025_06_27_2024_Corrected version.pdf

Invited

- Abdulrahman Azab, Sigma2 AS/NeIC, NO (organiser)
- Ahti Saar, University of Tartu, EE
- Alberto Lanzaova, CSC, FI
- Anders Sjöström, Lund University, SE
- Anis Yazidi, OsloMET, NO
- Anne Fouilloux, Simula, NO
- Anne Bergsaker, University of Oslo, NO
- Antti Valkonen, Aalto University, FI
- Björn Grüning, University of Freiburg, DE
- Hans Eide, Sigma2, NO
- Hisham Kholidy, Northern Illinois University, US
- Ilja Livenson, University of Tartu, EE
- Lorand Szentannai, Sigma2, NO
- Mattias Wadenstein, Umeå University/NeIC, SE
- René Belsø, DeiC, DK
- Roger Kvam, Sigma2 AS, NO
- Russel Wolff, University of Oslo, NO
- Sebastian von Alftan, CSC, FI
- Tomasz Malkiewicz, CSC/NeIC, FI
- Vilma Häkkinen, NeIC, FI

Attendees

- Abdulrahman Azab, Sigma2 AS/NeIC, NO (organiser)
- Anders Sjöström, Lund University, SE
- Björn Grüning, University of Freiburg, DE (online)
- Ilja Livenson, University of Tartu, EE (online)
- René Belsø, DeiC, DK
- Russel Wolff, University of Oslo, NO (online)

- Ali Syed
- Balazs Konya
- Bjoern Gruening
- Hemanadhan Myneni
- Hisham A. Kholidy
- Jan Martinovic
- Martin Golasowski
- Mattias Wadenstein
- Oxana Smirnova
- Tomasz Malkiewicz
- Yann Le Franc

Feedback from the previous workshop of NeIC's Expert Network for Nordic and EU Collaboration (2024-11-24)

- This was a very useful discussion
- We should have a better understanding of the scope
- Very good forum to share experience and information, to get more understanding of what others do
- Time planning needs to be improved, we need to be more early:
 - As early as the drafts are available
 - NeIC is a Nordic umbrella but the board needs to be more effective
- We should be connected with multi-annual roadmap
- The more we talk the more we can shape some of these proposals

Comments on the agenda

- Mandate of the group - who do the participants represent and speak on behalf of?
 - National provider organisations

Other

RIA (Research and Innovation Action): This type of funding supports research activities aimed at establishing new knowledge or exploring the feasibility of new or improved technologies, products, or services. It involves a combination of research and innovation, focusing on advancing knowledge and translating that into practical applications. RIA projects are usually funded at 100% of eligible costs.

CSA (Coordination and Support Action): CSA funds activities that are more focused on supporting the coordination, dissemination, and communication of research results, networking, policy dialogues, or other supporting measures. Unlike RIA, CSA does not directly fund research itself but supports activities that enable or enhance the research and innovation process. The funding rate for CSA is also typically 100%.

In the minutes below, call titles that are considered interesting as well as action points (AP) are **bolded**. Calls that are extremely interesting are also underlined.

Minutes, 8 October

INFRAEOSC calls (103 MEUR)

HORIZON-INFRA-2025-01-EOSC-01: Readiness and participation of nodes and node candidates in the EOSC Federation, RIA, 24.00 MEUR, 2 projects

Scope

- The focus is on operationalizing the EOSC federation through a network of nodes following a federation model
- Key areas covered include governance structures, federation policies, business models, service management procedures, technical and semantic interoperability, and the role of the EOSC EU Node.
- The proposals will need to demonstrate ability to work with nodes at different maturity levels: mature nodes will contribute data and services through the EOSC Exchange, while development-stage nodes will receive support to become EOSC federation-ready

Expected outcomes

- The EOSC federation will be established as a distributed system of systems, comprising of independently managed nodes.
- Organisations responsible for EOSC nodes will play an integral role in the ongoing operations of the EOSC federation. This interconnected network of systems will offer operational interfaces that promote cross-node integration.
- Researchers will benefit from unified support aimed at integrating their research environments with the EOSC federation.

Notes

- The scope of this call is likely to be rewritten: little use discussing now
- “Demonstrate ability to work with nodes at different maturity levels” - whose ability?
 - This part in particular might be formulated differently in the final version
 - What is the relevance of this on the Nordic level?
 - Nordic national providers might have different approaches with regard to establishing an EOSC node
 - An important issue is that Nordic national providers do not provide resources to external users for free
 - FYI: [EOSC Node blueprint](#)
- Further discussion should be had at a higher level; better to be followed up by the CSC-led group, with Sara Garavelli as the contact person

HORIZON-INFRA-2025-01-EOSC-02: Synergies and interplay of EOSC with Common European Data Spaces, RIA, 10.00 MEUR, 1 project

Scope

- The multifaceted scope revolves around creating tools, standards, and specifications that promote the FAIR principles within EOSC through collaboration, alignment, and interoperability with Common European Data Spaces
- Strengthening open interoperability standards and APIs, advancing technical specifications for FAIR digital objects,
- Operationalizing FAIR principles and validating through demonstrative cases involving participants in multiple Common European Data Spaces

Expected outcomes

- EOSC stakeholders are actively collaborating with key stakeholders from other Common European Data Spaces to define and standardise technical specifications for operational data services
- Enabling seamless adoption of FAIR practices throughout the research ecosystem by facilitating the transformation of digital objects into FAIR entities
- Propose mapping of EOSC Interoperability Framework elements and particular software/protocol candidates for Simpl-Open from the EOSC data space
- Enhancing content integration from data spaces, industry and beyond with EOSC

Notes

- This call text might be rewritten before publication
- Initiatives need to be connected to the DataSpaces work
 - DataSpaces are something that is controlled by ministries, so politics might be involved
 - Director-level decisions are required
 - Top-down support is required
- Interconnecting Dataverse in Norway and Denmark can be example of an activity
 - DK: There is a research group who will be willing to contribute, and DeiC could lead a collaboration
 - SE: Interested in joining such collaboration
 - NO: Interested
- Earth sciences as a possible pilot
- Integration with the SIMPL platform
- Nordic Institute for Interoperability Studies (NIIS), <https://www.niis.org/>
 - Main use case is the interconnection of public registries
 - University of Tartu is one of the nodes, CSC is hosting the national node (Xnode), Iceland is a member
 - NIIS could be a stand-alone partner, ETAIS could contribute to establishing the collaboration

- **AP: ETAIS to discuss with NIIS and book an online follow-up meeting with an agenda on noon Mon 28 October**
 - In addition to the Provider Forum, invite to this meeting
 - Rene Belsø, Anders Sjöström, Russel Wolff
 - Material to be shared with Provider Forum as soon as possible via mailing list, for the providers to consider the call and take to relevant, potential collaborators

HORIZON-INFRA-2025-01-EOSC-03: FAIR Integration for Enhanced Research Data in the EOSC ecosystem and beyond, RIA, 16.00 MEUR, 2 projects

Scope

- Is centred on advancing the interoperability and integration of research data within the European Open Science Cloud (EOSC), in alignment with the broader context of the Common European Data Spaces and cross-sector collaboration
- FAIR digital objects provide a conceptual and implementation framework to develop scalable cross- disciplinary capabilities, deal with the increasing data volumes and their inherent complexity
- build tools that help to increase trust in data, create mechanisms to efficiently operate in the domain of scientific assertions, and promote data interoperability

Expected outcomes

- Improved findability, accessibility, interoperability and reusability (“FAIRness”) of research data and other digital research outputs;
- Wider uptake of and compliance with FAIR data principles and practices by national and European research data and metadata providers, repositories and databases
- operationalisation of the concept of FAIR digital objects throughout the entire research data lifecycle
- enhanced and mainstreamed technical specifications for FAIR digital objects to facilitate the creation of digital objects that are FAIR-by-design

Notes

- Main focus of the call is FAIR Digital Objects
- Suggestion: EUDAT CDI to coordinate a consortium
 - DK: Large number of existing efforts, and interest in participating the consortium
 - SE: This may be of interest to SND
 - **AP: AS to check this**
 - FI: CSC is interested, though the strategy is not yet clear
- **AP: All attendees to the meeting to send an email to AA, expressing the national providers’ interest and scope of interest, and whether they are part of EUDAT council (DL: EOB Mon 14 October)**
- **AP: AA to discuss with EUDAT CDI on Tue 15 October**

HORIZON-INFRA-2025-01-EOSC-04: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem, RIA, 15.00 MEUR, 1 project

Scope

- Sustainable FAIRification of data can be a bottleneck towards the goal of a European web of FAIR data and services.
- AI/ML can significantly help in the process of FAIRification, data curation and data quality assurance, close to the source of the data
- European researchers need access to compute and repository services to develop, train and validate AI/ML models, in line with the GenAI4EU initiative
- proposed infrastructures should complement the EOSC EU Node capacity and be able to scale to a large number of users within transnational access to high-value datasets from national and European Research Infrastructure and e-Infrastructure ecosystems
- AI-based assistance tools shall be customised and trained for the discovery and composition of open science resources into custom workflows
- Activities are expected to start at TRL 4 and achieve TRL up to 7 by the end of the project

Expected outcomes

- EOSC will be advancing AI-readiness and Machine-Actionability (MA) in the ecosystem by offering AI-ready federated infrastructure and easy-to-use platform services for EOSC, in order to respond to one of the main challenges of research infrastructures for AI in science, namely the lack of interoperability between AI/ML solutions.
- EOSC will focus on integrating machine-actionable repositories within the ecosystem and demonstrating their reliability and effectiveness by collaborating with repository owners and service providers to implement MA tools and protocols, ensuring seamless integration with the EOSC EU Node.

Notes

- Focus of the call: Provide federated infrastructure services for serving AI models integrating horizontal and thematic EOSC nodes
- Interest among the national providers
 - DK: Very interesting to DeIC
 - SE: AI Sweden and RISE might be interested in collaborating
 - **AP: AS to check this**
 - NO: Sigma2 is interested, with relevance to the building of the new Research Data Archive (RDA)
 - EE: ETAIS is interested
 - FI: These themes are currently not a priority, but CSC participation is possible
- Uni-Freiburg: The scope is connected to FAIR Digital Objects and RO-Crate, we may develop Something on the top of this that provides accessibility and Data analysis layer

- Galaxy: Can process RO-Crate, but the building RO-Crate
- Possible pilots: Life sciences, humanities
- EGI might also be interested
- **AP: All attendees to the meeting to send an email to AA, expressing the national providers' interest and scope of interest, and whether they are part of EUDAT council (DL: EOB Mon 14 October)**
- **AP: BG to contact someone from EGI and ask about their interest in the call**

HORIZON-INFRA-2025-01-EOSC-05: Data stewards, skills and training for Open Science and FAIR practices, CSA, 8.00 MEUR, 1 project

Scope

- The uptake of Open Science practices and of the EOSC requires dedicated, professional profiles for data curation and data management
- equipping researchers with adequate skills and supporting them for the sharing and reuse of FAIR research digital objects
- data stewards and related profiles lack well-defined career paths, and data sharing and other open science practices are not fully mainstreamed within the research community and are often not recognised in research assessment practices
- to foster a stronger culture of Open Science and to address gaps related to the professionalisation of data stewards and to the acquisition and recognition of open science and data management skills at all career levels

Expected outcomes

- Definition of consistent core curricula for data stewards throughout Europe, fostering the adoption of OS and FAIR principles.
- Enhanced data steward skills, enhancing their ability to manage and interpret complex data.
- Advancement of OS education throughout all research career stages.
- Expansion and strengthening of existing competence networks, broadening their scope across countries and disciplines
- Mainstreaming transparent, aligned, and interoperable OS practices and promoting efficiency and trustworthiness in the management of FAIR digital objects.

Notes

- Interest among the national providers
 - DK: This call would be the most interesting to work together on in the Nordics
 - NO: Interesting for Sigma2 and Sikt
 - FI: CSC is interested
 - EE: ETAIS is interested
- Skills4EOSC: contact through <https://www.garr.it/en/>, especially Net dept.
 - Contact: <https://www.skills4eosc.eu/about/wp-and-people>

- Uni-Freiburg: Galaxy training network (GTN) has grown as a platform, is interested to participate but not to coordinate
 - Infrastructure on how to develop training material and run trainings for e.g. 30 k participants
 - <https://training.galaxyproject.org/>
 - <https://training.galaxyproject.org/training-material/topics/fair/>
 - <https://training.galaxyproject.org/training-material/>
 - <https://training.galaxyproject.org/#acknowledgment-and-funding>
 - Involving Admins, scientists: Earth sciences, materials science, statistical machine
 - Countries involved in GTN: Many, but especially NL, FR, DE
- Primary approach is to contact Skills4EOSC and ask for a possibility to collaborate; secondary is to form a consortium and compete with them
- Good argument: integrating with the EOSC EU node
- Option 1: Join forces with Skills4EOSC
- Option 2: Consortium with GTN and the Nordic partners, and others
- **AP: RB to contact GARR on behalf of the Nordic countries**
- AP (done): BG to discuss with GTN

HORIZON-INFRA-2025-01-EOSC-06: Using Generative AI (GenAI4EU) for Scientific Research via EOSC, RIA, 30.00 MEUR, 3 projects

Scope

- The uptake of Open Science practices and of the EOSC requires dedicated, professional profiles for data curation and data management
- equipping researchers with adequate skills and supporting them for the sharing and reuse of FAIR research digital objects
- data stewards and related profiles lack well-defined career paths, and data sharing and other open science practices are not fully mainstreamed within the research community and are often not recognised in research assessment practices
- to foster a stronger culture of Open Science and to address gaps related to the professionalisation of data stewards and to the acquisition and recognition of open science and data management skills at all career levels

Expected outcomes

- EOSC will make available the high-quality machine-readable scientific datasets to be consumed by machine-driven Generative AI applications at the service of science in line with the initiative
- EOSC will facilitate the pooling and sharing of high-value data sets originated from EOSC and other data spaces identified as priorities (including, but not limited to, public sector, health, climate, environmental, manufacturing, agriculture, energy, financial and mobility data)

- The large-scale actions supported by EOSC will include the creation of common data platforms enabling secure and compliant sharing and reuse of sensitive, confidential, proprietary and personal data

Notes

- The call and especially the expected outcomes overlap with the EOSC-04 call
- Strategic-level decision required for the Nordic countries to act
 - AI Factories will have an impact
 - What is the interest of NeIC's board in this field?
- NLP-related update from EE: collected dataset that are kept in private gitlab to train language models
- Interest among the national providers
 - NO: Sigma2 might be interested but is not resourced to coordinate
 - EE: ETAIS is interested, potentially could also coordinate, but motivation in other countries needs to exist too
 - DK: DeiC is marginally interested
- Potential use case should not be sensitive medical data but rather company-owned data
- **AP: ETAIS to inquire interest within the Provider Forum/ NeIC partners**
- **AP: All attendees to the meeting to inquire strategic interest from relevant bodies and/or institutions and return to AA via email**

INFRATECH calls (140 MEUR)

HORIZON-INFRA-2025-01-TECH-01: New technologies and solutions for reducing the environmental and climate footprint of research infrastructures, RIA, 25.00 MEUR, 5 projects

Scope

The proposed action is expected to deliver on several of the following points, as relevant:

- new technologies and solutions for research infrastructures enabling transformative resource efficiency (e.g. reduced energy consumption) and reduction of environmental (including climate-related) impacts, including, when relevant, more sustainable and efficient ways of collecting, processing and providing access to data;
- validation and prototyping;
- training of research infrastructures staff for the operation and use of the new solutions;

- action plans to deploy new developments at wider scale and ensure their sustainability;
- measures to ensure an environmentally effective integration of the solutions in the local contexts:
- societal engagement to foster acceptance of the solutions in the local and regional communities.

Expected outcomes

- reduction of environmental (including climate-related) impacts;
- optimisation of resource and energy consumption integrated through the full life cycle of research infrastructures;
- Increased long-term sustainability of European research infrastructures.

Notes

- In general, green computing is prioritised in the Nordics
- CERN could be interested in the call: scheduling based on the Carbon footprint and other green concerns, especially for WLCG which runs lots of cores all over the world
- EuroFP: Part of the scope is including more energy-efficient scheduling algorithms
- Galaxy: https://github.com/usegalaxy-eu/environmental_impact/blob/main/literature.md
 - Define from historical data > the non-energy usage efficient tools > use this to enhance the tools and do efficient scheduling
- Different levels to this theme:
 - Green scheduling
 - Green tool development: energy-efficient workloads
 - Green computing at the HPC sites
- Something could possibly be built around LUMI
 - Monitoring the usage of the computer, creating solutions to fix issues
- CERN focus (probably): Federation side, scheduling
- Nordic focus: Monitoring, tool development
- ETAIS have good contact with AI-UK and CSCS
- Interested: FI (CSC), EE (ETAIS), NO (Sigma2), SE (NAISS), DK (DeiC), also WLCG and Galaxy network
 - Elixir has an environmental focus group that could possibly be involved
- **AP: MW to inquire interest within CERN**
- **AP: All attendees to the meeting to inquire national interest in participating and return to AA via email (DL: 1 November at the latest)**
 - AP (done): Abdulrahman to organise a follow-up online meeting (4 November 12 CET)
 - **AP: BG to forward the meeting invitation to the focus group at Elixir**
- **Updates Nov 4th:**
 - Electricity pricing changing can be used as a scheduling parameters
 - How to do credit management of users?
 - What is the platform?
 - Potential monitoring of the workload usage, use historical data
 - Managing resource allocation:

- Monitoring the users quotas consumption
- Monitoring efficiency of user jobs, monitoring efficiency of usage allocation
 - Benchmarking/profiling of user jobs, then jobs should be allocated
 - Efficiency of the actual usage of Compute
- Efficiency of the clusters (monitoring the overall cluster efficiency)
- Can we introduce credits?
- Scope:
 - Better Resource Allocation
 - Monitoring and providing information
 - Cost factors to be taken into account as attributes: energy, procurement, OPEX, etc.
 - Focus on cheap electricity: consumptions of KWs for workloads on different clusters: ecological footprint → consumption of energy + how is the energy created
 - Providing recommendations on how to decrease CO2 emissions
 - Better Scheduling
 - Do actual meta-scheduling
- DeiC: Interested if other Centres are interested.
 - Geographical location providing low cost energy
- ETAIS: Interested, UK Bristol are also interested (mildly)
- NAISS: no news yet
- Consortium:
 - Interest to be defined from HPC service owners at the national providers
 - Service owners of institutional HPC services
- **APs:**
 - **Abdulrahman: check with EUDAT**
 - **All: check with the HPC service owners**
 - **Next meeting:**

Minutes, 9 October

EOSC Federation presentation

Comments

- EOSC Federation Handbook draft has no chapter on financing
- The word 'platform' should be maintained in the context of FP
- Nodes do exist already in January 2025, it should be mentioned
- Regarding Nordic interest
 - What is the internal value of becoming an EOSC Node?
 - Is it valuable in the first place?

- AS: We are part of the EU node, no funding to become a EOSC node
- NO: It is not the first priority. However, useful to receive new users
 - Would there really be new users from EU?
- What does EOSC concretely offer?
- DK: Machinery for paying for EOSC services needs to be in place
- Conclusion: interest in the Nordics exists, but more information is needed
- FYI: [EOSC Pain Points \(v2\)](#)
- Discussion to be continued in November

INFRA TECH calls (140 MEUR)

HORIZON-INFRA-2025-01-TECH-02: Implementing research infrastructure technology roadmaps, RIA, 45.00 MEUR, 4 projects, 10.00 to 15.00 / Project

Scope

- Projects should implement significant parts of, or entire research infrastructure technology
- roadmaps through co-creation with industrial partners from the earliest possible stage.
- The technology roadmaps should be the result of a community or cross-community effort already undertaken, and they should not be the result of an isolated effort, e.g., of a single research infrastructure.
- The technological solutions developed should respond to the needs of several research infrastructures, and in some cases the needs of different types of research infrastructures.

Expected outcomes

- enhanced scientific and technological competitiveness of European research infrastructures;
- enhanced research infrastructure capacities to address research challenges and EU policy priorities;
- increased technological level of European industries through the co-development of advanced technologies for research infrastructures and creation of potential new markets;
- increased availability of research infrastructure component manufacturing capabilities currently not available in Europe;
- long-term integration of research infrastructures into local, regional and global research and innovation ecosystems;
- strengthened foundations for the development of innovative companies in Europe.

Notes

- The call seems to be targeted at already existing consortia
- No interest

HORIZON-INFRA-2025-01-TECH-03: AI-powered impact simulations in support of the Destination Earth initiative, RIA, 30.00 MEUR, 4 projects, 7.00 to 10.00 / projects

Scope

The proposals should cover all of the following aspects:

- Demonstrate the innovative use of AI, in line with the GenAI4EU initiative, to setup and manage impact assessments assisted by simulation activities across RIs. They should ensure efficient selection of data and modelling resources and transparency for the consequent decision-making.
- Exploit the rapid advances in modelling, observations, digital technologies and ML/AI, ensuring that European leadership in this field is maintained;
- Link to existing DestinE Digital Twins and services to cover unexplored areas/domains and explore joining the overall DestinE ecosystem and service offering, addressing Union priorities and evolving end-user needs and create multi-disciplinary, horizontal, transversal infrastructure solutions to handle diverse end-to-end workflows spanning various areas.
- Allow for more informed decision-making by non-technical experts and policy makers through assistance of generative AI models enabling user requirements analysis and narrowing down vast amounts of data and information into actionable and understandable scenarios.
- Demonstrate trustworthiness/reliability in the use of AI and practice clear and open communication of AI use and impact to users. Additionally, the proposals should also include work on some of the following points:
- Evolve further through science & technology innovation using AI, provide novel digital solutions and capabilities at operational level and accelerate science-technology synergies to achieve breakthroughs in the area of AI-powered Earth system science;
- Invest on the design of a robust development framework and respective pre-operational infrastructure for advanced AI/ML tools and applications, ensuring the quality, reliability, transparency and verifiability (repeatability) of the methods applied and outcomes that are created;
- Expand to new thematic areas and fields based on identified user needs and structured feedback provided by relevant stakeholders and communities.

Expected outcomes

- Innovative use of AI, in line with the GenAI4EU initiative⁸⁴, to build powerful local impact assessments on top of large-scale scenarios provided by digital twins is demonstrated with fusion of real time data feeds, triggering available services and visualisations.

- Novel interfaces that translate the non-technical requirements of the users into concrete scenario assessments tailored for local needs.
- New best practices and guidelines on impact assessment of digital twin simulation and AI powered analysis are established.

Notes

- Existing connections
 - FI: CSC has a strong connection to Destination Earth
 - NO: Sigma2 as well
 - EE: Tartu is a member through the Estonian Marine Institute
- Decision: leave the call for communities that are already involved in DestinE
 - Do we wait for the communities to come to the providers, or should the providers nudge the communities towards the call?
 - The researchers should be aware of relevant calls such as this one

HORIZON-INFRA-2025-01-TECH-04: AI-generated digital twins for science, RIA, 40.00 MEUR, 4 projects, 8.00 to 10.00 / project

Scope

The proposals should cover all of the following aspects:

- Demonstrate the ability to setup complex modelling and digital twin setups using generative AI in line with the GenAI4EU initiative.
- Ensure a data driven approach in which new simulations and Digital Twins are set up and demonstrate the chosen approach to work in at least three different application scenarios.
- Enable non-technical decision makers to express scenarios for challenges to be translated into impactful simulations, making use of existing digital twins, models and data sources.
- Demonstrate trustworthiness/reliability in the use of AI and practice clear and open communication of AI use and impact to users.

Expected outcomes

- Innovative use of artificial intelligence (AI), in line with the GenAI4EU initiative, is demonstrated to setup and manage highly complex modelling and simulation activities across different research infrastructures (RIs).
- New best practices and guidelines for model generation and setup, including simulation and simulation-observation data fusion, are established.
- Emergence of new applications and use cases, in line with the GenAI4EU initiative

Notes

- Similar to the TECH-03 call, but the context here is more general
- Interest among the national providers

- SE: NAISS is very interested
- NO: Sigma2 is interested, connections to national AI initiatives
- FI: CSC is interested, connections to AI factories
- EE: ETAIS is interested, AI is in the focus on the governmental level
- Same consortia that are applying for AI factories could also apply for this call
 - AI factory should contain the hardware but also infrastructure to provide support, training, etc
 - This can be seen as a “complementary” call that is not overlapping
- The LUMI consortium will be applying for AI factories
 - DK: Probably only participating through LUMI consortium
 - NO: Participating through LUMI, but also open for other consortias
 - EE: LUMI & other consortia are possible, this call seems fitting
- E-governance initiatives might be interested
- **AP: All attendees to the meeting to reach out to certain scientific domains that do modelling and inquire interest**
 - At least in NO, EE, SE
- **AP: SVA to check at CSC if there is interest in this call as a complement to the AI-Factory call**
- **AP: ETAIS to ask if IT4I would be interested**
 - <https://lexis-project.eu/web/lexis-platform/>
- Previously submitted applications to the NeIC Open calls can be revisited by NeIC
- Follow-up happens via email

INFRADEV calls (61.5 MEUR)

HORIZON-INFRA-2025-01-DEV-01: Training and up-skilling of research infrastructures technical staff, CSA, 10.00 MEUR, 8 projects, 1.00 to 1.50 / project

Scope

This action will support structuring the offer of training activities dedicated to enhancing skills and career profiles of technical staff working in research infrastructures, as ‘one-stop shop(s)’. This would cover activities such as the development of new training programmes addressed to cover specific needs of research infrastructures, training programmes that promote mobility and career opportunities throughout Europe (for example through staff exchange) or that create training opportunities (for example through summer schools or workshops).

Expected outcomes

- Enhanced expertise and knowledge of technical staff working in research infrastructures, for an optimal functioning of the infrastructure.
- Enhanced mobility and career opportunities throughout Europe for technical staff, including across research infrastructure domains as well as across sectorial careers.
- 'One-stop-shop(s)' of training services dedicated to technical staff that meet the needs of different domains.

Notes

- Are there connections with NeIC's CodeRefinery?
 - Training as a Service
- Interest among the meeting participants
 - SE: NAISS is interested, could try to connect a national group to CodeRefinery
 - EE: ETAIS is interested, possibility to use Waldur as a platform (~400 students/semester)
 - K8S, others
 - <https://courses.cs.ut.ee/2024/kubeccloud/fall>
 - Example of labs: <https://k8s.cs.ut.ee/>
 - Example of HPC course: <https://docs.hpc.ut.ee/course/lab1/>
 - Galaxy Training Network (GTN)
 - GAT, Galaxy Admin Training
<https://training.galaxyproject.org/training-material/topics/admin/>
 - Very good tools for training, offline training, monitoring, etc.
 - Training Infrastructure as a Service, <https://galaxyproject.eu/tiaas>
 - Paper:
<https://academic.oup.com/gigascience/article/doi/10.1093/gigascience/gia048/7217081>
- Sigma2 may be willing to coordinate a consortium:
 - CodeRefinery, GTN, NAISS, ETAIS, DeIC (through CodeRefinery)
- Who else could possibly coordinate:
 - NeIC represented by CSC
 - ETAIS, possibly
 - Uni-Freiburg: Maybe, if capacity exists
- Cyber security/ ISO-27001 certificate could be something to distinguish ourselves of others
 - Uni-Freiburg is certified since 4 years and could help here
- **AP: TM to bring this call up in the CodeRefinery SG meeting in two weeks**
 - Buy-in from CodeRefinery staff would be needed
- **AP: AA to take the topic up at Sigma2**

HORIZON-INFRA-2025-01-DEV-02: Early phase implementation of ESFRI Projects that entered the ESFRI Roadmap in 2021, CSA, 14.00 MEUR, 10 projects, 1.00 to 1.50 / project

Consortia must represent at least one of the ESFRI Projects that entered the ESFRI Roadmap in 2021

Scope

Support can be provided for activities, such as:

- enlargement of the membership; establishment of the governance structure and legal entity; securing the funding;
- finalisation of the distributed architecture;
- development of ICT and data management solutions (including data management according to the FAIR principles and possible open access to data);
- development of access policies and users' strategies; consolidation of the international dimension;
- consolidation of the service offer; assessing possible expansion to new user communities/new needs;
- or addressing staff and procurement related issues.

Proposals should focus on the activities addressing the identified bottlenecks.

Expected outcomes

- enhanced ERA excellence and attractiveness through the availability of additional capacities;
- consistent and well-structured research infrastructures ecosystem in Europe; solid Member States/Associated Country engagement in pan-European research infrastructures, leading to their full implementation;
- long-term perspective for investments in research infrastructures;
- synergies and complementarities between new and existing research infrastructures.

Notes

- This group is not eligible to apply on their own
- No interest

HORIZON-INFRA-2025-01-DEV-03: Consolidation of the Research Infrastructure landscape – Individual support for evolution, long term sustainability and emerging needs of pan-European research infrastructures, RIA, 30.00 MEUR, 8 projects, 3.00 to 4.00 / project

Scope

Due to the scope of this topic, consortia must include at least one of the ESFRI Landmarks 26 or European Research Infrastructures Consortia (ERICs)

enlargement of the membership or broadening of the base of participating countries

- reinforcing international cooperation
- revision of business/funding plan
- development of managerial and technical skills for RI staff
- structuring and strengthening of national nodes
- extension of remote and/or virtual access
- management of research data according to the FAIR principles
- reorientation or evolution of the RI scope
- addressing critical aspects raised following an assessment or monitoring exercise, e.g. in the context of ESFRI activities

Expected outcomes

- better structured and strengthened European Research Infrastructure (RI) landscape;
- new services available to a wider user community, including participants in other parts of Horizon Europe, allowing to better tackle scientific and societal challenges;
- increased capacity to address EU policy priorities and/or socio-economic challenges;
- reinforced global competitiveness of the European Research Area;
- reduction of environmental (including climate-related) impacts as well as optimisation of resource and energy consumption integrated through the full life cycle of research infrastructures;
- increased long-term sustainability of European research infrastructures.

Notes

- “Targets consolidation of ERICs and ESFRI landmarks”
- Need to go via the ESFRI Communities
- The call is not necessarily meant for e-infrastructure provider organisations
- Interest among the national providers
 - SE: NAISS is interested
 - **AP: AS to check with NAISS**

HORIZON-INFRA-2025-01-DEV-04: Support to the European Strategy Forum on Research Infrastructures, CSA, 3.00 MEUR, 1 project: 1.50 to 3.00

Scope

- development and publishing of the ESFRI Roadmap and Landscape Analysis;
- effective evaluation of new ESFRI Roadmap applications and ESFRI project monitoring after 2026;
- development and execution of the ESFRI communication and outreach strategy, including organisation of ESFRI-led conferences and outreach events;

Expected outcomes

- enhanced efficiency, impact and visibility of ESFRI strategy and actions;
- better structured and strengthened European research infrastructure ecosystem;
- reinforced global competitiveness of the European Research Area;
- coordination and alignment of EU and national priorities for research infrastructures.
- impact assessment of ESFRI

Notes

- Out of scope for this group
- No interest

HORIZON-INFRA-2025-01-DEV-05: Preparatory actions exploring future frameworks for research infrastructures investment plans and funding streams, for integrated and sustained scheme for access and for joint technology development, CSA, 4.50 MEUR, 3 projects, 1.00 to 2.00 / project

Notes

- Support for SMEs: schemas for motivating for consuming resources in a meaningful way
- This call can be revisited if there is interest from any ESFRIs

INFRASERV calls (95 MEUR)

HORIZON-INFRA-2025-01-SERV-01: Research infrastructure services to enable R&I addressing main challenges and EU priorities related to the health domain, RIA, 37.00 MEUR, 4 projects, 5.00 to 12.00 / project

Scope

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructures services for challenge-driven research and innovation in each of the areas listed below, all related to the health domain, offered by a wide range of complementary and interdisciplinary top level research infrastructures.

Expected outcomes

For all areas:

- Provision of innovative, customised and efficient research infrastructures services enhancing and increasing society's long-term and consistent problem-solving capacity and evidence-based policy making related to the health domain

For research infrastructure services to support research and development of medical countermeasures for epidemic response:

- Excellent research and innovation to identify, characterise and mitigate the effects of existing and future emerging pathogens of public health concern.
- Comprehensive catalogue of research infrastructure services relevant to tackle infectious diseases epidemics, updated and available.
- Development of novel/adapted epidemics intervention tools and measures enabled by relevant research infrastructure services.
- Availability of research data emerging from access provision activities for re-use on common data platforms and registries, according to FAIR principles and compliant with legal provisions under the General Data Protection Regulation (GDPR).
- Challenge driven integration of EU research infrastructures and organisational and structural alignment with the future Pandemic Preparedness Partnership, the EU

Reference Laboratories and the EU4Health funded laboratory network DURABLE (or relevant legacy initiative).

- Providing a long-term sustainability concept for such a research infrastructure network supporting epidemic research.

Notes

- The HALRIC project brings together RI and health research
 - <https://halric.eu/>
 - <https://www.mediconvillage.se/hanseatic-life-science-research-infrastructure-consortium-halric/>
- Sounds like Elixir should be involved in this
- Clear connection to EOSC-ENTRUST
- **AP: AA to take this call to NorTRE**
- **AP: RB to take this call to a contact person in DK**
- **AP: AS to speak with HALRIC and LiU**
- **AP: BG to discuss with Elixir**

HORIZON-INFRA-2025-01-SERV-02: Research infrastructure services to enable R&I addressing main challenges and EU priorities, RIA, 18.00 MEUR, 2 projects, 5.00 to 10.00 / project

Scope

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructure services for challenge-driven research and innovation in each of the areas listed below, offered by a wide range of complementary and interdisciplinary top level research infrastructures.

Access also includes ad hoc users' training and scientific and technical support. Training courses for using the infrastructures may also be supported. Training courses and ad hoc users' training will prepare the new generations of researchers to properly exploit leading-edge research infrastructures, and should provide them with appropriate skills for data stewardship.

Activities to facilitate and integrate the access procedures, to further develop the remote or virtual provision of services and to improve, customise and harmonise the services the infrastructures will also be supported, including for better serving the needs of open EU industrial research and innovation.

Expected outcomes

- Provision of innovative, customised and efficient research infrastructures services enhancing and increasing society's long-term and consistent problem-solving capacity

and evidence-based policy making.

For research infrastructure services to improve the understanding and prediction of future climate changes and their impact:

- Reinforced support for cutting-edge research and innovation in understanding and predicting future climate changes and their impacts
- Wider, user-friendly and coordinated access for researchers to enhanced and further integrated state-of-the-art Earth system models, including high resolution or high complexity models and relevant high-performance computing resources
- More robust evidence underpinning the assessments of the Intergovernmental Panel on Climate Change (IPCC) about the state of scientific, technical and socio-economic knowledge on climate change, its impacts, risks and response options.
- More effective climate policies in the context of the implementation of the European Green Deal, the European Climate Law, and the Paris Agreement.

Notes

- DestinE people at CSC are looking into this call
- The research group led by Anne Fouilloux, FAIR2Adapt, could be relevant
 - **AP: AA to reach out to FAIR2Adapt and inquire their interest**

HORIZON-INFRA-2025-01-SERV-03: Research infrastructure services advancing frontier knowledge, RIA, 40.00 MEUR, 7 projects, 5.00 to 10.00 / project

Scope

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructure services for curiosity-driven research in wide scientific domains, offered by a wide range of complementary and interdisciplinary top level research infrastructures.

The scientific domains covered under this topic are:

- Environment: atmospheric chemistry and dynamics.
- Physical sciences and engineering: nanoscience.
- Physical sciences and engineering: particle and nuclear physics.
 - While further federation inside communities, such as the hadron physics community, are within the scope of this topic, the neighbouring fields of particle and nuclear physics can further benefit from collaboration and identification of common developments. Transversal links across the particle and nuclear physics communities that were also created within the project funded under the Horizon Europe topic HORIZON-INFRA-2021-SERV-01-07 are expected to be further reinforced.

- Scientific domains not covered by Horizon Europe Research Infrastructures part of Work Programme 2023 to 2025, both challenge- and curiosity- driven.

Expected outcomes

- Wider, simplified, and more efficient access to the best research infrastructures available to researchers to conduct curiosity-driven research, irrespective of location;
- Breakthrough and leading-edge research enabled by advanced research infrastructure services, including from emerging facilities, made available to a wider user community, including in emerging areas of research;
- Improved and harmonised research infrastructure services and broader and more balanced use of research infrastructure resources across the EU and Associated Countries deriving from the exploitation of synergies and complementarities;
- A new generation of researchers trained to optimally exploit all the essential tools for their research;
- Cross-disciplinary fertilisations and a wider sharing of information, knowledge and technologies across scientific fields fostered by closer interactions between researchers active in and around research infrastructures;
- Better management, including implementing FAIR data principle, of the continuous flow of data collected or produced by research infrastructures.

Notes

- WLCG could be interested in participating a consortium
 - Particle Physics? (Maiken)
- **AP: MW to inquire interest at CERN**
- **AP: BG to inquire interest at ESG**

Follow-up & next meetings

- Minutes from this meeting will be sent to participants as soon as possible, with actions points clearly marked
- Next NeIC Provider Forum meeting will be held at end of November, to discuss national strategies related to collaborating on EU calls
 - Date: 27-28 November, lunch-to-lunch
 - Location: Arlanda
 - Anders to attend as the Swedish representative
 - DK representative to be decided by DeIC
- Suggestion: organise a broader meeting in December, to discuss the calls that are considered interesting and have been followed up
 - Date 9-10 December, lunch-to-lunch
 - Location: Kastrup, Copenhagen/hybrid
 - **AP: RB to contact NORDUnet and ask if they could provide facilities**
 - **AP: AA to provide an agenda for the meeting ASAP**

Interesting calls & related action points:

- EOSC-02 (page 4)
 - AP: ETAIS to discuss with NIIS and book an online follow-up meeting with an agenda on noon Mon 28 October. In addition to the Provider Forum, invite to this meeting Rene Belsø, Anders Sjöström, Russel Wolff
- EOSC-03 (page 5)
 - AP: AS to check if there is interest at SND
 - AP: All attendees to the meeting to send an email to AA, expressing the national providers' interest and scope of interest, and whether they are part of EUDAT council (DL: EOB Mon 14 October)
 - AP: AA to discuss with EUDAT CDI on Tue 15 October
- EOSC-04 (page 6)
 - AP: AS to check if there is interest at AI Sweden and RISE to collaborate
 - AP: All attendees to the meeting to send an email to AA, expressing the national providers' interest and scope of interest, and whether they are part of EUDAT council (DL: EOB Mon 14 October)
 - AP: AA to discuss with EUDAT CDI on Tue 15 October
 - AP: BG to contact someone from EGI and ask about their interest in the call
- EOSC-05 (page 7)
 - AP: RB to contact GARR on behalf of the Nordic countries and ask about collaborating with Skills4EOSC on this call
- EOSC-06 (page 8)
 - AP: ETAIS to inquire interest within the Provider Forum/ NeIC partners
 - AP: All attendees to the meeting to inquire strategic interest from relevant bodies and/or institutions and return to AA via email
- TECH-01 (page 9), marked extremely interesting
 - AP: MW to inquire interest within CERN

- AP: All attendees to the meeting to inquire national interest in participating and return to AA via email (DL: 1 November at the latest)
 - AP: BG to forward AA's meeting invitation to the focus group at Elixir
- TECH-04 (page 13)
 - AP: All attendees to the meeting to reach out to certain scientific domains that do modelling and inquire interest – at least in NO, EE, SE
 - AP: SVA to check at CSC if there is interest in this call as a complement to the AI-Factory call
 - AP: ETAIS to ask if IT4I would be interested
- DEV-01 (page 15)
 - AP: TM to bring this call up in the CodeRefinery SG meeting in two weeks
 - AP: AA to take the topic up at Sigma2
- SERV-01 (page 19)
 - AP: AA to take this call to NorTRE
 - AP: RB to take this call to a contact person in DK
 - AP: AS to speak with HALRIC
 - AP: AS to inquire interest at UiO
 - AP: BG to discuss with Elixir

Other action points:

- Related to call DEV-03:
 - AP: AS to check with NAISS if there is interest
- Related to call SERV-02:
 - AP: AA to reach out to Anne/FAIR2Adapt and inquire their interest
- Related to call SERV-03:
 - AP: MW to inquire interest at CERN
 - AP: BG to inquire interest at ESG
- Related to the meeting in Kastrup on 9-10 December:
 - AP: RB to contact NORDUnet and ask if they could provide facilities
 - AP: AA to provide an agenda for the meeting ASAP