

Delivering for EOSC

Key Exploitable Results of Horizon 2020 EOSC-related Projects

Report from the H2020
INFRAEOSC Projects Survey,
run by the EOSC Association,
in Spring 2022

The logo for the European Open Science Cloud (EOSC) Association, featuring a stylized white 'e' icon followed by the lowercase letters 'eosc' in a white sans-serif font, all contained within a teal rounded rectangular background.



This report has been produced by the EOSC Association, in collaboration with Research Data Alliance Association (RDA).



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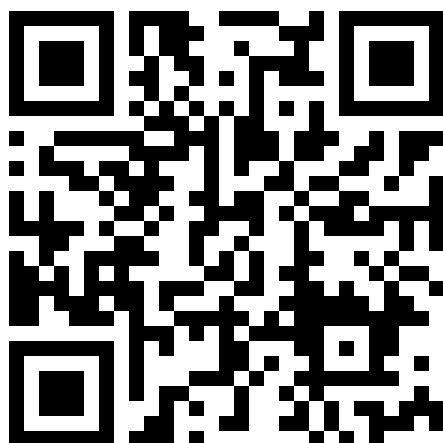


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Preface

The European Commission's Horizon 2020 and Horizon Europe grant projects are key elements for the implementation of EOSC and for the development of the EOSC ecosystem. They are part of the mechanism by which standards, services and tools are produced to support the sustainable and federated infrastructure for the sharing of scientific results (as openly as possible) known as the European Open Science Cloud. In the spirit of the EOSC ambition to multiply the potential impact of research data for science, education and innovation, the EOSC Association (EOSC-A) surveyed the still-running H2020 INFRAEOSC projects, in the spring of 2022. The purpose of the consultation was to capture each project's Key Exploitable Results (KERs), with the ultimate goal to establish a continuum between the sunseting H2020 projects and the new Horizon Europe projects supporting the implementation of EOSC.

The survey

A questionnaire was prepared by EOSC-A in collaboration with the Research Data Alliance Association (RDA), and distributed as a survey to the projects listed as relevant by the EC-mandated European Research Executive Agency (REA). The survey was open to all active H2020 projects, and ran between 11 March and 13 June 2022. The questionnaire meant to capture details on various aspects of the projects' implementation, including the description of up to six EOSC-related KERs that detailed their level of maturity, provisions for sustainability, further development plans and outstanding needs. The survey also captured the projects' provisions for the internationalisation of their products and their expectations relative to the EOSC Association.

The survey collected responses from 22 projects, which reported a total of 119 KERs, covering mainly technical and policy harmonisation efforts, virtual research environments, discovery/access platforms, training resources, knowledge centres and validation tools.

Status of the Horizon 2020 project KERs

With few exceptions, most KERs have moved beyond the demonstration phase, and have already been adopted by a broad reference community, as would be expected from projects in their final stages of implementation.

Most of the projects surveyed provided detailed sustainability and exploitation plans, which gives a general indication of the maturity level of the project's implementation and of the exploitability of each KER. The products developed by the so-called Science Cluster projects, in particular, appear well grounded in the ESFRI Research Infrastructure ecosystem, which provides a robust environment and a user community to cultivate their further use and development. Other projects have already been granted a path to sustain their KERs

through awards for new research projects. A handful of the project KERs would benefit from further development to improve their potential to be more widely used, particularly with respect to international collaborations and collaboration among projects. Training resources, which are a major KER in almost all projects, often lack a clear and standardised channel for discovery and use.

The RDA is often mentioned as a key counterpart for supporting the internationalisation ambitions of the project consortia, and could certainly play a role in the overall sustainability of the KERs.

Collaboration with industry partners also appears typically under-represented. Even when such collaboration is indicated as beneficial for the KER's sustainability, a clear plan to achieve industry engagement is missing.

The role of EOSC-A as a provider of sustainability measures is often recognised by the survey respondents, especially in its role as an advocate for new funding schemes or funding-support measures. The Association is also seen as a potential clearinghouse for the dissemination of project results, with a view toward stimulating wider adoption or further development of the KERs.

The KERs and the EOSC-A Task Forces

The EOSC Association has established five Advisory Groups (AGs) to provide an "umbrella" for a set of 13 Task Forces that address key areas of the EOSC implementation. These Task Forces are a major stakeholder in receipt of this report. They systematically liaise with EOSC projects to offer feedback on project developments, and provide input to the EOSC Partnership's Strategic Research and Innovation Agenda, the SRIA. The Task Forces are well-positioned to identify gaps in the implementation plan for EOSC and areas for investment.

The KERs identified in this survey of Horizon 2020 EOSC-related projects show strong correlations to the EOSC Advisory Groups topics, with maximum relevance for "Technical challenges in EOSC" and "Implementation of EOSC"; high relevance for "Metadata and data quality"; and satisfactory relevance for the AG topics "Research careers and curricula" and "Sustaining the EOSC". All of the areas covered by the 13 Task Forces are represented, with a level distribution of KERs across the various Task Forces topics.

Role of the EOSC Association

The EOSC Association will continue to reinforce its role of bringing the various initiatives together and to provide collaborative environments to foster increased communication among EOSC-related EU projects. Through initiatives like the Vademecum: A Handbook for Effective Collaboration within the EOSC Co-Programmed Partnership,

and the EOSC Forum online collaboration platform, EOSC-A aims to proliferate opportunities for inter-project exchange to achieve “One EOSC”, a critical mass of coordination that keeps everyone on the same page, working toward the same objectives. In particular, this cross-pollination of ideas will be useful in defining gaps in EOSC’s implementation, which can be brought to bear on the SRIA agenda updates.

The EOSC-related Horizon projects are encouraged to exploit the pathways created by EOSC-A to their fullest extent, and to actively engage in the creation of a culture of collaboration, knowledge exchange, exportability, quality production and re-use, that will realise the fundamentals of EOSC.





Results - The Surveyed Projects and their Key Exploitable Results (KERs)

ENVRI-FAIR



Name

ENVRI-FAIR – Environmental Research Infrastructures building Fair services Accessible for society, Innovation and Research

Grant agreement ID

824068

Website

envri.eu/home-envri-fair

CORDIS

cordis.europa.eu/project/id/824068

Brief description of the project

The EU-funded ENVRI-FAIR project aims to advance the findability, accessibility, interoperability, and reusability (FAIRness) of harmonised and easy-to-use data and services from the contributing environmental research infrastructures and connect them to the emerging European Open Science Cloud (EOSC).

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓	✓				✓
	1.2 Researcher Engagement and Adoption						
	1.3 Rules of Participation Compliance Monitoring						✓
AG 2	2.1 FAIR Metrics and Data Quality	✓				✓	✓
	2.2 Semantic Interoperability	✓				✓	
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit						
	3.3 Upskilling Countries to Engage in EOSC			✓			
AG 4	4.1 AAI Architecture					✓	
	4.2 Infrastructure for Quality Research Software						
	4.3 Technical Interoperability of Data and Services	✓	✓			✓	
AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation	✓				✓	

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 ENVRI Catalogue of services

The ENVRI Catalogue of services, which will be integrated in ENVRI-Hub, exposes the thematic data services and tools, ranging from the environmental RIs catalogues to the EOSC Catalogue and Marketplace.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.4024173

KER #2 ENVRI Knowledge Base

The cluster-level ENVRI Knowledge Base aims to share technical practices, identify common data & service requirements and design patterns. It also facilitates search and analysis of existing RI solutions for interoperability challenges.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.4311047

KER #3 ENVRI Training Catalogue

The ENVRI Training Catalogue is designed and implemented to facilitate findability, sharing and reuse of educational resources on FAIR data management and the Training Portal.

Exploitability

Operational service

Link: trainingcatalogue.envri.eu

KER #4 FAIR Implementation Profiles (FIP wizard tool)

Co-developed with GO FAIR, the FAIR Implementation Profiles tool (FIP Wizard Tool), allows for the evaluation of the implementation status of FAIR data practices at individual environmental RI level.

Exploitability

Prototype

KER #5 Common metadata schema

This metadata standard will allow the ingestion of RI metadata into the ENVRI Catalogue of Services and enable the search across all RIs by the ENVRI-Hub search functionality.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.4061702

KER #6 Policy framework in the ENVRI domain









Within ENVRI-FAIR, a policy framework for the entire community of ENV RIs will be developed and implemented by the end of the project. This policy will be aligned with EOSC Rules of Participation.

Exploitability

Prototype

Link: zenodo.org/record/3961475

KERs Categories

- | | | | |
|---|--|---|--|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Research Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

EOSC-Life



Name

EOSC-Life – Providing an open collaborative space for digital biology in Europe

Grant agreement ID

824087

Website

eosc-life.eu

CORDIS

cordis.europa.eu/project/id/824087

Brief description of the project

The EU-funded EOSC-Life project connects 13 pan-European Life Science Research Infrastructures to create an open, digital and collaborative space for life science research. EOSC-Life publishes FAIR data and a catalogue of services for the management, storage and reuse of data, and address policies for human research data under GDPR.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
 AG 1	1.1 PID Policy and Implementation	✓	✓	✓	✓	✓	✓
	1.2 Researcher Engagement and Adoption	✓	✓	✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring	✓	✓	✓	✓	✓	✓
 AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓	✓	✓	✓
	2.2 Semantic Interoperability	✓	✓	✓	✓	✓	✓
 AG 3	3.1 Data Stewardship Curricula and Career Paths	✓	✓	✓	✓	✓	✓
	3.2 Research Careers, Recognition, and Credit	✓	✓	✓	✓	✓	✓
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓	✓	✓	✓
 AG 4	4.1 AAI Architecture	✓	✓	✓	✓	✓	✓
	4.2 Infrastructure for Quality Research Software	✓	✓	✓	✓	✓	✓
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	✓
 AG 5	5.1 Financial Sustainability	✓	✓	✓	✓	✓	✓
	5.2 Long-term Data Preservation	✓	✓	✓	✓	✓	✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Life science data in EOSC

Establish EOSC-Life by publishing FAIR life science data resources for cloud use.

Exploitability

Concept, plan, or demonstrator

Link: fairsharing.org/3513

KER #2 Life-science toolkits in EOSC

Ecosystem of innovative life-science tools in EOSC:

- EOSC-Life Tools Collaboratory and the key services/ standards.
- Harmonised metadata specifications for computational tools and workflows.

Exploitability

Operational service

Link: Workflowhub.eu

KER #3









Enable ground-breaking data driven research in Europe by connecting life scientists to EOSC with procedures, guidance documents and templates for future EOSC Open Calls, the ARIA user and facility management system, and the LS Login, a common AAI system for life science RI.

Exploitability

Operational service

Link: instruct-eric.org/help/about-aria

KERs Categories

- | | | | |
|---|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

ESCAPE

Name

ESCAPE – European Science Cluster of Astronomy & Particle physics ESFRI research infrastructures



Grant agreement ID

824064

Website

projectescape.eu

CORDIS

cordis.europa.eu/project/id/824064

Brief description of the project

ESCAPE aims to address the Open Science challenges shared by ESFRI facilities as well as other pan-European research infrastructures in astronomy and particle physics. ESCAPE will unite astrophysics and particle physics communities with proven expertise in computing and data management by setting up a data infrastructure in support of the FAIR principles.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓	✓		✓		
	1.2 Researcher Engagement and Adoption		✓	✓	✓		
	1.3 Rules of Participation Compliance Monitoring		✓		✓		
AG 2	2.1 FAIR Metrics and Data Quality		✓		✓		
	2.2 Semantic Interoperability		✓		✓		
AG 3	3.1 Data Stewardship Curricula and Career Paths		✓		✓		
	3.2 Research Careers, Recognition, and Credit		✓		✓		
	3.3 Upskilling Countries to Engage in EOSC	✓	✓		✓		
AG 4	4.1 AAI Architecture	✓	✓		✓		
	4.2 Infrastructure for Quality Research Software		✓	✓	✓		
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓		
AG 5	5.1 Financial Sustainability	✓	✓		✓		
	5.2 Long-term Data Preservation	✓	✓	✓	✓		

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER#1 ESCAPE1 -ESCAPE DIOS- Data Storage/ Management/Transfer/Access system

ESCAPE DIOS prototyped a full Data Storage, Data Management, Data Transfer and Data Access system under a common AAI framework for distributed scientific computing.

Exploitability

Operational service

KER #2 ESCAPE2 - ESCAPE OSSR - catalogue for digital scientific products

ESCAPE OSSR developed a catalogue for digital scientific products – mainly software and services – including a complete meta-data standard, best practices in the software lifecycle and integration of system of development platforms, archiving solution and landing page for users.

Exploitability

Operational service

KER #3 ESCAPE CEVO interoperability standards for IVOA approved astronomical data services

ESCAPE CEVO has developed interoperability standards for astronomical data services that have been approved by the International Virtual Observatory Alliance (IVOA) and have been implemented in operational services.

Exploitability

Operational service

KER #4 ESAP – Science Platform for service offering integration

ESCAPE ESAP provides a reusable toolkit for integrating diverse service offerings to provide a coherent and customisable “science platform” environment and interoperability with a wide range of customised and off-the-shelf services in use within the wider scientific community.

Exploitability









Operational service

KER #5 Training Materials for OS practices and user community engagement

ESCAPE has developed training materials for the support of Open Science practices in the disciplines covered by ESCAPE, for the implementation of EOSC, and for user engagement.

Exploitability

KERs Categories

- | | | | |
|---|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

ExPaNDS

Name

ExPaNDS – EOSC Photon and Neutron Data Services

Grant agreement ID

857641

Website

expands.eu

CORDIS

cordis.europa.eu/project/id/857641



Brief description of the project

ExPaNDS' ambition is to enrich the EOSC with data management services and to enable national Photon and Neutron RIs to make the majority of their data 'open' following FAIR principles and to harmonise their efforts to make their data catalogues and data analysis services accessible through the EOSC.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓		✓		✓	✓
	1.2 Researcher Engagement and Adoption	✓		✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring					✓	
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓	✓		✓
	2.2 Semantic Interoperability	✓	✓	✓	✓		✓
AG 3	3.1 Data Stewardship Curricula and Career Paths	✓				✓	✓
	3.2 Research Careers, Recognition, and Credit	✓				✓	✓
	3.3 Upskilling Countries to Engage in EOSC	✓			✓	✓	
AG 4	4.1 AAI Architecture	✓		✓	✓	✓	✓
	4.2 Infrastructure for Quality Research Software	✓		✓	✓	✓	✓
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	✓
AG 5	5.1 Financial Sustainability	✓	✓	✓	✓	✓	
	5.2 Long-term Data Preservation	✓		✓			

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Policy harmonisation and self-assessment of FAIR in photon & neutron science

Building and documenting a consensus on FAIR-compliant Data Policies at the ExPaNDS research infrastructures including mechanisms for self-assessment.

Exploitability

Prototype

KER #2 Ontology of techniques in photon & neutron science

Steering the definition of an ontology for scientific techniques, focussed on Photon and Neutron facilities for datasets searches, classification of learning material and supporting self-defining data.

Exploitability

Prototype

KER #3 portable VISA

Enhancing VISA's (see PANOSC3) portability, allowing it to be deployed at PaN facilities and integrated with their diverse cloud technologies.

Exploitability

Prototype

KER #4 PaN workflow engines

Demonstrating the portability of scientific workflows, by providing common access mechanisms and analysis pipelines at multiple RIs using modern cloud technologies.

Exploitability

Prototype

KER #5 TeSS e-learning platform In PaN

Evaluating and adapting ELIXIR's TeSS e-learning platform to PaN requirements and deploying it as a central service at one of the project's facilities.

Exploitability

Operational service









KER #6 Enhancing the visibility of FAIR data within the EOSC Marketplace and other services

Facilitating RI adoption of standard catalogue software (SciCat and ICAT), enhancing visibility of FAIR data within services such as B2FIND, OpenAIRE and the EOSC Marketplace.

Exploitability

Prototype

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

PaNOSC

Name

PANOSC – Photon and Neutron Open Science Cloud

Grant agreement ID

823852

Website

panosc.eu

CORDIS

cordis.europa.eu/project/id/823852



Brief description of the project

The PaNOSC project brings together six European research infrastructures to contribute to the realisation of a data commons for Neutron and Photon science, providing services and tools for data storage, analysis and simulation. The project works to develop common policies, strategies and solutions in the area of FAIR data policy, data management and data services.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓	✓			✓	
	1.2 Researcher Engagement and Adoption	✓	✓	✓		✓	
	1.3 Rules of Participation Compliance Monitoring			✓	✓		✓
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓				✓
	2.2 Semantic Interoperability	✓	✓				✓
AG 3	3.1 Data Stewardship Curricula and Career Paths	✓				✓	
	3.2 Research Careers, Recognition, and Credit		✓		✓	✓	
	3.3 Upskilling Countries to Engage in EOSC	✓		✓	✓	✓	
AG 4	4.1 AAI Architecture	✓		✓	✓	✓	
	4.2 Infrastructure for Quality Research Software		✓	✓		✓	✓
	4.3 Technical Interoperability of Data and Services		✓	✓	✓	✓	✓
AG 5	5.1 Financial Sustainability	✓	✓			✓	
	5.2 Long-term Data Preservation	✓	✓		✓		

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 FAIR-compliant Data Policy Framework for Research Infrastructures

PaNOSC FAIR data policy is an update of the PanData Data Policy Framework (2010) providing a blueprint for the open data policies of photon and neutron sources in Europe.

Exploitability

Operational service

KER #2 Federated Search API + data portal

PaNOSC aims to provide open data for the EOSC. The federated search API and portal provides an easy way to search for open data across the photon and neutron facilities via one single portal.

Exploitability

Operational service

KER #3 Remote data analysis platforms (VISA and H5Web)

The VISA remote desktop platform was used for remote experiments during the COVID-19 confinement period and for remote data analysis since then.

Exploitability

Operational service

KER #4 Umbrella community AAI

The Umbrella community AAI is based on the AARC blueprint architecture and ready for the EOSC AAI federation and is used for community services.

Exploitability

Operational service

KER #5 Community e-learning platform

This training and e-learning platform is an updated version of the platform developed during the H2020 project SINE2020. PaNOSC has joined forces with the ExPaNDS on their training catalogue.

Exploitability

Operational service









KER #6 Experiment simulators (VINYL)

Simulation of experiments (VINYL) including McSTAS and OASYS which are now the de facto tools used for designing almost all beamlines world-wide; and SIMEX which builds on the outcomes of the EUCALL project.

Exploitability

Operational service

KERs Categories

- | | | | |
|--|--|---|--|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Research Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

SSHOC



Name

SSHOC – Social Sciences & Humanities Open Cloud

Grant agreement ID

823782

Website

sshopencloud.eu

CORDIS

cordis.europa.eu/project/id/823782

Brief description of the project

The EU-funded SSHOC project aims to encourage secure environments for sharing and using sensitive and confidential data. SSHOC aligns with prescribed cluster activities in order to create a social sciences and humanities cloud that can fully encompass infrastructural support for the study of social and cultural phenomena.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation		✓		✓		
	1.2 Researcher Engagement and Adoption	✓	✓	✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring	✓	✓	✓	✓		
AG 2	2.1 FAIR Metrics and Data Quality			✓			✓
	2.2 Semantic Interoperability	✓		✓	✓		✓
AG 3	3.1 Data Stewardship Curricula and Career Paths		✓			✓	✓
	3.2 Research Careers, Recognition, and Credit	✓	✓	✓		✓	
	3.3 Upskilling Countries to Engage in EOSC	✓				✓	✓
AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software	✓	✓	✓			✓
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓		✓
AG 5	5.1 Financial Sustainability	✓	✓	✓	✓		
	5.2 Long-term Data Preservation				✓		✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 SSH Open Marketplace

The SSH Open Marketplace is one of the entry points in the EOSC for SSH researchers with tools, services and training materials to support the reusability of research results.

Exploitability

Operational service

Link: marketplace.sshopencloud.eu

KER #2 Virtual Collection Registry (VCR)

The VCR allows researchers to create collections composed of different types of resources hosted by different distributed repositories.

Exploitability

Operational service

Link: collections.clarin.eu/public?5

KER #3 RESTORE

RESTORE is a tool-pack based on FAIR data principles that will help cultural heritage and heritage science professionals, institutions, manage multi-format and standardised digital resources.

Exploitability

Operational service

Link: marketplace.sshopencloud.eu/tool-or-service/plyy0d

KER #4 Improved Repositories

The ESS Data Portal allows better data retrieval and reuse. Surveycodings.org provides questionnaires, data collection tools, and coding frames. The support program guides SSH repositories in their journey to becoming Trusted Data Repositories.

Exploitability

Operational service

Link: zenodo.org/record/6394462

KER #5 Training discovery toolkit & Trainers Directory

The SSH Training Discovery Toolkit provides an inventory of training materials for social sciences and humanities researchers.

Exploitability

Operational service

Link: training-toolkit.sshopencloud.eu

KER #6 SSHOC-Created Networks & Communities









The EOSC Task Forces can promote their activities to the Ethnic and Migrant Minorities, International Secure Data Facility Professionals Network, SSH Dataverse, SSH Vocabulary Commons, SSH Trust Support and social media and newsletter communities.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.6564291

KERs Categories

- | | | | |
|---|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

Blue-Cloud



Name

Blue-Cloud – Piloting innovative services for Marine Research & the Blue Economy

Grant agreement ID

862409

Website

blue-cloud.org

CORDIS

cordis.europa.eu/project/id/862409

Brief description of the project

Blue-Cloud is the thematic marine EOSC, a collaborative Open Science platform in support of the EU Mission Ocean. Blue-Cloud innovative core services are deployed through a smart federation of leading European marine data and infrastructures, bringing an unprecedented amount of multidisciplinary data repositories, analytical tools, and computing facilities to the EOSC.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓	✓				
	1.2 Researcher Engagement and Adoption	✓	✓				✓
	1.3 Rules of Participation Compliance Monitoring	✓					
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓	✓	✓	✓
	2.2 Semantic Interoperability		✓	✓	✓	✓	
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit	✓	✓				✓
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓			
AG 4	4.1 AAI Architecture	✓		✓			
	4.2 Infrastructure for Quality Research Software	✓				✓	✓
	4.3 Technical Interoperability of Data and Services	✓		✓	✓	✓	
AG 5	5.1 Financial Sustainability	✓					
	5.2 Long-term Data Preservation						

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Blue-Cloud Virtual Research Environment (VRE)

The Blue-Cloud Virtual Research Environment is a cloud-based analytical and publishing framework working as a federation and orchestration of computing platforms and analytical services for constructing, hosting and operating Virtual Labs for specific applications in the marine and ocean domain.

Exploitability

Operational service

Link: blue-cloud.d4science.org

KER #2 Blue-Cloud catalogue

The Blue-Cloud Catalogue features datasets and products resulting from the Blue-Cloud VLabs and provenance metadata on the methods, data sets and workflows used to generate them.

Exploitability

Operational service

Link: blue-cloud.d4science.org/catalogue-bluecloud

Blue-Cloud Data Discovery & Access Service

The Blue-Cloud Data Discovery & Access Service facilitates federated discovery and retrieval of data sets and data products from multiple Blue Data Infrastructures in a common discovery and access interface, both for external users in stand-alone mode, and for users of the Blue-Cloud VRE.

Exploitability

Operational service

Link: data.blue-cloud.org

Blue-Cloud Virtual Lab for Fisheries data

The Virtual Lab on Fisheries data allows users to explore all oceans and regions of the world with the Fisheries Atlas. Features range from global fisheries maps, statistics and overviews, aggregate records about major world fisheries, and the Global Record on Stocks and Fisheries.

Exploitability

Operational service

Link :

blue-cloud.org/vlabs/global-record-stocks-and-fisheries

Blue-Cloud Virtual Lab for Aquaculture Monitor

A tool to produce national aquaculture sector overviews via OGC compliant data services to monitor country aquaculture sector. The tool is built on interoperable services where teams can compute and publish reproducible experiments.

Exploitability

Operational service

Link: blue-cloud.org/vlabs/aquaculture-monitor

KER #6 Blue-Cloud Virtual Lab for Zoo and Phytoplankton EOv products

The Zoo and Phytoplankton EOv demonstrator provides a description of the current state of the plankton communities and forecasts their evolution. This provides valuable information for the modelling, assessment and management of the marine ecosystem.









Exploitability

Operational service

Link :

blue-cloud.org/vlabs/zoo-and-phytoplankton-eov-products

KERs Categories

- | | | | |
|---|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

EOSC-Nordic



Name

EOSC-Nordic

Grant agreement ID

857652

Website

eosc-nordic.eu

CORDIS

cordis.europa.eu/project/id/857652

Brief description of the project

The EOSC-Nordic project will organise initiatives to support and develop open science and open innovation in Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Netherlands, and Sweden and exploit synergies to achieve greater harmonisation in policy and service provision across these countries.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
 AG 1	1.1 PID Policy and Implementation					✓	
	1.2 Researcher Engagement and Adoption					✓	
	1.3 Rules of Participation Compliance Monitoring	✓	✓	✓		✓	
 AG 2	2.1 FAIR Metrics and Data Quality					✓	✓
	2.2 Semantic Interoperability				✓	✓	✓
 AG 3	3.1 Data Stewardship Curricula and Career Paths					✓	
	3.2 Research Careers, Recognition, and Credit					✓	
	3.3 Upskilling Countries to Engage in EOSC			✓		✓	
 AG 4	4.1 AAI Architecture	✓	✓	✓	✓		✓
	4.2 Infrastructure for Quality Research Software	✓	✓	✓			✓
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	✓
 AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation						

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Nordic Service Interoperability Framework

Analysis and development of interoperability guidelines for service providers based on specific requirements coming from service providers based in the Nordic and Baltic countries.

Exploitability

Prototype

Link: eosc-nordic.eu/eosc-nordic-service-interoperability-framework

KER #2 EOSC-Service-compliance checklist & maturity model

Service compliance checklist & maturity model to quickly validate if a service is fit for EOSC.

Exploitability

Operational service

Link: eosc-nordic.eu/kh-material/deliverable-3-1-eosc-service-compliance-checklist-and-maturity-model

KER #3 Regional EOSC onboarding platform

The pre-onboarding platform facilitates the integration and onboarding of services provided by Nordic and Baltic service providers into the EOSC Marketplace.

Exploitability

Operational service

Link: eosc-nordic.atlassian.net/wiki/spaces/EN/pages/473792558/EOSC-Nordic+Service+Dashboard

KER #4 Prototype of secure data exchange across organizations

Secure data exchange platforms deployed in Estonia and Finland for cross-organisational services in different countries.

Exploitability

Operational service

Link: eosc-nordic.eu/feasibility-study-of-implementation-of-x-road-for-research-data-is-now-published

FAIR assessment model

FAIR assessment model: Semi-automated assessment of FAIR uptake for repositories and datasets.

Exploitability

Operational service

KER #6 Proof of Concepts of a Nordic eHealth infrastructure









Proof of Concepts of a Nordic eHealth infrastructure, managing cross-border sensitive data analysis (without actually moving the data out of the countries).

Exploitability

Prototype

Link: eosc-nordic.eu/eosc-nordic-as-proof-of-concept

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

Eosc-Pillar

Name

Eosc-Pillar – Coordination and Harmonisation of National Initiatives, Infrastructures and Data services in Central and Western Europe



Grant agreement ID

857650

Website

eosc-pillar.eu

CORDIS

cordis.europa.eu/project/id/857650

Brief description of the project

The EOSC-Pillar project aims to coordinate and harmonise national Open Science efforts across Austria, Belgium, France, Germany and Italy, ensure their contribution and readiness for the implementation of the European Open Science Cloud (EOSC) and investigate the option for them to interfederate at a later stage.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation						
	1.2 Researcher Engagement and Adoption	✓		✓	✓	✓	
	1.3 Rules of Participation Compliance Monitoring		✓		✓		
AG 2	2.1 FAIR Metrics and Data Quality	✓					✓
	2.2 Semantic Interoperability						✓
AG 3	3.1 Data Stewardship Curricula and Career Paths			✓			
	3.2 Research Careers, Recognition, and Credit			✓			
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓			
AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software						
	4.3 Technical Interoperability of Data and Services			✓	✓		✓
AG 5	5.1 Financial Sustainability		✓				
	5.2 Long-term Data Preservation						

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Eosc-Pillar Legal and Policy Recommendations and Guidelines.

Checklists to help researchers comply with the legal requirements of publishing, sharing and integrating research data to pave the way toward effective, open and FAIR science in Europe.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.6327668

KER #2 PoC for the Dashboard to measure EOSC readiness

PoC for the Dashboard to measure EOSC readiness with a set of indicators that would integrate data harvested from trusted open data sources automatically with the information provided manually by delegates from the member states.

Exploitability

Prototype

Link: eoscsecretariat.eu/cocreating-eosc/consultancy-design-and-poc-platform-monitoring

KER #3 The EOSC-Pillar RDM Training and support catalogue

The EOSC-Pillar RDM Training and support catalogue is a collection of online searchable resources for Data Stewardship and Research Data Management support.

Exploitability

Operational service

Link: eosc-pillar.d4science.org/web/eoscpillartrainingandsupport

KER #4 The Italian National Service Catalogue

The Italian National Service Catalogue is a collection of service providers and services representing the service offering aggregated by the Italian Computing and Data Infrastructure initiative.

Exploitability

Operational service

Link: eosc-pillar.d4science.org/web/eoscpillaritserviceregistry

KER #5 Ambassadors Programme

The Ambassadors Programme is made up of communication materials (poster, flyers, videos and podcasts) addressed to organisations and researchers to raise awareness of EOSC.

Exploitability

Operational service

Link: eosc-pillar.eu/ambassadors-programme

KER #6 The Federated FAIR Data Space









Services supporting the development of a unified data space out of datasets stored in existing and heterogeneous repositories and data sources.

Exploitability

Prototype

Link: eosc-pillar.d4science.org/web/eoscpillarresdataactlg

KERs Categories

- | | | | |
|---|--|---|--|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Research Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

EOSC-Synergy



Name

EOSC-Synergy – European Open Science Cloud - Expanding Capacities by building Capabilities

Grant agreement ID

857647

Website

eosc-synergy.eu

CORDIS

cordis.europa.eu/project/id/857647

Brief description of the project

EOSC-synergy contributes to the EOSC implementation by expanding national e-infrastructures and building human capacities in EOSC. In practice this means more compute and storage available, more datasets and tools to expand avenues of research.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓					
	1.2 Researcher Engagement and Adoption	✓	✓	✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring		✓		✓		✓
AG 2	2.1 FAIR Metrics and Data Quality	✓		✓	✓		✓
	2.2 Semantic Interoperability	✓					
AG 3	3.1 Data Stewardship Curricula and Career Paths					✓	
	3.2 Research Careers, Recognition, and Credit		✓	✓	✓	✓	
	3.3 Upskilling Countries to Engage in EOSC		✓			✓	
AG 4	4.1 AAI Architecture						✓
	4.2 Infrastructure for Quality Research Software	✓	✓	✓	✓		✓
	4.3 Technical Interoperability of Data and Services		✓	✓	✓		✓
AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation						

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 EOSC Synergy FAIR Framework

The FAIR Framework for validating EOSC FAIR data requirements provides automated deployment of data repositories and fairness verification to check the FAIRness level of digital objects from different repositories or data portals.

Exploitability

Operational service

Link: github.com/EOSC-synergy/FAIR_eva

KER #2 Services Quality Baseline

A set of quality baseline criteria to assess the quality and maturity of services within EOSC and build trust by strengthening their reliability and stability.

Exploitability

Operational service

Link: dx.doi.org/10.20350/digitalCSIC/12533

KER #3 Quality Badge Scheme for software, services and FAIR data

The Quality Badge Scheme is a method to motivate researchers, developers and service providers to produce high-quality software, services and FAIR data.

Exploitability

Operational service

Link: digital.csic.es/handle/10261/206348

KER #4 SQAaaS – Software and Services Quality Assessment (SQA) for on-demand automated software validation

The SQAaaS Platform contributes to the realisation of the open science principles by putting the focus on improving the software development life cycle through the fulfilment of a specific set of good practices.

Exploitability

Operational service

Link: github.com/EOSC-synergy/SQAaaS

KER #5 EOSC Training Platform

The EOSC Training Platform is a set of tools, including procedures and best practices, for the creation and execution of EOSC-related training courses.

Exploitability

Operational service

Link: learn.eosc-synergy.eu

KER #6 Methodology to integrate Thematic Services in the EOSC MVE









Methodology to integrate six thematic services by adapting its architecture to the EOSC Interoperability Framework.

Exploitability

Operational service

Link: eosc-synergy.eu/for-researchers

KERs Categories

- | | | | |
|---|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

FAIRsFAIR



Name

FAIRsFAIR – Fostering FAIR Data Practices in Europe

Grant agreement ID

831558

Website

fairsfair.eu

CORDIS

cordis.europa.eu/project/id/831558

Brief description of the project

The FAIRsFAIR project develops solutions and ensures the uptake and implementation of the FAIR principles in the EOSC by all the data providers throughout the research data life cycle to support research data management and ensure that European scientists reap the full benefits of FAIR data.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
 AG 1	1.1 PID Policy and Implementation		✓	✓		✓	✓
	1.2 Researcher Engagement and Adoption	✓			✓		
	1.3 Rules of Participation Compliance Monitoring						
 AG 2	2.1 FAIR Metrics and Data Quality	✓		✓	✓	✓	
	2.2 Semantic Interoperability			✓			✓
 AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit	✓					
	3.3 Upskilling Countries to Engage in EOSC		✓	✓	✓		
 AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software						
	4.3 Technical Interoperability of Data and Services						✓
 AG 5	5.1 Financial Sustainability			✓			
	5.2 Long-term Data Preservation			✓			

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 FAIR Adoption Handbook for Universities

The FAIR Adoption Handbook is a training handbook that supports universities in applying the competence framework according to their specific needs.

Exploitability

Concept, plan, or demonstrator

Link: zenodo.org/record/5787046

KER #2 FAIR Data Policy Checklist

The FAIR-enabling Data Policy Checklist enables policymakers to assess whether their data policies are FAIR-enabling and describe them in a structured way.

Exploitability

Concept, plan, or demonstrator

Link: zenodo.org/record/6225775

KER #3 ACME-FAIR: a guide for Research Performing Organisations (RPOs)

ACME-FAIR is a capability model for FAIR-enabling RPOs to help them assess whether and how they are enabling researchers to implement the FAIR principles.

Exploitability

Concept, plan, or demonstrator

Link: zenodo.org/communities/acme-fair?page=1&size=20

KER #4 FAIR-Aware

The FAIR-Aware tool provides practical information and resources to develop skills for FAIR data and incentivise researchers to develop their skills to make their data FAIR.

Exploitability

Operational service

Link: fairaware.dans.knaw.nl

KER #5 F-UJI: Automated FAIR Data Assessment Tool

The F-UJI: Automated FAIR Data Assessment Tool supports the assessment of the FAIRness of research datasets in five trustworthy data repositories.

Exploitability

Operational service

Link: fairsfair.eu/f-uji-automated-fair-data-assessment-tool

KER #6 FAIR-enabling Repository Finder









The FAIR-enabling Repository Finder is a searchable registry of repositories with embedded content and metadata to allow users to explore them in detail.

Exploitability

Operational service

Link: zenodo.org/record/6090418

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

NI4OS-Europe



Name

NI4OS-Europe – National Initiatives for Open Science in Europe

Grant agreement ID

857645

Website

ni4os.eu

CORDIS

cordis.europa.eu/project/id/857645

Brief description of the project

The EU-funded NI4OS-Europe project intends to support the development of national Open Science Cloud schemes in 15 EU Member States and associated countries. It will design, analyse and categorise the national Open Science environment in these countries to support general EOSC governance.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation						✓
	1.2 Researcher Engagement and Adoption	✓				✓	
	1.3 Rules of Participation Compliance Monitoring		✓	✓	✓		✓
AG 2	2.1 FAIR Metrics and Data Quality			✓			
	2.2 Semantic Interoperability	✓	✓				
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit						
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓		✓	
AG 4	4.1 AAI Architecture				✓		✓
	4.2 Infrastructure for Quality Research Software	✓		✓			
	4.3 Technical Interoperability of Data and Services		✓		✓		✓
AG 5	5.1 Financial Sustainability					✓	
	5.2 Long-term Data Preservation	✓	✓	✓			

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 NI4OS1 - Training platform

The NI4OS-Europe training platform is a Moodle-based e-learning solution that is used to host all the training materials produced in the project.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.3736155

KER #2 NI4OS2 - Pre-production environment supports the on-boarding of service providers

The Pre-production environment supports service providers in the process of onboarding, maturity assessment and integration of their services to EOSC.

Exploitability

Operational service

Link: doi.org/10.5281/zenodo.3932925

KER #3 NI4OS3 - FAIR/ORDM tools

The LCT is a tool for the selection of the most appropriate license for your work. The RoLECT is a tool focusing on the legal aspects of compliance with the EOSC Rules of Participation. The RePol is a tool for creating repository and privacy policies.

Exploitability

Operational service

Link: training.ni4os.eu/enrol/index.php?id=101

KER #4 NI4OS4 - NI4OS-Europe Login (AAI) service

The NI4OS-Europe Login provides a single integration point allowing access to the NI4OS-Europe services and resources using existing credentials from their home organisations.

Exploitability

Operational service

Link: zenodo.org/record/3932925

KER #5 NI4OS5 - National Open Science Cloud Initiatives (NOSCI)

The NOSCI Blueprint is a framework that can be customised by any country to advance its Open Science agenda and facilitate the EOSC governance.

Exploitability

Prototype

Link: zenodo.org/record/4061801

KER #6 NI4OS6 - AGORA service portfolio management tool









The NI4OS-Europe Onboarding procedures use the AGORA Service Portfolio Management tool for the Curation of the Services to be onboarded to EOSC. The on-boarding and the verification of the services are done using the NI4OS-Europe pre-production environment.

Exploitability

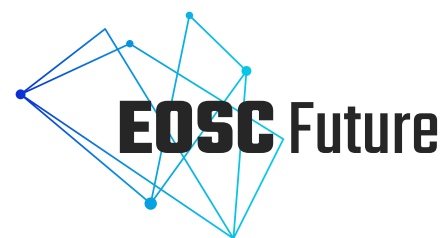
Operational service

Lin: zenodo.org/record/5078116

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

EOSC Future



Name

EOSC Future

Grant agreement ID

101017536

Website

eoscfuture.eu

CORDIS

cordis.europa.eu/project/id/101017536

Brief description of the project

The EU-funded EOSC Future project will integrate and connect e-infrastructures, research communities and initiatives in Open Science to advance the European Open Science Cloud (EOSC) platform of services (EOSC-Core, EOSC- Exchange, Interoperability Framework) to uncover the potential of European research.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
 AG 1	1.1 PID Policy and Implementation	✓	✓	✓	✓	✓	✓
	1.2 Researcher Engagement and Adoption	✓	✓	✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring	✓	✓	✓	✓	✓	✓
 AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓	✓	✓	✓
	2.2 Semantic Interoperability	✓	✓	✓	✓	✓	✓
 AG 3	3.1 Data Stewardship Curricula and Career Paths	✓	✓	✓	✓	✓	✓
	3.2 Research Careers, Recognition, and Credit	✓	✓	✓	✓	✓	✓
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓	✓	✓	✓
 AG 4	4.1 AAI Architecture	✓	✓	✓	✓	✓	✓
	4.2 Infrastructure for Quality Research Software	✓	✓	✓	✓	✓	✓
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	✓
 AG 5	5.1 Financial Sustainability	✓	✓	✓	✓	✓	✓
	5.2 Long-term Data Preservation	✓	✓	✓	✓	✓	✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 EOSC Future Platform

The EOSC Core and Support allows to share and access research services. The EOSC Exchange is a catalogue and marketplace of research resources for storing, exploiting and reusing FAIR data. The EOSC Interoperability Framework is a set of guidelines which promotes community best practices within EOSC.

Exploitability

Operational service

KER #2 EOSC Future Science Projects

The EOSC Future Science Projects perform new cross-disciplinary scientific analyses thanks to research collaboration between science clusters, showing how EOSC can be used to create knowledge from inter-working between communities.

Exploitability

Prototype

KER #3 EOSC Future Observatory

The EOSC Observatory is a policy intelligence tool for monitoring policies, investments, resources and infrastructures related to EOSC. It consists of a public interactive dashboard for the collection and presentation of data on the implementation and uptake of EOSC at European and national levels.

Exploitability

Prototype

KER #4 EOSC Future Knowledge Hub

Seamlessly integrated with the EOSC Portal, the EOSC Knowledge Hub (KH) is a platform that delivers a highly curated FAIR and open science training resources catalogue and a state-of-the-art Learning Management System (LMS) based on Moodle (for content delivery).

Exploitability

Prototype

KER #5 Commercial Services & Support

Commercial services and support for EOSC aim to involve industry and SMEs in the EOSC landscape in order to improve the exploitation of scientific products.

Exploitability

Prototype









KER #6 Future Community

The EOSC Future Community KER captures the value generated during the course of the EOSC Future project by the collaboration and community-building aspects of the wide variety of technical developments, consultations, forums and other project events and activities which, taken together, form the EOSC Future Community.

Exploitability

Operational service

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

C-SCALE



Name

Copernicus - eoSC AnaLytics Engine C-SCALE

Grant agreement ID

101017529

Website

c-scale.eu

CORDIS

cordis.europa.eu/project/id/101017529

Brief description of the project

The EU-funded C-SCALE project will make the discovery, access and processing of the space-based Copernicus environmental monitoring system environmental information available through the European Open Science Cloud (EOSC) to further innovative Earth Observation-based research and development activities.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation						
	1.2 Researcher Engagement and Adoption				✓		
	1.3 Rules of Participation Compliance Monitoring						
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓				
	2.2 Semantic Interoperability	✓	✓				
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit						
	3.3 Upskilling Countries to Engage in EOSC						
AG 4	4.1 AAI Architecture	✓					
	4.2 Infrastructure for Quality Research Software	✓		✓			
	4.3 Technical Interoperability of Data and Services	✓	✓				
AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation						

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Federated Earth System Simulation and Data Processing Platform (FedEarthData)

FedEarthData brings together the providers of data and processing capacity, so that Earth observation products held in distributed archives across the federation can be easily discovered and seamlessly accessed and processed on batch as well as interactive analytic platforms deployed on distributed computing resources anywhere across the federation.

Exploitability

Operational service

Link: wiki.c-scale.eu/C-SCALE

KER #2 Metadata Query Service (MQS)

The C-SCALE Metadata Query Service (MQS) makes Copernicus data distributed across partners within the federation discoverable and searchable.

Exploitability

Prototype

Link: mqs.eodc.eu/help

KER #3 openEO Platform

The openEO platform provides intuitive programming libraries alongside a large earth observation data repository to simplify processing and data management.

Exploitability

Prototype

Link: openeo.cloud

KER #4 C-SCALE Workflow solutions

Solutions to easily deploy workflows supporting monitoring, modelling and forecasting of the Earth system enabling users to create results on the C-SCALE federation.

Exploitability

Prototype

Link: github.com/c-scale-community/use-case-hisea

KER #5 C-SCALE community: forum, documentation, training, scientific publication and news









Set of activities and resources to engage with existing and new stakeholders to exchange knowledge and best practices about earth observation data analytics optimisation.

Exploitability

Operational service

Link: github.com/c-scale-community

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

DICE



Name

Developing Data-Intensive Cloud Applications with Iterative Quality Enhancements

Grant agreement ID

644869

Website

dice-eosc.eu

CORDIS

cordis.europa.eu/project/id/644869

Brief description of the project

DICE project will provide cutting-edge data management services and a significant amount of storage resources for the EOSC. The goal is to enhance the EOSC infrastructure and ensure support to guide European research and innovation into the future.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓			✓	✓	
	1.2 Researcher Engagement and Adoption			✓		✓	
	1.3 Rules of Participation Compliance Monitoring				✓		
AG 2	2.1 FAIR Metrics and Data Quality	✓					
	2.2 Semantic Interoperability						
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit						
	3.3 Upskilling Countries to Engage in EOSC						
AG 4	4.1 AAI Architecture				✓	✓	
	4.2 Infrastructure for Quality Research Software				✓		
	4.3 Technical Interoperability of Data and Services	✓			✓	✓	
AG 5	5.1 Financial Sustainability					✓	
	5.2 Long-term Data Preservation		✓				

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 PID integrity check

The PID integrity check includes two key aspects of PIDs' integrity: Integrity check for PID infrastructure (PID resolution) and PID metadata (the content of PID records and the usage of datatypes).

Exploitability

Prototype

Link: dice-eosc.eu/deliverables/pilots-integration-other-services-platforms

KER #2 Long term preservation policy template

Policy template for long term preservation for re-use by a wide range of repositories and policy-based data archives to compose their Long Term Preservation policies.

Exploitability

Operational service

Link: dice-eosc.eu/deliverables/pilots-integration-other-services-platforms

KER #3 EOSC data management services use cases

Exemplary use cases in the use of EOSC data management services from three different communities (CompBioMed, LOFAR and ICOS).

Exploitability

Operational service

Link: dice-eosc.eu/deliverables/pilots-description-and-validation

KER #4 Operational tools integration with EOSC Core

Integration and full compatibility of the EUDAT CDI Operational tools AGORA/SPMT with the EOSC Profiles and EOSC Portal API and of B2ACCESS with the EOSC AAI.

Exploitability

Operational service

Link: dice-eosc.eu/deliverables/intermediate-report-integration-cdi-operation-and-collaboration-tools-eosc

KER #5 Data Management services









Set of EOSC exchange services for data management, able to support diverse communities.

Exploitability

Operational service

Link: dice-eosc.eu/index.php/call-service-requests

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

RELIANCE



Name

**REsearch Lifecycle mAnagement for Earth Science
Communities and CopErnicus users in EOSC**

Grant agreement ID

101017501

Website

reliance-project.eu

CORDIS

cordis.europa.eu/project/id/101017501

Brief description of the project

The EU-funded RELIANCE project provides essential digital services for data management, processing, analysis, storage and networking, among others. The project seeks to boost the discovery of and access to research data and manage the research lifecycle while promoting FAIR and open science principles.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓	✓	✓			✓
	1.2 Researcher Engagement and Adoption			✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring						
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓	✓	✓	✓
	2.2 Semantic Interoperability	✓	✓	✓	✓	✓	✓
AG 3	3.1 Data Stewardship Curricula and Career Paths		✓	✓	✓		✓
	3.2 Research Careers, Recognition, and Credit	✓	✓	✓	✓	✓	✓
	3.3 Upskilling Countries to Engage in EOSC						
AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software		✓	✓			
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	✓
AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation	✓	✓	✓	✓		✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Metadata model for the description of FAIR data cubes

Metadata model for the description of FAIR data cubes, including crosswalks among existing metadata models used to describe earth observation products and datasets as well as those proposed and used in the EOSC ecosystem.

Exploitability

Prototype

Link: doi.org/10.5281/zenodo.5024537

KER #2 RELIANCE RO-Crates

The RELIANCE RO-crate profile describes research objects in EOSC that include data cubes to access earth observation data like documentation, images, etc.

Exploitability

Operational service

Link: reliance-eosc.github.io/reliance-ro-crate

KER #3 Research object management platform (ROHub)

The RELIANCE ROHub service supports the management of the research lifecycle, including the storage, management and preservation of scientific outcomes, across science disciplines in line with FAIR and open science principles.

Exploitability

Operational service

Link: reliance.rohub.org

KER #4 Advanced geospatial Data Management (ADAM) platform

The ADAM platform in EOSC enables efficient earth observation data discovery, access, processing and visualisation of data cubes.

Exploitability

Operational service

Link: adamplatform.eu

KER #5 Text mining services

Text mining services (semantic enrichment, semantic search, and recommendation) to extract information from the scientific text in EOSC.

Exploitability

Operational service

Link: reliance.expertcustomers.ai

KER #6 Research objects related to Earth Science









1500+ research objects related to earth science, aggregating over 7000 resources and 120+ data cubes enabling efficient access and reuse of geospatial data.

Exploitability

Operational service

Link: reliance.adamplatform.eu

KERs Categories

- | | | | |
|--|--|---|--|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Research Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

Cos4Cloud



Name

Cos4Cloud – Co-designed Citizen Observatories Services for the EOS-Cloud

Grant agreement ID

863463

Website

cos4cloud-eosc.eu

CORDIS

cordis.europa.eu/project/id/863463

Brief description of the project

COS4CLOUD aims to facilitate open science and citizen science initiatives by designing and implementing services. The project will design and prototype these new services using deep machine learning, automatic video recognition, and other cutting-edge technologies.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation	✓				✓	✓
	1.2 Researcher Engagement and Adoption	✓	✓	✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring		✓			✓	✓
AG 2	2.1 FAIR Metrics and Data Quality	✓			✓	✓	
	2.2 Semantic Interoperability	✓			✓	✓	
AG 3	3.1 Data Stewardship Curricula and Career Paths					✓	
	3.2 Research Careers, Recognition, and Credit	✓	✓	✓	✓	✓	✓
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓	✓	✓	✓
AG 4	4.1 AAI Architecture	✓					
	4.2 Infrastructure for Quality Research Software	✓			✓	✓	
	4.3 Technical Interoperability of Data and Services	✓		✓	✓	✓	
AG 5	5.1 Financial Sustainability						✓
	5.2 Long-term Data Preservation					✓	✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Cos4Cloud_services

13 technological services codesigned, prototyped and published in the European Open Science Cloud (EOSC).

Exploitability

Operational service

Link: cos4cloud-eosc.eu/services

KER #2 Cos4Cloud_codesign, co-design service platform for citizen observatories

Methodological guide: co-design service platform for citizen observatories.

Exploitability

Operational service

Link: cos4cloud-eosc.eu/the-project/this-is-cos4cloud/co-design-methodology

KER #3 Cos4Cloud_Training. Citizen-science toolbox and evidence hub

Citizen-science toolbox and evidence hub: Training courses and material.

Exploitability

Operational service

KER #4 Cos4Cloud_DIY - Do-It-Yourself guidelines for citizen observatories (CanAir.io and KdUINO)

Do-It-Yourself guidelines for citizen observatories (CanAir.io and KdUINO).

Exploitability

Prototype

Link: cos4cloud-eosc.eu/citizen-science-innovation/cos4cloud-citizen-observatories/canairio

KER #5 Cos4Cloud_COs - Guidelines on best practice for building citizen observatories

Guidelines on best practice for building citizen observatories.

Exploitability

Prototype

KER #6 Cos4Cloud_Sustainability

Sustainability strategy for Cos4Cloud services in the EOSC hub.

Exploitability

Prototype

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

INODE



Name

INODE - Intelligent Open Data Exploration

Grant agreement ID

863410

Website

inode-project.eu

CORDIS

cordis.europa.eu/project/id/863410

Brief description of the project

The volume and complexity of data make it difficult for most users to access data easily. The EU-funded INODE project provides a set of services that ensure open data sets help users and make communication with databases more humanlike.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation						
	1.2 Researcher Engagement and Adoption	✓	✓	✓	✓	✓	✓
	1.3 Rules of Participation Compliance Monitoring						
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓	✓	✓	✓
	2.2 Semantic Interoperability	✓	✓	✓	✓	✓	✓
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit					✓	✓
	3.3 Upskilling Countries to Engage in EOSC	✓					
AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software	✓	✓	✓	✓	✓	✓
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	✓
AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation	✓	✓	✓	✓	✓	✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 INODE system

The INODE system enables end-users to explore complex data in natural language, with guiding operators and a visual interface.

Exploitability

Concept, plan, or demonstrator

Link: inode-project.eu/post/inode-vision-paper

KER #2 INODE use cases

Uses cases (EU policy research data, cancer research and astrophysics) to teach how the INODE system enables scientific discovery and data exploration.

Exploitability

Operational service

Link: inode-project.eu/use-cases

KER #3 INODE Publications

The INODE Team published papers and presented tutorials in prestigious database conferences and journals: ACM SIGMOD, IEEE ICDE, VLDB, Information Systems.

Exploitability

Operational service









KER #4 Evaluation framework

The INODE Team developed the first exhaustive evaluation framework that combines quantitative measures with qualitative user studies.

KER #5 Information extraction and data integration approach

The INODE Team developed a novel approach for information extraction and data integration using linguistics- and learning-based algorithms.

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

CS3MESH4EOSC



Name

Interactive and agile/responsive sharing mesh of storage, data and applications for EOSC CS3MESH4EOSC

Grant agreement ID

863353

Website

cs3mesh4eosc.eu

CORDIS

cordis.europa.eu/project/id/863353

Brief description of the project

The EU-funded CS3MESH4EOSC project will integrate the existing cloud services for data storage, synchronisation and sharing to boost collaborative research and allow research groups, scientists and engineers to share, transfer and synchronise data in simple but powerful ways.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation				✓		
	1.2 Researcher Engagement and Adoption			✓	✓		
	1.3 Rules of Participation Compliance Monitoring						
AG 2	2.1 FAIR Metrics and Data Quality				✓		
	2.2 Semantic Interoperability	✓			✓		
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit						
	3.3 Upskilling Countries to Engage in EOSC		✓				
AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software		✓	✓	✓	✓	✓
	4.3 Technical Interoperability of Data and Services	✓	✓		✓		✓
AG 5	5.1 Financial Sustainability		✓				
	5.2 Long-term Data Preservation						✓

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Interoperability standards portfolio and toolbox for Enterprise file synchronization and sharing (EFSS) storage and application services

The project produces and maintains a set of standard interoperable protocols and APIs for the EFSS services ecosystem by integrating the existing, de-facto standards and developing new ones if necessary for the EOSC use cases.

Exploitability

Operational service

KER #2 ScienceMesh federated e-infrastructure for collaborative research

The ScienceMesh is a platform that allows its users to easily share data across the federation, transparently crossing institutional and disciplinary research boundaries.

Exploitability

Operational service

Link: sciencemesh.io

KER #3 Web-based Distributed Analysis Environments CRW

Web-based Distributed Analysis Environments CRW addresses the interactive data analysis, exploration and ease-of-use by combining Jupyter Notebook interfaces with access to complex data, computing and the sync and share capabilities of the EFSS systems.

Exploitability

Operational service

KER #4 Open Data Systems CRW

The Open Data Systems CRW addresses the problem of FAIR metadata annotation in the early phases of research as well as enabling other metadata-aware workflows and achieving interoperability with digital repositories via metadata packaging and description standards.

Exploitability

Operational service

KER #5 Collaborative Documents CRW

The Collaborative document editing CRW enables researchers to keep documents, code and other files in a single research workspace and to store them locally.

Exploitability

Operational service

KER #6 On-demand Data Transfers CRW

The Data transfers CRW addresses the problem of transferring large datasets between nodes in ScienceMesh and between ScienceMesh and external storage services.

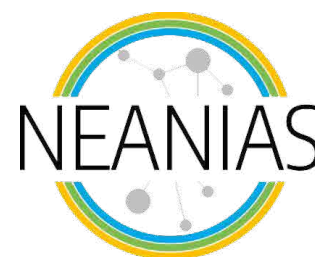
Exploitability

Prototype

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

NEANIAS



Name

Novel EOSC services for Emerging Atmosphere, Underwater and Space Challenges

Grant agreement ID

863448

Website

neanias.eu

CORDIS

cordis.europa.eu/project/id/863448

Brief description of the project

The EU-funded NEANIAS project aims to co-design, deliver and integrate innovative access, collaboration and interdisciplinary research services for the underwater, atmospheric, and space research communities into the EOSC to address these communities' needs in line with open science principles.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation						
	1.2 Researcher Engagement and Adoption	✓	✓	✓			
	1.3 Rules of Participation Compliance Monitoring						
AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓			
	2.2 Semantic Interoperability						
AG 3	3.1 Data Stewardship Curricula and Career Paths						
	3.2 Research Careers, Recognition, and Credit	✓	✓	✓			
	3.3 Upskilling Countries to Engage in EOSC	✓	✓	✓			
AG 4	4.1 AAI Architecture						
	4.2 Infrastructure for Quality Research Software						
	4.3 Technical Interoperability of Data and Services	✓	✓	✓			
AG 5	5.1 Financial Sustainability	✓	✓	✓			
	5.2 Long-term Data Preservation						

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 EOSC Services for underwater-related studies and engineering tasks

Cross-cutting services for tackling operationally underwater-related studies and engineering tasks.

Exploitability

Operational service









KER #2 EOSC Services for space-related studies

Cross-cutting services for tackling space-related studies to be exploited as a springboard of operational tools for space communities.

KER #3 EOSC Services for atmospheric-related studies

Cross-cutting monitoring and forecasting services for tackling operationally atmospheric-related studies and engineering tasks.

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

TRIPLE

Name

Transforming Research through Innovative Practices for Linked interdisciplinary Exploration TRIPLE



Transforming Research through Innovative Practices for Linked Interdisciplinary Exploration

Grant agreement ID

863420

Website

project.gotriple.eu

CORDIS

cordis.europa.eu/project/id/863420

Brief description of the project

The EU-funded TRIPLE project will make it easier for researchers to discover and reuse social sciences and humanities (SSH) research data and to embark on interdisciplinary collaboration initiatives to improve our assessment of and response to complex societal issues.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
AG 1	1.1 PID Policy and Implementation			✓			
	1.2 Researcher Engagement and Adoption	✓				✓	
	1.3 Rules of Participation Compliance Monitoring		✓			✓	
AG 2	2.1 FAIR Metrics and Data Quality		✓	✓	✓	✓	
	2.2 Semantic Interoperability	✓	✓	✓	✓	✓	
AG 3	3.1 Data Stewardship Curricula and Career Paths		✓	✓			
	3.2 Research Careers, Recognition, and Credit	✓				✓	
	3.3 Upskilling Countries to Engage in EOSC						
AG 4	4.1 AAI Architecture	✓					
	4.2 Infrastructure for Quality Research Software						
	4.3 Technical Interoperability of Data and Services	✓	✓	✓	✓	✓	
AG 5	5.1 Financial Sustainability						
	5.2 Long-term Data Preservation		✓				

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 Discovery platform for SSH resources

Single access point for users SSH researchers to discover and reuse SSH resources, connect with other researchers and discover new ways of funding research.

Exploitability

Operational service

Link: gotriple.eu

KER #2 Multilingual Vocabulary Service

The Multilingual Vocabulary Service is a publicly available SSH vocabulary, published in an open format (e.g. SKOS) with vocabulary data downloadable as XML or Jason file.

Exploitability

Operational service

KER #3 SSH corpus for Machine Learning Training

Constitution of a training textual dataset of SSH sources that can be reused for training machine learning and artificial intelligence tasks.

Exploitability

Operational service

KER #4 FAIR Metadata schema

Reference data model for describing research documents, projects, authors and research profiles of the SSH community and beyond, based on the schema.org ontology.

Exploitability

Operational service

KER #5 TRIPLE Open Science Training Series

A series of 12 online training events on open science and the EOSC to support the uptake of open research practices available in open access to the SSH community.

Exploitability

Operational service









KER #6 TRIPLE Training Toolkit

The TRIPLE Training Toolkit is an open and reusable workflow to design and deliver training events that follow the FAIR principles and publish training materials as OERs.

Exploitability

Operational service

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |

ARCHIVER



Name

ARCHIVER – Archiving and Preservation for Research Environments

Grant agreement ID

824516

Website

archiver-project.eu

CORDIS

cordis.europa.eu/project/id/824516

Brief description of the project

The ARCHIVER project combines multiple ICT technologies and business models in a hybrid cloud environment to deliver end-to-end archival and preservation services that are EOSC ready and cover the full research lifecycle for multiple research domains.

Relevance of the KERs to the EOSC Advisory Groups (AGs) and Task Forces (TFs)

AG	Task Force	KER #1	KER #2	KER #3	KER #4	KER #5	KER #6
 AG 1	1.1 PID Policy and Implementation						
	1.2 Researcher Engagement and Adoption						
	1.3 Rules of Participation Compliance Monitoring						
 AG 2	2.1 FAIR Metrics and Data Quality	✓	✓	✓			
	2.2 Semantic Interoperability						
 AG 3	3.1 Data Stewardship Curricula and Career Paths			✓			
	3.2 Research Careers, Recognition, and Credit						
	3.3 Upskilling Countries to Engage in EOSC						
 AG 4	4.1 AAI Architecture			✓			
	4.2 Infrastructure for Quality Research Software	✓	✓	✓			
	4.3 Technical Interoperability of Data and Services	✓	✓	✓			
 AG 5	5.1 Financial Sustainability	✓	✓	✓			
	5.2 Long-term Data Preservation	✓	✓	✓			

AG1: Implementation of EOSC	AG2: Metadata and data quality	AG3: Research careers and curricula
AG4: Technical challenges on EOSC	AG5: Sustaining EOSC	

KER #1 LABDRIVE, the ultimate Research Data Management and Digital Preservation platform

LABDRIVE is a Research Data Management and Digital Preservation platform that focuses on scientific datasets and allows organisations to keep the research data they produce, for the long term, in a single platform.

Exploitability

Operational service

Link: marketplace.eosc-portal.eu/services/libnova-labdrive-the-ultimate-research-data-management-and-digital-preservation-platform

KER #2 Arkivum: Petabyte scale digital preservation, guaranteeing the long-term use of scientific research data

Arkivum is an innovative new SaaS solution for archiving, preserving and accessing vast and hugely valuable scientific datasets from disciplines that include astronomy, particle physics, genomics and more.

Exploitability

Prototype

Link: marketplace.eosc-portal.eu/services/arkivum-digital-archiving-and-preservation-solution?q=Arkivum+Digital+Archiving+and+Preservation+Solution

KER #3 ARCHIVER Test Suite for EOSC services validation









This tool is intended to be used to test and validate commercial cloud services across the stack for research and education environments and it is being used as a validation tool for commercial cloud services procurement in European Commission sponsored projects such as OCRE, ARCHIVER and CloudBank EU.

Exploitability

Operational service

Link: github.com/cern-it-efp/EOSC-Testsuite

KERs Categories

- | | | | |
|--|--|---|---|
|  Technical Harmonisation |  Policy Harmonisation |  Discovery/Access Platform |  Virtual Reserch Environment (VRE) |
|  Training Resource |  Knowledge Centre |  Authentication and Authorization Infrastructure (AAI) |  Validation Tool or Other |





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