

EOSC services, collaborations and the RDA

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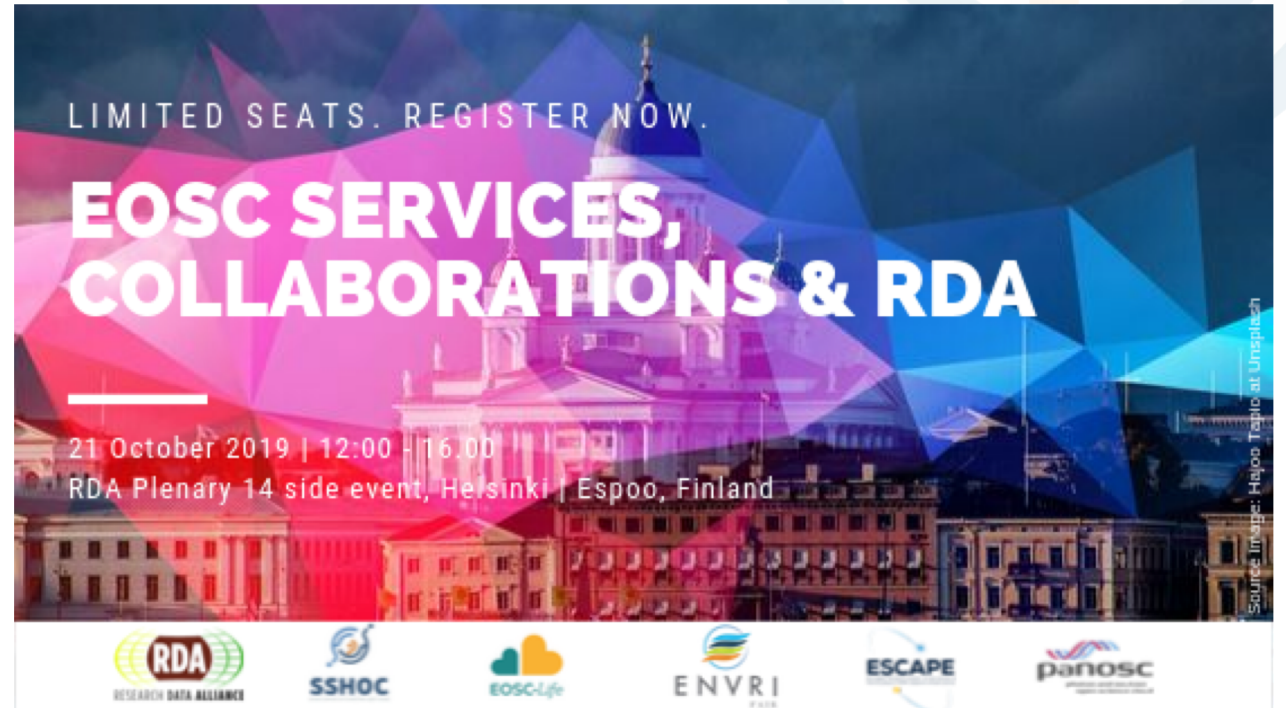
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Discussion Forum

A discussion forum for

- all five ESFRI cluster projects,
- RDA Working and Interest Groups, and
- EOSC representatives on our journey to EOSC.



Focusing on the technical, social and governance issues we all face.
What can we learn from each other and take back to the data communities we serve?

Cluster Projects – looking at commonalities & collaborations



The **Photon and Neutron Open Science Cloud (PaNOSC)** is aiming to provide scientific data management policies, services and tools for enabling Open Science, **making FAIR data a reality** for the photon and neutron user community.



ESCAPE is a collaborative cluster of next generation ESFRI facilities in the area of **astronomy- and accelerator-based particle physics** in order to implement a **functional link** between the concerned ESFRI projects and European Open Science Cloud.



Realising the **Social Sciences and Humanities Open Cloud**. SSHOC **pools and harmonises the tools and services** that unlock **heterogeneous SSH data collections across Europe**. This makes data easy to process, enrich, analyse and compare.



Environmental Research Infrastructures building **FAIR services** accessible for society, innovation and research.



EOSC-Life brings together **biological and medical** RIs to create an open collaborative space for digital biology. It aims to publish FAIR life science data resources for cloud use creating an ecosystem of innovative **tools** in EOSC and enabling groundbreaking **data-driven research** in Europe by connecting life scientists to EOSC.



The journey to EOSC – Implementation Roadmap

EOSC Implementation Roadmap action lines

EOSC projects contributing to the implementation



https://ec.europa.eu/research/openscience/pdf/swd_2018_83_f1_staff_working_paper_en.pdf

EOSC related Working Groups



Activity	EC DG RTD	EOSC- Gov. Board	EOSC- Exec. Board	EOSC- Secretariat	ERIC- Forum	Other
Business Models			WG Business Models	Study Business Models		OECD study
Rules of Participation	HLEG EOSC (Muscella)	Regulatory Framework (Legal, IPR, ...)	WG Rules of Participation	Study Rules of Participation		EOSC-pilot deliverable
Governance / Sustainability			WG Sustainability	Study Post 2020 - Legal	WP Governance	EOSC-Cluster projects
FAIR Implementation	HLEG FAIR (Hodson)		WG FAIR			FAIRsFAIR project
Architecture (technical)	SWD Roadmap EOSC		WG Architecture		WP Operations	EOSC-hub project
Implementation		Co-funding & Co-programming				
Policies & Actions (National)		WG Compatability (Nat. Plans-EOSC)	WG Landscape Analysis		WP Strategy & Policy	DE, Nordic, ...
Monitoring / Assessment	HLEG Instruments (Rossi)				WP Impact	ESFRI WG Monitoring
Communication & Outreach			in prep		WP Communication	



Governance



- 🌀 A lot of Working Groups, many Stakeholders (incl. Member States)
- 🌀 On the other hand, it is our cloud too, so Data Clusters should develop a vision of what to bring, and under which conditions.



The Research Data Alliance and EOSC

🌀 Examples of relevant RDA working & Interest groups for each of the action lines of the EOSC implementation roadmap

EOSC Action line	What RDA is bringing to EOSC	Examples of relevant RDA working & Interest groups
 Architecture	A number of working groups relevant to barrier removal and data sharing	<ul style="list-style-type: none"> Brokering Framework WG National Data Services IG Provenance Patterns WG RDA/CODATA Legal Interoperability IG Storage Service Definitions WG
 Data	RDA fosters the development of professional practices in research data management and stewardship on an international scale.	<ul style="list-style-type: none"> Data Versioning WG DMP Common Standards WG Exposing Data Management Plans WG FAIR Data Maturity Model WG Repository Audit and Certification DSA-WDS Partnership WG WDS/RDA Assessment of Data Fitness for Use WG A number of disciplinary groups
 Services	RDA provides a forum for all 5 types of services for researchers defined in the EOSC roadmap. <ul style="list-style-type: none"> Identification & authentication Work environment Access to service information Find, access, re-use and analyse research data generated by others Make data FAIR 	<ul style="list-style-type: none"> Data Citation WG Data Description Registry Interoperability WG Data Usage Metrics WG Research Data Collections WG Research Data Repository Interoperability WG
 Access & Interface	RDA works on globalising metadata standards for including research data services in catalogues, both for universal entry point for all potential users and for community specific interfaces built on a common platform.	<ul style="list-style-type: none"> Data Type Registries WG FAIRSharing Registry: connecting data policies, standards & databases WG Metadata Standards Catalog WG Persistent Identification of Instruments WG PID Kernel Information WG Software Source Code Identification WG
 Rules	Leveraging the clear and transparent RDA process for producing and endorsing its outputs as Recommendations, three waves of outputs from the RDA groups have been submitted to the European multi-stakeholders' platform on ICT standardisation to be recognised as ICT technical specifications.	<ul style="list-style-type: none"> TS1 Data Foundation & Terminology Model TS2 PID Information Types API- Persistent Identifier Type Registry TS3 Data Type Registries Model TS4 Practical Policies recommendations TS5 Dynamic-data Citation Methodology TS6 Data Description Registry Interoperability Model TS7 RDA/WDS Repository Audit and Certification Catalogues TS8 RDA/WDS Publishing Data Services
 Governance	RDA is a bottom up organization, but equally an organization that funders and others trust to carry out its mission subject to its guiding principles.	<ul style="list-style-type: none"> Research Funders and Stakeholders on Open Research and Data Management Policies and Practices IG Data for Development IG

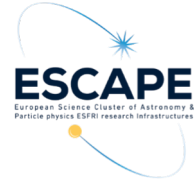


RDA Recommendations & Outputs building blocks



Cluster Projects indicate that a wide selection of RDA Outputs & Recommendations have been adopted or used as source of inspiration

Assets



- **Network of PaNOSC RIs** ensure **data** produced at PaN sources align with FAIR principles.
- **PaNOSC Network of experts** to generalise the adoption of open data policies, standard meta-data and stewardship
- High potential to improve **exploitation already available datasets** at PaNOSC RIs
- Contributors to the innovation of **distributed computing infrastructures** and new computing architectures
- **Virtual Observatory** framework
- Multi-messenger and **cross-domain repository & science platform**
- **citizen science** mass participation experiments
- **Knowledge** about state of the **Earth System**
- **Access** to top level facilities
- **ENVRI-Hub**
- **Marketplace**
- **Services**
- Awareness raising, **training activities & training material**
- Linking to research libraries through LIBER
- **SSHOC use-cases**
- **Network of SSH research communities**



Top 5 Data Services



- Petabytes of FAIR raw and processed data
- Discovery and access services for large datasets
- Tools for data simulation & analysis
- Expertise for reducing and analysing data
- e-Learning platform & Training material for understanding photon and neutron science



- Software Repository
- Science Platform
- Virtual Observatory
- Data Lake Cloud Services
- Citizen Science



- Community policies and standards on all steps of the **data life cycle**
- sustainable, transparent and auditable **data services** compliant to FAIR principles
- **pre-production services**
- **thematic data services** and tools at EOSC catalogue of services



- Catalogue
- Marketplace
- Controlled Vocabulary platform
- SSHOC interoperability hub
- SSHOC VCR
- SSHOC Switchboard

How can we ensure interoperability? Where should coordination activities for alignment between cluster projects take place?

ACCESS EOSC SERVICES & RESOURCES



NETWORKING



COMPUTE



STORAGE



SHARING & DISCOVERY



DATA MANAGEMENT



PROCESSING & ANALYSIS



SECURITY & OPERATIONS



TRAINING & SUPPORT



Challenges when connecting to communities

**More connection
needed with the
communities of the
ESFRIs**

**FAIR data practices are
not top priority for many
scientists**

**Lack of awareness of
FAIR data and associated
best practices**

**Bridging these wide
domains is a challenge,
as is bridging the
technical and scientific
needs.**

**Difficulty in opening
data before end of
embargo period, even if
scientific articles have
already been published**



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We're interested in your input!



ENSURE YOUR SPOT. REGISTER NOW.

EOSC SERVICES, COLLABORATIONS & RDA

21 October 2019 | 12:00 - 16.00
RDA Plenary 14 side event, Helsinki | Espoo, Finland

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