2023 NTE Spain Post Event Report

Country: Spain
Place: Madrid, Instituto de Física Química Rocasolano (Salón de Actos), Calle Serrano 138
Date: 19 September 2023
Format: In-person 70
National Organisers: CSIC

Executive summary

The onsite event was attended by 70 representatives from research-performing or -funding organisations, e-infrastructure providers, Research Infrastructures and other policy stakeholders. The large community was welcomed by Isabel Díaz, Deputy Vice President of Internationalisation and Cooperation at CSIC, and Inmaculada Figueroa, Deputy Vice Director General for Internationalisation of Science & Innovation in the Spanish Ministry of Science & Innovation (SGI-MICINN).

The [programme](#) was organised into four block sessions including: EOSC governance, Open Science in data-intensive scientific communities, e-Infrastructures and policies supporting EOSC, and the future of EOSC in Spain and towards SRIA 2.0.

EOSC governance

Karel Luyben, President of the EOSC Association (EOSC-A), introduced Open Science as 'a web of scientific insight', and EOSC as the additionality to the web of FAIR data that aims to federate infrastructures, including both Research Infrastructures (RI) and e-Infrastructures supported by the Member States and Associated Countries (MS/AC).

From the Spanish Ministry of Science and Innovation, Inmaculada Figueroa, in her role as the Spanish representative on the EOSC Steering Board (EOSC-SB), noted the active involvement of CSIC in the development of EOSC as one of the four founding members of EOSC-A as well as serving as the Association's Mandated Organisation in Spain.

Javier López-Albacete from the European Commission, emphasised EOSC as part of the EU strategy for Open Science, in alignment with the European Research Area (ERA) policy agenda (2021-2024), in particular, ERA Action 1, to enable sharing of research knowledge, data and tools including through the EOSC.

Open Science in data-intensive scientific communities

Of particular interest during the event was the exploration of Open Science in data-intensive scientific communities, including astronomy, photonics and neutronics, the social sciences, humanities, health, genomics, and oceanography. The major issues faced by these disciplines, some of which are domain-specific, such as Big Data and sensitive data, were addressed in the context of open access to FAIR data, a federated Authentication and Authorization Infrastructure (AAI) for EOSC, and the EU General Data Protection Regulation (GDPR).

e-Infrastructures and policies supporting EOSC

The federation of e-infrastructures in Spain supporting EOSC was showcased by IberGrid and the Spanish Network for Supercomputing ([RES](#)). Mark Dietrich, a senior advisor at the EGI Foundation, introduced Spain as a key contributor to the EGI federation to data-intensive

computing through IberGrid services offered via the EOSC Portal. Nadia Tonello, data management manager at the Barcelona Supercomputing Center (BSC) demonstrated how RES coordinates 14 Spanish infrastructures for high-performance computing, data exploitation and AI. Another national structure, the Spanish Network for e-Science (REeC), was presented by EOSC-A board member Ignacio Blanquer (UPV). REeC advises the General Secretariat for Research (SGI-MICINN) on the promotion and coordination of the development of e-science in Spain. The Spanish participation in the EC's Horizon Europe INFRAEOSC projects was encouraged by Pilar Rico Castro of the Spanish Foundation for Science and Technology (FECYT), in alignment with the recently approved Spanish National Strategy for Open Science (ENCA).

Future of EOSC in Spain towards SRIA 2.0

Contributions to the development of the EOSC Partnership's Strategic R&I Agenda (SRIA 2.0) were highlighted, first, by a representative of the EOSC-A Task Force on FAIR metrics and data quality Fernando Aguilar (VICYT-CSIC). In the context of the future governance of EOSC, examples of European governance models were presented on behalf of the GÉANT Association by Alberto Pérez Gómez (RedIRIS), INSTRUCT-ERIC by Carlos Oscar Sorzano (Instruct Spanish Center), and the European Digital Infrastructure Consortium (EDIC) model was presented by Almudena Ruiz (Spanish economic ministry). For Spain being a member of such European governance bodies, the main opportunities were highlighted for scalability and long-term sustainability in relation to EOSC interacting with European National Research and Education Networks (NRENs), Research Infrastructures, and the Digital Decade Policy Programme.

To wrap up the presented sessions, a discussion was moderated by Ignacio Blanquer (UPV) to explore the features of the EOSC EU node; examples of potential Spanish nodes; and tasks that Spain should focus on for EOSC post-2027.

The participants addressed some of the challenges of bridging between EOSC at the policy level and individual researchers as end-users at the operational level. Overall, cross-disciplinary collaboration was found to be more challenging than cross-national collaboration, leading to the opportunity of demonstrating a federated multi-disciplinary environment as a part of the added value of EOSC.

In her concluding remarks, Inmaculada Figueroa brought attention to the importance of Spanish initiatives leading the country-specific strategies for Open Science and EOSC activities, which will be followed up during the adjacent EOSC Symposium 2023, in Madrid, and the upcoming Open Science Fair 2023.

1. Overview

Under the auspices of the Spanish presidency of the Council of the EU, the event brought together the three key actors in the governance of EOSC, namely the European Commission (EC), EOSC Steering Board (EOSC-SB), and the EOSC Association. Welcoming the entire community, this event provides a platform for alignment, guidance, and outreach to new stakeholders.
In 2023, the NTE in Spain focused on the alignment with the objectives of the EOSC Multi-Annual Report (Multi-Annual Report) MAR 23-24 (Expansion to production that generates added value) and MAR 25-27 (Expansion to develop impact from Open Science). These

objectives will serve as a foundation for fostering progress and advancements within the EOSC framework.

The event explored Open Science in data intensive scientific communities, encompassing a diverse range of disciplines. Participants had the opportunity to delve into the latest developments in astronomy, photonics and neutronics, social sciences, humanities, health, genomics, and oceanography, with the aim to promote cross-disciplinary cooperation and foster a better understanding of the transformative potential of open science in these fields. The programme provided a rich and engaging experience, featuring keynote presentations, panel discussions, interactive and networking opportunities for participants to gain valuable insights, establish new collaborations, and contribute to shaping the future of EOSC.

2. Main highlights

Last year, in October 2022, the first EOSC National Tripartite Event for Spain and Portugal was co-organised, in parallel to the 11th Iberian Grid (IBERGRID) Conference, in Faro. This joint event aimed to showcase success stories and best practices, raise awareness of the EOSC concept, share training opportunities, identify collaborations, and reinforce the Spanish and Portuguese EOSC ecosystem. In 2023, the federation of e-infrastructures in Spain supporting EOSC was showcased by IBERGRID and the Spanish Network for Supercomputing (RES). Mark Dietrich, a senior advisor at the EGI Foundation, introduced Spain as a key contributor to the international EGI federation to data-intensive computing through IBERGRID services offered via the EOSC Portal. Nadia Tonello, data management manager at the Barcelona Supercomputing Center (BSC) demonstrated how RES coordinates 14 Spanish infrastructures for high-performance computing, data exploitation and AI. Another national structure, the Spanish Network for e-Science (REeC), was presented by EOSC-A board member Ignacio Blanquer (UPV). REeC advises the General Secretariat for Research (SGI-MICINN) on the promotion and coordination of the development of e-science in Spain.

3. Tripartite collaboration

Karel Luyben, President of the EOSC Association (EOSC-A), introduced Open Science as 'a web of scientific insight', and EOSC as the additionality to the web of FAIR data that aims to federate infrastructures, including both Research Infrastructures (RI) and e-Infrastructures supported by the Member States and Associated Countries (MS/AC). Since 2022, 24 MS countries have been targeted in EOSC National Tripartite Events. Recent engagement of EOSC-A was highlighted by its involvement with the ESFRI RIs Working Group in contribution to MAR 2025-2027 consultation, as well as CODATA, GO FAIR, and the Research Data Alliance (RDA) on a global scale.

From the Spanish Ministry of Science and Innovation, Inmaculada Figueroa, in her role as the Spanish representative on the EOSC Steering Board (EOSC-SB), noted the active involvement of CSIC in the development of EOSC as one of the four founding members of EOSC-A as well as serving as the Association's Mandated Organisation in Spain. The current Spanish EOSC-SB team is supported by subgroups for monitoring and policies, with activities including:

- EOSC beyond 2027 Model with 6 possibilities for funding and governance
- ESFRI EOSC Task Force for a federation of RI data, services and e-infrastructures
- EOSC coordination for a formal relationship with 9 sectoral Data Spaces, in particular, European Health Data Space (EHDS)

- EOSC Observatory for gathering information of MS/AC in order to monitor the state of development of EOSC at MS/AC level

Javier López-Albacete from the European Commission, emphasised EOSC as part of the EU strategy for Open Science, in alignment with the European Research Area (ERA) policy agenda (2021-2024), in particular, ERA Action 1, to enable sharing of research knowledge, data and tools including through the EOSC. In the Horizon Europe Work Programme (2021-2027), the net EU contribution to Spanish beneficiaries counted for 7.2% of 15 INFRAEOSC projects (2021-2022), coordinating two of them. Towards EOSC post-2027, NTEs can contribute to the future tasks including operation of the 'EOSC EU Node' (Core, Exchange, FAIR Data Federation) and expansion of the EOSC federation (Market) as a system of systems.

4. Government level contributions

Pilar Rico Castro of the Spanish Foundation for Science and Technology (FECYT) introduced 5 National Policies relevant to Open Science in Spain:

- State Plan of Scientific and Technical Research and Innovation 2021-2023 (PEICTI)
- Spanish Science, Technology and Innovation Strategy 2021-2027 (EECTI)
- Science, Technology and Innovation Law 2022
- Organic Law of the University System (LOSU) 2023
- National Open Science Strategy (ENCA) 2023-2027

The recently approved Spanish National Strategy for Open Science (ENCA) is the first National Open Science Policy prepared in collaboration among the FECYT, national funding agencies and research assessment agencies. With 17 measures it is composed of four main pillars: Digital infrastructures for Open Science; FAIR research data; Open access to academic publications; and Incentives, rewards, and training. In alignment with the first pillar facilitating the integration of data and services into EOSC, the Spanish participation in the Horizon Europe INFRAEOSC projects was encouraged.

In relation to the second pillar focusing on FAIR research data, Fernando Aguilar (VICYT-CSIC) introduced FAIR Data principles and highlighted the analysis tool FAIR EVA (Evaluator, Validator & Advisor) developed in the project EOSC-Synergy. The involvement in EOSC-A Task Force FAIR metrics and Data Quality was encouraged to define how to assess data quality and FAIRness within EOSC. According to the Task Force state of the art, there are different assessment tools and implementations resulting in ambiguous results that can confuse funders, researchers and publishers. The flexibility of FAIR Principles may be adapted to communities and possible types of users.

5. Relevant quotes

"*This year's event is entirely national, taking place before the EOSC symposium. We will be able to gain a full understanding of #OpenScience in Spain.*" Inmaculada Figueroa, EOSC Steering Board representative for Spain @CienciaGob #EOSC #EOSCTripartite

Isabel Diaz, from @CSIC, mandated organisation, greets the attendees. "*Mobilising the Spanish community is our main purpose*"

> "*EU is not alone. Other countries such as US, Australia and Canada are also very involved in Open Science*", Karel Luyben, president #EOSCAssociation
>
> "*EOSC should be flexible, with a low barrier to entry. To contribute to the environment in a consistent manner while maintaining organisational autonomy, a community-driven process and gradual implementation is needed.*" @JLAlbacete @EUScienceInnov
>
> "*Bringing openness to the whole research cycle*" - @JLAlbacete from @EUScienceInnov presents the strategic objectives and policies on #OpenScience from the European Commission.

6. Future plans and actions

Inmaculada Figueroa (Ministry of Science and Innovation), the Spanish EOSC-SB representative, reported the following 6 options to shape the future model of EOSC beyond 2027:

1. Co-Programmed European Partnership;
2. Co-funded European Partnership using a programme co-fund action;
3. Institutionalised European Partnerships (Joint Undertakings Art 187/Art 185);
4. ERIC. European Research Infrastructure Consortium;
5. EDIC. European Digital Infrastructure Consortium;
6. Private Model under a public procurement.

The ongoing activities by EOSC-SB subgroups were recommended on EOSC Policies and EOSC Monitoring. For EOSC Policies, coordination between RIs and EOSC should be improved to promote FAIR Data providers and knowledge hubs on Open Science; coordinate MS+AC joint investment for RIs construction & operation; facilitate the federation of data, services & e-infrastructures to EOSC; reduce fragmentation in data production/curation/computing/storage; promote the increase of data productivity; and reinforce ESFRI – EOSC Task Force.

The EOSC Monitoring subgroup observes the state of development of EOSC at MS & AC level and measures the progress with the aims to show the added value of EOSC as well as harmonise the EOSC observatory with other monitoring exercises and platforms running in the context of ERAm such as EOSC-A, ERA FORUM, and Open Science. The second survey will be launched by the end of 2023.

Community engagement is also encouraged for Spain being the second largest country in terms of membership in EOSC-A, whose members meet monthly for discussion. There are opportunities for participation in INFRAEOSC projects and development of ERA Actions 1, 3, and 8. Under the Spanish Presidency of the EU Council, the next SB meeting in Madrid on 28 November 2023 will follow up on future activities.

Finally, interactive discussion on the future of EOSC post-2027 was moderated by Ignacio Blanquer (UPV) from EOSC-A Board with the participating stakeholders. Among 5 main tasks for the future, it was explored on where Spain should focus, resulted in the following priority orders:

1. Enabling Open Science policies and the uptake of Open Science practices
2. Enabling a 'web of FAIR data and services' for science

3. Develop, prototype and test new elements supporting the evolution of the EOSC Core and Exchange and the tools enabling the federation
4. Deploying and operating the EOSC EU node
5. Maintaining and updating the EOSC EU node and expanding the EOSC federation

7. Use cases or practices

There were various domain-specific practices for Open Science, presented by data-intensive scientific communities, in alignment with the ESFRI cluster projects in EOSC.

1. Astronomy

Lourdes Verdes Montenegro (Instituto de Astrofísica de Andalucía) introduced the International Virtual Observatory Alliance (IVOA), established in 2022, a pioneer in Open and FAIR data in the area of Astronomy. The Square Kilometre Array (SKA) Observatory was showcased by adoption of Open Science values and reproducibility of SKA science data products. As a solution to an extreme Big Data challenge, the SKA Observatory Principles are aligned with those of EOSC as ESFRI is involved in the EOSC project ESCAPE (European Science Cluster of Astronomy & Particle physics ESFRI research infrastructures).

2. Photonics and Neutronics

Oscar Matilla represented ALBA Synchrotron, Spanish Research Infrastructure, as one of the 16 initiatives of the European Photon Community LEAPS (League of European Accelerator-based Photon Sources). The LEAPS Data Strategy includes three pillars: efficiency of experiments; Open Science; and sustainability of solutions. In addition, ALBA Synchrotron contributes to the ESFRI cluster project ExPaNDS (European Open Science Cloud Photon and Neutron Data Services), for development of common data catalogue tools (ICAT, SCICAT), compatibility of PaN Data Portal with Open AIRE and B2FIND, and functionality of common DaaS platform (VISA).

3. Humanities

Germán Rigau Claramunt (HiTZ), the national coordinator of CLARIN and DARIAH (CLARIAH-ES), introduced the CLARIAH-ES as a distributed Research Infrastructure consisting of 10 centres in Spain, contributing to the ESFRI cluster project SSHOC (Social Sciences & Humanities Open Cloud). With the new AI paradigm, the discovery cycle has been accelerated and impressively progressed in Deep Learning and Large Language Models.

4. Health

Ignacio Blanquer (Universitat Politècnica de València, Institute of Instrumentation for Molecular Imaging) an European federated infrastructure based on the project EUCAIM (EUropean Federation for CAncer IMages), participated by a number of Spanish partners involving the major RIs in Health and key e-Infrastructures. The EUCAIM aims to consolidate the Cancer Imaging research community through a sustainable infrastructure and enhance cancer diagnosis through AI tools. The keys to success include FAIR data principles and interoperability standards in health and interdisciplinary research areas.

5. Genomics

![eosc Focus logo]

Salvador Capella-Gutierrez (Barcelona Supercomputing Center, BCS) introduced the Spanish National Bioinformatics Institute as a coordination node for the European Life Science Infrastructure for Biological Information (ELIXIR) and the Spanish National Health System (SNS). Several ELIXIR nodes have engaged in establishing the federation together with European Genome-phenome Archive (EGA), a federated network fostering reuse of human biomedical data for research purposes. In addition, ELIXIR participates in the ESFRI cluster project EOSC-Life while at national scale BCS coordinates the project IMPaCT (Infrastructure for Personalized Medicine associated to Science and Technology) with the aim to set the foundations of the future national genome medicine in Spain.

6. Oceanography

Juan Gabriel Fernández (Sistema de Observación Costero de las Illes Balears, SOCIB-CSIC) presented a multi-platform system of ocean observation and prediction in the Balearic Islands (SOCIB), scaling from the coast to the open sea and from events to climate. SOCIB Data Quality Policy follows FAIR data principles as well as the Data Repository supports Open Science and links to EOSC through the EOSC project Blue-Cloud 2026.

Susana Diez Tagarro (Unidad de Tecnología Marina, UTM-CSIC) presented the UTM-CSIC Data Centre, featuring its Data Discovery and Access Service and Geoportal aligned with FAIR principles. This enables connecting the UTM-CSIC infrastructure to European marine data infrastructures such as EMODnet and SeaDataNet which are federated with Blue-Cloud.

8. Main indicators

8.1 Indicators organisation event
Official name of the event: EOSC National Tripartite Event in Spain
Starting Date: 19 September 2023
Ending Date: 19 September 2023
Thematic profile (was there a specific theme to the event apart from the Tripartite collaboration?): No
Target audience: researchers, e-infrastructure providers, research infrastructures and policy stakeholders

8.2 Profile of participants
Total number of participants: 70
In-person: 70
Virtual (online): N/A
Gender: Male: 49% Female: 51%
8.3 Type of participants affiliation
Research Performing Organisations: 73%
Research Funding Organisations: 2%
Service providing Organisations: 12%
Public administration: 5%
Others: 8%

9. Programme and List of organisations that participated at the National Tripartite Event

ALBA Synchrotron

Barcelona Supercomputing Center (BSC)
BCAM
CESGA
CESSDA ERIC
CIEMAT-PIC
CREAF
CSIC
CSIC-CNB
CSIC-IAA
CSIC-IEO
CSIC-IFCA
CSIC-IGME
CSIC-Instituto Cajal
CSIC-Instruct
CSIC-UTM
Digital Curation Centre (DCC)
EGI
EOSC-A
European Commission
FECYT
HiTZ Centre, University of the Basque Country
ICN2
IdiPAZ
IdISBa
Institute of Computer Science, Masaryk University
Ministerio de Asuntos Económicos y Transformación Digital
Ministerio de Ciencia e Innovación
Museo Nacional de Ciencias Naturales (MNCN)
Red.es
SOCIB
Trust-IT
Universidad Politécnica de Madrid
Universitat Politecnica de Valencia
Universitat Pompeu Fabra, European Social Survey ERIC

https://eosc.eu/wp-content/uploads/2023/03/20230919_EOSC-Tripartite-programme_NTE-Spain_vf.pdf.pdf

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Spain National Tripartite Event

Venue: Instituto de Física Química Blas Cabrera (Salón de Actos), Calle Serrano 119, Madrid

Date: 19th September 2023 10:00-17:00

Registration: https://u.i3m.upv.es/j6eoe (first come, first served)

DRAFT PROGRAMME

09:30-10:00	**Registration**
10:00-11:00	**Introduction & Welcome** ***Institutional Welcome*** **Isabel Díaz** (CSIC) **Inmaculada Figueroa** (SGI-MICINN) **EOSC Governance** - ***EOSC and EOSC-A*** **Karel Luyben** (EOSC-A) - ***EOSC-Steering Board*** **Inmaculada Figueroa** (SGI-MICINN) - ***EOSC as part of the EU strategy for Open Science*** **Javier Lopez Albacete** (European Commission)
11:00-12:30	**Open Science in Data Intensive Scientific Communities:** - ***Astronomy*** **Lourdes Verdes Montenegro** Instituto de Astrofísica de Andalucía - ***Photonics and Neutronics*** **Oscar Matilla** ALBA Synchrotron - ***Biodiversity*** **Christos Arvanitidis (TBC)** Lifewatch ERIC - ***Social Sciences*** **Diana Zabala Rojas** European Social Survey ERIC RECSM Deputy Director, Universitat Pompeu Fabra, Barcelona - ***Humanities*** **Germán Rigau I Claramunt** HiTZ Basque Center for Language Technologies Facultad de Informática de San Sebastián UPV/EHU

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EOSC | Focus

	- **Health Data**
	  Ignacio Blanquer
	  Universitat Politècnica de València
	  Institute of Instrumentation for Molecular Imaging
	
	 - **Genomics data**
	  Salvador Capella-Gutierrez
	  Spanish National Bioinformatics Institute Coordination Node
	  Barcelona Supercomputing Center (BSC)
	
	 - **Oceanography Data**
	  Juan Gabriel Fernández
	  Sistema de Observación Costero de las Illes Balears (SOCIB)
	  Spanish Research Council
	
	  Susana Diez Tagarro
	  Unidad de Tecnología Marina - Spanish Research Council

12:30-13:30	**e-Infrastructures and policies supporting EOSC:**
	
	 - **E-infrastructures for EOSC**
	  Mark Dietricht (EGI)
	
	 - **Spanish Network for Supercomputing (RES)**
	  Nadia Tonello (BSC)
	
	 - **Open Science Policies & INFRAEOSC**
	  Pilar Rico (FECyT)
	
	 - **e-Science Network**
	  Ignacio Blanquer (UPV, Advisor to MCIN)

13:30-14:30	**Lunch**

14.30-16:30	**The future of EOSC in Spain and towards SRIA 2.0:**
	
	 - **FAIR Data**
	  Fernando Aguilar
	  VICYT-CSIC
	
	 - **Examples of Governance models**
	  GEANT model
	   Alberto Pérez Gómez (RedIRIS)
	  INSTRUCT-ERIC experience
	   Carlos Oscar Sorzano (Instruct Spanish Center, Spanish National Center for Biotechnology, CNB-CSIC)
	  EDIC Model
	   Almudena Ruiz (Ministry of Economy)
	
	 Discussion about the EOSC 'helicopter view'
	 Moderated by Ignacio Blanquer (UPV, MICINN advisor)

16:30-16:45	**Closing session**