National Initiatives for Open Science in Europe

National Capacity Building Event

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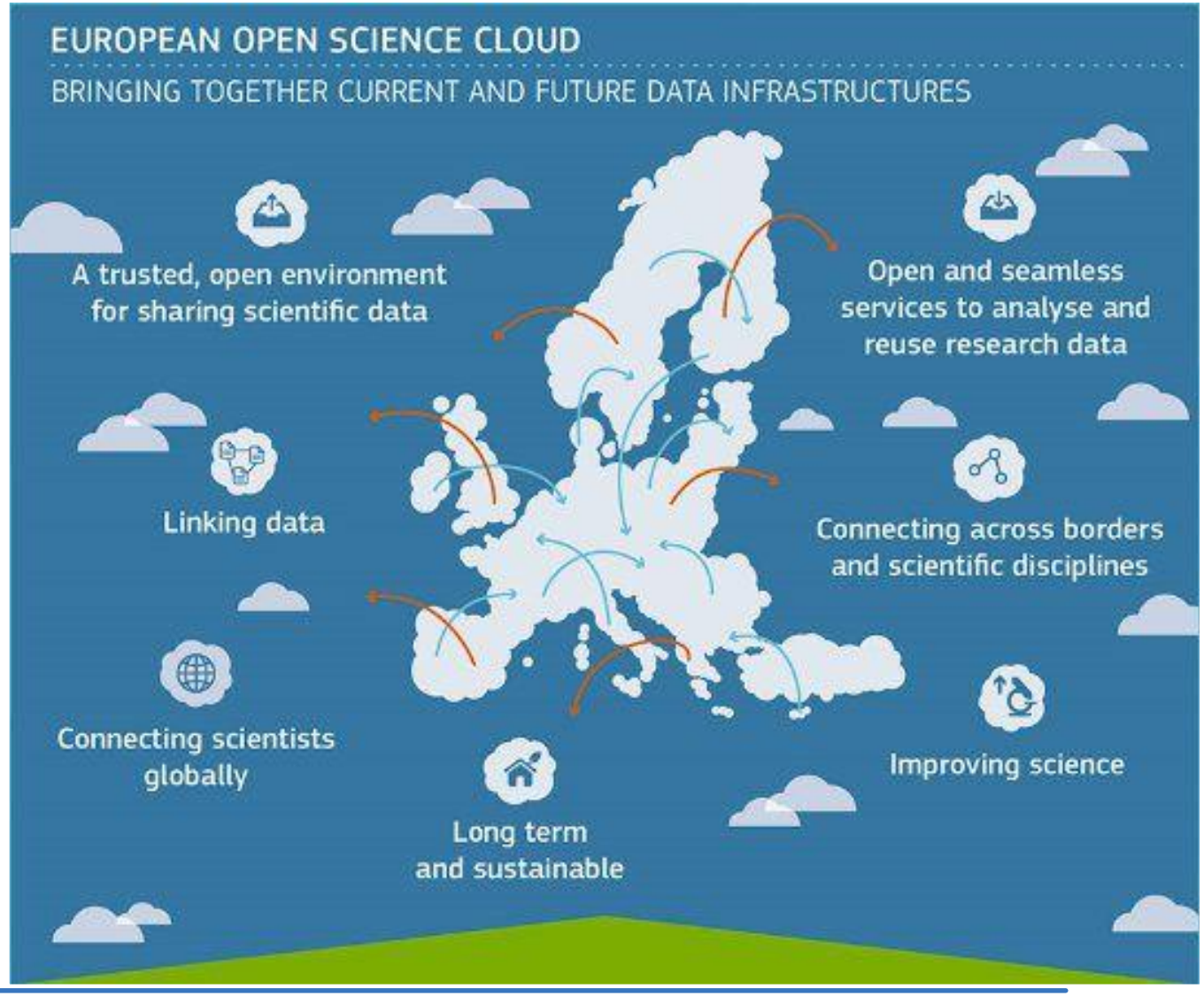
European Open Science Cloud

- The role of the EOSC is to ensure that European scientists will receive the full benefits of data-driven science, by offering:

- “1.7 million European researchers and 70 million professionals in science and technology a virtual environment with free at the point of use, open and seamless services for storage, management, analysis and re-use of research data, across borders and scientific disciplines”

2016 Communication on the “European Cloud Initiative”



Project administrative summary

- Name: National Initiatives for Open Science in Europe
- Acronym: NI4OS-Europe
- Call: INFRAEOSC-05 (b) Coordination of EOSC-relevant national initiatives across Europe and support to prospective EOSC service providers - Research and Innovation Actions
- Grant number: 857645
- Amount of EC funding 5,599,475 Euro
- 22 Partners from 15 countries

Partnership

1	National Infrastructures for Research and Technology SA	GRNET	Greece
2	Athena Research & Innovation Center	ATHENA	Greece
3	The Cyprus Institute	CYI	Cyprus
4	University of Cyprus	UCY	Cyprus
5	Institute of Information and Communication Technologies	IICT	Bulgaria
6	SRCE - University of Zagreb, University Computing Centre	SRCE	Croatia
7	Ruđer Bošković Institute	RBI	Croatia
8	Governmental Agency for IT Development	KIFU	Hungary
9	University of Debrecen	UD	Hungary
10	National Institute for Research and Development	ICI	Romania
11	Executive Agency for Higher Education, Research, Development and Innovation Funding	UEFISCDI	Romania
12	Academic and Research Network of Slovenia	ARNES	Slovenia
13	University of Maribor Library	UMUKM	Slovenia
14	Institute of Physics Belgrade	IPB	Serbia
15	University of Belgrade	UOB	Serbia
16	Albanian Academic Network - Interinstitutional ICT Research Centre	RASH	Albania
17	University of Banja Luka	UNI BL	Bosnia-Herzegovina
18	Ss. Cyril and Methodius University in Skopje	UKIM	Northern Macedonia
19	University of Montenegro, Faculty of Electrical Engineering	UOM	Montenegro
20	Research and Educational Networking Association of Moldova	RENAM	Republic of Moldova
21	Institute for Informatics and Automation of the Academy of Sciences of Armenia	IIAP	Armenia
22	Georgian Research and Educational Networking Association	GRENA	Georgia

Mission

Support the development and inclusion of the national Open Science Cloud initiatives in 15 Member States and Associated Countries in the overall scheme of EOSC governance

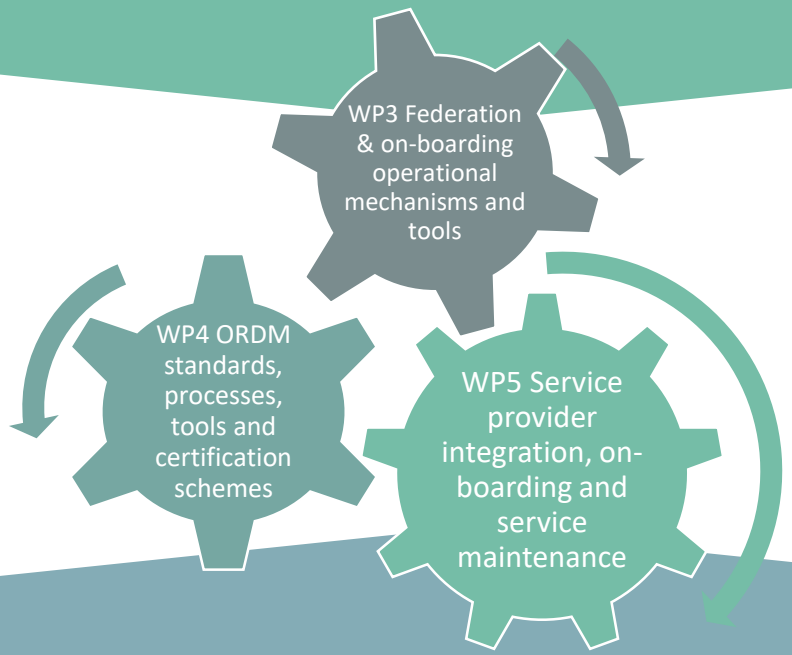
Spread the EOSC and FAIR principles in the community and train it

Provide technical and policy support in on-boarding of the existing and future service providers into EOSC

Project structure

WP1 Management

WP2 EOSC national initiatives and policy support



WP6 User engagement, training and demonstrators

WP7 Communication, marketing, sustainability and innovation

WP2 EOSC national initiatives and policy support

Strengthen the national Open Science ecosystems, enhance regional representation in the pan-EU initiatives and support alignment of policies and practices for Open Science and FAIR data with EOSC

- Support the EOSC Governance structure by forming **15 national OSC initiatives** in partner countries
- Support the building of sustainable **pan-European EOSC** governance by engaging the national initiatives
- Provide **support and interface** to other EOSC-relevant bodies
- Reduce **fragmentation** and promote federation on national level
- Prepare the ground for EOSC **on-boarding**

Open Science survey: Capturing the state of OS in the region (WP2)

- Compilation of extensive list of stakeholders and organizations from SEE
- Survey in 15 NI4OS-Europe partner countries
- >1000 stakeholders approached, 575 responses received (57% response rate)

- Visualization of results: https://ni4os.eu/survey-results/
- Creation of stakeholder map for SEE: https://ni4os.eu/os-stakeholders-map/

National OS Cloud initiative models and guidelines (WP2)

National Open Science Cloud Initiative

- Coalition of national organizations that have an important role and interest in EOSC

Aims:

- Promotion of synergies at national level
- Enhance participation of national research communities in EOSC

Top down

Central decision of the related ministry or national research funding organisation

objective-driven

Bottom up

Initiative by researchers, OS stakeholders and actors in the country

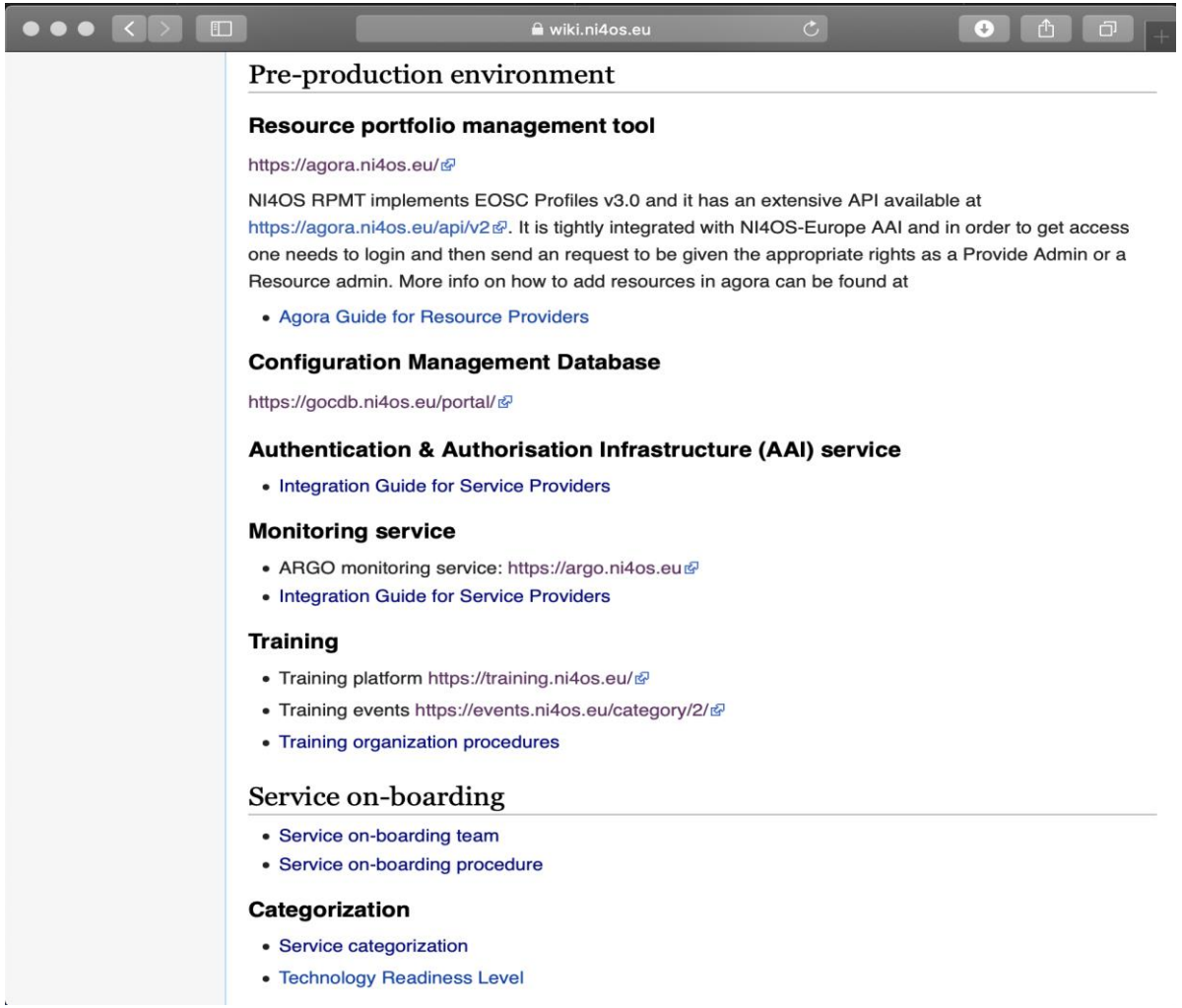
data-driven

Hybrid

Combination of previous two, independently of who initiated it

WP3 Federation and on-boarding operational mechanisms and tool

- Pre-production environment: helpdesk, backend & frontend monitoring, accounting, service catalogue management system, authentication & authorisation, training portal
- Collection of related policies and procedures on NI4OS-Europe wiki page
- These documents support service providers towards uniform and seamless EOSC integration



WP4 ORDM standards, processes, tools and certification schemes

- Implementation and adoption of tools, standards and guidelines
- Selection and delivery of tools
- Harmonization and interoperability within and across communities and with core initiatives
- Development and application of certification schemes
- Analysis to improve the uptake of Open Research Data Management and FAIR principles

WP5 Service provider integration, on-boarding and horizontal service maintenance

- Enabling EOSC-relevant, non-commercial services (generic, thematic, repository) to be accessed through the EOSC portal
- Provision of technical support to service providers for interoperability and integration into EOSC
- Securing and implementing interoperability between national services and EOSC
- Implementation of processes and practices for optimal use of the resources
- Georgia: 1 generic, 1 thematic and 1 repository services

EOSC candidate generic services (WP5)

- HPC Resources
  - CPU
  - GPU

- Cloud Virtual Machines

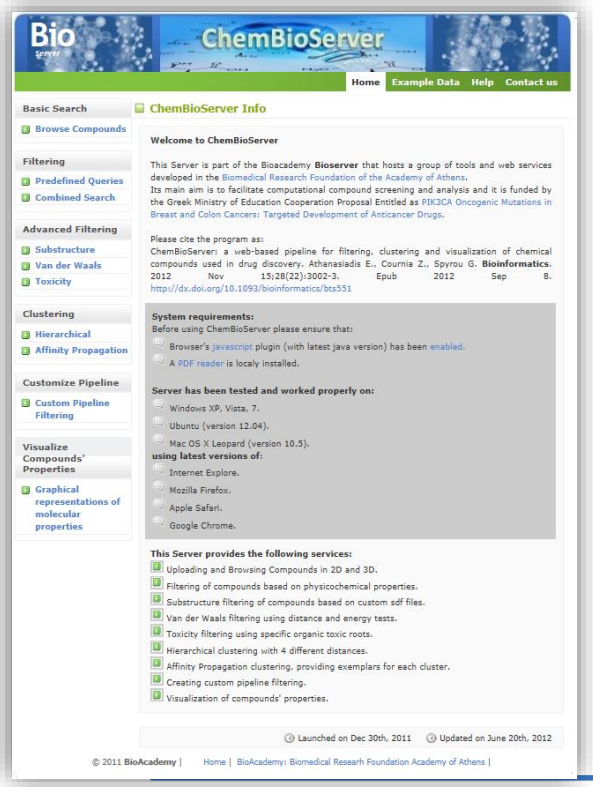
- Generic Storage

- Data management services (Archival, Repository, Data discovery, Hadoop on-demand, Data analysis service, Simple storage)

EOSC candidate thematic services (WP5)

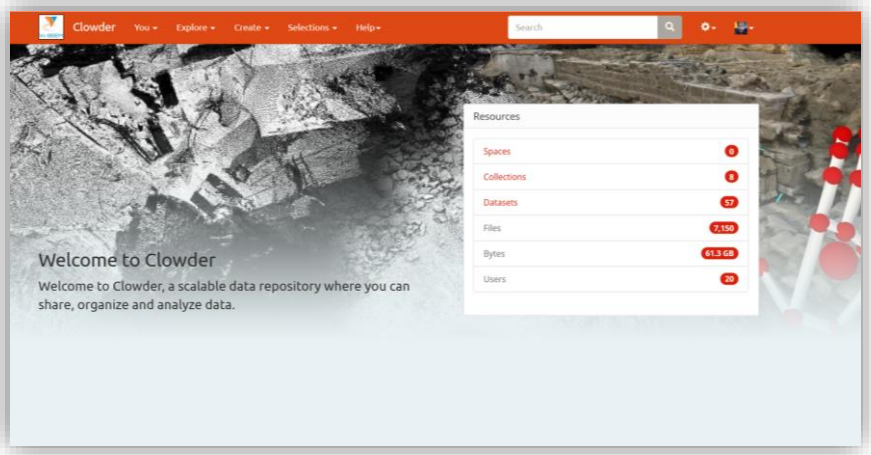
ChemBioServer

Service for filtering, clustering and visualization of chemical compounds used in drug discovery



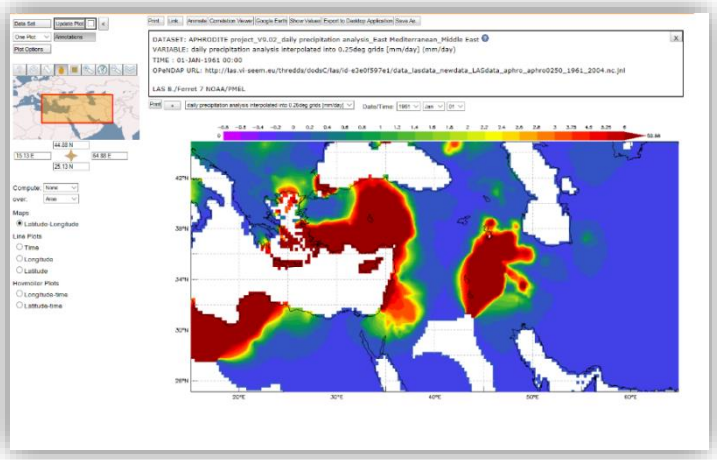
DCH Clowder

A Digital Culture Heritage repository which also offers integrated interactive visualization tools



Live Access Server

A web server providing flexible access to geo-referenced scientific data, offering visualization & post-processing capabilities for climate data



EOSC candidate repositories: actions (WP5)

National

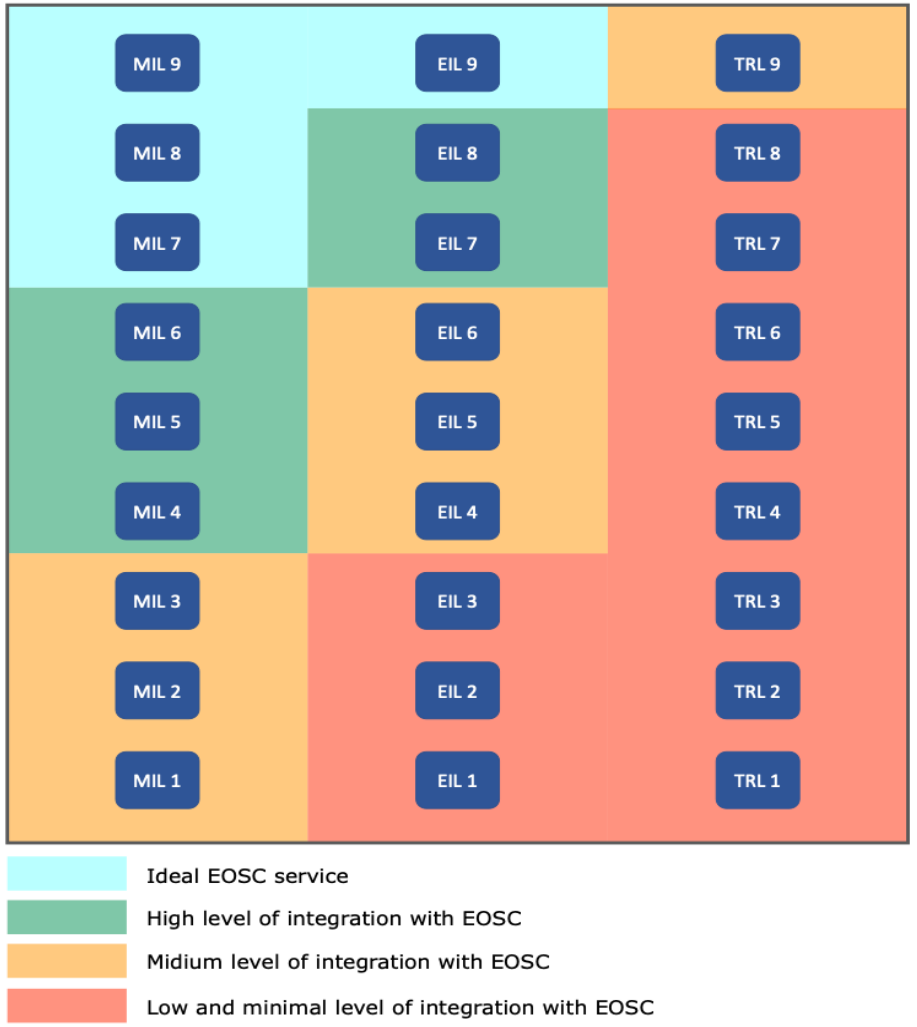
- Type of repository (registry, database, etc)
- Maturity (production, maintenance, software versions)
- Types of content/ data (publications, literature, data, OER, digitisations, etc)
- Best practices adoption (Open & FAIR, policy, training)

- Four repositories on-boarded to the OpenAIRE
  - NI4OS-Europe Repository
  - SZTE Repository of Publications
  - Repository of Faculty of Science University of Zagreb
  - Meteorological and Hydrological Service of Croatia Repository

Institutional

Service Integration levels (WP3, WP5)

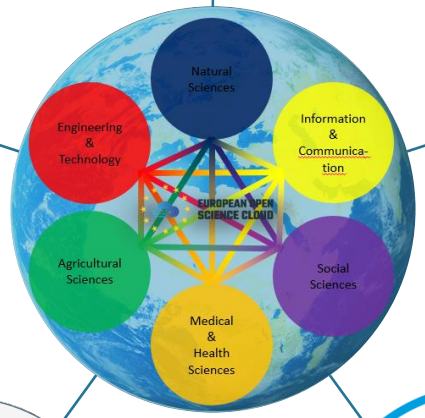
- NI4OS-Europe uses multiple categorization of services:
  - Technology Readiness Levels (TRL)
  - EOSC Integration Levels (EIL)
  - Management Integration Levels (MIL)
- All three categorizations used to assess EOSC readiness of each of the services to be on-boarded
- Resource on-boarding includes five main steps



WP6 User engagement, training and demonstrators

Involving and supporting scientific communities

Ensuring take-up of core EOSC services in the community



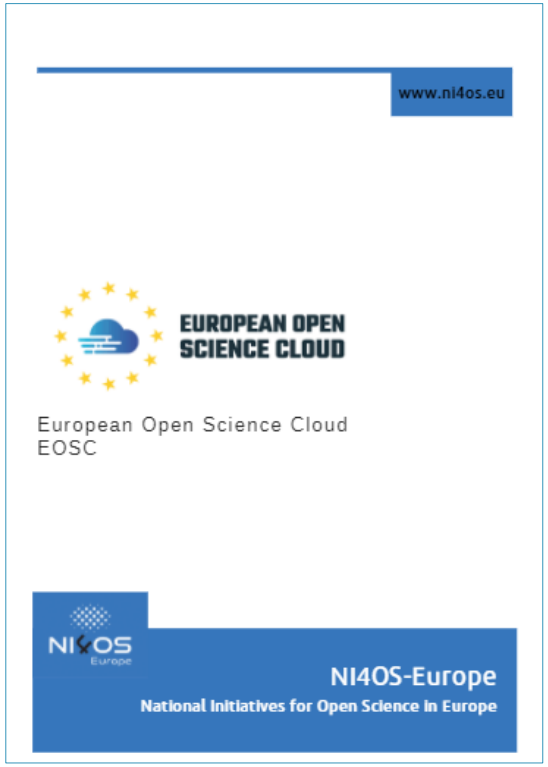
Promoting uptake of FAIR among research communities

Promoting and ensuring EOSC research outcomes through concrete support to users

Training for federated services, interoperability, ORDM principles, repository certification, FAIR…

Support to EOSC service & FAIR uptake in communities (WP6)

- NI4OS-Europe training platform has been populated with training materials: https://training.ni4os.eu/
- Training and dissemination material for FAIR and EOSC service uptake is available in all different mother languages of the NI4OS-Europe area
- Webinars for disseminating EOSC and FAIR principles in each country
- Georgia: 2 training events



WP7 Communication, marketing, sustainability, innovation

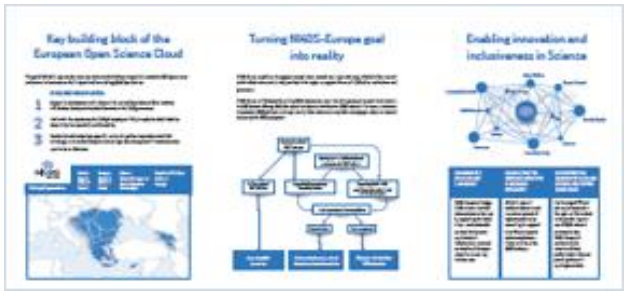
Communication platform

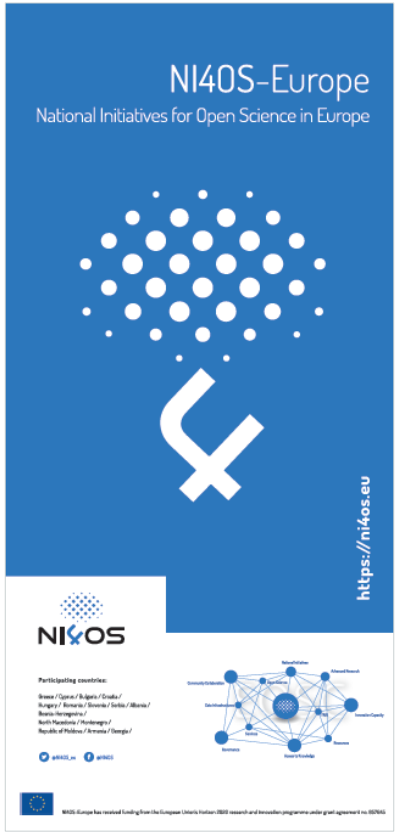
Website: https://ni4os.eu/
Calendar: https://ni4os.eu/calendar
Agenda tool: http://events.ni4os.eu/
Social media: NI4OS_eu NI4OS ni4os.eu

COVID-19 webpage: fast track access to services, tools and software for the scientific communities that perform extensive research to tackle COVID-19
https://ni4os.eu/ni4os-europe-vs-covid19

Promotional material

Brochure, posters, presentation, roll up banners, web banners





Dissemination events

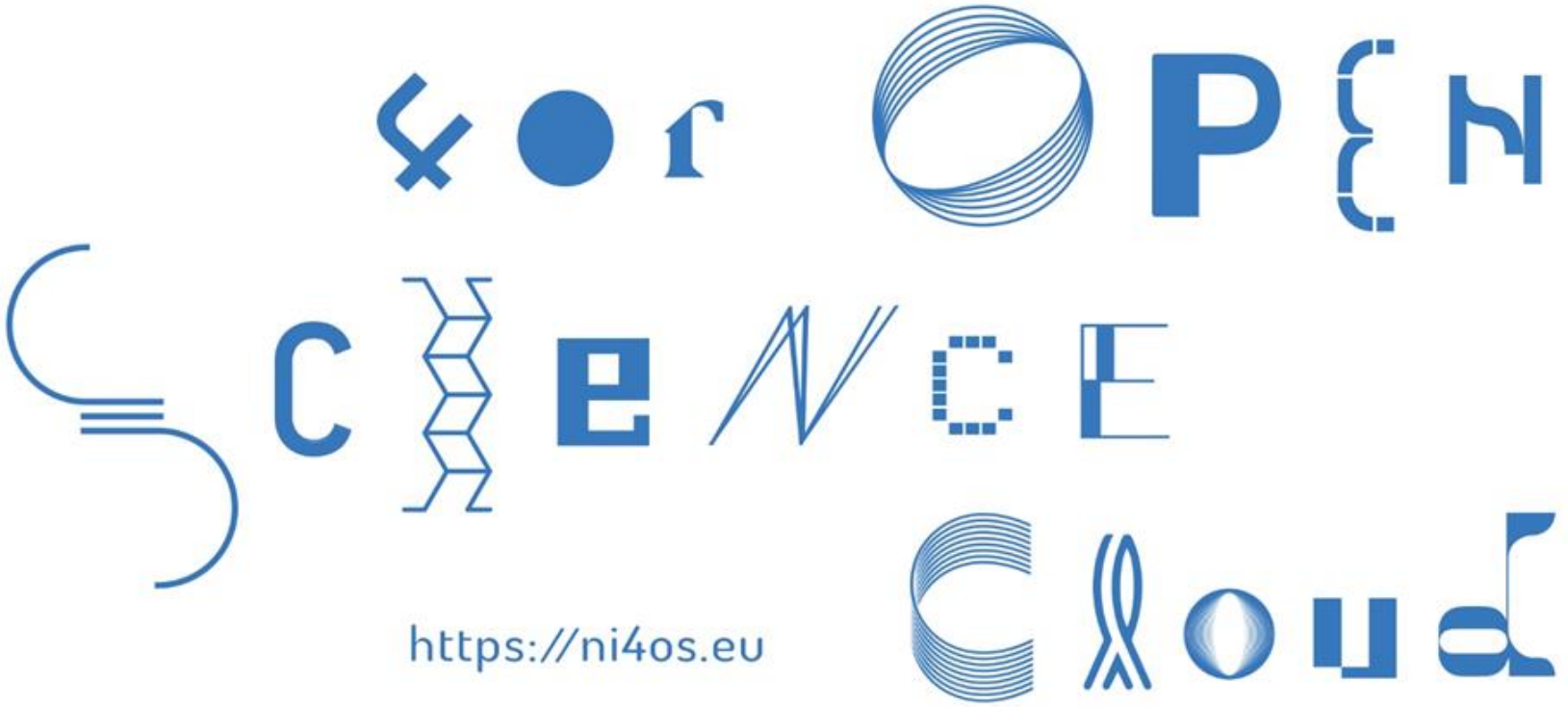
Sustainability and innovation

Find solutions for sustainable and long-term impact of project results
Manage knowledge and results so as to create added value for different stakeholders

NI4OS-Europe in numbers: Key Performance Indicators

- 15 OSC initiatives
- 20 generic services
- 20 thematic services
- 15 repositories
- 30 national-level trainings (450 persons targeted)
- 5 train-the-trainer events
- 30 national dissemination events (600 persons targeted)
- 1 regional event (200 persons targeted)
- 4 flagship scientific fields (Life Science, Climate Science, Digital Cultural Heritage, Computational Physics)
- 3 sets of ORDM guidelines
- 1 pre-production environment

Thank you!



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