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NI 40S-Europe

National Initiatives for Open Science in Europe

Deliverable D7.5 Promotional package with updates

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Abstract: Deliverable D7.5 – Promotional package with updates presents the full package of the project branding and dissemination material that constitutes a powerful tool of the NI4OS-Europe marketing and communication strategy. The updated and enriched set of effective promotional elements, namely the project video, brochures, posters, presentation, roll ups and web banners, are built on a common graphic style and together with the project communication platform (D7.1), form the backbone of the project brand, community outreach and public visibility. The promotional package reflects the project strategy and progress in a way that highlights NI4OS-Europe contribution to the realization of the European Open Science Cloud.

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[1] Project NI4OS-Europe-857645 - Annex I - Description of the Action

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List of Acronyms

EOSC European Open Science Cloud

NI4OS-Europe National Initiatives for Open Science in Europe

FAIR data Findable, Accessible, Interoperable, Reusable data

Executive summary

What is the focus of this Deliverable?

The D7.5 - Promotional package with updates - reports on the project brand and marketing material that has been created, updated and enriched since the beginning of the project. The material is an essential part of the overall communication system used to enhance the project brand, connect with the target communities and maximize the impact of NI4OS-Europe activities.

What is next in the process to deliver the NI4OS-Europe results?

The deliverable and workflow progress are described in the project Annex-I – Description of the Action [1]. Further communication material will be gradually available by the end of the project in order to reflect up to date developments and to motivate, enlarge and retain the project respective target communities.

What are the deliverable contents?

The deliverable describes the NI4OS-Europe logo & favicon, web banners, video, brochures, posters, and presentation.

Conclusions and recommendations

NI4OS-Europe has built a strong brand with the creation of a full set of communication elements that are built on a common, consistent graphic style. The promotional package is a powerful tool that supports the project marketing and dissemination activities for gaining public visibility and for achieving community outreach and engagement. Following the project progress, the package is gradually updated and complemented with additional material such as brochures, posters, infographics and power point presentations. The project promotional package together with additional dissemination material such as social media campaigns, announcements and press releases, newsletters, etc., are significant in maximizing the effectiveness of the NI4OS-Europe outcomes.

1. NI4OS-Europe logo

The logo was designed at the very start of the project to establish the NI4OS-Europe brand, create awareness and connect with the external audience.

The design is kept simple and clear, uses a two-color palette and a basic element to define the project brand identity.

The logo concept serves as the basis for all further promotional elements, as well as the communication infrastructure (website, training portal, social media accounts) in order to ensure consistent branding across all communication tools.



Figure 1: NI4OS-Europe logo

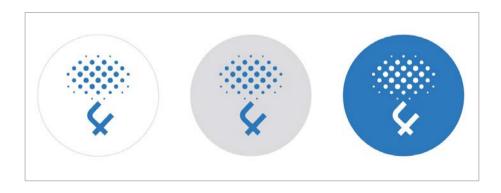
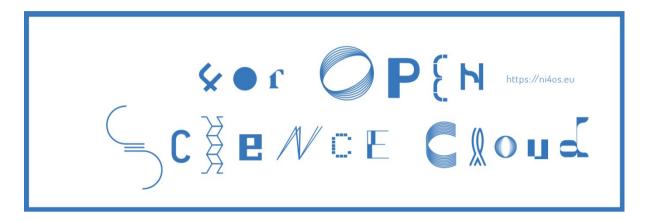


Figure 2: NI4OS-Europe favicon

2. Web banners

Based on the basic graphic design, a set of web banners have been created and used for the project social media accounts, to ensure consistency of the NI4OS-Europe brand.

All the banners have been used in multiple dissemination elements, such as power point presentations, website & social media posts, and newsletters.





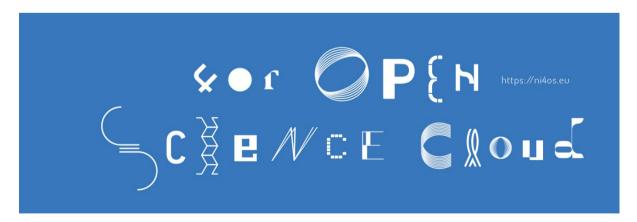


Figure 3: Twitter banners

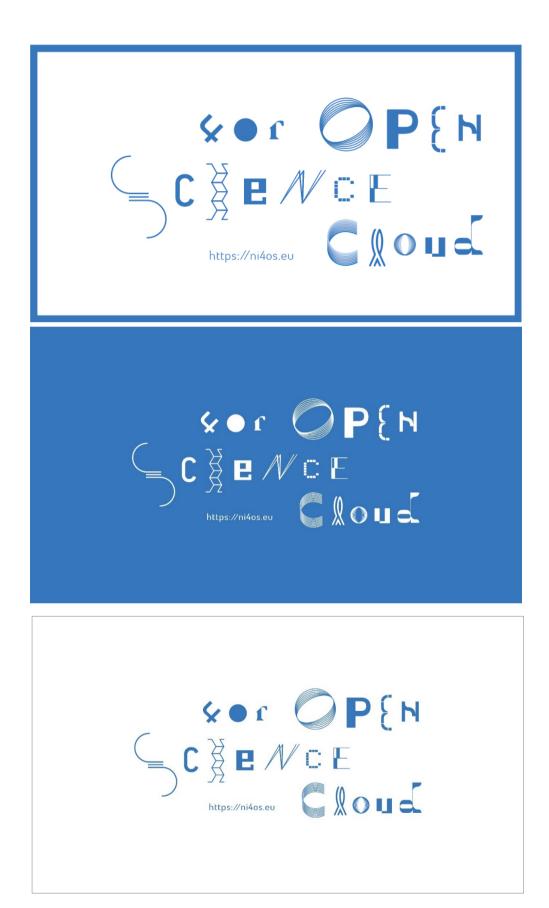


Figure 4: Facebook and power point banners

3. NI4OS-Europe video

<u>NI4OS-Europe video</u> consists one of the strongest marketing and communication elements of the project that is expected to further enhance NI4OS-Europe brand and public visibility. It presents in a catchy, intelligible and legible manner how NI4OS-Europe contributes to the realization of EOSC to the benefit of researchers, scientists and other stakeholders.



Figure 5: Screenshots from NI4OS-Europe video

3.1. Video script

"Technological advancements have changed rapidly the way Scientific Research is performed. Modern electronic Infrastructures and digital services have enabled the transition from traditional to high-performance Research, paving the way towards scientific Innovation, to the benefit of the citizens worldwide. Still, knowledge exchange and digital service and data availability beyond geographical borders and scientific domains remains limited, preventing global Research from producing maximum outputs.

The European Commission tackles these barriers by leading the activities for the creation of the European Open Science Cloud. EOSC is a trusted, integrated virtual environment that provides seamless access to data and interoperable services, enabling millions of scientists to access, store, manage, analyze, share and reuse research data, across borders and scientific disciplines.

In this effort, NI4OS-Europe project is a key contributor: it provides integrated solutions to support the EOSC Governance, contribute to its portfolio of services and engage the regional research communities, enabling innovation and inclusiveness in Science.

NI4OS-Europe has a three-level approach:

Policies

NI4OS-Europe runs surveys and performs analyzes on the status of Open Science stakeholders, services, policies and capacity in the region. It utilizes the outputs to suggest viable organizational and governance models for the setting up and operation of National Open Science Cloud Initiatives in the region, to ensure its participation into the EOSC.

Services

NI4OS-Europe provides a full stack of open computing infrastructure & services, data sets, open data storage and management services and repositories to be on-boarded to EOSC. Authentication and authorization mechanisms and support systems ensure secure access, availability and reliability for every user. Services will be available to the widest research community, starting with targeted demonstrators and use cases, followed by open calls.

Community engagement & Training

NI4OS-Europe ensures community engagement and participation to EOSC at all levels:

- It disseminates the EOSC philosophy and the principles for data Findability, Accessibility, Interoperability and Reusability via its network of EOSC promoters and national events.
- It provides multi-level training on services onboarding and Open Research Data Management through its "train the trainers" series and Capacity Building workshops, taking place in every NI4OS-Europe country.

Through its activities and collaborations, NI4OS-Europe creates a strong foundation for the implementation of the European Open Science Cloud, a common and trusted environment for collaborative and innovative Open Science research, to the benefit of Scientists, ICT professionals, and ultimately the citizens worldwide".

The video closes with a card providing acknowledgement of the EU funding as well as NI4OS-Europe contact details.

4. Project brochures

4.1. Core brochure 1st edition

The <u>1st edition of the NI4OS-Europe brochure</u> provides in an intelligible and legible manner a meaningful overview of the project, its methodology and the benefits for its target communities.

The brochure cover page is built on the basic message "for Open Science Cloud" and the logo basic element ("f-4"). The chosen fonts are symbols that have been used to relate Open Science Cloud with Research. The graphics of the interior pages provide NI4OS-Europe methodology, the key points of the project and its relation with EOSC ("Key building block of European Open Science Cloud").

The brochure was printed and sent to the whole partnership during the first months of the project implementation, in order to enhance dissemination via national channels. It is also available on NI4OS-Europe website.

4.2. Core brochure 2nd edition

The 2nd edition of the project brochure reflects all the progress and outputs of the first half of the project implementation. It describes NI4OS-Europe developments and offerings regarding the setting up and support of National Open Science Initiatives in the region, Services and Tools, User engagement and training activities. The brochure complements the 1st edition, thus providing a holistic view of the NI4OS-Europe crucial role and contribution to FOSC.

The graphic design concept is common with the 1st edition, in order to keep consistency, while other colors of the NI4OS-Europe palette have been chosen to indicate that it provides up to date, additional information about the project.

4.3. EOSC and FAIR brochures

Two additional brochures have been created as training material, but also facilitate promotional activities, providing insights and guidelines about the European Open Science Cloud and FAIR Data. The EOSC brochure describes the concept, the Governance Structure and the future of the European Open Science Cloud (EOSC), as well as the benefits for various stakeholders. The FAIR Data brochure provides guidelines on what FAIR Data is and how they can be managed so that they are Findable, Accessible, Interoperable and Reusable. The material has been created in the framework of NI4OS-Europe training and user engagement activities addressing various stakeholders, in order to promote EOSC and FAIR principles and to facilitate the uptake of research data sharing across national research communities. It is available on the project training platform and website, in all mother languages of the NI4OS-Europe area.

NI40S-Europe Partnership

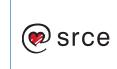








































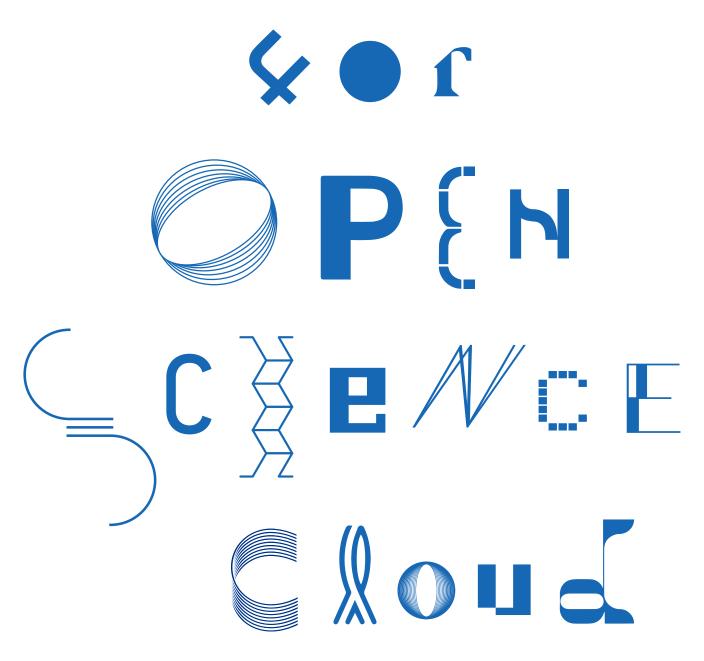














National Initiatives for Open Science in Europe

https://ni4os.eu

Key building block of the European Open Science Cloud

The goal of NI4OS-Europe is to be a core contributor to the EOSC service portfolio, commit to EOSC governance, and ensure inclusiveness on the European level for enabling global Open Science.

STRATEGIC LINES OF ACTION:



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



Instill within the community the EOSC philosophy and FAIR principles for data Findability, Accessibility, Interoperability and Reusability.



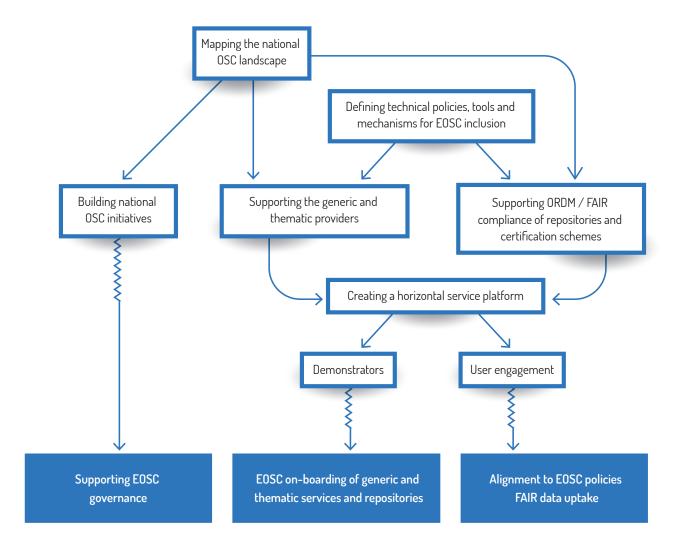
Provide technical and policy support for on-boarding of service providers into EOSC, including generic services (compute, data storage, data management), thematic services, repositories and data sets.



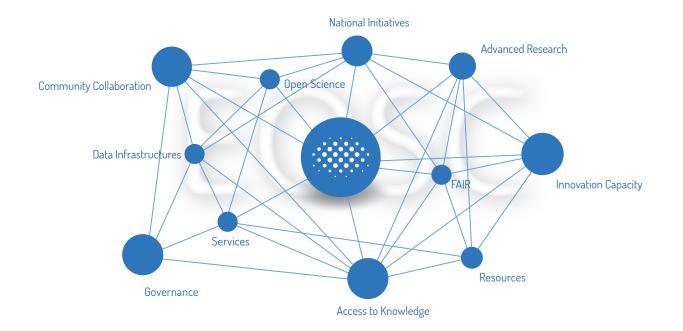
Turning NI40S-Europe goal into reality

NI40S-Europe exploits and engages a strong human network covering a wide range of stakeholders, as well as the infrastructure and service providers in the region, to support the overall EOSC vision, architecture and governance.

NI4OS-Europe will federate the existing EOSC-relevant services in the 15 target countries and include them in the EOSC service offering. NI4OS-Europe will collaborate with the other EOSC-related initiatives to contribute to the common EOSC platform including a set of policies, rules and principles for managing services and research data across the EOSC ecosystem.



Enabling innovation and inclusiveness in Science



CHANGING THE OPEN SCIENCE LANDSCAPE COMMUNITY

NI40S-Europe will trigger EOSC-relevant technical advancements in the area by supporting a full stack of open and sustainable services. It will provide equal access to infrastructures, data and services for all European researchers, ensuring inclusiveness.

EMPOWERING THE REGIONAL SCIENTIFIC & RESEARCH

NI40S-Europe will enable collaborative and innovative research of highest excellence by connecting the regional scientific and research community between them and to the wider EOSC landscape.

SUPPORTING THE REGIONAL ICT & SCIENCE SECTOR, PREVENTING BRAIN DRAIN

A wide range of ICT and science professionals in the region will be involved in the provisioning and use of EOSC-relevant services and data. NI40S-Europe will contribute to the retention of these professionals in the area, providing them with equal opportunities.

NI40S-Europe Partnership













































For frequent updates, see our website at:





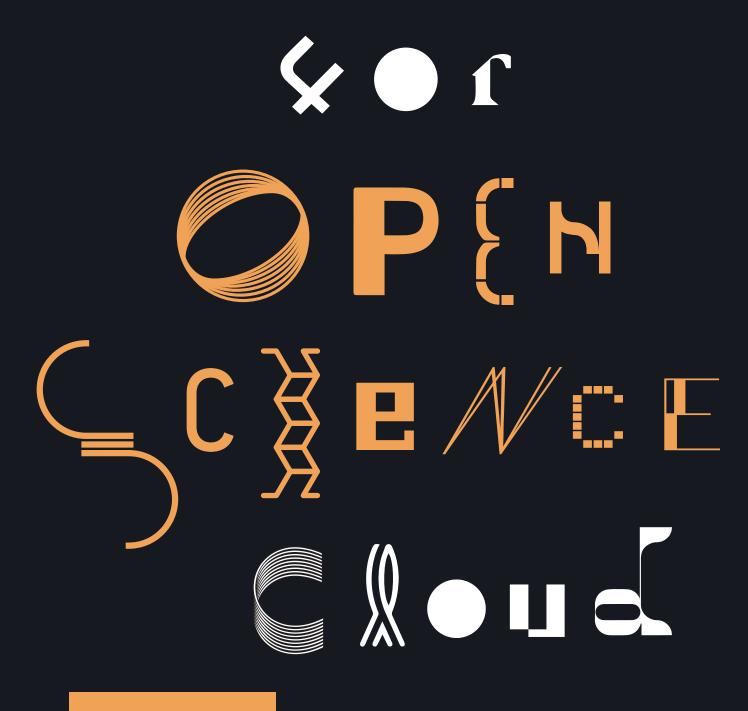


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NI40S-Europe

National Initiatives for Open Science in Europe

https://ni4os.eu

NI40S-Europe SUPPORTS INCLUSIVENESS AND SUSTAINABILITY IN EOSC BY SETTING UP NOSCIs

National Open Science Cloud Initiatives (NOSCIs) are envisaged as a coalition of national organizations that have a prominent role and interest in the European Open Science Cloud (EOSC). The main aim of NOSCIs is the promotion of synergies at the national level, and the optimization/articulation of participation in European and global challenges in the field of Open Science.

Landscaping

The most extensive attempt to capture Open Science (OS) in the region

Capturing the state of existing OS policy documents

Mapping existing national OS strategies/initiatives

Modeling

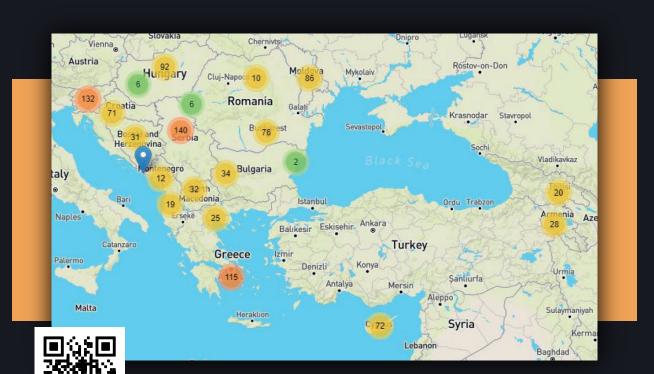
Draft of an adaptable Blueprint for NOSCIs in South East Europe (SEE)

Aiding in the creation of NOSCIs and national OS Plans

Supporting the Setup of NOSCIs

Suggest different pathways for the formation of National Initiatives in SEE

Provide handy checklists with indicators and work-flows for assessing status and progress of setup process



Open Science stakeholders in South East EuropeData sets are openly available in Zenodo.

HOW DOES NI40S-Europe BRING SCIENTIFIC COMMUNITIES CLOSER TO EOSC?

NI4OS-Europe will integrate a wide range of end-user services to EOSC, and aid scientific communities in adapting and using these services on a daily basis.

NI40S-Europe 5-step on-boarding procedure

Request for onboarding

> Information gathering

Integration

Validation

Publication

NI40S-Europe supports providers by on-boarding their services to EOSC.

- The main target groups for on-boarding are: generic services, thematic services, repositories
- Operational best practices enabling the on-boarding and federation of generic and thematic services and their connection to EOSC
- Support for certification of repositories
- Harmonization of service templates
- Providing a pre-production environment for testing and validation

The on-boarded services are tested by demonstrators, specific scientific communities, who have the ability to provide detailed assessment about the project's services, from the user perspective.



NI40S-Europe TOOLS FOR ADDRESSING LEGAL CONCERNS IN ORDM AND FAIR

LCT - License Clearance Tool

A web application for establishing open-source license required for the creation of a new or synthetic dataset, media, software, etc. or for the re-use of existing unlicensed content.

RoLECT - EOSC RoP Legal & Ethics Compliance

Aggregated guided assessment for EOSC Rules of Participation, which mitigates legal uncertainty and ensures compliance with the key legal and ethical aspects.

RePol - Repository Policy Generator

The main purpose of this web application is to generate policies for repositories, but it can be used to generate any other type of document, due to the versatile nature of its configurable forms and Free-Marker templates.

Capacity Building in the Region

BUILDING CAPACITY



NI40S-Europe "Train the Trainers" events ensure effective knowledge transfer. Instructors are trained in EOSC philosophy and the principles of data Findability, Accessibility, Interoperability and Reusability (FAIR) and diffuse their knowledge to the wider community. NI40S-Europe trainees are now trainers supporting scientific communities in federated services, interoperability, Open Research Data Management (ORDM), FAIR and other topics relevant to EOSC.

PROMOTING EOSC



Engagement of stakeholders is essential for the implementation of the EOSC vision. Direct communication and an active network of Open Science actors can play a crucial role in this respect. EOSC Promoters are a network of people active in Open Science, who act as the EOSC and FAIR ambassadors at the national level. The 15 EOSC promoters are high profile individuals known in the community who have visibility at the national level and are able to engage the stakeholders.

CREATING AWARENESS



NI40S-Europe reaches out to key stakeholders in the region and establishes liaisons via national training (capacity building) and dissemination events. 12 national dissemination events have been organized with close to 400 participants and 14 national training events with more than 500 attendees, raising awareness of the project offerings and opportuniti-

www.ni4os.eu



European Open Science Cloud EOSC



NI4OS-Europe

National Initiatives for Open Science in Europe

EUROPEAN OPEN SCIENCE CLOUD

The idea of a European Open Science Cloud (EOSC) took shape in 2015, as a vision of the European Commission of a large infrastructure to support and develop open science and open innovation in Europe and beyond.

The EOSC is projected to become a reality in 2020 and will be Europe's virtual environment for all researchers to store, manage, analyse and re-use data for research, innovation and educational purposes.



The elements for the success of EOSC are: open, publicly funded and governed, research centric, comprehensive, diverse & distributed, interoperable, service-oriented and social.

According to the EOSC strategic implementation plan, the components of EOSC, is to "build the necessary trust for wide deployment among a large variety of research communities, so it is essential that the development of EOSC follows principles that will drive its implementation".



GOVERNANCE STRUCTURE

EOSC Governance Board

All 28 Member States and 10 associated countries have delegates appointed to:

- approve the list of the Executive Board members;
- decide the strategic orientations for the EOSC (based on the advice of the Executive Board) and approving an annual work plan;
- assess the progress of the EOSC implementation;
- ensure coordination with relevant Member States/Commission initiatives;
- discussing new activities in support of the EOSC, including its long-term sustainability.

EOSC Executive Board

8 representatives of Pan-European research e-infrastructures plus 3 individual experts, nominated by the EC to:

- Provide advice and support on the strategy, implementation, monitoring and reporting on the progress of the implementation of the EOSC as set out in the Staff Working Document on the Implementation Roadmap (SIP) for the EOSC, notably in the form of:
 - a strategic implementation plan and annual work plans, and of a proposed mechanism for overseeing and steering the implementation of the strategic and annual work plans, and for monitoring and reporting on progress;
 - rules for participation to guide service provision and an action plan for scientific data interoperability to operationalise the FAIR principles.
- Provide recommendations on the appropriate mechanisms and possible forms for the EOSC governance after 2020 including business models and modes of financing, and on how the user base of the EOSC could be extended to the public sector and the industry.

EOSC Working Groups

An official part of the EOSC Governance structure is the 6 Working Groups, that will ensure a community-sourced approach to the current challenges of the EOSC. In addition, task forces have been set up to cover topics which are largely in line with the EOSC Working Groups: Landscaping, Training, Service Onboarding, Dissemination and Skills.

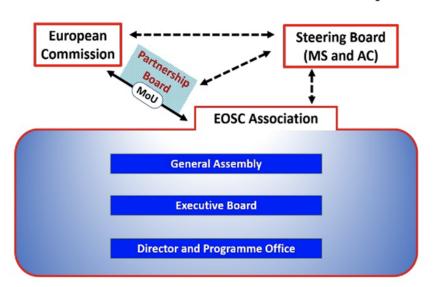


THE FUTURE OF EOSC

EOSC Governance - Association

The EOSC Partnership will enable a trusted, virtual, federated environment in Europe to store, share and re-use research data across borders and scientific disciplines. It will bring together institutional, national and European initiatives and engage all relevant stakeholders to co-design and deploy a European Research Data Commons where data are Findable, Accessible, Interoperable and Reusable (FAIR). This European contribution to a "Web of FAIR Data and Related Services for Science" will enhance the possibilities for researchers to find, share and reuse publications, data and software, leading to new insights and innovations, higher research productivity and improved reproducibility in science.

Governance of the Partnership



EOSC European Partnership Proposal (Draft), 28 May 2020

- The Partnership will operate through EOSC Association (AISBL), based in Belgium, along the principles of decentralisation, transparency and openness.
- Core tasks: Coordination and alignment (SRIA), Monitoring and reporting, EOSC technical guidance, FAIR training, Communication.
- The Association will be essentially resourced via the membership fees. The activities
 resulting from the SRIA will be resourced through commitments by the European
 Commission, at European level, and by the members of the Association at national
 and institutional level.

GLOSSARY

EOSC Portal

The EOSC Service implementing a web portal facilitating the access to and use of the EOSC Resources.

EOSC Portal Catalogue and Marketplace

Integrated platform that allows easy access to lots of services and resources for various research domains along with integrated data analytics tools.

EOSC Service

An EOSC Resource implemented by the EOSC System to provide EOSC System Users with ready-to-use facilities. EOSC Services are supplied by an EOSC Service Provider in accordance with the EOSC Rules of Participation for EOSC Service Providers. EOSC Services are approved by the EOSC Service Portfolio Management Committee and populate the EOSC Service Portfolio and the EOSC Service Catalogue.

EOSC Service Catalogue

The list of all live EOSC Services that can be requested by EOSC System Users. It is a subset of the EOSC Service Portfolio and it populates the EOSC Service Registry.

EOSC Service Portfolio

The internal list of EOSC Services including those in preparation, live and discontinued. The development of this list is controlled by the EOSC Service Portfolio Management Committee.

EOSC Service Provider

An EOSC System Manager managing and delivering an EOSC Service.

Third-party Service Provider

An EOSC End-user willing to develop and operate a service by relying on one or more EOSC Services.

EOSC Rules of Participation

The principles defined by the EOSC Governance to drive the processes enacting an actor to play the role of EOSC System User (and any specialization of it).

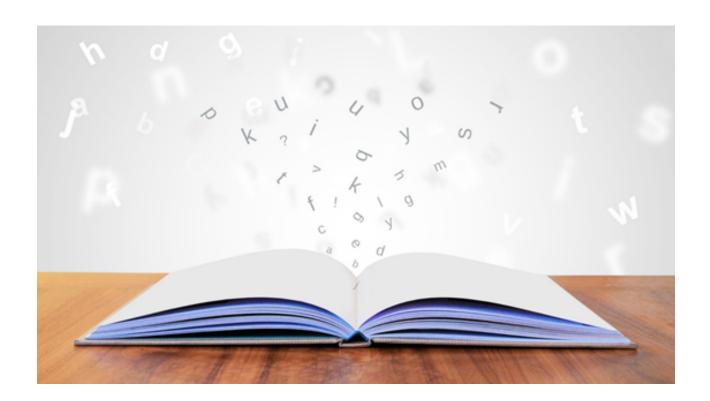
Underpinning Agreement

A documented agreement between an EOSC Service Provider and an EOSC Supplier that specifies the underpinning EOSC Service Component(s) to be provided by the EOSC Supplier, together with the related service targets.



RESOURCES

- Official European Commission documents and steps towards the creation of EOSC: https://ec.europa.eu/research/openscience/index.cfm?pg=open-sciencecloud
- EOSC strategic implementation plan: https://ec.europa.eu/info/publications/european-open-science-cloud-eosc-strategic-implementation-plan_en
- EOSC Portal: https://eosc-portal.eu/
- Factsheet, Open science: https://ec.europa.eu/info/files/open-science_en
- EOSC Glossary: https://www.eosc-portal.eu/glossary
- EOSC Declaration: https://ec.europa.eu/research/openscience/pdf/eosc_declaration.pdf#view=fit &pagemode=none
- EOSC Action List: https://ec.europa.eu/research/openscience/pdf/eosc_declaration-action_list.pdf#view=fit&pagemode=none







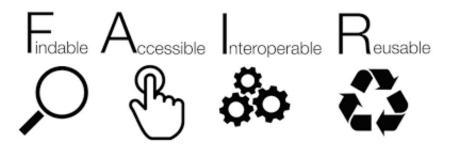




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Everything you need to know about FAIR Data



NI4OS-Europe

National Initiatives for Open Science in Europe

WHAT IS FAIR DATA?

The increasing production and availability of online resources requires data to be created with longevity in mind. By providing the wider research community with access to scientific data, knowledge discovery is facilitated and research transparency is improved. In light of this, in 2016, 'The FAIR Guiding Principles for scientific data management and stewardship' were published.

FAIR is a set of principles, not a standard, according to which FAIR research data are the data which can be Findable, Accessible, Interoperable, and Reusable, as given overleaf.

Besides supporting data reuse by individual scholars, the FAIR Principles put specific emphasis on enhancing the ability of machines to automatically find and use the data. The Principles highlight the fact that within the current digital ecosystem, humans increasingly depend on computational support so as to be able to deal with the increasing volume, complexity, and creation speed of data. Within this framework, machine-actionability (i.e., the capacity of computational systems to find, access, interoperate, and reuse data with none or minimum human intervention) that FAIR Principles bring forth, is key.



A common misconception among researchers is that FAIR data equals Open data. No, FAIR data does not have to be Open, as they can be shared under restrictions and still be FAIR.



HOW TO MAKE YOUR DATA FAIR

Turning FAIR principles into practice can vary for different disciplines, however the following guidelines can generally apply:

- Make your data findable by ensuring it has a persistent identifier, rich metadata, and is searchable and discoverable online.
- Make your data accessible by ensuring it can be retrieved online, using standardised protocols and by putting restrictions in place if necessary.
- Make your data interoperable by using common formats and standards, and by making use of controlled vocabularies.
- Make your data reusable by ensuring it is well-documented, and by having clear machine-readable licence and provenance information on how the data was formed.
- Use new innovative research approaches and tools

Findable

The first step in (re)using data is to find them. Data and metadata should be easy to find for both humans and computers. Machine-readable metadata are essential for automatic discovery of datasets and services, so this is an essential component of the FAIRification process.

Accessible

Once the users find the required data, they need to know how these can be accessed, possibly including authentication and authorisation.

Interoperable

The data usually need to be integrated with other data. In addition, the data need to interoperate with applications or workflows for analysis, storage, and processing.

Resusable

The ultimate goal of FAIR is to optimise the reuse of data. To achieve this, metadata and data should be well-described so that they can be replicated and/or combined in different settings.





Basic steps to be followed towards Findability

- Metadata are assigned a globally unique and persistent identifier (PID)
- Data are described with rich metadata
- Metadata clearly and explicitly include the identifier of the data they describe
- Metadata are registered or indexed in a searchable resource



Basic steps to be followed towards Accessibility

- Metadata are retrievable by their identifier using a standardised communications protocol
- The protocol is open, free, and universally implementable
- The protocol allows for an authentication and authorisation procedure, where necessary
- Metadata are accessible, even when the data are no longer available



Basic steps to be followed towards Interoperability

- Metadata use a formal, accessible, shared, and broadly applicable language for knowledge representation.
- Metadata use vocabularies that follow FAIR principles
- Metadata include qualified references to other metadata



Basic steps to be followed towards Reusability

- Metadata are richly described with a plurality of accurate and relevant attributes
- Metadata are released with a clear and accessible data usage license
- Metadata are associated with detailed provenance
- Metadata meet domain-relevant community standards



WHY MAKE YOUR DATA FAIR?

Making research data FAIR has manifold benefits for researchers, research communities, research infrastructure facilities and research organisations. FAIR data:

- help to gain maximum potential from data, and overall maximum impact from research increase visibility and citations
- improve the reproducibility and reliability of research
- help in staying aligned with international standards and approaches
- engage in new partnerships with researchers, business, policy and broader communities
- enable new research questions to be answered
- use new innovative research approaches and tools

EOSC AND FAIR

The European Open Science Cloud (EOSC) will strive to ensure that European scientists will be able to take advantage of the full benefits of data-driven science, by offering an environment with free, open services for data storage, management, analysis and reuse across disciplines.

It will provide a platform for European research, including a web of FAIR research data and services.

HOW FAIR ARE YOUR DATA?

Researchers in their effort to determine how FAIR their research data are and how to enhance FAIRness, they can consult already produced tools, such as:

- "How FAIR are your data" checklist (http://doi.org/10.5281/zenodo.1065991), or
- "A design framework and exemplar metrics for FAIRness" (https://www.biorxiv.org/content/10.1101/225490v3)

RESOURCES

- Wilkinson, M., et al. (2016). "The FAIR Guiding Principles for scientific data management and stewardship", Scientific Data 3. https://doi.org/10.1038/sdata.2016.18
- https://www.openaire.eu
- https://www.eosc-portal.eu/
- https://www.fosteropenscience.eu/
- https://www.go-fair.org/











www.ni4os.eu



NI4OS-Europe has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 857645

5. Project posters

5.1. Core posters

<u>NI4OS-Europe core posters</u> are used to catch the attention of the project target groups and to enhance the project brand at meetings, workshops, conferences and exhibitions. Due to the COVID-19 pandemic since the beginning of 2020, the use of the posters was limited in relation to the initial plan. The poster design is fully consistent with the brochure.

5.2. Other promotional posters and Infographics

Two informative posters describing <u>NI4OS-Europe</u> and its <u>License Clearance tool</u> were presented during the Open Science Fair in Porto (16-18 Sept. 2019) and the RDA 16th Plenary Meeting, (9-12 November 2020), respectively.

The poster entitled "NI4OS-EUROPE: Building National Initiatives for Open Science in Europe" provides information on the objectives, the core actions, the expected outcomes and the target region of the project. The License Clearance tool poster briefly describes the features, workflow and benefits of the tool.

NI4OS-Europe catalogue Infographic describes the status of the registered and the on-boarded services, as well as the identified service descriptions: the catalogue lists 41 registered services, out of which 19 are on-boarded. The catalogue will be expanding, with NI4OS-Europe identifying and selecting the resources with the highest relevance and added value to its communities, to be integrated into the EOSC. Today, 97 service descriptions have been identified.

https://ni4os.eu



NI40S-Europe

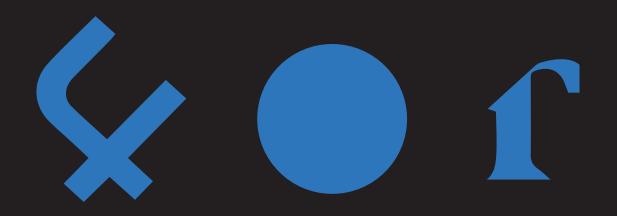
National Initiatives for Open Science in Europe







https://ni4os.eu









NI40S-Europe

National Initiatives for Open Science in Europe







NI4OS-Europe: Building National Initiatives for Open Science in Europe

Mission

- Contribute to EOSC service portfolio.
- Commit to EOSC governance, policies & FAIR data uptake.
- EOSC onboarding of generic & thematic services & repositories.
- Support the development of National Open Science Cloud initiatives in SEE.





Objectives

- Support EOSC governance framework.
- Facilitate the federation of existing infrastructures & stateof-the-art services.
- Enable non-commercial services to be accessed through the EOSC portal.
- Provide technical, organizational & legal guidelines, tools, mechanisms & certification schemes, to support ORDM and its implementation.
- Offer technical & policy support in the on-boarding of service providers into EOSC.

Core Actions

- 1. Mapping & analysing the national OSC landscape.
- 2. Supporting the operational framework for governance by focusing on coordination between relevant national initiatives.
- 3. Defining technical policies, tools & mechanisms for EOSC inclusion.
- 4. Providing technical support to service providers.
- 5. Supporting ORDM/FAIR compliance of repositories & certification schemes.
- 6. Creating a horizontal service platform.
- 7. Validating project solutions through demonstrators & user engagement activities.

Major outcomes

- 15 National Open Science Initiatives
- >40 services onboarded
- 1 integrated production-level platform
- Operational best practices
- Guidelines and tools for IPR, data protection compliance, ORDM

NI4OS-Europe partnership







An open-source and easy to use tool for researchers & research organisations:













Different types of data



Software and hardware



Media and other outputs

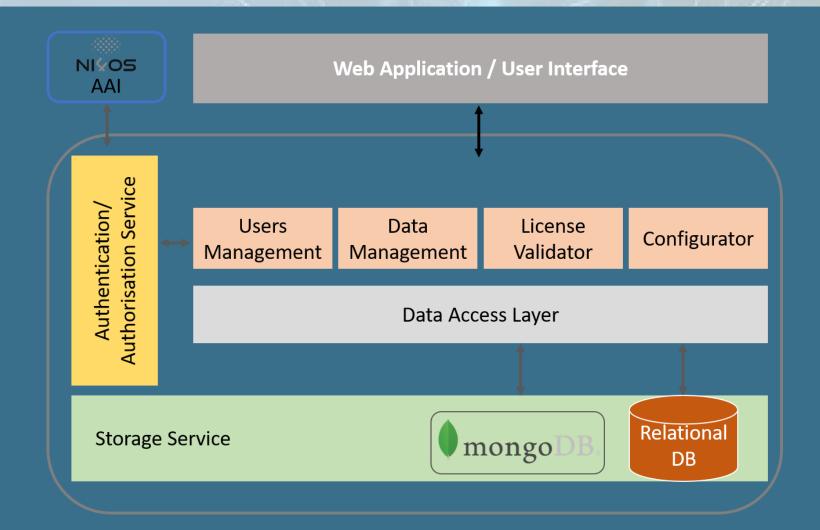
LCT supports:

- Clearance procedure not bound to the user that initiated it
- Equivalence, similarity, and compatibility
- Crowdsourced processes
- Clearance metadata as an opensource resource

Workflows

A. the user wants to associate an appropriate open-source licence for derivative work by combining licenses from the originating content.

B. the user verifies compatibility with existing licences-in (derivative work) or is given options for compatible licences-in (from unlicensed content).



License clearance block-diagram













NI4OS-Europe has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 857645.

EXPLORING NI4OS-EUROPE CATALOGUE







41

REGISTERED RESOURCES 19
ON-BOARDED
SERVICES

6

THEMATIC SERVICES

2 REPOSITORIES

4

GENERIC SERVICES

CORE

97

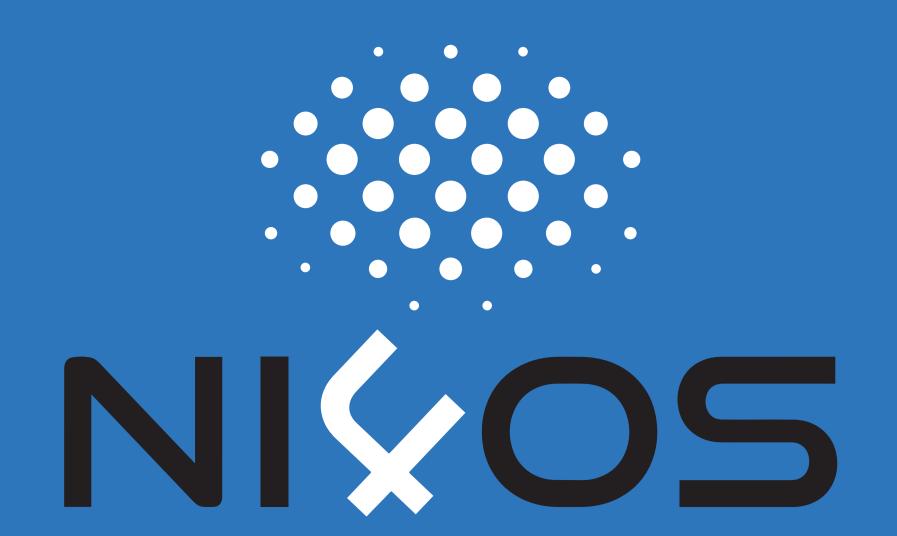
RESOURCE DISCRIPTIONS WERE IDENTIFIED AND SELECTED WITH THE HIGHEST RELEVANCE AND ADDED VALUE TO ITS COMMUNITIESERVICES

6. Roll-up banners

<u>NI4OS-Europe roll-up banners</u> are and will be used at events organized by the project and related events hosting poster sessions and/or exhibitions, in order to enhance the project presence.

When organizing events with physical presence, the banners can further boost and support the project dissemination activities via the relative events' photo material.

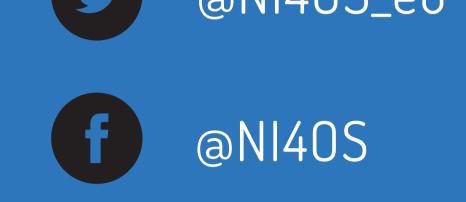
The banners can be used both separately or they can be placed together, depending on the concept of each event.

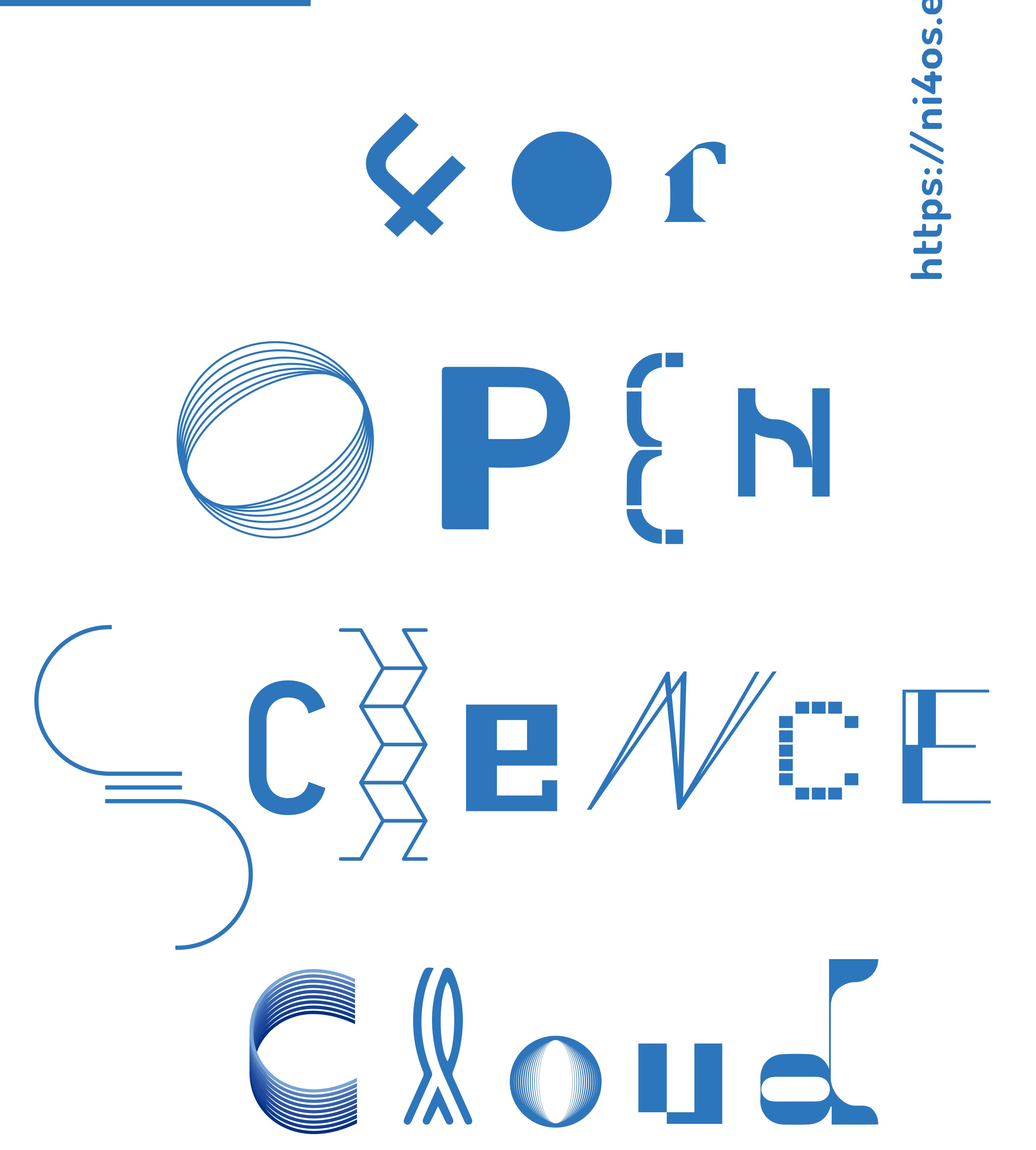


NI40S-Europe

National Initiatives for Open Science in Europe



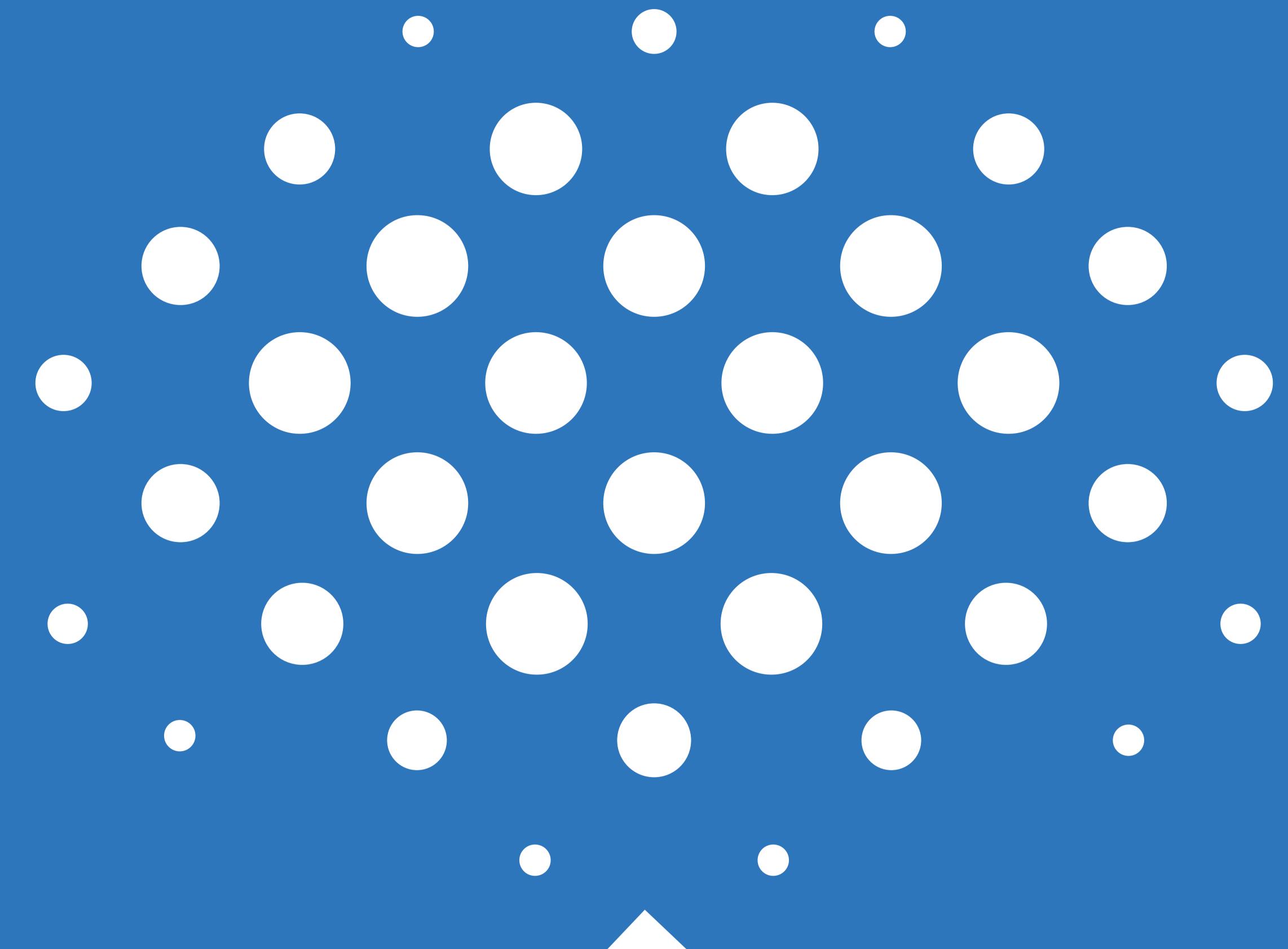






NI40S-Europe

National Initiatives for Open Science in Europe





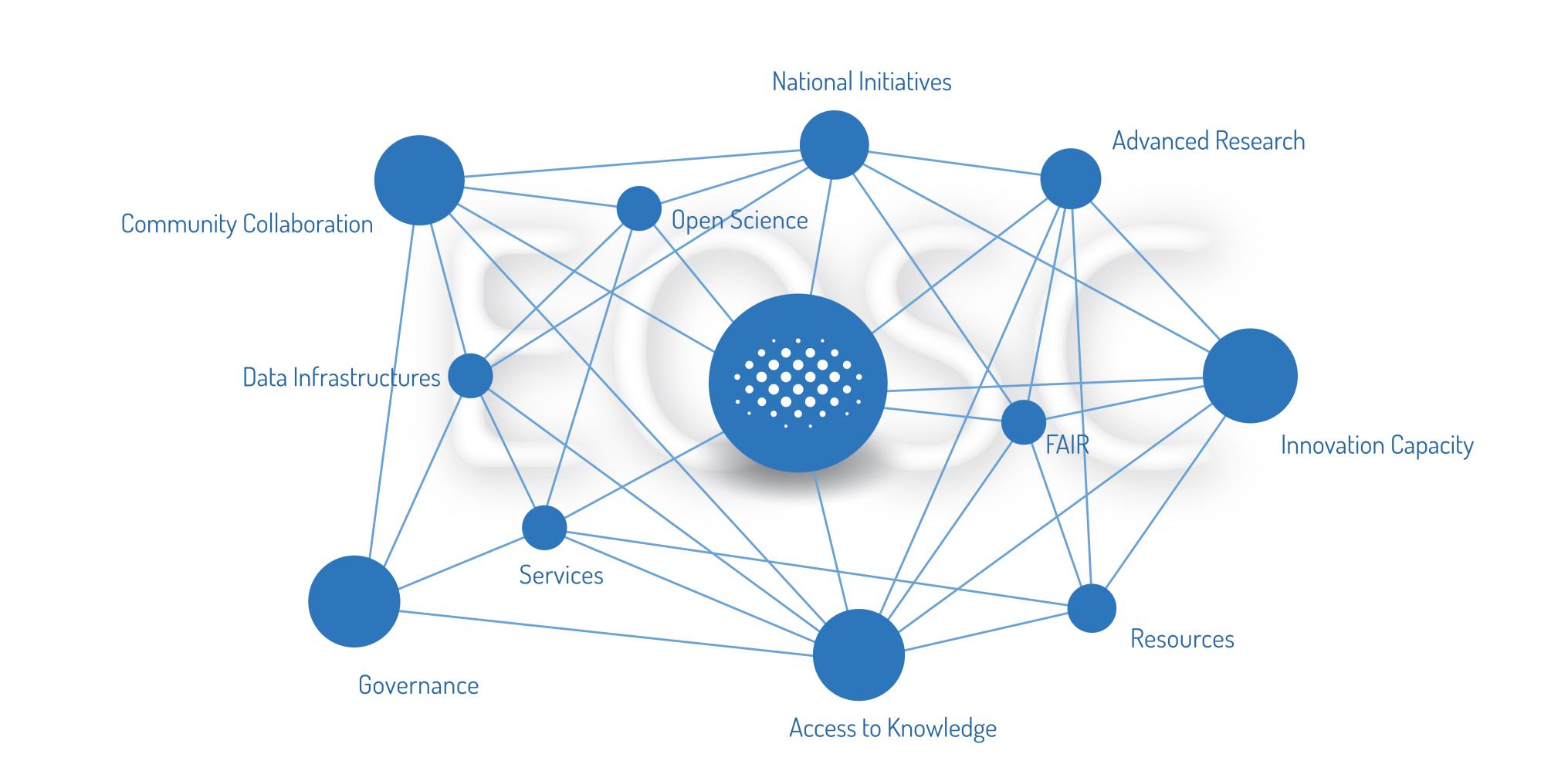


Participating countries:

Greece / Cyprus / Bulgaria / Croatia / Hungary / Romania / Slovenia / Serbia / Albania / Bosnia-Herzegovina / North Macedonia / Montenegro / Republic of Moldova / Armenia / Georgia /









7. Newsletters

Four newsletters have been released since NI4OS-Europe commencement. The newsletters reflect the plethora of initiatives and activities taking place, delivering significant results.

The newsletters have been announced on the project social media accounts and they are also available on NI4OS-Europe and other websites:

- NI4OS-Europe newsletter | Issue no.1 | April 2020
- NI4OS-Europe newsletter | Issue no.2 | July 2020
- NI4OS-Europe newsletter | Issue no.3 | November 2020
- NI4OS-Europe newsletter | Issue no.4 | March 2021

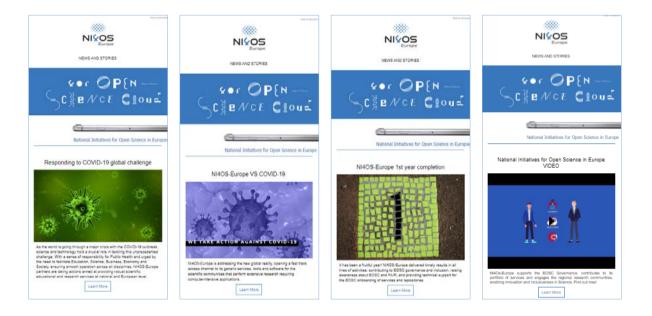


Figure 6: NI4OS-Europe newsletters

8. NI4OS-Europe presentation

NI4OS-Europe core presentation provides a holistic view of the project, reflecting the crucial work and the significant outcomes delivered in each WP in the light of the NI4OS-Europe objectives. The presentation is structured on the project three level approach to provide better understanding of its methodology:

- 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
- Provide technical and policy support in on-boarding of the existing and future service providers into EOSC
- Spread the EOSC and FAIR principles in the community and train it

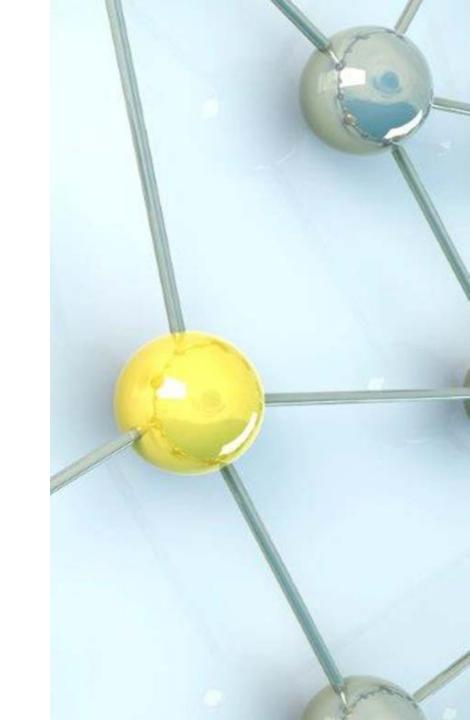
Special emphasis is given on the use of pictures, icons and the project colors with the aim to highlight the information and messages that reflect the project value.



National Initiatives for Open Science in Europe

<<Title of presentation>>

<< Presenter name, affiliation>>



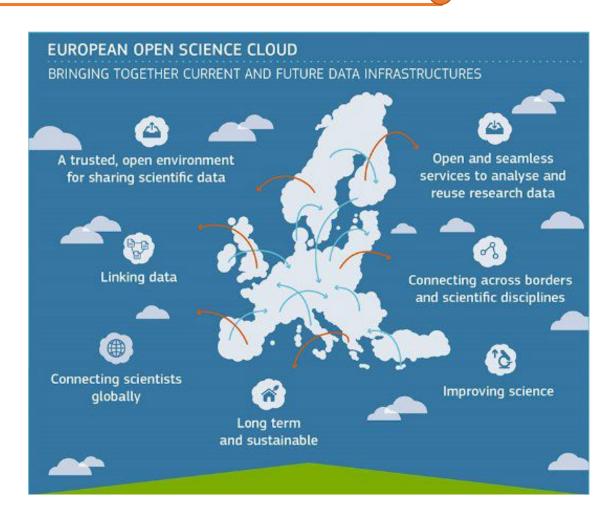
European Open Science Cloud



Vision

To ensure that European scientists reap 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"



NI4OS-Europe



















































Partnership building blocks



Operators of services for research & technology

Open Science communities & infrastructures



Mission





Support

the development and inclusion of the national Open Science Cloud (OSC) initiatives in 15 member states and associated countries in the overall scheme of EOSC governance



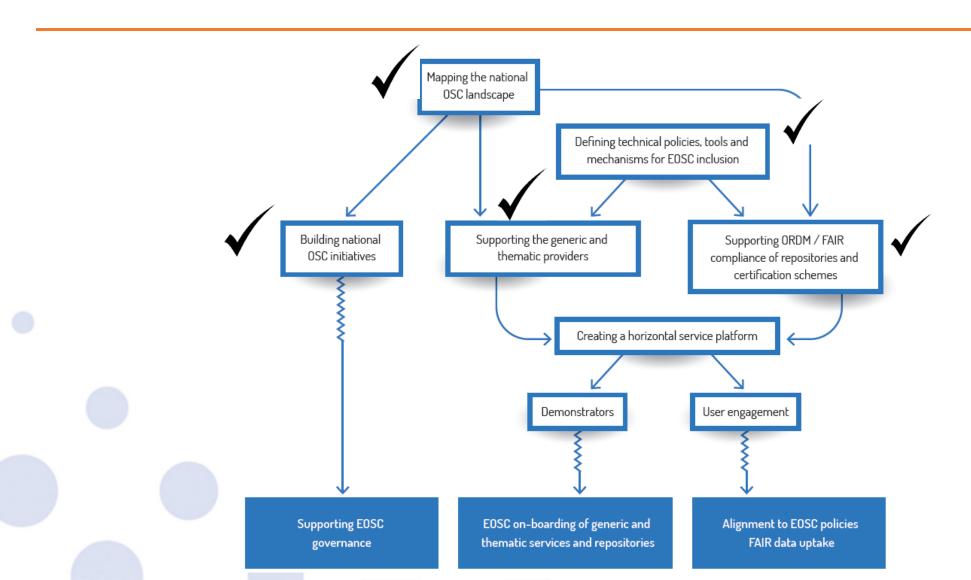
Spread the EOSC and FAIR principles in the community and train it



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

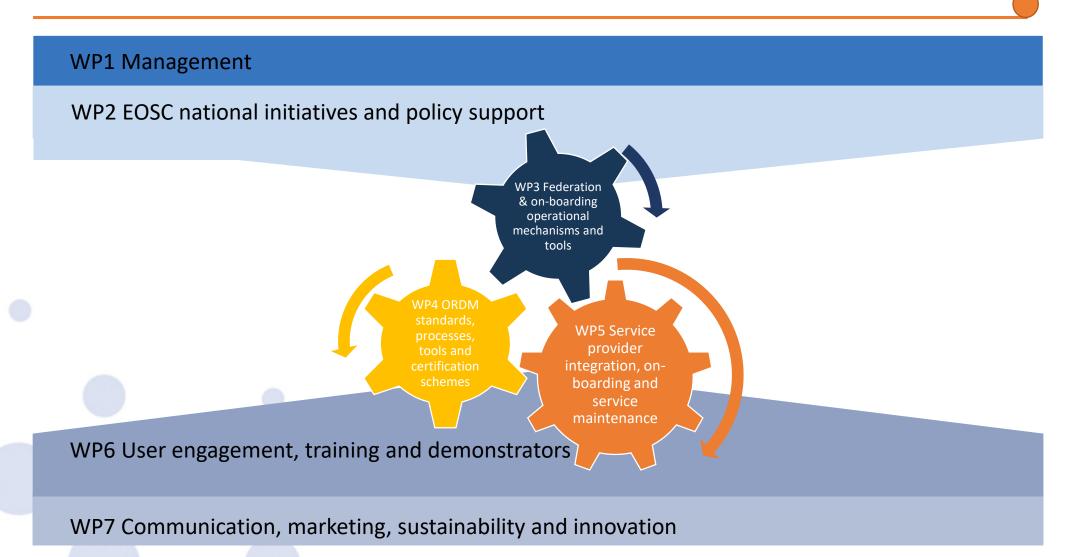
Methodology





Organization





Lines of action





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

EOSC national initiatives & policy support



Support the EOSC governance structure by forming in partner countries

Support the building of sustainable governance by engaging the national initiatives

Provide support and interface to other EOSC-relevant bodies

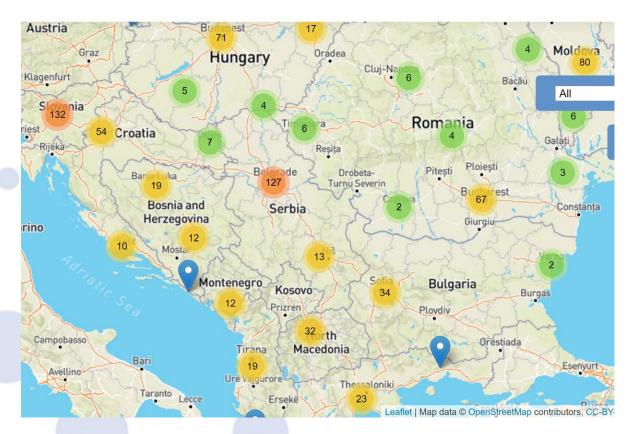
Reduce fragmentation and promote federation on national level

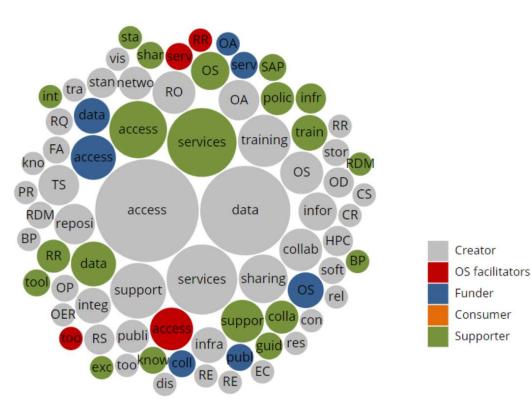
Prepare the ground for EOSC on-boarding

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



- Visualization of results
- Creation of stakeholder map for SEE
- First set of data deposited in Zenodo under an open license

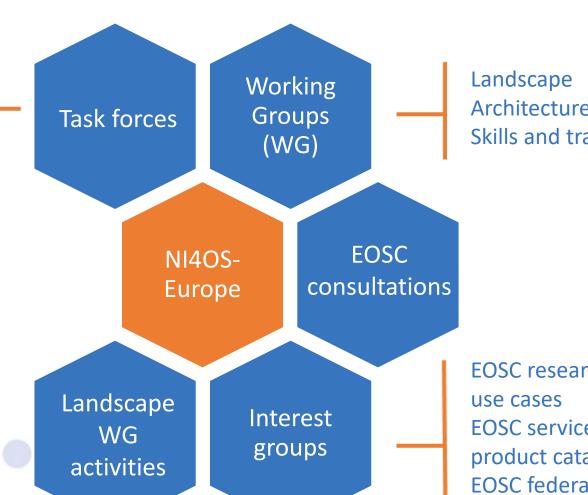




Liaison with EOSC



Landscape Service onboarding (chair) National policies (chair) FAIR data and infrastructures Dissemination and events Training and skills



Architecture Skills and training

EOSC glossary

EOSC researcher engagement and EOSC service and research product catalogues EOSC federating core

National Open Science Cloud Initiatives



- NOSCIs are living national OS ecosystems that support with the EOSC governance
- NOSCIs recognize diversity and OS maturity of countries, and their modelling can be adjusted to fit the needs of each country
- NOSCIs keep national stakeholders up to date with EOSC developments and spread awareness



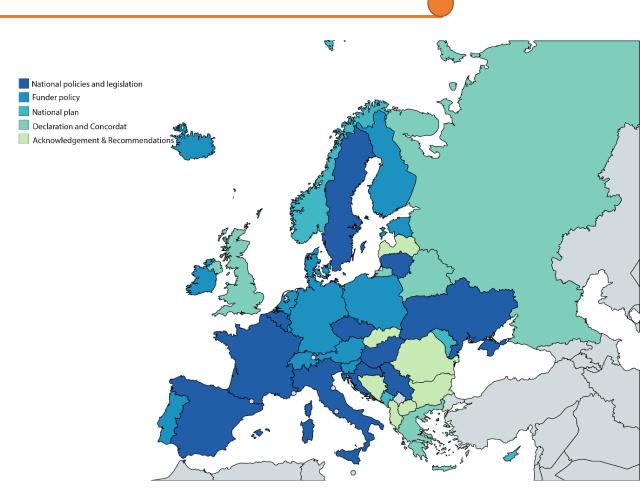
A NOSCI is a coalition of national organisations that have a prominent role and interest in the European Open Science Cloud (EOSC). The main aim of NOSCI is the promotion of synergies at national level, and the optimization/articulation of their participation to European and global challenges in the field of Open Science Cloud. National Initiatives are envisaged to play a prominent role in member states and associated countries and facilitate EOSC governance.



Establishing a NOSCI: all-round support



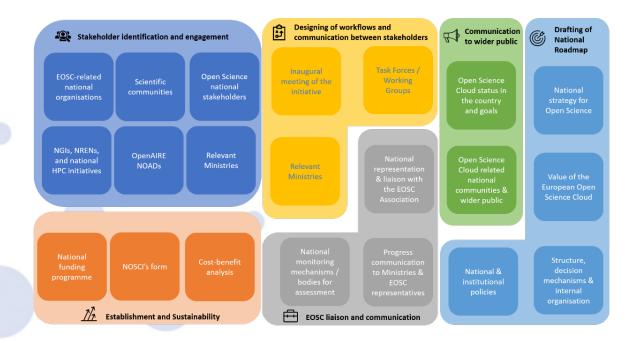
- Collection of current OS policies and models in Europe with focus on SEE area
- Clustering and visualization of OS policies across Europe
- Classification of major OSC building blocks.
- Blueprint for setting up NOSCIs
- 2 checklists facilitating the establishment and operation of the NOSCIs
- Explanatory video guiding through the different setup options
- Training webinar supporting the set-up of NOSCIs
- Workshop bringing together NI4OS-Europe partners with the EOSC governance board country delegates

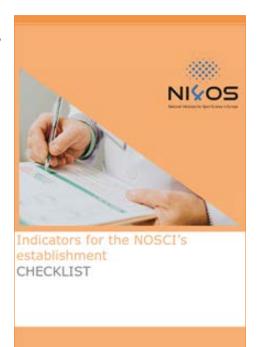


Blueprint for NOSCIs: workflows and checklists



- Set of indicators for assessing establishment progress
- Modular workflow for setting up NOSCIs
- Operational aspects for their day-to-day operation







Lines of action





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

Service integration and onboarding



- Pre-production environment validate readiness and maturity level for EOSC onboarding
- Service portfolio management system based on the EOSC provider and service profile
- Integration with federation core services
- Service categorization
- Onboarding of
 - generic services
 - thematic services
 - repositories





Portfolio management

Request for onboarding

Information gathering

Integration

Validation

Publication

NI4OS-Europe pre-production environment



Federating core

Service catalogue management

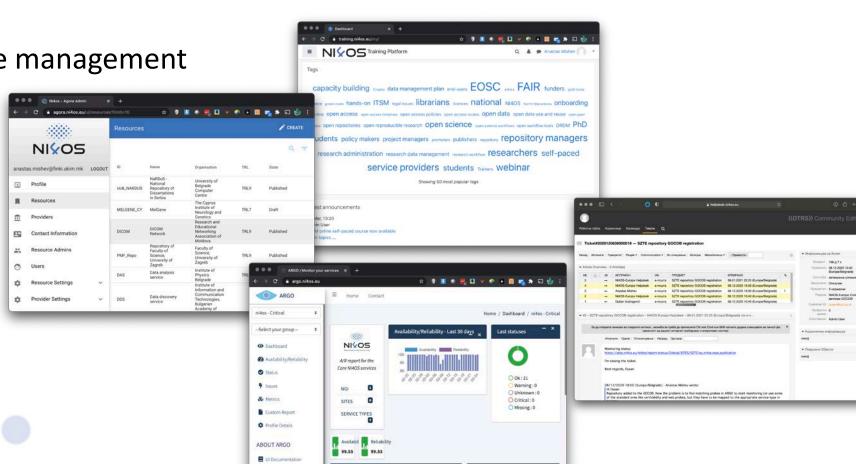
system (AGORA)

O AAI

Helpdesk

Monitoring

Accounting

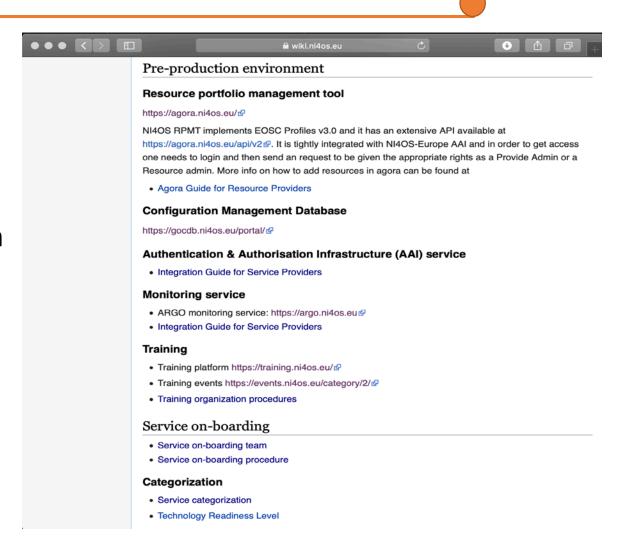


Procedures and policies



- NI4OS-Europe wiki page
 - Policies
 - Policy templates
 - Procedures for service integration with the pre-production environment

Role: to support service providers towards uniform and seamless EOSC integration



On-boarded generic services



- HPC resources: CPU, GPU, Xeon Phi
- Cloud virtual machines
- Generic storage
- Data management services
- 14 generic services registered within the AGORA catalogue
- 4 generic services are fully onboarded









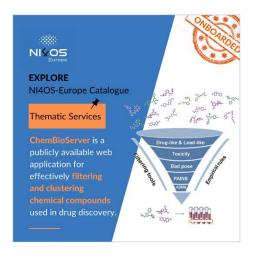
On-boarded thematic services



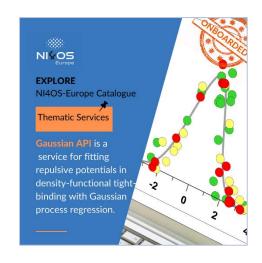
- 14 thematic services registered within the AGORA catalogue
- 6 thematic services are fully onboarded













Onboarded repositories



- Enhance discoverability (indexed by registries)
- Contribute to OpenAIRE/EOSC Research Graph (OpenAIRE compatibility; information contextualization)
- Enrich collections (Broker)
- Certification (in collaboration with FAIRsFAIR)
- 7 repositories registered within the AGORA catalogue
- 2 fully onboarded



Onboarded pre-production environment













Services from NI4OS-Europe pre-production environment have been onboarded

EOSC candidate repositories: actions





- Type of repository (CRIS, registry, database, etc.)
- Maturity (in beta vs in production; maintenance, software versions)
- Types of content/data (literature, data, OER, digitisations, etc.)
- Services integrated (internal vs external; PIDs, etc.)
- Best practices adoption (Open & FAIR, policy, training)
- Enhance discoverability (indexed by registries)
- Contribute to OpenAIRE/EOSC Research Graph (OpenAIRE compatibility; information contextualisation)
- Enrich collections (Broker)
- Certification (in collaboration with FAIRsFAIR)



Institutional

45 candidatesCertificationNOADs cooperation

ORDM / FAIR tools and certification schemes Ni



- 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
- Elaboration of incentives to support ORDM and FAIR
- Analysis of the incentives and rewards that can be employed to improve the uptake of ORDM and FAIR
- Analysis of guidelines for OS by approaching ORDM and FAIR
- Analysis and categorization of contemporary existing tools supporting FAIR and ORDM

WP4 deliverable documents with their elements NICOS

Incentives for supporting ORDM and FAIR - Support mechanisms, countrytailored rewards

Analysis of survey data and detailed status in 4 NI4OS-Europe countries

4 levels of rationales/benefits

10 categories of instruments

5 exemplary best practices

Data repository integration and ORDM/FAIR compliance guidelines

Overall methodology, means and approach elements

Selected most relevant sources, guidelines, models and tools

All instruments classified in 10 areas

Each area is explained and detailed

Mapping of legal, technical and procedural tools -Tools Catalogue

Detailed analysis of landscaping survey data

Categorization

Types: guidelines & policies, models, tools
Uses: certification, decision making, support

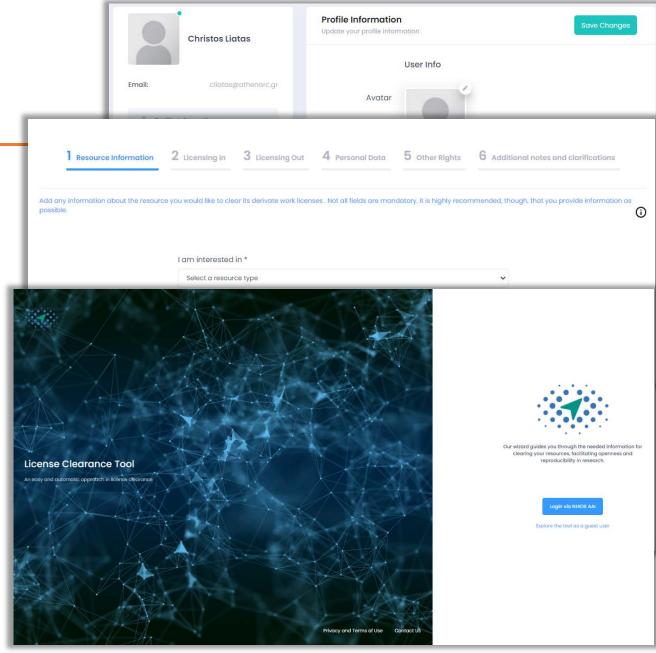
Mapping on stakeholders

Catalogue
139 items
14 descriptors for each

LCT- License Clearance Tool

→ https://lct.ni4os.eu/

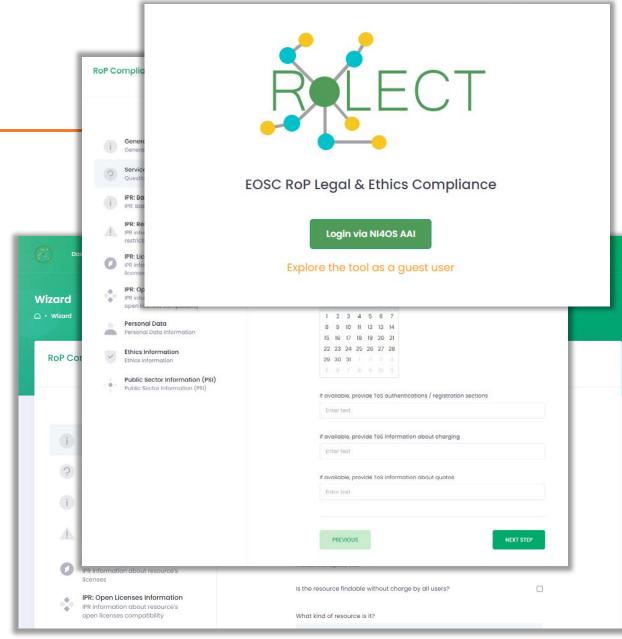
- An intuitive tool for content license clearance
- Automates the clearance of rights (copyright) for derivate works
- Mitigates legal uncertainty and diminishes costs in the clearance of licensing issues
- Effectively reduces time to publicly release properly licensed content
- Mainstreams legal support on usage rights
- Allows for both free-tier and costmodel based crowdsourced clearance



RoLECT - EOSC RoP Legal & Ethics Compliance

→ https://rolect.ni4os.eu

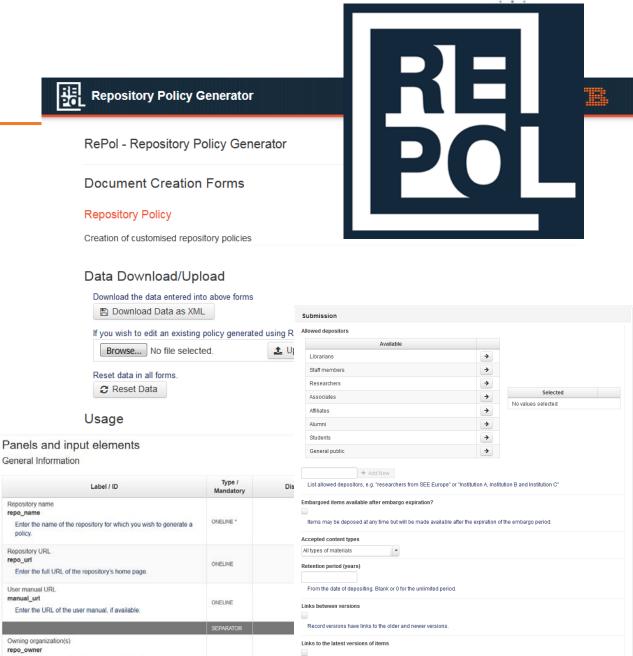
- Guided compliance check for legal and ethics EOSC RoP
- Targets service providers, researchers and research organizations
- Mitigates legal uncertainty and ensures compliance with the key legal and ethical aspects
- Successfully reduces time for compliance evaluations
- Mainstreams EOSC RoP compliance procedure, tracking changes, identifying and constructing a series of legal and ethical rules
- Will evolve to automatically check the validity of the provided resources



RePol - Repository Policy Generator

→ https://repol.ni4os.eu

- It greatly simplifies drafting of repository policies
- Created policies to cover all relevant aspects of repository use and governance
- Simple and explained choices
- Carefully crafted template formulations
- Previously created policies can be updated online
- User data and choices are not kept within RePol but saved in embedded XML
- Continually growing interest world-wide



Provide the name of the legal entity or body/unit owning the

Lines of action





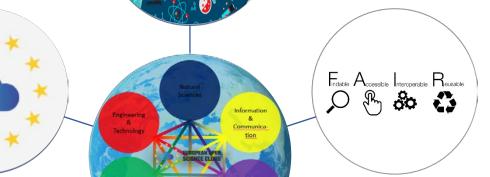
Spread the EOSC and FAIR principles in the community and train it

User engagement, training and demonstrators NIKOS



Ensuring take-up of core EOSC services in the community

Involving and supporting scientific communities



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

User engagement, training and demonstrators NICOS

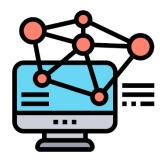


- Training materials available
- Definition of use cases in various scientific fields:









Digital
Cultural Heritage

Life Sciences

Climate Science

Computational Physics

Support to EOSC service & FAIR uptake in communities



- Ambassadors from each country assigned as EOSC promoters
- Training and dissemination material for FAIR and EOSC service uptake is available in all different languages of the NI4OS-Europe area
- Webinars for disseminating EOSC and FAIR principles in each country





NI4OS-Europe training



- NI4OS-Europe training platform
- Training material on various FAIR & ORDM topics available on the training platform for self-paced learning
- 5 train-the-trainers events held on:
 - o FAIR
 - National EOSC promotion
 - ORDM
 - Onboarding
 - IT service management
- Each country participating in NI4OS-Europe has scheduled 2 training events – total of 30 training events



Communication, marketing, sustainability, innovation



- Strong digital presence
 - Website
 - Calendar
 - Agenda tool
- Events and networking
 - Webinars
 - Workshops
 - Dissemination events
- Collaboration with the EOSC-5b projects
- Support the global efforts on COVID-19







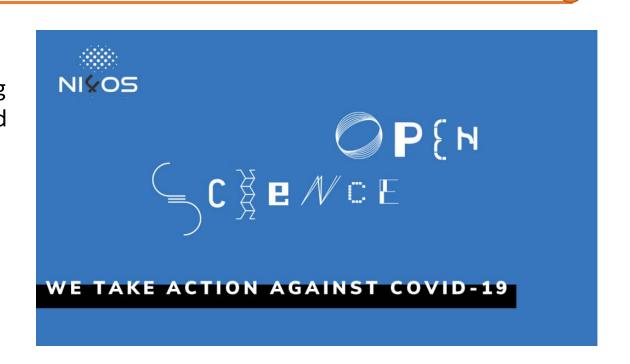


- Sustainability and innovation
 - Find solutions for sustainable and longterm impact of project results
 - Manage knowledge and results so as to create added value for different stakeholders

Support the global efforts on COVID-19



- COVID-19 social media campaign
- NI4OS-Europe vs COVID-19: providing fast track access to services, tools and software for the scientific communities that perform extensive research to tackle COVID-19
- NI4OS-Europe Covid19 Wiki: Collection of joint resources in open science related to COVID-19 in SEE



Scientific results:

"Multi-omics data integration and network-based analysis drives a multiplex drug repurposing approach to a shortlist of candidate drugs against COVID-19"

NI4OS-Europe brand & promotional package



NIXOS Europe

National Initiatives for Open Science in Europ

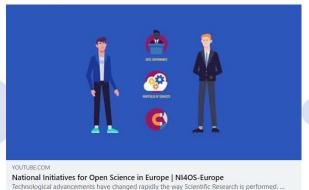
- Logo
- Video
- Brochures
- Presentations
- Newsletters
- Posters
- Infographics
- Roll-up banners













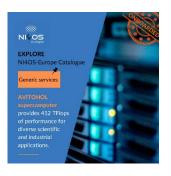


NI4OS-catalogue onboarding campaign









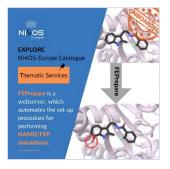






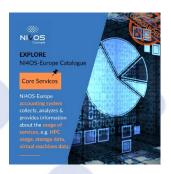
















NI4OS-Europe in numbers: Key Performance Indicators (KPIs)





- 20 generic service instances
- 20 thematic services
- 15 repositories
- 5 train-the-trainer events
- 3 flagship scientific fields
- 1 regional event (200 persons targeted)
- 30 national-level trainings (450 persons targeted)
- 3 sets of ORDM guidelines
- 6 ORDM tools
- 1 pre-production environment



Thanks!











Join NI4OS-Europe community:

https://ni4os.eu/contact-us

9. Conclusions

NI4OS-Europe full set of digital and printed promotional material constitutes a powerful tool that effectively serves the project marketing and dissemination activities for gaining public visibility and for achieving community outreach and engagement. Built on a common, consistent graphic style, the material has contributed to the establishment and enhancement of a strong brand. Following the project dynamic progress, it is gradually updated and enriched with new elements, thus disseminating NI4OS-Europe developments and offerings to its target communities.

NI4OS-Europe promotional package, together with additional dissemination material such as social media campaigns templates, announcements, press releases and newsletters, as well as the <u>project communication platform (D7.1)</u>, are significant in maximizing the effectiveness of the project outcomes.