



Workflows for setting up National Open Science Cloud initiatives CHECKLIST

How to use this document

A National Open Science Initiative (NOSCI) is envisaged as a coalition of national organizations that have a prominent role and interest in the Europe Open Science Cloud (EOSC). The main aim of NOSCI will be the promotion of synergies at national level, and the optimization/articulation of their participation to European and global challenges in this field of OSC, including the EOSC. National initiatives are envisaged to play a prominent role in Member States and Associated Countries and facilitate EOSC governance.

The setting up of National Open Science Cloud Initiatives (NOSCI) cannot be taken as a linear process. There is no “one solution fits all”, country/community-specific considerations must be taken into account.

Nascent efforts in South East Europe have already chosen different pathways for their formulation according to different partner and country profiles and needs. These efforts might operate as task forces, consortia, national projects, professional associations or legal entities, each one addressing different modules of the following different setups. NI4OS-Europe project proposes a modular workflow for the setup of the initiatives. This will give to countries or national initiatives maximum flexibility, while making sure that all important for them aspects are addressed.

This document condenses all activities that have been identified as important steps towards building a NOSCI and presents them in a checklist form to facilitate the process. The proposed steps are considered as important elements that can be combined, adapted and adjusted, as part of the modular workflow for the setup.

The steps are categorized in six distinct categories:

- Stakeholders' identification and engagement
- Designing of workflows and communication between stakeholders
- Communication to wider public
- Drafting of National Roadmap
- Establishment and Sustainability
- EOSC liaison and communication

Glossary

EOSC	European Open Science Cloud
HPC	High Performance Computing
MoU	Memorandum of Understanding
NGI	National Grid Initiatives
NOAD	National Open Access Desk
NOSCI	National Open Science Cloud Initiative
NREN	National Research and Education Network
OS	Open Science
OSC	Open Science Cloud
PPP	Public Private Partnership



1. Stakeholders' identification and engagement

- Identify **national organisations** that have a prominent role in EOSC, either in the EOSC Secretariat or in consecutive EOSC-related projects.
- Make contact with diverse **scientific communities**, institutes and organizations interested and active in the EOSC, including the research infrastructures, e-infrastructures, large computing centers, research service providers and manage to get consensus towards a common strategy for Open Science Cloud development in the country.
- Reach out to **national stakeholders** - a first attempt has already been made in the context of the NI4OS-Europe project to collect contact details from all relevant to Open Science national stakeholders.
- Collaborate with **NGIs, NRENs**, and **national HPC** initiatives of respective countries who are knowledgeable of the current status in data transfer, processing and management services and could provide links with other research and e-infrastructures, nationally.
- Collaborate with **OpenAIRE NOADs** of respective countries who have been making links between communities for the past years and are experienced in Open Science endeavours.
- Approach relevant **Ministries** (e.g. Digital Governance, Science, Research and Technology, Development, Education) with the proposed NOSCI MoU agreement, and try to get the support of Ministries. This can have the form of an official letter of support to the NOSCI.

2. Designing of workflows and communication between stakeholders



- Hold an **inaugural meeting** of the consortium/initiative to establish collaboration between identified stakeholders and create **common ground of understanding**.
- Hold working meetings and divide work in **Task Forces / Working Groups** that will perform landscape reviews on policies, infrastructures and training, e.g. Learned Societies to work on open access and Plan S, RIs and e-infrastructures to work on categorising the services etc.
- Involve right **from the beginning** the Ministries (e.g. Science and Technology, Development, Education, Information Technology), as they might have already established Working Groups or Task Forces for Open Science. Check whether **merging of efforts** is feasible under their umbrella and/or how the initiative could act complementary or be left totally independent of their activities.

3. Communication to wider public



- Communicate current Open Science Cloud status in the country and goals as well as inform about the **EOSC**, its advancements, national representation already in place and what the future holds for national research ecosystems.
- Hold an official inauguration event of the NOSCI targeted at wider public, with the support from the Ministries. The inauguration event will introduce the NOSCI (even if still under formation) to all **Open Science Cloud related national communities** (users, developers, infrastructure providers, funding agencies, related public bodies, industry etc.).

4. Drafting of National Roadmap



- Agree on a **common roadmap** that includes contribution to producing a national strategy for Open Science and implementation actions.

Main things to be considered for the strategy are:



- Research outputs management, sharing and publication.
- Research/e-Infrastructures and services access and enhancement.
- Training and skills for digital research, data management and scholarly communication.
- Connection with existing R&D ecosystem focusing on information exploitation and innovation.
- Connection with the EOSC.

- Define and adopt in the strategy any **national and institutional level policies**, if they can be replicable.
- Reflect in the strategy the **value of the European Open Science Cloud** and build on the resources available and the dynamic of national stakeholders involved in/ supporting the initiative.
- Examine the possibility to use this document also to define the **structure** of the initiative and its **decision mechanisms** and **internal organisation**.



5. Establishment and Sustainability

- Consider and define the form that NOSCI can have.

Possible formats are:



- Legal base - establishing a legal entity for promoting OS in the country with roles and responsibilities for EOSC
- Public private partnership - cooperation based on good practices and well-defined roles and responsibilities for the public and private sector
- Appointed by the government / ministry - experts (individuals or organisations) working under the authorship of Ministries; tied to national policies.
- Collaboration through an MoU- scope, duration, responsibilities and overall framework under which members build a consortium and collaborate are defined

A **Memorandum of Understanding (MoU)** should define the common goals in setting up a National Open Science Cloud Initiative (NOSCI) and developing Open Science activities in the country and may include:

- the description of appropriate tools and methods to establish the NOSCI;
- the collaboration with the relevant European and international initiatives such as: EOSC Association, EuroHPC, OpenAIRE, PRACE, RDA, EUDAT and EGI;
- the decision mechanisms and internal organization;
- the initial activities and guiding actions of the agreement, such as the mapping of the national digital capacity in terms of available computing resources and services related to the Open Science Cloud;
- the development and implementation of the National Open Science Strategy, with reference to the national roadmap, and the possibility of creating common working groups, or forming a Joint Research Unit (JRU), or inclusive association entities open to all national research infrastructures and e-infrastructures.

- Perform a **cost-benefit analysis**, complementary to the strategy, to showcase recurring and non-recurring costs and benefits from integrating Open Science in current national scientific sceneries.
- Seek **national funding programme** by proposing a national-level project. With support from a Ministries and with proof of EU funding there are more chances with the national funding bodies to get funding for National OSC activities.

6. EOOSC liaison and communication



- Communicate** progress to Ministries and EOOSC representatives ensuring that the country is represented at its fullest and in a coordinated fashion among all stakeholders, from higher to lower in the organizational model and vice versa.
- Define** national representation and liaison with the EOOSC Association, make sure that the initiative is formally represented on behalf of the consortium (with whatever format has been selected: legal entity, PPP or MoU).
- Link** to national monitoring mechanisms / bodies for assessment and adaptation that will result in better alignment with the EOOSC.