Skills 4 EOSC

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Deliverable Abstract

This Deliverable describes the first dissemination, communication and exploitation plan for the project Skills4EOSC.

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TERMINOLOGY

https://eosc-portal.eu/glossary

Terminology/Acronym	Definition
AI	Artificial Intelligence
CC	Competence Centre
CCs	Competence Centres
Comms	Communications
D&E&C	Dissemination, Exploitation, Communication
ELSI	Ethical, Legal and Social Issues
EOSC	European Open Science Cloud
EOSC-A	European Open Science Cloud Association
EUA	European University Association
FAIR	Findable, Accessible, Interoperable, Reusable
Knowledge Broker	One of the actors at the Science for Policy interface, acting as impartial mediator between science and policy actors.
LERU	League of European Research Universities
MVS	Minimum Viable Skillset
OS	Open Science
RDA	Research Data Alliance
RPO	Research Performing Organisation
RRI	Responsible Research & Innovation
SRIA	Strategic Research and Innovation Agenda
ToT	Training of Trainers
UNITE!	University Network for Innovation, Technology and Engineering
VRT	Virtual Round Table

Contents

Executive summary

Skills4EOSC project focusses on creating a training ecosystem for Open Science and FAIR, whose ultimate outcome is to foster the development of a skilled and digitally-prepared workforce for EOSC. It will coordinate a pan-European network of competence centres and support networks in order to enable the practice of Open Science with adequate knowledge of standards, applications and tools and best practices for delivering, managing, re-using, sharing and analysing FAIR data, as well as other digital research objects within a Responsible Research & innovation - RRI horizon, as well as to exploit the potential of the EOSC. To achieve this, a well-executed communication, dissemination, and exploitation (D&E&C) where the community of practice is partner and not only recipient alongside the whole process is necessary. In fact, our challenge is to frame the communication/dissemination/exploitation as a multi-actor engagement process where informing and communicating is from the beginning a vector of empowerment and inclusion of all the scientific and societal actors in the ecosystem for Open Science, FAIR and RDM. Besides, the RRI principles are integrated and shaping the D&E&C as an open, inclusive, fair, ethical process, in a nutshell a responsible dynamic path[1].

The purpose of this document is to outline Skills4EOSC specific D&E&C plan and actions, to maximise the impact of the project, to ensure its success during its 36-month duration, and pave the way towards long-term sustainability.

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[1] Further information: European Commission, Directorate-General for Research and Innovation, *Indicators for promoting and monitoring responsible research and innovation : report from the Expert Group on policy indicators for responsible research and innovation*, Publications Office, 2015, https://data.europa.eu/doi/10.2777/9742; Burget, M.; Bardone, E.; Pedaste, M. Definitions and Conceptual Dimensions of Responsible Research and Innovation: A Literature Review. Sci. Eng. Ethics, 2017, 23, 1–19. [Google Scholar] [CrossRef] [PubMed]; RRI Toolkit at https://rri-tools.eu/

1 Introduction

Skills4EOSC is an ambitious undertaking, that aims at having a long-lasting impact on the scenario of Open Science, FAIR and RDM competences in the addressed countries and beyond. A sound dissemination, communication and exploitation (D&E&C) strategy is pivotal to achieve this impact and propose its approach and key exploitable results to the wider possible audience.

One of the main challenges to this plan are the limited resources allocated to the specific D&C if compared to the rest of the project, versus a large number of targets, stakeholders and countries involved. We address this challenge by leveraging the broad diversity available in the project consortium, and the partners' strong motivations in pursuing OS skills programmes in their countries/regions. Moreover, we strive to prioritise the Skills4EOSC actions designing a focused approach to communicate and disseminate the project. More details on this can be found in chapters 5.1 and 6.1.

The D&E&C strategy will rely on a mix of different instruments and channels (e.g. interactive events, workshops, Virtual Round Tables, interviews, published reports, knowledge practice and hot scenario exchange), with the objective to create awareness of project activities, encourage participation of the different target groups, their mobilisation, and engagement in two-way communication, in order to improve our outputs, maximise impact through co-creation and community validation, and, last but not least, to facilitate adoption of project outputs.

This multi-actor engagement action will primarily target the Research Professionals and Academia and Research target groups (see below, chapter, 2 for the full target list), but other target groups will be included whenever possible and appropriate. To maximise the exploitation of project outputs, direct engagement will be sought with the pan-European entities (EOSC actors and OS advocates) and, through the national Competence Centres' networks, with national stakeholders and programmes and inter-regional level to promote key project results (e.g. harmonised curricula/skills,

certification framework/materials) in the relevant programmes (main target group: Public sector and secondarily Academia and Research). The alignment and co-programming of consolidated funding streams is considered a priority for the OS skill set development and OS in general as both a RRI cornerstone and a practical and critical RRI training ground.

1 D&C&E objectives

Skills4EOSC's overall objective is to provide Open Science Commons and create an EOSC-ready skilled European workforce, connecting existing centres of competence in open science and scientific data management to build a future based on Open Science and FAIR/ELSI/RRI data practices. To achieve this overall goal we identified the following activities, which are directly related to the project's Key Exploitable Results (KERs):

- identifying different career profiles and defining requirements for competencies and proficiency levels (Minimum Viable Skillsets);
- implementing Training of Trainers (ToT) courses;
- developing FAIR by design methodology for learning materials;
- harmonising Open Science curricula and learning paths targeting researchers at different career stages, data professionals and policy makers;
- setting up lifelong learning through professional networks;
- coordinating existing and buddying national, regional and thematic Competence Centres and creating a European support network to operate after the end of the project, keep aligned the key outputs of the project and liaise with the EOSC Partnership.

The D&C&E plan directly and indirectly contributes to all the main activities mentioned above, through the following D&C&E activities:

- Engaging with stakeholders to implement consultation and co-creation activities for elaborating the project outcomes and ensure their inclusiveness and their success based on the widest possible consensus;
- Advertising the initiatives and opportunities provided by the project, such as the fellowship programme, communities of practice, and targeted training programmes, while engaging and encouraging researchers and other targets in participating and provide feedback to further improve them;
- Providing communication support to all work packages and partners to ensure the success and optimal visibility of their activities;

- Disseminating the project results through the appropriate channels and promote their wider exploitation, also thanks to the creation of synergies, agreements and collaborations with national and international actors and projects;
- Supporting the Skills4EOSC training platform[2] as a tool for the ToT action and explore the uptake within the Consortium of the project results such as the FAIR by design methodology for learning material;
- Integrating a RRI approach in the project actions.

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[2] The Skills4EOSC training platform is based on Moodle and meets the curernt standards of the Open Science training community; it will be used mainly for the ToT activites envisaged in the project (learning.Skills4EOSC.eu)

2 Target audiences

Skill4EOSC targets a broad range of stakeholders, that can be grouped in 5 macro-areas:

1. Science professionals;
2. Public sector;
3. Academy and Research;
4. Industry;
5. OS and EOSC actors.

2.1 Science professionals

This category includes researchers and research support personnel at Universities and public and private Research Performing Organisations (RPOs):

- Researchers at different career stages (including PhD students and early careers);
- Domain or sector experts;
- Data stewards;
- Data managers;
- Research support staff;
- Legal & ethics experts;
- Professional trainers.

2.2 Public sector

This category includes the public actors who (a) can provide policy and funding support to the longer-term sustainability and further developments of the Skills4EOSC results (i.e. funding and policy making agencies), (b) are responsible for the provision of governmental open data and wish to adopt an OS and FAIR approach to maximise their use by different societal actors (e.g. for scientific or public service purposes) and (c) those (both individuals and organisations) who can be interested in exploiting an OS approach to support their decision making processes and implement evidence-informed decisions:

- Civil servants and public administrations;
- Policy and Decision makers: Governmental organisations and ministries as well as policy makers in Research Performing Organisations;
- Funding bodies;
- Agencies managing national/regional/international programmes;
- Regulatory Bodies.

2.3 Academy & Research

This target group includes the organizations that make up the research and academia ecosystem, whether in individual countries or international level, as well as the associations that facilitate the exchange of common practices and their standardisation:

- Public and private Research Performing Organisations (RPOs);
- National and International Research Infrastructures (RIs);
- Universities;
- European University networks (EUA[3], LERU[4], UNITE![5], The Guild[6], CESAER[7], Coimbra Group Universities[8], etc);
- National conferences of rectors;
- National and international associations (e.g. ScienceEurope)
- European Universities Initiatives (https://education.ec.europa.eu/education-levels/higher-education/european-universities-initiative) .

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[3] https://eua.eu/

[4] https://www.leru.org/

[5] https://www.unite-university.eu/

[6] https://www.the-guild.eu/

[7] http://www.cesaer.org/

[8] Coimbra Group Universities

2.4 Industry

The target group includes professionals and companies that (re)use or produce data for research, especially those related to the EOSC building process:

- Industries interested or linked to the EOSC
- Public and private training and education providers
- Certification agencies/actors
- Gaia-X[9]
- Industrial initiatives aiming at participate in the upcoming Common European Data Spaces

2.5 OS and EOSC actors

This target group includes all actors that are directly involved in progressing the planning and implementation of EOSC:

- EOSC Association;
- EOSC Steering Board;
- EOSC-related initiatives, projects and infrastructures;
- EOSC Task Forces;
- National OS initiatives, national structures and task forces;
- EOSC Mandated Organisations;
- OS and FAIR Advocates (e.g. RDA[10], OpenAIRE[11], GO FAIR Foundation,…)

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[9] https://gaia-x.eu/
[10] https://rd-alliance.org/
[11] https://www.openaire.eu/

3 Key exploitable results

The following Key exploitable project outputs will be addressed with the D&E&C measures:

Standardisation	QA and skills recognition	networks of competences	Accelerating training
• *MVS for identified profiles* • *European curriculum for data stewards* • *OS essentials" for academic courses*	• *Shared framework for competence recognition* • *Methodology for FAIR-by-design learning materials*	• *Professional networks for data stewards, researchers and others* • *European user support network*	• *"Science4Policy" course designs and resource kits for Competence Centres* • *Generic and thematic ToT course designs*

4 Value proposition

The formulation of a clear value proposition for each of the target audiences the project addresses is pivotal to propose the project offering in a clear and enticing way to each of the involved actors. A clear value proposition is important to define the message we want to communicate about Skills4EOSC to different audiences.

At the current stage of the project, key stakeholders constitute the following groups: "**Science professionals**", "**Public sector**", "**Academy and research**", "**Industries**" and "**OS and EOSC actors**".

The partners constituting the project consortium are regionally distributed to ensure inclusion and consideration of regional specificities and allow for the implementation of engagement activities within all of the participating countries.

The following table summarises the project's targeted offering for each stakeholder group and the key elements identified to build the Skills4EOSC value proposition for each target group.

	Targeted offering	Key elements to construct value proposition
Science professionals	• Community of practice, • Link to relevant competence centres for specialisation/training/support • Training resources • Competences recognition	• Becoming part of a community of peers to exchange practices and solve problems, enhancing lifelong learning; • Counting on the Skills4EOSC Competence Centre Network for all OS/EOSC training/orientation/ consultancy needs • Obtaining better resources for better learning and having EU-recognised competences.
Public sector	• Resources for policy makers, • Link to CCs for relevant activities (e.g. targeted training/consultancy)	• Obtaining guidance to use data in decision-making (evidence-informed decision making) • Obtaining competences to drive the uptake of OS in Society
Academy and	• Training workforce to spread OS/EOSC	• Tackle the growing needs of skilled professionals to drive OS-related

Research	knowledge, • Pooling training resources, • Definition of professional figures to be integrated in the workforce	changes in Research&Academic organisations (i.e. defining OS and RDM policies, implementing dedicated infrastructures for RDM, implementing RRI good practices etc). • Obtain qualified trainers to meet the OS- RDM- and FAIR-related training needs of the organisation. • Align training/competence recognition processes to ensure the uniformity of professional profiles and allow for professional mobility across Europe.
Industry	• Training paths/reusable materials, • FAIR Data for AI • Certification schemes	• Obtain qualified training. • Tailor OS and RDM training to the needs of the private sector (e.g. data for AI). • Hire qualified professionals with verifiable skills.
OS and EOSC actors	• Europe-level harmonisation, • Governance model for CCs network • Sustainability of training/learning actions	• Obtain an adequate number of skilled RDM and OS professionals to implement the EOSC roadmap in Europe • Obtain qualified trainers to meet the OS- and RDM-related training needs of European organisations and industries. • Align training/competence recognition processes to ensure the uniformity of professional profiles and allow for professional mobility across Europe.

In the following paragraphs, the challenges, benefits and key messages for each stakeholder group are discussed in detail.

4.1 Tailored messages

Science professionals

Challenges

- Lack of a clear definition of data professional profiles and corresponding career paths.
- Fragmentation in training resources.
- Lack of specialised OS competencies targeting the needs of science professionals in thematic RIs.

- Low familiarity with Ethical, Legal and Social implications, regulations and RRI principles and related issues in the research lifecycle.
- Need to create and identify lifelong learning paths through professional networks as an enabling environment to discuss, co-create exchange best practices and solutions.

Benefits from Skills4EOSC

- Mapping of professional profiles related to Open Science and definition of the "Minimum Viable Skillset" (MVS) for each of them so to harmonise curricula and competencies.
- A shared and trusted framework for the recognition of competencies acquired by trainers and OS professionals as a part of an academic path or a lifelong learning process.
- Provision of both OS FAIR-by-design materials and a methodology that can be generalised to learning materials in any discipline to improve the access, the re-use, the adaptation of OER, facilitating international cooperation.
- Skills4EOSC standardised framework for soft certification and accreditation to provide Science professionals with the recognition of competencies acquired in informal learning processes and specialisation courses.
- Skills4EOSC ToT programme will offer Science professionals tailored courses. Schemes to recognise the competences of trainers will be developed to ensure the quality and uniformity of the teaching.
- Support for an harmonised training of science professionals over Europe.
- Training modules on ELSI (Ethical, Legal and Social Issues) aspects focussing on Intellectual Property Rights (IPR), Public Sector Information (PSI), Open Data, licensing, database rights, integrity, responsible and participatory research, impact on society, and all aspects connected with a Responsible Research and Innovation approach.
- Skills4EOSC will provide use cases to address challenges and opportunities arising from the interaction between generalist OS experts and selected thematic Research Infrastructures professionals.

- Better Open Science skilled professionals will be able to find more and better jobs, as data stewards are recognised as a critical success factor in the EOSC SRIA.
- Science Professionals will be able to identify national and regional CCs and communities to provide specialised OS competences targeting their needs.
- Through CCs they will be able to reach professional networks for lifelong learning and exchange.
- Specific recommendations and thematic communities to stimulate the uptake of FAIR practices: FAIR Data for AI, FAIR Data for Health and Technology and Museum Data Curator Network.

Main message

> Skills4EOSC provides opportunities for science professionals to enhance their competencies in Open Science and FAIR data management practises through a trusted and recognised European framework that will ensure harmonised curricula and learning paths that take into account discipline, thematic, and research infrastructure-oriented training.
> Skills4EOSC will use peer professional and thematic networks as vehicles for lifelong learning and the development and maintenance of an EOSC-ready digitally skilled workforce.
> Competencies gained through informal processes as well as specialised courses will be recognised and accredited. More and better jobs for scientists will become available.

Communication and engagement channels

- Web sites
- Social media
- Webinars and workshops
- Participation through presentations and contributions in conferences and events such as RDA Plenary, OpenAIRE, Codata events
- Virtual meetings with representatives from Thematic RIs and their national nodes
- Articles and presentations on Zenodo

- Training catalogues and platforms, including the ones developed outside the Skills4EOSC project
- Research and consultation activities focusing on stakeholders needs (e.g., open consultation calls, qualitative interviews, desk research, etc.).

Public sector

Challenges

- Acknowledging the vital importance of science, to respond to the environmental, social and economic challenges, policy makers should support the adoption of open science processes to advance shared research agendas dealing with complex problems.
- Developing an enabling policy environment for open science in order to ensure adequate investments in open science infrastructures and services.
- Lack of familiarity with Open Science and FAIR data management among policy makers and civil servants.
- Policy makers need to make decisions pretty quickly and they require information from researchers.
- Civil servants need support for particular evidence-informed solutions in their organisation/department.
- Researchers and scientists must deal with a different level of communication when interacting with policy makers and civil servants. They need to communicate in a systematic, timely, and comprehensible manner, offering understandable policy options.
- Low familiarity with Ethical, Legal and Social impacts, relevant regulations, RRI principles, and related issues.

Benefits from Skills4EOSC

- Design and deliver "Science4Policy" courses targeting researchers, "knowledge brokers"[12], civil servants and policy makers: policy makers and

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[12] In science, an knowledge broker typically refers to an individual or organization that facilitates communication and collaboration among different stakeholders in scientific research or policy-making processes. The concept is linked to the one of the honest broker in science that was first introduced by social scientist Roger Pielke Jr. in his 2007 book "The Honest Broker: Making Sense of Science in Policy and Politics". According to Pielke, an honest broker is someone who does not

agencies will be trained in understanding the benefits of Open Science and FAIR research data managements, as well as in data acquisition, management and analysis, promoting use of open scientific data for evidence-informed policy making, while researchers and "knowledge brokers" on how Open Science can encourage use of research outputs by policy makers and public administration.

- ELSI training materials (fact-sheets, guides, FAQs, tool-boxes) to be embedded in the Science4Policy Kit.
- Skills4EOSC will identify real-life scientific topics with high societal impact to showcase evidence-informed decision making.
- Provide civil servants & decision makers with key competences to use OS outputs for evidence-informed decisions.
- Provide researchers and "knowledge brokers" with key competences on OS and communication of scientific output with policy makers, funders and Public Authorities.
- Empower Competence Centres with resources for "Science4Policy" activities.
- Demonstrate the power of Open Collections to implement policy goals such as climate adaptation, biodiversity conservation, public understanding of science, Covid-research, or nature based solutions in the area of bioeconomy (New Green Deal).

Main message

> Skills4EOSC will deliver "Science4Policy" courses and learning paths targeting researchers, "knowledge brokers", civil servants and policy makers. It will also provide researchers and "knowledge brokers" with the key competences on OS and communication of scientific outputs, their life cycle and interpretation for policy makers and funders.

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advocate for a particular policy outcome, but rather provides unbiased information and expertise to decision-makers. By facilitating communication and building trust among different groups, an knowledge broker can help to ensure that decision-making is informed by the best available evidence and that policy outcomes are broadly acceptable to all parties involved. In Skills4EOSC we use the term knowledge broker to identify key intermediary actors that help in translating and disseminating knowledge to support in the decision making process.

Communication and engagement channels

- News and articles
- Training
- Social media
- Virtual meetings
- Policy briefs and research reports
- Policy events and workshops
- Research and consultation activities focusing on stakeholders needs (e.g., open consultation calls, qualitative interviews, desk research, etc.) with governmental organisations and ministries
- Collaboration with other initiatives, e.g. DG JRC

Academy and research

Challenges

- Lack of a clear definition of academic curricula profiles and corresponding career paths for Open Science and FAIR management of research outputs professionals.
- Low familiarity with Open Science and FAIR data-intensive management practices in university courses and lack of OS competencies as a part of an academic learning path.
- Low familiarity with Ethical, Legal and Social issues, implications & regulation and RRI principles, and issues aspects.
- Fragmentation in Open Science, FAIR and RDM training resources and difficulties to ensure quality and uniformity of learning resources and their reuse.
- Difficulties to interact and raise awareness of policy makers on societal opportunities and benefits of Open Science.

Benefits from Skills4EOSC

- Mapping of professional profiles related to Open Science and definition of the "Minimum Viable Skillset" (MVS) for each of them so to harmonise curricula and competencies.

- A shared and trusted framework for the recognition of competencies acquired by trainers and by university students, as a part of an academic path or a lifelong learning process.
- Skills4EOSC standardised framework for soft certification and accreditation to provide university students and trainers with the recognition of competencies acquired in informal learning processes and specialisation courses.
- "OS and data-intensive science essentials" for inclusion in generic undergraduate, postgraduate and PhD curricula as a key skill that anyone doing research is expected to acquire.
- Open Science and Research Data Management training for researchers, tailored to specific community needs.
- Provision of both OS FAIR-by-design and OS RRI-by-design materials and a methodology that can be generalised to learning materials in any discipline to improve the access, the re-use, the adaptation of OER, facilitating international cooperation within an ELSI/RRI horizon.
- Researchers and academia will be able to identify national and regional CCs and communities to provide specialised OS competencies targeting their needs.
- "Science4Policy" courses will support researchers and academia to communicate scientific outputs, their lifecycle and interpretation toward policy makers and funders.
- Training modules on ELSI (Ethical, Legal and Social Issues) aspects focussing on Intellectual Property Rights (IPR), Public Sector Information (PSI), Open Data, licensing, database rights, integrity, responsible and participatory research, impact on society, and all aspects connected with a Responsible Research and Innovation approach.

Main message

Through Skills4EOSC, Universities, RPOs and Research Infrastructures can better match curricula and learning paths for Open Science professionals. This will guarantee that the acquired competences are aligned, uniform, of high quality, and acknowledged throughout Europe and beyond.

Communication and engagement channels

- News and articles
- Training
- Social media
- (Virtual) meetings
- Briefs and reports toward European University networks, National conferences of rectors
- Public events and workshops
- Research and consultation activities focusing on stakeholders needs (e.g., open consultation calls, qualitative interviews, desk research, etc.) with governmental organisations and ministries

Industry

Challenges

- Lack of awareness of Open Science and FAIR data-intensive management practices.
- Lack of recognition of professional OS Competencies
- Low familiarity with Ethical, Legal and Social regulation and issues aspects.
- Fragmentation in training resources.

Benefits from Skills4EOSC

- Standardised soft certifications (e.g. open badges) are adopted to accredit OS competencies
- Employers selecting skilled OS professionals in their ranks can rely on a recognised European framework.
- Training modules on ELSI (Ethical, Legal and Social Issues)
- Provision of OS FAIR-by-design materials
- Industries will be able to identify national and regional CCs and communities to provide specialised OS competencies targeting their needs.
- Through CCs they will be able to reach professional networks for lifelong learning and exchange

- Industries will find specific recommendations and thematic communities to stimulate the uptake of FAIR practices: FAIR Data for AI, FAIR Data for Health and Technology and Museum Data Curator Network.

Main message

> Through a European framework that improves training paths and the reusability of learning materials, industries can improve their work and increase their competencies in Open Science and FAIR data management practices. The Skills4EOSC training programme will prepare them to use best practises for open research data, research- and e-infrastructures in their work.

Communication and engagement channels
- News and articles
- Training
- Social media
- (Virtual) meetings
- Research and consultation activities focusing on stakeholders needs (e.g., open consultation calls, qualitative interviews, desk research, etc.) with governmental organisations and ministries

OS and EOSC actors

Challenges

- EOSC Partnership expects to establish coordination on OS training and skills activities at the EU level (SRIA)
- EOSC A, related Task Forces and Working group want to engage with relevant stakeholders at the national and institutional level to co-create, promote, broker and ensure the recognition of digital career profiles related to Open Science.
- EOSC-related initiatives, projects and infrastructures need the input and involvement of an EOSC-ready digitally skilled workforce from research and academic organisations, RIs and professional networks.
- The vast number of national and thematic initiatives makes it difficult to get everyone's input.

- OS and EOSC actors need to establish and manage a practical collaboration with key EOSC initiatives and projects, and synergies with relevant national/regional/EU to harmonise open science curricula and competence recognition
- EOSC Partnership need to bridge the fragmentation of training resources and expects to increase the availability of FAIR-by-Design learning materials and to foster the reuse of these materials for new courses.

Benefits from Skills4EOSC

- Skills4EOSC will coordinate a network of Competence Centres, that will support a coordination on Open Science and EOSC activities in their countries or thematic domain
- The project will develop a mechanism of coordination of the CCs Network to guarantee the long term alignment of CCs activities and of common outputs (MVS, curricula, ToT)
- Thanks to the CCs Network, transnational cooperation is enhanced and objectives of the New ERA are easier to achieve
- The CCs Coordination Board of the Network will provide a unified voice for OS and OS actors particularly on providing feedback to the EOSC Working Groups' and TFs outputs regarding training and learning paths

Main message

> The Skills4EOSC Competence Centres Network will ensure the long-term alignment of curricula, ensure the co-creation quality assurance and certifications schemes for skills and materials, and pool expertise to provide rapid and much-needed Open Science training and support. Through a self-governing mechanism, the CC Network, will cooperate and align with activities of the EOSC Partnership and coordinate with relevant initiatives and projects contributing to the development of EOSC.

Communication and engagement channels
- Open communication line via email
- Website
- Webinars

- EOSC events (i.e. EOSC Symposium, EOSC Tripartite events)
- Representation and involvement in the Working Groups
- EOSC Forum platform

5 Channels

The D&E&C strategy will rely on a mix of different channels, that reflect the complexity of the target audiences to be addressed and will take into account both a European/global perspective and the national/local one to maximise the results.

The main **communication** channels foreseen to date are:

1. **Web:** Skill4EOSC website; the partners' institutional websites; thematic OS/EOSC/skills portals.
2. **Social networks:** Skill4EOSC social channels (Twitter, LinkedIn, Academic social media); the partners' institutional social channels; opinion leaders in the consortium, personal social media
3. **Events:** Online live events, webinars and virtual Round Tables; Project workshops; Participation to external events (e.g. conferences, symposia, science and career fairs, etc).
4. **Targeted mailing:** Project mailing lists; Project newsletters; CCs and partner's mailing lists and newsletters.
5. **P2P:** Person to person bi- and multi-lateral meeting exploiting the partners' existing contact networks.

The main **dissemination and exploitation** channels foreseen are:

1. **Training Catalogues and platform:** Moodle platform for the ToT courses (learning.Skills4EOSC.eu), National training catalogues / CC training catalogues; National/regional/thematic knowledge hubs and resource centres (e.g. Nordic Knowledge hub, Italy's OS portal etc); EOSC training catalogue and platform.
2. **OA publications and repositories:** OA Journals; OA platforms with or without peer reviews; Open Access repositories, such as Zenodo[13] and Zotero as references manager[14], Open Research Europe platform to ensure

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[13] Skills4EOSC Community on Zenodo at
https://zenodo.org/communities/skills4eosc?page=1&size=20
[14] Skills4EOSC Group on Zotero

long-term availability and preservation of outputs according to the project Data Management Plan (DMP); Open Software repositories (for the CC SW bundles); Open Educational Resources (OER) repositories (for learning materials); Horizon Results Platform.

The Skills4EOSC's website, www.skills4eosc.eu, was launched on M1 at the Kick off meeting (September 2022) and it represents the central digital hub for communication and engagement.

The website is already entirely navigable from desktop and mobile devices. It provides rich content designed for the identified target audiences and it will ensure visibility to the project's outcomes, which will be broken down for the different stakeholder categories, in the section 'What's in it for me?'.
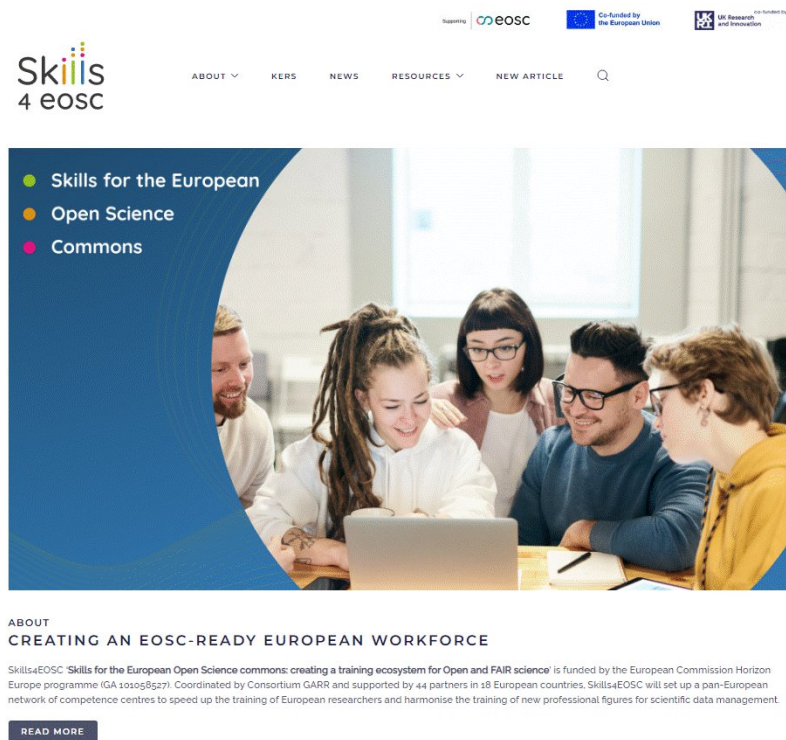
https://www.zotero.org/groups/4912026/elsi_materials_skills4eosc?token=di893xolctnx1z8n3vfjswnab3nj8nklb2gmovf5

The project web site will collect several types of videos material, ranging from interviews to tutorials and to post-event videos. This material will help to disseminate key project contents such as use case stories, key concepts and Skills4EOSC methodology, and more.
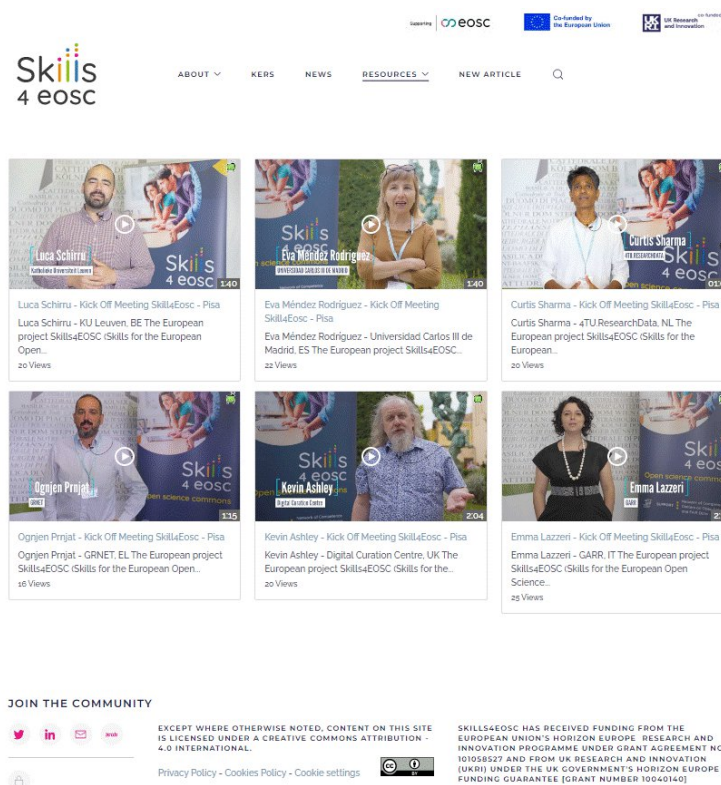
Skills4EOSC events and third party events

On-site events will be organised locally by partners to limit travels (eg: meetings with stakeholders such as policy makers, training to test Skills4EOSC material and methodology, etc...).

In view of the European Year of Skills 2023, the coordinator is planning to organise an event during the Spanish Presidency, in cooperation with EOSC Association and the University of Madrid Carlos III.

A series of Training-of-Trainers events and Skills4EOSC webinars to launch the online consultations and present the results are planned.

Skills4EOSC partners actively participate in relevant third party events as speakers, organising sessions or workshops, presenting posters or giving talks. A non-exhaustive list of the events held to date, is provided below.

| Event title	Typology	Date	Target	Venue	Addedd value for Skills4EOSC
EaPEC 2022	On site event	28-29 sept 2022	NRENs, RIs and local decision makers and senior researchers in the Eastern-Asian Partnership	Baku, Azerbaijan	presenting the project outside its region of influence, seeking sinergies and collaboration with other countries/regions
IBERGRID, Iberian EOSC Workshop	Hybrid	10 Oct. 2022	Iberian Research Communities, R&D for computing services, networking, and data-driven science, EOSC and OS	University of Algarve (UALG) at Campus da Penha	presenting the project outside its region of influence, seeking sinergies and collaboration with other countries/regions
EOSC National tripartite in Georgia	Hybrid	2-4 Nov. 2022	Ministries, RPOs, Research Funding Organisations and the wider EOSC research community.	Ministry of Education and Science of Georgia, Uznadze str. 52, Tbilisi, Georgia	presenting the project outside its region of influence, seeking sinergies and collaboration with other countries/regions
GenOA Week 2022	Hybrid	Nov. 7-11, 2023	Open Science communities, universities	Genova, Italy	presenting the project to the Italian research communities, seeking sinergies and collaboration with RPOs and Universities
Open science, a landscape under construction with a horizon of possibilities"	On site event	Nov 11-13, 2022	Mathematicians, researchers, editors, librarians, developers, etc	Castro Urdiales, Spain	presenting the project outside its region of influence, seeking sinergies and collaboration with other countries/regions

					and different professionals
EOSC Symposium 2022	Hybrid event	Nov 14-17, 2022	EOSC related initiatives	Online + Prague, Czechia	In presence talk & workshop to establish synergies and collaborations
L'atelier technique EOSC-France	National/local event. Hybrid	24-26 January 2023	infrastructures, IT dptmts, researchers	Strasbourg, France	Presenting the projet
TRIPLE Conference 2023	Hybrid	02 February 2023	Training community	Bonn, Germany	presenting the project and gathering additional input for the FAIR-by-design methodology development, activitiy is performed in collaboration with NI4OS-Europe
RDA 20th Plenary	Hybrid	March 21-23 2023 (under organisation)	Researchers, data scientists, policy makers, and data stewards	Gothenburg, Sweden	Project presentation, collection of user needs, alignment and collaboration with RDA Tiger activities.

6 Challenges

Because of its ambitious objectives and of the way the consortium is built, the project has to tackle very specific changes, that are discussed below:

6.1 Large number of partners inside the project, larger number of prospective ones in the wider EOSC area

In order to achieve the objective to reduce the fragmentation of the OS and RDM skills scenario and harmonise curricula and practices at the European level, the project needs to reach a significant critical mass: even if the project outputs were of the highest quality, their wider uptake in all European countries and thematic communities would be doomed without a great inclusiveness in the co-creation methodology and the capacity and flexibility to involve new partners. This is the reason behind the choice of having a large number of organisations as partners and third parties, and while it ensures diversity and the capacity to cover multiple countries and communities, it also brings with it the need of ensuring strategic alignment and a very efficient allocation of resources.
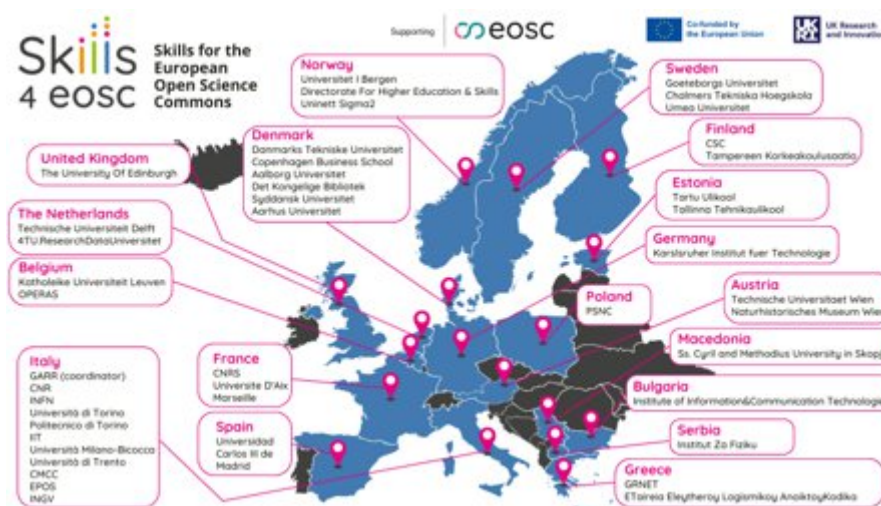
6.1.1 Strategic alignment: VRT

In order to provide strategic alignment with the project partners, Virtual Round Tables (VRTs) will be organized on the frame of WP1 and WP8.

The overall objective of the VRTs is to provide strategic alignment with the project partners, address potential gaps in existing workflows, and enhance alignments, especially in knowledge and experience.

During these VRTs experiences, based testimonials concerning the present working environment contrasted with the anticipated working environment will be gathered through the application of the Data Management Plan and the Code of Conduct. The participants involved are the consortium members and the partner organisations.

The first VRT will take place on 31 March, 2023, from 11 to 12:30 p.m. and it will address issues inherent Competence Centres, financial sustainability and services and will be entitled 'Sustainable development and community building among the partners of Skills4EOSC project'.

6.1.2 Efficiency

Efficiency in the use of these very distributed resources is paramount not to disperse effort. The project will do this by leveraging two elements: (a) a small but centralised team of people with communication background (mainly part of the coordinating party staff and reporting to the Project Manager to ensure the strategic consistency of the communication ("core comms team") and (b) a broad network of communicators who are part of the partners' staff and working having relatively small effort allocated on them ("dissemination network"). The core comms team will provide information about the project progresses and key results to be disseminated, implement a strong coordination and provide ready-to-use or easily customisable resources, guidelines and other tools aiming at obtaining the maximum results with the minimum effort by the broader dissemination network: reuse is one of the points of Skills4EOSC and communication is no exception to it.

Within the guidelines provided (e.g. re. branding and reuse/customisation/adaptation of contents), the communication professionals involved in the dissemination network have a broad discretion in what message, content or results to prioritise, basing on their local communication strategy and the role and interest their organisation has in

the project. For example, this will allow to leverage the different partners' communication strategies and contact network to cover both the international and the national/local levels (e.g. compare the focus of a university, which is deeply rooted in the territory where it is based, with that of an international organisation).

6.2 Multilingualism and g-localisation

The project covers many countries and many languages, and aims to further enlarge its geographical scope. This can pose a challenge in terms of the need for translation, adaptation and localisation of the key messages and contents. Experience tells that the need for localisation/translation to local languages may significantly vary from country to country, with some countries having a more widespread usage of the English language and other where this is less so, but also depending on the target. Translation may result to be not necessary for researchers in most countries (although this also may vary in specific domains/countries) but will be advisable in many when addressing policy makers and civil servants. In other cases, translation might not be enough because of the need to localise concepts and other contents (e.g. policies, practices and laws that vary across countries and may need some contextualisation). In order to ensure time- and cost-effectiveness, this aspect will be carefully evaluated by the core comms team together with local partners, depending on the target, message and communication.

6.3 Multi-Stakeholder environment: scientific & ethical pluralism

The discussion about the multilingualism nicely introduces another challenge; the project works in a multi-stakeholder environment and as discussed above its success strongly depends on the ability to engage with a number of different stakeholders. The discussion about the translation/localisation in national languages can be easily transposed to other differences in language (e.g. formal/vs informal, community-specific Vs generic and technical VS non-technical). All these aspects are part of the

overall planning and must be decided and prioritised based on the situation, country and intended target. As local partners may exploit their knowledge of the national/local situation, so partners that are rooted in a specific scientific community (e.g thematic Research Infrastructures) or stakeholder group (e.g. Research funders) can advise about the best course of action: therefore it is important that the communication team maintains a strong link with them.

7 Action plan: a 360° approach to D&C&E

7.1 All partners are communicators (with the right tools and support)

To achieve the ambitious goals of the project, it is crucial that all partners can develop activities to communicate their achievements in their thematic, national and regional communities and their frames of reference.

To coordinate and support the partners in their communication activities, a "core comms team" was created. This is a small but centralised team of people with communication background who are mainly part of the coordinating party staff. An internal mailing list (comms@lists.skills4eosc.eu) was created for partners to reach this team.

Early in the project, this team proceeded in collecting communication- and dissemination-related contacts among the partners' network. These contact not only include people who are directly involved in the project, but also communication and dissemination professional who are not, but could, with the provision of a modicum of information (e.g. simple project introduction, guidelines and materials, periodical updates) be part-time or even occasionally involved in helping disseminating the project. The contact collection covered different communication and dissemination aspects including press relations, social media, technical writing and content editing and other communication contacts that are not included in the previous ones (for example, designers, event organisers or other roles for which at the moment the project had no specific actions but partners may involve in the loop for later activities –e.g. if planning to organise a local event on the project at a later stage). Then a second mailing list (dissemination@lists.skills4eosc.eu) was created to easily reach out to this broad network of communicators ("dissemination network").

created, with the contact person in charge of communication of each partner, in order to share with the Communication Team:

- designing and implementing a comms plan

- creating communication materials
- providing professional support/advice for their communication activities
- keeping track of the comms/dissemination activities for reporting purposes

Brand management and templates

At the very beginning of the project, requirements for the project's visual identity were collected, basing on which different logos were proposed and the final Skills4EOSC logo was selected by the partners through an online survey. The project branding has the aim of building a clear visual identity and attracting stakeholders and communicating the unique project's value proposition.

Then in order to align the project branding, with the EOSC-A co-branded strategy, the EOSC co-branded logo, launched in June 2022, flanked by the text 'Supporting'.

The folder include also ready to use logos of the project and supporting the EOSC logo, as well as EU and UKRI logos and powerpoint template for presentations.

To provide the brand identity of Skills4EOSC, making it distinguishable across communication activities, the Word Document, Deliverable, and PowerPoint presentation templates were developed and are downloadable in the shared Workplace.

- Ready-to-use materials

- To support partners in communication and dissemination activities ready-to-use branded materials were produced:
- Graphic materials, such as a vectorial map with the project partners country highlighted, graphic icons and project logo on different backgrounds and roll up banners to be printed.
- Press release: of the kick-off meeting and other project event
- Deliverable and PowerPoint templates
- PowerPoint presentations, to be re-used and adapted by the partners.

Other materials are planned to communicate key project results and products. This includes in particular the creation of Infographics, which were identified by most of the technical activities as one of the preferred supporting materials.

Guidelines & Processes

Another key tool developed to support the 360° comms approach is the 'Project Starter Kit' , a document providing guidelines for all partners who want to get to know the tools and project methodology and generally for all partners who can find the main reference document and instructions for work and communication in one place. The project includes communication guidelines and a menu of available support services. It is a living document and it will be updated throughout the project.

Professional support

The project has dedicated comms personnel ("core comms team", see above for a discussion) including different communications skills, that take care of:

- designing and implementing a comms plan;
- creating communication materials;
- providing professional support/advice for your communication activities;
- keeping track of the comms/dissemination activities for reporting purposes;

All partners can reach out to the team with their requests/questions/suggestions at comms@lists.skills4eosc.eu

As mentioned above, since the start of the project, partners were requested to involve the people in charge of communications in their organisation to maximise the dissemination of Skills4EOSC events, news, press releases and materials. These people were engaged through dedicated introductory events (Skills4EOSC Inductions, see below § 7.4) and through the dissemination@lists.skills4eosc.eu mailing list. Partners can add new contacts whenever they want (and ask inductions or re-use the induction materials to provide them a general introduction of the project and its key concepts).

The comms team needs to keep track of the communications/dissemination activities partners are carrying out both for reporting purposes and to provide support if needed. All partners can include new activities in a

dedicated space in the project workplace through a project calendar and shared spreadsheets dedicated to the activities. Relevant activities include:

- organisation of regional/national/local events where you envisage a Skill4EOSC participation
- participation in any kinds of external events (from international to local) where you envisage a Skill4EOSC participation
- publishing of content/news items on paper/online magazines, newsletters, blogs, websites, either published by your organisation or third parties
- submission of articles to journals etc

Detailed guidelines are available to parters for reporting on planned and additional activities and for including new ones they would like to carry out in the future, and to ask for support for the latter ones.

Support includes generic requests like directions on the available resources and how to customise them, and more specific ones, like getting:

- a speaker for a local event event,
- an editor for a publication/press release/news or other material,
- tailored materials to distribute in a specific occasion/showcase a particular project aspect
- proof-reading for an existing material.

Additionally, partners are requested to inform the comms@lists.skills4eosc.eu if they plan to give the presentation at a public, ideally at least a week before, to make sure it is promoted on the project's social media. Information should include event title, date, time, and topic of the speech and optionally. the speaker's pic and twitter/linkedin contact details if they're ok with being tagged (not needed if they already provided them once and they don't wish to change their choice).

Moreover, partners may ask support for specific comms projects (e.g. campaingns, infographics, events etc that were not originally foreseen in the communication plan). These activities will be addressed and prioritised based on available resources.

7.2 Visual identity Kit and communicator's toolbox

A visual identity kit was realised with ready to use artworks as well as logo and other resources in the folder: https://workplace.skills4eosc.eu/Products/Files/#486

New materials are being developed and the folder content will increase throughout the project. These are either devised by the comms team or produced upon the WP leaders' or other partners' request, so partners are advised to visit the resources folder from time to time and send requests or suggestions for new materials to comms@lists.skills4eosc.eu in case those available do not fit their communication needs. This will help the comms core team to prioritise the realisation of planned materials and consider new ones that were not originally planned to better address the needs of the project consortium.

7.3 Train the communicators!

Communication professionals are not the sole nor, as a matter of fact, the main responsible subjects for project communication: it is often the project technical staff, working on the different project activities who have more time and effort available to disseminate the project results, and justly so as, being the ones who implemented them, they have an in-deep knowledge of them. Unfortunately, however, this knowledgeability is not enough to make their presentations as effective as they could be and this is why as a part of our C&D&E plan we plan to provide dedicated training and guidance to non-communication staff on topics like:

– Public speaking
– Effective communication techniques
– Slides preparation
– Data visualization and its use in communication

7.4 Inductions: because you can't disseminate what you don't know well enough

The concept behind the Skills4EOSC inductions is that people who have a good level of information about the overall objectives and activities of the project they work in are more confident and better motivated in their general work and in particular in the activity of communicating the project to third parties. This is even more so in case of people who only have a limited part-time involvement, as it is the case for many of our project workers, who may otherwise lack the time to get information on activities that are not immediately related to their task. Among this category also falls the extended dissemination network, whose participants also have another disadvantage: the fact that they do not necessarily know anything about Open Science, Research Data Management and FAIR.

Induction webinars were hence designed to close this information gap and inform newly onboarded partners and the wider communication network about the project scenario, general objectives and activities. Two induction webinars were held in December 2022 and January 2022, and others may follow with main updates on the project or upon request.

The programme provides a 101 presentation about OS, RDM and FAIR, an introduction to the Skills4EOSC project and communications guidelines. Related material and recordings are available in the Skills4EOSC Zenodo community:

- https://zenodo.org/record/7470587#.Y6ODo3bMK5c
- https://zenodo.org/record/7470622#.Y6OG3XbMK5c

8 The D&C network

8.1 Social media policy

In addition to the official website, the project is also using Linkedin and Twitter accounts to regularly update the audience about the project status and activities.

Through these social media channels the project wants to:

- raise awareness on the Skills4EOSC project;
- drive traffic to the official website;
- generate new leads;
- increase multi-actor engagement;
- build a lively community of practice;
- increase media exposure;
- learn from new initiatives.

Both feeds from Linkedin and Twitter are displayed on the project website so that all information published also appears on the website home page.

News regarding the project activities or other relevant information not strictly concerning the project are **published** on the project's Linkedin and Twitter accounts by the GARR team.

Project partners will work to expand the reach of the social media accounts by inviting interested stakeholders within and beyond their network.

In addition, the **project partners**' own social media channels will be used to spread information and update on project activities and main results. All partners will be involved in sharing information through social media, with the aim of reaching a wider public.

As a general rule for all partners, the *project website* is to always be mentioned when posting on social media and the same *hashtag* has to be used by partners to maximise traffic to the website. When posting from other social media accounts, the *project accounts should be tagged*. Partners are

also encouraged to *tag other members of the consortium* to enable the visibility of the posts.

Linkedin - https://www.linkedin.com/company/skills4eosc/

Twitter - https://twitter.com/Skills4Eosc

Skills4EOSC hashtag: **#Skills4EOSC**

Other hashtags to use in messages: #openscience #datastewardship #lifelonglearning #digitalupskilling #eosc #HorizonEU
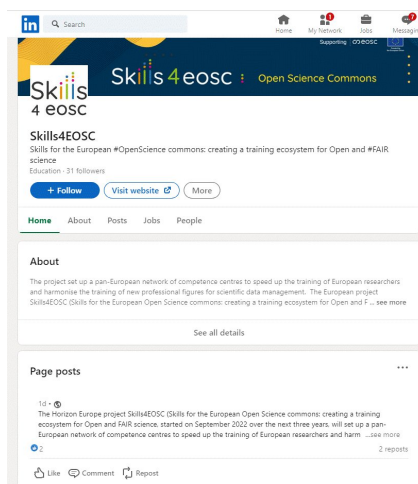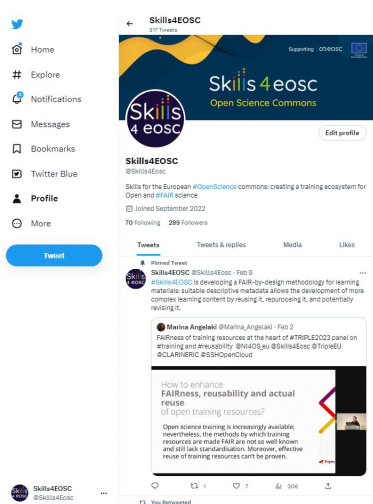
9 Engagement strategy

The project's overall goal is to unify the "current training landscape (…) in order to accelerate the upskilling of European researchers and data professionals in the field of FAIR and Open Data, intensive-data science and Scientific Data Management". Against this background, T8.1 "Stakeholder engagement" aims to define and implement an multi-actor engagement strategy in order to "mobilise key stakeholders to co-create, validate and promote the adoption of key project outputs". In accordance with the proposal, two main approaches are to be taken: A bottom-up approach to engage researchers and their communities and a top-down and responsible approach to distribute project results via e.g. policy and decision makers, funding bodies or University Networks. In addition, the project partners' / WPs' / tasks' needs are taken into account with respect to stakeholder engagement. The stakeholder engagement plan therefore is a living document that will be evaluated and - if needed adapted - on an annual basis.

Work in the context of the engagement strategy can be roughly divided into three phases:

- In the first phase, the plan and the strategy are created in the form of a document. This contains descriptions of the stakeholders, an action table per stakeholder and a well argued prioritisation of both stakeholders and actual engagement activities. The action tables do not only include engagement activities and expected results, but also list all project partners' who are involved in the activity, a rough timeline as well as success criteria to facilitate the evaluation of activities. At the time of writing this Deliverable, T8.1 is working on this first phase. Ideally, the Stakeholder Engagement Plan should be completed by the end of May 2023 so that the second phase can be launched in June 2023.
- From the end of June 2023 onwards, the actual engagement activities will start, thus initiating the second phase that will continue at least up to August 2023.
- The focus of the third phase is on the distribution of results, which will require close cooperation with T8.6 "Communications and outreach".

Phases two and three are not strictly separated, but overlap. As already mentioned, activities should also be evaluated on an ongoing basis in order to be able to react adequately to current circumstances.

This approach is also reflected by the timeline for C&D&E that integrates the one of the project deliverables and milestones:

M3	M6	M9	M12	M15	M18	M21	M24	M27	M30	M33	M36
	Phase 1 engagement strategy design			Phase 2 engagement activity				Phase 3 result distribution			
	D8.1 and D8.3 delivered	Engagement strategy first version ready	First draft of exploitation strategy		D8.4 delivered, engagement strategy update			Exploitation and engagement strategy update			D8.5 delivered

Timeline of project deliverables and phases for the engagement and exploitation activities within the project

Moreover, the 'D8.1 MoU or Letter of Intent on key cooperation topics[15]', delivered in February, presents the collaboration framework to facilitate the fostering of synergies and engagement with EOSC-relevant projects and initiatives, as well as with interested Parties.

Skills4EOSC Consortium have taken note of the Vademecum[16] and consider it as a possible form of cooperation; the coordinator and the Comms team are participating in the EOSC Forum and in the monthly HE Communication and Engagement WG Call to coordinate D&E&C activities with the EOSC Association and the other INFRAEOSC Projects.

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[15] See at https://doi.org/10.5281/zenodo.7684500

[16] Accessible via: https://forum.eosc.eu/

Skills4EOSC co-creation methodology

Since there are many differences at the national/regional levels with EOSC readiness and how research and education are planned, prioritised and funded, Skills4EOSC adopts a participatory approach in all its activities to converge on outcomes that will be effectively embraced in different countries. We will follow a bottom-up approach by leveraging activities that are already in the focus of the CCs and coordinates new developments by consensus and co-creation instead of proposing a top-down model that can only work on paper. This approach will facilitate the adoption and sustainability of the project outcomes.

Each Skills4EOSC output will be obtained through a co-creation procedure.

The steps for the co-creation are:

1. **Task and WP level**

Each task and WP will work to obtain a first version of the project output. Once the WP leader has approved the first version, this will be ready to be presented to the Skills4EOSC consortium

2. **Consortium level**

The first version of the Skills4EOSC output will be shared with the whole consortium with the aim of

- Collecting feedback
- Highlighting gaps
- Identifying relevant stakeholder for the next phase

The output will be shared in digital form and possibly presented through live interactive webinars. Feedback and comments will be collected offline via Mentimeter, EUSurvey and by discussion and Mentimeter during live events.

3. **Stakeholder and Community level**

Once Consortium feedback are incorporated, a version of the output can be shared with relevant key stakeholders (EOSC Partnership, EOSC-A Task Forces, Community fora, etc..) and the overall public

This can happen through:

- Live events (webinar+mentimeter+EUSurvey)
- Offline feedback (publication in Zenodo+dedicated page in project website+EUSurvey for feedback collection)

To better coordinate the activities on landscaping and consultation carried out by the different tasks in the project a transversal Working Group has been created. Its goal is to design a single methodology to collect information from consortium partners about the different aspects touched in your tasks and WP, coordinate messages inside the consortium (so we do not send too many emails asking to complete surveys, spreadsheets, etc) and coordinate the consultation and collection of information/feedback outside the consortium.

The rationale behind this, is the amplitude and diversity of Skills4EOSC consortium, the idea being that most of the knowledge needed for the different activities can be found within the consortium.

After this work phase is completed, the findings are ready to be published and to be presented to the EOSC broader community with a request for comments and feedback.

In Skills4EOSC, we adopted Zotero Library for sharing references resources collected in landscaping activities and EU Survey platform for collecting online feedback, on specific project outputs.

10 Exploitation plan: a living plan

One of the biggest strength of the project lies in the expertise and diversity inherent in the consortium members, applying open science skills development in the Member States. Partners are well distributed geographically and play key roles in their Open Science environment at a regional or national level. have knowledge of local and regional programmes and contacts with key decision makers which allows influencing the status quo at these levels. Partners also have a strong track record as 'doers', not only at the direct national and regional levels as well as with European and global reach, and are key players in the broader ecosystem of EOSC and Open Science initiatives, many of them being active members of the EOSC-Association.

Based on the forecast of the project's results, this preliminary Exploitation Plan describes the exploitation activities that will be developed during the life of the project, collecting all the relevant exploitation information. This report will be updated continuously throughout the project's lifetime. A final Exploitation Plan will be presented at the end of the third year of the project (M36), including the list of the key exploitable results, the joint exploitation objectives as well as the partner-specific exploitation plans for each result.

The Skills4EOSC consortium counts on several target audiences of the value chain: science professionals, public sector, academy and research, industry, OS and EOSC actors; providing an adequate approach and ensuring outcome exploitation will come out of the project.

To maximise the exploitation of project outputs, direct engagement will be sought with the pan-European entities (EOSC Actors and OS advocates) and, through the national CC networks, with national stakeholders and programmes and inter-regional level to promote key project results (e.g. harmonised curricula/skills, certification framework/materials) in the relevant programmes (main target group: Public sector and secondarily Academia and Research).

The aim of the final Exploitation Plan will be to describe the activities to be carried out and the channels that will be used to exploit the project results and promote the transfer of the project results beyond the consortium to the target end-users, stakeholders, the scientific community, and society in general.

The following table the preliminary Exploitation Plan is presented and includes:

- list of the key exploitable results, presented by a general description of the expected result;
- exploitation pathway that can be used by the project partners as a guideline for formulating their exploitation plans. The next steps, to update in M18 and M36, will be the identification of the most appropriate strategy and the proposed exploitation route for each exploitable result;
- the primary and secondary targets of each KER;
- the expected KPI.

This plan will be reviewed and updated regularly, to present the partners-specific exploitation plans, which will be included in the final Exploitation Plan at the end of the project. The final objective is to establish, from the beginning of the project, the goals and the strategies for partners to follow when developing the activities related to the transfer of knowledge and exploitation towards end-users.

Moreover, following the Horizon Europe guidelines of dissemination and exploitation a Key Exploitable Result template for each relevant output will be filled and shared via the EC Horizon Results Platform portal, making project results more visible to the European audience.

Key Exploitable Results	Exploitation pathway	Targets	Expected KPI
Pool existing expertise tailor a ToT programme and a trainer accreditation framework	Accreditation of individuals and organisation as OS training providers .	**Primary**: prospective trainers; CCs, training providers; members of EOSC A. **Secondary**: researchers, data professionals, young career researchers	CCs take up regular ToT courses during project lifetime [KPI:# of ToT sessions for CC experts (13); #of CCs involved (15); # of CC trained experts (200)]
Mapping of OS- profiles and definition of Minimum Viable Skillset (MVS) for each of them	Harmonised MVS used to design academic and lifelong specialisation courses	**Primary**: OS professionals, trainers, policy makers, funders, university networks, **Secondary**: Universities, other Research Performing Organisations, other training providers	Standardised CVs for data stewards based on MVS used in professional training [KPI: # of universities or national bodies adopting the curriculum for data stewards (20)] University courses include "OS and data intensive essentials" in courses based on defined MVS [KPI:# of universities/RPOs that include "OS essentials" in their curricula (20)]
Shared and trusted framework for competences recognition for Academic and lifelong learning	Standardised soft certifications (e.g. open badges) are adopted to accredit OS competences acquired through lifelong training	**Primary**: researchers and early careers, data stewards, data curators, legal experts **Secondary**: universities, research organisations, industry	The framework is adopted by CCs and other professional training providers [KPI: # of Competence centres/initiatives and # of universities/RPOs piloting the MVS and competence recognition (15)] Framework is recognised by employers [KPI: #of endorsing organisations (60)]
F A I R - b y - Design learning resource**s** methodology, licensing for reuse	CCs pool and reuse FAIR-by Design learning materials	**Primary**: CCs and OS trainers in a wide range of organisations and communities **Secondary**: trainees and others interested in learning materials (including self-	Increasing availability of FAIR-by-Design learning materials in EOSC Portal Reuse of materials for new courses [KPI: # of FAIR-by-design learning materials reused one or more times (10)]

		learning)	
Coordination network of Data Competence Centres activated at the national or institutional level.	Certification frameworks, CVs and learning materials adopted by CCs across Europe	**Primary:** existing CCs at the national/ institutional/ thematic level **Secondary:** newly built CCs and organisations willing to implement it.	CCs' Steering body and agreement on rules and procedure to collaborate [KPI: # of CC initiatives joining the network (10)]
Coordination with key players at the national level	Pilots	**Primary:**Policy Makers, funders, RPOs, members of EOSC A.industrial partners **Secondary:**Agencies (e.g. regions); University networks	Mobilisation and engagement: of stakeholders [KPI: # of involved research communities (10); of research professionals (100); RPOs and Universities (70) civil servants (50); funders (10); university networks (2);]
OS 4Policy programme	CC offer courses at national level	**Primary:** policy makers, civil servants **Secondary:** researchers and knowledge brokers, new CCs	Participation of civil servants/policy makers in trainings that include "OS and data intensive essentials" [KPI: # trainings for policy (15); # of trained people (150)]

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Co-funded by the European Union

UKRI UK Research and Innovation
co-funded by

11 References

No	Description/Link
R1	European Commission, Directorate-General for Research and Innovation, Indicators for promoting and monitoring responsible research and innovation : report from the Expert Group on policy indicators for responsible research and innovation, Publications Office, 2015, https://data.europa.eu/doi/10.2777/9742
R2	Burget, M.; Bardone, E.; Pedaste, M. Definitions and Conceptual Dimensions of Responsible Research and Innovation: A Literature Review. Sci. Eng. Ethics, 2017, 23, 1–19. [Google Scholar] [CrossRef] [PubMed]; RRI Toolkit at https://rri-tools.eu/
R3	Skills4EOSC Community on Zenodo at https://zenodo.org/communities/skills4eosc?page=1&size=20
R4	Skills4EOSC Group on Zotero https://www.zotero.org/groups/4912026/elsi_materials_skills4eosc?token=di893xolctnx1z8n3vfjswnab3nj8nklb2gmovf5
R5	Roger A. Pielke Jr; The Honest Broker: Making Sense of Science in Policy and Politics, Cambridge: Cambridge University Press, 2007
R6	Vademecum HE EOSC-related Projects. A Handbook for Effective Collaboration within the EOSC co-programmed Partnership, Brussels, 22 September 2022; https://forum.eosc.eu/