Open and Universal Science Project (OPUS)

OPUS helps reform the assessment of research towards a system that incentivise researchers to practice #OpenScience

WP1
STATE OF THE ART ON AN ECOSYSTEM FOR OPEN SCIENCE

Deliverable 1.1:

Initial State of the Art on Open Science Initiatives

Horizon Europe Programme 2021 – 2027
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Responsibility

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1. Introduction

1.1. Background and Definitions

The OPUS project was funded by the 2021 Horizon Europe call to support changes in the assessment of research and researchers to reward the practice of open science[1].

In this context, OPUS's main goal is to develop coordination and support measures to reform the assessment of research(ers), towards a system that incentivises and rewards researchers to take up practices of providing open access to research outputs, early and open sharing of research, participation in open peer-review, measures to ensure reproducibility of results, and involving all stakeholders in the co-creation of research and innovation agendas and content.

The project work-plan, running from 01 September 2022 to 31 August 2025, is designed to:

- Conduct a comprehensive state-of-the-art on existing literature and initiatives for Open Science;
- Develop a comprehensive set of interventions to implement Open Science at Research Performing Organisations (RPOs) and Research Funding Organisations (RFOs);
- Develop realistic indicators and metrics to monitor and drive Open Science at RPOs and RFOs;
- Test the interventions and indicators and metrics in pilots at RPOs and RFOs;
- Utilise a stakeholder-driven feedback loop to develop, monitor, refine, and validate actions;
- Synthesise outcomes into policy briefs and a revised OS-CAM2 for research(er) assessment.

Within the OPUS project, we use the term "Open Science" to cover all academic disciplines and all stakeholders (academic, industrial, policy makers and funders), as well as a wide range of practices to open up activities and outputs of the research life-cycle. These practices include open access to publications, data that is made Findable Accessible Interoperable Reusable (FAIR) and open, open source software, open methodologies, open peer review, and citizen science. This also includes open infrastructures and open digital tools to facilitate researchers in practising OS.

1.2. Introducing the State-of-the-Art on Open Science Initiatives

OPUS Work Package (WP) 1 - State-of-the-Art on an Ecosystem for Open Science conducted an analysis of initiatives and literature to reform research(er) assessment and incentivise and reward Open Science.

This WP kicked off the OPUS project, with a view not only to landscaping content, but also to providing direct input to:

- Identification of incentives for Open Science (Rewards and Incentives for Researchers) – project WP2;
- Identification of metrics and indicators for Open Science (Rewards and Incentives for Researchers) – project WP3.

Within WP1, Task 1.1 ran a State-of-the-Art on Open Science Initiatives. This task covered landscaping of:[2]

- framework programme projects linked to Open Science;
- key experts, organisations and networks linked to Open Science.

It also produced a stakeholder engagement plan, focusing on means of engaging key target actors to support the stakeholder input and validation sessions in WP2 and WP3.

Deliverable 1.1 "Initial State of the Art on Open Science Initiatives" has the overall objective to present the results of this landscaping. It provides an initial structured input to the project's overall objective to "*develop coordination and support measures to reform the assessment of research and researchers at Research Performing Organisations (RPOs) and Research Funding Organisations (RFOs) towards a system that incentivises and rewards researchers to practise Open Science*".

[1] https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-widera-2021-era-01-45

[2] Originally, Task 1.1 also included landscaping on trust/mis-trust in relation to Open Science. However, this was moved to Task 1.2 – literature review, as activities were better suited in that task.

Deliverable 1.1 was developed as a collaborative effort between all partners involved in WP1, with one coordinating partner, sub-task leaders and contribution from all partners. The subsequent chapters of this deliverable are structured as follows:

- Chapter 2 - Landscaping of Framework Projects
- Chapter 3 - Landscaping of Experts, Organisations and Networks and Schemes
- Chapter 4 - Stakeholder Engagement Plan
- Chapter 5 - Conclusions
- Annexes

2. Landscaping of Framework Projects

2.1. Project identification and selection methodology

Within the context of OPUS, a Framework Project was defined as an action funded by the European Commission framework programme for research and innovation. This included actions funded under the Horizon 2020 programme (2014-2020) and the Horizon Europe programme (2021-2027).

For actions funded under the Horizon 2020 programme (all closed or closing), the objective was to review results and outputs with a view to providing inspiration to subsequent OPUS WPs.

For Horizon Europe actions (nearly started or about to start), the aim was to identify relevant projects, in order to promote synergies and collaborations throughout activities within the OPUS project.

2.1.1. Methodology for Landscaping Horizon 2020 projects

The following methodology was applied in order to review relevant Horizon 2020 projects:

Phase 0:

The following work-programmes were identified as having potentially relevant projects:

- Spreading Excellence and Widening Participation;
- Science with and for Society;
- Marie Skłodowska-Curie Actions;
- Research Infrastructures.

The Work Programmes for 2014-15, 2016-17 and 2018-20 were analysed by the sub-task leader and WP1 coordinator, with a final check by the project Scientific Coordinator. Additionally, in order to find projects that explored the links between Open Science and gender equality, and Open Science and industry practices, two more expert WP1 partners were involved in the analysis. Each analysis was carried out by systematically reading relevant topic calls, to then identify the projects funded within these on the Cordis website[3]. The funded projects were then accessed using the search engine of the aforementioned website, selecting the ´Programme´ filter (Horizon 2020) and copy-pasting the relevant topic call in the Cordis search bar. Once the engine had produced results, the topic call could be accessed by means of scrolling down on the first project result and clicking on the topic call itself, 'Topic(s)'. On the tab of the topic call, the full list of projects funded within the topic call was found when clicking on ´See all projects funded under this programme or topic´. This method was applied to all relevant topic calls in each Work Programmes.

Projects were selected against the following initial criteria:

1. Projects funded by the Horizon 2020 programme 2014 to 2022 and finishing after 2017 (including on-going projects, with available results), within the following work programmes: Spreading Excellence and Widening Participation / Science with and for Society / Marie Skłodowska-Curie Actions / Research Infrastructures; AND
2. Projects with content related to Open Science in Research Funding organisations (RFOs) OR Research Performing Organisations (private or public RPOs); AND
3. Projects with easily available documentation (i.e. Open source deliverables, languages with which WP1 participants are familiar).

The selected projects' list was shared among the OPUS consortium and Advisory Board members, who had indicated an interest in WP1 activities.

The projects that were considered relevant for the OPUS project were added chronologically to a shared Excel sheet. The result was a list of 32 projects, funded by the Science with and for Society and Research Infrastructures work programmes. Projects within the given topic call that were not considered relevant for OPUS were added to another Excel sheet. 66 projects were considered not directly relevant to OPUS during Phase 0 (see Annexe 1 – Framework Projects not selected for review for full list).

[3] https://cordis.europa.eu/search/en

No relevant projects were identified in the Spreading Excellence and Widening Participation Work Programmes. Concerning the Marie Skłodowska-Curie Actions (MSCA), the sheer volume of individual actions made it impossible to produce a full review of funded projects. As such, the landscaping activity turned to OPUS partner MCAA for advice. MSCA include Open Science as a transversal element to its actions, and mostly engage in Open Science without studying it directly. As a consequence, finding relevant projects considering the volume and the scope of the actions, was outside the capacity of WP1.

Phase 1:

An initial review of the selected projects was carried out to identify potential relevance and input to OPUS. Projects were analysed against the following secondary criteria:

1. Project provides specific input to OPUS in terms of:
    a) Open science interventions;
    b) Open science metrics and indicators;
    c) Research Assessment/Rewards and incentives;
    d) Precarity and open science;
    e) Gender and open science;
    f) Industry and open science;
    g) Trust and open science

If the answer is NO to all of the above, the project is not reviewed further.

OPUS partners involved in WP1 were allocated a number of projects to review, proportionally to allocated Person Months. Using a common template, they screened available material to identify:

1. Brief overview of the project
2. Specific elements of interest for OPUS
3. Any specific input on “rewards and incentives for researchers”?
4. Recommendations for WP2 (initiatives?)
5. Recommendations for WP3 (indicators and metrics?)
6. Any policy related input for WP5?
7. Any proposal for further analysis? Any other points of interest?

Where projects produced potentially relevant content for any of the above, it was recommended for the final, full review (phase 02). The result was a list of 18 projects. Those projects that were not considered sufficiently relevant for OPUS after phase 1 (14) were added to the same ‘not selected’ list (see Annexe 01), making a total of 80 not selected projects.

Phase 2:

A full landscaping of the 18 projects was carried out, with a view to providing practical input to WP2/WP3. WP1 partners were again allocated to projects (Projects listed in Chapter 2.2. Overview of landscaping from selected Framework Projects). Partner allocation differed from Phase 1, in order to ensure different perspectives on content. Partners undertook in-depth screening of deliverables and outputs available on-line.

The common template prepared for this phase required the following information:

A. If the phase 1 review identified possible INTERVENTIONS of interest (relevant to WP2): Details of the intervention and how it relates to OPUS, where it has been tested / Link to available material;

B. If the phase 1 review identified possible INDICATORS or METRICS of interest (relevant to WP3): Details of the indicators / metrics and how they relate to OPUS, where they have been tested / Link to available material;

C. Any other points of attention relevant for OPUS (e.g. mutual learning exercises /action plans for RPOs or RFOs/ broader topics on Trust and Open Science other than interventions...)?

D. If the phase 1 review identified possible policy input (relevant to WP5): Details of the policy input and how it relates to OPUS / Link to available material;

E. Experts and literature: list of any expert(s) involved in the project that should be invited to OPUS expert group and reasons for suggesting / list of any relevant literature.

Phase 3:

The final phase covered a comparative analysis and merging of information. In this phase, the WP1 coordinator and sub-task leader went through all reviews with a view to:

- preparing comparative results (as described in 2.2. Overview of landscaping from selected Framework Projects);
- informing other partners of relevant input;
- sharing full content with WP2, 3, 4 and 5 coordinators as practical input to subsequent project phases.

2.1.2. Methodology for Landscaping Horizon Europe projects

The following methodology was applied to review relevant Horizon Europe projects:

Phase 0:

The following work-programmes were identified as having potentially relevant projects:

- Widening Participation and Strengthening the ERA;
- Research Infrastructures.

The Work Programmes for 2021-22 were analysed by the sub-task leader and WP1 coordinator, with a final check by the project Scientific Coordinator. The same method applied to analyse the Horizon 2020 Work-Programmes and subsequent projects was applied (see method explained on 'Phase 01' of the Horizon 2020 analysis).

A list of projects was prepared, against the following initial criteria.

1. Projects with explicit content related to Open Science in Research Funding Organisations OR Research Performing Organisations.

The result was a list of 18 projects selected, and 11 projects not selected (see Annexe 3 – Horizon Europe Projects for the full list).

Phase 1:

The WP1 coordinator and sub-task leader analysed the projects to identify the content, the names and contact details of the coordinators and key partners. The details were integrated into the list of the Experts to be contacted for the OPUS expert groups (as described in As detailed in subsequent chapters, a number of criteria were set in order to define the scope of the OPUS state of the art review. One important criteria refers to the geographical scope of the OS networks/Organisations and schemes. The decision was taken to focus only on initiatives covering more than one country and not on initiatives developed on a purely national level. It would have been beyond the reach of the state of the art to analyse initiatives in individual member states. As such, the identification of networks that engage national authorities directly *(see for example UNESCO, EOSC, CoNOSC and the National Open Access Desks – NOADs, all described in Chapter 3.3. Methodology and results of landscaping of Networks, Organisations and Schemes*) was selected as the most effective means of discovering and connecting with relevant national initiatives.

3.2. Methodology and results of landscaping Experts).

2.2. Overview of landscaping from selected Framework Projects

This section presents an overview of the landscaping of the 18 projects funded by Horizon 2020.

Project Name	Duration	Brief overview	Specific elements of interest for OPUS
Gender Diversity Impact – Improving research and innovation through gender diversity **(GEDII)**	1 October 2015 - 30 September 2018	GEDII developed a reliable diversity measure that is sensitive to power, status and information sharing differentials within teams and across public & private organisations: the Gender-Diversity-Index (GDI). The GDI should provide clear and comprehensive evidence for the link between gender diversity and research performance.	GEDII was selected as potential input to the link between gender equality and OS. The GDI, as a monitoring and assessment tool for research teams, could potentially be a useful tool for WP3.
New Understanding of Communication, Learning and Engagement in Universities and Scientific Institutions **(NUCLEUS)**	01 September 2015 - 31 August 2019	NUCLEUS focused on embedding sustainable Responsible Research and Innovation (RRI) within the governance structures of Higher Education Institutions across Europe. It developed an Implementation Roadmap for RRI and evaluated its performance in practice. Over 26 renowned universities and scientific institutions took part in the project.	The RRI Road Map includes a reference to elements of OS, such as OA. Potentially relevant interventions for RPOs in WP2 may be found in this context (in relation to research careers, rewards, incentives...).
Piloting RRI in Industry: a roadmap for tranSforMAtive technologies **(PRISMA)**	1 August 2016 - 31 July 2019	PRISMA conducted pilot studies with 8 companies to integrate RRI into their innovation process and business practices, including a gender dimension. PRISMA then developed a roadmap to help companies to integrate RRI in their businesses. Technological fields included synthetic biology, nanotechnology, self-driving vehicles and IoT.	The RRI approach (Road map and tool kit) touches on OA in industry, potentially providing input to the industry practices and OS link that the OPUS project explores.
RoadMAPs to Societal Mobilisation for the Advancement of Responsible Industrial Technologies **(SMART-map)**	1 May 2016 - 31 October 2018	SMART-map connected industrial players with actors from research and civil society organisations, to establish innovative formats of collaboration and define and pilot roadmaps (SMART Maps) for responsible development of technologies and services in 3 fields. Collaborative dialogues were used to co-design the SMART Maps.	Based on the principles of RRI, the project could serve to explore the link between industry and OS through the SMART Map tool, helping business address issues of social and environmental responsibility in their innovation processes.
Fostering Improved Training Tools For Responsible Research and Innovation **(FIT4RRI)**	1 May 2017 – 31 October 2020	FIT4RRI is based on the premise that there is a significant disconnect between the potential contribution that OS and RRI could play in helping RFOs and RPOs to manage science's rapid transformation processes, particularly related to science in society. FIT4RRI worked on skill development and embedding RRI/OS practices institutionally.	FIT4RRI carried out four experiments to observe RRI and OS in action, thus generating knowledge on RRI-related processes (barriers, drivers, resistances, interests and values, feasibility and transferability conditions, etc.).
Open Responsible research and Innovation to further Outstanding kNowledge **(ORION)**	1 May 2017-30 September 2021	ORION explored ways in which RPOs/RFOs in life sciences and biomedicine open up how they fund, organise and do research. It sought to trigger institutional, cultural and behavioural changes, targeting researchers, management staff and leadership. It considered: stakeholder engagement / risk management / citizen science.	The project developed open experiments and Action Plans (APs) to embed OS, containing interventions (possibly relevant for WP2) carried out in 4 RPOs and 2 RFOs. Some APs include performance indicators (possibly relevant to WP3).
LIVING INNOVATION - Implementing RRI through co-creation of smart futures with industry and citizens **(LIV.IN)**	1 May 2018 - 31 October 2021	LIV_IN worked with industry and 1 RPO to co-create more responsible approaches to innovation in the area of smart future living. It followed an opportunity oriented approach in order to activate industry leaders, experts and citizens to experiment with responsible ways of co-creating innovation, to build capacity and develop cross-sector tools.	LIV.IN created LIV-IN Labs (co-creation workshops) as a space for exchange, experimentation and learning about co-creating innovations. It addresses the link between OS and industry (citizen science & participative research processes).

Fostering the practical implementation of Open Science in Horizon 2020 and beyond **(FOSTER +)**	1 May 2017 – 31 April 2019	FOSTER+ promoted practical implementation of OS - activities targeting academic staff, young scientists and policy-makers. It considered life sciences, social sciences and humanities. It developed advanced, discipline-specific materials (including an OS Toolkit and Trainer Bootcamp) to build capacity for practical adoption of OS.	FOSTER+ sought to promote a culture change within RFOs/RPOs and facilitated engagement with OS practices. This is relevant for OPUS as it seeks to incorporate OS in research assessment, make OS practices the new normal and reward them.
Fostering a Next Generation of European Photovoltaic Society through Open Science **(GRECO)**	1 June 2018 - 31 May 2021	GRECO conducted a series of pilots to test how open science tools could shape the development of Photovoltaic (PV) products. GRECO contributed to understanding the difficulties that technical researchers have when trying to adopt OS, in relation to a specific technology, and to motivate researchers to be more open.	GRECO includes a practical guide for researchers and tests OS approaches, addressing researcher's doubts, concerns, and possibly enlightening the link between OS and industry.
Fostering FAIR Data Practices in Europe **(FAIRsFAIR)**	1 March 2019 – 28 February 2022	FAIRsFAIR aimed to supply practical solutions for the use of the FAIR data principles throughout the research data life cycle, with an emphasis on fostering FAIR data culture and the uptake of good practices in making data FAIR, in particular accelerating the realization of the goals of the European Open Science Cloud (EOSC).	FAIRsFAIR developed a competence framework for higher education, which may prove an effective blueprint as accompanying OPUS' interventions (WP2) at partner RPOs. Additionally, metrics on FAIR data were developed (WP3).
Standard Operating Procedures for Research Integrity **(SOPs4RI)**	1 January 2019 - 31 December 2022	SOPs4RI's overall objective was to create a toolbox to support and guide RPFOs in fostering research integrity and consequently preventing, detecting and handling research misconduct. It provided Standard Operating Procedures and guidelines to create and implement Research Integrity Promotion Plans.	SOPs4RI developed a toolbox that, though mainly focused on research integrity, also contained OS topics that may prove useful for OPUS's interventions (WP2).
Grounding RRI practices in research performing organisations **(GRRIP)**	1 January 2019 - 31 December 2022	GRRIP aimed to embed sustainable RRI practices in four RPOs and 1 dual function RPO and RFO in the Marine and Maritime sectors, developing Action Plans (AP) for institutional and cultural change. This was accompanied by a platform for engagement with the Quadruple Helix and a platform for mutual learning.	The project developed a list of interventions and indicators and metrics (including OS) that could be useful as a template or best practice example for OPUS.
Grounding RRI Actions to Achieve Institutional Change in European Research Funding and Performing Organisations **(GRACE)**	1 January 2019 - 31 December 2021	GRACE supported the dissemination and application of RRI by implementing fundamental RRI-oriented institutional change in six RFOs and RPOs. Mutual learning and a set of RRI-oriented Grounding Actions were piloted as a basis for tailored 8-year RRI Roadmaps within these organisations, for sustainable and continued institutional change.	GRACE carried out different mutual learning exercises that could serve as an inspiration for OPUS, covering topics such as open access and gender equality.
Paths to Successful Innovations **(ISPAS)**	1 March 2021 - 28 February 2022	ISPAS aimed to develop new joint curricula of PhD courses, organised by academic and non-academic institutions, focused on skills in Open Innovation and OS. Courses were directed to the fields of science, technology, engineering and mathematics (STEM), medicine, social sciences, as well as arts and humanities.	ISPAS developed PhD courses on OS and FAIR data that could be useful interventions for the OPUS pilots.
Developing and Implementing hands-on training on Open Science	1 January 2021 - 31 December 2022	DIOSI project proposed a full-cycle concept of doctoral training, from a new, joint model for doctoral education (training on OS, open innovation and entrepreneurship for doctoral candidates and early career researchers (DCs and	DIOSI included Roadmaps for the implementation of the DIOSI model for Doctoral learning (on OS and Open innovation) in 8

and Open Innovation for Early Career Researchers **(DIOSI)**[4]		ECRs) - to measuring impact of such training with an impact and graduate tracking framework.	Universities that may prove interesting for OPUS.
Effective training of transferable skills related to open science and innovation for PhD candidates and early-stage researchers **(DISCOVERY LEARNING)**	1 December 2020 - 31 May 2022	DISCOVERY LEARNING pursues a new training model in the curricula for ESRs to promote open science and innovation in their pathways. The goal was to establish a set of KPIs on training on transferable skills related to open science and innovation and, in doing so, to broaden the spectrum of career and job opportunities for young researchers.	DISCOVERY LEARNING developed training on open science and skills -including transferable- that could be relevant for WP2 (interventions) as it touches on research assessment and precarity of ESRs.
Observing and Negating Matthew Effects in Responsible Research and Innovation Transition **(ON-MERRIT)**	1 October 2019 - 31 March 2022	ON-MERRIT suggested a set of evidence-based recommendations for policies, indicators and incentives, which could address and mitigate cumulative (dis)advantages of OS. It investigated impact of OS practices in academia, industry and policy, particularly focusing on institutions and individuals working in agriculture, climate and health.	ON-MERRIT covers various factors relevant to OPUS: incentives for researchers at RFO-level to achieve wider uptake of OS; uptake of OS in industry; implications of OS and Gender-related policies and reward systems; indicators and metrics in RPOs.
Scientific Understanding and Provision of an Enhanced and Robust Monitoring system for RRI **(SUPER MoRRI)**	1 January 2019 - 31 December 2023	Building on the achievements of the MoRRI project, SUPER MoRRI worked to secure sustained data collection, curation, further evaluation and clarification of the MoRRI indicators on RRI. SUPER MoRRI sought to create a mature monitoring system with robust, realistic and easy to implement indicators and metrics.	SUPER MoRRI improved the MoRRI RRI indicators and metrics producing new ones. These may prove useful for WP3. The project also includes case studies that could provide inspiration for WP2 interventions.

[4] The DIOSI project is not included in section 2.3 given that official results (reviewed by the European Commission) were not made public from the start of the OPUS project -when DIOSI was chosen- till the time of writing (5 months).

2.3. Framework Projects' Potential Input to WP2 and WP3

In this section, we summarise the findings that emerged from the landscaping of framework projects in reference to interventions and indicators & metrics for OS. With the aim of supporting OPUS pilots' transition and given the early stage of the project (landscaping phase), the decision was made to include all OS-relevant interventions/metrics, and not only those centred on incentives and rewards. The subsequent work packages will be able to select the most appropriate for the project framework and for the different institutional realities. That being said, where a potential to contribute to better rewards and incentives for researchers was identified, this has been highlighted.

It is worth mentioning that when analysing the relevant Work-Programmes of Horizon 2020 and Horizon Europe, one could see how Horizon 2020 projects mostly referred to Responsible Research and Innovation (RRI). RRI is most frequently defined as:

"*a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products(in order to allow a proper embedding of scientific and technological advances in our society)*"[5]

The original RRI keys of the European Commission[6] did not mention Open Science, but focused on the sub-topic of Open Access. As such, funding in Horizon 2020 (particularly SWAFS work programme) mainly related to the study and implementation of RRI, with the Open Access component. This becomes clear in the review presented below. In Horizon Europe, the narrative has altered. RRI is now considered as a horizontal element and the topic of Open Science has become more prominent. This represents an evolution, given that RRI and Open Science are connected by the values of openness, inclusion and democracy.[7]

Project Name	Potential input to WP2 (interventions)	Potential input to WP3 (indicators & metrics)	Limitations for OPUS
GEDII	*No OPUS-relevant interventions identified in this project.*	The Gender Diversity Index (GDI) is a composite indicator that measures the participation of women and men in teams in an elaborate way across 7 pillars including age, education, care responsibilities, marital status, type of contract, seniority and team tenure. The construction of the GDI is based on data collected via an online survey (D 3.1) of research teams.	Although the indicators and metrics did relate to gender equality and research assessment, the OS perspective is not sufficient to be relevant for OPUS. Only three questions of the survey had a link with OS (on RRI, Open Access and citizen science).
NUCLEUS	Possible interventions in the form of two categories of testing sites called Nuclei: • Embedded Nuclei: RRI practices in ten research institutions, with policies and culture change led by dedicated units. • Mobile Nuclei: modular approaches, such as workshops, exhibitions or science cafes. The Organisational Manual for Embedded Nuclei (D. 5.1) - relating to the institutions that trialled and tested RRI	*No OPUS-relevant indicators were developed (the 'Implementation Roadmap', D 3.6, lists the MORRI indicators) in this project.*	The 'Implementation Roadmap' (D 3.6) only makes reference to Open Access as one of the RRI Keys. It also mentions that the mobile nuclei could encourage citizen discussion fora on OS.

[5] Von Schomberg,Rene (2012) 'Prospects for Technology Assessment in a framework of responsible research and innovation' in: Technikfolgen abschätzen lehren: Bildungspotenziale transdisziplinärer Methode, P.39-61, Wiesbaden: Springer VS
[6] The six keys are: Ethics, Science Education, Gender Equality, Open Access, Governance and Public Engagement. In the EU Framework Programmes, these have been combined under the headings of 'Science and Society' (FP6), 'Science in Society' (FP7) and 'Science with and for Society' (Horizon 2020).
[7] https://openeconomics.zbw.eu/en/knowledgebase/difference-between-open-science-and-responsible-research-innovation-rri/

	strategies –refers to information sources to develop OA approaches and mentions a report outlining researchers' skills to practice OS.		
PRISMA	Possible intervention in the form of the Gender Strategy Toolkit. (D 1.1, p.26) This module addresses human resources as a key method to drive structural change and improve business performance. The Gender Strategy Toolkit is a direct implementation of a toolkit developed by the Australian government's Workplace Gender Equality Agency. This document provides a strategy document for reforming HR processes and cultural change management within an organisation.	*No OPUS-relevant indicators found in this project.*	All project results address OS from a purely OA perspective.
SMART-map	Possible intervention in the form of workshops - Industrial Dialogues (D2.1): participative workshops that produced a number of proposals for RRI tools. Participants included industry, policy makers, researchers and civil society, so relevant to the possible Research-Industry link.	*No OPUS-relevant indicators found in this project.*	Although the SMART Maps were mainly concerned with OA, the Industrial Dialogues are a potentially interesting format to encourage researcher collaboration within industry. OPUS should then analyse how such collaboration can be rewarded.
FIT4RRI	The Guidelines on governance settings for responsible and open science (D. 5.1) deal with how RRI and OS can be embedded in RPOs and how to activate institutional processes towards RRI and OS. They target researchers and managerial support staff. Page 6 includes problems, uncertainties and risks relevant for the trust dimension of WP2 interventions. The Guidelines have been tested in 4 experiments. In the first experiment (D 3.1), section 7.3 outlines the most relevant RRI practices (p. 15): • Internal RRI Awareness Programme and RRI Training Programme • Participation in RRI-oriented national / international programmes • RRI-oriented certification processes • Participation in specialised RRI networks Section 7.6 outlines issues/constraints noticed during the experiment that can be relevant to WP2 risk assessment (p.14).	KPIs for the 1st experiment (D3.1, annex 2) were divided into: 1. Relevance (Scope of experiment / Agreement / Mobilisation of external actors) 2. Effectiveness (Implementation process / Beneficiaries) 3. Impact (Institutional agreement / Expected changes / Unexpected effects & Multiplicative effects / Communication impacts / Degree of agreement with the experimentation / Changes in the perception of RRI/OS / Orientation towards future involvement	*N/A*

ORION	Tailored series of possible interventions (D6.4 – see particularly Annexe 1), tested during the ORION project: 1. Appoint a senior manager at the Institute to lead OS approaches; 2. Establish an OS Working Group; 3. Establish a dedicated OS site on intranet and website; 4. Establish an advocacy programme to encourage uptake of OS practices; 5. Develop Institutional Open Data and Research Data Management policies (FAIR principles; 6. Train a Research and Innovation Support Department manager, to support researchers and administrations in Data Management; 7. Develop evaluation, recognition and career development frameworks and policies that supports OS practices alongside guidance to those involved in appraisal / promotions; 7. Recognise OS practices in hiring processes and policies; 8. Increase awareness in OS / establish trust of general public (science popularisation events / public dialogues) 9. Set up OA repository for researchers; 10. Focus on community engagement to share "good" and "new" practices publishing. 11. (for RFOs) Involve public in evaluation process of selected funding schemes; 14. (for RFOs) Organisation and administration of programmes motivating young people and young scholars in research and science involving wide outreach and impact. In D3.9 (Implementation of new funding calls) one RFO installed an open public review in the evaluation process. The RFO uploaded all (anonymised) project proposals in an open online platform (Authorea) where the public could review and give feedback. The expert evaluators would then consider comments of during the second	Some of the interventions contained indicators: - OA: Repository for researchers → Guidelines for uses of the repository; number of publications in the repository. - Trained a Research and Innovations Support Department manager, who will provide support for researchers and administrations in Research Data Management → Guidelines for Data Management Plans - Training on OS (for PhDs and Postdocs but also administrative staff) → Number of promoted training for early-stage researchers/administrative staff. - Increasing awareness in OS monitoring international, national and institutional news and regularly publish it on the website → Regular report on OS, Open Science website section, internal newsletters (OS section). - Increasing awareness about OS and establishing trust of general public introducing OS elements to the public through active engagement during the two most important science popularisation events that are being regularly organised → Realisation of 2 events per year.	*N/A*

	round of the evaluation. This approach did not gather much traction.		
LIV.IN	Possible intervention in the form of co-creation labs as part of the innovation process (citizen science). The document "Workshop Design and Implementation Plan" (D4.1) provides a full overview of how to set up such a workshop. It provides a workshop checklist as an Annex. The Co-creation tool kit (D 4.3) also covers some of this material. In addition, it describes possible methods to use during the workshops and matches them to the suggested aim of the workshop.	*No OPUS-relevant indicators found in this project.*	N/A
FOSTER +	Possible intervention in the form of an OS Training handbook (D5.3), a series of 12 online training modules in OS. To incentivise taking part, one receives a badge upon completion of each module. The training toolkit contains ten courses covering the most relevant topics.	*No OPUS-relevant indicators found in this project.*	Although a badge may not be a sufficient incentive or reward to take the course, it could serve as an inspiration and could be linked to a points system in a reward framework.
GRECO	Possible intervention in the form of a Practical Guide on OS for researchers (D1.2) that includes a list of concrete statements to consider and implement OS in various phases of the researchers´ investigation and a set of FAQs. The Open Innovation process (D3.1) refers to the inclusion of external experts into a solution finding process, being the initial step of using participatory designs to include external knowledge. The process contains two main elements, 1. Users in spotlight, 2. Creating well-functioning eco-system that allows co-creation. The steps are: a. definition of relevant stakeholders, b. definition of barriers and overcoming the Open Innovation Process, and c. methodology of the open innovation process.	*No OPUS-relevant indicators found in this project.*	N/A
FAIRsFAIR	*No OPUS-relevant interventions identified in this project.*	List of 15 Metrics to measure to what extent research data objects are FAIR: - Data is assigned a globally unique identifier. - Data is assigned a persistent identifier. - Metadata includes descriptive core elements (creator, title, data identifier, publisher, publication date, summary and keywords) to support data findability.	N/A

		- Metadata includes the identifier of the data it describes. - Metadata is offered in such a way that it can be retrieved by machines. - Metadata contains access level and access conditions of the data. - Metadata remains available, even if the data is no longer available. - Metadata is represented using a formal knowledge representation language. - Metadata uses semantic resources. - Metadata includes links between the data and its related entities. - Metadata specifies the content of the data. - Metadata includes license information under which data can be reused. - Metadata includes provenance information about data creation or generation. - Metadata follows a standard recommended by the target research community of the data. - Data is available in a file format recommended by the target research community. For metric specification and description see M4.9 Report on Fair Data Assessment Mechanisms to Develop Pragmatic Concepts for Fairness Evaluation at the Dataset Level.	
SOPs4RI	Possible intervention in the form of an online toolbox of standard operating procedures and guidelines for research integrity. This helps RPFOs comply with the European Code of Conduct for Research Integrity. D4.5, describes the 9 topics relevant to RPOs (p.12). The subtopics for topic 5 (Data management and practices) include the FAIR principles. Within the subtopics for topic 8 (Publication and communication) one can find open science. Page 13 includes the description of the 11 topics for RFOs. In topic 3 (Funders´ expectations of RPOs) they	*No OPUS-relevant indicators found in this project.*	Although the toolbox touches upon OS topics, it is mostly related to research integrity.

	included assessment of researchers. These topics were finally merged into 6.		
GRRIP	D6.1 (Action Plans) details a list of 72 institutional and cultural interventions related to RRI. The interventions include the creation of a reward system for RRI champions and for public engagement, and an incentive mechanism for researchers.	GRRIP followed the well-known SMART and SPICED criteria in co-developing the indicators with the RPO&RFOs. The indicators and metrics are described in detail in D6.1 (Action plans) and in D8.1 (Plan on monitoring processes and indicators). The indicators and metrics are embedded within each of the action plans under *Targets.*	In reference to interventions: content might not be transferable to OPUS, but the general structure might be useful as a starting point. When it comes to OS, GRRIP is mainly focused on OA. In reference to indicators: The form, not the content, could serve OPUS for inspiration in WP3.
GRACE	The project developed Mutual Learning exercises on RRI (D 3.1, Mutual Learning Plan). The Roadmaps and respective resources rest on five out of the six pillars of RRI: gender equality, public engagement, science education, research ethics and integrity, and open access - as part of open science (D 3.3 on Grounding Actions).	*No OPUS-relevant indicators explained in this project.*	While the Mutual Learning exercises format will serve as inspiration for WP4, the project's OS dimension rests purely on OA.
ISPAS	Targeted to PhDs, ISPAS developed two curricular courses on OS basics (plus recordings) and on FAIR Data Management (recordings).	*No OPUS-relevant indicators found in this project.*	N/A
DISCOVERY LEARNING	Possible interventions in the form of: • 19 webinars in different topics related to open science and innovation covering all categories of transferable skills included in the project's ontology for PhD candidates and ESRs (relevant for OPUS due to its link to reducing precarity). Content and results are described in section 3 of D 2.2 (Report on Proof of Concept). • Career Guidance (D 1.2 – with some reference to OS) training/mentoring focused on developing new skills and articulating existing skills. A set of career cards describe skills (to be used by career advisors / supervisors to support PhD students), available as deliverable annexe and separate document.	*No OPUS-relevant indicators found in this project.*	N/A
ON-MERRIT	*No OPUS-relevant interventions found in this project.*	D3.3 (RPOs), D6.1 (RPFOs), D6.2 (RFOs), D6.4 (RPOs): Literature review, surveys, and interviews on a wide range of indicators, and correlation with rankings / other means of verification for impact of different metrics and indicators (recommendations / guidelines deduced from it).	For RFOs (D6.2): since it is a theoretical model, the level of abstraction is high and no specific implementation of the indicator is discussed.

		Impact of Gender equity in assessment criteria and reward systems investigated and described in D 6.3: Drivers and barriers to uptake OS resources in industry given in deliverables (D4.1) and (D4.2).	
SUPER MoRRI	*No OPUS-relevant interventions found in this project.*	The Implementation Plan (D.2.1.) builds upon the SUPER MoRRI Strategic Plan (D1.2) that outlines the SUPER MoRRI monitoring framework. The two documents set out the basic principles for monitoring activities and provide step-by-step description of the execution of data collection. Source: Eurobarometer, secondary data (OECD, ETER, Eurostat STI indicators, She figures & bibliometric databases - Web of Science). D.6.2 is the self-assessment tool that contains 174 indicators by clusters: Science Education & Communication; General Ethics; Internal organisational management and governance; Organisational governance and Gender specifically; Stakeholder management and Data management.	D.2.1 (*relevant but yet approved by the European Commission*) shows the CCN study on RFOs: The overall aim of this component of the implementation of the monitoring framework is to examine the mechanisms through which RFOs enhance responsibility in research and innovation. Such mechanisms relate to 1) setting priorities for research 2) designing responsible funding instruments and 3) assessment.

3. Landscaping of Experts, Networks / Organisations and Schemes

3.1. Overview of definitions and landscaping objectives

In relation to landscaping Experts, Networks, Organisations and Schemes, the following definitions and review objectives were applied.

Typology	Definition	Landscaping objective
Open Science Network or Organisation	An entity (*different from a project, in that it not connected to a specific funding / does not have a time limited duration*) that supports the uptake of Open Science.	OPUS reviewed networks & organisations in order to: 1. establish state of the art 2. gather contents of use for WP2,3,4,5 3. identify potential experts (see below)
Open Science Scheme	An officially recognised initiative that supports the uptake of Open Science.	OPUS reviewed schemes in order to: 1. establish state of the art; 2. gather content of use for WP2,3,4,5
Open Science Experts	An individual with proven knowledge / expertise in supporting the uptake of Open Science.	OPUS reviewed experts in order to: 1. establish state of the art; 2. create a database of contacts that can be informed about OPUS and consulted on key outputs)

As detailed in subsequent chapters, a number of criteria were set in order to define the scope of the OPUS state of the art review. One important criteria refers to the geographical scope of the OS networks/Organisations and schemes. The decision was taken to focus only on initiatives covering more than one country and not on initiatives developed on a purely national level. It would have been beyond the reach of the state of the art to analyse initiatives in individual member states. As such, the identification of networks that engage national authorities directly *(see for example UNESCO, EOSC, CoNOSC and the National Open Access Desks – NOADs, all described in Chapter 3.3. Methodology and results of landscaping of Networks, Organisations and Schemes*) was selected as the most effective means of discovering and connecting with relevant national initiatives.[8]

3.2. Methodology and results of landscaping Experts

3.2.1 Methodology

In order to identify the Open Science Experts, OPUS partners first agreed on an initial set of criteria, as follows:

1.	Proven / documented (and ongoing / recent) expertise in Open Science
2.	Availability of contact details (possibility to make active contact with organisation)

On this basis, the methodology to identify experts covered the following main phases:

Phase 1:

Selection (desk research and existing knowledge) by OPUS expert partners, on the basis of identified criteria. Starting from the existing knowledge and extensive network of contacts within the OPUS consortium, research was carried out through:

- Desk research and internet search (including recent conference speakers on topics within the remit);
- literature review (Task 1.2 of OPUS WP1, where authors of relevant articles were identified and included in the landscaping);

[8] Some relevant national initiatives include the National Research Data Infrastructure Germany (NFDI) and the Netherlands National Programme Open Science (NPOS), but there are many others.

- Project reviews (see chapter 2 above, were project coordinators were identified and included in the landscaping);
- Review of networks, organisations and schemes (see below – where key figures were identified and included in the landscaping).

An initial list was prepared with: Name, Organisation, contact details, gender, country of work, specific expertise in OS and any necessary notes / relevant information.

This initial list (available as a password-protected file on the internal MS Teams platform) was shared among all OPUS consortium for verification. Any suggestions for integrations were reviewed and incorporated.

Phase 2:

The methodology foresaw a stage of contact with experts, in order to invite them to form part of the OPUS expert group. In order to discover more about their expertise we asked that they undertake a self-assessment, through on-line survey, to provide details on years of experience and specific Open Science specialisation(s). As such, the stages of this phase of the methodology can be summarised as follows:

- Preparation of a short, on-line survey[9] to request key information from invited experts. This survey collected:
    - Contact details;
    - Information about employer;
    - Level of researcher;
    - Length of time working in open science;
    - Open science specialisation;
    - Particular areas of interest to OPUS;
    - Suggestions for others with whom OPUS should engage;
- Direct contact with identified experts (legitimate interest) to invite participation. This took the form of two email invitations: one in December 2022 and another (reminder and any additional experts in January 2023);
- Registration of experts through the OPUS website, by completing the online survey;
- Creation of WP1 OPUS Expert group database, with full statistical analysis.

This database will remain open throughout the project as OPUS wish to continue to seek experts that might join the database and contribute to our knowledge. It is anticipated that, as the project develops and profile is raised, more individuals may wish to join this group.

[9] The full survey is available here: https://opusproject.eu/expert-group/

3.2.2 Results – Overview of Experts

Initial landscaping of experts (*September – December 2022*) produced a list of 109 potential experts. Broadly there was an even balance between males and females invited to participate, with slightly more males (see figure 1). The potential list of experts represented many European countries (see figure 2).

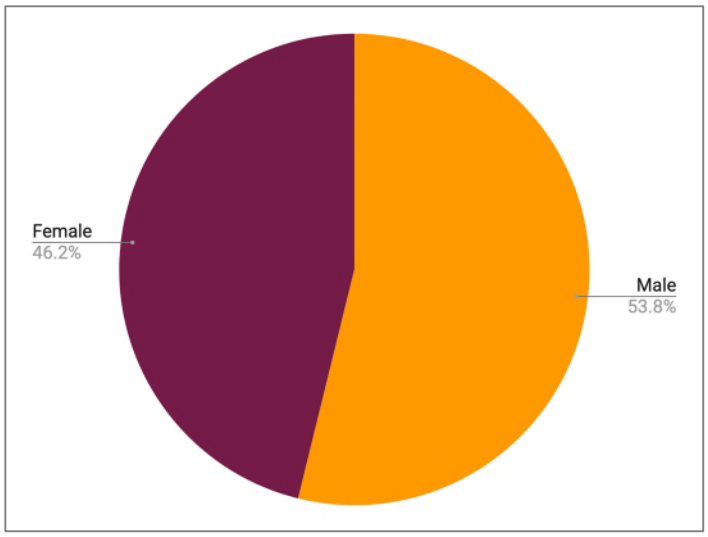

Figure 1: **Gender of Potential Experts**

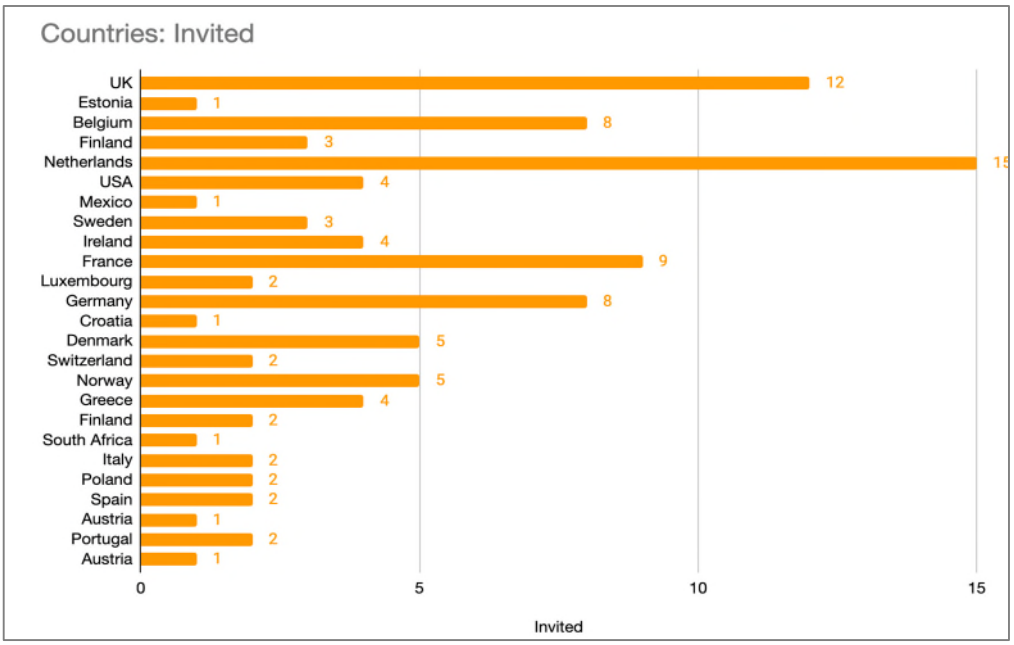

Figure 2: **Country of Potential Experts**

These experts were invited to complete the on-line survey. Moreover, the survey was open to participation to those not directly contacted by email. Results were screened by OPUS experts to check for authenticity.

By the time of preparing this deliverable, a total of 47 experts had signed up to the OPUS expert groups. This section provides some further details on the composition of the expert group at the time of writing.

Country of Work:

The expert group represents a wide variety of countries, with over 22 currently identified as countries in which experts are working (see figure 3).

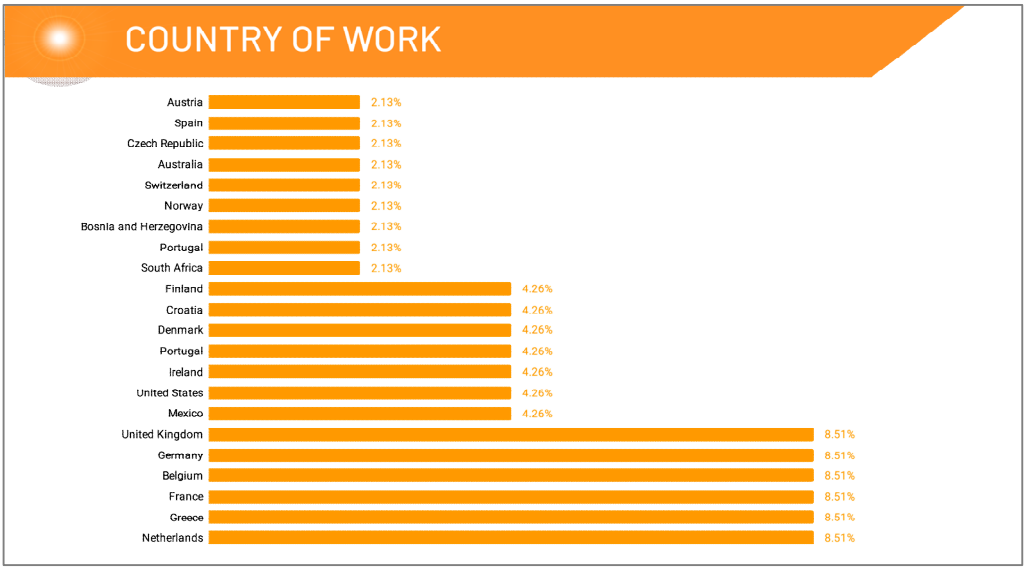

Figure 3: Country of Work

Types of Organisation:

The majority of the OPUS expert group represent public research performing organisations, with funders and the private sector also represented (see figure 4).

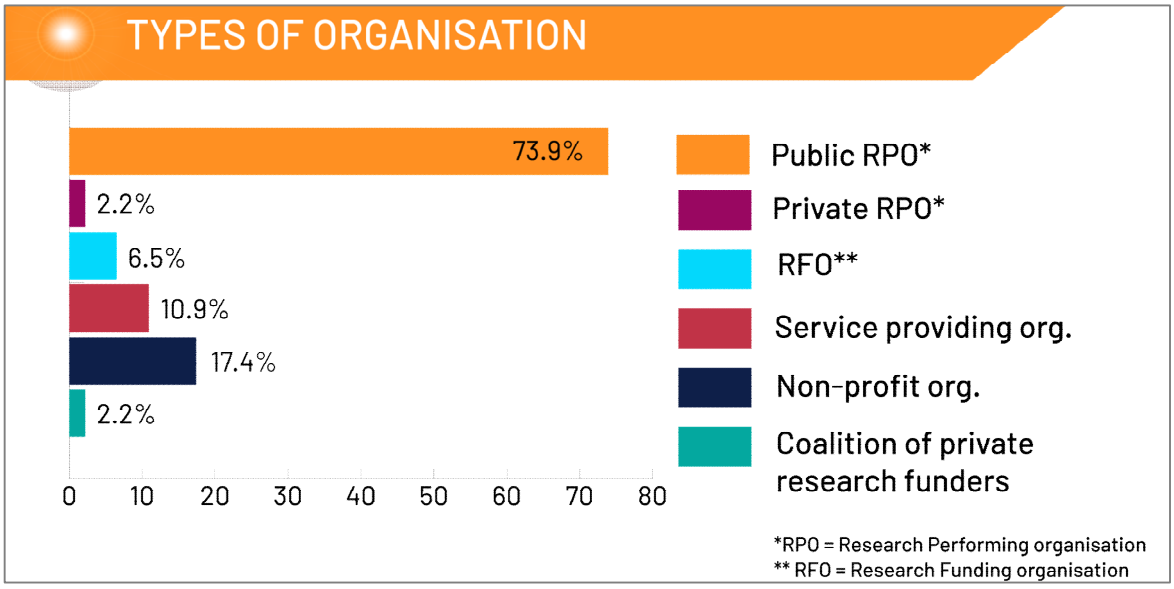

Figure 4: Type of organisation

Researcher Level

The OPUS expert group comprises approximately 60% of leading or established researchers, with an additional 20% identifying as recognised researchers (see figure 5).

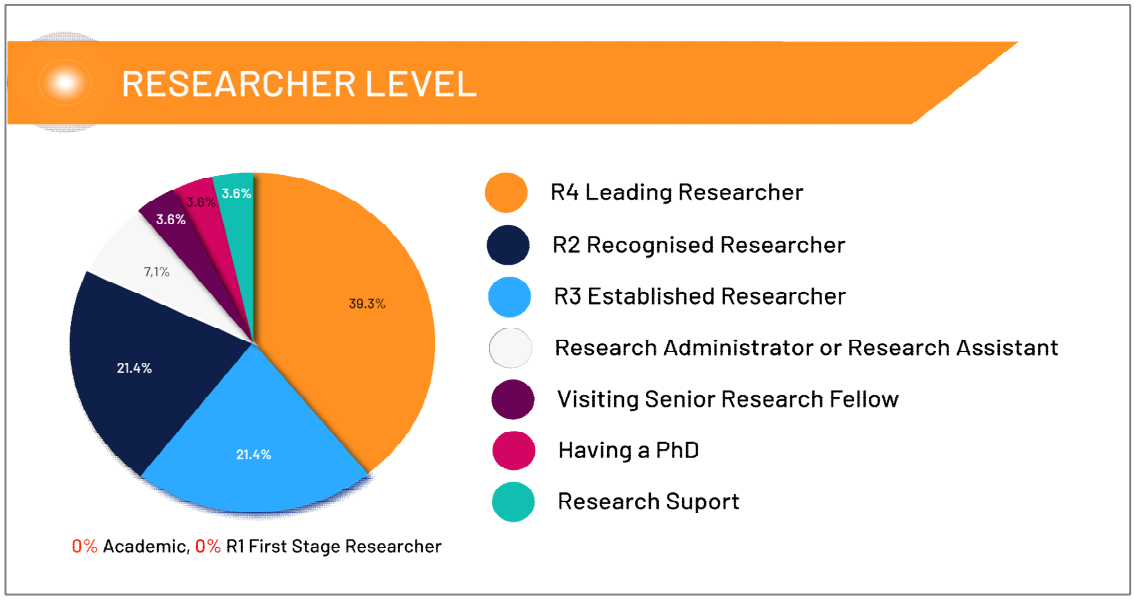

Figure 5: Researcher level

Length of Time working in Open Science

Experts in the working group have been working in this field for a number of years. With 30% having worked in open science for over 10 years and approximately 85% having worked in this field for over 3 years (see figure 6).

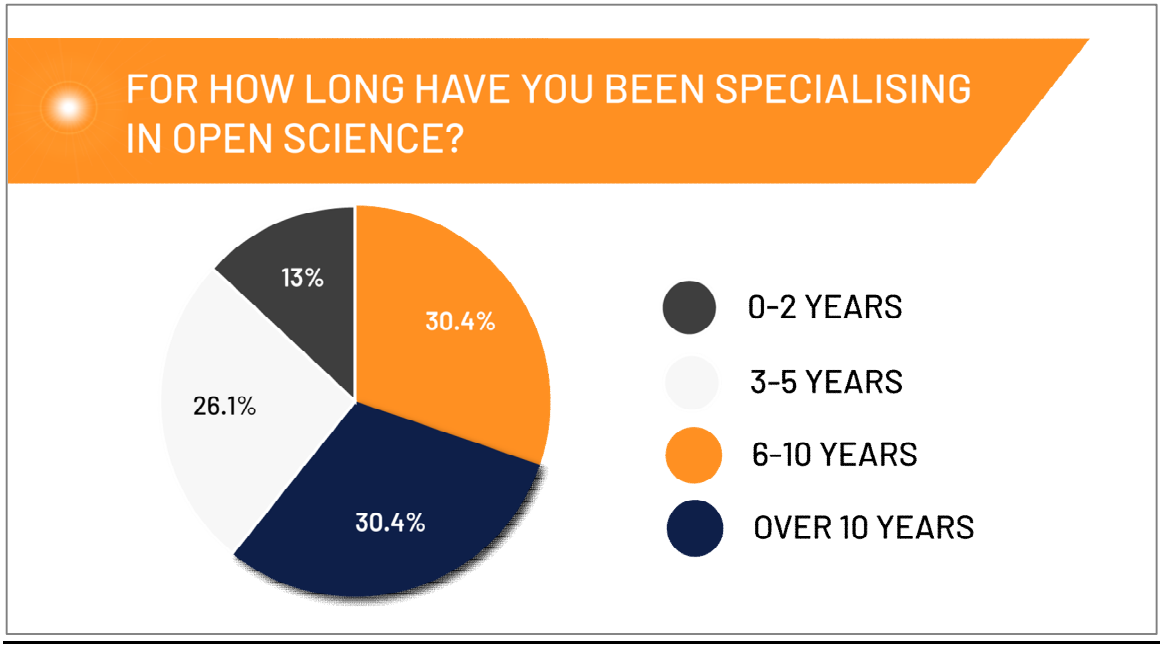

Figure 6: Length of time working on OS

Open Science Specialisation

The expert group have a wide range of specialisations particularly around publications, infrastructure and FAIR and open data (see figure 7).

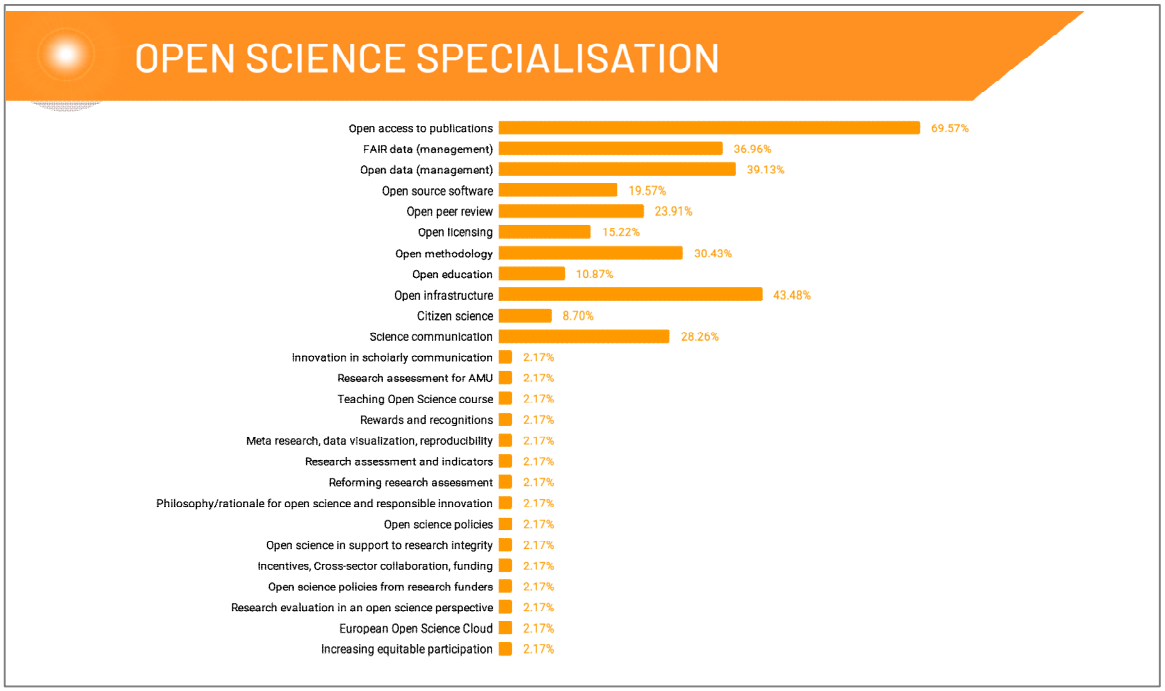

Figure 7: OS Specialisation

Interest in OPUS

Experts are interested in all aspects of the OPUS project and will continue to work with us to develop our list of interventions and indicators and explore collaborations (see figure 8).

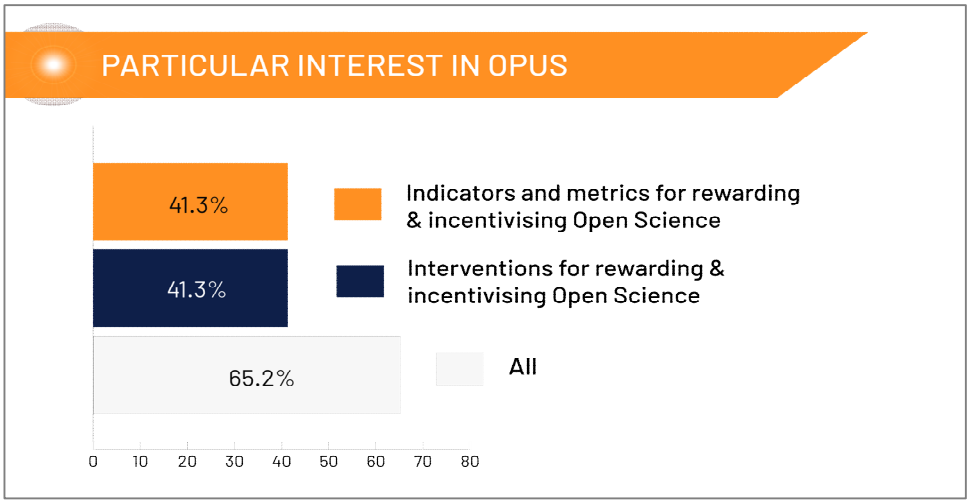

Figure 8: Interest in OPUS

3.3. Methodology and results of landscaping of Networks, Organisations and Schemes

3.3.1 Methodology

In order to identify the Open Science Networks and Organisations and Schemes, OPUS partners first agreed on a set of criteria in order to run an initial screening, as follows:

Typology	Initial Criteria for First Screening
Open Science Network or Organisation	• Entity still exists • Entity has proven / documented results • Entity has easily available documentation (i.e. Public material, languages with which WP1 participants are familiar) • Entity has easily available contact details • Entity covers more than one country (not a purely national initiative)[10]
Open Science Scheme	• Scheme has proven / documented results • Scheme has easily available documentation (i.e. Public material, languages with which WP1 participants are familiar) • Scheme covers more than one country (not a purely national initiative)[11] • Scheme could be adapted to an intervention in a Research Performing or Research Funding Organisation (OPUS Pilot Organisations)

From this initial screening, a second level criteria was designed to assess the extent to which the Network/Organisation or Scheme provided specific input to OPUS in terms of key open themes, as follows:

1. Open science interventions
2. Open science metrics and indicators
3. Open Science and Research Assessment/ Rewards and incentives
4. Open Science and Precarity
5. Open Science and Gender Equality
6. Open Science and Industry
7. Open Science and Trust

On this basis, the methodology to identify networks, organisations and schemes covered the following main phases:

Phase 01:

An initial screening and selection was carried out by OPUS expert partners, on the basis of identified criteria. Desk research was carried out, starting from the existing knowledge and extensive network of contacts within the OPUS consortium. This led to an initial list, which was shared on-line and discussed in detail between WP1 partners allocated to this task, in order to ensure full respect for criteria. On this basis, some networks, organisations and schemes were removed from the list and a final list for full screening was agreed.

Phase 02:

A full review was carried out, using a common template, to detail the content / features of each selected entry and to identify areas of interest for OPUS WP2/WP3. The identified networks, organisations and schemes were divided between the three partners allocated to this sub-task. The common template prepared for this phase required the following information for Networks and Organisations:

A. Basic information;
B. Reference to SELECTION CRITERIA GROUP 01;
C. Reference to SELECTION CRITERIA GROUP 02;
D. Brief overview of the Network / Organisation;
E. Specific elements of interest for OPUS;
F. Any specific input on "rewards and incentives for researchers";
G. Input to / recommendations for WP2 (initiatives);
H. Input to / recommendations for WP3 (indicators and metrics);
I. Any policy related input for WP5.

[10] Representatives from purely national networks were included in the expert list (*Chapter 3.2*)
[11] Representatives from purely national schemes were included in the expert list (*Chapter 3.2*)

This list (available as a password-protected file on the internal MS Teams platform) and full reviews were shared among all OPUS consortium for verification. Any suggestions for integrations were reviewed and incorporated. They were shared with the OPUS Scientific Coordinator during an on-line meeting. Phase 02 resulted in a list of 34 Networks/Organisations and Schemes.

The list does not represent an exhaustive list of all the organisations and networks operating in the field of Open Science. The criteria defined above were designed to ensure that the review identified some of the main players working on themes of direct relevance to the OPUS project. As such, there are many other networks that focus on specific aspects of the concept of OS. Taking the example of data, the Committee of Data of the International Science Council (CODATA) and the World Data System (WDS)[12] are two important examples. Such organisations, though not listed in the review below, can be engaged indirectly through the listed networks. Others can be engaged through the Expert group, which will continuously evolve (as described in Chapter 3.2. Methodology and results of landscaping Experts).

Phase 03:

Personal contact was made with each identified Network/organisation, in order to discuss their possible input to OPUS. Contact people were asked to check and confirm the information provided in the review template. This led to a number of short individual meetings where mutual collaboration was discussed. Key players in each were asked to sign up to the OPUS expert group (described above). *Contact is currently ongoing with and OPUS will continue to explore collaboration and mutual learning.*

3.3.2 Results – Overview of Networks / Organisations and Schemes

This section presents the final list of Networks/Organisations and Schemes that were screened within the landscaping exercise (*presented in alphabetical order*).

[12] https://codata.org/about-codata/our-mission/ and https://worlddatasystem.org/. See also the Joint Data Together Statement on Fostering Cooperation among Open Science Platforms https://www.go-fair.org/wp-content/uploads/2021/03/Data-Together-Fostering-Cooperation-Among-Open-Science-Platforms_March-2021.pdf

Name	Brief overview	Specific elements of interest for OPUS
Conseil Européen pour la Recherche Nucléaire - Open Science Strategy Working Group (CERN OSWG) Network/Organisation	CERN was formed in 1951, following an intergovernmental meeting of UNESCO to establish a European Council for Nuclear Research. CERN brings together scientists from across the world, providing a unique range of particle accelerator facilities to researchers, to advance the boundaries of human knowledge. CERN is committed to the practice of Open Science and to the advancement of science and wide dissemination of knowledge by adopting practices to make scientific research more open, global, collaborative and responsive to societal changes. They have formed the Open Science Strategy Working Group.	The CERN Open Science Policy covers all aspects of the Open Science realm relevant to CERN. CERN also has an Open Access Policy and a LHC Open Data Policy. Of specific relevance to OPUS is work on Research Assessment. CERN was an early signatory of the 2022 Agreement on Reforming Research Assessment and member of CoARA (*see below*). A CERN working group will analyse all existing practices and policies to identify gaps with the CoARA principles. Based on the results, a roadmap will be created on how to address gaps and implement new, transparent, and fair research assessment practices. It will be made publicly available by at the latest by the end of 2023.
Strong and United Voices of Universities of Science and Technology in Europe (CESAER) Network/Organisation	CESAER is an international association of leading specialised and comprehensive universities with a strong science and technology profile that advocate, learn from each other and inspire debates. Members from across Europe champion excellence in higher education, training, research and innovation, contribute to knowledge societies for a sustainable future and deliver significant scientific, economic, social and societal impact. CESAER has a Task Force on Openness of Science & Technology (2022-2023), which covers Open Science, Knowledge safety and security and Citizen science.	CESAER Openness of Science & Technology task force focuses on Research Data Management, advancement of the EOSC (see below), advancement of FAIR data and promotion of open access. They also consider effective outreach and engagement around key technologies (Citizen Science). Among their many publications, CESAER have produced: • A paper on successful implementation of open access strategies at universities of science and technology. • A White Paper on New Generation Metrics.
Coalition for Advancing Research Assessment (CoARA) Network/Organisation	CoARA is the global coalition behind the Agreement on Reforming Research Assessment, with over 350 organisations from 40 countries. The Coalition was created to ensure that signatories of the agreement work together to enable systemic reform on the basis of common principles within an agreed timeframe, and to facilitate exchanges of information and mutual learning between all those willing to improve research assessment practices. It brings together RFOs, RPOs, national/regional assessment authorities and agencies, as well as associations of the above organisations, learned societies and other relevant organisations.	The 2022 Agreement on Reforming Research Assessment details 10 main commitments, many of which reference OS and openness. Openness of research is integrated into the agreement as part the principles related to “Quality and impact” and to “Diversity, inclusiveness and collaboration” The framework is directly relevant to OPUS’s main aim to reform the assessment of research(ers), towards a system that incentivises and rewards researchers to take up practices of OS.
cOAlition S Network/Organisation AND **PLAN S** Scheme	cOAlition S was launched in 2018 as an initiative to make full and immediate Open Access to research publications a reality. The group is make up of national RFOs, together with international organisations and charitable foundations. It is built around Plan S, an initiative for Open Access publishing that was launched in September 2018. With 1 target and 10 principles, Plan S requires that, from 2021, scientific publications that result from research funded by public grants must be published in compliant Open Access journals or platforms.	The main target of Plan S and accompanying principles are important to OPUS. cOAlition S provides guidance to ensure compliance with Plan S and practical advice for Open Access Repositories. Point 10 of Plan S directly references assessment of research outputs, stating that funding decisions should assess merit and not the publication channel, impact factor (or other journal metrics) or publisher. The coalition supports DORA and other international initiatives.

		Funders are committed to ensuring that any use of bibliometrics or indicators is done in a responsible way, taking into account the key dimensions summarised in The Metric Tide.
Coimbra Group (COIMBRA) Network / Organisation	COIMBRA was founded in 1985 and is an association of 41 long-established European multidisciplinary universities of high international standard. COIMBRA is committed to creating special academic and cultural ties in order to promote, for the benefit of its members, internationalisation, academic collaboration, excellence in learning and research, and service to society. COIMBRA is involved in EU level debate on Open Science and its member organisation are active in the topic within their institutions.	Several contributions by Coimbra partner university rectors touch on Open Science: • The promise of Open Science by Henk Kummeling, Rector Magnificus, Utrecht University The Coimbra Group was consulted about research assessment as part of the consultative process that led to the report "Towards a reform of the research assessment system".
Council for National Open Science Coordination (CoNOSC) Network / Organisation	CoNOSC is a network of national Open Science coordinators in the UN-European region. CoNOSC brings together national OS leaders to engage in international dialogue and share good practice for a stronger and more unified, workable Open Science policy framework. The aim is for members to learn from each other to coordinate and advance / revise OS policies. In 2021, the network identified the following top three priority areas: 1. Research assessment and incentives; 2. Policy monitoring; 3. Data stewards.	Contact with CoNOSC brings OPUS into contact experts from national contexts, learning about OS policies and implementation in each different country. CoNOSC produced a report on reforming research assessment (emerging from a meeting held on 3rd November 2022). CoNOSC shares OS initiatives from all the member countries. There are strategies on digitalisation, on Open Science in general, on Open Access, Open Cloud, research integrity and others).
Directory of Open Access Journals (DOAJ - Ambassador Programme Scheme	DOAJ is an index of diverse open access journals from around the world, driven by a growing community, committed to ensuring quality content is freely available online for everyone. Their mission is to increase the visibility, accessibility, reputation, usage and impact of quality, peer-reviewed, open access scholarly research journals globally, regardless of discipline, geography or language. DOAJ has 21 active ambassadors, who work with communities around the world.	The DOAJ Ambassador scheme is an intervention for promoting Open Access publishing Ambassadors help journal editors understand the importance of standards in open access publishing; they raise DOAJ's profile and help to make the journals a more attractive place to publish research.
E-LIFE community (Ambassador Programme) Scheme	E Life is an open access journal publishing high quality research in all areas of the life sciences and medicine. It complies with all major funding agency requirements for immediate online access to published results of research grants. E Life commits to a "publish, review, curate" model for publishing, by: • Peer reviewing preprints in the life sciences and medicine • Building technology that is open-source, readily adaptable and addresses community needs • Working with global scientists the world to improve research culture	E Life are keen to influence research culture through their community, including the focus on peer review and reviewed pre-prints. Moreover, E Life runs an ambassador programme, which provides training on topics such as research reproducibility, influencing skills, open science, equity, diversity and inclusion (EDI), science communication.

European Commission initiatives on Open Science Scheme *See also EOSC below*		Open science is a policy priority for the European Commission and the standard method of working under its research and innovation funding programmes. The 8 ambitions of the EU's open science policy are Open Data, EOSC, New generation metrics/altmetrics and rewards, the Future of scholarly communication, Rewards, Research integrity & reproducibility of scientific results, Education and skills, and Citizen science. European Commission initiatives include the Open Science Policy Platform, Expert group on indicators, Open Science Monitor and Open Research Europe.	All of the 8 ambitions of the EU's open science policy have potential relevance to OPUS, particularly "New generation metrics/altmetrics and rewards" and "Rewards". A working group produced a report in 2017 on rewards, incentives and recognition for researchers practicing open science. The European Commission has been an active participant in setting up CoARA and the accompanying mainstreaming of research assessment that reward and incentivise Open Science practices.
European Council of Doctoral Candidates and Junior Researchers (Eurodoc)[13] Network / Organisation		Eurodoc is the European Council of Doctoral Candidates and Junior Researchers. It is an international federation of 26 national organisations of PhD candidates, and more generally of junior researchers from 24 countries of the European Union and the Council of Europe. Eurodoc promotes the circulation of information on issues regarding young researchers; organises events, takes part in debates and assists in elaboration of policies on Higher Education and Research in Europe. Eurodoc has a working group on Open Science, which advocates to change the academic culture towards a more open one.	Within the OS working group, Eurodoc works on topics such as OS skills and previously ran an OS Ambassador programme. Eurodoc regularly conducts a survey of early-career researchers with regard to the European research landscape and how it affects the career development of researchers. The recent "Perspectives on Open Science and Scholarly Publishing: a Survey Study Focusing on Early Career Researchers in Europe" addressed incentive and reward systems. Eurodoc is represented on the EOSC's Research Careers, Recognition and Credit Task Force.
European Citizen Science Association (ECSA) Network / Organisation		ECSA is a Citizen Science organisation with a vision that all citizens in Europe are valued and empowered as actors in advancing knowledge and innovation, and thus supporting sustainable development. They seek to establish citizen science as a recognised, promoted and funded approach, one that fosters scientific literacy and the democratisation of science. ECSA has a working group on Citizen Science and Open Science.	In 2018, ECSA published their policy brief on Citizen Science and Open Science. ECSA has produced the 10 principles for Citizen Science, a relevant aspect of OS. They have also produced a report detailing ECSA's Characteristics of Open Science. ECSA has also produced as set of openness guidelines, which is strictly related to developing ECSA into a more open organisation.
European Open Science Cloud Association (EOSC)	**Portal** Scheme	EOSC aims to provide European researchers, innovators, companies and citizens with a federated and open multi-disciplinary environment where they can publish, find and reuse data, tools and services for research, innovation and educational purposes. EOSC enables: seamless access; FAIR management; reliable reuse of research data and other digital objects produced in the research life cycle. EOSC aims to develop a 'Web of FAIR Data and services' for science in Europe, upon which a wide range of value-added services can be built. These range from visualisation and analytics to long-term information preservation or the monitoring of the uptake of open science practices.	The EOSC Catalogue and Marketplace is an integrated platform that allows easy access to services, data and integrated data analytics tools. It is possible to browse by: • Scientific Domain (Medical & Health Sciences; Engineering & Technology; Natural Sciences; Generic; Humanities; Agricultural Sciences; Social Sciences; Other); • Category (Discover research outputs; Public research outputs; Access Computing and Storage Resources; Process and Analyse; Access Research Infrastructures; Manage Research Data; Access Training Material; Find Instruments & Equipment).

[13] Eurodoc is a partner of the OPUS Consortium

	Association Network / Organisation	The EOSC Association is the legal entity established to govern the European Open Science Cloud (EOSC). It was formed on 29th July 2020 with four founding members and has since grown to over 200 Members and Observers.	The EOSC Association, in addition to governing EOSC, has a research careers, recognition and credit task force that addresses incentives and rewards for researchers to manage and share their data, code and other research outputs, activities, and processes. They have a draft charter on recognition and credit.
	Executive Board Network / Organisation	The Executive Board of the EOSC is a body of representatives from the research and e-infrastructures communities, appointed by the European Commission. All Executive Board members are appointed in a personal capacity and represent pan-European organisations of relevant for EOSC implementation.	The Strategic implementation plan resents the activities that will contribute to the implementation of the EOSC. The Work plan outlines the key outputs which will be delivered during implementation. *Versions available up to 2020.*
European Universities Association (EUA)[14] Network / Organisation		The European University Association (EUA) represents over 850 universities and national rectors' conferences in 49 European countries. EUA plays a role in the Bologna Process and in influencing EU policies on higher education, research and innovation. EUA has been very active in the debate about Open Science, and on diverse topics related to open science, such as reform of research assessment. EUA has selected three major priority areas for its work on Open Science in future: Open Access to scholarly outputs in a just scholarly publishing ecosystem, FAIR research data, and research assessment.	The EUA Open Science Agenda 2025 defines the Association's priorities in the field and describes the current context, challenges and developments envisaged for the coming years. In addition, it outlines the actions EUA will take to drive this agenda forward. EUA conducts surveys about the institutional practices of its members with regard to Open Science, see for example 2020-21 survey results.
GO FAIR[15] Network / Organisation		GO FAIR is a bottom-up, stakeholder-driven and self-governed initiative that aims to implement the FAIR data principles. It is designed as an ecosystem for individuals, institutions and organisations working together through Implementation Networks: • GO CHANGE (priorities, policies and incentives); • GO TRAIN (awareness and skills development); • GO BUILD (coordinating technology). GO FAIR also coordinate and contributes to development of the Internet of FAIR Data & Services (IFDS) through community-led initiatives. They are a member of Data Together, in which 4 international data organisations seek to fostering cooperation among OS Platforms.	GO FAIR is mainly concerned with FAIR Data, one area of the global Open Science approach. The GO CHANGE activities include a focus on ensuring alignment of incentive schemes and developing agreed acknowledgement measures. The GO CHANGE process works towards a new FAIR academic culture. It promotes research systems that fully acknowledge researchers' efforts to follow the FAIR principles when evaluating and supporting their research careers.
Guild of European Research Intensive Universities (the Guild) Network / Organisation		Founded in 2016, The Guild comprises 12 of Europe's most distinguished research-intensive universities in 16 countries. It is dedicated to enhancing the voice of academic institutions, their researchers and their students. The Guild is committed to the pursuit of excellence, the importance of truth-seeking and trust-building as the foundation of public life, and the	The Guild is involved in EU level debate on Open Science and has produced publications in this field. See the 2019 Policy Paper: Open Access and the implementation of Plan S, but also articles warning about the need for a careful transition towards Open Science: • Care before speed -2018

[14] EUA is represented with a member in the OPUS Advisory Board
[15] GO FAIR is represented with a member in the OPUS Advisory Board

	creation of new knowledge for the benefit of society, culture, and economic growth. The Guild has a working group on Open Science and another on Research Careers and Assessment.	• Open Access? Absolutely, but don't jeopardise research quality & freedom - 2019 "Looking to the Future: The Guild's Vision for Europe's Universities" (2020) is the Guild's vision for European universities and it stresses the importance of various aspects of OS.
Institute for Globally Distributed Open Research and Education (IGDORE) Network / Organisation	IGDORE is an independent research institute dedicated to improving the quality of science, science education, and quality of life for scientists, students, and their families. IGDORE was founded in 2016 to promote and enable good science, and has the institutional values of global, healthy, openness and replicability. IGDORE was founded to promote and enable good scientific practices. They want to harbour and protect whistleblowers in science and to be an institution that takes responsibility for educating affiliated scientists and students in good scientific practices. They work directly on initiatives related to Open and Replicable Science.	IGDORE seeks to make the transition toward a transparent science easier and more efficient to everyone. They provide scientific openness support to all scientists and students, wherever they are and regardless of affiliation (if any). IGDORE is in itself an intervention against academic precarity as it facilitates researchers without an affiliation to obtain an affiliation that they may require to take part in the academic community. IGDORE is in the process of taking responsibility for the training content generated by the OS MOOC initiative.
League of European Research Associations (LERU) Network / Organisation	LERU is an advocate for the promotion of basic research at European research universities. LERU has 23 members, who work on policy development in selected areas and engage in mutual learning. Their aim is to further politicians', policy makers' and opinion leaders' understanding of the important role and activities of research-intensive universities. LERU works on various research-related topics, with a series of working groups, among which Open Science, Careers of researchers and HR and research integrity.	LERU is a member of the Open Science Policy Platform contributing to its eight policy actions (future of scholarly publishing, FAIR data, altmetrics, rewards, skills, citizen science, research integrity and the European Open Science Cloud). The ad hoc Group on Open Science was set up in 2019 with as remit the implementation of the LERU Open Science Roadmap.
Association of European Research Libraries (LIBER) Network / Organisation	LIBER is the voice for Europe's research library community. They have over 420 national, university and other libraries. Their strategy for 2023 – 2027 has three driving factors, one of which is a drive for openness. By 2027, they have a commitment that research libraries stimulate, facilitate, co-develop and manage infrastructures and practices designed to take open science to the next level. Working groups and Steering Committees have been set up for each topic.	LIBER have a number of OPUS-relevant publications. Most key appears to be their open science roadmap which outlines specific actions libraries can take to champion open science both within and beyond their institutions. It cites 7 priority areas: Scholarly Publishing; FAIR Data; Research Infrastructure & the EOSC; Metrics & Rewards; Open Science Skills; Research Integrity; Citizen Science.
Marie Curie Alumni Association (MCAA)[16] Network / Organisation	MCAA is an international non-profit organisation established and supported by the European Commission, but entirely run by volunteer members and with a bottom-up approach at its core. MCAA is a major platform for researchers to contribute to shaping science policy in Europe, providing career development opportunities and	MCAA has published several policy briefs and statements relevant to the goals of OPUS. MCAA also regularly conducts a survey of early-career researchers with regard to the European research landscape and how it affects the career development of researchers. See for example the Policy Brief "Towards

[16] MCAA is a partner of the OPUS consortium

	supporting the wider research community on topics affecting research and researchers' lives. In the field of Open Science, MCAA published policy input and co-organises training interventions.	Responsible Research Career Assessment" published by MCAA in collaboration with the New HoRRIzon H2020 project. Relevant training initiatives include hosting the Open Science Clinique (with the Foster+Project).
OpenAIRE and National Open Access Desks (NOADs) Network / Organisation	OpenAIRE has been operating as an e-Infrastructure provider for Open Scholarly Communication since 2009 and was established as a non-profit organisation in 2018. Its main strategic priorities are: Infrastructure for open scholarly communication, data and service quality assurance; responsible research and career assessment that includes Open Science; innovation in research communication and dissemination; monitoring the uptake of Open Science policies. The backbone of OpenAIRE is its network of 34 National Open Access Desks.	OpenAIRE brings together an international community of experts. They have produced a range of material on the topic of Open Science, see for example: • Open Access Basics primer • RDM Handbook (primer on managing research data) • Guides on policies and services (Guide on practicing open science and using OpenAIRE services) • Factsheets (Quick references on open science topics for researchers, administrators, funders, etc.)
Open Access 20202 (OA2020) Network / Organisation	OA2020 is a global alliance committed to accelerating the transition to open access. It aims to propel open access forward by fostering and inciting the transformation of today's scholarly journals from the current subscriptions system to new open access publishing models. They seek to enable unrestricted use and re-use of scholarly outputs. The Joint Statement of OA2020 and Coalition S (see above) outlines the need for decisive steps in this direction and describes how the two can work in synergy on both sides of the policy chain.	Institutions and organisations who endorse the OA2020 Expression of Interest pledge to pursue transformation of scholarly journals by converting funds currently expended on subscriptions into funds to support Open Access publishing models, according to their own publishing preferences. OA2020 offers a tool to produce an OA2020 transformation roadmap.
Open Life Science Ambassadors (OLS) Scheme	The OLS programme is a 16-week long personal mentorship and cohort-based training for people interested in applying open principles in their work and becoming Open Science ambassadors in their communities. The UK based programme was originally only focused on Life Science disciplines, but has since evolved to include other fields.	The OLS programme is mainly focused on sharing information on core Open Science practices, through mentor-mentee relationships and training interventions.
Open Research Funders Group (ORFG) Network / Organisation	ORFG is a partnership of philanthropic organisations committed to the open sharing of research outputs and other forms of scholarship. Collectively, the ORFG members hold assets in excess of $255 billion, with total giving in the $12 billion range. The ORFG has built a coalition of interested parties to develop actionable principles and policies that promote greater dissemination, transparency, replicability, and reuse of papers, data, and a range of other research types. ORFG is an initiative of the Scholarly Publishing and Academic Resources Coalition (*see SPARC Europe below*).	ORFG can provide expertise and practical tools for RFOs in: • monitoring open access and open data policy compliance/impact. • Merging resources that qualitatively and quantitatively underscore how openness accelerates research and discovery. • Identifying best practices to policy development and implementation. • Highlighting workflows that minimise hassles for both grant recipients and grant administrators. • Sharing all of the above with the range of research stakeholders. Their Incentivization Blueprint provides funders with a stepwise approach to adjusting their incentivisation schemes.

Open Science MOOC	The Open Science MOOC was originally designed to help equip students and researchers with the skills they need to excel in a modern research environment. The content of this MOOC were to be 10 core modules, of which only 2 have been completed. Each module comprises a range of resources including videos, research articles, dummy datasets and code, as well as tasks to complete as individuals or groups. Certificates are awarded upon completion of each module. Open Science MOOC was never completed and the Institute for Globally Distributed Open Research and Education (IGDORE) is now in the process of taking responsibility for the training content.	The modules of potential relevance to OPUS cover the topics of: Open principles; Open collaboration; Reproducible research and data analysis; Open research data; Open research software and open source; Open access to research papers; Open evaluation; Public engagement with science; Open education resources; Open advocacy.[17]
Organisation for Economic Cooperation and Development (OECD) Network / Organisation	The OECD is an international organisation that works to build better policies for better lives. Their goal is to shape policies that foster prosperity, equality, opportunity and well-being for all. The OECD is working with member and non-member economies to review policies to promote open science and to assess their impact on research and innovation. This is located within their work on Science, Technology and Innovation policy. Among their work, they have looked at Open science initiatives relating to COVID-19.	The OECD has demonstrated a commitment to open science through revised recommendation on access to research data from public funding (a legal instrument). They have also published a series of policy papers on topics that include OS.
Public Library of Sciences (PLOS) Scheme	PLOS is a non-profit, Open Access publisher empowering researchers to accelerate progress in science and medicine by leading a transformation in research communication. PLOS propelled the movement for OA alternatives to subscription journals and established the first multi-disciplinary publication inclusive of all research regardless of novelty or impact. PLOS publishes a suite of influential Open Access journals across all areas of science and medicine.	PLOS publishes research results and surveys on topics related to OS. PLOS presents Altmetrics as a way to assess the impact of research publications:
Research Data Alliance (RDA) Network / Organisation	The RDA was launched in 2013 by the European Commission, the US Government's National Science Foundation and National Institute of Standards and Technology, and the Australian Government's Department of Innovation. It has the goal of building the social and technical infrastructure to enable open sharing and re-use of data. RDA has national Nodes interacting with researchers and innovators, as a platform for exchange of information in compliance with RDA's	RDA working groups on Data Citation and Data Usage Metrics appear to have completed their work. Their Recommendations and Outputs page provides a full overview of their outputs (technical and social infrastructure solutions) and recommendations (official, endorsed results of RDA and considered "flagship" Outputs). These can be searched by topic and by scientific domain.

[17] The MOOC was hosted by the now discontinued Open Source provider Eliademy. OS MOOC is currently in the process of being transferred to IGDORE. It's not clear if this will only involve transferring the completed modules or if the remaining modules will be completed and all modules updated continuously (https://opensciencemooc.eu/community/2022/02/25/moving-to-igdore/).

	principles of Openness, Transparency, Consensus, Community, Harmonisation and Non-profit. RDA has Working Groups on Data Citation and Data Usage Metrics. It has an active Interest Group on Sharing Rewards and Credit. This interdisciplinary group should unpack and improve crediting and rewarding mechanisms in data/resource sharing processes.	RDA's Data Usage Metrics Working Group produced a report that outlines next steps and recommendations for widespread adoption of normalised data usage practices. Other results and WGs include the **CoreTrustSeal Maintenance WG** and the RDA/WDS Certification of Digital Repositories IG, describing the scheme to ensure quality and usability of shared data and long-term preservation of data in sustainable and trustworthy digital repositories. The RDA shares Adoption stories and Adoption Use cases, to show OS and FAIR related Recommendations in practice. RDA recommendations cluster around topics like: Data Management, Data Collection, Data Description, Identity, Store, and Preserve, Disseminate, Link, and Find, Policy, Legal Compliance, and Capacity.
Responsible Research and Innovation Networking Globally (RRING Community) Network / Organisation	The RRING Community is a community of practice to learn, share and apply practices related to Responsible Research and Innovation. RRING goals are to establish and cultivate, country by country, a true community of practice to learn, share and apply influence to achieve ever more responsibility and freedom in research and innovation.	The RRING Community is a community of stakeholders that engage with RRI practices. Open Access is one of the RRI keys. Other RRI keys, such as gender equality, governance, ethics/integrity and science communication have relevance to research assessment and the Open Science Career Assessment Matrix. The coordinator of the RRING project is planning to repurpose the RRING community and widen its focus even further, so that it directly supports the objectives of OPUS and similar projects.
San Francisco Declaration on Research Assessment (DORA) Scheme	DORA recognises the need to improve the ways in which the outputs of scholarly research are evaluated. The declaration was developed in 2012 during the Annual Meeting of the American Society for Cell Biology in San Francisco. It has become a worldwide initiative covering all scholarly disciplines and all key stakeholders including funders, publishers, professional societies, institutions, and researchers. 22,325 individuals and organisations in 159 countries have signed DORA to date.	DORA emerged from the need to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties. Recommendations focus primarily on practices relating to research articles published in peer-reviewed journals, but can and should be extended by recognising additional products, such as datasets, as important research outputs. These recommendations are aimed at funding agencies, academic institutions, journals, organisations that supply metrics, and individual researchers. DORA has produced a toolkit of resources.
Science Europe[18] Network / Organisation	Science Europe is the organisation representing major public organisations that fund or perform excellent, ground-breaking research in Europe. It brings together expertise from European research organisations, currently counting around 40 members from 30 countries. Science Europe advocates science and the scientific community to help build the European Research Area and shape the global scientific agenda. Its vision is for a European Research Area with optimal conditions, to support robust education, research and innovation systems.	Science Europe has published a Position statement on research assessment processes (2020) and an Agreement on reforming research assessment processes (2022). It includes principles, commitments, and timeframes for reforms and lays out principles for a Coalition of organisations willing to work together in implementing the changes. It also provides a practical tool kit. Science Europe has also published papers on Open Access (Briefing paper on Monitoring Open Access and Action Plan on Diamond Open

[18] Science Europe is represented with a member in the OPUS Advisory Board

		Science Europe's strategy includes (among others: Open Access, Research Assessment; Research data; Open Science.	Access) and Research Data Management (Practical Guide to the International Alignment of Research Data Management).
Sustainability Coalition for Open Science Services (SCOSS) Network / Organisation		The Global Sustainability Coalition for Open Science Services (SCOSS), established in 2017, is a network of influential organisations committed to helping secure OA and OS infrastructure well into the future. The purpose is to help identify non-commercial services essential to Open Science, and to make qualified recommendations on which of these services should be considered for funding support. The 2022-24 strategy outlines their main priorities at present. SCOSS-supported open science infrastructure provides the scientific and scholarly community with resources and services to access, share, and assess research.	SCOSS is influential through provision of support to selected, vetted global open science infrastructure (e.g., Arxiv or Sherpa Romeo, etc.). It helps them find funding, connecting funders with infrastructures and infrastructures with other infrastructures, in oder to build capacity in the sector.
Scholarly Publishing and Academic Resources Coalition Europe (SPARC Europe) Network / Organisation		SPARC Europe is a Dutch foundation committed to delivering on the promise of open access, open science, open scholarship and open education. Their work centres on five goals: Strengthen Open Access, Open Scholarship and Open Science and Open Education policy; Strive to enable more equity in Open (*all who wish to publish and share research and education resources openly are better enabled to do so*); Promote diversity in publishing Open research and education; Raise impact of publicly funded research by reimagining how Open research is rewarded and incentivised; Help sustain the Open infrastructure/service ecosystem.	SPARC has a huge resource section, with different target groups (e.g. resources for libraries to better leverage data in negotiation with publishers or to transition journals from subscription to open access, developments in academic publications). SPARC has tool kits for Open and FAIR data and for Open Education. They have published policy documents related to researcher assessment, including the Briefing paper "Better ways to evaluate research and researchers".
UNESCO Open Science	**Global Open Science Partnership and working groups**[19] Network / Organisation	The UNESCO Open Science Partnership brings together relevant and interested OS stakeholders across the world. The Partnership is open ended and the scientific community, public and private science, technology and innovation institutions, relevant private sector and industry, UN agencies and all other relevant open science actors. The Open Science Partnership is geographically balanced, with representative stakeholders and institutions from all regions and all branches of Basic and Applied Sciences, including Natural Sciences, and Social and Human Sciences, particularly taking into account local and indigenous peoples and their traditional knowledge.	Through Global Open Science Partnership, UNESCO can reach OS stakeholders at global level. This includes, for example, the international federations of Library Associations and Libraries and the International Association of STM Publishers (STM). UNESCO Open Science Working Groups can bring global input on possible interventions and policy developments. UNESCO has also developed a tool kit on Open Science.
	Recommendation on Open Science Scheme	The UNESCO Recommendation on OS provides a complete, globally agreed definition on Open Science. Member States are encouraged to prioritise several areas including: • Developing an enabling policy environment for OS; • Investing in training, education, digital literacy and capacity-building, to enable researchers and other stakeholders to participate in OS; and • Fostering a culture of OS and aligning incentives for OS	The Recommendation sets out a series of core values (*Quality and integrity; Collective benefit; Equity and fairness; Diversity and inclusiveness)* and guiding principles *(Transparency, scrutiny, critique and reproducibility; Equality of opportunities; Responsibility, respect and accountability; Collaboration, participation and inclusion; Flexibility; Sustainability*) for Open Science.

[19] UNESCO is a partner of the OPUS consortium

		With the adoption of this Recommendation, Member States embrace the culture and practice of OS and report every four years on progress.	In particular priority area (v) "Fostering a culture of open science and aligning incentives for open science" addresses many topics of relevance to OPUS.
Young European Research Universities Network (YERUN)[20] Network / Organisation		YERUN, founded in 2016, brings together young research universities in Europe, with the primary objective of raising the voice of young universities in Europe. YERUN's vision is to shape a higher education environment where young universities have a true impact on the role and nature of academic pursuit, by being inclusive, responsible, open and innovative, and by enabling talent to grow in all its dimensions. Promotion of Open Science is one of their key areas of work and many of their member organisations are active in this field. Reform of research assessment is another priority area.	YERUN has published a number of documents / policy papers on OS related topics and research assessment report. 2018 documents include the YERUN position on Plan S and Response to the Guidance on Implementation of Plan S. On research assessment, publications include the Reforming research assessment in Europe: YERUN's take on the issue, Rethinking Academic Careers: cultural change as key bottleneck to be addressed and YERUN position on the agreement of research assessment and the CoARA initiative.

[20] YERUN is a partner of the OPUS consortium

3.4. Networks, Organisations and Schemes' Potential Input to WP2 and WP3

The above landscaping has described the general contribution to Open Science that each of the identified networks/organisations and schemes seeks to provide. It has also sought to connect this work to the main objectives of the OPUS project.

As per Chapter 2. Landscaping of Framework Projects, the content was deliberately kept wide, covering various aspects of Open Science. This can be relevant and important to the OPUS Pilot Organisations and to the overall framework being developed in the project. At this early, landscaping, stage, it was important to cast the net wide, as demonstrated in Chapter 3.4. Networks, Organisations and Schemes' Potential Input to WP2 and WP3.

That being said, OPUS has the specific aim to contribute to reformed assessment, with a view to rewarding and incentivising Open Science. As such, this section focuses in on some specific input emerging from the landscaping exercise that can be of background or direct relevance to this topic for Work Package 2 (interventions) and Work Package 3 (indicators and metrics).

The landscaping has highlighted a series of **policy papers**[21] produced by the networks/organisations reviewed above that stress the need for reformed research assessment.

- The 2012 San Francisco Declaration on Research Assessment (DORA)
- The 2015 Leiden Manifesto for research metrics
- SPARC Europe 2015 Briefing paper Better ways to evaluate research and researchers
- The 2017 European Commission report on rewards, incentives and recognition for researchers practicing open science[22]
- European University Association's 2019 paper Research Assessment in the Transition to Open Science
- MCAA's 2019 report Towards Responsible Research Career Assessment
- Science Europe 2020 Position statement on research assessment processes
- UNESCO's 2020 Recommendation on Open Science
- The 2021 European Commission report "Towards a reform of the research assessment system": (with consultation from many of the networks cited above)[23]
- YERUN 2021 Reforming research assessment in Europe: YERUN's take on the issue,
- CoARA and the 2022 Agreement on Reforming Research Assessment
- CoNOSC 2022 report on reforming research assessment
- Science Europe 2022 Agreement on reforming research assessment processes

[21] See also OPUS Deliverable 1.2, landscaping of literature, where the key policy papers are analysed. This is not an exhaustive list, as other relevant documents exist. It represents the list of main documents reviewed for this deliverable in OPUS. See for example: *Council of the European Union (2022), Council conclusions on Research assessment and implementation of Open Science; The Hong Kong Principles for Assessing Researchers: Fostering research integrity (2020); The Global Research Council Call to Action for Responsible Research Assessment (2021)*

[22] European Commission, Directorate-General for Research and Innovation, Cabello Valdes, C., Rentier, B., Kaunismaa, E., et al., Evaluation of research careers fully acknowledging Open Science practices : rewards, incentives and/or recognition for researchers practicing Open Science, Cabello Valdes, C. (editor), Rentier, B. (editor), Kaunismaa, E. (editor), Metcalfe, J. (editor), Esposito, F. (editor), McAllister, D. (editor), Maas, K. (editor), Vandevelde, K. (editor), O'Carroll, C. (editor), Publications Office, 2017, https://data.europa.eu/doi/10.2777/75255

[23] European Commission, Directorate-General for Research and Innovation, Towards a reform of the research assessment system : scoping report, Publications Office, 2021, https://data.europa.eu/doi/10.2777/707440

- YERUN 2022 position on the agreement of research assessment and the CoARA initiative and Rethinking Academic Careers: cultural change as key bottleneck to be addressed.

Concerning **practical tools (possible interventions for WP2)**, particularly relevant examples are summarised as follows.

The **ORFG** Incentivization Blueprint provides funders with a stepwise approach to adjusting their incentivisation schemes. The three steps cover: Policy development and declarations; Implementation; Engagement.

The report "Reimagining Academic Career Assessment: Stories of innovation and change", together with the accompanying online repository bring together and analyse case studies in responsible academic career assessment. This is a joint initiative of **EUA, DORA and SPARC Europe**, to serve as a source of inspiration for universities and other actors looking to improve their academic career assessment practices.

Science Europe, in the Agreement on Reforming Research Assessment, proposes "Annex 3 – Reform journey: a suggested process for achieving the Commitments" and "Annex 4 – Toolbox: practical tools and options to consider".

DORA has produced a toolkit of resources, including a practical guide for research evaluators, the *Building Blocks for Impact* (*one pager that outlines the variety of academic achievements and outcomes that could be considered "impactful"*), De-biasing Committee Composition and Deliberative Processes (*one page brief on the evaluation process for hiring, promotion and tenure*), SPACE to evolve academic assessment: A rubric for analysing institutional conditions and progress indicators and the Workshop kit to introduce the SPACE rubric.

OPENAire provides the ASSESS portfolio service that tracks, monitors and evaluates research. This service provides measures and indicators on Open Science trends and impact, and can help organisations shape their policies and actions.

The landscaping has also resulted in knowledge in terms of **frameworks / Indicators and metrics (possible input to WP3)**.

The **LERU policy paper (2022)** A Pathway towards Multidimensional Academic Careers represents a Framework for the Assessment of Researchers. The framework proposes three perspectives of assessment:

- multidimensional perspective, focusing on the diversity of contributions that is expected from academics today (research dimension / education dimension / public engagement and outreach / service to the institution / other dimensions);
- developmental perspective, focusing on personal growth and development of true leadership (leadership in academia / collaboration and innovation)
- contextual perspective, taking into account the particular context of the researcher who is under assessment (professional context / personal context).

CESAER White Paper on New Generation Metrics (see Annexe 1 for full description and Table of Indicators.) suggests a set of ´next generation metrics´ primarily driven towards interesting and suitable

metrics for universities of Science and Technology. The metrics are categorised into Input, Process, Output and Impact. They are designed to be SMART and are divided into:

- Science metrics: set of indicators for measuring research performance through open science.
- Education metrics: a set of indicators that provide essential information on the readiness of higher education to provide their graduates with the skills needed in the 21st century
- Innovation metrics: set of indicators relating to the universities involvement in open innovation

The White Paper also considers a move towards "progressive metrics".

PLOS presents Altmetrics as a way to assess the impact of research publications. Indicators come from the following sources: Viewed; Cited; Recommended; Discussed; Saved.

In close connection(building on work by PLOCS, **SPARC** has prepared a primer on Article-Level Metrics. This document provides input to a framework of article level metrics, considering five distinct categories: Usage; Captures; Mentions; Social Media; Citations.

Plan S Principle on Responsible Research Assessment and Evaluation states that "when assessing research outputs during funding decisions, cOAlition S funders will make decisions based on the intrinsic merit of the work and not the publication channel, its impact factor (or other journal-level metrics), or the publisher". They take into account the key dimensions summarised in The Metric Tide as: Robustness; Humility; Transparency; Diversity; Reflexivity. cOALition S has also set up a framework for Monitoring the effects of Plan S on Research and Scholarly Communication.

EUA's 2020 report Exploring Higher Education Indicators explores what kind of education indicators are used by external quality assurance agencies, funding mechanisms and international university rankings and whether they are fit for purpose. It examined three external tools that use indicators and have an impact on higher education institutions: external quality assurance, funding formulae, and rankings. This report covers indicators related to education in the broad sense, encompassing learning and teaching, but also the overall learning experience and environment.

The **SCOPE Framework** for Research Evaluation is a five-stage model for evaluating responsibly. It is a practical step-by-step process designed to help research managers, or anyone involved in conducting research evaluations, in planning new evaluations as well as check existing evaluations. SCOPE is an acronym, where S stands for START with what you value, C for CONTEXT considerations, O for OPTIONS for evaluating, P for PROBE deeply, and E for EVALUATE your evaluation.

Finally, it is clear the OPUS must work in synergy with the **networks and working groups** identified above, including but not limited to the following.

- The **EOSC Association** research careers, recognition and credit task force (in addition to the EOSC Executive Board)
- **UNESCO** Working Group on the Open Science monitoring framework
- **The Guild** Research Careers & Assessment working group
- **CERN** Open Science Working Group (currently developing the roadmap on CoARA - expected before end 2023)
- **EUA** working group on Science 2.0 and Open Science
- **cOAlition S** Research Assessment Task Group

- **Science Europe** Open Science working group
- OpenAIRE **and National Open Access Desks**
- **Coalition for Advancing Research Assessment (CoARA)**, which is expected to function through working groups
- **CoNOSC**, given its importance at the level of OS national policies and for its recent focus on Research Assessment voted as a priority topic by its members in in 2022, as well as 2023.

4. Stakeholder Engagement Plan

4.1 Introduction / methodology

Methodology for developing the Stakeholder Engagement Plan

The engagement of stakeholders is a key activity in all technical Work Packages: WP2 Interventions, WP3 Indicators, WP4 Pilots and WP5 Policy briefs. One particular type of engagement is outreach for dissemination and communication purposes, for which the stakeholder engagement planning is coordinated together with the corresponding WP7 (see figure 9).

As such, the stakeholder engagement plan builds upon inputs from the landscaping results (tasks A1.1.2-A1.1.4, as described in Chapter 2. Landscaping of Framework Projects and Chapter 3. Landscaping of Experts, Networks / Organisations and Schemes). Correspondingly, the stakeholders are divided into four groups: **Networks & Organisations, Schemes**, **Projects** and individual **Experts**. A set of guidelines and a stakeholder engagement plan are provided for WP2-5, while coordinating closely with WP7 for other outreach activities.[24] Feedback from these work packages is gathered through a continuous review process, measuring the reach and impact of stakeholder engagement. Results are used to adapt the guidelines and plan throughout the project.

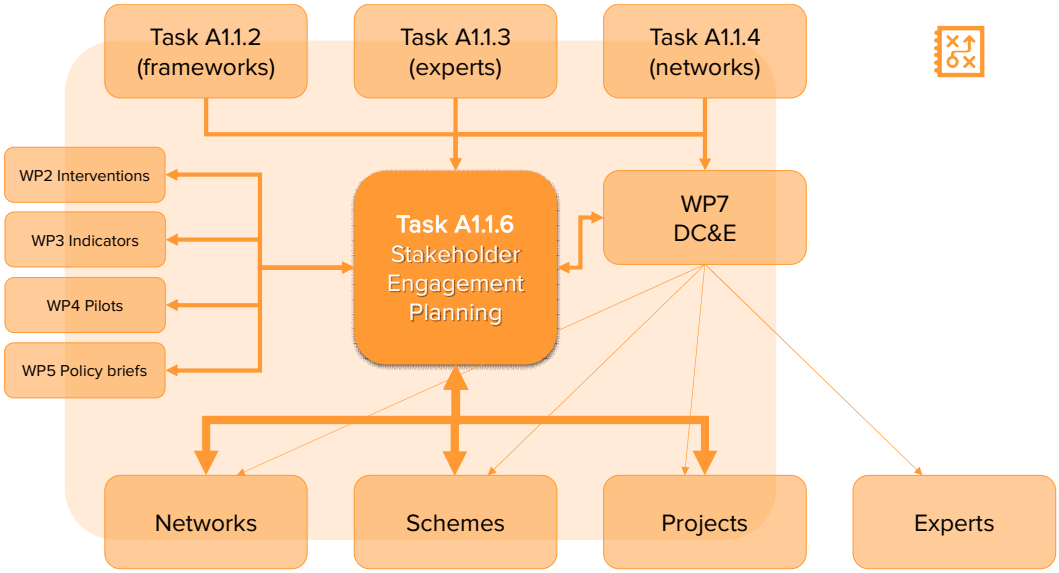

Figure 9: Overview of OPUS framework

While the development of interventions and indicators (WP2/3), the pilots (WP4) and the policy briefs (WP5) will require different kinds of interactions, the important stakeholders to engage will likely be similar for those tasks. The important questions to clarify for the engagement of stakeholders were thus:

- Which stakeholders should participate?
- When should they participate?
- How can their inclusion contribute to achieving the OPIS project goals?

To ensure a successful participation of stakeholders, the engagement planning has been divided into a three-step process, as displayed in Figure 10.

[24] The Guidelines are prepared as part of the D&C Work Package (WP7) and will be made available with the D&C Plan for the OPUS project

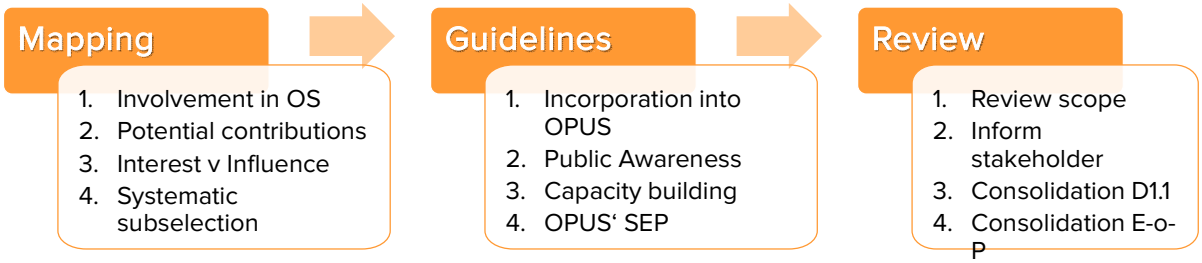

Figure 10: Overview of OPUS engagement planning

The **first step** was a mapping exercise to identify relevant stakeholders and determine the timing and role or objective of their participation or engagement. This took a wide overview of networks, schemes and projects from the landscaping tasks A1.1.2-A1.1.4 as a basis. Through an interactive co-creation exercise with OPUS consortium partners, we were able to address the following points:

- Identifying stakeholder involvement in open science and the potential linkages with other stakeholders.
- Evaluating the potential contribution that the various stakeholders can make and whether they can advance or hinder open science.
- Mapping the identified stakeholders using an Interest-Influence matrix to determine specific, targeted activities towards them.

In the **second step**, guidelines were developed on how to involve the identified stakeholders based on interests, needs and capacity. For this, general objectives of knowledge incorporation, awareness raising etc. were translated into goals and purposes of engagement within the work packages for specific stakeholder groups. These purposes were matched with suited types and intensities of engagement. Finally, criteria were agreed upon to assess and consolidate the stakeholder engagement.

The **final step** is an evaluation of the stakeholder engagement based on the guidelines and criteria, which shall happen throughout the project to adjust the engagement approach where and whenever necessary. For this purpose, the scope and scale of the stakeholder engagement will be assessed after each larger event involving stakeholders. Moreover, upon completion of any significant output, including deliverables, reports and policy briefs, the stakeholder management process will be consolidated and reviewed. This will be completed before the output is disseminated and stakeholders consulted on the output will be informed about the results of their contributions.

Interest - influence matrix as a tool for selection and structured engagement

The interest-influence matrix was chosen to select stakeholders identified in the landscaping exercise and to suitably structure the engagement. This mapping is achieved by evaluating each individual stakeholder according to their level of interest that they are likely to have in project contents, both in favour of or against to the project objectives, and by estimating the influence as to how strongly they might be able to facilitate or block the work and objectives. Both dimensions are rated on levels of high, middle and low, such that the identified stakeholders scatter on a two-dimensional map, forming four distinct groups according to the quadrants highlighted below (Figure 11).

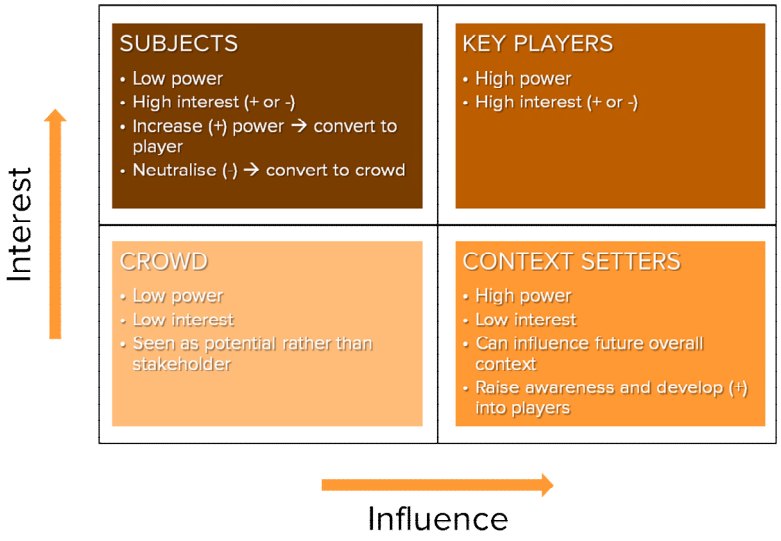

Figure 11: OPUS Influence / Interest Matrix

These two dimensions are further considered and discussed in the workshop that implements the mapping exercise, to clarify the nature of each stakeholder's interest regarding how their interests intersect with the work or what they are likely to be most interested from the work, and to clarify why they are influential or not, and how they could help or block the project.

Depending on the quadrant, different intensities and means of engagement are chosen, while considering appropriate ways of interaction with the different stakeholder types.

4.2. Planned engagement of identified stakeholders

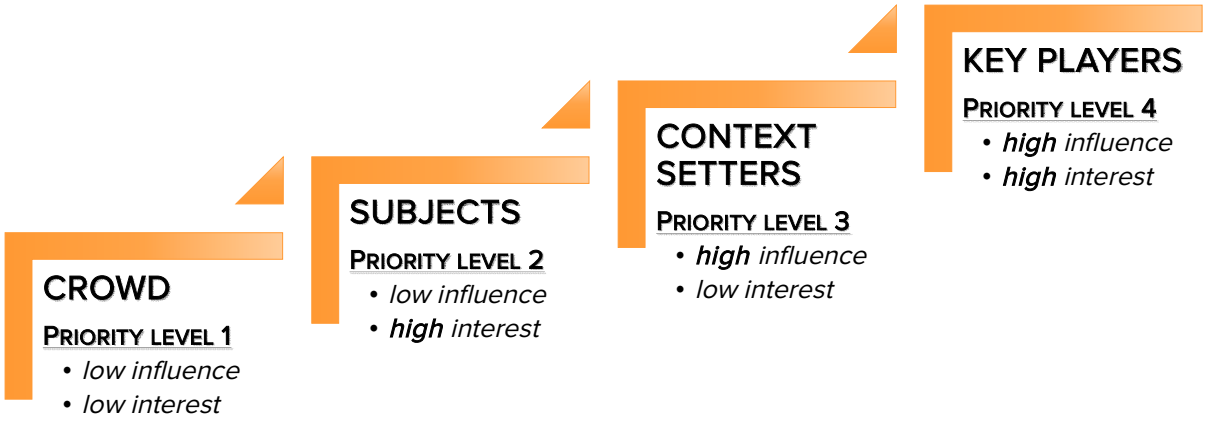

Figure 12: OPUS engagement levels

The stakeholder engagement plan distinguishes between interactions with stakeholders on four levels as described above in the methodology of interest-influence mapping and illustrated below (Figure 13).

The list of pre-identified international stakeholder **Experts** (>130 from Chapter As detailed in subsequent chapters, a number of criteria were set in order to define the scope of the OPUS state of the art review. One important criteria refers to the geographical scope of the OS networks/Organisations and schemes. The decision was taken to focus only on initiatives covering more than one country and not on initiatives developed on a purely national level. It would have been beyond the reach of the state of the art to analyse initiatives in individual member states. As such, the identification of networks that engage national authorities directly *(see for example UNESCO, EOSC, CoNOSC and the National Open Access Desks – NOADs, all described in Chapter 3.3. Methodology and results of landscaping of Networks, Organisations and Schemes*) was selected as the most effective means of discovering and connecting with relevant national initiatives.

3.2. Methodology and results of landscaping Experts section) was decided during the mapping process to be kept outside of the four levels and the experts are instead invited to sign up for the project's expert pool,

hence complying with GDPR requirements. Further experts are being collected in the project's expert pool through a permanently open call disseminated by the communication team on the project's different online channels.

The open science **Schemes** (identified in Chapter 3.3. Methodology and results of landscaping of Networks, Organisations and Schemes) were minutely screened. While contents were readily incorporated into the project's literature base, several of the identified schemes were currently inactive and instead, the main driving individuals were invited personally to sign up into the project's expert pool.

With the expert pool set up, the remaining **Networks and Organisations** (as identified in Chapter 3.3. Methodology and results of landscaping of Networks, Organisations and Schemes) and ongoing **Horizon Europe Projects** (18 relevant ones identified in Chapter 2.1. Project identification and selection methodology) were mapped and structured as shown in the following subsections. In contrast to that, from the Horizon2020 framework programme, 18 projects were reviewed in detail to allow re-use of contents. Given that those projects have ended already or are about to come to an end, the teams were not incorporated into the stakeholder engagement plan, but the individual researchers were invited into the expert pool.

It is noteworthy, that among the mapped stakeholders, no context setters were identified. This could relate to the high attention devoted to Open Science within the European Research Area over the last years, which may have generated a corresponding interest among influential stakeholders, or it may be caused by pre-selection criteria being too effective in excluding indifferent stakeholders. Between the identified stakeholders, the Horizon Europe-funded projects show a strong split between those that are both influential and interested, and those that are neither very influential nor demonstrate much interest. In contrast to that, the identified networks predominantly show both high interest and strong influence within the European Research Area. This predominance of top-tier stakeholders among the networks may be related to the screening criteria, but is likely a consequence of the high degree of voluntary work pursued with perseverance within the networks.

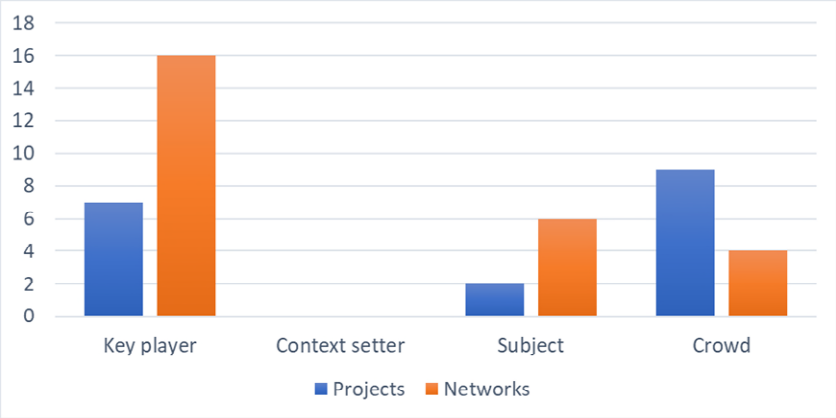

Figure 13: Overview of OPUS Mapped priority levels

Priority level 4: Key players

The **Key players** are mapped below (Figure 14), where medium levels of influence and interest are located in the bottom left corner, whereas highest levels of influence and interest are located in the top right corner.

Networks are displayed as orange bubbles and projects are shown as blue bubbles. The size of each bubble corresponds with the number of stakeholders found at the same levels of interest and influence. In total, 7 projects and 16 networks were identified in this category.

Again, similar to the general analysis, networks were found on average to have larger interest and influence, whereas projects more strongly tend towards medium-high levels. Correspondingly, these stakeholders will be involved into the project most actively with regular interactions and engagements.

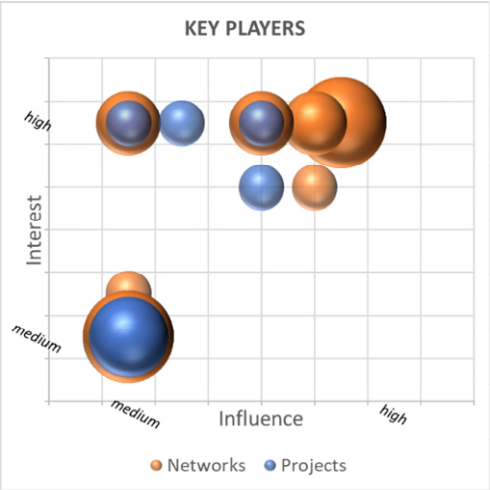

Figure 14: OPUS Key Players

Priority level 3: Context setters

As stated in the beginning of this section, no significant context setter of high influence, but low interest, was identified in the landscaping and mapping exercise.

Priority level 2: Subjects

The subject category of stakeholders with low influence, but relatively high interest, contains two projects and six networks. However, all of the identified stakeholders in this category were found to have only a medium-high interest in the OPUS project goals (Figure 15). In this category, funded projects appear to be slightly more influential, whereas the networks influence was evaluated as even more limited. These stakeholders will be included particularly in the broader consultations as well as for dissemination purposes during the project's lifetime.

Priority level 1: Crowd

The crowd category of stakeholders with both low influence and interest yielded nine projects and four networks, which on average lean equally strong to the lower end of the scales (Figure 16). The stakeholders identified in this category of lowest priority will be included in all regular communication and dissemination activities, but particularly those outreach activities suited for non-professional audiences.

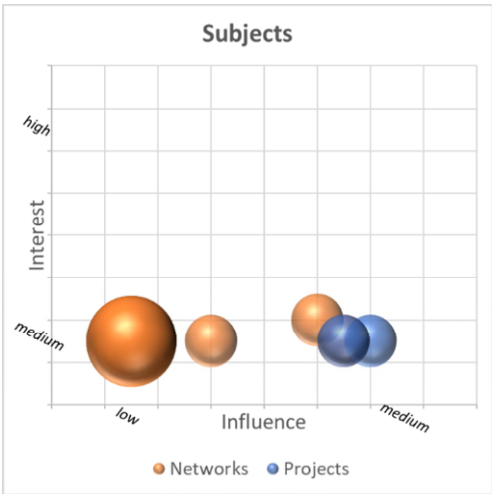

Figure 15: OPUS Subjects

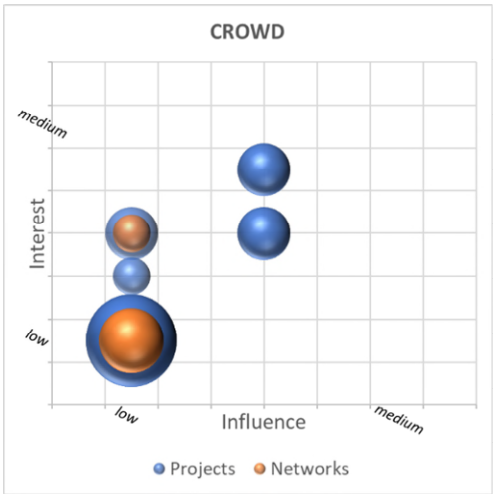

Figure 16: OPUS Crowd

Goals and purposes of the stakeholder engagement in different work packages

WP1: The first work package provides the foundation for the rest of the project. Since the stakeholder analysis starts here, it provides the basis for all widespread outreach activities and shall achieve the proactive signing up of interested experts for consultation activities. Correspondingly, most activities of stakeholder engagement in WP1 focus on getting the relevant experts and other stakeholders even more interested in the project contents. A further goal is achieving a most complete state of the art, which shall be verified and where necessary extended through input from stakeholders.

WP2: Designs incentives and rewards to be implemented in the interventions, and thus seeks cooperation with key players among the networks identified and engaged. The main goal of engagement early into the work package is to gather input through evaluating the collected best practices. During later phases of the project, the objective of stakeholder engagement will increasingly shift towards raising awareness of any other interventions, which could be included into the final framework (an updated Open Science – Career Assessment Matrix: OSCAM2) as well as to disseminate the resulting toolbox of best practices to the network of institutional stakeholders.

WP3: The main goal of stakeholder engagement regarding this work packages is the co-creation and the validation of the collected and further developed indicators and metrics, for which key players will be personally engaged. Through a broader consultation of stakeholders, feedback will be sought to enhance the understanding of realistic indicators and their implementation.

WP4: The pilot actions will engage with individual experts from the project‘s expert pool database, for contribution to the Mutual Learning Committee that will provide continuous advice to the pilots. A range of individuals from the project’s expert pool will further be invited to consult on the development of the work package’s Action Plans. At the end of any of the pilot phases, stakeholders from the key players and the subject categories will be engaged for after-pilot reviews and for consultation on the pilots’ results. Finally, the dissemination activities will be directed to RFOs and RPOs among all identified stakeholders to empower the researchers and ensure the staff at the organisations come out of the pilots better prepared to do Open Science. Finally, key player stakeholders will be invited to consult on the results of the OPUS pilots.

WP5: The policy briefs and the recommendations emerging from the OPUS activities will be disclosed for feedback to stakeholders from the key players categories as well as to selected experts from the project’s expert pool. These consultations will be conducted first for the early (12-months) version as well as for the final recommendations and the OS-CAM2 framework.

During the drafting of the policy briefs, key players will be consulted to inform and guide the drafting team as to what policy briefs are most needed and what the best format for this is in order to make the policy briefs as meaningful and applicable as possible.

WP7: The Dissemination and Communication activities will follow the DC plan (deliverable D7.1) that is prepared separate from the general stakeholder engagement plan. Interactive engagements will mostly be conducted through direct meetings and events, e.g. specific workshops, sessions etc. Moreover, high priority individual experts and key player stakeholders will be invited as attendees and guest speakers at the events of the OPUS project. From all levels, specific stakeholders will be identified as “promoters” to enhance visibility in target audiences. The DC work package will manage contact with the expert group, in collaboration with work package leaders.

For broad outreach activities, stakeholders from all levels above will actively be invited to sign up for the different OPUS channels, that are newsletter, social media (Twitter, LinkedIn), and the events organised by the OPUS consortium.

The dissemination and communication activities include two further general objectives, these are:

- Raising public awareness about open science
- Knowledge and capacity building around open science.

Through the dissemination and communication activities, the consortium further aims to unify the experts and networks towards a single global community to be based on one of the existing non-commercial platforms such as the Open Access Infrastructure for Research in Europe (OpenAIRE) or the European Open Science Cloud (EOSC) to ensure a sustainable, lasting basis of interaction replacing the establishment of competing communities.

5. Conclusions

Deliverable 1.1 has presented the overview of landscaping of framework projects, experts, networks/organisations and schemes.

This landscaping has provided:

- An understanding of the projects funded by the European Commission H2020 programme, which have direct relevance to some elements of the topic of Open Science, including any with a specific focus on the question of rewards and incentives for the transition towards OS. In this case, the objectives was to analysis the content produced by the projects, with a view to providing relevant input to WP2 and WP3;
- An understanding of the projects recently funded by the European Commission Horizon Europe programme, which are expected to have direct relevance to some elements of the topic of Open Science, including a specific focus on the question of rewards and incentives for the transition towards OS. In this case, the objective was to identify the projects, their potential input and the people in the project that should be contacted to promote potential synergies with OPUS;
- An understanding on who is working on Open Science, in terms of individual experts. In this case, the objective was to identify the experts, encourage them to sign up to the OPUS expert group and to categorise the kind of input they could provide;
- An understanding of the networks and organisations working on Open Science and the various schemes being promoted. In this case, the objective was to analyse their mission, their work and the content produced, in addition to identifying the key players coordinating such activities, , with a view to providing relevant input to WP2 and WP3.

We found a huge amount of content and material, confirming the approach at the basis of OPUS: the need to work in synergy with past and ongoing initiatives and to build on what already exists. We also noted a significant push towards Open Science in recent years. This is exemplified, for example, by the fact that Horizon 2020 projects barely mentioned Open Science as a holistic concept (many focussing on RRI and Open Access), while Horizon Europe has already funded many projects working explicitly on supporting uptake of Open Science.

Moreover, we found it necessary to take decisions about relevance to the OPUS project. We focus on Open Science, but specifically on the topic of who to reward and incentivise its uptake. However, at this early stage in the project, we were hesitant to disregard potentially interesting material related to Open Science in general. Therefore, we chose to cast the net wide in terms of landscaping, but when providing specific input to subsequent work packages, we attempted to highlight input that is specifically relevant to research assessment, awards and incentives. Moreover, we recognise that reform of research assessment goes beyond the topic of Open Science. As such, we have highlighted initiatives of interest on this wider question of research reform.

WP1, and in this case Deliverable 1.1, has set an initial basis for the OPUS project. The work will now have to be taken forward in subsequent WPs and activities. To this end, our stakeholder engagement plan represents an important tool. It details how we intend to build on WP1 work, in terms of engaging and extending the expert group and of working with the various networks active in the field of Open Science and Research Assessment reform. All WP will have a part to play, with a central, coordination role going to WP7 for Dissemination and Communication.

6. Annexes

Annexe 1 – Framework Projects not selected for review

Work Programme	Topic call	Name / Acronym	Reason for not selecting
SWFS	SEAC.1.2014.2015 - Innovative ways to make science education and scientific careers attractive to young people	Next Generation Science Challenges Using Digital and Social Media to Make Science Education and Careers Attractive for Young People (SciChallenge)	Out of scope. The SciChallenge project focuses on developing novel concepts to actively integrate young boys and girls in science education
SWFS	SEAC.1.2014.2015 - Innovative ways to make science education and scientific careers attractive to young people	Developing an Engaging Science Classroom (CREATIONS)	Out of scope. Innovative approaches and activities that involve teachers and students in Scientific Research
SWFS	SEAC.1.2014.2015 - Innovative ways to make science education and scientific careers attractive to young people	Promoting Youth Scientific Career Awareness and it Attractiveness through Multi-stakeholder Co-operation (MultiCO)	Out of scope. The project's target is to increase students' future preferences for choosing science studies and their desire to reflect on and pursue science-related careers.
SWFS	SEAC.1.2014.2015 - Innovative ways to make science education and scientific careers attractive to young people	Participatory Engagement with Scientific and Technological Research through Performance (PERFORM)	Out of scope, not relevant for OPUS. The project aims to investigate the effects of the use of innovative science education methods based on performing arts in fostering young peoples' motivations and engagement with science.
SWFS	SEAC.1.2014.2015 - Innovative ways to make science education and scientific careers attractive to young people	Educational Robotics for STEM (ER4STEM)	Out of scope, not relevant for OPUS. The Educational Robotics for STEM (ER4STEM) project aims to turn curious young children into young adults passionate about science and technology with a hands-on use case: robotics.
SWFS	SEAC-2-2014 - Responsible Research and Innovation in Higher Education Curricula	Higher Education Institutions and Responsible Research and Innovation (HEIRRI)	Out of scope. Aims to promote the integration of Responsible Research and Innovation (RRI) within the education of future scientists, engineers and other professionals involved in the research and innovation (R&I) process.

SWFS	SEAC-2-2014 - Responsible Research and Innovation in Higher Education Curricula	Enhancing Responsible Research and Innovation through Curricula in Higher Education (EnRRICH)	Focused on students. The project will build the capacity of staff in higher education to facilitate their students' development of knowledge, skills and attitudes and competencies in responsible research and innovation, and respond to the research needs of society
SWFS	GERI-1-2014 - Innovative approach to communication encouraging girls to study science	Hypatia	No relation to OPUS. The project focuses on sceince education striving to develop a toolkit of activities and guidelines for engaging teenagers in STEM in a gender-inclusive way.
SWFS	GERI-4-2014 - Support to research organisations to implement gender equality plans	PLOTINA - Promoting gender balance and inclusion in research, innovation and training	No focus on OS. The project was focused on development, implementation and assessment of self-tailored Gender Equality Plans (GEPs) with innovative and sustainable strategies for the Research Performing Organizations (RPOs) involved.
SWFS	GERI-4-2014 - Support to research organisations to implement gender equality plans	GENERA - Gender Equality Network in the European Research Area	No focus on OS. The project strived to support research organisations in implementing gender equality plans and propos the coordination and support actions with a focus on physics research and a keen eye on cultural differences throughout Europe.
SWFS	GERI-4-2014 - Support to research organisations to implement gender equality plans	LIBRA - Leading Innovative measures to reach gender Balance in Research Activities	No focus on OS. The main goals of LIBRA are to implement innovative Gender Equality Plans (GEPs) that will empower women researchers to achieve successful careers in science, remove gender barriers and biases at an institutional level, and raise awareness of gender aspects in the experimental design of pre-clinical research projects.
SWFS	GARRI-1-2014 - Fostering RRI uptake in current research and innovations systems	Fostering a Transition towards Responsible Research and Innovation Systems (FoTRRIS)	Out of scope. The main objective of FoTRRIS is to develop and introduce new governance practices to foster Responsible Research and Innovation (RRI) policies and methods in research and innovation systems.
SWFS	GARRI-1-2014 - Fostering RRI uptake in current research and innovations systems	Promoting societal engagement under the terms of RRI (PROSO)	Out of scope. The objective is to foster societal engagement under the terms of RRI in the research and innovation systems in Europe through generation of a policy guide for developing governance for the advancement of societal engagement under RRI in relation to three fields of R&I.
SWFS	GARRI-4-2015 - Innovative approach to release and disseminate research results and measure their impact	OPENing UP new methods, indicators and tools for peer review, impact measurement and dissemination of research results	OA. OpenUP addresses key aspects and challenges of the currently transforming science landscape and aspires to come up with a cohesive framework for the review-disseminate-assess phases of the research life cycle that is fit to support and promote Open Science.
SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	TARGET TAking a Reflexive approach to Gender Equality for institutional Transformation	Not OS focused. The project initiates institutional change in seven gender equality innovating institutions (GEIIs) in the Mediterranean basin employing a reflexive approach which goes beyond the formal adoption of a gender equality plan by emphasising an iterative reflection of progress

			made as well as establishing a community of practice to effect institutional transformation.
SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	CHAlleNging Gender (In)Equality in science and research	No OS. The main aim of the project is to support research organisations to implement gender equality plans.
SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	Gender Equality in Engineering through Communication and Commitment	No OS. The project aims to establish tailor-made Gender Equality Plans (GEPs) in 4 European RPOs and to implement the gender dimension in 2 RFOs. All participating RPOs are located in the STEM (Science, Technology, Engineering, and Mathematics) field.
Research infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	Towards an e-infrastructure Roadmap for Open Science in Agriculture (e-ROSA)	Out os scope. The strategic goal of e-ROSA is to provide guidance to EU policies by designing and laying the groundwork for a long-term programme aiming at achieving an e-infrastructure for open science in agriculture that would position Europe as a major global player at the forefront of research and innovation in this area.
Research infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	Design for Open access Publications in European Research Areas for Social Sciences and Humanities	Out of scope. OPERAS-D (Design) project will support the 5 main partners (“core group”) of the OPERAS network in the development of a European e-infrastructure for open access publications in the Social Sciences and Humanities (SSH).
Research infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	Advanced European Network of E-infrastructures for Astronomy with the SKA (AENEAS)	Not relevant for OPUS. The objective of the AENEAS project is to develop a concept and design for a distributed, federated European Science Data Centre (ESDC) to support the astronomical community in achieving the scientific goals of the Square Kilometre Array (SKA).
Research infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	European E-Infrastructure Services Gateway (eInfraCentral)	Not relevant for OPUS. EInfraCentral's mission is to ensure that by 2020 a broader/ more varied set of users (including industry) benefits from European infrastructures.
Research infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	e-Infrastructure Reflection Group Support Programme 5	Not relevant for OPUS. The project e-IRGSP5 is intended to provide support to the e-Infrastructure Reflection Group (e-IRG).
SWFS	SwafS-04-2018 - Encouraging the re-use of research data generated by publically funded research projects	Improving Health Research in EU through FAIR Data (FAIR4Health)	Focuses on FAIR only. Aims to facilitate and encourage the European Union health research community to apply the FAIR principles

SWFS	SwafS-05-2018-2019 - Grounding RRI practices in research and innovation funding and performing organisations	Ethics Governance System for RRI in Higher Education, Funding and Research Centres (ETHNA)	Focused on ethics. ETHNA System project intends to develop and apply an ethics governance system for the use of RRI in higher education, funding and research centres (HEFRCs).
SWFS	SwafS-05-2018-2019 - Grounding RRI practices in research and innovation funding and performing organisations	Co-Create Change in Research Funding and Performing	Out of scope. The EU-funded Co-Change project will apply an innovative systemic approach to boost the transformative capacity and leadership for RRI. It will centre on the concept of change labs and focus on interactions and dependencies of actors in each research and innovation ecosystem.
SWFS	SwafS-05-2018-2019 - Grounding RRI practices in research and innovation funding and performing organisations	RESponsible research and innovation grounding practices in BIOSciencies	Out of scope, few results. The EU-funded RESBIOS project will embed RRI practices in the field of biosciences – a sector at the crossroads between science and society – in four European countries. To achieve sustainable institutional changes in the various organisations, the project will implement RRI-oriented grounding actions (GAs)
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Social network tools and procedures for developing entrepreneurial skills in PhD programmes (prodPHD)	No results available. Less focus on OS.
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Enhancing skills intelligence and integration into existing PhD programmes by providing transferable skills training through an open online platform (DocEnhance)	The project will focus on transferable skills, which facilitate the transition into employment and are widely applicable, regardless of scientific field and chosen career path. Less focus on OS.
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Video gamEs foR Skills trAining (VERSA)	Not relevant for OPUS. VERSA aims to challenge preconceived methods of skills development by using a variety of commercially available and fun video games.
SWFS	SwafS-23-2020 - Grounding RRI in society with a focus on citizen science	Supporting sustainable Institutional Changes to promote Citizen Science in Science and Technology (TIME4CS)	Focused on citizen science. Aims at supporting and facilitating sustainable institutional changes in research organisations to promote public engagement (citizens and citizens associations) and citizen science in science and technology.
SWFS	SwafS-23-2020 - Grounding RRI in society with a focus on citizen science	Join Us to Optimize Health Through Cohort Research (JoinUs4Health)	Out of scope. The EU-funded JoinUs4Health project will bring together Responsible Research and Innovation (RRI) and crowdsourcing

SWFS	SwafS-23-2020 - Grounding RRI in society with a focus on citizen science	Establishing Citizen Science Hubs in European Research Performing and Funding Organisations to drive institutional change and ground Responsible Research and Innovation in society (INCENTIVE)	Out of scope. The EU-funded INCENTIVE project aims to support Europe's research performing and funding organisations (RPFOs) in establishing sustainable transdisciplinary hubs for stimulating and supporting excellent citizen science.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	GEARING ROLES - Gender Equality Actions in Research Institutions to traNsform Gender ROLES	No focus on OS: the project will assess GEPs at five universities and one research organisation
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	LeTSGEPs - Leading Towards Sustainable Gender Equality Plans in research performing organisations	No relation to OPUS: LeTSGEPs project intends to connect several research-performing organisations to plan and perform actions that will result in systemic institutional transformation concerning gender prejudices and will promote the use of gender budgeting (GB) to face discrimination against women by integrating them in the budgetary process, aiming to eliminate marginalisation and exclusion from economic and political activities.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	Gender SMART Science Management of Agriculture and life sciences, including Research and Teachning	No relation to OPUS: Gender-SMART project aims to attain gender equality in research performing and research funding organisations operating in the field of agricultural and life sciences research focusing on management and work-life balance careers.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	ATHENA - Implementing gender equality plans to unlock research potential of RPOs and RFOs in Europe	No focus on OS: ATHENA project focuses on the implementation of Gender Equality Plans (GEPs) in six research performing and two research funding organisations and seeks to eliminate the existing obstacles to the recruitment, retention and career progression of female researchers and to address gender imbalances in decision-making processes.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	CALIPER - Linking research and innovation for gender equality	No focus on OS: CALIPER project intends to support the transformation of research institutions to more gender-equal entities by increasing the number of women researchers in STEM, enhancing their carrier perspectives and adding a gender dimension in research.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	EQUAL4EUROPE - Gender Equality Standards for AHMSSBL institutions throughout Europe	No focus on OS: EQUAL4EUROPE project focuses on the fields of art, humanities, medicine, social science, business and law; six research-performing institutions will develop and implement tailored gender equality plans in order to realise sustainable cultural and institutional change.
SWFS	SwafS-09-2018-2019-2020 - Supporting research	TARGETED-MPI - Transparent And Resilient Gender Equality Through	No relation to OPUS: TARGETED-MPI project will study gender inequality in B&M schools through the development and efficient performance of innovative gender equality plans (GEPs), focusing on the diverse academic

	organisations to implement gender equality plans	Integrated Monitoring Planning and Implementation	cultures and socio-economic environments in Europe (Belgium, Greece, Sweden and the United Kingdom) and Lebanon. The project will apply action-based research and a transparent end-to-end stakeholder involvement strategy that is fundamental for the development of GEPs, to identify apparent and covert gender prejudices and obstacles in partner organisations.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	SPEAR - Supporting and Implementing Plans for Gender Equality in Academia and Research	No focus on OS: SPEAR project will develop learning platforms and arenas for the exchange of experiences to monitor and support the implementation of gender equality plans (GEPs).
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	MINDtheGEPs - Modifying Institution by Developing Gender Equality Plans	No focus on OS: MINDtheGEPs project aims to create gender equality plans in research organisations, including universities, to encourage systemic change that boosts equality. The project's work will help increase the number of women in university decision-making and managing bodies and pave the way for a gender equality ombudsman. It will also increase open trainings and admissions monitoring processes, and encourage equal opportunities in research and administrative promotions.
SWFS	SwafS-10-2018 - Analysing gender gaps and biases in the allocation of grants	GRANteD - GRant AllocatioN Disparities from a gender perspective	No focus on OS: despite they strive to identify factors that cause gender imbalances before, during and after the submission of research grants. It will focus on real-life problems. The results will show where gender bias occurs, as well as the causes (institutional) of gender bias and its impact on research careers. - they do not mention OP in their questionnaires.
SWFS	SwafS-11-2019 - Scenarios for an award/certification system for gender equality in research organisations and universities in Europe	CASPER - Certification-Award Systems to Promote gender Equality in Research	No focus on OS: CASPER project will focus on gender-related inequalities in research and innovation. It will examine the feasibility of establishing a European award or certification system for gender equality in research organisations. It will work on four scenarios, including a no-action scenario, in co-creation with national and international stakeholders.
SWFS	SwafS-13-2018 - Gender Equality Academy and dissemination of gender knowledge across Europe	GE Academy - Gender Equality Academy	No focus on OS: GE Academy project will develop and perform a consistent and high-level capacity-building programme on gender equality (GE) in research and innovation (R&I) and Higher Education (HE). The project will offer a set of comprehensive training schemes and tailor-made training materials for trainers, practitioners and researchers that will be available in Europe and beyond.
SWFS	SwafS-25-2020 - Gender-based violence including sexual harassment in research organisations and universities	UniSAFE - Gender-based violence and institutional responses: Building a knowledge base and operational tools to make	Not relevant for OPUS: UniSAFE project aims to produce better knowledge on GBV in this field and translate it into operational tools and recommendations for higher education, research organisations and policymakers. To do this, it will investigate the mechanisms of GBV – social determinants, antecedents and consequences – by developing a 7P

		universities and research organisations safe	model that will be used to collect, analyse and synthesise qualitative and quantitative data.
SWFS	SwafS-26-2020 - Innovators of the future: bridging the gender gap	EQUALS-EU - Europe's Regional Partnership for Gender Equality in the Digital Age	No results available. EQUALS-EU project will promote gender equality in social innovation. The project aims to establish capacity through multilateral collaborations to empower existing business networks and create new ones, and to build smart, sustainable and inclusive social innovation ecosystems in EU and non-EU local communities and cities, deploying its activities in EU Member States, associated countries and third countries.
SWFS	SwafS-26-2020 - Innovators of the future: bridging the gender gap	shemakes.eu - Opportunity Ecosystems Bridging the Gender Gap	No relation to OPUS: d shemakes.eu project aims to permanently improve the opportunity structures within the textiles and clothing sector in Europe and promote, highlight and celebrate the leading role of women in innovation. The project will address to various age groups, local communities and businesses. It will blend the approaches of a new textile academy where textiles, digital fabrication and biology meet with those of a multi-faceted business ecosystem that focuses on building alternative, circular and sustainable paths to over-production and diminishing value.
SWFS (OTHER ACTIONS)	SC5-IBA-GENDER-2018 - Stocktaking of 20 years of Gender equality in Research and Innovation	NEW PATHWAYS TO GENDER AND EQUALITY IN RESEARCH AND INNOVATION IN THE EUROPEAN UNION	No focus on OS: NEWPATHWAYS project has proposed a conference in Helsinki in October 2019 to discuss the state of gender equality in the digital era. They will debate on whether gender equality is affected by structural or institutional transformations. Participants will also evaluate gender equality in terms of intersectionality and diversity, as well as its role in digital technology, artificial intelligence and robotics. The conference will debate the future of gender equality in the sector and will elaborate on the evolution of gender equality in the last two decades.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Participatory science toolkit against pollution (ACTOIN)	Beyond OPUS objectives: The ACTION accelerator - a research and innovation framework - provides help and resources to six-month citizen science pilots. Throughout 2020 and 2021 the accelerator hosts 16 pollution-focused pilots from seven countries.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	The Platform for Sharing, Initiating, and Learning Citizen Science in Europe (EU-Citizen.Science)	Out of scope. Aim is to build, fill, and promote a sustainable platform and mutual learning space providing different tools, best practice examples and relevant scientific outcomes that are collected, curated, and made accessible to different stakeholders, ranging from interested citizens over scientific institutions up to politicians and public media in order to mainstream Citizen Science in Europe.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Citizen Science for Monitoring Climate Impacts and Achieving Climate Resilience (CROWD4SDG)	Out of scope. The EU-funded CROWD4SDG project aims to analyse how citizen science (CS) can be used to measure progresses to achieve the SDGs

SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	REsearch INfrastructures FOR Citizens in Europe (REINFORCE)	Out of scope. The EUfunded REINFORCE project aims to engage and support more than 100 000 citizens to increase their awareness of science and their attitude towards it, eliminating anti-intellectual beliefs in society and providing citizens with the intellectual ammunition needed to become critical consumers of scientific knowledge
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	WeCount: Citizens Observing UrbaN Transport	Out of scope. WeCount aims to empower citizens to take a leading role in the production of data, evidence and knowledge around mobility in their own neighbourhoods, and at street level.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Developing metrics and instruments to evaluate citizen science impacts on the environment and society (MICS)	Out of scope. The EU-funded MICS project is developing a platform of tools to measure costs and benefits of citizen science
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Citizen Science for Urban Environment and Health (CitiSHealth)	Out of scope. The project's aim is to develop a citizen science model to assess urban air and noise pollution, wood burning and urban design and mobility at local levels.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Co-designing Citizen Social Science for Collective Action (CoAct)	Out of scope. The EU-funded CoAct project proposes a fundamentally new approach to tackling social global concerns related to mental health care, youth employment, environmental justice and gender equality: by engaging vulnerable citizens acting as co-researchers.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Citizen Scientists Investigating Cookies and App GDPR compliance (CSI-COP)	Out of scope. The project will mobilise citizen scientists from across Europe and beyond to investigate the different types of trackers in cookies and apps.
SWFS	SwafS-15-2018-2019 - Exploring and supporting citizen science	Citizen Science for Environmental Citizenship: Backyard Birding and the Potential for Cultivating Green Engagement (EviroCitizen)	Out of scope. The EU-funded EviroCitizen project will investigate the extent to which citizen science encourages and increases environmental citizenship and promotes environmental sustainability by engaging citizens in environmental-based activities.
SWFS	SwafS-30-2020 - Responsible Open Science: an ethics and integrity perspective	Responsible Open Science in Europe (ROSiE)	Not mature enough. Contact expert. The EU-funded ROSiE project will develop tools to ensure ethics and research integrity in open science and citizen science.
SWFS	SwafS-20-2018-2019: Building the SwafS knowledge base	Future-oriented Science EDucation to enhance Responsibility and engagement in the society of Acceleration and uncertainty (FEDORA)	Out of scope. The FEDORA project aims to develop a future-oriented model enabling formal and informal science education to offer young people foresight, imaginative and action competences.

SWFS	SwafS-20-2018-2019: Building the SwafS knowledge base	COMMUNITIES FOR SCIENCES (C4S) Towards promoting an inclusive approach in Science Education	Out of scope. EU-funded C4S project aims to research the relationships between science and society by focusing on vulnerable communities to ensure their visibility and equal access in science and to improve the knowledge-base on inclusive science education.
SWFS	SwafS-20-2018-2019: Building the SwafS knowledge base	Be Better Informed About Fertility. Giving voice to citizens towards improving assisted reproduction technologies for society (B2/InF)	Out of scope. The EU-funded B2-InF project will examine how young people perceive ART and to what extent clinics align their services and research with the perceptions, concerns and expectations of young citizens.
SWFS	SwafS-31-2020 - Bottom-up approach to build SwafS knowledge base	Pandemic Virus Trace Application for the Effective Knowledge Transfer Between Science and Society Inside the Quadruple Helix Collaboration	Out of scope. The EU-funded PandeVITA project will develop an app by the same name collecting and evaluating the societal awareness and acceptance of scientific guidance during the COVID-19 pandemic to better engage the public in related measures.
SWFS	SwafS-31-2020 - Bottom-up approach to build SwafS knowledge base	Critical Making: Studying RRI Principles in the Maker Community	Out of scope. The EU-funded Critical Making project will study the global maker community in order to reveal its true potential for innovation and public benefit while promoting responsible research and innovation (RRI).
SWFS	SwafS-31-2020 - Bottom-up approach to build SwafS knowledge base	Science Engagement to Empower Disadvantaged adoleScents	Out of scope. The EU-funded SEEDS project aims to engage adolescents from disadvantaged neighbourhoods in designing interventions that will increase their interest in scientific methodologies and in science, technology, engineering, mathematics education by raising the health understanding
SWFS	SwafS-31-2020 - Bottom-up approach to build SwafS knowledge base	Mission-Oriented SwafS to Advance Innovation through Co-creation	Out of scope. The EU-funded MOSAIC project will address this SwafS knowledge base gap within a mission-like environment focused on climate-neutral and smart cities priorities.
NOT SELECTED PROJECTS AFTER PHASE 01			
SWFS	GERI-3-2015 - Evaluation of initiatives to promote gender equality in research policy and research organisations	Evaluation Framework for Promoting Gender Equality in Research and Innovation (EFFORTI)	The project relates to OS topic as much as it repeats projet MoRRi indicators for OS, GE, other.
SWFS	GARRI-2-2015 - Responsible Research and Innovation in industrial context	Evidence and opportunities for responsible innovation in SMEs (COMPASS)	Limited focus on Open Science (RRI self-assessment for SMEs and tool to develop RRI road map). Minor references to open access and stakeholder involvement in industrial innovation. NOT RECOMMENDED FOR FURTHER REVIEW IN PHASE 02.
SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	Supporting the Promotion of Equality in Research and Academia (SUPERA)	The project is not relevant to OS topic as focuses on gender sensitive communication strategies

SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	Pilot experiences for improving gender equality in research organisations (R-I PEERS)	The project is not relevant to OPUS: the project mentions "open access" of GEPs
Research Infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	Euro-African Open Biomedical Engineering e-Platform for Innovation through Education (UBORA)	Not relevant enough for OPUS.
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Championing A Multi-Sectoral Education and Learning Experience to Open New Pathways for Doctoral Students (CHAMELEONS)	Not relevant enough for OPUS. This is more around encouraging career management skills and considering the pathway to a career whilst undertaking the doctorate.
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	ENABLing CAReErS: priming talent for success in Biomedicine (ENABLECARES)	Not mature enough.
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Opportunities and education in networked innovation for new graduates with PhDs using open online resources (OPENING DOORS)	Focus on PhD and training. Use of training materials but no need for further analysis
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Open Science Innovation in PhD programme through Earth Observation: towards new career skills development (InnEO'Space_PhD)	Not mature enough, focused on students as target group
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	SKilled, Innovative & Entrepreneurial Scientists (SKIES)	Not mature enough. In the project website one can find a number of worshops and activies explained.
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	Redisining Equality and Scientific Excellence Together (RESET)	TO MOVE TO "not selected" list - no relation to OS.
SWFS	SwafS-20-2018-2019: Building the SwafS knowledge base	Widening and diversifying citizen engagement in science (ALLINTERACT)	Limited interest for OPUS. Focus on citizen engagement, but material available (only 4 reports) does not provide any particularly useful input. Only some background information.

SWFS	SwafS-31-2020: Bottom-up approach to build SwafS knowledge base	A Responsible Research & Innovation Model for Impact investment & Responsible Startups (RRISTART)	Not relevant for OPUS. Too industry focused.
EXCELLENT SCIENCE - Research Infrastructures	INFRAEOSC-05-2018-2019 - Support to the EOSC Governance	National Initiatives for Open Science in Europe (NI4OS-Europe)	Not directly relevant for OPUS. However, NI4OS did produce a deliverable on rewards & incentives, which presents a broad framework of interventions: NI4OS-Europe Incentives for supporting ORDM and FAIR https://ni4os-europe.eu/wp-content/uploads/2021/06/NI4OS_RI_ORDM__web__EN_single_pages.pdf

Annexe 2 – Overview of Phase 01 Project Review

Work Programme	Topic call	Full Name / Acronym	Relevance to OPUS	Any other comments + input on rewards & incentives - OS interventions, indicators & metrics?	Pass to review stage 2?
SWFS	GERI-2-2014 - Impact of gender diversity on Research & Innovation	Gender Diversity Impact – Improving research and innovation through gender diversity (GEDII)	Gedii will develop a reliable diversity measure that is sensitive to power, status and information sharing differentials within teams and across public & private organisations. This Gender-Diversity-Index (GDI) will thus provide a much more nuanced and realistic measure of the impact of gender diversity on research productivity, quality and innovation across countries and sectors.	POTENTIALLY INTERESTING D4.3, if empirical data on open access schemes used would be needed.	YES
SWFS	GERI-3-2015 - Evaluation of initiatives to promote gender equality in research policy and research organisations	Evaluation Framework for Promoting Gender Equality in Research and Innovation (EFFORTI)	EFFORTI strived to analyse and model the influence of measures to promote gender equality on research and innovation out-puts and on establishing more responsible and responsive RTDI systems.	TO MOVE TO "not selected" list - the project relates to OS topic as much as it repeats MoRRi´s indicators for OS, GE, other.	NO
SWFS	ISSI-5-2014 - Supporting structural change in research organisations to	New Understanding of Communication, Learning and Engagement in	There is reference to Open Access. With some sugestions for "information sources for developing	POTENTIALLY INTERESTING (Action Plan implemented in 1 university made reference to	YES

	promote Responsible Research and Innovation	Universities and Scientific Institutions (NUCLEUS)	more open access approaches to information in the Embedded Nuclei at the national, institutional and individual level".	Open Science intervention + Self Assessment concept) RECOMMENDED CONTACT WITH NUCLEUS COORDINATOR	
SWFS	GARRI-2-2015 - Responsible Research and Innovation in industrial context	Piloting RRI in Industry: a roadmap for tranSforMAtive technologies (PRISMA)	Responsible Research and Innovation in Industry technologies, Roadmap and pilots in industry for RRI - open innovation, stakeholder engagement, good practices of gender and diversity aspects in companies	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02	YES
SWFS	GARRI-2-2015 - Responsible Research and Innovation in industrial context	Evidence and opportunities for responsible innovation in SMEs (COMPASS)	Goal of the project: responsible innovation accessible, comprehensible and feasible for Small and Medium-Sized Enterprises (SMEs) - field: biomedicine, nanotechnology, cybersecurity. Topics mentioned: Openness to info. sharing with clients, customers, end users, stakeholder engagement strategy	Limited focus on Open Science (RRI self-assessment for SMEs and tool to develop RRI road map). Minor references to open access and stakeholder involvement in industrial innovation. NOT RECOMMENDED FOR FURTHER REVIEW IN PHASE 02.	NO
SWFS	GARRI-2-2015 - Responsible Research and Innovation in industrial context	RoadMAPs to Societal Mobilisation for the Advancement of Responsible Industrial Technologies (SMART-map)	Establishing innovative formats of collaboration and roadmaps for responsible development of technologies. Industrial Dialoges, data sharing, open innovation.	Potentially interesting. Format on industry dialogues (could be used to interview businesses for open science initiatives) and SMART-maps (recommendations to various groups of stakeholders in RRI practices).	YES
SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	Supporting the Promotion of Equality in Research and Academia (SUPERA)	The main aim of the SUPERA project is to implement 6 fully-fledged Gender Equality Plans to articulate a structural understanding of gender inequalities, stereotypes and biases in research as a cross-cutting issue to tackle in their complex, multi-layered dimensions and the inclusion of a gender perspective in research and academia, with a	TO MOVE TO "not selected" list - the project is not relevant to OS topic as focuses on gender sensitive communication strategies	NO

			holistic set of measures addressing the above-mentioned objectives of the European Commission's strategy.		
SWFS	SwafS-03-2016-2017 - Support to research organisations to implement gender equality plans	Pilot experiences for improving gender equality in research organisations (R-I PEERS)	The project aims at creating and validating pilot experiences aiming at disrupting the gender-biased approach and those unconscious rules that limit the participation and the career of women in research and innovation in the Mediterranean Area. To do so, we will leverage on the synergies of structured dialogues and women' empowerment through skills and entrepreneurial perspective of research and innovation.	TO MOVE TO "not selected" list as the project is not relevant to OPUS: the project mentions "open access" of GEPs	NO
SWFS	SwafS-04-2016 - Opening Research Organisations in the European Research Area	Fostering Improved Training Tools For Responsible Research and Innovation (FIT4RRI)	Research assessment ('Enhancing competences and skills related to RRI and OS')	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. Deliverable on one of the experiments with definitions of KPIs, indicators, acitions, benchmarks, tools, results - relevant for OPUS WP2, WP3 and WP4	YES
SWFS	SwafS-04-2016 - Opening Research Organisations in the European Research Area	Open Responsible research and Innovation to further Outstanding kNowledge (ORION)	Deliverable D6.4 relates to Action Plans to embed Open Science in RFOs and RPOs. This project also takes into account research managers	Interesting and recommended for Phase 2. Deliverables on Action plans for OS	YES
SWFS	SwafS-06-2017 - Engaging industry – Champions for RRI in Industrial Sectors	LIVING INNOVATION - Implementing RRI through co-creation of smart futures with industry and citizens (LIV.IN)	Integrating RRi in industry in the area of smart future living, industry: ICT sector, new approaches to responsible innovation, policy briefs for industry for responsible innovation	POTENTIALLY INTERESTING. RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. Policy Briefs (for WP5, ABIS sub-task)	YES
SWFS	SwafS-07-2016 - Training on Open Science in the European Research Area	Fostering the practical implementation of Open	Mainly training interventions. See deliverables	POTENTIALLY INTERESTING. RECOMMENDED FOR FURTHER REVIEW IN PHASE	YES

		Science in Horizon 2020 and beyond (FOSTER +)		02. Mainly training interventions.	
SWFS	SwafS-10-2017 - Putting Open Science into action	Fostering a Next Generation of European Photovoltaic Society through Open Science (GRECO)	Open Science into action in a research project concerning Photovoltaic (PV) Energy Research. Pilots - testing how open science could shape the development of PV products, best Open Science approaches	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02.	YES
Research Infrastructures	INFRASUPP-03-2016 - Support to policies and international cooperation for e-infrastructures	Euro-African Open Biomedical Engineering e-Platform for Innovation through Education (UBORA)	Open source co-design of new solutions to face the current and future healthcare challenges. Open design philosophy for technological hubs.	NOT RELEVANT FOR OPUS	NO
Research Infrastructures	INFRAEOSC-05-2018-2019 - Support to the EOSC Governance	Fostering FAIR Data Practices in Europe (FAIRsFAIR)	The EU-funded FAIRsFAIR project (www.fairsfair.eu) has formed a consortium that will cooperate with other relevant projects and initiatives to develop a knowledge infrastructure on, and practical solutions for the use of the FAIR data principles throughout the research data life cycle.	POTENTIALLY INTERESTING. RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. Includes training interventions / assessment tools regarding data / badging reward system	YES
SWFS	SwafS-03-2018 Developing research integrity standard operating procedures	Standard Operating Procedures for Research Integrity (SOPs4RI)	It has a tool kit and inside this there are 9 topics, of which one is Data Management (including FAIR data) and one is Communciation and Publications (including Open Access).	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. Recommendations on OS and guidelines on research integrity including research assesment	YES
SWFS	SwafS-05-2018-2019 - Grounding RRI practices in research and innovation funding and performing organisations	Grounding RRI practices in research performing organisations (GRRIP)	The GRRIP project will embed sustainable responsible research and innovation (RRI) practices in four research-performing organisations (RPO) and one dual-function RPO and research-funding organisation in the M&M sector through action plans (AP) for institutional and cultural change.	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. Interventions on Open Access, mutual learning plan, open innovation resources	YES
SWFS	SwafS-05-2018-2019 - Grounding RRI practices	Grounding RRI Actions to Achieve Institutional Change	The project implements fundamental RRI-oriented	POTENTIALLY INTERESTING, RECOMMENDED FOR	YES

	in research and innovation funding and performing organisations	in European Research Funding and Performing Organisations (GRACE)	institutional change in six research performing and funding organisations (RFPOs). With an intense mutual learning programme and a co-creation environment, four expert partners (cooperating organisations) support six other partners in implementing a set of specific RRI-oriented Grounding Actions	FURTHER REVIEW IN PHASE 02. Interventions on Open Access, mutual learning plan, open innovation resources	
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Championing A Multi-Sectoral Education and Learning Experience to Open New Pathways for Doctoral Students (CHAMELEONS)	May be relevant for research assesment, rewards and incentives	Not really relevant for OPUS. This is more around encouraging career management skills and considering the pathway to a career whilst undertaking the doctorate.	NO
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	ENABLing CAReErS: priming talent for success in Biomedicine (ENABLECARES)	Possibly relevant for research assessment, rewards and incentives. Will provide high-level training on Open Science, entrepreneurship and other related transferable skills to talented young scientists in Europe, with the aim to empower them and give them the tools necessary to pursue a professional career in academia or beyond.	Not mature enough.	NO
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Paths to Succesful Innovations (ISPAS)	Research assessment, rewards and incentives. It will develop new joint curricula of PhD courses organised by academic and non-academic institutions, providing candidates from the fields of science, technology, engineering and mathematics (STEM), medicine, social sciences as well as arts and humanities with skills in open innovation and open science.	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. PHD COURSES ON OPEN SCIENCE / OPEN INNOVATION	YES

SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Opportunities and education in networked innovation for new graduates with PhDs using open online resources (OPENING DOORS)	Research assessment, rewards and incentives. The project aims to provide interdisciplinary, intersectoral and international training to post-graduate researchers delivered via a challenge-based open online educational programme on open science	Focus on PhD and training. Use of training materials but no need for further analysis	NO
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Open Science Innovation in PhD programme through Earth Observation: towards new career skills development (InnEO'Space_PhD)	Research assessment, rewards and incentives. . The InnEO'Space_PhD shall stand for a special academic excellence for future scientific leaders in any field related to EO, enlarging their training and experience with soft skills, environment monitoring, open science and entrepreneurship, that are needed elements for innovation at any level.	Not relevant for OPUS, not mature enough, focused on students as target group	NO
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Developing and Implementing hands-on training on Open Science and Open Innovation for Early Career Researchers (DIOSI)	No results yet (it may produce results in the coming months), Research assessment, rewards and incentives. A full-cycle concept of doctoral training, from the development of a new joint model for doctoral education - through the provision of training on open science and open innovation and entrepreneurship for doctoral candidates and early career researchers (DCs and ECRs) - to measuring the impact of such training by creating an impact and graduate tracking framework.	YUFE, Potentially interesting, final conference in November 30th, DIOSI model and Implementation roads for modernize doctoral education	YES
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	Effective training of transferable skills related to open science and innovation for PhD candidates and early-stage researchers (DISCOVERY LEARNING)	Research assessment, rewards and incentives. The project explores effective approaches for participatory, empowered and evolutionary work-based learning in PhD programmes and for	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. However, the official deliverables are not available	YES

			transferable skills training related to open science and innovation in higher education	(problem with links on cordis and limited documentation on project webpage). In theory, they could have some interesting input in general on rewards / incentives (certainly on promoting researcher skills) and some interesting training material on open science issues	
SWFS	SwafS-08-2019-2020 - Research innovation needs & skills training in PhD programmes	SKilled, Innovative & Entrepreneurial Scientists (SKIES)	Research assessment, rewards and incentives. The EU-funded SKIES project aims to provide for PhD and 1st-year postdoctoral researchers in the field of astronomy with a new set of skills integrating open science, innovation and entrepreneurship.	NOT RELEVANT TO OPUS FOR NOW. No results available although the project has finished. In the project website one can find a number of worshops and activies explained.	NO
SWFS	SwafS-09-2018-2019-2020 - Supporting research organisations to implement gender equality plans	Redesigning Equality and Scientific Excellence Together (RESET)	Despite not all results achieved, a check list for integration of gender (equality) with focus on RRI pillars (including OP) is presented alredy.	TO MOVE TO "not selected" list - no relation to OS.	NO
SWFS	SwafS-20-2018-2019: Building the SwafS knowledge base	Observing and Negating Matthew Effects in Responsible Research and Innovation Transition (ON-MERRIT)	The project proposes qualitative and computational methods to examine advantages and disadvantages in Open Science and Responsible Research & Innovation (RRI). ON-MERRIT produces a set of evidence-based recommendations for science policies, indicators and incentives, which could address and mitigate cumulative (dis)advantages.	POTENTIALLY INTERESTING, RECOMMENDED FOR FURTHER REVIEW IN PHASE 02. Various deliverables about rewards and recognition of Open Science / Data sharing interventions / specific deliverables about gender + industry / policy recommendations	YES
SWFS	SwafS-20-2018-2019: Building the SwafS knowledge base	Widening and diversifying citizen engagement in science (ALLINTERACT)	Could have relevant input (interventions?) to the citizen element side of Open Science	Limited interest for OPUS. Focus on citizen engagement, but material available (only 4 reports) does not provide any particularly useful input. Only some background information.	NO
SWFS	SwafS-21-2018: Advancing the Monitoring of the	Scientific Understanding and Provision of an Enhanced	Follow up of the MORRI project, which developed the baseline RRI	POTENTIALLY INTERESTING, RECOMMENDED FOR	YES

	Evolution and Benefits of Responsible Research and Innovation	and Robust Monitoring system for RRI (SUPER MORRI)	indicators, including indicators on Open Science. SUPER MORRI critically assessed these indicators and proposed an improved set of RRI indicators, ensuring sustained data collection, technical refinements, and new metrics and indicators.	FURTHER REVIEW IN PHASE 02. The project proposes improvements to the MoRRI indicators and a self assessment tool. NOTE that the indicators only refer to open ACCESS and not open SCIENCE in general.	
SWFS	SwafS-31-2020: Bottom-up approach to build SwafS knowledge base	A Responsible Research & Innovation Model for Impact investment & Responsible Startups (RRISTART)	The project mentions "RRI based impact investment indicators", so should be analysed to assess whether there are potentially interesting indicators on Open Science and Industry.	NOT RELEVANT TO OPUS	NO
EXCELLENT SCIENCE - Research Infrastructures	INFRAEOSC-05-2018-2019 - Support to the EOSC Governance	National Initiatives for Open Science in Europe (NI4OS-Europe)	Support for the development of national Open Science Cloud schemes in 15 EU Member States and associated countries. It will design, analyse and categorise the national Open Science environment in these countries to create national OSC structures to support general EOSC governance.	NOT RELEVANT TO OPUS.	NO

Annexe 3 – Horizon Europe Projects

Annexe 3.1 Horizion Europe projects selected as relevant to OPUS

Work Programme	Topic call	Full Name / Acronym	Relevance to OPUS
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	Excellent peripheries for a strong European Research Area (EXPER)	OS appears among the project´s key words. The EU-funded EXPER project will increase the scientific excellence and innovation capacity of the University of Las Palmas de Gran Canaria (ULPGC) and Azores University (UAC) through capacity-building activities and international cooperation. The project will initiate collaborations with the leading universities of Rostock in Germany and Calabria in Italy, focusing on research fields relevant to the blue economy and circular economy. EXPER will raise the excellence profile of ULPGC and UAC, increase

			their attractiveness to local and international talents, and design and plan the institutional transformation of the universities.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-20 - Towards a Europe-wide training and networking scheme for research managers	Career Acknowledgement for Research (Managers) Delivering for the European Area (CARDEA)	Suggested by the EC due to its link between OS and research managers. CARDEA will develop a range of solutions, including a Capacity Maturity Model to assess and improve RM activities, a novel RM Hub for networking and training to include a community of practice. Equality, Diversity and Inclusion, Widening Participation (EU13), Public-Private partnership actions will be at the core of our research, training and enhancement activities.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-20 - Towards a Europe-wide training and networking scheme for research managers	CREATING FRAMEWORK CONDITIONS FOR RESEARCH MANAGEMENT TO STRENGTHEN THE EUROPEAN RESEARCH AREA (RM ROADMAP)	Suggested by the EC due to its link between OS and research managers. To enhance access to excellence, the overarching objective of RM ROADMAP is to identify and adapt the research management capital base of the EU, including the widening countries, of its current and future research management workforce to emerging needs to improve the EU's competitiveness and sustain its economic performance.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-40 - Modelling and quantifying the impacts of open science practice	Open Science Impact Pathways (PathOS)	PathOS will (i) bring a better understanding of the implications of open science for science, economy and society, (ii) provide recommendations to policy makers and other actors in the R&I ecosystem as to how and to what extent open science should be promoted in a balanced way, and (iii) develop innovative tools and methods using a big data to augment traditional ones for studying the causal effects of open science
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-41: Global cooperation on FAIR data policy and practice	Global cooperation on FAIR data policy and practice (WorldFAIR)	CODATA and RDA will work with a set of domain and cross-domain case studies to implement and test FAIR recommendations, including those for core interoperability, to develop a set of recommendations and a framework for FAIR assessment in each discipline or cross-disciplinary research areas involved.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-43 - Capacity-building for institutional open access publishing across Europe	Developing Institutional open Access publishing Models to Advance Scholarly communication (DIAMAS)	DIAMAS gathers 23 organisations from 12 European countries, well-versed in OA academic publishing and scholarly communication.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-44 - Societal trust in science, research and innovation	INspiring and ANchoring TrUst in Science (IANUS)	The IANUS project strengthens warranted trust in science by fostering participation in research as a co-creative and inclusive process, sensitive to societal values, concerns and needs. Trust must be inspired by transparency and trustworthiness of knowledge production, and anchored by actively involving and serving society, as part of the modus operandi of science.

Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-44 - Societal trust in science, research and innovation	deVEloping scientific Research with ethIcs and inTegrity for shAred benefitS (VERITAS)	Includes OS as key words. VERITAS combines multidisciplinary expertise, both from the social sciences and engineering, to synthesise existing knowledge to evaluate tools and methods for enhancing trust in science through original research and small-scale participatory activities, before producing the VERITAS Protocol of Recommendations for ""stewards of trust"".
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-44 - Societal trust in science, research and innovation	Probing the impact of integrity and integration on societal trust in science (POIESIS)	Includes OS as key words. POIESIS will carry out an extensive research programme to systematically examine the interrelatedness of integrity, integration, and trust, and the role of institutions in fostering a research climate that is conducive to societal trust in science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2022-ERA-01-41 - Increasing the reproducibility of scientific results	TIER2: ENHANCING TRUST, INTEGRITY AND EFFICIENCY IN RESEARCH THROUGH NEXT-LEVEL REPRODUCIBILITY IMPACT PATHWAYS (TIER2)	2 cross-disciplinary stakeholder groups (research publishers and funders) to systematically investigate reproducibility of results across contexts. The project starts by thoroughly examining the epistemological, social and technical factors (epistemic diversity) which shape the meanings and implications of reproducibility across contexts. Next, we build a state-of-the-art evidence-base on existing reproducibility interventions, tools and practices, identifying key knowledge gaps.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2022-ERA-01-42 - Supporting the development of aligned policies for open access books and monographs	Policy Alignment of Open access Monographs in the European Research Area (PALOMERA)	Focuses on Open Access of academic books, research funders and institutions. It will provide actionable recommendations and concrete resources to support and coordinate aligned funder and institutional policies for OA books.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2022-ERA-01-50 - Developing an effective ERA talent pipeline	Sustainable Careers for Researcher Empowerment (SECURE)	The Sustainable Careers for Researcher Empowerment (SECURE) project will develop coordination and support measures to create, trial, implement, and mainstream a common Research Career Framework (RCF) that offers a suite of options to support organisations in the recruitment, employment, training, development, progression, and mobility of researchers with the aim of improving research careers and reducing career precarity.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2022-ERA-01-50 - Developing an effective ERA talent pipeline	Transforming Europe Through Doctoral Talent and Skills Recognition (DocTalent4EU)	DocTalent4EU aims to enhance PhD employability through a strong, visible and innovative recognition-system of the most in-demand transferable skills (relying on the ESCO framework) that early-career researchers (ECRs) acquire or will acquire through their doctoral training and research activities
Research infraestructures	HORIZON-INFRA-2022-EOSC-01-01: Supporting an EOSC-	Skills for the European Open Science Commons: Creating a Training	Skills4EOSC brings together leading experiences of national, regional, institutional and thematic Open Science (OS) and Data Competence Centres from 18 European countries with the goal of

	ready digitally skilled workforce	Ecosystem for Open and FAIR Science (Skills4EOSC)	unifying the current training landscape into a common and trusted pan-European ecosystem, 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.
Research infrastructures	HORIZON-INFRA-2022-EOSC-01-01: Supporting an EOSC-ready digitally skilled workforce	next Generation Research Assessment to Promote Open Science (GraspOS)	*GraspOS* sets out the ambitious goal to develop, assess and put into operation an **open and trusted federated infrastructure for next generation research metrics and indicators**, offering data, tools, services and guidance to support and enable policy reforms for research assessment at researcher (individual/group), institutional, organisational and country level. GraspOS aims to: -Deliver an Open Science Assessment Framework (OSAF) as a toolkit to assist tailoring and applying in practice new generation, OS-aware Responsible Research Assessment (RRA) approaches - Develop and deliver EOSC-integrated tools and services to support the implementation of new generation, OS aware Responsible Research Assessment (RRA) approaches - Develop an EOSC-integrated, Federated Open Metrics Infrastructure to offer data, tools, and services. - Empower and bring together different stakeholder communities to co-design, showcase, validate, and evaluate OS-aware RRA indicators, tools, services and infrastructure in real-world pilots.
Research infrastructures	HORIZON-INFRA-2021-EOSC-01-02 - Supporting the development and coordination of activities of the EOSC Partnership	EOSC Focus	EOSC Focus will support the co-programmed EOSC Partnership in delivering its mission of establishing Open Science as the “new normal” and achieving the key objectives, which are outlined in the Memorandum of Understanding between the European Union and the EOSC Association (EOSC-A). Includes stakeholder engagement.
Research infrastructures	HORIZON-INFRA-2021-EOSC-01-03 - Deploying EOSC-Core components for FAIR	Core Components Supporting a FAIR EOS (FAIRCORE4EOSC)	Includes articles on OS in its webiste. https://faircore4eosc.eu/ FAIRCORE4EOSC focuses on the development and realisation of EOSC-Core components supporting a FAIR EOSC, addressing gaps identified in the SRIA. Leveraging existing technologies and services, the project will develop nine new EOSC-Core components aimed to improve the discoverability and interoperability of an increased amount of research outputs.
Research infrastructures	HORIZON-INFRA-2021-EOSC-01-05 - Enabling discovery and interoperability of federated research objects across scientific communities	Expanding FAIR Solutions across EOSC (FAIR-IMPACT)	Builds on FAIRsFAIR and other projects but it may be too centered around EOSC. FAIR-IMPACT focuses on expanding FAIR solutions across the EOSC. It builds on the results of FAIRsFAIR and other relevant projects and initiatives. The project aims to realise a FAIR EOSC, that is an EOSC of FAIR data and services. FAIR-IMPACT will identify proven domain solutions and facilitate the interoperable

			uptake of these solutions across scientific domains and for different types of research output.

Annexe 3.1 Horizion Europe projects not-selected

Work Programme	Topic call	Name / Acronym	Reason
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	Trailblazing Inclusive, Sustainable and Resilient Cities (InCITIES)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	Strengthening Research and Innovation Excellence in Autonomous Aerial Systems (AeroTwin)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	BOOSTING INGENIUM FOR EXCELLENCE (B4E)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	European Higher Education Institutions Network for Climate and Atmospheric Sciences (EDU4ClimAte)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	E3UDRES2 Ent-r-e-novators: Cooperating for excellence and impact in research and innovation (E3UDRES2 Ent-r-e-novators)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	European Universities designing the horizons of sustainability (Sustainable Horizons)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	TRANSFORMING ADVANCED WATER SKILLING THROUGH THE CREATION OF A NETWORK OF EXTENDED-REALITY WATER EMULATIVE CENTRES (WATERLINE)	No mention of Open Science.

Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ACCESS-05-01 - Capacity building to strengthen networks of higher education institutions and cooperation with surrounding ecosystems	Bringing Excellence to Transformative Socially Engaged Research in Life Sciences through Integrated Digital Centers (Better Life)	No mention of Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-60: A capacity-building and brokering network to make citizen science an integral part of the European Research Area	European Citizen Science (ECS)	No direct input to the topic of rewards and incentives for Open Science.
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-61 - Supporting and giving recognition to citizen science in the European Research Area	IMPETUS	No direct input to the topic of rewards and incentives for Open Science..
Widening participation and strengthening the ERA	HORIZON-WIDERA-2021-ERA-01-80 - Centre of excellence on inclusive gender equality in Research & Innovation	European Centre of Excellence on Inclusive Gender Equality in Research & Innovation: Creating Knowledge & Engaging in Collaborative Action (INSPIRE)	No mention of Open Science.

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