graspos
open research metrics dataspace

Open Science Assessment Framework (OSAF)

Webinar Team

- Clifford Tatum (CWTS)
- Zeynep Anli (CWTS)
- Josefine Nordling (CSC)
- Lottie Provost (CNR)
- Zenia Xenou (OpenAIRE)

The project is funded by the European Commission, under Grant Agreement No. 101095

Supporting eosc

Funded by the European Union

Webinar Agenda

- GraspOS context
- On Frameworks
- Open Science Assessment Framework (OSAF)
- Use case: Openness Profile
- Discussion

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

graspos
open research metrics dataspace

Menti

The project is funded by the European Commission, under Grant Agreement No. 101095

Supporting eosc

Funded by the European Union

graspos

A multidisciplinary consortium

Infrastructure experts + RRA + OS experts + Communities

ATHENA Research & Innovation Information Technologies

OpenAIRE

CWTS Meaningful metrics

INRAE

Consiglio Nazionale delle Ricerche

egi

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

Federation of Finnish Learned Societies

UNIVERSITY OF EASTERN FINLAND

CSC

cesnet

Inria

OPERAS open scholarly communication in the european research area for social sciences and humanities

grnet

Faculty of Chemistry University of Belgrade

Utrecht University

uefiscdi

TÜBİTAK

Funded by the European Union

Supporting eosc

The project is funded by the European Commission, under Grant Agreement No. 101095129

Open science aware responsible research assessment

graspos

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

GraspOS at a glance

GraspOS aims to support the emerging policy reforms and pave the way towards an **open science aware responsible research assessment** system

GraspOS will develop, assess and operate an **open and trusted federated infrastructure** for next generation research metrics and indicators, offering data, tools, services and guidance

Core elements of GraspOS:

- Open Science Assessment Framework
- Assessment data, tools, and services
- Federated Open Metrics Infrastructure
- GraspOS pilots (9)
- GraspOS community of practice + CoARA OI4RRA working group

Budget: 2.985M

Start date: 1/1/2023

Duration: 36 months

Funded by the European Union Supporting eosc

The project is funded by the European Commission, under Grant Agreement No. 101095129

graspos
open research metrics dataspace

On Frameworks

The project is funded by the European Commission, under Grant Agreement No. 101095

Supporting eosc

Funded by the European Union

Definition: framework

a basic structure underlying a system, concept, or text. (Oxford dictionary)

Relevant examples:

- Open Science Career Assessment Matrix (OS-CAM)
- Norwegian-Career Assessment Matrix (Nor-CAM)
- Opus Researcher Assessment Framework (Opus RAF)
- Indicator Frameworks (EC expert committee)
- SCOPE Assessment Guide (SCOPE)

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

OS-CAM

Figure 1. Open Science Career Assessment Matrix (OS-CAM) representing the range of evaluation criteria for assessing Open Science activities

Open Science Career Assessment Matrix (OS-CAM)	
Open Science activities	*Possible evaluation criteria*
RESEARCH OUTPUT	
Research activity	Pushing forward the boundaries of open science as a research topic
Publications	Publishing in open access journals Self-archiving in open access repositories
Datasets and research results	Using the FAIR data principles Adopting quality standards in open data management and open datasets Making use of open data from other researchers
Open source	Using open source software and other open tools Developing new software and tools that are open to other users
Funding	Securing funding for open science activities
RESEARCH PROCESS	
Stakeholder engagement / citizen science	Actively engaging society and research users in the research process Sharing provisional research results with stakeholders through open platforms (e.g. Arxiv, Figshare) Involving stakeholders in peer review processes
Collaboration and Interdisciplinarity	Widening participation in research through open collaborative projects Engaging in team science through diverse cross-disciplinary teams
Research integrity	Being aware of the ethical and legal issues relating to data sharing, confidentiality, attribution and environmental impact of open science activities Fully recognizing the contribution of others in research projects, including collaborators, co-authors, citizens, open data providers
Risk management	Taking account of the risks involved in open science
SERVICE AND LEADERSHIP	
Leadership	Developing a vision and strategy on how to integrate OS practices in the normal practice of doing research Driving policy and practice in open science

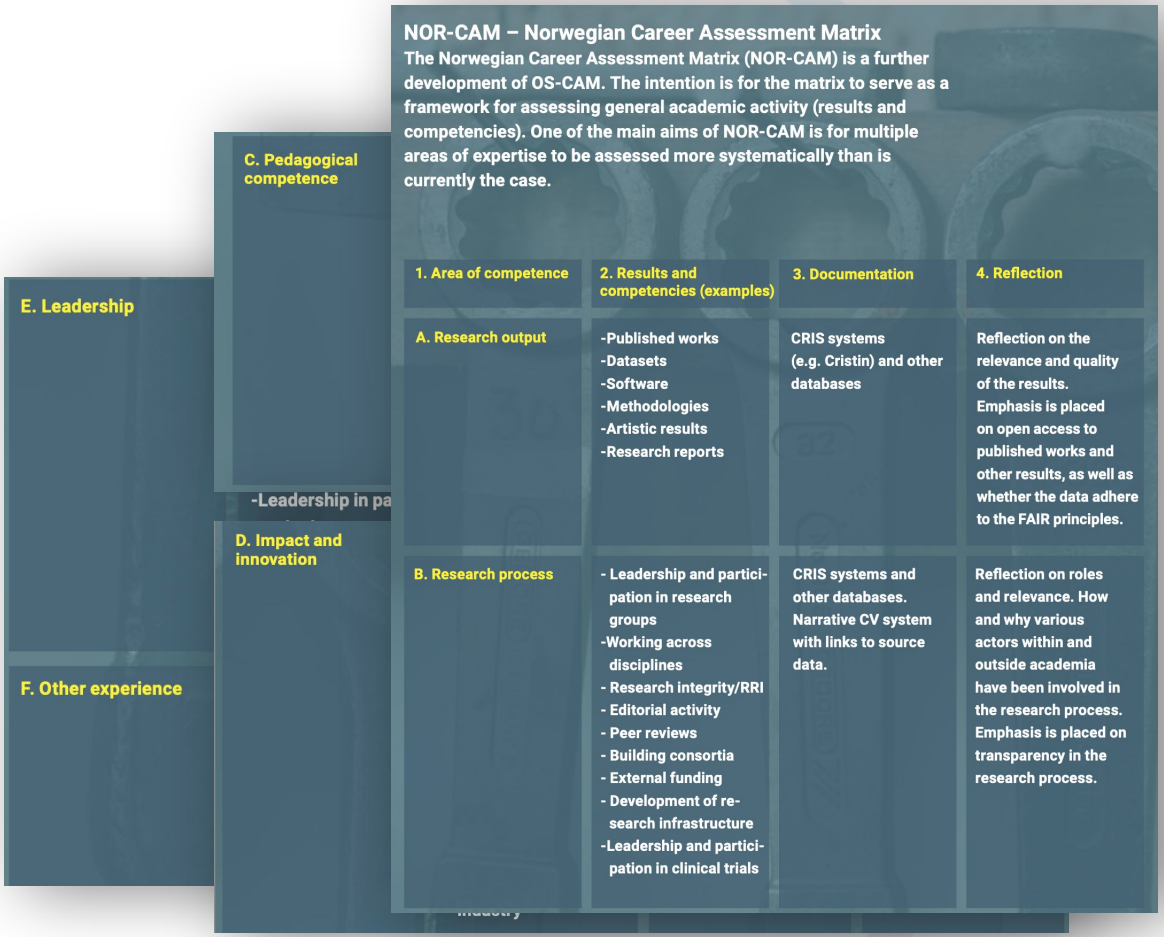
Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

OS-CAM

	Being a role model in practicing open science
Academic standing	Developing an international or national profile for open science activities Contributing as editor or advisor for open science journals or bodies
Peer review	Contributing to open peer review processes Examining or assessing open research
Networking	Participating in national and international networks relating to open science
RESEARCH IMPACT	
Communication and Dissemination	Participating in public engagement activities Sharing research results through non-academic dissemination channels Translating research into a language suitable for public understanding
IP (patents, licenses)	Being knowledgeable on the legal and ethical issues relating to IPR Transferring IP to the wider economy
Societal impact	Evidence of use of research by societal groups Recognition from societal groups or for societal activities
Knowledge exchange	Engaging in open innovation with partners beyond academia
TEACHING AND SUPERVISION	
Teaching	Training other researchers in open science principles and methods Developing curricula and programs in open science methods, including open science data management Raising awareness and understanding in open science in undergraduate and masters' programs
Mentoring	Mentoring and encouraging others in developing their open science capabilities
Supervision	Supporting early stage researchers to adopt an open science approach
PROFESSIONAL EXPERIENCE	
Continuing professional development	Investing in own professional development to build open science capabilities
Project management	Successfully delivering open science projects involving diverse research teams
Personal qualities	Demonstrating the personal qualities to engage society and research users with open science Showing the flexibility and perseverance to respond to the challenges of conducting open science

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

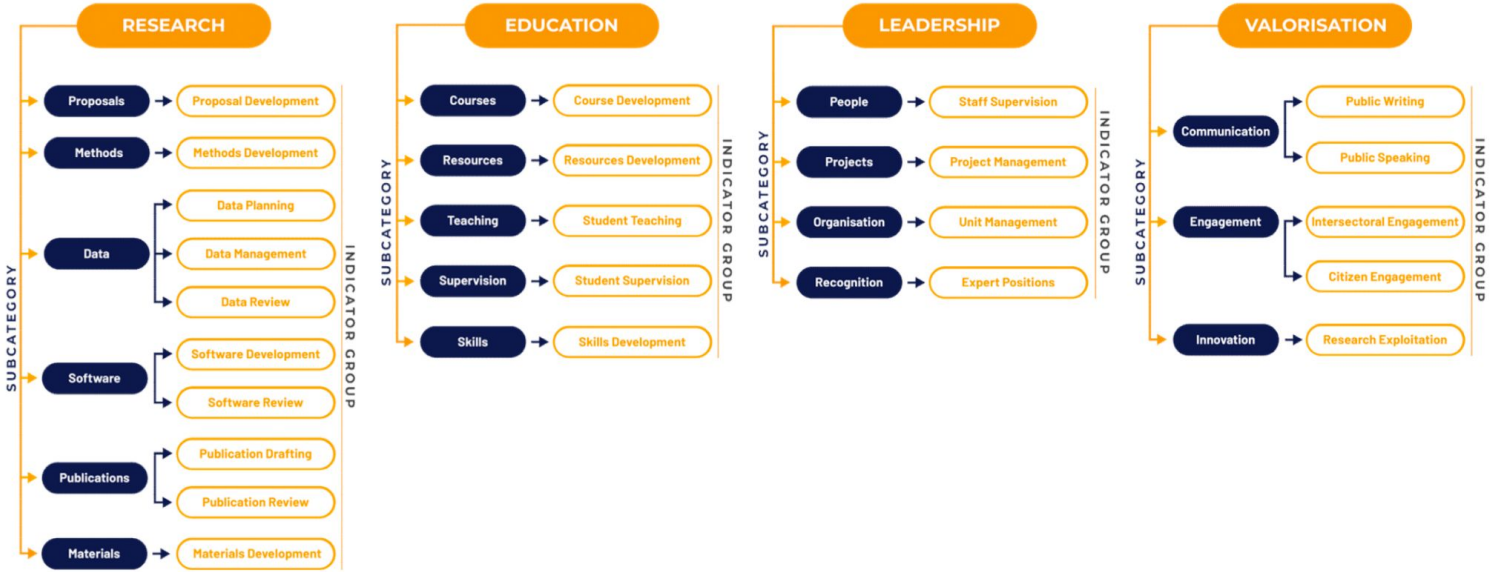
Nor-CAM



Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

OPUS RAF

Figure 1: Categories, Subcategories, and Indicator Groups of Researcher Assessment Framework



Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Indicator frameworks

for fostering open knowledge practices in science and scholarship

Based on the strengths, weaknesses, potential and risks of each indicator

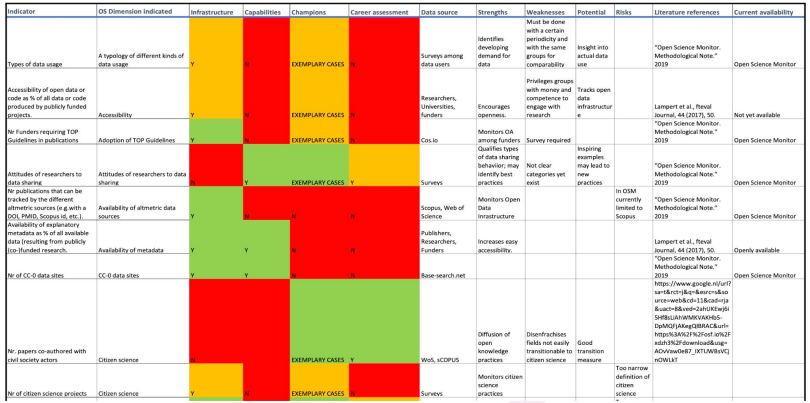
Y and Green: the indicator may be used…

Y and Orange: the indicator is promising, but…

N and Orange: the indicator is currently not fit to be used…

N and Red: the indicator should not be included…

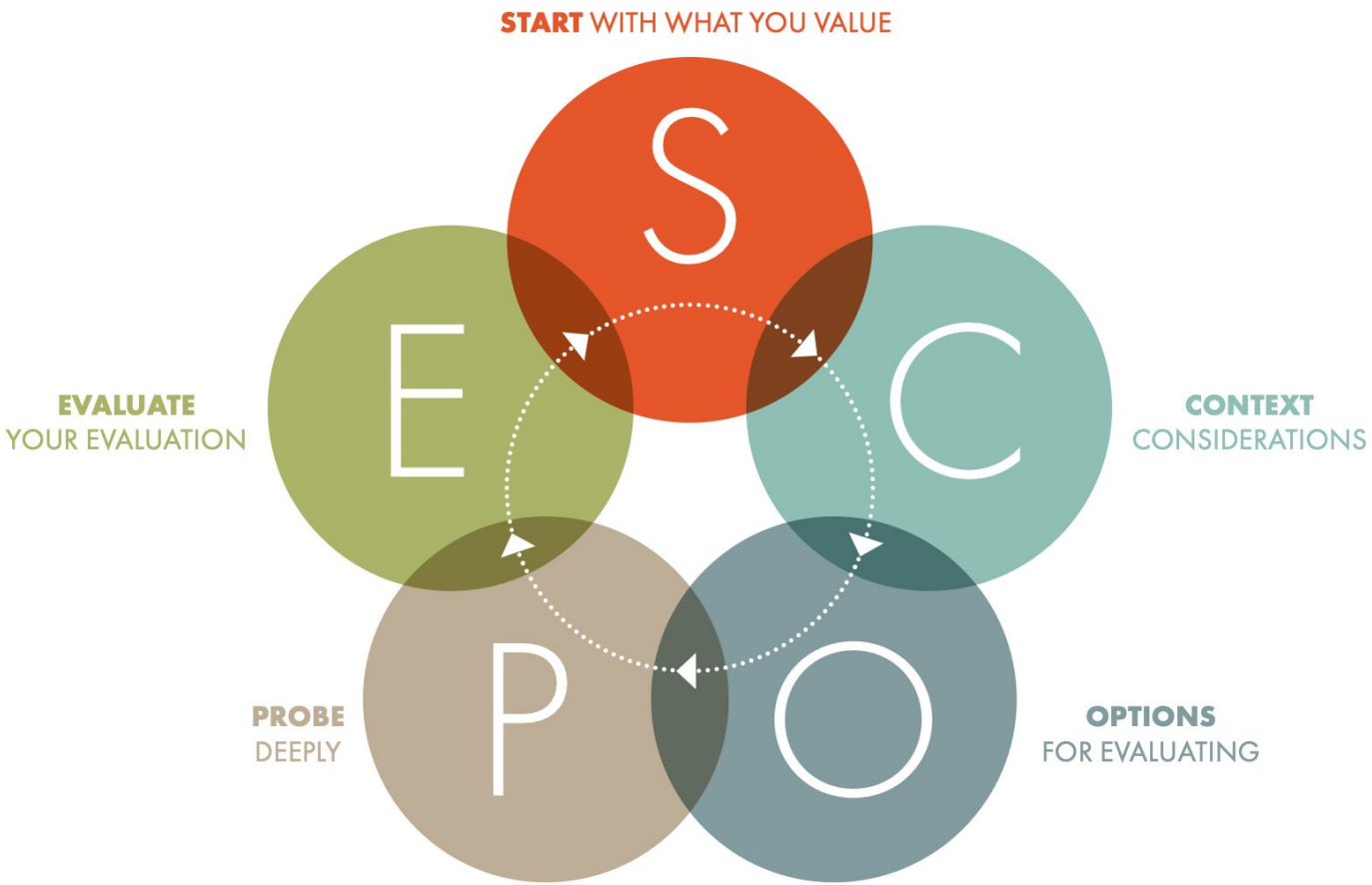
The list contains in total 149 indicators […] it is not exhaustive…



Indicator	OS Dimension indicated	Infrastructure	Capabilities	Champions	Career assessment	Data source	Strengths	Weaknesses	Potential	Risks	Literature references	Current availability
Types of data usage	A typology of different kinds of data usage	Y	N	EXEMPLARY CASES	N	Surveys among data users	Identifies developing demand for data	Must be done with a certain periodicity and with the same groups for comparability	Insight into actual data use		"Open Science Monitor. Methodological Note." 2019	Open Science Monitor
Accessibility of open data or code as % of all data or code produced by publicly funded projects.	Accessibility	Y	N	EXEMPLARY CASES	N	Researchers, Universities, funders	Encourages openness.	Privileges groups with money and competence to engage with research	Tracks open data infrastructure		Lampert et al., Reval Journal, 44 (2017), 50.	Not yet available
Nr Funders requiring TOP Guidelines in publications	Adoption of TOP Guidelines	Y	N	EXEMPLARY CASES	N	Cos.io	Monitors OA among funders	Survey required			"Open Science Monitor. Methodological Note." 2019	Open Science Monitor
Attitudes of researchers to data sharing	Attitudes of researchers to data sharing	N	Y	EXEMPLARY CASES	Y	Surveys	Qualifies types of data sharing behavior; may identify best practices	Not clear categories yet exist	Inspiring examples may lead to new practices		"Open Science Monitor. Methodological Note." 2019	Open Science Monitor
Nr publications that can be tracked by the different altmetric sources (e.g.with a DOI, PMID, Scopus Id, etc.).	Availability of altmetric data sources	Y	N	N	N	Scopus, Web of Science	Monitors Open Data Inrastructure			In OSM currently limited to Scopus	"Open Science Monitor. Methodological Note." 2019	Open Science Monitor
Availability of explanatory metadata as % of all available data (resulting from publicly (co-)funded research.	Availability of metadata	Y	Y	N	N	Publishers, Researchers, Funders	Increases easy accessibility.				Lampert et al., Reval Journal, 44 (2017), 50.	Openly available
Nr of CC-0 data sites	CC-0 data sites	Y	Y	N	N	Base-search.net					"Open Science Monitor. Methodological Note." 2019	Open Science Monitor
Nr. papers co-authored with civil society actors	Citizen science	N		EXEMPLARY CASES	Y	WoS, sCOPUS	Diffusion of open knowledge practices	Disenfrachises fields not easily transitionable to citizen science	Good transition measure		https://www.google.ni/url?sa=t&rct=j&q=&esrc=s&source=web&cd=11&cad=rja&uact=8&ved=2ahUKEwj6iSHfBsLiAhWMOVAKHdiS-DpMQFjAKegQIBRAC&url=https%3A%2F%2Fosf.io%2Fsdsh3%2Fdownload&usg=AOvVaw0e87_IXTUWBxVCjnDW1kT	
Nr of citizen science projects	Citizen science	Y	N	EXEMPLARY CASES	N	Surveys	Monitors citizen science practices			Too narrow definition of citizen science		

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

inorms SCOPE



Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

graspos
open research metrics dataspace

Open Science Assessment Framework

The project is funded by the European Commission, under Grant Agreement No. 101095

Supporting eosc

Funded by the European Union

OSAF: Translating **Principles** to Practice

Coalition for Advancing Research Assessment (priority commitments)

- Recognise the **diversity of contributions** in accordance with the needs and nature of the research
- Base assessment **primarily on qualitative evaluation supported by quantitative indicators**
- Abandon inappropriate uses journal- and publication-based metrics, in particular (JIF) and h-index
- Avoid the use of rankings of research organisations in research assessment

SCOPE Framework (principles)

- Evaluate only where necessary
- **Evaluate with the evaluated**
- Draw on evaluation expertise

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

OSAF: Translating Principles to **Practice**

Open Science Assessment Framework (OSAF)

SCOPE+i Method

- assessment-specific infrastructure
- assessment resources
  - RRA in general
  - OS in particular

Assessment Portfolio

- Narrative + Evidence
- Diversity of inputs & roles
- Researcher/group/institution
- Collaborative resource

Assessment Registry

- Contextualized assessment
- Searchable database

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

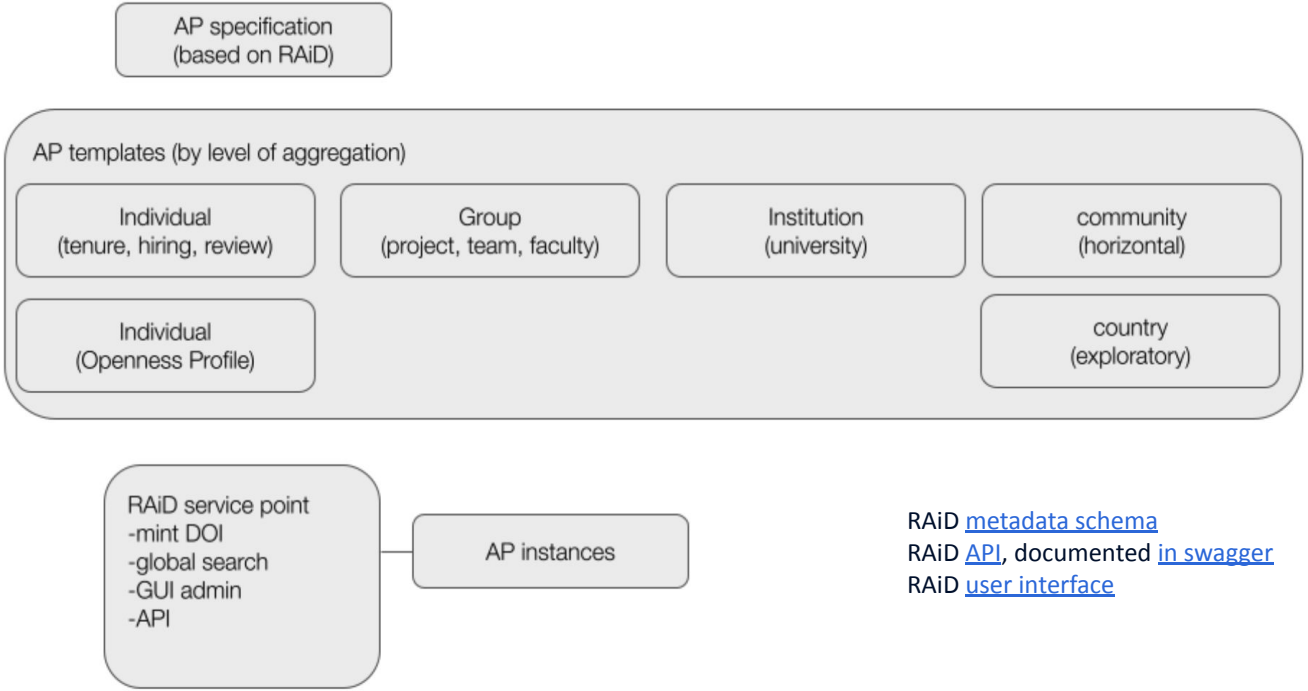
	Open Science Assessment Framework (OSAF)		
Assessment event phases	SCOPE	SCOPE+i Method	Assessment Infrastructure
Assessment readiness	**1-Start with what you value** **2-Context & purpose**	- templates - guidelines	**Assessment Portfolio** - document readiness
Assessment design	**3-Options for evaluation** **4-Probe deeply**	- templates - guidelines - checklists	**Assessment Portfolio** - multi-actor object - evaluand(s) narrative - assessment ***protocol***
Perform the Assessment		- open analytics - open data sources - GraspOS service catalog	**Assessment Portfolio** - distribute portfolio
Assessment evaluation & dissemination	**5-Evaluate the evaluation**	- guidelines - template	**Assessment Registry** - publish assessment ***protocol*** - evaluation of the evaluation

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Our approach to research assessment begins with the premise that context, purpose and values inform assessment protocol, and that each context is different.

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

OSAF | Assessment Portfolio



RAiD metadata schema
RAiD API, documented in swagger
RAiD user interface

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Use case: Openness Profile

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Introducing the Openness Profile: Finnish research.fi service as a pilot

graspos
open research metrics dataspace

Josefine Nordling, Senior Open Science Specialist
CSC - IT Center for Science
OSAF webinar, 7 March 2024
Credits to Laura Himanen, CSC

The project is funded by the European Commission, under Grant Agreement No. 101095129
Supporting eosc
Funded by the European Union

What is an Openness Profile all about?

- A digital resource where Open Science efforts (activities and outputs) within research are centrally accessible
- Originates from the work undertaken in the Knowledge Exchange network (https://www.knowledge-exchange.info/about-us). More info on the work: https://www.knowledge-exchange.info/event/openness-profile
- The technology of the profile will be based on the RAiD being developed further within the FAIRCORE4EOSC project. A responsible research assessment extension to RAiD is necessary for fulfilling the requirements set by the Openness Profile (OP)
- ORCID to be leveraged with automated processes
- Currently in the process of creating an inventory of OS indicators, with the help of nine pilots involved in the project → Research.fi is one of these pilots

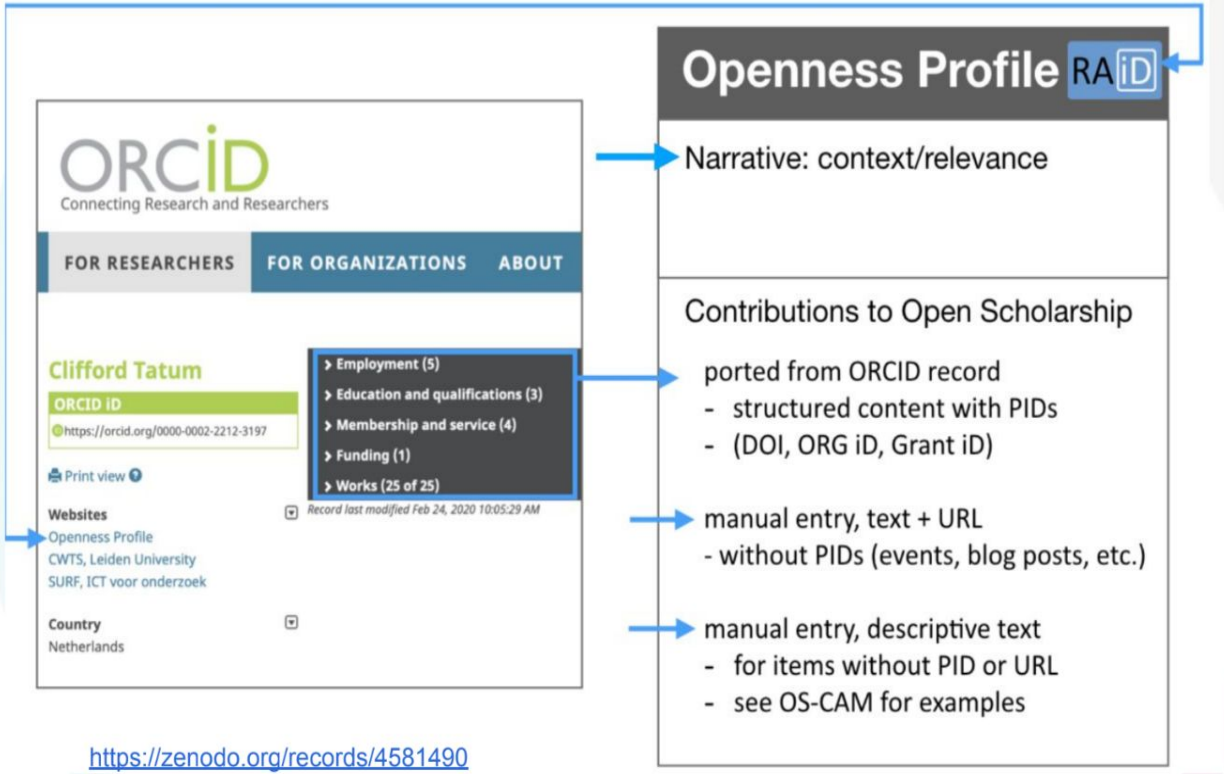
Funded by the European Union Supporting eosc The project is funded by the European Commission, under Grant Agreement No. 101095129

Requirements for an OP

- Reducing the administrative burden
- Balancing between metrics and narratives
- Receiving credits for a large variety of outputs
- Assuring provenance is properly managed
  - Automation is desired, but requires manual checks and validations
  - Data provenance information generates trust within research
- Community governance
  - A need for community consensus over taxonomies, workflows, standards, and points of integration between systems and for the prevention of information lock-in within proprietary systems
- PID-enabled automated workflow
  - Creates links between entities (people, organisations, outputs, institutions, projects etc.)
  - Through the use of APIs, knowledge graphs can be created for reporting purposes

Funded by the European Union Supporting eosc The project is funded by the European Commission, under Grant Agreement No. 101095129

Openness Profile concept



https://zenodo.org/records/4581490

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Figure 4
The OP would be integrated into ORCID, it would take evidence of research outputs from and present those which conform to open scholarship values, for example, open access articles and open datasets. In addition, other research outputs and activities would be evidenced with web addresses. Finally, some outputs and activities would simply be supported with narrative text from the research contributor.

Category	Content	Source
Narrative	Free text composed by the contributor to provide a textured account of their contributions to open scholarship.	User
Entries from ORCID record	DOI - OA publications DOI - OA presentations DOI - OA Dataset	ORCID: works
	Org ID - Service contribution	ORCID record: service
	Org ID - OS affiliation[5]	ORCID record: affiliation
	Grant ID - OS award[6]	ORCID record: Grant awards
	Open peer review	ORCID record: peer review
User-entered items with associated URIs	URL - software	e.g. Github
	URL - OS tools	e.g. website, repository
	URL - even	e.g. website, blog post
	URL - course curriculum	Institutional webpage
	URL - art exhibit	Institutional profile / webpage
	URL - (social) media mentions	e.g. altmetrics providers
User-entered items that cannot be evidenced by public documentation	Descriptive text and references	Activities that do not create a web presence. Example might include those in the OS-CAM matrix**[18]** (Page 15)

Source: **https://zenodo.org/record/3929036#.YD8Tty1h3gg**

graspos

Search for information on research in Finland

Search target | For example, publication, field of science, keyword | SEARCH | Search help

Publications 799 997 | People 624 | Projects 15 293 | Research data 5 490 | Funding calls 483 | Show all

Science and research in Finland

Researcher's Profile Tool

Create a public profile to Research.fi service or log in to your existing profile

Latest science and research news

Musiikkikasvatuksen saavutettavuus, tukiverkostot ja musiikillisen toiminnan jatkuvuus säätelevät nuorten taiteen kautta syntyvää osallisuutta ja musiikillista toimijuutta

05.03.2024

Taideyliopisto

Ihmisen toiminta ajanut maapallon makean

Open funding calls

Apurahat hengitysterveyttä edistävään toimintaan

Hakuaika päättyy **10.3.2024**

Kuopion Seudun Hengityssäätiö

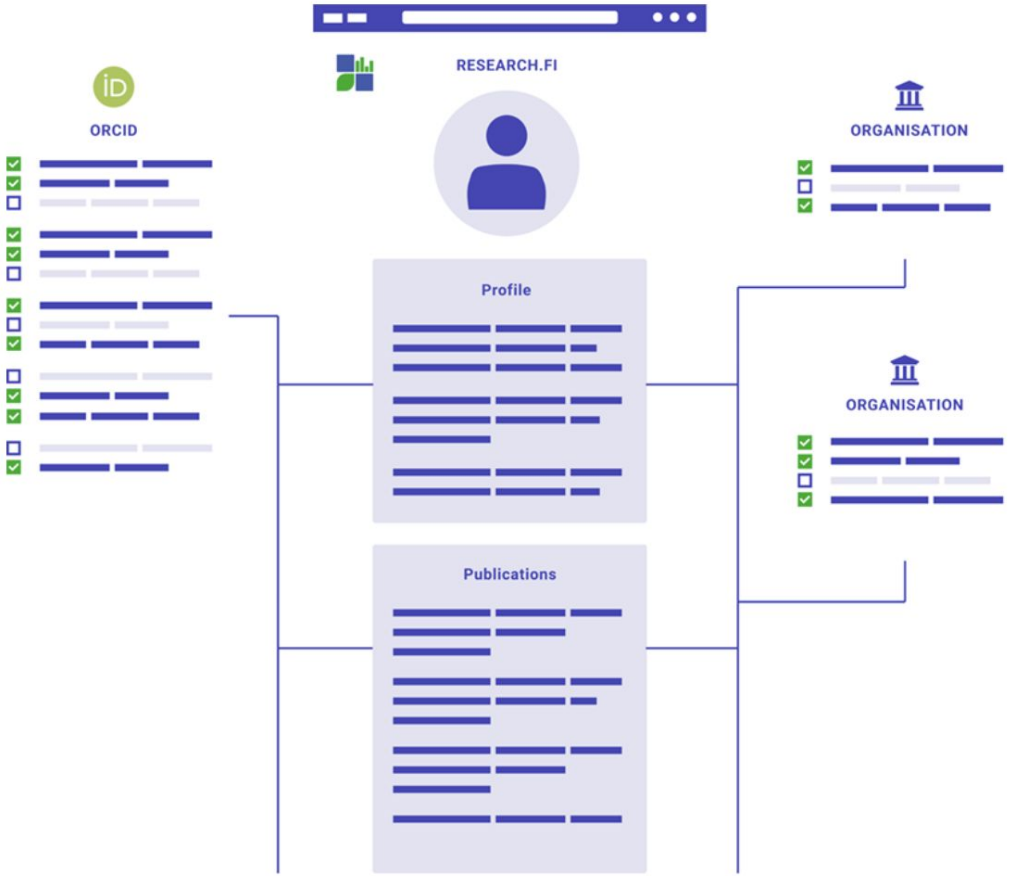
Research grants

Hakuaika päättyy **12.3.2024**

GIVE FEEDBACK!

The Researcher Profile

Using the Researcher's Profile Tool, you can compile a public profile in the Research.fi service from information in your ORCID profile and your home organisation. In the tool, you can preview the information before it is published and select only the information that you want to be part of your profile.



Funded by the European Union Supporting eosc The project is funded by the European Commission,

Pilot ambitions of Research.fi

Openness Profile as part of Research.fi researcher's profile:

- A separate section of researcher's profile listing open science activities → Considering **open science more diversely** in Research.fi
- A test site for volunteering researchers, complete a survey or interviews targeting the test-users
- The information shown in the profile is **completely based on the researcher's own choice** (or if anything is shown), based on the MyData principles

Funded by the European Union Supporting eosc The project is funded by the European Commission, under Grant Agreement No. 101095129

Example: Adopting Openness Profile in a researcher's profile in Research.fi

People > Puuska, Hanna-Mari

Puuska, Hanna-Mari

http://orcid.org/0000-0001-5532-9274

Director, CSC - IT Center for Science

Keywords

scientometrics, bibliometrics, science studies, research policy

Affiliations

Tampere University

Source: ORCID

CSC - IT Center for Science

Unit	Title
Research and Education Information Management and Data Analytics	Director 2010

Source: ORCID

Education

Degrees

PhD 2014 / University of Tampere

Publications (18)

Publication Forum 2010-2020: Self-evaluation report of the Finnish quality c
channels
2021
DOI 10.23847/isbn.9789525995442

Bibliometrinen tutkimus ja innovaatiopolitiikka
2014

Tutkimuksen kansallinen tehtävä.
2014

Show all

Open Science activities (n)

raspos

Outputs and activities through which the researcher contribute to open research

Considerations and limitations

- Research.fi is not an evaluation tool, nor is it designed to support evaluations. Its purpose is to collect and disseminate information on research activities → the OP would not be used for evaluation purposes, only for **showcasing openness**
- **The concept** of 'openness' in different contexts **should be made clear** and be mutually acceptable
- **Openness is not unambiguously a merit**, for example if data is opened without due consideration of its sensitive nature → measuring openness with indicators can have negative consequences
- How to capture activities and merits in open science not currently available in a **reliable** way?

Funded by the European Union Supporting eosc The project is funded by the European Commission, under Grant Agreement No. 101095129

The added-value to Research.fi

- The **international cooperation** in developing more OS-aware ways of evaluating and monitoring research
- GraspOS gives a promise to design **mutually accepted** ways to appreciate open science also in practice
- **Support the implementation of** the core commitments of the **Agreement on Reforming Research Assessment** (CoARA)

Funded by the European Union Supporting eosc The project is funded by the European Commission, under Grant Agreement No. 101095129

Knowledge Exchange reports on the Openness Profile:

Murphy, F., & Jones, P. (2020). Openness Profile: Defining the Concepts (Version 1). Zenodo. https://doi.org/10.5281/zenodo.3607579

Jones, P., & Murphy, F. (2021). Openness Profile: Modelling research evaluation for open scholarship. Zenodo. https://doi.org/10.5281/zenodo.4581490

The project is funded by the European Commission, under Grant Agreement No. 101095129 Supporting eosc Funded by the European Union

graspos
open research metrics dataspace

Menti

The project is funded by the European Commission, under Grant Agreement No. 101095

Supporting eosc

Funded by the European Union

questions

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Let’s make it happen! Together.

THANK YOU

c.c.tatum@cwts.leidenuniv.nl

josefine.nordling@csc.fi

graspos

open research assessment dataspace

Funded by the European Union

Supporting eosc

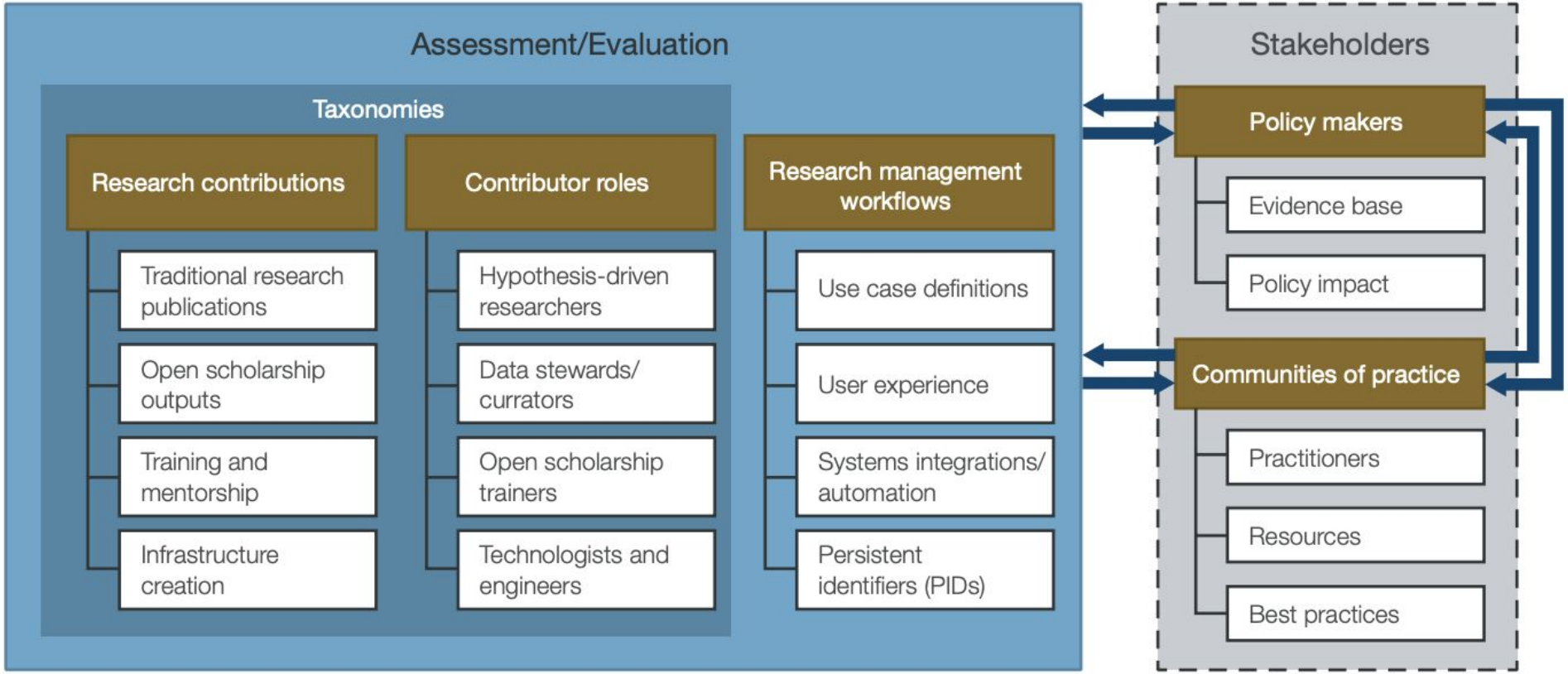
The project is funded by the European Commission, under Grant Agreement No. 101095129

supplementary slides

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Figure 5

The Openness Profile reference model showing the various requirements uncovered during this research study and the feedback loops needed to maintain their development.



OSAF | Assessment Registry

Protocol - ***a procedure for carrying out a scientific experiment or a course of medical treatment.*** (Oxford dictionary)

Example: **Strategy Evaluation Protocol (Netherlands)**

- The main goal of a Strategy Evaluation Protocol (SEP) evaluation is to evaluate a research unit in light of its own aims and strategy. An assessment committee of independent experts assesses the performance of the unit based on the self-evaluation and a site visit.

- The SEP is a flexible instrument that is at the service of a productive conversation on the quality and societal relevance of the research and the viability of research units in light of their own aims and strategy.

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

OSAF | SCOPE+i method

(translating principles into practice)

Templates
Assessment readiness template
Stakeholder mapping template
Value(s) statement template
Purpose statement template
Contextual factors template
Narrative template
Strategy template

Open Infrastructure, Indicators & Data Sources
GraspOS tools & services catalog
Indicator toolboxes
Open research information sources

Guidelines & Checklists
Open Science Assessment Guide
Guidance on the diversity of OS contributions, roles, and activities
Assessment team guidelines
Guidelines for evaluators and evaluands
Guidance for overcoming common obstacles in implementing RRA
Guidance on equity, diversity, inclusion (EDI)
Guidance on translating values, purpose and context into an assessment protocol
Checklist for responsible assessments
Guidance/template on what to include, how to document an assessment protocol
Guidelines for evaluating the evaluation

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Assessment Readiness

Open Science Assessment Framework (OSAF)		
Scope	SCOPE+i Method	Assessment Infrastructure
1-Start with what you value **2-Context & purpose**	- OS assessment guidelines - assessment team guidelines - template, assessment readiness - template, stakeholder mapping - template, value statement - template, purpose statement - template, contextual factors	**Assessment Portfolio** - assessment team - readiness report - stakeholder map - value statement - purpose statement - relevant contextual factors

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Assessment Design

Open Science Assessment Framework (OSAF)		
Scope	SCOPE+i Method	Assessment Infrastructure
3-Options for evaluation **4-Probe deeply**	- translating values, purpose and context into an assessment design - narrative template - strategy template - evaluator/evaluand guide - RRA obstacles guide - diversity of OS contributions guide - equity, diversity, inclusion guidelines - responsible assessment checklist - assessment design guide/template - indicator toolbox guidelines - open research information sources - GraspOS services catalog	**Assessment Portfolio** - collaborative evidence selection - evaluand(s) narrative - indicators and data sources - assessment design document

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Perform the Assessment

Open Science Assessment Framework (OSAF)		
Scope	SCOPE+i Method	Assessment Infrastructure
	- assessment protocol - open analytics - open data sources - GraspOS service catalog	**Assessment Portfolio** - distribute portfolio to stakeholders

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129

Evaluation & Dissemination

Open Science Assessment Framework (OSAF)		
Scope	SCOPE+i Method	Assessment Infrastructure
5-Evaluate the evaluation	**-** Evaluate the evaluation	**Assessment Registry** - assessment team - readiness report - stakeholder map - value statement - purpose statement - relevant contextual factors - assessment protocol

Funded by the European Union
Supporting eosc
The project is funded by the European Commission, under Grant Agreement No. 101095129