



Open Science Monitoring Initiative

OSMI First public meeting

4th of December 2024

OSMI Coordination Committee



Welcome
Laetitia Bracco

Why is OSMI important? A perspective from founding initiatives

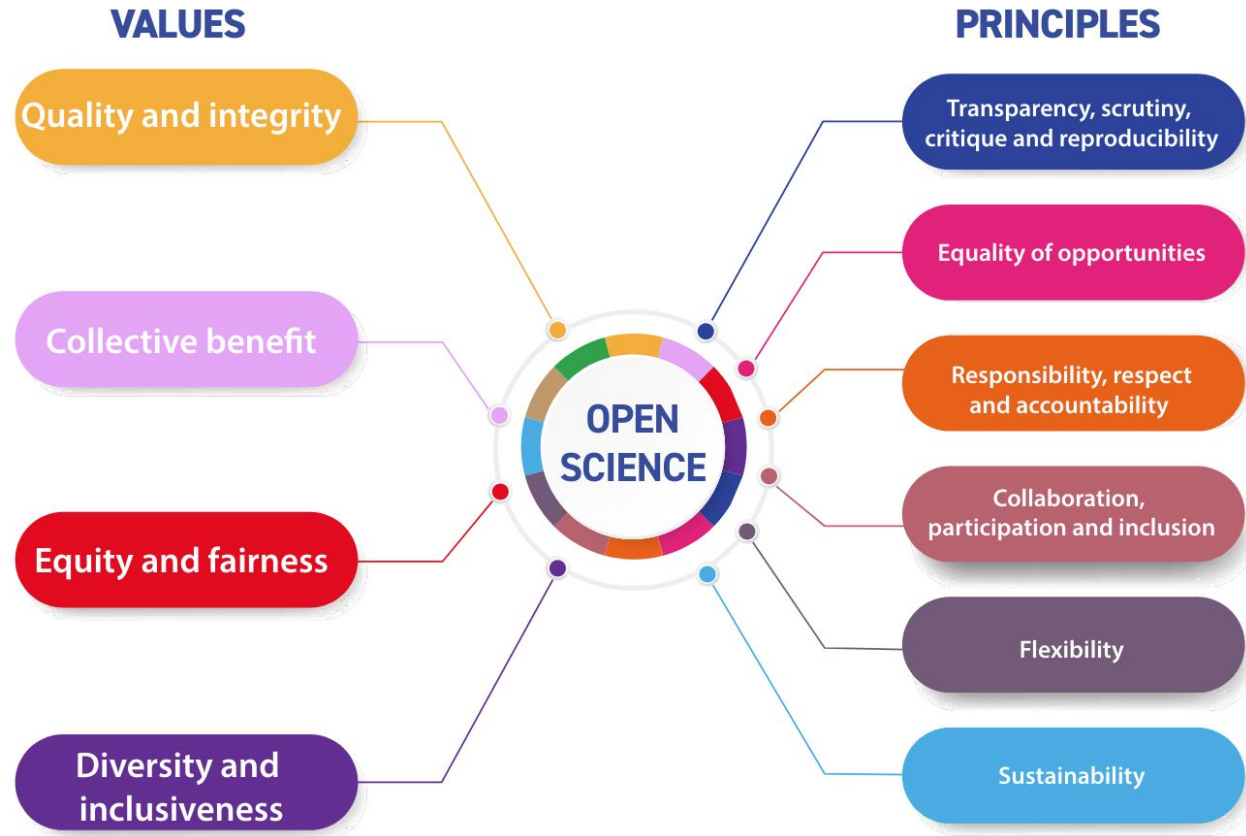
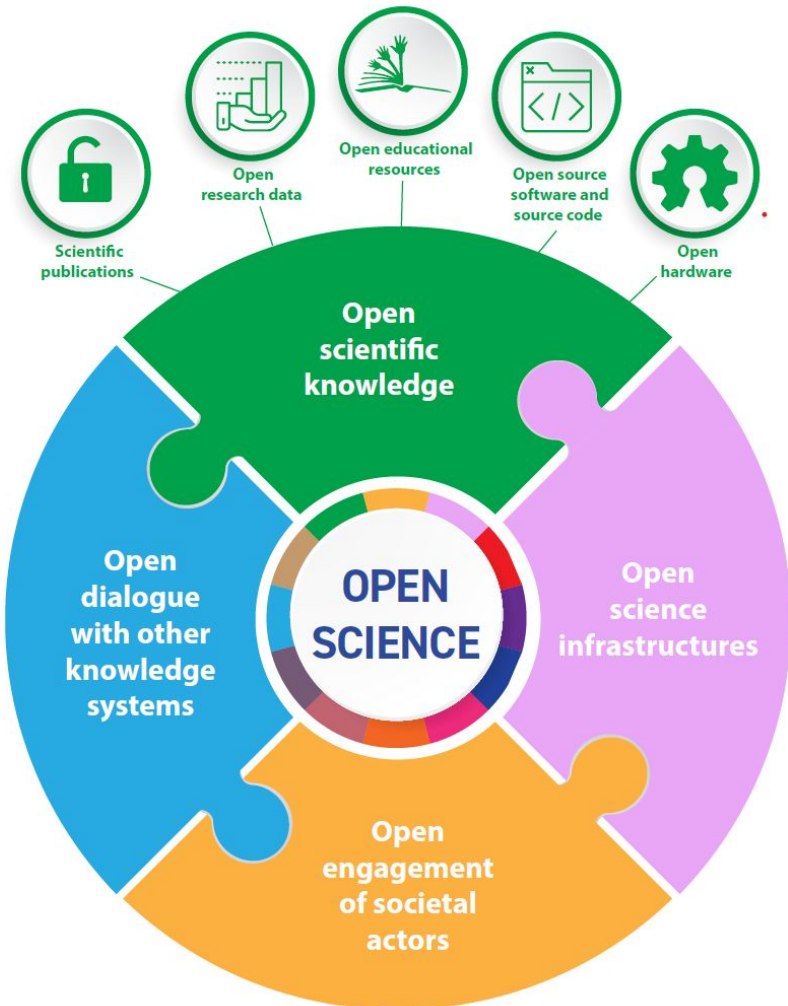
- Nicolas Fressengeas, French Ministry of Higher Education and Research and Université de Lorraine
- Laurent Romary, Inria
- Iain Hrynaszkiewicz, PLOS
- Evgeny Bobrov, Charité
- Vanessa Proudman, SPARC Europe
- Ana Persic, UNESCO



Context

Vanessa Proudman

Open Science



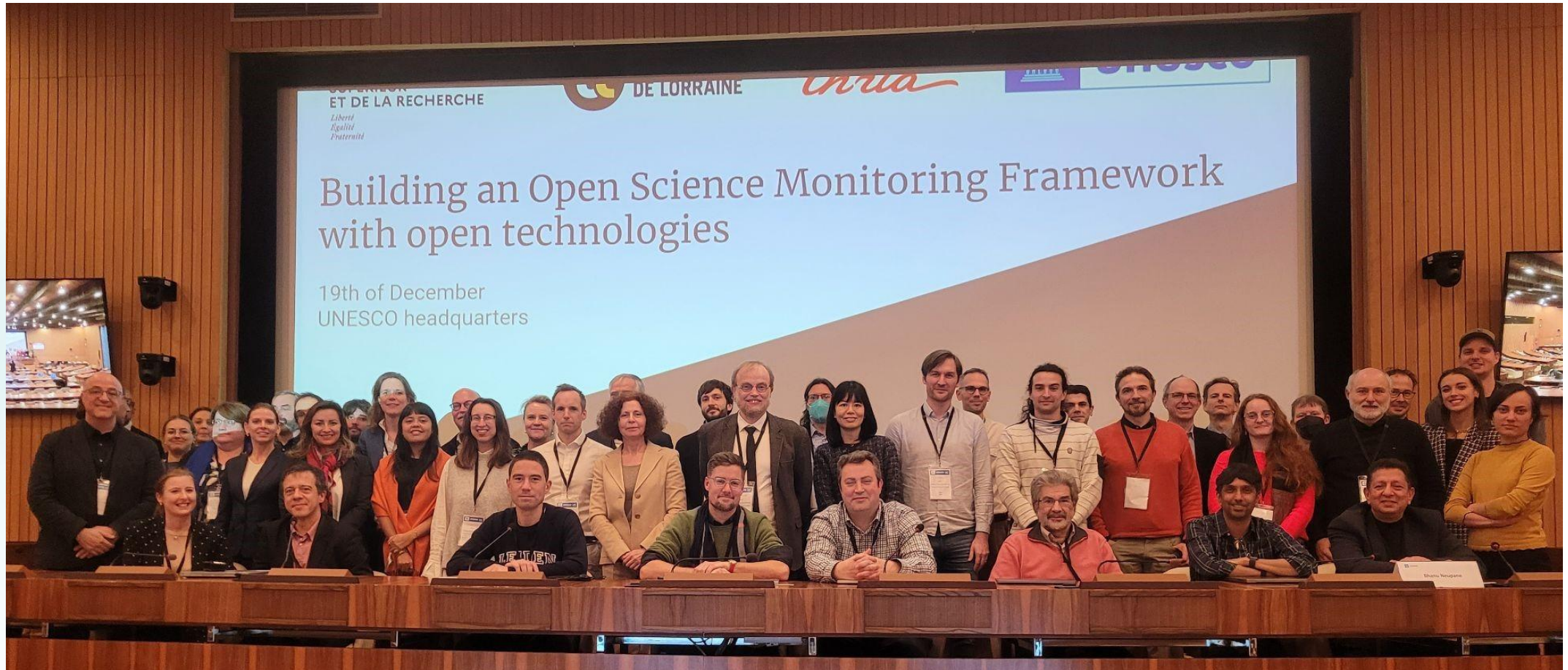
<https://www.unesco.org/en/open-science/about>

May 2023 G7 Communique (excerpt)

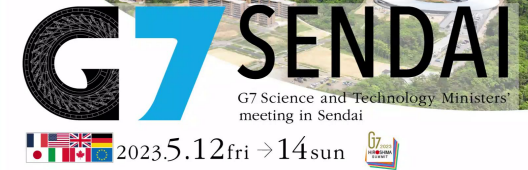


G7 cooperation on open science is set to continue, in particular to encourage a **framework for monitoring** the progress and obstacles of **open science**.

Creating the spark for international collaboration



The need for global coordination



Initiatives are flourishing worldwide

- Diversity and multiplicity is good
- Distinct or incompatible ways may not be

Could we agree on principles for monitoring?

- Preserve initiatives, diversity and local needs
- Towards a common shared goal

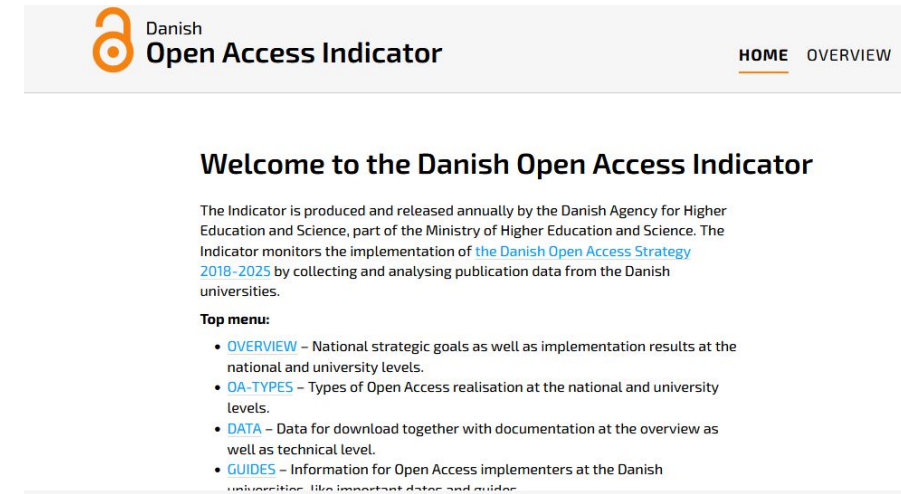
A development of initiatives

- **Some national monitors:**

- Danish Open Access Indicator <https://oaindikator.dk/en/>
- French Open Science Monitor <https://frenchopensciencemonitor.esr.gouv.fr/>
- Helmholtz Association's Open Access Monitor for Germany <https://os.helmholtz.de/en/open-access/>

- **International initiatives:**

- Unesco Open Science Monitoring Working Group
- Curtin University's Open Knowledge Initiative (COKI) <https://openknowledge.community/>
- And many more...



The screenshot shows the header of the Danish Open Access Indicator website. It features the logo on the left and navigation links 'HOME' and 'OVERVIEW' on the right. Below the header is a section titled 'Welcome to the Danish Open Access Indicator' with a paragraph of introductory text and a 'Top menu' section containing links for OVERVIEW, OA-TYPES, DATA, and GUIDES.

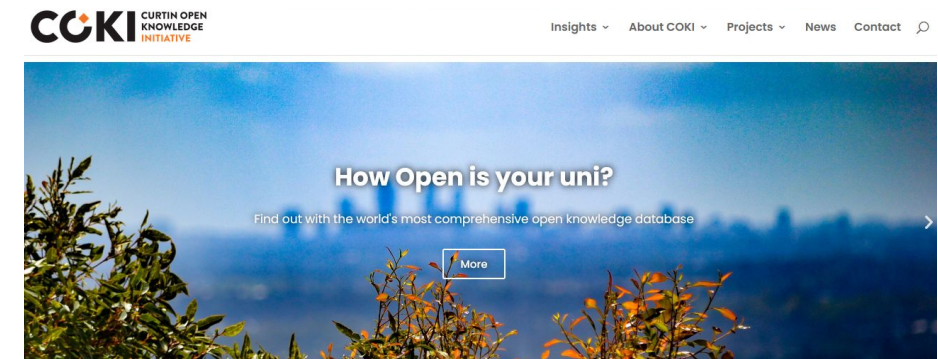
Danish Open Access Indicator [HOME](#) [OVERVIEW](#)

Welcome to the Danish Open Access Indicator

The Indicator is produced and released annually by the Danish Agency for Higher Education and Science, part of the Ministry of Higher Education and Science. The Indicator monitors the implementation of the [Danish Open Access Strategy 2018-2025](#) by collecting and analysing publication data from the Danish universities.

Top menu:

- [OVERVIEW](#) – National strategic goals as well as implementation results at the national and university levels.
- [OA-TYPES](#) – Types of Open Access realisation at the national and university levels.
- [DATA](#) – Data for download together with documentation at the overview as well as technical level.
- [GUIDES](#) – Information for Open Access implementers at the Danish universities, like important dates and guides.



The screenshot shows the header and main banner of the Curtin University's Open Knowledge Initiative (COKI) website. The header includes the COKI logo and navigation links for Insights, About COKI, Projects, News, and Contact. The main banner features a scenic background image with the text 'How Open is your uni?' and a 'More' button.

COKI CURTIN OPEN KNOWLEDGE INITIATIVE [Insights](#) [About COKI](#) [Projects](#) [News](#) [Contact](#)

How Open is your uni?

Find out with the world's most comprehensive open knowledge database

[More](#)

Pathos

— Open Science Impact Pathways

Duration: Sep 2022 – Aug 2025 (36M)

Website: <https://pathos-project.eu/>

Identify and quantify the Key Impact Pathways of Open Science across academia, society, and the economy to enhance understanding and drive informed policy-making

- Map the **Causal Pathways** for Open Science
- Design and estimate **OS Impact Indicators** for selected case studies
- Formulate a **Cost-Benefit Analysis** framework for Open Science



ATHENA
Research & Innovation
Information Technologies



technopolis
group

OpenAIRE



Universidade do Minho



Funded by
the European Union

Some guidelines and frameworks

- 2020: Principles of Open Scholarly Infrastructure
<https://doi.org/10.24343/C34W2H>
- 2021: UNESCO Recommendation on Open Science
<https://www.unesco.org/en/open-science/about>
- 2023: UNESCO Open Science Outlook
<https://unesdoc.unesco.org/ark:/48223/pf0000387324>
- 2024: PathOS Open Science Indicator Handbook
<https://handbook.pathos-project.eu/>
- 2024: Declaration on Open Research Information
(related but ≠ from Open Science Monitoring)
<https://barcelona-declaration.org/>



Yet no common understanding on Open Science Monitoring

- We need a global approach to monitor open science progress
- In all domains, not only open access to **publications**
- But **also**:
 - research data
 - open source software
 - clinical trials
 - open science impacts
 - open science costs
 - open science infrastructures
 - citizen science, and engagement with societal actors
 - dialogue with other knowledge systems
 - etc.

A French initiative within the Open Science Monitor project

- Project led by the French Ministry of Higher Education and Research, the Université de Lorraine and Inria
- Since 2021, discussions have been taking place on how to include new objects in the monitoring of open science in France
- Numerous international exchanges on the issue, notably with Denmark, Portugal and Germany
- Draft of a first version of what these principles could be

the French Open Science Monitor



Measure the evolution of open science in France using reliable, open and controlled data.

Creating the spark for international collaboration

- **Workshop** organised by the partners of the French Open Science Monitor at the Unesco headquarters on December 19th, 2023
- Objective: **gathering international open science monitoring stakeholders and experts** and **impulsing the creation of an international community on the topic**
- Fifty international experts from various institutions: CERN, NASA, CWTS, OurResearch, Crossref, DataCite, SPARC Europe, Redalyc, the OECD, COKI, the Max Plank Digital Library, PLOS, the Technical University of Denmark



[Slides available online](#)

Outputs of the December 2023 meeting - Unesco

- ▶ Five breakout sessions :
 - ▶ *Principles (in two breakout sessions)*: currently internationally reviewed
 - ▶ *Community of practice*: to build the community
 - ▶ *Technical specifications on research data and software*: a need for Technical specifications to support the Principles
- ▶ Discussions with international experts
- ▶ Around 50 people
- ▶ 16 countries
- ▶ Presentations and outputs available here:
<https://zenodo.org/records/10600864>
- ▶ A starting point for the OSMI working groups

OSMI Goals



OSMI's high-level goals

1. Promote the worldwide adoption of Open Science Principles
2. Provide recommendations for technical specifications for their implementation
3. Support stakeholders on various levels in monitoring Open Science practices



Immediate goals

- ▶ Finalising the Principles
Launching the Principles
- ▶ Starting with four working groups
 - ▶ Scoping the landscape of open science monitoring
 - ▶ Identifying needs and solutions
 - ▶ ...

OSMI organisation



Initiators

- ▶ **Members:** the founding members of the initiative: UNESCO, the French Ministry of Higher Education and Research, Université de Lorraine, Inria, SPARC Europe, Charité and PLOS
- ▶ **Responsibilities:**
 - ▶ Ensure inclusion and diversity
 - ▶ Monitor progress
 - ▶ Resolve issues and manage risks
 - ▶ Approve the initiation of working groups
 - ▶ Follow the consultation on the Principles of Open Science Monitoring
 - ▶ Keep up to date with the work of the Coordination Committee

Governance to be discussed in earnest next year, diverse and inclusive governance structure is paramount

Co-ordination Committee

- ▶ **Members:** Arianna Becerril García (REDALYC/AmeliCA), Laetitia Bracco (Université de Lorraine), Andrea Davidson & Vanessa Proudman (SPARC Europe) and Ana Persic (UNESCO)
- ▶ **Responsibilities:**
 - ▶ Oversees overall day-to-day OSMI operations.
 - ▶ Raises issues to the Initiators and set the Initiators Meeting agendas.
 - ▶ Acts as the public interface of OSMI and provides core information on the initiative and updates on developments to the wider OS community through email and the OSMI website.
 - ▶ Develops and maintains OSMI mailing lists and manages its social media presence
- ▶ **Reports to the OSMI initiators**

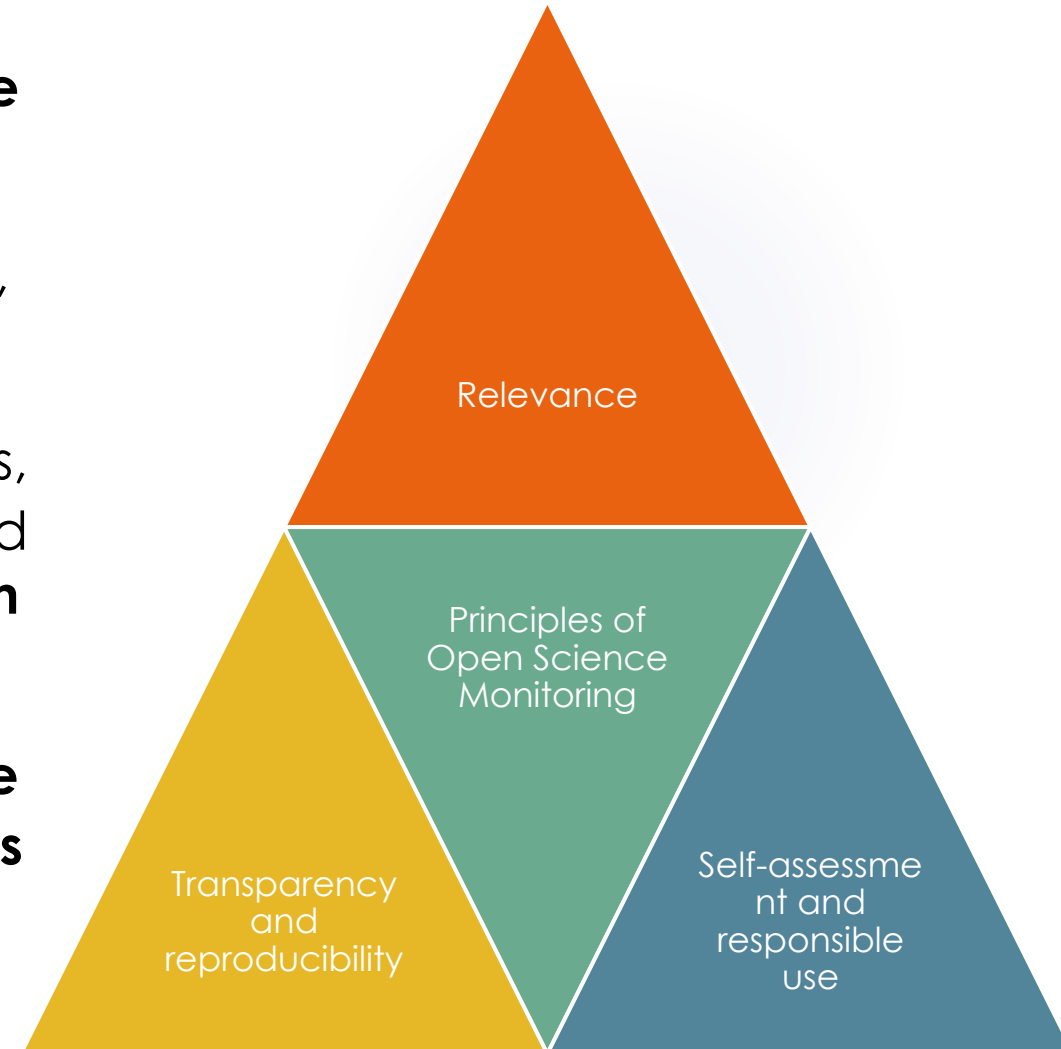


Status of the Principles and next steps

Laetitia Bracco

High-level principles

- Acknowledging the **diversity of Open Science monitoring approaches** throughout the world
- Providing guidelines to encourage **pooling, comparisons** and **reuse** when possible
- Helping stakeholders like national governments, research-performing organisations and international organisations to **set up their own monitoring tools**
- Global aim: monitor a **comprehensive transformation to open science** and its **impacts** on the research ecosystem and on society



Relevant indicators: they should be...

- Applicable and clear in scope
- Meaningful for public policy
- Co-created
- Inclusive
- Comprehensive
- Mature
- Indicators toolboxes for different contexts
- Up to date

Transparency and reproducibility

- Communication to the general public
- Public documentation of processes and methodology
- Explicit data provenance
- Open output data
- Inclusion of FAIR and CARE principles
- Sampling
- Open source software
- Standardised indicators
- Transparency in the quality of indicators
- Reusable by design

Self-assessment and responsible use

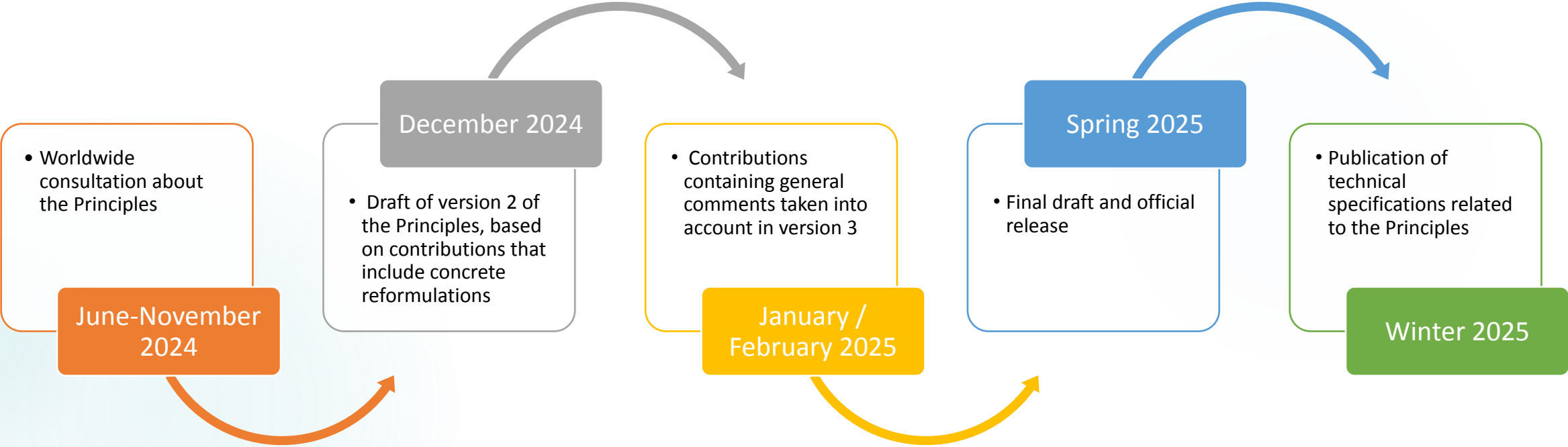
- Self-assessment
- Monitor for improvement
- Continuous assessment of the monitoring initiative
- Adaptable
- Avoid rankings

Current status of the Principles

- ▶ [Call for input](#) launched on the 6th of June
- ▶ Closed the 30th of November 2024
- ▶ 52 contributions from 150 people in 42 countries and 6 continents
- ▶ Very positive feedback / attention to qualitative indicators
- ▶ Breakdown of contribution types:

General	38
Introduction	1
Part 1	3
Part 2	7
Part 3	1
Irrelevant	2

Next steps



Working groups

Ana Persic



Working groups 2024/2025

Scoping working groups

1. Scoping the needs of open science monitoring: Problems
2. Understanding the OS monitoring landscape: Existing solutions

Technical working groups

3. Open Science monitoring with scholarly content providers
4. Shared resources and infrastructure to analyse scholarly outputs

1. Scoping the needs of open science monitoring: Problems

Objectives:

- To understand the needs of open science (OS) monitoring and guide the OS monitoring community's future work.
- Identify key stakeholders and beneficiaries at international, national, and local levels to understand who is impacted by and benefits from OS.

Scope of Monitoring: Define what aspects of OS should be monitored and why, establishing a clear scope.

Methods for Monitoring: Pinpoint areas needing quantitative and/or qualitative methods to address OS monitoring needs effectively.

Collaboration: Work closely with the “Understanding the OS Monitoring Landscape” group to align efforts, achieving a nuanced understanding and enabling better decision-making and planning.

2. Understanding the OS monitoring landscape: Existing solutions

Goal: Align OSMI with other initiatives to promote synergies and prevent duplication of efforts.

Global Scan: Identify OS monitoring projects, services, methods, and tools worldwide.

Collaboration: Work closely with the “Scoping the needs of open science monitoring” group to coordinate efforts.

Comprehensive Understanding: Joint efforts aim to create a nuanced view of OS monitoring.

Outcome: Enable informed decision-making and better planning for the future of OS monitoring.

3. Open Science monitoring with scholarly content providers

Purpose: Support OSMI's goals by exploring how scholarly content can address diverse open science monitoring needs.

Focus: Leverage the definition of "scientific knowledge" from the 2021 UNESCO Recommendation on Open Science.

Stakeholders: Engage scholarly content providers such as publishers, open archives, repositories, and standard-setting organizations.

Key Contributors: Include research libraries, funders, meta-researchers, and citizen scientists in the effort.

Outcome: Facilitate the creation of tailored solutions to meet diverse OS monitoring requirements.

4. Shared resources and infrastructure to analyse scholarly outputs

Purpose: Create a collective framework for extracting and sharing key metadata from the full-text of scientific publications (e.g., author affiliation, data and software use, funding, etc.).

Open Source Tools: Promote the use of advanced NLP open-source tools for full-text information extraction.

Methodological consensus: Ensure a consensus on which metadata to extract

Resource Pooling: Address computing and storage demands through shared resource mechanisms.

Outcome: Build a shared vision on key metadata to extract, shared technologies to use and improve, collective way to share computing resources and extracted metadata



Next steps

Laetitia Bracco

How to participate

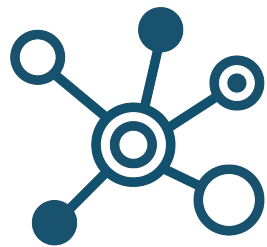
- ▶ Working groups 1 to 4 are expected to start in January 2025
- ▶ Send your application for one or more WGs to the OSMI Coordination Committee **before the 15th of January** via an [online form](#)
- ▶ **To be an OSMI Member, it is necessary to be part of a working group**
- ▶ Members are displayed publicly on the website and take part in working groups, make connections to other related initiatives, and attend plenary meetings.
- ▶ An international representation is expected for each WG
- ▶ The list of members of each WG will be displayed on the OSMI website
- ▶ **Not interested in the working groups but in OSMI in general?**
Join the mailing list on the [OSMI website homepage](#) or follow us on social media ([LinkedIn](#) / [Mastodon](#))



Your questions!

Next steps

- ▶ Recruiting new members
- ▶ Starting the working groups
- ▶ Releasing the Principles of Open Science Monitoring
- ▶ Building a strong governance structure



**Open Science
Monitoring
Initiative**



Thank you for your attention!