

Monitoring Model

Part 1

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1. MONITORING PRINCIPLES

1.1 INTRODUCTION

The Declaration for Open Science and Research 2025–2030 defines the guiding principles for advancing openness in the Finnish higher education and research community, a vision for responsible openness, and more specific commitments concerning the openness of the culture for open scholarship, publishing, research data and methods, and learning.

To strategically advance the objectives defined in the Declaration and the national policies that specify it, the higher education and research community needs reliable information on the extent to which open science and research practices are applied in organisational activities. To produce this information, the Secretariat of Open Science Coordination in Finland (AVOTT) is responsible for monitoring the development of open science and research both nationally and at the organisational level.

Monitoring focuses on verifying progress towards the objectives set out in the Declaration and the policies. The set of policies was completed and updated where necessary during 2026. It may still be supplemented with new policy components, which can be incorporated into the monitoring.

In addition to the national set of policies, the development of monitoring is influenced by several international policies and guidelines, including the Principles of Open Scholarly Infrastructure (POSI) (2020), the UNESCO Recommendation on Open Science (2021), the Coalition for Advancing Research Assessment (CoARA), the Barcelona Declaration on Open Research Information (2023), and the Open Science Indicator Handbook produced by the PathOS project (2024).

The monitoring model consists of (a) monitoring principles, (b) monitoring indicators, and (c) monitoring implementation, which includes a more detailed timetable for carrying out the monitoring.

The monitoring principles are now open for comments, and the development of the indicators will begin immediately after the principles have been approved.

The draft principles for the monitoring model were prepared in spring 2026 by the monitoring development group in cooperation with an expert working group. The development group was appointed by the National Open Science and Research Steering Group from among its members and deputy members. The new monitoring model builds on the Open Science and Research Monitoring Model (2022), under which open science and research monitoring was carried out in 2022, 2024 and 2026. Prior to these monitoring rounds, the Ministry of Education and Culture conducted Open Science Maturity Level Assessments in 2015–2019.

1.2 MONITORING OBJECTIVES

The monitoring model is based on the objectives jointly defined in the Declaration for Open Science and Research and the related policies. Monitoring provides the higher education and research community with important information on the progress towards these objectives. Monitoring benefits organisations in the Finnish higher education and research community in the following ways:

1. Monitoring supports organisations in developing their own activities to advance openness in research.
2. The qualitative self-assessment included in the monitoring enables peer learning and cooperation between organisations in developing openness.
3. Monitoring provides organisations with data that offers an overall picture of openness. This enables an organisation to compare its own development with that of other organisations of the same type.
4. Publicly funded organisations can use the monitoring results in negotiations with their home ministry.

Monitoring provides a national overview of the state of openness in the Finnish higher education and research community. This overview supports the Finnish higher education and research community in the following ways:

1. The national overview is used in various international comparisons for national monitoring of open science and research, particularly within Europe. This reduces the need to collect information through separate surveys.
2. The national overview supports the development of national open science and research services by helping to identify where joint development provides the greatest benefit to the research community.

3. Finnish open science monitoring is an international forerunner in self-assessment and peer learning. Finland's experience can be used internationally by research organisations, at the governmental level, and in research.

Open Science monitoring is developed through extensive international cooperation, in which Finland has played an active role. Cooperation within the Open Science Monitoring Initiative (OSMI) has been particularly important. OSMI has produced the first internationally shared principles for monitoring open science.

The development of the monitoring model has considered both the OSMI principles and other actors developing monitoring, such as UNESCO, the European Research Area (ERA), Horizon Europe and the European Open Science Cloud (EOSC).

1.3 TARGET GROUPS OF MONITORING

In the first phase, monitoring focuses on research performing organisations. The next objective is to extend monitoring to research funding organisations. Monitoring may also be extended to organisations that support research.

Monitoring is conducted at the organisational level, not at the level of individual researchers, research groups or fields of research. Organisation-level monitoring makes it possible to take into account the diversity of organisations and disciplines.

The impact of open science is monitored as part of the qualitative self-assessment.

1.4 STRUCTURE OF MONITORING

Information on research openness is collected in three ways. Together, these provide an overview of openness both at the organisational and national levels. Organisation-specific scores produced through monitoring will no longer be public, but they will be generated in order to form the national overall picture.

1. Survey

- a. Every four years, the AVOTT Secretariat conducts an open science and research monitoring survey. The survey may be conducted more frequently for specific types of research organisations upon their request.
- b. The development of the survey for the new monitoring model draws on the 2022 monitoring model and the surveys conducted in 2022, 2024 and 2026. The aim is to create a shorter survey focusing on key development needs in advancing openness.
- c. The survey indicators are prepared collaboratively as part of Open Science Coordination in Finland. The National Open Science and Research Steering Group

- is responsible for decisions on the indicators.
 - d. The next survey will be conducted in 2030.
 - e. Survey responses without scores will be openly available after approval by the National Open Science and Research Steering Group.
 - f. Scored results will be shared only with the organisation concerned to reduce competition between organisations. An organisation may choose to share its scored result at its own discretion.
 - g. The scored results of organisations will be aggregated and published as joint results by organisation type.
2. The AVOTT Secretariat compiles quantitative data from existing data sources, for example on the openness of publications and educational resources.
- a. Quantitative data will be published annually and used to form time series.
 - b. Quantitative data supports organisations' self-assessment.
 - c. Quantitative data will be collected from 2027 onwards.
3. Organisations conduct an annual qualitative self-assessment to support the development of openness within their own organisation.
- a. Each year, the self-assessment focuses on one area of openness: publishing, research data, learning, or the culture for open scholarship.
 - b. One targeted national self-assessment question is selected collaboratively. In addition, each organisation selects the other questions for its own self-assessment and decides how to carry out the assessment.
 - c. The self-assessment makes maximum use of existing data and self-assessments conducted for other purposes.
 - d. Based on the self-assessment, research organisations form peer-learning groups supported by the AVOTT Secretariat.
 - e. Organisations' self-assessments are shared only among participants in the same peer group. An organisation may choose to publish its own self-assessment. The AVOTT Secretariat shares the outputs of all peer groups in cooperation with each peer group.
 - f. Based on the self-assessment and peer learning, the AVOTT Secretariat compiles a national summary, which is published openly.
 - g. The qualitative self-assessment is not scored.
 - h. The first self-assessment will be carried out in 2027,

and its results will be used to define the practices for future self-assessments.

The annual self-assessments, quantitative data and survey results together provide organisations with data that offers an overview of openness.

Every four years, following the survey, the AVOTT Secretariat produces a synthesis combining all datasets to form a national overview of openness.

Appendix: Preparatory Working Group

The National Open Science and Research Steering Group established a strategic-level working group to develop the monitoring model, inviting members and deputy members of the Steering Group to participate. An expert group consisting of people who had responded to the monitoring survey on behalf of their organisations was assembled to support the working group. The groups worked closely together in developing the monitoring principles.

Members of the working group formed from members and deputy members of the Steering Group

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