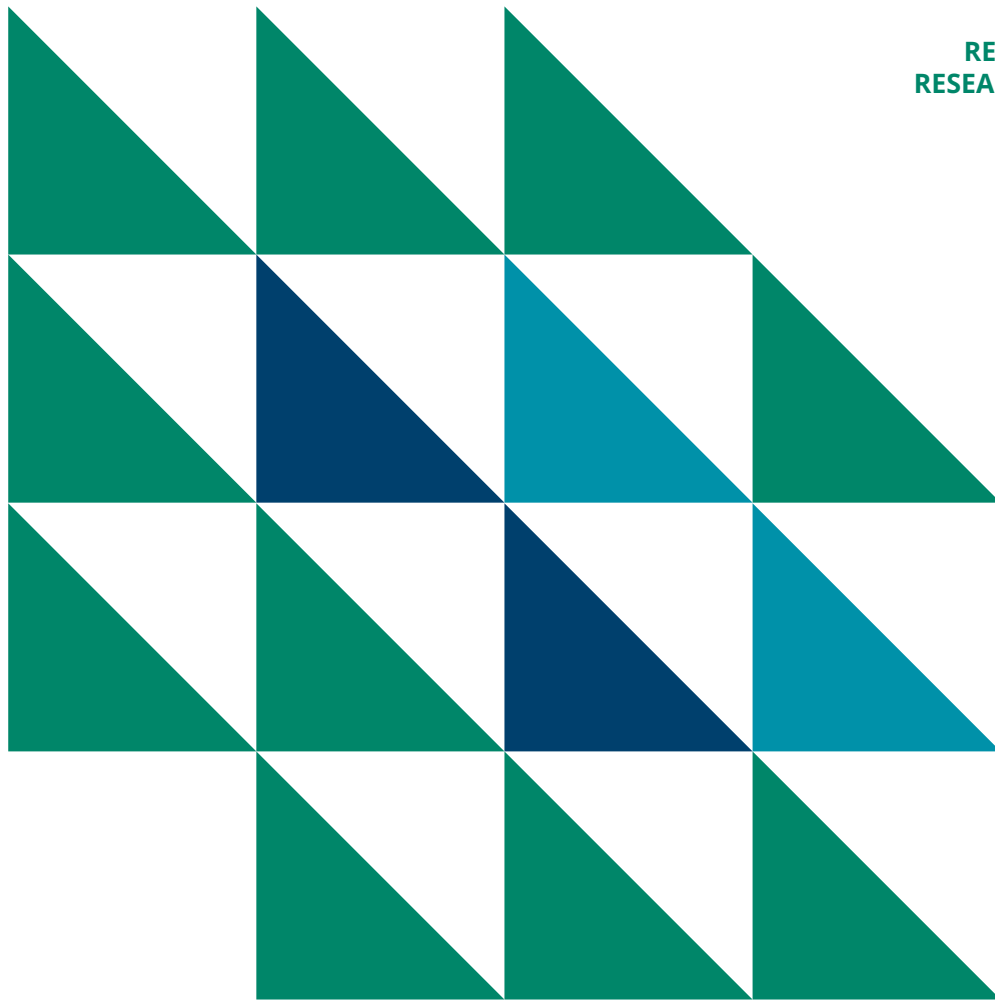


RESPONSIBLE
RESEARCH SERIES
2:2022



POLICY FOR OPEN SCHOLARSHIP

RESPONSIBLE RESEARCH SERIES

Responsible Research Series publishes declarations, policies, studies, recommendations and other documents relating to the openness, responsibility and accessibility of science and research. Publications also cover science communication and science-society interactions. The publication series is not a scientific peer-reviewed publication. The series is published by the Committee for Public Information (TJNK) and the Federation of Finnish Learned Societies (TSV).

Policy for open scholarship

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1. INTRODUCTION

1.1 OPEN SCHOLARSHIP AS PART OF THE NATIONAL POLICY WORK

Culture of open scholarship requires new courses of action. In order for culture to become more open, an organisation can require changes in the courses of action and, at the same time, it must offer services and incentives to support the activity.

In accordance with the [Declaration For Open Science and Research 2020–2025](#), the Finnish research community has drawn up a policy for open scholarship. The starting point of the policy is to support the strategic goal set out in the Declaration, according to which “responsible openness is part of daily life in the research community, and research organisations have the evaluation practices, incentives and services needed to support open science and research” (Figure 1).

When drafting the policy for open scholarship, all previous policies and recommendations made within the framework of the Open Science Coordination in Finland have been reviewed. This policy brings together previous perspectives so that the focus is on the culture of open scholarship of an organisation. In addition, previous policies will be supplemented with perspectives related to services, incentives, and interaction.

The policy does not address all dimensions of open science interaction but focuses on citizen science and business cooperation. Interaction with decision-makers can best be addressed in a separate recommendation.

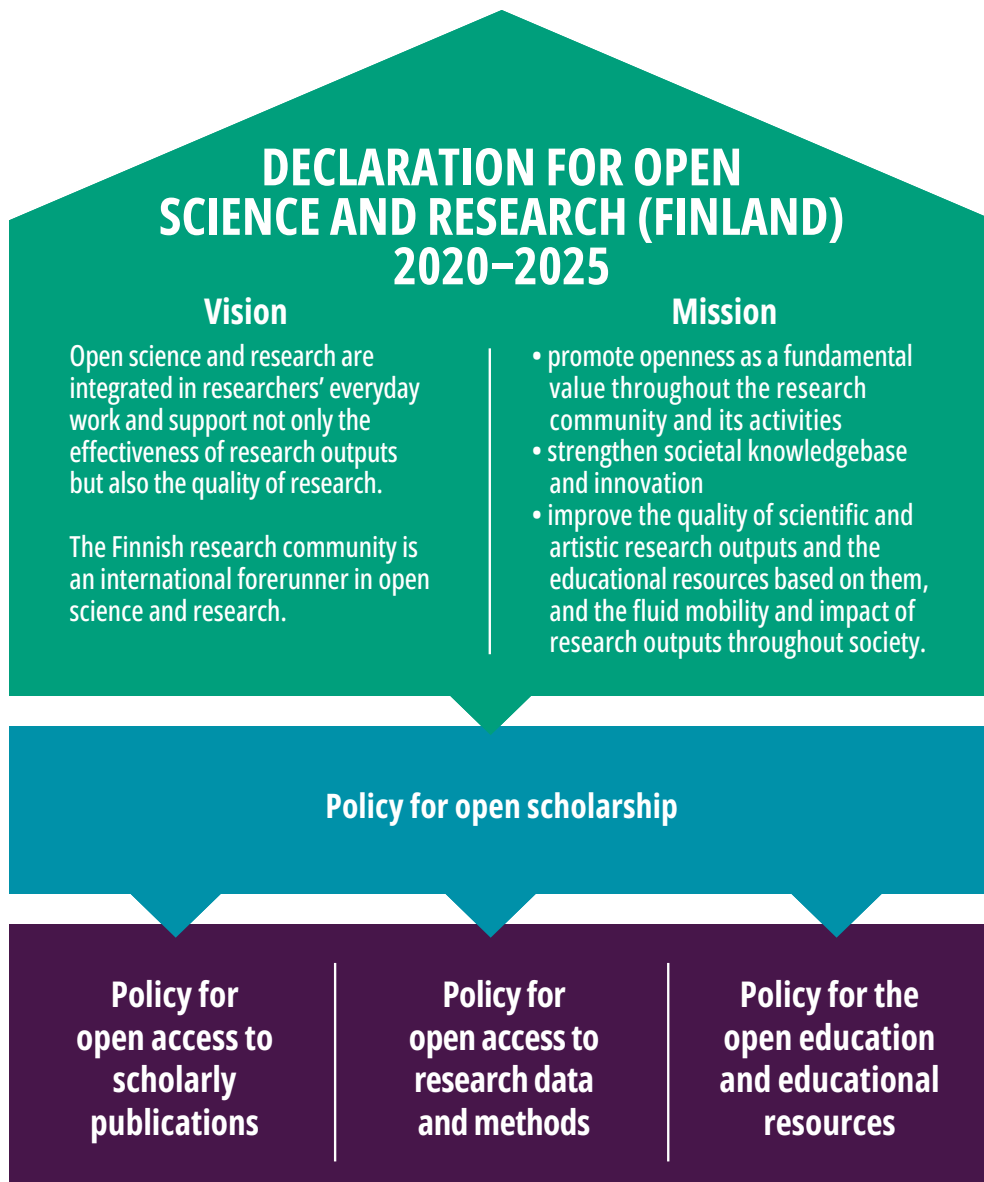


Figure 1. The policy for open scholarship in the Declaration on Open Science and Research. Source: Declaration on Open Science and Research 2020–2025, Open Science Coordination, Federation of Finnish Learned Societies, 2020.

1.2 STRUCTURE, IMPLEMENTATION AND MONITORING OF THE POLICY

This policy includes the principles, objectives and actions of the culture of open scholarship. The following three recommendation documents specify the policy on the culture of open scholarship:

- A self-evaluation tool for the service of culture of open scholarship
- Recommendation for open scholarship and checklist for research, development and innovation activities

carried out in business collaboration between research organisations and companies

- Recommendation on citizen science

Recommendations supporting the implementation and monitoring of strategic objectives and actions contain detailed checklists or evaluation criteria that are scaled to the needs of each organisation. This way both the starting level and monitoring can be implemented as organisational self-assessment and as part of the national open science monitoring model. The objectives of the policy must be achieved within the schedule of the Declaration on Open Science, i.e. by the end of 2025. The set schedule does not replace the target schedules presented in previous policies and recommendations.

1.2.1 BUSINESS COLLABORATION

Business collaboration has not been discussed in previous national policies on open science. Business collaboration refers to collaboration between research organisations and companies for consideration or free of charge, which may vary from informal interaction to organised collaboration. Forms of collaboration include contract research, commissioned research, training and consulting. The collaboration can be funded by a public or private sector organisation. Research, development and innovation (RDI) projects implemented in collaboration with businesses must take into account the European and national objectives of open science.

In RDI projects conducted in business collaboration, the starting points for promoting openness are trust and understanding of the objectives and needs of the other party. Collaboration between researchers and companies is governed by a number of laws, the conditions of those funding the research and responsible conduct of research. Business collaboration must balance between open and confidential information, so the open access to research data, communication and publication of results must be agreed upon with an agreement between the research organisation and the company participating in the RDI activities. It is important to agree on how research results, data and material from business collaboration can be utilised and/or disseminated safely, efficiently and as openly as possible taking the interests of different parties into account.

As part of creating the policy for open scholarship, the work group for open collaboration with companies has prepared a recommendation on the implementation of open science practices in RDI activities between research organisations and companies. The recommendations are intended for researchers working in research organisations and research support service personnel who prepare and conduct RDI projects in collaboration with companies.

1.2.2 CITIZEN SCIENCE

Citizen science has not been discussed in previous national policies on open science. Throughout history, not only researchers have participated in science in different ways. However, the development of universities and other research organisations, the complexity and distance of research questions from everyday life as well as the need to maintain expensive and complex equipment have limited the participation of non-researchers in scientific research over the past decades. Constantly evolving information and communication technologies improve the opportunities for citizen scientists to participate in scientific projects and thus promote public awareness of scientific processes and methods. Interaction between research organisations and the rest of the community is also an effective means of reducing the negative social impacts of fake news and disinformation.

1.2.3 LEARNING

In 2020, [Open education and educational resources. National policy and executive plan by the higher education and research community for 2021–2025. Policy component 1 – open access to educational resources](#) was published. The policy for open scholarship supports and complements the implementation of the policy for education, but this policy does not alter the target timetables presented by previous policies and recommendations.

1.2.4 RESEARCH DATA

In 2021, [Open research data and methods. National policy and executive plan by the higher education and research community for 2021–2025. Policy component 1: Open access to research data](#) was published. The policy for open scholarship supports and complements the implementation of the policy for research data, but this policy does not alter the target timetables presented by previous policies and recommendations. The openness of research methods and measures to promote it will be addressed in a separate policy to be published later.

1.2.5 PUBLICATIONS

In 2019, [Open access to scholarly publications. National Policy and executive plan by the research community in Finland for 2020–2025 \(1\): Policy component for open access to journal and conference articles](#) was published. The policy for open scholarship supports and complements the implementation of the policy for publications, but this policy does not alter the target timetables presented by previous policies and recommendations. Recommendations on Open Publication Technology will be published later.

1.2.6 RESPONSIBLE ASSESSMENT

In 2020, [Good Practice in Research Evaluation. Recommendation for the responsible evaluation of a researcher in Finland](#), produced

by a broad-based working group assembled by the Federation of Finnish Learned Societies, was published. Although the Recommendation for the evaluation of a researcher in Finland has been drafted from the point of view of an individual researcher evaluation, the recommendation states that “the same principles should also be followed when evaluating research organisations, research units and research in a broader context”.

As the Recommendation for the responsible evaluation of a researcher in Finland extensively addresses evaluation practices and incentives at a general level, this policy focuses specifically on services promoting responsible assessment. The policy also emphasises the importance of incentives used by organisations to promote open science and a culture of open scholarship. With regard to incentives, the Recommendation for the responsible evaluation of a researcher in Finland states that the evaluation of scientific quality will broadly consider research output in different formats and languages. The evaluation must also take into account the considerations of open science, including activities to promote open access, compliance with the ethical principles of research, activities as a teacher and supervisor, societal impact and interaction, and activities in research and other communities. The recommendations for action in the policy for open scholarship support the implementation plan in the policy for responsible evaluation.

1.3 ENCOURAGING OPEN SCHOLARSHIP

This policy focuses on the open nature of the organisation’s courses of action, including the coordination, implementation and monitoring of open science services and support for researchers’ interaction with society. The policy does not deal with open government, which has its own national guidelines for [open government and promoting inclusion in Finland](#) (pdf, in Finnish). The role of the state, ministries and other actors at the national level is also important, as organisations need an operating environment in which regulations and resources enable the promotion of open scholarship.

1.3.1 INTERNATIONAL FRAMEWORK

The policy for open scholarship is strongly based on the international objectives of the policy for open science. According to Article 27 of the [Universal Declaration of Human Rights](#), “[e]veryone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.”

In the [UNESCO Recommendation on Open Science](#), published in 2021, “open science is defined as an inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and

reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.”

The European Commission’s policy on open science defines open science broadly to be based on eight pillars: Open data, EOSC infrastructure, next-generation metrics, merit, the future of scientific communication, research ethics and reproducibility of results, education and skills, and citizen science. The reform of the evaluation culture is also at the heart of European open science policy. The Commission’s report Towards a reform of the research assessment system, published in November 2021, is well in line with the Recommendation for the responsible evaluation of a researcher in Finland, produced by the Finnish research community.

1.3.2 COST OF OPEN SCHOLARSHIP

The transition to a culture of open scholarship requires resources and expertise, and the resulting costs cannot be left to organisations alone. However, international studies show that the cost of non-transparency is considerably higher¹, but the relationship between the costs and benefits of open science is not self-evident². More research and studying is needed on the inputs and revenues of open science from the perspectives of Finnish society, the research system and organisations, taking into account the international context of open science. Cost-effectiveness can be increased through national and international cooperation.

1.3.3 FREEDOM AND RESPONSIBILITY OF A RESEARCHER

The policy for open scholarship applies in particular to the organisation’s activities to support the freedom of researchers. The policy does not aim to influence what is being studied or how. The responsibility for the implementation of open scholarship lies both with individual researchers and research organisations, but the research organisations are responsible for providing services and incentives to support the implementation.

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- 1 For example, Cost of not having FAIR research data Cost-Benefit analysis for FAIR research data: <https://doi.org/10.2777/02999>; Costs and benefits of Open Access: <https://www.knowledge-exchange.info/event/costs-benefits-open-access>;
 - 2 Avoimen julkaisemisen supermarketissa mukavuudesta maksetaan kova hinta: <https://avointiede.fi/ajankohtaista/avoimen-julkaisemisen-supermarketissa-mukavuudesta-maksetaan-kova-hinta>.

2. POLICY FOR OPEN SCHOLARSHIP

2.1 DEFINITIONS

- **Incentive:** incentives refer directly to the motivation through appreciation, such as evaluation criteria, awards or honours.
- **Citizen science:** Citizen science is scientific research conducted partly or entirely by amateur scientists. Citizen science can also serve official information. Citizen scientists can participate in research in many ways. For example, they can collect, classify or analyse data needed for a study. In responsible citizen science, it is important that the people are not the subjects of the research but the authors of it. There is no need to be a trained scientist to participate in research. Citizen science can also be referred to as community science, crowd-sourced science or volunteer monitoring. Citizen science requirements:
 1. Citizen scientists are involved at least at one stage of the research.
 2. Citizen scientists are not the subjects of the research but the authors of it.
 3. Research must usually be led by a trained researcher.
- **Metadata:** metadata or descriptive information refers to the context, content and structure, management and/or processing of research data and information describing and summarising its compilation.
- **Service:** in this policy, services are understood as activities that an organisation uses to promote and make the culture of open scholarship possible.
- **RDI activities:** RDI activities refer to research, development and innovation activities.
- **Culture:** In this policy, culture of open scholarship refers to the working environment and methods of science and research.
- **Research data:** research data is material collected, detected, measured or created to confirm hypotheses and verify research results. Research data can usually be in digital format but also in analogue or physical format (e.g. laboratory journals).
- **Business collaboration:** business collaboration refers to collaboration between research organisations and

companies for consideration or free of charge, which may vary from informal interaction to organised collaboration. Forms of collaboration include contract research, commissioned research, training and consulting. The collaboration can be funded by a public or private sector organisation.

2.2 STRATEGIC PRINCIPLES

1. Responsibility, i.e. reliability, ethics, repeatability and transparency, is a precondition for openness.
2. The openness of the culture requires reciprocity, which is manifested in interaction that benefits both internal and external activities of the organisation.
3. The realisation of a culture of open scholarship requires transparency, services and incentives.

2.3 OBJECTIVES AND ACTIONS

The organisation must strive to achieve the objectives set out in this policy by 2025 at the latest.

1. CULTURE OF OPEN SCHOLARSHIP

The organisation has entrusted and scheduled the coordination, implementation and monitoring of open science services and sufficient support for the interaction of researchers with different actors in society.

Actions required by the objective:

- a. **Services.** The organisation implements and monitors open science services in a coordinated manner.
- b. **Interaction.** The organisation invests in communication, legal and IT services and courses of action that promote social interaction.
- c. **Data protection.** The organisation shall ensure the lawful and responsible processing of personal data and confidential information containing all parties' activities.
- d. **Cooperation.** The organisation utilises national and international cooperation in the development of open science whenever possible and appropriate.

2. BUSINESS COLLABORATION

The organisation promotes openness in research conducted in business collaboration by providing researchers with adequate and appropriate support and training.

Actions required by the objective:

- a. **Awareness.** The organisation increases the personnel's awareness of the starting points, methods and preconditions of open science in research conducted in business collaboration.
- b. **Guidelines.** The organisation offers researchers clear guidelines for promoting openness in business projects.
- c. **Ownership and utilisation.** The organisation ensures that the ownership, the utilisation and sharing of results and material is agreed upon with the business partner at the beginning of the project.
- d. **Agreement.** The organisation concludes necessary agreements with the business partner in a transparent manner whenever possible.
- e. **Support services.** The support services provided by the organisation have sufficient competence to take into account openness and the special features of business projects as part of the agreement process.
- f. **Publication and communication plan.** The organisation supports the researcher in drawing up the publication and communication plan promoting openness in the early stages of the business science project.
- g. **Training.** The organisation takes business projects into account in its open science training programmes.
- h. **Responsible conduct of research.** The organisation ensures that researchers representing the organisation take care of the implementation of responsible conduct of research in business projects.

3. CITIZEN SCIENCE

The organisation promotes the operational preconditions for citizen science by providing sufficient and appropriate support and training to the involved researchers and other parties.

Actions required by the objective:

- a. **Raising awareness.** The organisation increases the personnel's awareness of the starting points, methods and preconditions of open science in research conducted using methods of citizen science.
- b. **Guidelines.** The organisation offers researchers clear guidelines for citizen science projects.
- c. **Training.** The organisation takes citizen science into account in its open science training programmes.
- d. **Data management.** The organisation supports the preparation of a data management plan in citizen science projects.

- e. **Communication.** The organisation supports the researcher in publishing and communicating in a sufficiently popular manner in accordance with the principles of citizen science.
- f. **Publication and communication plan.** The organisation supports the researcher in drawing up the publication and communication plan in the early stages of the citizen science project.
- g. **Responsible conduct of research.** The organisation ensures that the researcher leading a citizen science project takes care of the implementation of responsible conduct of research.
- h. **Systems.** The organisation ensures that the systems supporting citizen science projects are brought to an adequate level.

4. EDUCATION

The organisation promotes the culture of open education by providing up-to-date services to ensure that all persons providing education have equal opportunities to organise open education and to prepare and publish open educational resources regardless of the organisation, field of education or career stage.

Actions required by the objective:

- a. **Competence requirements for open education.** In cooperation with open scholarship coordination, the organisation ensures that the persons providing education have the opportunity to acquire the competence to utilise and create open educational resources in accordance with [the national competence requirements for open education](#).
- b. **Copyright, licenses and agreements.** The organisation requires respect for copyright in the organisation of open education and in the preparation and production of open educational materials and provide support for open licensing of educational materials.
- c. **Resource findability.** The organisation recommends that the authors of open educational resources make the metadata of the educational resources available in the [Library of Open Educational Resources](#) as comprehensively as possible.
- d. **Resource accessibility.** The organisation ensures that the provided open education and open educational resources comply with the national [accessibility criteria](#).
- e. **Communication.** The organisation ensures that their communication channels features communication related to open education.
- f. **E-education tools.** The organisation ensures that persons providing education have access to e-education

tools that enable making the education open and support for using them.

- g. **Quality criteria and editorial support.** The organisation provides support for developing the quality of open education and open educational resources.
- h. **Use of open education materials in teaching.** The organisation encourages education providers to use open education materials in teaching.

5. RESEARCH DATA

The organisation promotes the transparency of research data in accordance with the [FAIR principles](#). Services are available for research organisation personnel and students at all stages of the data lifecycle. The services ensure that everyone has an equal opportunity to access at least the metadata of the research and, when feasible, all research data available for reuse regardless of the organisation, field of research, funding base or career stage.

Actions required by the objective:

- a. **Local support for data management.** The organisation provides local support that complements generic data management services for all stages of the data lifecycle and enables researchers and support service experts to specialise as research field, method or data type specific local support.
- b. **Training.** Data management training is available in the organisation. Personnel and students are encouraged to participate in the training.
- c. **Data management plans.** The organisation requires and supports research, development and innovation projects to create and maintain a data management plan throughout the data lifecycle.
- d. **Immaterial and agreement services.** The organisation has built a researcher-driven [process](#) (in Finnish) to take the intellectual property, contract and permit issues of research data into account in research projects.
- e. **Data protection and information security services.** In order to ensure data protection, the organisation has arranged support services, training and secure data collection, processing and storage infrastructure services for research projects.
- f. **Persistent identifiers.** The organisation assists researchers in obtaining [ORCID researcher identifiers](#) and persistent identifiers of (meta)data.
- g. **Publication of data.** The organisation accumulates and maintains comprehensive and open metadata for research data, which may also be linked to research methods, publications and infrastructures, if the nature of the data makes this possible.

- h. **Digital preservation.** The organisation ensures the long-term preservation of research data by outlining the storage periods and locations of different types of data and by providing advice and technical support, if necessary, in cooperation with other organisations.

6. PUBLICATIONS

The organisation promotes the culture of open publication by providing up-to-date services to ensure that everyone has an equal opportunity to openly publish the results of their research and development work regardless of the organisation, field of research, funding base or career stage.

Actions required by the objective:

- a. **Local support for open publication.** The organisation creates support services for open publication either alone or in cooperation with other organisations.
- b. **Open access repository.** The organisation maintains a publication archive or a comparable system, either alone or together with other organisations.
- c. **Use of open publications.** The organisation encourages personnel to use open publications in teaching, research, expert work and studies.
- d. **New open publication forms, practices and publishing platforms.** The organisation promotes the development of open publication practices and formats as well as publication platforms both nationally and internationally.
- e. **Open theses.** Organisations have policies and guidelines for the open publication of theses and a platform for their publication.
- f. **Science publishing.** The organisation's own scientific publishing is supported, and publication production is open and licensed with open licences.
- g. **Persistent identifiers.** The organisation ensures the use of persistent identifiers.
- h. **Digital preservation.** The organisation ensures the long-term preservation and availability of open publications, making use of suitable national and international services/ service providers.
- i. **Monitoring the costs of openness.** The organisation has an idea of the costs of openness and an understanding of how the open publication of the organisation is structured.

7. RESPONSIBLE ASSESSMENT

The organisation has at its disposal practices, criteria and a knowledge base for documenting diverse outputs and merits that promote open science and its culture as part of the assessment and merit of Finnish research organisations and their personnel.

Actions required by the objective:

- a. **Responsible practices.** The organisation ensures that the evaluation of research and a researcher follows the responsible and transparent practices in accordance with the [Good practice in researcher evaluation](#) recommendation.
- b. **Incentives.** The organisation ensures that the evaluation of research and researchers takes into account the research output with different formats and languages (e.g. publications, data, software), merits and effectiveness as well as activities to promote open science.
- c. **Knowledge base.** The organisation enables and ensures that an open science knowledge base is produced to support the evaluations, which enables comprehensive and comparable documentation of research outputs, merits and impact in different forms.
- d. **Qualitative evaluation support.** The organisation enables the production and utilisation of qualitative information, such as narratives and case descriptions of quality and research impact, in evaluations.
- e. **Transparency and monitoring.** The organisation ensures that the evaluations are conducted in an open and transparent manner and that the implementation of responsible assessment is monitored in all evaluation processes from the organisational level to the individual level.
- f. **Guidelines and local support.** The organisation ensures that all parties of the evaluation have adequate guidance, guidelines and resources for responsible assessment.
- g. **Responsible party.** The organisation determines a responsible party that researchers can contact should there be shortcomings in the responsibility of the evaluation.



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