Consistency and Responsibility in the Evaluation of Open Science

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(Presentation at #RSD2025)

Agenda

1. Background

2. Organisations' evaluation contexts

3. Conclusions and possible solutions

Kuinka moni on…

1) ollut tuottamassa tietoa organisaation arviointiin?
   1) mikä arviointi on ollut kyseessä?
2) ollut vastuussa organisaation arvioinnin toteuttamisesta?
3) osallistunut organisaation arvioinnin kehittämiseen omassa organisaatiossa?

# 1. Background

OS Reference Architecture 2024-2030

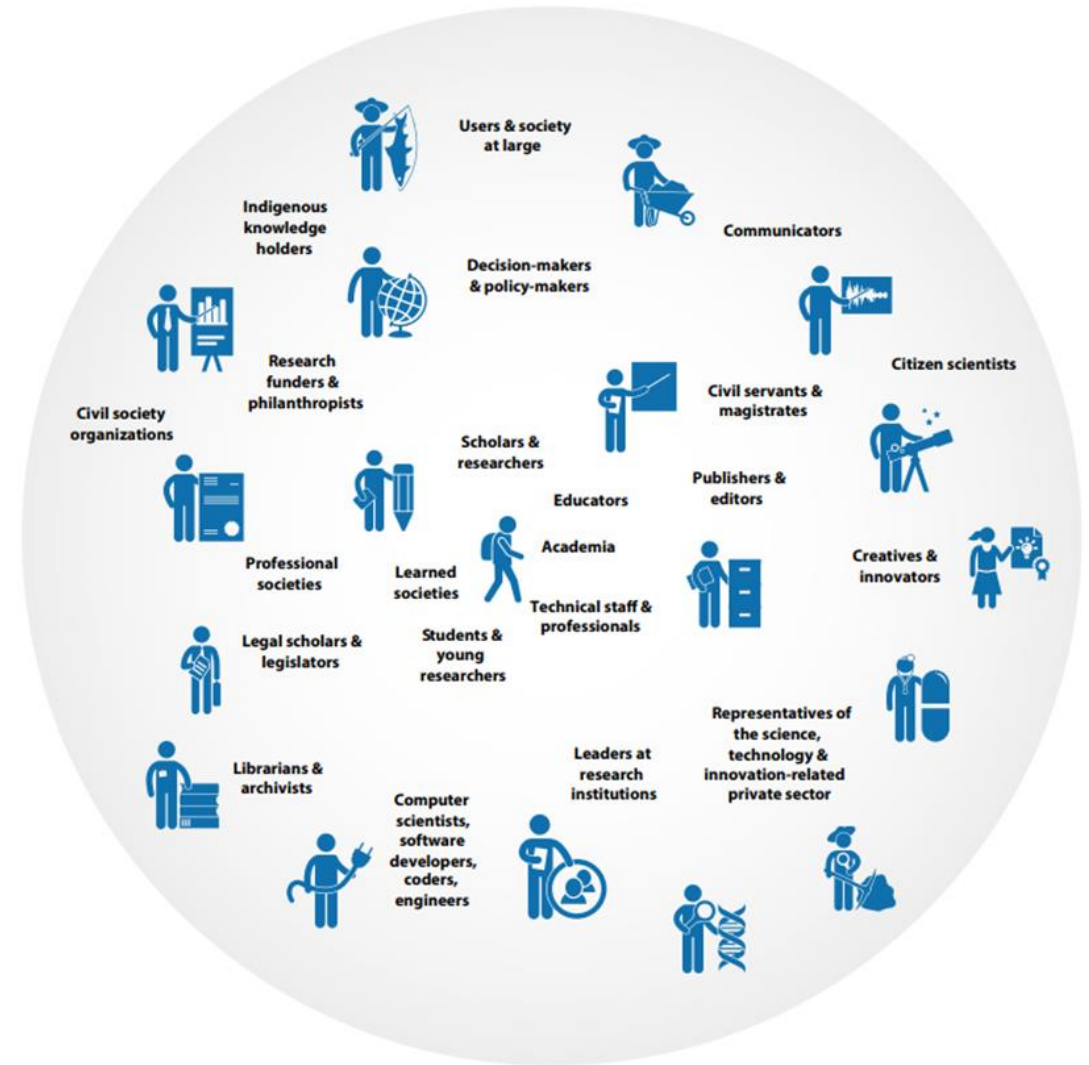Different levels/perspectives

Guiding principles

OPEN SCIENCE AND RESEARCH REFERENCE ARCHITECTURE (OScaR)

- OScaR is based on the goals of the Declaration of Open Science and Research.

- The architecture has been expanded based on international open science trends, such as the UNESCO Open Science Recommendation and the CoARA agreement.

- Aims to steer open science and research at the national level and implement the Finnish Open Science Declaration and related policies in the organisations of the Finnish research community.

- OScaR gives an overall picture of the services which support researchers to apply open science practices and organisations to develop open science practices in the scientific community.

- The services are grouped into 6 service areas: Overarching services, Open access scholarly publication, Research data, infrastructures and methods, Education and educational resources, Participatory science, Responsible assessment.
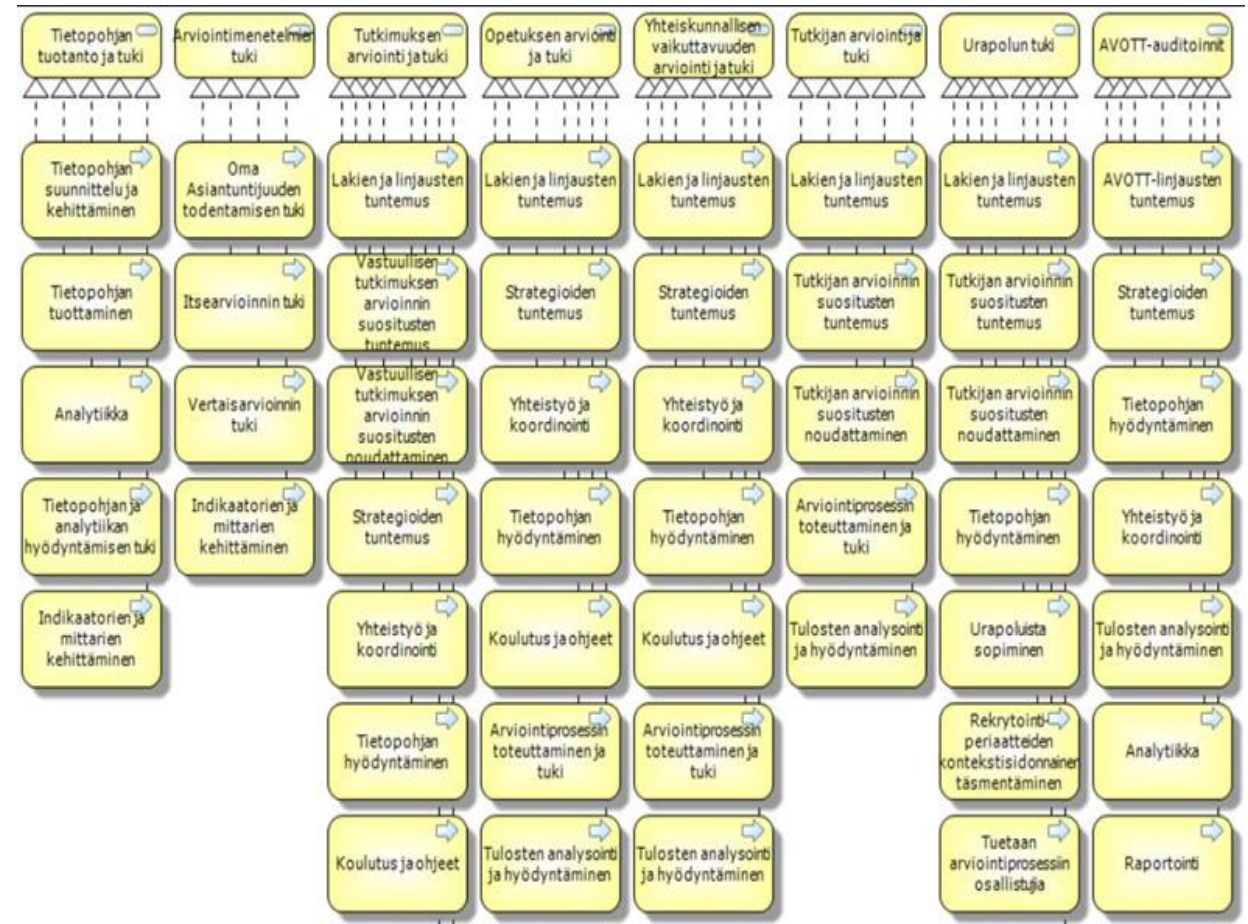
- There are multiple actors and stakeholders involved in open science and the overall research ecosystem.

- The collaborative and inclusive nature of open science allow new social actors to engage in scientific processes, including through citizen and participatory science.

Different levels/perspectives

The reason it is important to identify who (or what) and why you are evaluating prior to considering how you might undertake the evaluation is that assessments in some settings have a greater impact on the entity being evaluated and are therefore a higher risk.

		Country	HEI	Group	Individual
Analysis	To understand	Low impact	Low impact	Medium impact	Medium impact
Advocacy	To show off	Low impact	Low impact	Medium impact	Medium impact
Accountability	To monitor	Low impact	Medium impact	Medium impact	High impact
Acclaim	To benchmark	Medium impact	High impact	High impact	High impact
Adaptation	To incentivise	Medium impact	High impact	High impact	High impact
Allocation	To reward	High impact	High impact	High impact	High impact

- Low impact (green)
- Medium impact (orange)
- High impact (red)

https://doi.org/10.26188/21919527.v1

Guiding principles

San Francisco Declaration on Research Assessment (DORA) (published in 2012) aims to improve the quality of evaluation of research outputs.

Leiden Manifesto for Research Metrics (2015) was designed so that researchers can review the methods that are used to assess their work and that evaluators can justify the indicators used.

The Hong Kong Principles for Assessing Researchers (2019) lists six principles aiming to develop researcher assessment so that it is more sustainable with regard to research ethics and more versatile and of a higher quality.

SCOPE Framework for Research Evaluation (2021) 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.

UNESCO recommendation on Open Science (2021) provides an international framework for Open Science policy and practice that recognises disciplinary and regional differences in Open Science perspectives.

European Agreement on Reforming Research Assessment (CoARA – Coalition for Advancing Research Assessment) **(2022)** sets a shared direction for changes in assessment practices for research, researchers and research performing organisations, with the overarching goal to maximise the quality and impact of research.

Barcelona Declaration on Open Research Information (2024) promotes transition from closed to open research information and thereby strengthens the responsible evaluation of information.

The **Open Science Monitoring Initiative (OSMI)** (2025) goals are to promote the worldwide adoption of the Principles of Open Science Monitoring, to provide recommendations for technical specifications for their implementation, and to support stakeholders on various levels in monitoring Open Science practices.
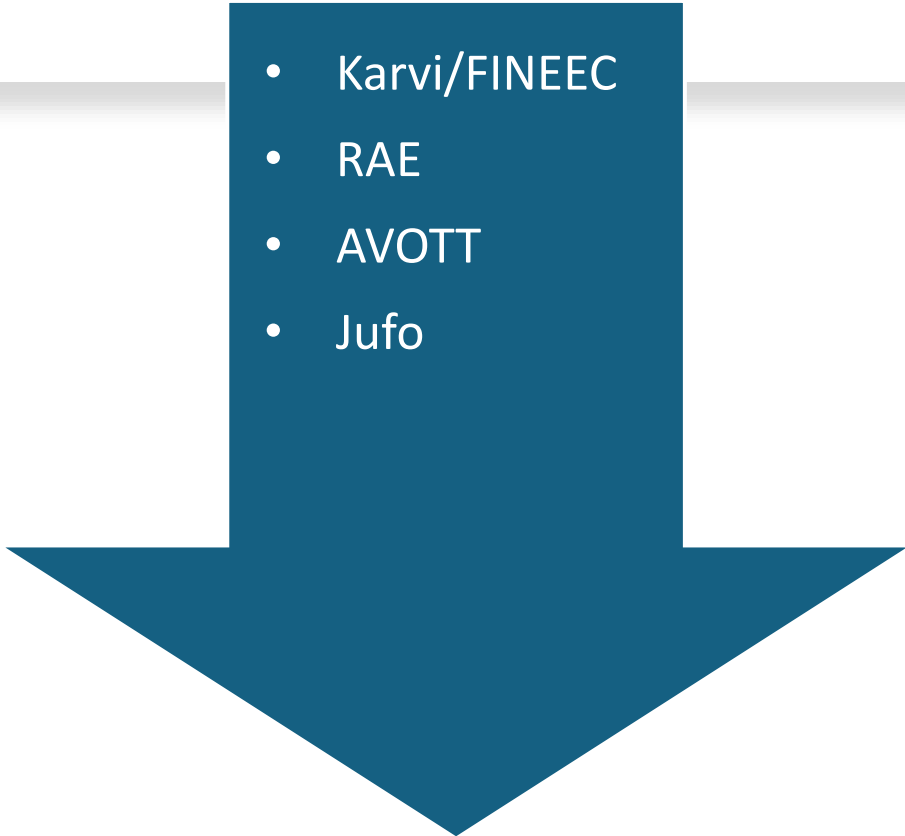
Responsible assessment of research performing organisations

- The Agreement on Reforming Research Assessment sets a **shared** direction for changes in assessment practices for research, researchers and research performing organisations, with the overarching goal to maximise the quality and impact of research.

- The signatories commit to a **shared** vision, which is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research.

2. Organisations' evaluation contexts

- Karvi/FINEEC
- RAE
- AVOTT
- Jufo

KARVI/FINEEC

FINEEC's 2018–2024 audit model for HEIs assesses the functionality and effectiveness of the quality systems of HEIs. The focus of the audit is on the procedures used by the HEI to maintain and enhance the quality of its activities.

Evaluation areas → Research, development, innovation, and activities and impactful artistic activities → "The HEI has systematic procedures for ensuring the responsible conduct of research. The HEI enhances open science."

https://www.karvi.fi/fi/arvioinnit/korkeakoulutus

RAE (Research Assesment Exercise)

- The purpose of the evaluation is to determine the quality, impact and areas for development of the research conducted at the university.
- The assessment is widely based on the research community's self-assessment and the assessment panel's interviews with the research community.
- In addition to the panel assessments, it is common that an external expert body carries out a bibliometric analysis.
- It is inherently international.
- 5-7 years cycle.
- Each organisation designs its own tailored model.

AVOTT : **Monitoring model for open science and research - Principles and practices (2022)**

"In 2020, the National Steering Group for Open Science and Research established a working group to develop a next generation model for monitoring open science and research in Finland.

The outcome of the efforts of the working group is presented here as a monitoring model consisting of the subjects to be monitored, the indicators and their data sources.

Monitoring is used to create an overview of the operating models and achievements of open science and research applied by the Finnish research community and its organisations."

https://edition.fi/tsv/catalog/book/238

Jufo

"Publication Forum (in Finnish often referred to as JUFO) is a rating and classification system to support the quality assessment of research output. To account for the different publication cultures characteristic of various disciplines, the classification includes academic journals, book series, conferences as well as book publishers. The four-level classification rates the major foreign and domestic publication channels of all disciplines as follows:

1 = basic level
2 = leading level
3 = highest level
0 = publication channels that don't meet the criteria for level 1.

The evaluation is performed by 23 discipline-specific Expert Panels composed of some 300 distinguished Finnish or Finland-based scholars."

https://julkaisufoorumi.fi/en/user-guide

3. Conclusions and possible solutions

Conclusions

Solution: SCOPE Framework

Solution: Self-evaluation / Peer-review

Discussion

Conclusions

Evaluation models are shared and common for good reason. However, when they are shared and common, they cannot adequately reflect the personalised aims and specific characteristics of individual universities. It is also a risk that we spread and continue unpurposeful evaluation methods.

National models are too shallow and strongly bound to quantitative indicators. They are also designed in order to be able to compare different (same type of) organisations, as Finnish universities with each others. More recourses are needed in order to develop the model further.

We're especially missing the organisational self-evaluation that reflects the guiding principles of the responsible assessment. Joint external evaluations of organisations do not sufficiently capture organisational specificities and objectives. External evaluations (tend to) seek comparability and also public image.

Openness is part of quality and impact - Jufo does not yet (?) respect that.

Solutions: **Evaluate the evaluation, SCOPE Framework**

Solution: Self-evaluation/Peer-review

- Organisations may conduct self-evaluation and/or peer-review internally
- Not yet established practice/ behind the formal scenes
- New tailored and dynamic self-evaluation models are needed
- Co-creation of the self-evaluation models

Mitä muuta?

See more

- Himanen, L.; Nykyri, S. (2024). Towards a sustainable and responsible model for monitoring open science and research—analysis of the Finnish model for monitoring open science and research, *Research Evaluation*, 2024;, rvae008, https://doi.org/10.1093/reseval/rvae008

- Niemi, L., & Nykyri, S. (2025). Mitä tavoittelemme avoimen tieteen seurannalla?. *Signum, 58*(1), 49–55. https://doi.org/10.25033/sig.160649

- Nykyri, S.; Jauhiainen, I.; Niemi, L.; Rouvari, A. (2023). *NWB2023_Cocreating open science ecosystem to foster the reform of research and researchers assessment*. figshare. Presentation. https://doi.org/10.6084/m9.figshare.24298201.v1

- Nykyri, S.; Niemi, L. (2024). *The role of Open Science and Metrics in Science Policy: Case Finnish University CoARA Action Plans*. figshare. Presentation. https://doi.org/10.6084/m9.figshare.28033043.v1

- *The Open Science and Research Reference Architecture 2024–2030*. Avoimen tieteen ja tutkimuksen koordinaatio, DOI: https://doi.org/10.23847/tsv.942

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- Self-evaluation model for Finnish Universities (next step, to be presented at NWB 10/2025)

Thank you!

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