



CERN Action Plan

CERN Scientific Information Service: Antonia Winkler, Alexander Kohls, Kamran Naim

CERN Experimental Physics: Nathalie Knoors

CERN IT: Jose Benito Gonzalez Lopez

CERN HR: Anne Kerhoas, Lisette van den Boogaard

Introduction

This action plan provides an overview of CERN's previous and planned future efforts to reform research assessment activities in line with CoARA, the Coalition for Advancing Research Assessment. It outlines initial findings regarding assessment procedures at the Organization and provides suggestions and future plans aimed at realising the following core CoARA principles at CERN:

- 1. Recognise the diversity of contributions to, and careers in, research in accordance with the needs and nature of the research*
- 2. Base research assessment primarily on qualitative evaluation for which peer review is central, supported by responsible use of quantitative indicators*
- 3. Abandon inappropriate uses in research assessment of journal- and publication-based metrics, in particular inappropriate uses of Journal Impact Factor (JIF) and h-index*
- 4. Avoid the use of rankings of research organisations in research assessment*

(See [CoARA commitments](#) or [full CoARA Agreement Text](#) for more detailed information)

The timeframe of the action plan constitutes five years from June 2024.

CERN and CoARA – synergies and alignment

CERN is committed to the fair evaluation of researchers and research proposals. Current assessment procedures at CERN largely rely on a culture of qualitative judgment that enables the consideration of diverse profiles and aims to recognise research contributions of significant societal value. Due to a decades-long preprint publication culture, assessment practices at CERN typically ignore the journal's reputation. Additionally, by placing a focus on open science practices, CERN seeks to maximise its impact on society and acknowledge the relevance of diverse types of research outputs and contributions.

To reinforce CERN's focus on qualitative assessment, supported by the responsible use of quantitative metrics, the Organization was an early signatory of the CoARA initiative. Next to promoting qualitative types of evaluation, CERN's membership in the CoARA initiative constitutes an opportunity to strengthen its focus on more holistic forms of research assessment. An example of this is CERN's goal to promote the acknowledgement of a more diverse set of research outputs (i.e. data, software and hardware) beyond publications in assessment procedures. Since the transformation towards more diverse and qualitative types of assessment requires a global cultural change in research evaluation practices, CERN further views its participation in CoARA as an opportunity to contribute towards this collective reform of the larger research assessment system.



Defining research assessment at CERN

Through CoARA, CERN seeks to address research assessment at CERN, both at the individual level and in project proposal assessment.

In the context of individual research assessment, CERN considers two major groups as targets of the CoARA initiative.

The first group consists of researchers who are directly employed by the laboratory, which includes CERN staff, fellows (graduates), and doctoral students working in a research domain. The overall population across these groups is close to 4,000 members of personnel. However, only ca. 2'200 of these work in a domain affected by research assessment reform. For this group, four broad processes were identified, which involve research assessment, namely: hiring, promotion, annual performance assessments (MERIT), and limited duration to indefinite contract transitions (LD2IC). After developing an overview of current assessment practices in these four domains throughout the different sectors of the institution, recommendations to align assessment with the CoARA principles will be developed.

CERN's main role is to provide facilities (such as the Large Hadron Collider, LHC) for CERN research collaborations to perform physics experiments. These collaborations represent the CERN user community of more than 12'000 researchers. The CERN user community represents the second group in the context of the CoARA implementation at CERN. Since these researchers are not directly employed by CERN, but instead by their home universities, it is not possible to include them in all suggested changes devised for the first target audience. However, specific actions taken by the Organization in the context of research assessment reform may be made available to the user community through including them in training efforts and sharing prepared material to increase awareness for CoARA and its principles.

Next to reforming the assessment of individual researchers, CoARA aims to address project proposal evaluation. Some initial examples of project proposal assessment at CERN include the allocation of test beam time for the LHC or the allocation of beam time at other experimental facilities such as ISOLDE. A more comprehensive investigation will be necessary to identify all instances of research project proposal assessment activities at the Organization.

Affecting change in line with CoARA at CERN

Members of the CERN Scientific Information Service (SIS) are working to coordinate efforts at CERN to align research assessment with the CoARA principles. In this work, SIS is working in close collaboration with the Information Technology (IT) and Human Resources (HR) Departments at CERN.

CERN's strategy towards affecting change in line with the CoARA principles generally relies on involving the diverse set of stakeholders who participate in research assessment practices.

In a first instance, members of the experimental and theoretical physics research community will be involved through interviews that aim to establish an overview of current assessment practices in this domain. Following this, the overview will be expanded to

include other CERN communities, early career researchers and underrepresented groups. In addition, stakeholders involved in the assessment of research proposals will be interviewed. Further, a desk review of official documentation relating to assessment procedures will be performed in close collaboration with the HR department.

Based on the findings of the review of official documentation and research assessment practices outlined in interviews, recommendations for aligning current practices with the CoARA principles will be devised in close collaboration with the research community. Leveraging the strong culture of innovation and collaboration at CERN, the recommendations will aim to facilitate change by providing additional information and creating awareness rather than mandating change. Recommendations may include amendments to official documentation, the development of training materials, or the provision of relevant information resources.

CERN is a highly diverse organisation with different departments exercising assessment procedures optimised for their individual needs in their respective research domains/context. This necessitates in-depth research on the culture and practices of research assessment employed across different sectors of the Organization. A more substantial consideration of the active application of open science practices, as well as the inclusion of research outputs beyond publications, such as research data, analysis software and hardware, represents the main opportunity for institutional assessment practices at CERN on its journey towards implementing CoARA.

Action Plan

As a first step towards implementing the CoARA principles at CERN, an investigation of research assessment practices has been initiated and aims to conclude by the end of 2025. Similarly, a desk review of official documentation relating to assessment has started and will continue until the summer of 2025. The following action plan outlines the future steps that will be taken following the preliminary investigation.

Please note that these actions are not exhaustive and are subject to change and further elaboration based on the findings of upcoming interviews and general feedback from the CERN community. Therefore, this action plan will be updated regularly throughout the CoARA implementation. The CERN Open Science Office will coordinate all actions.

Action	Involved stakeholders	Date of completion
Interviews to establish an overview of research assessment of individual researchers	Researchers involved in assessment procedures, HR department	Dec 2025
Review of relevant official HR documentation	HR department	Jun 2025
Develop targeted educational material and training for hiring managers	HR department	CoARA info document until Jun 2025, expand existing training programs until Dec 2025
Develop detailed, individual recommendations based on the findings from interviews and desk reviews	Researchers involved in assessment procedures, department management, HR department	First iteration until Jun 2025, second iteration until Jun 2026

Interviews to identify research proposal assessment procedures and applied practices	Researchers involved in project proposal assessment	Dec 2025
Implementation of changes based on recommendations	Researchers involved in assessment procedures, department management, HR department	Dec 2026
Testing the effect of implemented changes	Researchers involved in assessment procedures, department management, HR department	Dec 2027
Devising and testing additional strategies for change if necessary	Researchers involved in assessment procedures, department management, HR department	Dec 2028 - June 2029
Devise recommendations and procedures for aligning research proposal assessment at CERN with the CoARA principles	Researchers involved in project proposal assessment	Dec 2027
Test implemented changes	Researchers involved in project proposal assessment	Dec 2028 - June 2029