

Evaluation of Research Careers fully acknowledging Open Science Practices Rewards, incentives and/or recognition for researchers practicing Open Science

Status: OSPP Working Group Initial assessment
03 November 2017

[Access to the Report](#)

[\[See comments on the OSPP Skills WG\]](#)

The OSPP welcomes the report on “rewards and incentives”. It is informative and describes comprehensively both the policy setting and the respective ecosystems for the topics (researcher situation, institutional environment etc.).

General recommendations:

1. The OSPP strongly recommends that any development of new evaluation criteria should include the provision of a comprehensive list of concrete stories and use-cases describing good-practice and existing efforts that demonstrate how new rewards and incentives can be implemented and the consequences of that implementation.
2. Definitions of Open Science in relation to its component parts, such as outputs, activity and behaviour, should be consistent across all EC Open Science related reports, in particular the report on Skills which is being published concurrently (e.g. the terminology for ‘Open’ resp. FAIR data). While consistency is required, we also acknowledge that the definition of Open Science is likely to change as new technologies emerge that can benefit research communication.
3. The OSPP considers that the OS-Career Assessment Matrix (OS-CAM) should be aligned with the [European Framework for Research Careers](#). Training of researchers must take into account the relevant assessment criteria, and actively foster longer-term behaviour and attitudes that are consistent with Open Science among European Researchers.
4. This OSPP report addresses the *“Rewards, incentives and/or recognition for researchers practicing Open Science”* paper. However, to ensure all the recommendations, outputs and terminology are aligned, we recommend that the OSPP should also prepare an overarching complementary report that bring together the issues and recommendations of the 3 individual papers from the expert groups on altmetrics, rewards and skills.
5. New career assessment methods and robust qualitative and quantitative indicators to replace the ‘impact factor’ (or other surrogates of journal rank) in researcher evaluation need to be developed and tested in relatively small pilots, and eventually implemented widely where effective. Such efforts require the engagement of the academic community to ensure independent analyses of their robustness, but also that of research funders and policy makers. Relevant policies and funding streams should therefore be created to support this engagement.
6. The OS-CAM should be carefully reviewed in order to assess the validity and utility of the “possible evaluation criteria” as “real criteria”. Moreover, given that all the common activities and outputs being assessed will be evaluated within an Open Science framework, the phrase, “Open Science Activities” should be replaced with “Academic Activity”, thus making open science activity implicit and normalised. This includes, for example, teaching and supervision, instead of teaching “about Open Science”, teaching “in” formats of Open

Science, and Open Education, using MOOCs, OCW, etc., similarly supervision that should assess “Open Supervision Initiatives”.

7. In addition to encouraging both RPOs and funders to embed OS criteria in their promotion or grant award processes, the Commission should actively promote Open Science criteria and indicators as part of their own award schemes. This will also provide a mechanism to test the robustness of the matrix.
8. Overall, the recommendations of the report (p. 8) are supported by the OSPP with the exception of recommendation 4 (create an OS-CAM). Instead we recommend a unique CAM embedding Open Science in it. In recommendation 3, the ERC should be added to the 2nd sub-bullet point. Alternatively, recommendations should apply essentially to anyone who is getting money through the stated mechanisms.

Comments to the “rewards” report:

A main general comment regards overall evaluation of researchers and research. It is also fundamental to ensure **qualitative criteria** (in particular by formats of peer-review) as well as quantitative metrics and criteria, and this should be the priority of any evaluation and reward system. The paper mentions this aspect but it should be stressed even further in the executive summary and in other sections. The CAM does not take qualitative assessment of the outputs into account, and this limitation should be emphasized.

P. 10 – good: clear description what Open Science means from a researcher perspective

P. 16 Career Assessment Matrix (CAM)

It’s a key finding of the report. The OSPP supports the concept of a more multi-dimensional CAM. Quantitative indicators have to be combined with qualitative assessments. One figure (e.g. the impact factor or H-factor) cannot adequately describe the quality of research output.

However, the OS-CAM is too comprehensive to have an immediate practical use by research institutions and is one-sided. Instead of introducing a separate OS-Matrix, Open Science should be integrated into all dimensions of career assessment (research, teaching, science communication, extra-academic experience etc.) starting with a few, well focussed elements (e.g. to be selected from the OS-CAM).

The OSPP recognises other potential areas of activities that could be incorporated into a CAM, including “internationalisation”, “leadership and team working”, “engaging with society + citizen science”, “diversity”, “sustainability”, “interdisciplinarity” etc. The OSPP sees the need to keep any upcoming new CAMs practicable, not adding dimension by dimension to an “XXL-schema”. Clear pathways for the adoption of any resulting assessment instrument should also be developed, as a way of promoting and providing evidence of the culture change required to bring real advances. This will also help us move away from the tacit assumption that assessment exists in a vacuum: assessment exists in many forms for many purposes, and this nuance needs to be fully embraced for any evaluation tool to have maximal value.

Besides adding other criteria to the matrix, several criteria should also be:

- reorganized (e.g. Invert the order of “research output” and “research process”: process and leadership should come first, then output and impact).
- completed (e.g. “Research process” should also include also the design of research not only the data collection aspect, and would need to add IP/legal issues at this stage as these aspects are very important from the very beginning).

- or reinterpreted (e.g. Teaching and supervision should be interpreted from the point of view of Open education and Collective learning).

Matrixes could be modified for its application in different research careers stages (R1-R4) and at various levels (individual researcher, research group / project, institution, etc.), and at disciplinary level, but having a clear core criteria and an open dissemination of them and consistently aligned with the skills included in researchers training in OS.

Evaluation of grants, recruitment committees etc. should involve researchers with experience in Open Science relevant areas (e.g. data management, open access, open data, citizen science, open education, etc.).

Enabling reproducibility of data could be a strong incentive for Open Science in some disciplines, e.g. Psychology.

Doctoral candidates should receive well-organised information on Open Science practices and be encouraged to practice them while assuring them that their career development is safeguarded based on direct scientific excellence assessment (not indirect, as e.g. impact factors).

In many discussions it has become clear that researchers and universities often agree on the principle to further develop evaluation systems and processes but there is little practical experience of how such evaluation is implemented. Many institutions have signed the DORA declaration, for example, but there are no concrete examples of its implementation. In order to move forward from principles to implementation, more best-practices are required.

The OSPP recommends the EC provide funding for pilots to develop and implement new methodologies, addressing different scenarios of researchers' careers and covering the diversity of disciplinary cultures. Differences with respect to the stage of career should also be incorporated. The EC has also an excellent instrument in their hands to implement new reward systems: the European Research Council (ERC), and the European Innovation Council (EIC). The ERC could show leadership and an example of best practice by implementing the matrix during evaluation¹, and the EIC could pilot the application of the new Competences Assessment Matrix (CAM) to EIC Horizon prizes, since it is a new granting process born at the "OOO"²light.

The survey results provide some interesting insights. No information is provided on how the survey was distributed and with 244 responses the response rate seems to be rather low (as noted by the authors it was unevenly distributed, e.g. strong representation from Spain and Poland). One error appears on p. 22, performance indicators: capacity to secure external funds should be 43% according to p. 40, i.e. second and not third as major element for the evaluation of researchers' careers. The aspect of OS in relation to these external funds could have been further investigated in the survey (e.g. if/how funder requirements related to OS have been considered in research assessments).

¹ ERC grants might be the perfect context to apply the matrix for several reasons:

- Besides the ground-breaking approach of the proposal, the ERC does evaluation at individual/researcher level.
- The grant system at ERC will allow to (first proof) implement Open Science indicators at 3 of the 4 R levels included in the HRS4R (starting: R2, consolidator: R3, advance: R4)
- ERC is very very well known for being Open Science supporter, from its president, to the mandate of making all the research outcomes open, and to remove the scholarship if the research is not reproducible (see <https://forbetterscience.com/tag/susana-gonzalez>).
- ERC grants imply excellence, so it will be a way to send the message that excellent researchers could be also Open Scientists.

² OOO: Open Science, Open Innovation, Open to the World.

To turn the report into policy recommendations, we propose to prepare a transversal report addressing the 3 papers from expert groups on altmetrics, rewards and skills at the same time, as they are very related and connected to each other.

Authorship Information

These recommendations were drafted by the *Rewards Working Group*³ of the Open Science Policy Platform:

Norbert	Lossau (Chair, Rapporteur)	EUA (European Universities Association)
Rebecca	Lawrence	F1000
Eva	Méndez	Young European Research Universities Network (YERUN)
Michela	Bertero	EU-LIFE
Michele	Garfinkel	The European Molecular Biology Organization (EMBO)
Wolfram	Koch	European Association for Chemical and Molecular Sciences (EUCHEMS)
Jennifer	Edmond	Digital Research Infrastructure for Arts and Humanities (DARIAH)

Comments were received and incorporated from the OSPP member Catriona MacCallum, Director of Open Science, Hindawi Limited.

³ Several of the members of this working group belonged also to the “altmetrics” (new generation metrics) WG and/or the “skills” WG. So, some of the comments are consistent in the 3 documents.