School of the Physical Sciences
Guidance on the Implementation of DORA
November 2023

1. Background

1.1 In July 2019 the University of Cambridge signed the San Francisco Declaration on Research Assessment (DORA, https://sfdora.org/). As a signatory, the University is committed to transparency, integrity, fairness, and consideration of a diversity of outputs in evaluating an individual's research for such purposes as recruitment, probation, and promotion.

1.2 The University is committed to three key actions:

Action 1: To eliminate journal-level metrics (JLMs) in the research assessment of individuals.

Action 2: To be transparent and consultative about how research quality will (and won't) be evaluated.

Action 3: To encompass a wide range of potential research impacts, reaching beyond a narrow focus on peer-reviewed publications and including contributions to open science, the translation and application of research, public engagement and policy impacts.

1.3 The University developed high-level guidance and asked Schools to further develop this into bespoke DORA implementation policies appropriate for their disciplinary needs.

1.4 This guidance, approved by the Council of the School, outlines recommendations for implementing each of the three key DORA actions across the School of the Physical Sciences.

2. Elimination of journal-level metrics

Action 1: To eliminate journal-level metrics in research assessment of individuals.

Recommendations for implementation:

2.1 The Departments of the School of the Physical Sciences will not use JLMs in the formal evaluation of candidates' research, for example in recruitment, or in promotion or probation assessments.

2.2 Steps that could be taken include:

   i.   Ensuring that individuals being evaluated, and external reviewers, are aware that we do not accept JLMs as a proxy for research quality.

   ii.   The use of JLMs in relation to candidates' publications will be explicitly prohibited from documents prepared by applicants or assessors.

   iii.   Chairs of School committees for Academic Career Pathways (ACP) and other career development programmes will be asked to regulate informal use of journal titles as proxies for research quality in discussions about candidates.

   iv.   The use of terms such as "target journal" and "high impact journal" in recruitment, probation, and promotion processes, guidance documents and advertisements, will

not be approved by School HR review; terms such as "high quality research" or "influential research" are preferred to the words "impact" and "impactful" with respect to the reputation of peer-reviewed journals.

2.3 The School recognises that journal metrics and titles have become embedded in perceptions of research quality and it will take some time to fully eliminate the unconscious bias that equates journal-level metrics with the quality of an individual research output. Mitigation measures such as redacted publication lists (providing only the DOI for each paper) are currently not favoured by the School because of the extra workload associated with retrieving publications when many candidates are being assessed, and because a redacted form of citation is contrary to the general DORA recommendation that research evaluation should be informed by complete information on all relevant outputs. It is therefore imperative that assessment committees are resolute in ensuring that output quality, not publication venue, is the primary indicator of research quality.

3. Transparency around the evaluation of research quality

Action 2: To be transparent and consultative about how research quality will (and won't) be evaluated.

Recommendations for implementation:

3.1 Research excellence or quality should ultimately be decided by competent and impartial assessors who have the necessary subject knowledge and expertise to make qualitative judgements about the content of research outputs.

3.2 Any evidence to be used in the assessment process will permit fair and equal comparison between researchers and will be appropriate for the purposes of the evaluation. The limitations of any evidence or methods will be considered.

3.3 The School will ensure that the objectives, criteria, range of admissible evidence, methods, and interpretation of results in any assessment process are set out in guidance for assessors and those submitting materials for assessment, including referees. All those subject to evaluation will be treated equally and impartially. Evaluation will consider only such material and information as is submitted for assessment in accordance with the guidance produced for the process in question.

3.4 The use of metrics may be considered as part of a complete assessment of publications submitted for evaluation of individuals. However, such metrics may only inform and must not supplant expert evaluations and any quantitative bibliometrics must be used carefully, recognising any biases associated with them. Use of a single metric alone to rank or evaluate individuals is not acceptable.

3.5 General guidance about appropriate use of metrics, and the strengths and weaknesses of various metrics is available from:
   i.   The University Library, https://libguides.cam.ac.uk/research-skills/metrics.
   ii.   The Metrics Toolkit website, https://www.metrics-toolkit.org,

4. Consideration of a diversity of research outputs and impacts

Action 3: To encompass a wide range of potential research impacts, reaching beyond a narrow focus on peer-reviewed publications and including contributions to open science, the translation and application of research, public engagement and policy impacts.

Recommendations for implementation:

4.1 While peer-reviewed publications will retain a central place in research quality assessments, the scope of research assessments will be widened so that peer-reviewed publications or related metrics are not the only focus of evaluation. Individuals should have an opportunity to report their research impact in terms of open science, public engagement, translation and application, economic activity, or policy-making.

4.2 In accordance with the University's commitment to the Open Research agenda (https://osc.cam.ac.uk/open-research/open-research-position-statement), evaluation processes should recognise contributions to open research, e.g. making datasets and/or software freely available, in Cambridge and more widely.

4.3 Evaluation will appropriately take account of the diversity of a researcher's outputs. Guidance for each assessment process should explicitly encourage the submission of materials across the relevant range of formats.

4.4 Qualitative measures of research excellence will be used, as appropriate, for example:

i.   The use of narratives and/or summaries of key papers in CVs and other materials to explain the quality of selected outputs.

ii.   The use of narratives to document research outputs in relation to open science, public engagement, translation and application, economic activity, and policy making criteria for impact.

4.5 Narrative-based CVs, such as the Royal Society's Résumé for Researchers (https://royalsociety.org/topics-policy/projects/research-culture/tools-for-support/resume-for-researchers/), aim to capture the full range of an individual's research contributions and are increasingly being adopted by funders.

4.6 Narratives are already widely used in research assessment across the University, for example, in evaluating research summaries or plans, and in probation and promotion processes. It is recognised that narrative elements come with their own biases (for example, they could privilege candidates with enhanced literary skills). Within the School, an exclusively narrative CV is not deemed appropriate. The following is recommended:

i.   Narratives continue to be requested under suitable headings as a part of assessment processes.

ii.   Applicants are invited to include, in narrative form, an account of what they see as the importance of an appropriate subset of their outputs and to justify the use of any citation-based author-level or paper-level metrics that they wish to include in their supporting documentation.

4.7 Narrative sections are useful in capturing contributions to research culture, researcher development or open science. Examples include but are not limited to:

i.   *Contributions to research teams and the development of others*, e.g. project management, supervision, mentoring, involvement in collaborations/networks within and outside the University, strategic leadership, etc. Narrative documentation of contributions of this nature could appropriately include statements from mentees, or members of research teams, who have been mentored or managed by the applicant.

ii.   *Contributions to the wider research and innovation community:* e.g., reviewing, refereeing, editorial board or funding panel membership, crucial to the success of the ecosystem; committee membership in the Department, University, or nationally/internationally; organisation of workshops, conferences or other events that benefit the research community; the development of research facilities or service platforms, contributions to improving research culture; contributions to open research.

iii.   *Exploiting and communicating research impact:* e.g., knowledge exchange, generation of IP or new commercial activity; engagement with industry, private/public sector partnerships, or policy makers; communication with researchers in different fields/disciplines or general public engagement through books, broadcasts, talks or other general media.

5. Implementation

5.1 In general, it is felt that the School of the Physical Sciences adheres to the principles of DORA, working in accordance with the University's commitment to transparency, fairness, integrity and diversity in all matters of staff recruitment and evaluation.

5.2 Given that academic promotion processes need to compare individuals fairly across the diverse disciplines of the School, it is felt that employment of these principles has been ingrained in operations for many years. The above recommendations provide overarching guidance for implementing DORA while both recognising current good practice and acknowledging that there is room for improvement.

5.3 The recommendations will ideally be implemented in all matters of staff evaluation, and with Departmental and staff feedback taken into account. Specific guidance for recruitment, probation and promotion procedures will need to be updated in light of these recommendations.

Staff Guidance and Support

5.4 The School will need to take steps to ensure that appropriate guidance and information is made available to all staff, and provided as a mandatory requirement to assessors formally responsible for evaluating research quality.

5.5 The University will develop a short online guide to DORA as part of its unconscious bias training package, and it is recommended that all those who are involved in evaluating research quality, for example in the ACP scheme, complete this training when it becomes available.

5.6 Assessors will be required to confirm that they have understood and adopted the relevant guidance and information prior to carrying out any research quality assessments.

Learning and improvement

5.7 The School will, from time to time, review this policy. Reviews may include, for example, reflexive evaluation of an individual assessment exercise (e.g. an annual promotion round), an annual or bi-annual appraisal of several assessment exercises, or applicant and evaluator feedback. Policies and guidance will be modified in light of such evaluation, if needed, in the spirit of continuously seeking to improve how we recognise and assess research quality.

Annex 1: Specific Considerations for Key Research Exercises

Promotion Reviews of Internal Candidates

- Applicants for promotion review must not include journal-level metrics, such as the Journal Impact Factor, in relation to any of their publications.

- Applicants may include author-level metrics, such as the h-index, in narrative sections as evidence to support the influence or progression of their research activity. Applicants should justify the choice of any author-level metrics they choose to include and should refrain from any explicit ranking or comparative evaluation of their metrics relative to other authors in Cambridge or elsewhere.

- Applicants may use citation-based paper-level metrics, for example to highlight the influence of a particular research output. In such cases, internal applicants should use the Relative Citation Ratio (RCR) or the Field Citation Ratio (FCR) provided via the Dimensions link for each paper on the University's Symplectic system where it is available. Raw citation counts should be discouraged.

- Applicants are encouraged to include a wide range of potential research impacts beyond the narrow focus on peer-reviewed publications. Preprints with DOIs are acceptable as part of the list of publications submitted by applicants. Other acceptable research outputs may include, but are not limited to, datasets, databases and software, patents and other commercial activities, translation and application of research outputs, contributions to public engagement and policy impacts.

- Applicants are encouraged to describe how their research activity contributes to and is compliant with the University's open research policy (https://www.openaccess.cam.ac.uk/university-policies-guidance).

Probation Reviews

- Probation reviews will generally follow the guidance for promotion reviews. The probation period is particularly important in setting expectations about research culture and evaluation of research performance in the University. Supervisors of probationary staff should pay special attention to communicating the School's commitment to the DORA principles, including early, clear and consistent guidance on how a diverse range of outputs will be evaluated by the committee assessing each individual's performance at the end of their probation period.

- Performance criteria for successful completion of a probation period, as agreed in advance with recently appointed staff, should not include lists of target journals, or any other publication criteria explicitly or implicitly informed by journal-level metrics.

Recruitment Processes

- All advertisements and job descriptions etc should clearly state that the University supports the principles of DORA, e.g: "*As a signatory of the San Francisco Declaration on Research Assessment, the University of Cambridge does not use journal-level metrics when assessing the quality of research outputs. Applicants should not include journal-level metrics, such as the Journal Impact Factor, anywhere in their application materials.*"

- If article- or paper-level metrics are to be used as part of the assessment process, it must be clearly stated in the guidance to applicants which metrics are admissible and

recommended. For example, applicants wishing to use paper-level metrics to emphasise the influence of a particular research output should be encouraged to use Field Normalised or Weighted indices, preferably the Relative Citation Ratio, rather than raw citation counts, which should be discouraged.

- Author-level metrics, such as the h-index, may be provided by applicants as part of a narrative; but applicants should justify the choice of any author-level metrics they choose to include without any explicit ranking or comparative evaluation of their metrics relative to other authors in Cambridge or elsewhere.

- Applicants should be encouraged to highlight a subset of specific research outputs and provide a brief narrative on their importance. For example, applicants should be asked to highlight a select subset of what they consider to be their most important research outputs and provide a brief narrative account of their significance.