UNIVERSITY OF CAMBRIDGE

Signatory of DORA

DORA

The San Francisco Declaration On Research Assessment

sfdora.org

Prof Steve Russell - Chair DORA Working Group

What is DORA?

1. Eliminate the use of journal-based metrics, such as Journal Impact Factors (JIF), in funding, appointment and promotion considerations.

2. Assess research on its own merits rather than on the basis of the journal in which the research is published.

3. Capitalise on the opportunities provided by online publication (i.e. relaxing unnecessary word, figure or reference limits) and exploring new indicators of significance and impact.

4. Consider the value and impact of all research outputs (including datasets and software) in addition to research publications, and consider a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice.

Why is DORA necessary?

- Increasingly recognised that there is a need to improve the ways in which the outputs of scholarly research are evaluated.
- While initially driven by the STEM sector, it is becoming more widespread and the University wishes to apply the principles of DORA to all research areas.
- Outputs are many and varied (articles, books, data, reagents, software, intellectual property and trained young researchers).
- Institutions and funders need to be able to assess the quality and impact of research outputs, it is imperative that this is measured accurately and evaluated wisely.
- Need to establish well founded and academically supported criteria for evaluating primary research and other indicators of research, that transparently inform hiring, probation and promotion policies.

What it's not

DORA is NOT proscriptive about where you can publish your work!

Who has signed up

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UK Research and Innovation

wellcome

THE ROYAL SOCIETY

CANCER RESEARCH UK

HFSP HUMAN FRONTIER SCIENCE PROGRAM

hhmi Howard Hughes Medical Institute

1834 Organisations
15462 Individuals

Aston	Imperial	Nottingham
Babraham	KCL	Oxford
Birkbeck	Keel	Queen's Belfast
Birmingham	Kent	Salford
Bristol	Lancaster	Sheffield
Bournemouth	Leicester	St Andrews
Cardiff	Lincoln	St George's
Dundee	Liverpool	Sussex
Durham	Liverpool JM	Swansea
Edinburgh	Loughborough	UCL
Essex	Manchester	Warwick
Goldsmiths	Newcastle	York

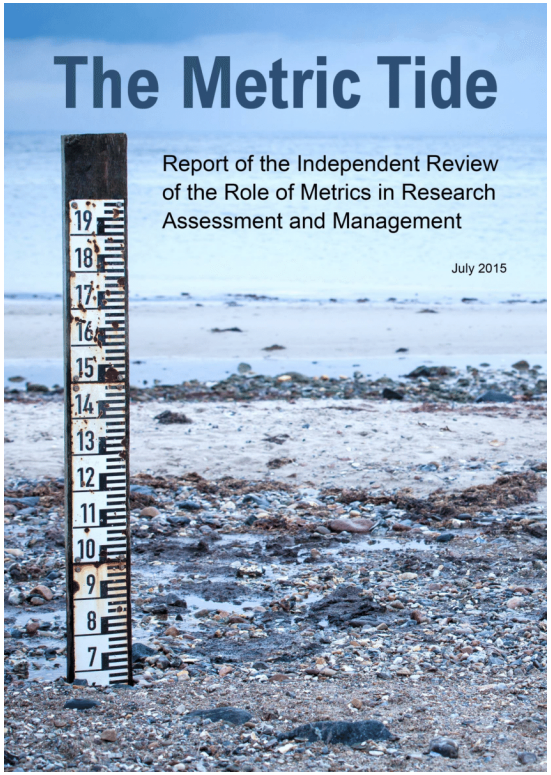
17/24 Russell Group

The University and DORA

- Recommendation of Open Research Work Group
- University signed DORA in July 2019
- DORA Working Group established Nov 2019 to steer the implementation of DORA across the University, providing oversight, input and guidance on:
  - Mechanisms for effective communication, consultation and advocacy with stakeholders across the University.
  - Development of principles and policies steering the responsible use of m
  - Coordinate with HR regarding relevant HR policies.
  - Development and implementation of a programme of appropriate training and awareness raising activities.
  - Public statements arising from the University's commitment to DORA.
  - Reports on progress to the Open Research Steering Group and Research Policy Committee.

INDICATORS

Metrics & Indicators

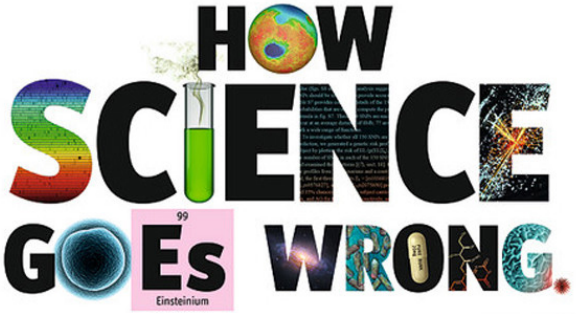


San Francisco DORA
Declaration on Research Assessment

The Leiden Manifesto for research metrics

UK Progress towards the use of metrics responsibly

Three years on from The Metric Tide report



UUK - Responsible Metrics

The Metric Tide https://responsiblemetrics.org/the-metric-tide/

Responsible metrics can be defined by the following key principles:

Robustness – basing metrics on the best possible data in terms of accuracy and scope.

Humility – recognising that quantitative evaluation should support, but not supplant, qualitative, expert assessment.

Transparency – that those being evaluated can test and verify the results.

Diversity – accounting for variation by research field, and using a range of indicators to reflect and support a plurality of research and researcher career paths across the system.

Reflexivity – recognising and anticipating the systemic and potential effects of indicators, and updating them in response.

The Leiden Manifesto http://www.leidenmanifesto.org

Research Assessment Indicators - JIF

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The Journal Impact Factor is a measure reflecting the annual average (mean) number of citations to recent articles published in that journal. Used appropriately and in conjunction with other metrics, the JIF can be useful in collection development decisions made by librarians.

JIF is widely acknowledged to be a poor indicator of the quality of individual papers. It has has a number of well-documented deficiencies as a tool for research assessment, including:

- **Highly skewed citation distributions within journals.**
- **JIFs are field-specific, a composite of multiple, highly diverse article types (primary papers and reviews).**
- **Poorly reflects output in many fields (i.e. Social Sciences, Arts & Humanities) or non-English output.**
- **JIFs can be manipulated by editorial policy.**
- **Data used to calculate JIFs not transparent or publicly available (Thompson Reuters Web of Science).**

JIF = Guesswork

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Royal Society Future of Scholarly Scientific Communication Meeting 2015

Exercise with 11 journals: *Science*, *eLife*, *The EMBO Journal*, the *Journal of Informetrics*, the *Proceedings of the Royal Society B*, three journals published by the Public Library of Science, and *Nature* along with two of its sister journals. In 2013 and 2014, those journals published more than 366,000 research articles and 13,000 review articles.

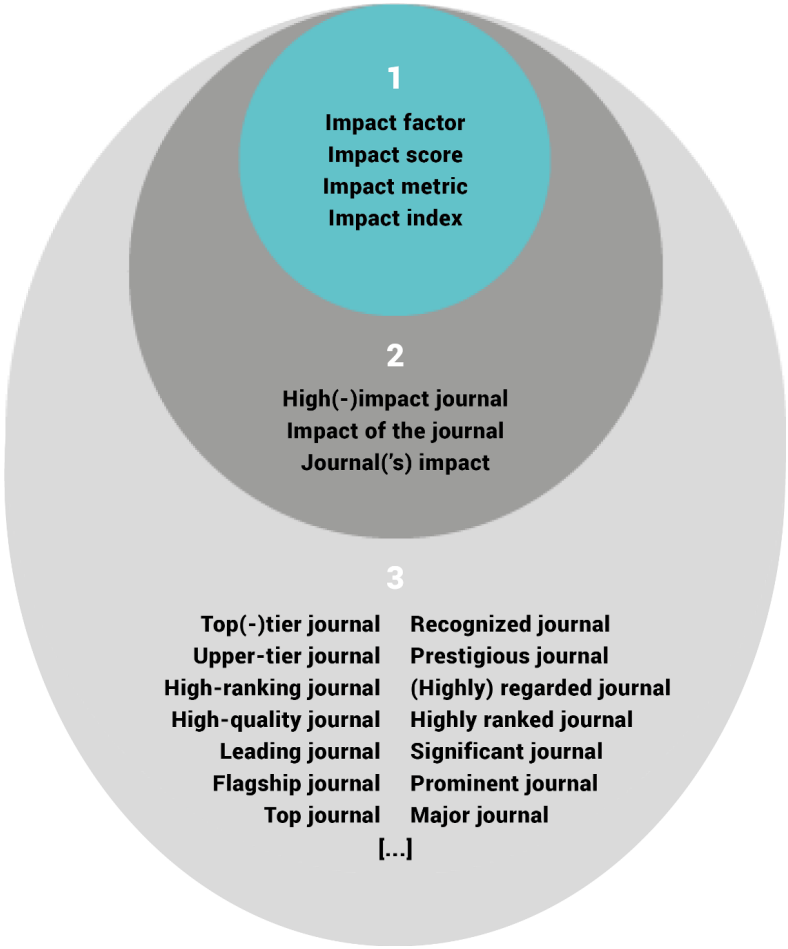
Used Thomson Reuters database to count all citations to those articles in 2015. Vincent Larivière, an expert on journal citations at the University of Montreal in Canada led the analysis of the data.

Citation distributions are so skewed that up to 75% of the articles in any given journal had lower citation counts than the journal's average number.

Using JIF to forecast the impact of any particular paper is close to guesswork.

Larivière et al (2016) doi.org/10.1101/062109

JIF



Assess research on its own merits rather than on the basis of the journal in which the research is published.

McKiernan et al (2019) doi.org/10.7554/eLife.47338

Citation Counts

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- # of times an output appears in the reference list of another output.
- Context of citation needs to be considered.
- Many factors influence citation counts.
- Discipline specific norms need to be considered.
- Citation counts should never be interpreted as a direct measure of research quality and should not be used as a measure of positive reputation for individual researchers.
- Citation counts should not be used to compare output of different age, type or subject.
- A metric more suited for this type of comparison is the Field Normalised Citation Impact.

H-Index

- An author-level metric: calculated from citation counts and used as evidence of the scholarly influence of an author's body of work.
- Varies by discipline - differing norms of publishing speed and quantity.
- No account career longevity - benefits more experienced individuals.
- Unable to differentiate between active and inactive researchers.
- Biased towards productive researchers to detriment of selective ones.
- Relatively insensitive to highly cited papers.
- Should not be used as a sole metric of scholarly impact, nor should it be used as a direct measure of quality.
- Should not be used to rank authors who are in different disciplines or those at different stages of their careers.

Altmetric Attention Score

- **Altmetric Attention Score - automatically calculated, weighted count of all of the attention a research output has received.**
- **Outputs include, journal articles, books, and any research output deposited to a repository that the company tracks.**
- **Mentions in News articles, Blogs, Twitter, Facebook, Sina Weibo, Wikipedia, Policy Documents (per source), Q&A, F1000, Publons, Pubpeer, YouTube, Reddit, Pinterest, LinkedIn, Open Syllabus, Google+.**
- **AAS does not take into account the sentiments of mentions made about research objects, and thus does not help one understand the positive nor negative attention that a piece of research has received.**
- **Should not be used as a direct measure of research impact or quality.**

www.metrics-toolkit.org

REF 2021 & "Metrics"

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UKRI: All REF panels are briefed on DORA, and the REF2021 guidance for submitting institutions states that "journal impact factors or hierarchy of journals will not be used in the assessment of outputs."

Main Panel A supplementary criteria – citation data (Life Sci)

277. All sub-panels in Main Panel A will use citation data, where appropriate and available, as a potential indicator of academic significance to inform the assessment of output quality.

Main Panel B supplementary criteria – citation data (Physical, Eng, Math)

278. Sub-panels 7, 8, 9 and 11 acknowledge that citation data are widely used and consider that they are well understood in the disciplines covered in their UOAs. These sub-panels will receive citation data, where available, and may make use of the data as part of the indication of academic significance to inform their assessment of output quality.

279. Sub-panels 10 and 12 believe that citation data in their disciplines cannot be used to provide sufficient added value to inform the assessment of output quality. They therefore will not receive nor make use of citation data.

Main Panel C supplementary criteria – citation data (Social Sci)

280. Sub-panel 16 (Economics and Econometrics) will receive citation data, where available, and will make use of the data supplied by the REF team where it is considered appropriate as an additional piece of supplementary evidence to support the initial assessment of outputs, not as a determining factor. Sub-panel 16 will take account of the well-known limitations of citations, including equality, diversity and inclusion issues.

281. The remaining sub-panels within Main Panel C will neither receive nor make use of citation data.

Main Panel D supplementary criteria – citation data (Arts & Hum)

282. The sub-panels in Main Panel D will neither receive nor make use of citation data.

Wellcome Trust

- Be explicit about the criteria used to evaluate scientific productivity, and clearly highlight that the scientific content of a paper is more important than publication metrics or the identity of the journal in which it is published.
- Recognise the value of all research outputs (for example publications, datasets and software), as well as other types of contributions, such as training early-career researchers and influencing policy and practice.
- Make sure that the criteria used for hiring, promotion and other decisions on career advancement are clear and transparent, and specifically reference the DORA principles.
- Developing clear guidance for staff involved in recruitment and promotion decisions.
- Enabling and encouraging candidates to highlight a broader range of research outputs and other contributions, in addition to publications.
- Prohibiting the use of language in job advertisements which refers directly or indirectly to journal title as a proxy for quality (e.g. “a track record of publication in leading journals”).
- Discouraging the use of lists of ‘target journals’.

https://wellcome.ac.uk/how-we-work/open-research/guidance-research-organisations-how-implement-dora-principles

What we need

- **Engagement from Staff, Faculties & Schools to help define a transparent set of indicators for use in hiring and promotion decisions.**
- **Short questionnaire circulated after open meetings to gauge views on research indicators and assessment.**
- **Collate views of staff on the use of indicators in research assessment.**
- **Please encourage staff participation!**

Timeline

- January 2020 - open meetings & survey launch
- March 2020 - review & disseminate survey output
- April/May 2020 - develop draft policies
- May/June 2020 - consultation with Schools & Faculties on draft policies.
- Summer 2020 - revise policies
- Michaelmas 2020 - policies to RPC
- Jan 2021 - initial DORA framework in place across the University
- Ongoing - develop policies for training and monitoring DORA implementation

DOI CV

DOI based CV

Korona D. *el al*. (2019) Characterisation of protein isoforms encoded by the *Drosophila* Glycogen Synthase Kinase 3 gene *shaggy*. *bioRxiv* doi.org/10.1101/835801

Taxiarchi C. *et al* (2019) High resolution transcriptional profiling of *Anopheles gambiae* spermatogenesis reveals mechanism of sex chromosome regulation. *Scientific Reports* **9:**14841

Porcelli D, *et al* (2019) Chromatin accessibility plays a key role in selective targeting of Hox proteins. *Genome Biol* **20:**115

Fabre B, *et al* (2019) Comparison of *Drosophila melanogaster* embryo and adult proteome by SWATH-MS reveals differential regulation of protein synthesis, degradation machinery and metabolism modules. *J. Proteome Res*.**18:**2525-2534

Korona D. *el al*. (2019) Characterisation of protein isoforms encoded by the *Drosophila* Glycogen Synthase Kinase 3 gene *shaggy*. **doi.org/10.1101/835801**

Taxiarchi C. *et al* (2019) High resolution transcriptional profiling of *Anopheles gambiae* spermatogenesis reveals mechanism of sex chromosome regulation. **doi.org/10.1038/s41598-019-51181-1**

Porcelli D, *et al* (2019) Chromatin accessibility plays a key role in selective targeting of Hox proteins. **doi.org/10.1186/s13059-019-1721-4**

Fabre B, *et al* (2019) Comparison of *Drosophila melanogaster* embryo and adult proteome by SWATH-MS reveals differential regulation of protein synthesis, degradation machinery and metabolism modules. **doi.org/10.1021/acs.jproteome.9b00076**

Narrative CV's

Résumé for Researchers

Below is the suggested structure for the Résumé for Researchers tool.

Personal details

Provide your personal details, your education, key qualifications and relevant positions you have held.

Module 1 – How have you contributed to the generation of knowledge?

This module can be used to explain how you have contributed to the generation of new ideas and hypotheses and which key skills you have used to develop ideas and test hypotheses. It can be used to highlight how you have communicated on your ideas and research results, both written and verbally, the funding you have won and any awards that you have received. It can include a small selection of outputs, with a description of why they are of particular relevance and why they are considered in the context of knowledge generation. Outputs can include open data sets, software, publications, commercial, entrepreneurial or industrial products, clinical practice developments, educational products, policy publications, evidence synthesis pieces and conference publications that you have generated. Where outputs have a DOI please only include this.

Module 2 – How have you contributed to the development of individuals?

This module can be used to highlight expertise you provided which was critical to the success of a team or team members including project management, collaborative contributions, and team support. It can include your teaching activities, workshops or summer schools in which you were involved (for undergrads, grads and post-grads as well as junior colleagues), and the supervision of students and colleagues. It can be used to mention mentoring of members in your field and support you provided to the advancement of colleagues, be it junior or senior. It can be used to highlight the establishment of collaborations, from institutional (maybe interdisciplinary) to international. It can be used to describe where you exerted strategic leadership, how you shaped the direction of a team, organisation, company or institution.

Module 3 – How have you contributed to the wider research community?

This module can include various activities you have engaged in to progress the research community. It can be used to mention commitments including editing, reviewing, refereeing, committee work and your contributions to the evaluation of researchers and research projects. It can be used to mention the organisation of events that have benefited your research community. It can highlight contributions to increasing research integrity, and improving research culture (gender equality, diversity, mobility of researchers, reward and recognition of researchers' various activities). It can be used to mention appointments to positions of responsibility such as committee membership and corporate roles within your department, institution or organisation, and recognition by invitation within your sector.

Module 4 – How have you contributed to broader society?

This module can include examples of societal engagement and knowledge exchange. It can include engagement with industry and the private sector. It can be used to mention engagement with the public sector, clients and the broader public. It can be used to highlight positive stakeholder feedback, inclusion of patients in processes and clinical trials, and other impacts across research, policy, practice and business. It can be used to mention efforts to collaborate with particular societal or patient groups. It can be used to highlight efforts to advise policy-makers at local, national or international level and provide information through the press and on social media.

Personal statement

Provide a personal statement that reflects on your overarching goals and motivation for the activities in which you have been involved.

Additions

Mention career breaks, secondments, volunteering, part-time work and other relevant experience (including in time spent in different sectors) that might have affected your progression as a researcher.

https://royalsociety.org/topics-policy/projects/research-culture/tools-for-support/resume-for-researchers/

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Questions & Comments

http://bit.ly/CambridgeDORA

www.research-strategy.admin.cam.ac.uk/research-policy/DORA

Prof Steve Russell - Chair DORA Implementation Group