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## **UOC signs the San Francisco Declaration (DORA) Action Plan**

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**Document prepared by  
the work group DORA and  
approved by the Research  
and Innovation Commission  
on December 18, 2018**

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# Foreword



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## Swimming against the tide, but for how much longer?

The European University Association (EUA) created its Expert Group on Open Science back in 2015, and the UOC, at the behest of the Conference of Rectors of Spanish Universities (CRUE), has been a member from the start. I can remember the first meeting as if it were yesterday. As we introduced ourselves, we each put forward our challenges, needs and best practices for open science, and for many members – from universities such as Liège, Zurich and Minho – there was clear agreement on one particular need: to draw attention to how research evaluation was (and is!) a key factor for open science’s chances of long-term success. The very first document produced by the group – a road map towards open access – stated how one of the requirements was getting researchers of all levels of experience involved in developing new systems to evaluate their academic careers. As is our wont, here at the UOC we have worked hard on this issue and you now have before you our first step on the road to an evaluation system that is not based on journals’ impact factors.

Obviously, if the criteria used to evaluate researchers do not change, then we will find it hard to develop open science. As we all know, swimming against the tide can be tiring, and you may risk not reaching the shore! But right now, it looks like the tide is turning.

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**Marta Aymerich**

UOC Vice President for Strategic Planning and Research  
December 2018

## 1.1. General context

Globally, many changes are underway in science and innovation. In this context, there is a growing movement to **improve research assessment and valorization**; a movement that is closely related with the call for more open, responsible science: open science and responsible research and innovation (RRI). The European University Association (EUA), for instance, recently published its *Roadmap on Research Assessment in the Transition to Open Science*, which links the need for new research assessment methods with the transition to open science and greater assessment quality.

The current system for assessing research excellence is more focused on the journal in which the research is published than on the content of the research itself. It is implicitly assumed that the research that is published in prestigious journals is excellent and therefore must be recognized accordingly. This system contributes to some specific shortfalls in the global science system.

Both the **DORA Declaration** (2013) and the **Leiden Manifesto** (Hicks *et al.*, 2015; Wilsdon *et al.*, 2015) question this practice and evidence the bias and risks of centring solely on this idea of excellence. They also propose changes regarding how to improve research assessment systems.

In addition, in recent months there have been two rulings in Catalonia and Spain supporting researchers who seek recognition of their research outside the usual model (in which value is determined by the impact of the journals in which they publish):

- STSJ (High Court of Justice Ruling) Catalonia 263, of 24 April 2018
- STS (Supreme Court Ruling) 986, of 12 June 2018

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## 1.2. Institutional context

Through its **Strategic Plan**, the UOC is committed to the valorization of knowledge (sub-plan 0404) and to research with an impact (sub-plan 0401) as well as to promoting knowledge open to everyone and for everyone (sub-plan 0303) and to open science and RRI. In this context, in May 2017 the signature of the DORA Declaration was discussed for the first time in the Research and Innovation Committee (CRI). Almost a year later, given that the movement has been gathering momentum and, as it advances, the institutional strategy is becoming more relevant for the institution (coinciding with the definition of future indicators to assess UOC scientific output and the formulation of strategic research plans for courses and research centres and the Open Knowledge Action Plan), the subject was taken up again and the CRI decided to create a **working group** to assess the implications of the UOC's signing the DORA Declaration.

This document is the result of the working group's process of study and analysis. It should be the basis for discussing and approving the signature of the DORA Declaration by the CRI, and for a future work plan to implement DORA principles at the UOC.

It should be taken into account that the UOC is not alone in the research assessment area: it acts in the framework of a system that has the weight and influence of other stakeholders. Hence, the UOC recognizes research premiums and external accreditations as a tool that enables the institution, for now, to accredit programmes, obtain external recognition as a research university and promote the mobility of teaching staff in the context of a state university.

Therefore, **this document is designed to focus on aspects and points on which the UOC can act**. At the same time, we propose reinforcing the work of the lobby in national and international organizations to contribute to a paradigm shift beyond the UOC.



In particular, the DORA Declaration criticizes **the limitations of the impact factor (IF)** and, more generally, science assessment that is based on exclusive, bibliometric and mechanized ideas of excellence. Criticism of the impact factor is based on the following arguments:

- The distribution of citations in journals is highly biased.
- The properties of the IF are specific to each field.
- The IF can be manipulated by the journal's editorial policy.
- The information that is used to calculate the IF is not transparent or accessible to the public.

Hence, the use of a narrow, decontextualized idea of excellence to assess scientific output is criticized. When specific, standard criteria are used, the quality and social relevance of the research cannot be assessed or valued (another meaning of *assess*). All research that is focused on addressing sustainable development goals (STG) and the 2030 Agenda is particularly vulnerable in such assessments. Therefore, the DORA Declaration recommends that the IF should not substitute an assessment of the quality of individual research papers and researchers' scientific contributions or assessments for researcher recruitment and promotion. Nor should it be used

as the basis for making research funding decisions.

The DORA Declaration proposes going beyond assessment centred on papers as the only scientific outputs: "Our recommendations therefore focus primarily on practices relating to research articles published in peer-reviewed journals but can and should be extended by recognizing additional products, such as datasets, as important research outputs".

The DORA Declaration inverts the assessment system and puts **quality** (not metrics) at the centre. In addition, it gives a central role to expert assessment and epistemic communities in the assessment of scientific excellence and quality.

Some have argued that these problems could be remedied by alternative indicators, also known as *altmetrics*. Although such indicators could complement assessments, they do not get to the heart of the issue: the **need to reconsider the production, communication and assessment of academic knowledge** (Ràfols, 2018). The DORA Declaration and other initiatives get to the root of the issue and establish the need to reconsider the production of scientific knowledge, democratize it and consider the diversity of scientific output (in terms of geography, language and discipline,



etc). Therefore, it is a movement in favour of a **more varied, inclusive and contextualized** assessment. Through greater contextualization and participation, indicators could consider more assumptions and values, so that decision-making is more sensitive to the contexts of knowledge use. Pluralization of perspectives enriches assessment.

The movement is also in favour of an assessment that serves for something more than accountability or deciding on resource allocation. From this perspective, assessment should also serve to analyse and **learn** and to transform and engage in the main social problems of our times, through advocacy.

**In line with this changing context and with the UOC's firm commitment to the transition to open science, we propose signing the DORA Declaration and making a commitment to the transformation of research assessment to a system that is more qualitative, transparent and fair, diverse and inclusive, and that incorporates learning and constant transformation through assessment as its aim. This change refers to all levels of research assessment, from research results and projects to researchers, groups, research centres and the entire University.**



On an institutional scale, the signature of the DORA Declaration has two main implications, associated with the following terms:

**1. Assessment and dissemination of research.** The DORA Declaration proposes considering the value and impact of all research outputs, including research datasets and software, as well as scientific publications, and considers a wide range of measures, including qualitative indicators of the impact of research and its influence on public policies or in practical applications.

**2. Criteria for researcher recruitment and promotion.** The DORA Declaration requires institutions to be explicit about the criteria used to make recruitment and promotion decisions, and to stress, especially for young researchers, that the content of a scientific paper is much more important than the metrics of scientific publications and the name of the journal in which it is published.

## 3.1. Research assessment

### Internal calls for applications

In the UOC Research Programme (PPR), various assessment criteria are used for internal calls for applications, including those made by the Office of the Vice President for Strategic Planning and Research and by the Doctoral School. In some, such as the call for applications for postdoctoral assignments or for the publication of papers in open access, the number of published papers and their IF are used as a key aspect in assessing applications. The weight of this aspect in the final score is quite high. In others, such as the call for applications for research stays or the calls organized to encourage participation in Horizon 2020 and other prestigious international programmes, more qualitative aspects are already included, such as the prestige of the host centre, the proposed work plan, the European and international proposals that the applicant has submitted and whether the proposal fits in with the University's strategic goals.

In a **process of reviewing all PPR calls**, the DORA Declaration could help to establish more qualitative, less quantitative assessment systems and to standardize the assessment of applicants' research quality.





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## Postdoctoral call

To show that the IF is still given importance, below are the assessment criteria used in the last call for postdoctoral assignments at the UOC.

- 10 points (out of 100) for the time the applicant has dedicated to research stays.
- 45 points (out of 100) for the applicant's scientific output as detailed in their curriculum vitae, according to the type of publication.
- 20 points (out of 100) for the scientific output and the funding awarded to the research group to which the applicant belongs.

**Except for the 25% of the assessment corresponding to the scientific and technical quality of the submitted proposal, the rest of the score is determined from quantitative criteria more than qualitative criteria.**

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## Research assessment indicators

The DORA Declaration states that research outputs are “many and varied”:

The outputs from scientific research are many and varied, including: research articles reporting new knowledge, data, reagents, and software; intellectual property; and highly trained young scientists. (DORA Declaration)

Therefore, assessments that are focused exclusively on the impact factor for scientific output will be incorrect and incomplete, as they do not take into consideration everything that research generates apart from the outputs themselves: the effect or impact these outputs have on the stakeholders of each research project, the public (the group that receives the most immediate benefits of the research) and society in general.

In a participative study around a year ago with deputy deans of research, directors of the Doctoral Schools' research centres and other UOC experts, **19 OUTCOME** indicators were defined that should be validated or reviewed, according to criteria in the DORA Declaration. These indicators are listed in Appendix 1.

They illustrate that there is ample room for **indicators of the social impact of research at the UOC**. Furthermore, much of the impact of research cannot be explained or assessed with quantitative indicators. Instead, it requires a **report**. Both elements are included in the action plan in this section.



In fact, we are talking about moving towards a **mixed approach** that **complements more standard quantitative statistical analysis** with qualitative information (and also quantitative indicators) that is better adapted to the **context** and the stakeholders who participate in the research, as proposed by **Ismael Ràfols<sup>1</sup>** in the Keynote speech he gave at the 2017 S&T Indicators Conference in Paris:

For this transformation towards contextual indicators to occur, scholarship in STI indicators needs to be more engaged with other research fields. This does not mean rejecting the focus on statistical analysis, but rather to complement it with qualitative methods that can contribute to mixed approaches and new quantitative methods that facilitate the scrutiny of data analyses by stakeholders.

This view is complemented by that set out in B-Debate “Open science: from values to practice. Building a roadmap for transformative change”, held in Barcelona on 4 and 5 October. The following are notable conclusions from this event:

- **Assessment based on bibliometric indicators is a barrier to open science.**
- **Altmetrics are not the solution either; what is important is the quality of the communication, not the quantity.** The **method of dissemination** is also relevant. For example, social networks can be useful to talk about nutrition, but perhaps not about agronomy.
- **There is no single solution: science is highly diverse and interacts with society in many ways.** Consequently, there can be no universal indicators. However, indicator frameworks can be created and then adapted to each research study and the specific impacts of each research unit: *prêt-à-porter indicators*.
- **In assessment processes, we must consider the assessment, not the indicators.** Indicators are the result rather than the objective of a research assessment process. Consequently, indicators should not guide and determine the assessment process.
- **A research assessment process for open science should focus more on knowledge transfer and the quality of interactions than outputs.**

A good example of this perspective is the ASIRPA approach, developed in France (INRA). This approach analyses an organization’s social impacts based on a standardized case study methodology and qualitative (*story-telling*) and quantitative analysis of the role of research and research processes (combining the production of a series of cases, the production of common descriptors and the revelation of common trends).

<sup>1</sup> Science policy analyst at Ingenio (CSIC-UPV, Universitat Politècnica de València) and visiting professor at CWTS. Ismael works on research evaluation and science mapping, focusing on more plural S&T indicators for informing priority setting and research strategies.



## 3.2. Criteria for researcher recruitment and promotion

The principles of the DORA Declaration are in line with the European Commission's Code of Conduct for Recruitment and its European Charter for Researchers (documents known by the acronym C&C). These texts served as the basis for formulating the Human Resources Strategy for Researchers (HRS4R). The UOC's Gap Analysis and Action Plan were submitted to the European Commission (EC) in March 2018. In August of the same year, the EC approved the UOC Action Plan and gave the University the HR Excellence in Research Award.

The DORA principles should be considered for the undertaking of the following actions, all relating to the assessment of competencies and skills, staff recruitment, talent retention and assessment systems based on merits, and planned for 2020:

- No. 1. Review of the competencies and skills associated with a career in science
- No. 5. Recruitment policy
- No. 8. Attraction and development of talent

Some initiatives that are already underway at the UOC, such as the HRS4R or Open, Transparent and Merit-Based Recruitment of Researchers (OTM-R), introduce clear guidelines for research assessment that are qualitative as well as quantitative. Increasing importance is given to research content and its social impact, rather than just its impact and appearance in various journals and metrics.

To advance in this direction, we can look to examples such as that of the University of California, which asks candidates to select three of their most important papers and describe the social impact; the University of Colorado School of Medicine, which asks candidates to explain the importance of their work; and University College London, which recognizes in its teaching staff policy that it has signed the DORA Declaration and as a result rejects the use of metrics based on academic journals to assess research quality. The guide drawn up by University Medical Center Utrecht can also serve as inspiration for the definition of research assessment criteria that consider the impact of research and do not use the impact factor exclusively. Finally, participative recruitment practices, such as those that have begun to be



implemented at Goldsmith, could be an option for the UOC in the future. In these practices, all department members are involved in the decision about whether a candidate is suitable for the institution.

### 3.3. Other institutional implications

In addition to the two main points, the signature of the DORA Declaration has some other implications in the institutional environment.

#### Research communication

To ensure consistency in the implementation of the DORA Declaration's principles, research communication (that is, annual research reports, the UOC website, UOC R&I, the websites of faculties and research centres, researchers' files, the newsletter and the information bulletin *UOC R&I Insights*, among others) must establish narratives in which impact factors are not central to scientific quality. Measures and discussions should be established on how to communicate the impact of research undertaken within faculties, in centres and at the UOC in general, as well as researchers' own work. In this respect, the collection of good DORA practices and their dissemination among the UOC community could help in the implementation of the DORA Declaration.



## Action plan in the institutional area

| Area  | 2018   | 2019  | 2020   |
|---|--|---|--|
| Recruitment and promotion: UOC staff, predoctoral and postdoctoral          | HRS4R (Human Resources Strategy for Researchers) Award |   | Includes the DORA principles for reviewing researchers' competencies and skills, the recruitment policy and talent development   |
| Internal calls: projects, mobility and grants for publication, among others |  | Review internal calls and establish DORA criteria   |  |
| Assessment of research by the UOC   |  | Gather DORA good practices and communicate them<br><br>Draw up a map of the impact of UOC research<br><br>Undertake a pilot study at IN3 to assess social impact based on the ASIRPA model  | Propose indicators to measure the social impact of UOC research, including data and software, more broadly<br><br>Expand the catalogue of research outputs to assess the impact and transfer of research |
| Research communication  |  | Construct narratives of research at the UOC and use it in communications associated with research, to reflect the principles of the DORA Declaration<br><br>Draw up a communication plan that supports implementation of the DORA Declaration<br><br>Define and construct a system for measuring the dissemination (report) of UOC research (both face-to-face and through social networks) |  |

# Implications for researchers

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In relation to researchers, signing the DORA Declaration has the following implications:

- **Participation in research assessment processes:** DORA proposes that, when people are involved in committees that make funding, recruitment or promotion decisions, the decisions should always be based on scientific content more than on metrics.
- **Citation of primary sources:** DORA recommends that, when appropriate, primary sources should always be cited instead of reviews, to give credit to the research groups that first reported the findings.
- **Evidence of the impact of published papers beyond metrics:** DORA suggests using a wide range of metrics, indicators and supporting statements to demonstrate the impact of published papers, and other research results, such as the impact in social and traditional media, the organization of seminars or conferences, participation as experts in debates to create new policies for action or governance, etc.

As an example, we also consider the Royal Society proposal, Resume4Researcher, to be interesting. This is a tool for assessing individual research that enables recognition of a wide range of activities and moves away from high-performance indicators. It allows researchers to create a curriculum vitae in which the results and achievements can be described in the broadest sense, going beyond traditional indicators.

Resume4Researcher can be used to explain and organize a research curriculum vitae in four modules:

1. How are you engaged in the flow of ideas and the generation of knowledge?
2. How are you engaged in the progression of researchers?
3. How are you contributing to the research community?
4. How are you contributing to the broader society?

**Promotion and teaching of good practices:** the DORA encourages researchers to question and challenge research assessment practices based inappropriately on the impact factor and to promote and teach good practices that focus on valuing the influence of specific research results.

# Implications for researchers

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It is vital to provide **spaces for discussion** to reflect on assessment practices and practices that help to create **knowledge and awareness** between UOC researchers about new research assessment models and the DORA Declaration. In addition, **training sessions** should be offered on how to demonstrate the impacts of research beyond metrics.

## Action plan for faculties, research centres and researchers

| Area                             | 2019   | 2020   |
|----------------------------------|--|--|
| Awareness<br>Research assessment | Organize a public presentation of signing the DORA Declaration to generate knowledge and awareness among UOC researchers | Organize training sessions for UOC researchers on how to apply the DORA Declaration to scientific practice                                 |
|                                  |  | Draw up guidelines or models of curriculum vitae that include the DORA Declaration (researchers' websites, research groups' websites, etc) |
| Research assessment              |  | Establish dynamics for the analysis and assessment of actions in 2019  |

# Implications as publishers

05



The UOC publishes six scientific journals and three general-interest journals from the various faculties (December 2018). For this reason, we propose that DORA recommendations should be established for publishers as well.

As a publisher of academic journals, the implications of signing the DORA Declaration for the UOC affect the following aspects:

- Reduction in the emphasis on the impact factor as a tool to promote journals. It is an indicator that could be presented in the context of other indicators when a more general view is given of the journals.
- Establishment of metrics at the scale of the paper, to move towards an assessment of the content of a study, instead of metrics at the scale of the journal.
- Promotion of **responsible authorship practices** and provision of information on the specific contribution of each author.
- Whether the journal is open access or subscription, elimination of any limitations to the reuse of reference lists in research papers and increase their availability with a **Creative Commons** Public Domain Dedication license.
- Elimination or reduction in limitations to the number of references in research papers and, when appropriate, request the citation of primary literature instead of reviews, to give credit to the groups that first reported the finding.





## Action plan for the UOC as a publisher

| Area                | 2018  | 2019   | 2020   |
|---------------------|---|--|--|
| Contextualized data | Publish contextualized data in journals without stressing the impact factor. Example: <a href="#">Impact and visibility of UOC Open Access Journals</a> | Establish metrics at the scale of the paper  |  |
| Open citations      |   | Include a note in journals' rules for authors that there is no limitation to the number of references to papers                        | Ask Ubiquity to make the field of the Open Journal Systems (OJS) visible, so that references in open access are visible and reusable |
| Ethics              |   | Add a paragraph regarding the promotion of responsible authorship practices in journals' rules for authors                             | All members of the Committee on Publication Ethics (COPE) should sign for each journal   |
| Ethics              |   | Recommend the citation of primary sources rather than reviews in publication rules, considering the characteristics of each discipline |  |

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