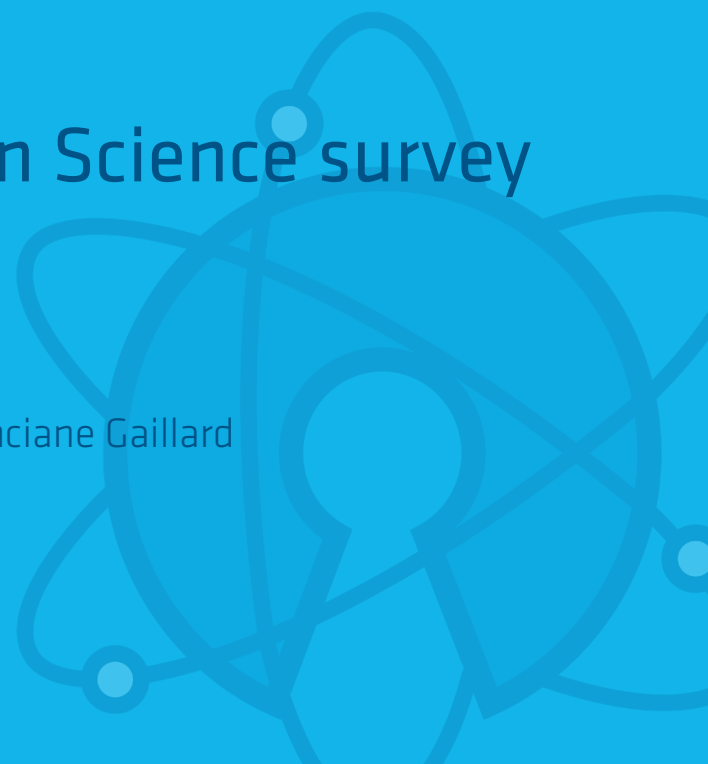


Open Science in university approaches to academic assessment

Follow-up to the 2020-21 EUA Open Science survey

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Introduction

This report looks at the place of Open Science in European university approaches to academic assessment. Do these institutions consider the openness of the research process and its outputs in their research evaluations? If so, how and to what extent are open research practices acknowledged? If not, why not? And do European universities plan to look at open research practices as part of their future academic assessments?

These questions are important for the future of research and innovation in Europe. They go to the heart of what academia should value, look at whether the right tools and conditions are in place to make this possible and examine whether the right incentives and rewards are available.¹ In recent years, incentives have dominated discussions in the university community as this approach was seen as the way to reshape academic culture (cf. [OSPP Final report, 2020](#)). Career incentives and rewards have become popular drivers of the transition to Open Science. Research funding organisations have become deeply involved in this [discussion](#), while European and national policy makers launched potentially far-reaching initiatives.²

This follow-up to the [2020-2021 EUA Open Science Survey](#) discusses the state of play and potential ways forward for responsible academic assessment from a European university perspective. EUA Open Science surveys began in 2014 and have gathered comprehensive and up-to-date insights into Open Access to research publications and data, research assessment and other aspects of the transition to Open Science on a regular basis (cf. [EUA Open Science Survey 2017-2018](#), [2019](#)). The 2020-21 results were based on 272 valid responses from universities in 36 European countries.

In order to provide a more in-depth discussion, this report also draws on EUA's work on research and academic assessment. Subsequent to the priority actions laid out in the [EUA Roadmap on Research Assessment in the Transition to Open Science](#), the EUA Secretariat, EUA Expert Group on Science 2.0/Open Science³ and the EUA Expert Subgroup on Research Assessment, have gathered and shared information to start and sustain dialogue between universities and with other actors, and developed policy and good practice recommendations.

1 Making Open Science meaningful, possible and rewarding was first defined as the way to transform academic assessment in [Making FAIRer assessments possible. Final report of EOSC Co-Creation projects: "European overview of career merit systems" and "Vision for research data in research careers"](#) (2021).

2 At European level, research assessment is a European Research Area renewal priority (see Communication on ["A new ERA for Research and Innovation"](#) (2020) and [Council Conclusions on the new European Research Area](#) (2020). Coordinated efforts between national stakeholders have also emerged in several European countries, such as Norway (cf. [NOR-CAM. A toolbox for recognition and rewards in academic careers](#), 2021), Finland (cf. [Good practice in researcher evaluation. Recommendation for the responsible evaluation of a researcher in Finland](#), 2020) and the Netherlands (cf. [Room for everyone's talent: towards a new balance in the recognition and rewards of academics](#), 2019).

3 A list of members of the [EUA Expert Group on Science 2.0/Open Science](#), chaired by Professor Jean-Pierre Finance (University of Lorraine, France), is available online. Any member of this group can volunteer for the EUA Expert Subgroup on Research Assessment, chaired by Dr Pastora Martínez Samper (Open University of Catalonia, Spain).

Our research shows that Open Science is currently given limited consideration in university approaches to academic assessment. However, this report also shows that the importance of Open Science as a strategic priority is increasing, suggesting that its limited role in academic assessment is an issue of practical implementation. Finally, the report points to growing university awareness of the issue and willingness to make changes.

This report understands Open Science as the “...various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community” ([UNESCO Recommendation on Open Science](#), 2021, p.7).

In short, Open Science goes beyond Open Access to the outputs of research and more broadly aims to make all stages of the research process open and transparent. This transition has the potential to enhance the quality and impact of research, and to improve European solidarity by making the research process more inclusive and its outputs more widely available.⁴

⁴ Note that deliberate action is needed to achieve this “potential” to improve European solidarity, as the transition to Open Science will not automatically lead to a more inclusive academic system. This is explored, in terms of both academic research and policy-oriented organisations, in [Dynamics of Cumulative Advantage and Threats to Equity in Open Science. A Scoping Review](#) (2021) and [Equity in Open Access. ALLEA statement on the occasion of the 2021 International Open Access Week](#) (2021).

Academic assessment refers to the qualitative and quantitative practices used to evaluate the quality and impact of academic activities. Assessment outcomes are typically used to make decisions related to career progression (our focus in this report) and funding allocation. This report deliberately uses the term academic (rather than research) assessment. This is to enhance the parity of the statuses given to different academic activities, including research (which is the focus of this report), teaching, innovation and service to society (cf. [Innovation ecosystems for a sustainable Europe: How to enhance the contribution of universities](#), 2021).

This publication is part of a series of three follow-up reports to the main [EUA 2020-2021 Open Science Survey report](#). The other reports take a closer look at the topics of Open Access to research publications and research data.

Limited consideration

EUA surveys show that Open Science is given limited consideration in university approaches to academic assessment. Figure 1 shows that 34% of the 2020-21 survey respondents do not include Open Science practices in their career progression or funding allocation decision processes. This is further confirmed by answers to an open question asking respondents to describe their institution's current approach to academic assessment. Slightly over half of the 61 responses describe current approaches as "traditionally" or "classically" output and funding based.

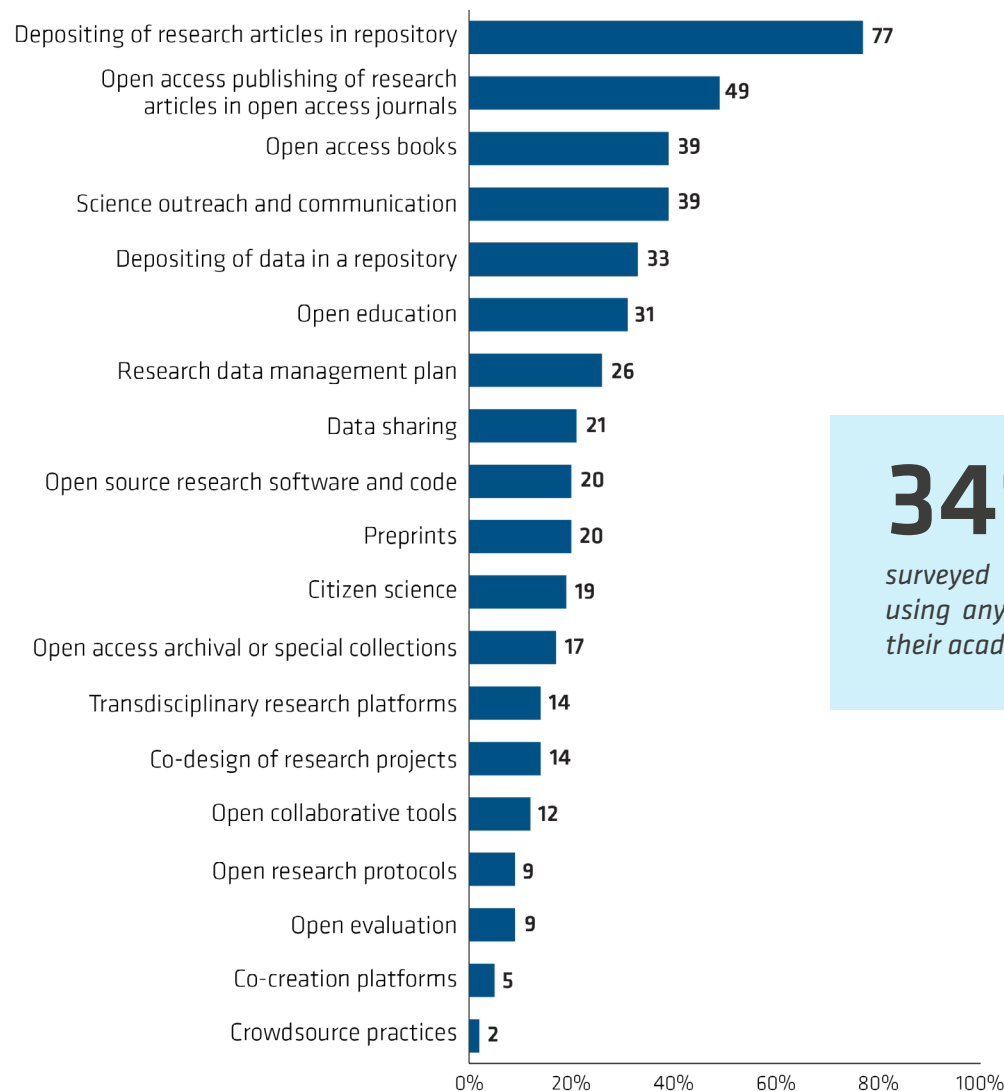
Respondents to the 2020-21 survey who use at least one element of Open Science in their academic assessments mostly confine their attention to Open Access to research publications. Some 77% look at article deposition in a repository, while 49% consider article publication in Open Science journals. Only 33-39% of universities examine Open Access books, science communication activities, depositing data in a repository and open education. In stark contrast, less than 25% of the respondents consider any other kind of research outputs or stages in the research process.

This focus on Open Access to publications is also apparent in answers to another open question in the same survey. When asked to explain if and how their institution encourages researchers to develop Open Science activities, two-thirds of the 81 responses cite incentives for Open Access to publications, either by publication in Open Access journals or

Figure 1 – Open Science elements included in academic assessment (2020-21 survey data).

Number of respondents: 172/272.

Note: this figure only includes institutions that indicated using at least one element of Open Science as part of their academic assessments.



34%

surveyed institutions reported not using any Open Science elements in their academic assessments.

deposition in an institutional repository. Other types of research output (e.g. research data, open education) or other ways to conduct research (e.g. citizen science) are barely, if at all, mentioned.

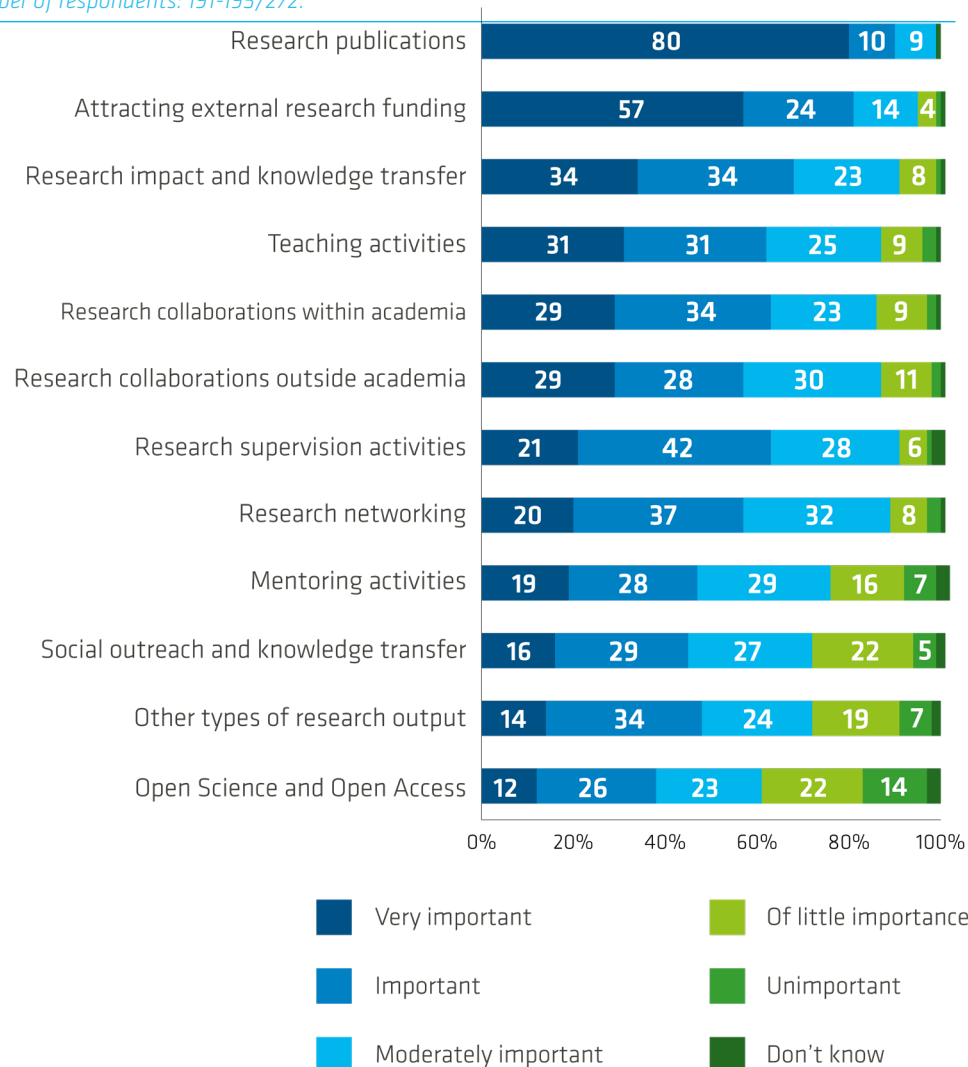
It is important to note that respondents to the 2020-21 survey predominantly understand Open Access to publication “incentives” in financial terms. Various types of financial support for Article Processing Charges (APCs) and other Open Access publishing fees are mentioned by just under a third of the 81 responses to this question. Awareness raising and skills training are only occasionally cited as incentives. While the financial costs involved are certainly important when discussing the transition to Open Science (cf. [EUA Big Deals report](#), 2019), it is concerning that universities strongly and specifically connect Open Access publishing with additional costs. This needs to be addressed to ensure that the transition to Open Science actually improves European and global solidarity, and to avoid the process being perceived as a costly undertaking only available to countries and institutions with the necessary resources.

The limited consideration given to Open Science in academic assessment was visible in the [2019 survey results](#). As Figure 2 shows, only 38% of the 2019 survey respondents considered Open Science and Access as (very) important aspects of their career decision making. Research publications and securing external funding were much more highly valued. Some 90% of universities stated that research publications were either very important (80%) or important (10%) considerations; while 81% indicated that attracting external research funding was either very important (57%) or important (24%).

The lack of attention paid to Open Science and Open Access in the 2019 survey shows that they are not commonly included in academic assessment approaches. Open Science and Open Access activities are only considered important or very important by 38% of institutions, and 36% considered them as having low importance.

Figure 2 – Importance of academic activities for research careers (2019 survey data).

Number of respondents: 191-195/272.



Strategic priority

Although universities give limited consideration to Open Science in their academic assessment processes, this does not mean that they see Open Science as unimportant. In fact, the results of EUA surveys point to the growing importance of open research practices as a strategic priority. Figure 3 shows that almost six out of ten 2020-21 survey respondents place high or very high importance on Open Science, while a further 31% say that it is at least moderately important.

Moreover, Figure 4 shows that 54% of the 2020-21 survey respondents have an Open Science policy while 37% are drafting one. And only 9% of universities lack an Open Science policy and are not planning to develop one. These results are in line with previous editions. Under the 2017-18 survey, 62% of respondents reported having an Open Access policy for research publications, while a smaller but growing group of respondents (13%) had an Open Access policy for research data.

Figure 3 – Importance of Open Science in the institution's strategic priorities (2020-21 survey data).
Number of respondents: 272/272.

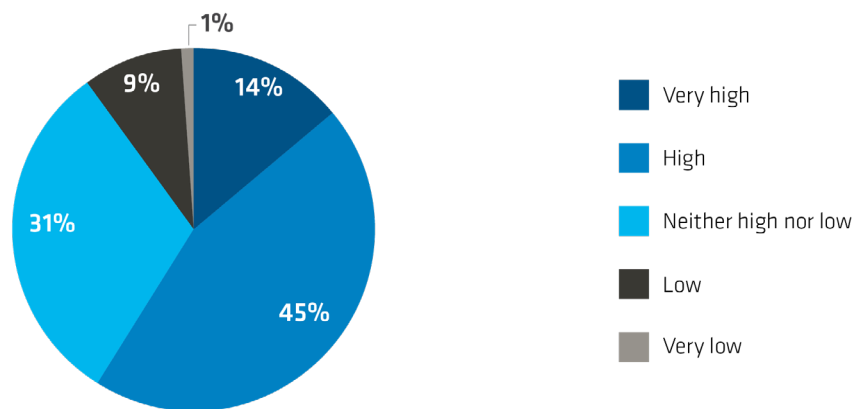
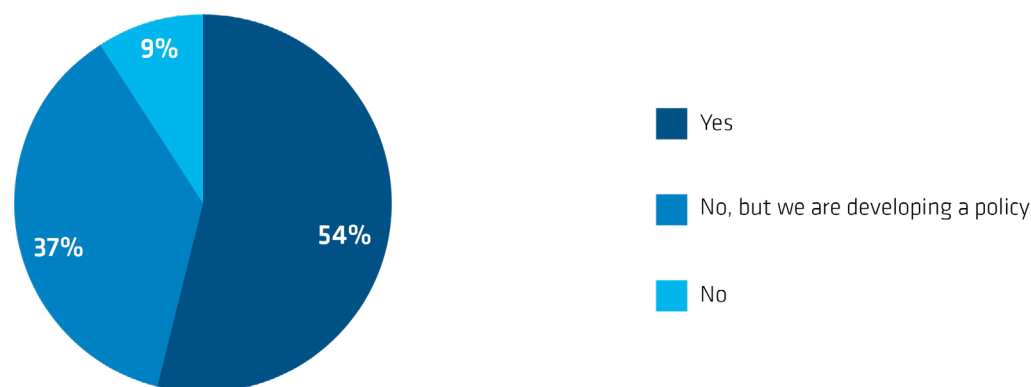


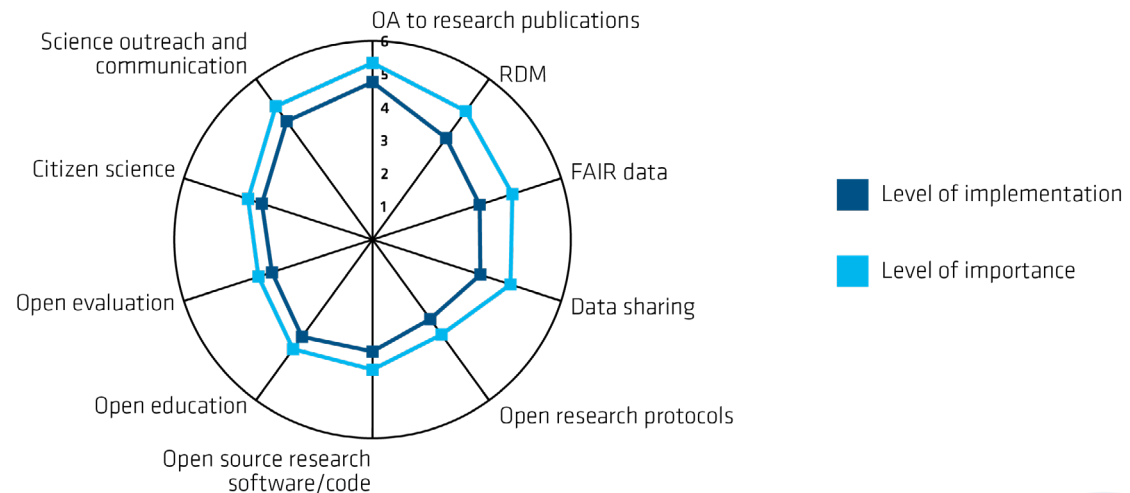
Figure 4 – Existence of an institutional Open Science policy (2020-21 survey data).
Number of respondents: 271/272.



Despite the importance of Open Science and the existence of dedicated policies at most universities, the survey results show more practical implementation work is needed. Figure 5 shows that respondents to the 2020-21 survey generally gave strategic importance higher scores than implementation in all areas. Open Access to research publications, science outreach and communication achieved the highest levels of importance and implementation. Research data elements (i.e. research data management, FAIR data, data sharing) are regarded as moderately to highly important, but here implementation clearly lags behind. Areas like citizen science, open evaluation, open education, open research protocols and open software/code are seen as less important, and this is reflected in their implementation.

Figure 5 – Level of importance and implementation of Open Science areas (2020-21 survey data).

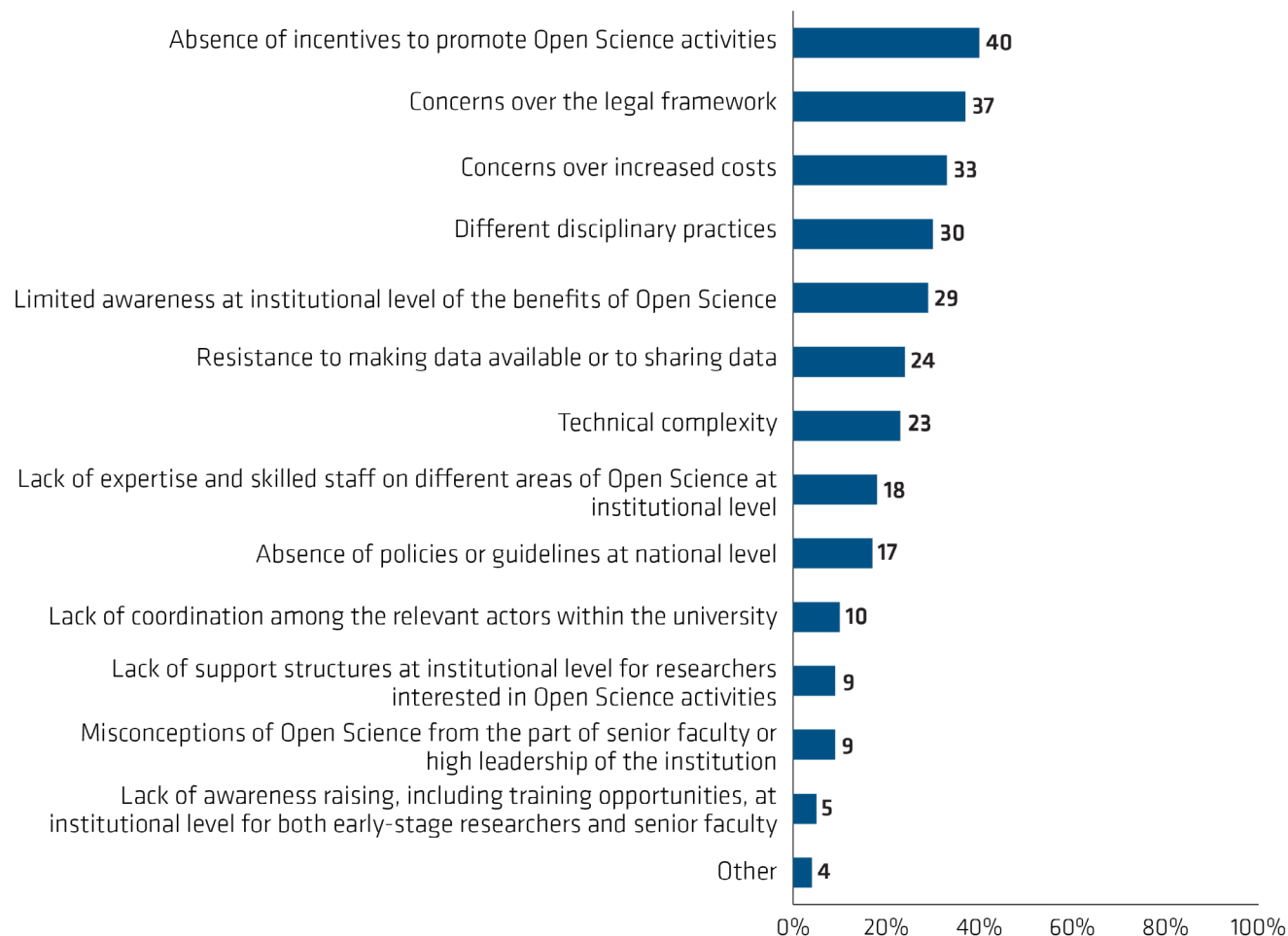
Number of respondents: 265-270/272.



One of the priorities for the practical implementation of Open Science is to make incentives and rewards commonly available and, to moreover ensure that such encouragement is provided throughout the research process, rather than the current situation in which they are limited to Open Access to research publications. Indeed, 40% of the 2020-21 survey respondents noted that one of the main hurdles to the institutional transition to Open Science is the absence of incentives (cf. Figure 6), above concerns about the legal framework (37%) and increased costs (33%).

Figure 6 – Hurdles to the institutional transition to Open Science (2020-21 survey data).

Number of respondents: 267/272. Multiple-choice question.



But the process of reviewing and changing academic assessment practices is fraught with challenges. When asked about the main barriers and difficulties, 46% of the 2019 survey respondents cited “Complexity of research assessment reform (e.g. different national and disciplinary practices)” as the main issue (cf. Figure 7).

Furthermore, between half and about a third of respondents indicated that a “Lack of institutional capacity (e.g. skilled staff, support structures)” (38%), “Resistance to research assessment reform from researchers” (33%), “Concerns over increased costs (e.g. skilled staff, support structures)” (33%) and “Limited awareness of research assessment reform and its potential benefits” (31%) are the main barriers to reviewing university approaches to research assessment.

Figure 7 – Main barriers and difficulties for reviewing approaches to research assessment (2019 survey data).
Number of respondents: 233/254. Multiple-choice question.



Growing awareness and willingness to make changes

Universities show increasing awareness of the limited consideration given to Open Science in their approaches to academic assessment, and a clear and demonstrable willingness to make changes.

Just over half of the 2020-21 survey respondents (56%) reported their institution was planning to expand the range of Open Science elements in their assessment approaches (cf. Figure 8)⁵. And while we have seen that respondents often describe institutional assessment approaches as “traditionally” or “classically” focused on output and funding (cf. supra), responses to open questions in the 2020-21 survey also regularly describe plans to give more consideration to Open Science activities.

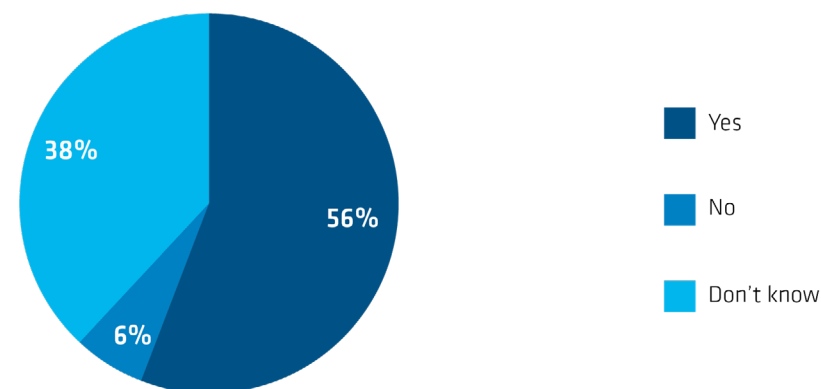
A growing number of universities are undertaking initiatives to change their approach to academic assessment. Across Europe, institutions and national consortia are either making substantial changes to their evaluation practices or reinforcing existing success stories. Together with the San Francisco Declaration on Research Assessment (DORA) and Scholarly Publishing and Academic Resources Coalition (SPARC) Europe, EUA has explored this shift towards implementation by bringing together and analysing ten case studies in the [Reimagining Academic Career Assessment: Stories of innovation and change](#). The accompanying [online repository](#) continues to add more cases as they emerge in Europe and around the world.

The answers to open questions in the 2020-21 survey complement the lessons learned about responsible academic assessment from these case studies. Responses offer an insight into how European universities navigate and take part in this shift towards implementing change in their assessment approaches. Responding universities provided insights into the practicalities involved in this process, as well as their perceptions of the main opportunities and challenges.

⁵ This response pattern may partly be explained by the high proportion of respondents working in research support or library roles, who may not be privy to strategic, institution-wide decisions.

Figure 8 – Likelihood that the range of Open Science elements considered in academic assessments will increase (2020-21 survey data).

Number of respondents: 271/272.



Universities look to guidelines and recommendations for inspiration on how to make their assessments more responsible. These documents are often, but not always, written by the academic community. In line with the previous survey results, answers to open questions in the 2020-21 survey mention a broad range of these resources. The [DORA declaration](#) is the most well-known document mentioned, followed by the [Leiden Manifesto for Research Metrics](#) and relative newcomers such as the [Hong Kong Principles for Assessing Researchers](#) and the [SCOPE Framework for Research Evaluation](#). Respondents also cite the [Human Resources Strategy for Researchers](#) (HRS4R), which is a strategy and code of conduct designed to help research institutions and funding organisations implement the European Commission's European Charter for Researchers.

The organisations behind these guidelines and recommendations are following universities' shift towards implementation. DORA has moved beyond its initial declaration and established a repository of good practices together with EUA and SPARC Europe (cf. supra) and developed [Tools to Advance Research Assessment](#) (TARA). EUA has published an [update to the Open Access checklist](#), including an action related to changing assessment approaches, and the European Commission has launched an initiative to facilitate the implementation of new evaluation practices as part of its [new European Research Area](#). While these and other tools are too recent to have been mentioned in 2020-21 survey answers, the results show a clear need for them.

Universities house a variety of bodies that guide changes in their approaches to academic assessment. Answers to the open questions in the 2020-21 survey mention various "advisory boards", "working groups" and a "multi-disciplinary committee" that bring relevant actors from across the institution together. These are vital to the interplay between top-down and bottom-up dynamics identified as an important way to change institutional assessment approaches (cf. [Reimagining Academic Career Assessment: Stories of innovation and change](#), 2021; [Towards wide-scale adoption of open science practices: The role of open science communities](#), 2021), whereby "bottom-up" means initiatives emerging from and driven by the university's academic, library, or administrative staff, while "top-down" is defined as leadership actions. As the case studies showed, bodies like those mentioned by the survey respondents are critical to developing and implementing initiatives that can transform institutional assessment approaches.

The 2020-21 survey answers also show the importance of other actors outside universities and of the evolving academic landscape in the discussion on academic assessment and the transition to Open Science. As our survey reports have shown on many occasions, references to financial and policy frameworks indicate universities' keen awareness of the importance of research funding organisations and regional, national and EU policymakers.

The 2020-21 survey respondents are ambiguous about the role of other actors. The imposition of rules and regulations that constrain institutional assessment approaches and their potential for change is seen as a hindrance. The [2019 survey](#), which showed that universities are keenly aware of external constraints, reflected these results. Case studies collected by EUA, DORA and SPARC Europe have refined understanding of these constraints, showing significant differences between systems that offer universities more or less autonomy (cf. [Reimagining Academic Career Assessment: Stories of innovation and change](#), 2021).

However, the 2020-21 survey respondents also cite other actors' potential to coordinate and scale up changes in academic assessment. National initiatives that unite the main actors are highlighted for their role in creating changes that go beyond the capacity of a single university. These initiatives were first explored in the [Norwegian](#), [Finnish](#) and [Dutch](#) case studies in our report and online repository.

Conclusion

This report has shown that Open Science currently plays a limited role in university academic assessment approaches. In addition, open research practices are given less importance than most other academic activities, notably publishing research and attracting external funding.

However, it has also shown that Open Science is a growing strategic priority, making its limited role in academic assessment an issue of practical implementation. The survey respondents are keenly aware that changing assessment approaches is a complex and gradual process, yet they are taking the initiative to change university evaluation practices.

The survey revealed growing university awareness of the limited consideration given to Open Science in academic assessment, and a clear, demonstrable willingness to make changes. EUA supports universities in this practical shift towards implementation. Taking a comprehensive, holistic approach to academic assessment, the Association aims to:

- build consensus and create a level-playing field for Europe's universities;
- play a proactive and leading role in setting the policy agenda and driving the debate, with the objective to promote the sector's interests;
- consolidate EUA's expertise and knowledge base through its work with members and partner organisations representing other relevant stakeholder organisations;
- provide support and services to its members by acting as catalyst, multiplier and capacity builder.

The European University Association (EUA) is the representative organisation of universities and national rectors' conferences in 48 European countries. EUA plays a crucial role in the Bologna Process and in influencing EU policies on higher education, research and innovation. Thanks to its interaction with a range of other European and international organisations, EUA ensures that the voice of European universities is heard wherever decisions are being taken that will impact their activities.

The Association provides unique expertise in higher education and research as well as a forum for exchange of ideas and good practice among universities. The results of EUA's work are made available to members and stakeholders through conferences, seminars, websites and publications.

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