

Open Science in European Universities

Dr. Ignasi Labastida
on behalf of

Prof. Jean-Pierre Finance, Prof. Bernard Rentier, Dr. Lidia Borrell-Damian, Dr.
Bregt Saenen, Lennart Stoy

Ciencia Abierta – Ecos, Retos y Oportunidades de los PlaneS

VIII Jornadas OS Repositorios y XVIII Workshop de Proyectos Digitales
de REBIUN y CRUE

Universidad de León, España

25-27 Septiembre 2019

Open Science: key objectives and conditions

Key objectives:

- Sharing of research-generated knowledge
- Quality of research and research ethics and integrity
- Transparency of the research process and outcomes publication
- Easy and affordable accessibility to research publications and data

Conditions:

- Investment in Open Access business models (cost of publications)
- Investment in e-infrastructure (deposit and access – FAIR principles)
- Policies fostering Open Access to research publications and data
- Researchers motivation and careers

EUA Policy Positions- Open Science

EUA Roadmap on Research Assessment in the Transition to Open Science

JUNE 2018

[Link](#)

EUA POSITION Open Access by 2020: EUA supports Plan S for an open scholarly system

September 2018

On 4 September 2018, eleven national research funding organisations in Europe jointly published the so-called "Plan S" to accelerate the transition towards Open Access (OA) to research publications. Plan S stipulates that "after 1 January 2020 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms."

The European University Association (EUA) would like to express its support for Plan S and welcome its ambition. Implementing the plan's bold vision, in combination with Horizon Europe reinforced OA policies, has the potential to create a critical mass of research funders able to ensure a wider uptake of OA across Europe. Plan S is in line with the EUA recommendations in its [Statement to EU Institutions and National Governments and "Towards Full Open Access by 2020"](#). For EUA, the transition to OA requires the coherent and concerted efforts of major stakeholders including researchers, research funders, universities, research performing organisations and governments.

EUA is pleased to see that Plan S urges researchers to retain the copyright of their research outcomes and to publish them using open licenses and platforms. This has the potential to change the business models underlying the research publishing market, and to make them more open and competitive while also enabling a more efficient use of public funds. The engagement of the wider community of researchers is necessary, which is not the case today, as only around 10% of university researchers have a good knowledge of publishers' OA policies ([EUA OA Institutional Survey results](#)).

EUA would like to underline that both "gold" and "green" OA routes are important in the transition to full Open Access. Green

OA repositories enrich and link publications and data and provide added value services with openly available content. Regarding gold OA, beyond copying Article Processing Charges (APCs), which can be an appropriate temporary measure, the OA publishing system must evolve in a way in which costs are affordable for universities, and limit inflation costs. The principle goal of Plan S, to end the phenomenon in academic publishing known as "double dipping" (giving first to publish and second to access the publication through subscriptions), is laudable.

Plan S should effectively support the implementation of Open Science practices, as part of the pre- and post-evaluation of research projects, and, progressively, in national research assessment exercises. Research assessment, career assessment and the recruitment of researchers must be adapted to accommodate Open Science practices and move away from purely quantitative measures such as journal impact factors. EUA provides a framework for such an evolution through its recently adopted [Guidance on Research Assessment](#). Plan S should also incentivise researchers to adopt Open Science as the default model of conduct for publicly funded research.

To summarise, EUA supports Plan S, and its vision to accelerate the transition to full OA, while also encouraging more national research funders across Europe to adopt Plan S. In the coming weeks, EUA will further reflect on the implications of Plan S, and how universities can further align their policies to contribute to its implementation. Ultimately, the success of Plan S hinges on turning principles into practice. More details of Plan S need to be fleshed out, and EUA is pleased to offer a platform for dialogue for its implementation.

Contact: info@eua.eu
www.eua.eu

With more than 800 members, the European University Association (EUA) is the representative organisation of universities and national rectors' conferences in 47 European countries.



[Link](#)

The lack of transparency and competition in the academic publishing market in Europe and beyond. The European University Association (EUA) representing 800 universities over Europe and 33 National Rectors Conferences, is very concerned about possible irregularities concerning pricing and market conditions in the research publishing sector. We find that the current lack of transparency and competition is harmful to knowledge dissemination and the progress towards a European science system based on Open Science. With this communication, EUA, on the initial initiative of Universities Denmark, is asking the European Commission, DG Competition to undertake a European analysis of pricing and competition within the large industry of research publishing.

In 2015, Commissioner Moedas first presented his three O's: Open Science, Open Innovation and Open to the world. The goal is to make science and innovation more open, collaborative and global. These objectives are shared and fully supported by the European University Association through its activities since 2005.

Open Science is the present and future of research, inside and outside academia. As the European Council of Ministers acknowledged in their conclusions in 2016, "Open science has the potential to increase the quality, impact and benefits of science and to accelerate advancement of knowledge by making it more reliable, more efficient and accurate, better understandable by society and responsive to societal challenges, and has the potential to enable growth and innovation through reuse of scientific results by all stakeholders at all levels of society, and ultimately contribute to growth and competitiveness of Europe".¹

A key element in Open Science is to ensure that public research results become more readily available inside and outside academia. This largely happens through publishing of research outcomes. Research journals are central to the dissemination of scientific, research-based knowledge and maximise the value of public investments in research and innovation. It is important for society to allow easy and low-cost access to publicly funded research results. Moreover, access is important to industries and SMEs as it has the capacity to shorten innovation cycles, to European citizens and taxpayers as it increases trust and transparency of science and last, not least to realising an innovative, efficient and competitive European Research Area based on open collaboration.

Every year, European universities spend in a conservative estimate some three-digit millions of Euros to access research data and publications: to read information mainly created by themselves and their scientific peers at other universities. As we describe and demonstrate in this paper, the public funds devoted to research publications ends largely in the hands of a few big scientific publishers who are making enormous profits by selling an intellectual product they obtain free of charge from researchers to a market that is neither fair, transparent nor competitive.

As a well-known allegory says: "Imagine a farmer who owns, feeds and milks his cow in order to give away the milk for free to a dairy company – and then finally buys it back in a milk carton at a very high price". This is the business model of big research publishers.

In 2002, the British Office of Fair Trading published a statement noting, "there is evidence to suggest that the market for STM journals may not be working well... Many commercial journal prices appear high, at the expense of education and research institutions... it remains to be seen whether market forces, perhaps enhanced by the use of new technology, will remedy the problems that may exist".

¹ The "STM" acronym refers to the fields of science, technology and medicine in general.

[Link](#)

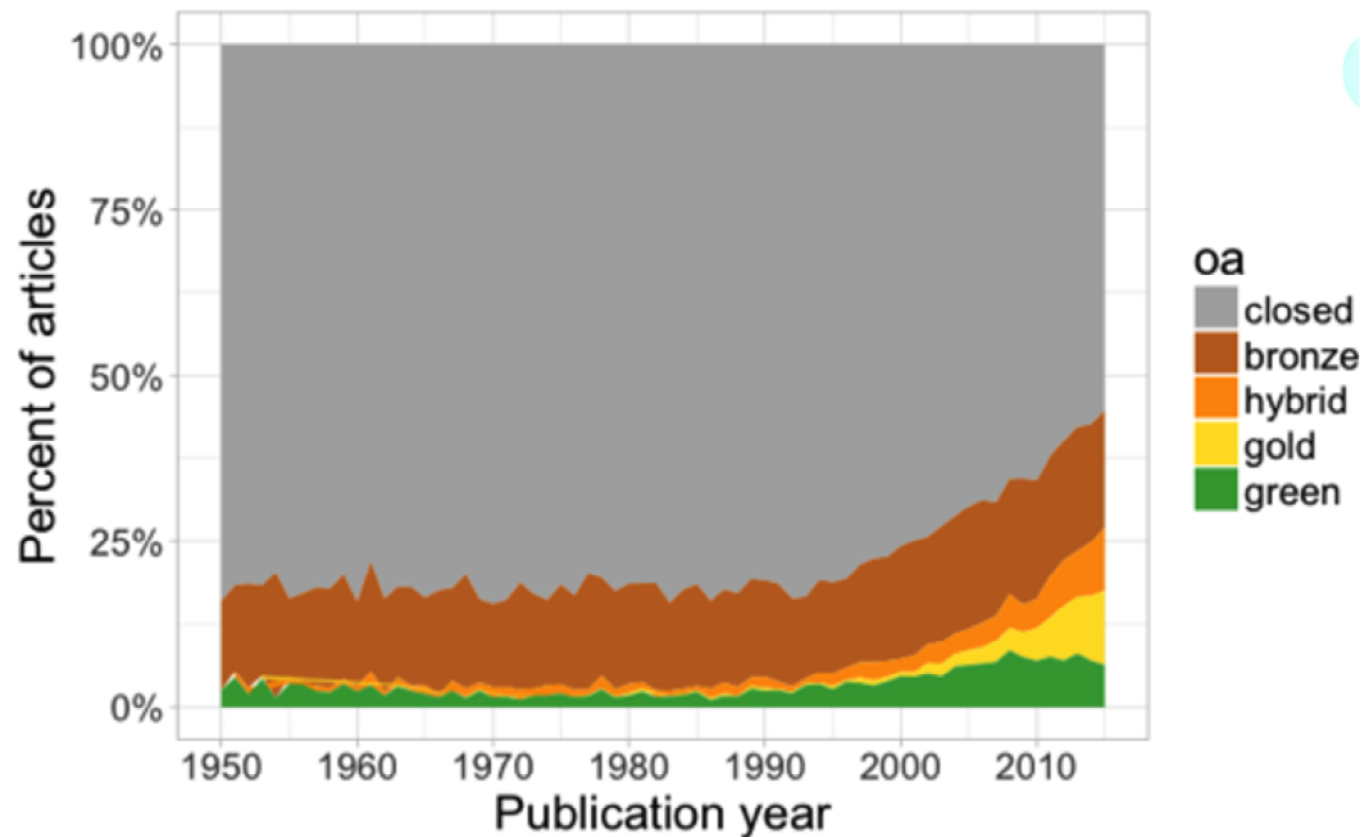
Constraints for Open Science:

Limited
engagement of
a large part of
researchers for
many reasons

Necessary (although not sufficient) conditions to make Open Science a reality

- **Clarification of legal issues concerning sharing and reuse of publications and data – copyright regulation**
- **Original authorship respect – ethical considerations**
- **Reputation and research career progression – linked to research assessment and outputs**

Share of Scholar Publications in Open Access worldwide is far from 100%

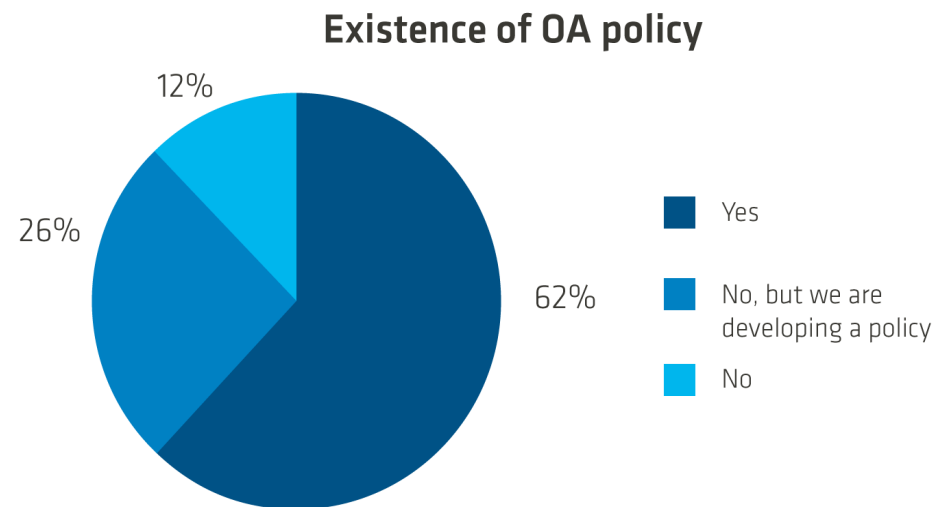


Piwowar, Heather; Priem, Jason; Larivière, Vincent; Alperin, Juan Pablo; Matthias, Lisa; Norlander, Bree; Farley, Ashley; West, Jevin; Haustein, Stefanie (2018-02-13). ["The state of OA: a large-scale analysis of the prevalence and impact of Open Access articles"](#). PeerJ. 6: e4375. [doi:10.7717/peerj.4375](#). [ISSN 2167-8359](#). [PMC 5815332](#). [PMID 29456894](#).

Estimation OA < 35 % of the total of scholarly publications

EUA Open Access Survey 2017-2018 :

Share of Open Access scholarly publications is far from 100%



Key information

- Data collection: August-November 2018
- Respondents:
 - 31 Consortia negotiating on behalf of the university sector and other higher education and research performers
 - Focus: Periodicals
 - 5 major publishers (Elsevier, SpringerNature, Taylor & Francis, Wiley, American Chemical Society)
- Data analysed in aggregated fashion
- Most data refers to big deal contracts ongoing in 2017 or 2018



Total annual expenditure on big deals

For all subscriptions to electronic resources (including periodicals, databases, e-books) by national consortia:

Total (30 European countries) = ~ 1 025 253 055 EUR (estimate 2018, 3.5% yearly increase)

This is a conservative figure not including:

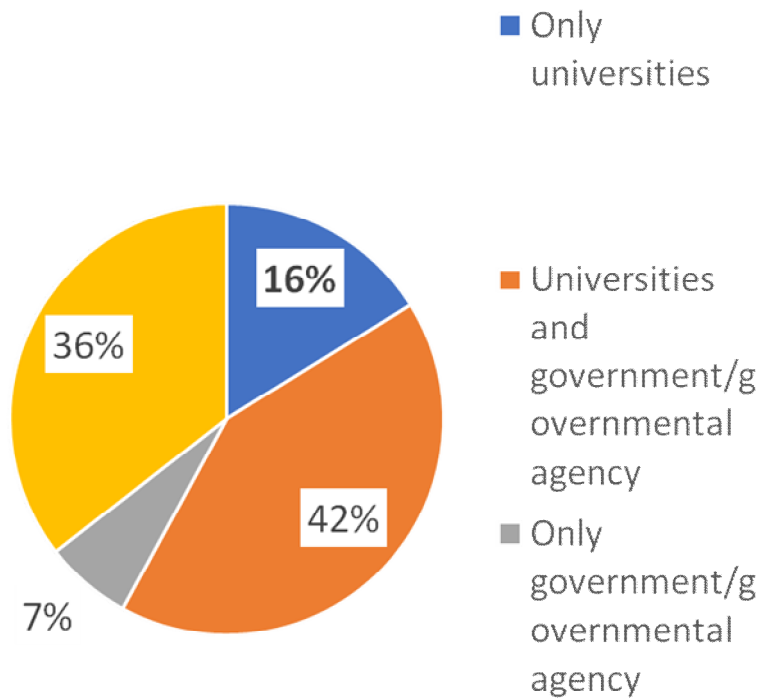
- Article Processing Charges (APCs)
- Consortia other than those participating in the Survey
- Individual institutional contracts with publishers

For periodicals only in the surveyed consortia:

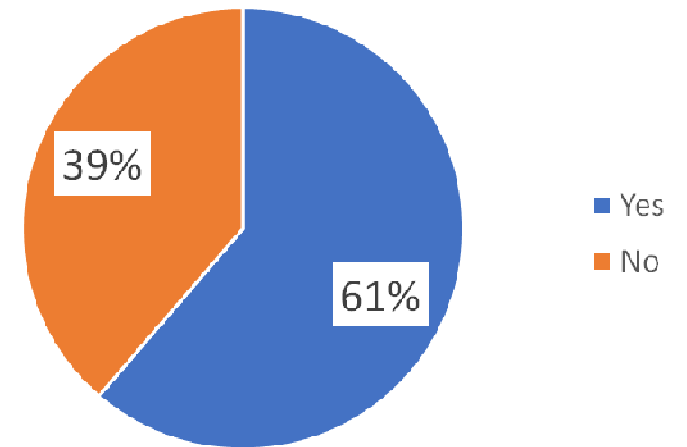
Total (31 consortia, representing 30 European countries) = ~ 726 350 945 EUR (average yearly increase 3.6%)

Proportion of costs covered by universities in the consortia = 519 973 578 EUR (~72%)

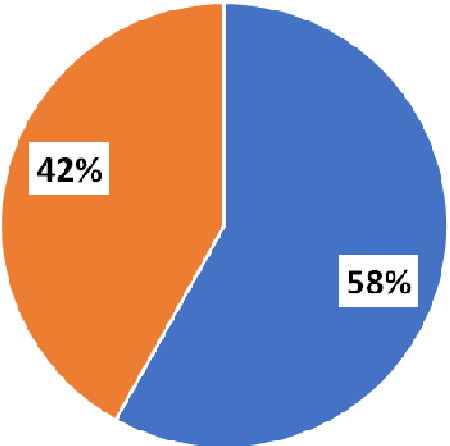
Origin of funds for big deals



Publicly available information on expenditure on electronic documentary resources



University leadership role in the negotiation of big deals

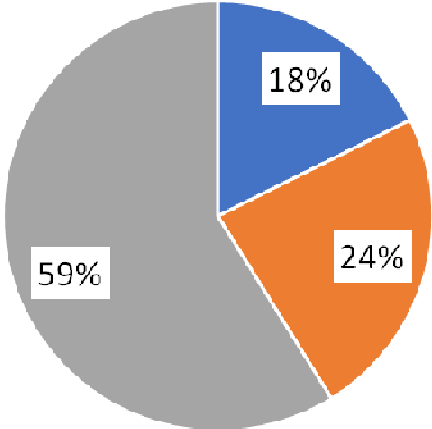


n= 31/31



- Yes
- No

The university leadership has a role:



- As part of the negotiating team
- As the lead negotiator
- Other

n= 17/18

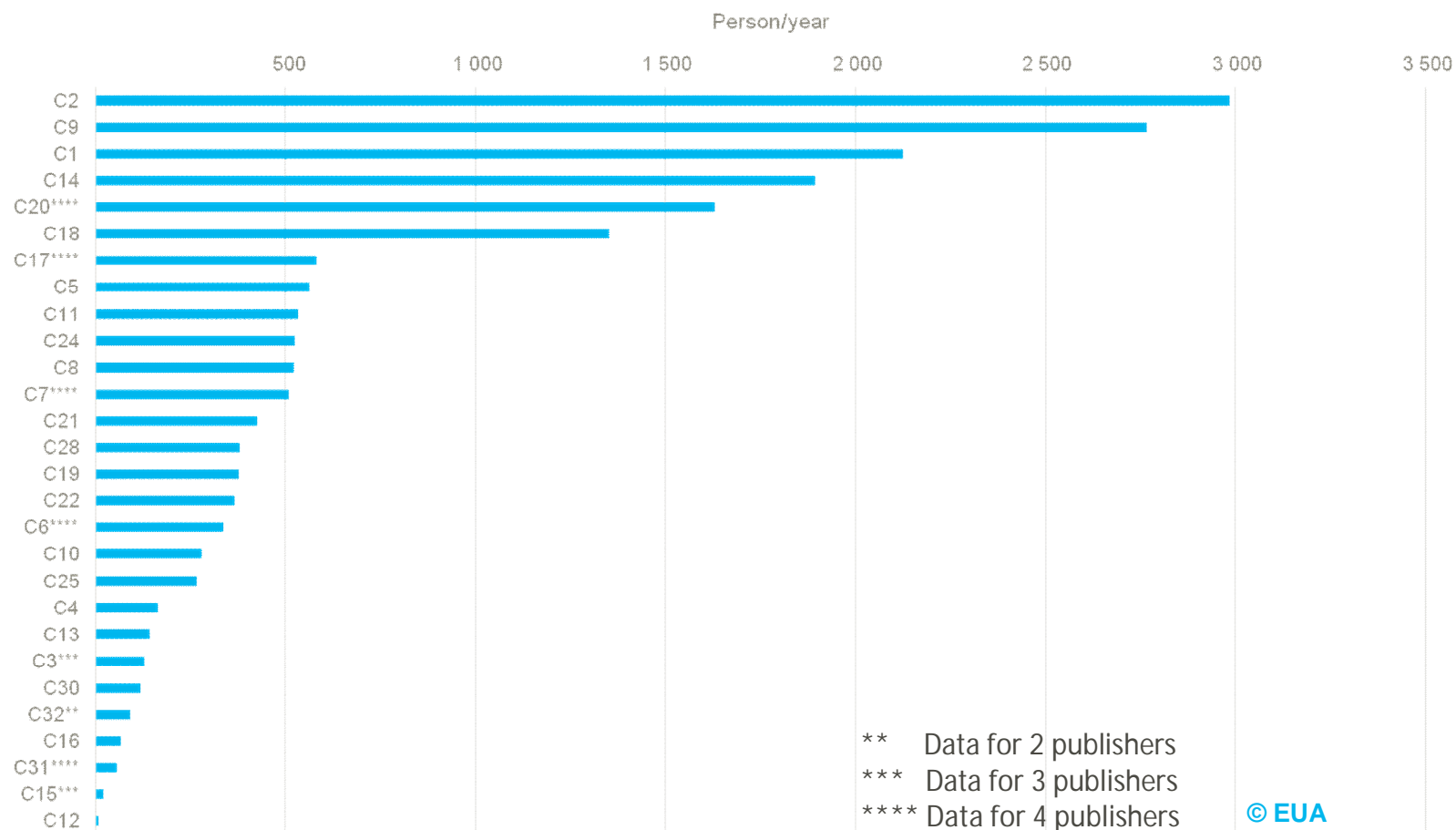
Other includes: negotiation only for some publishers; defining strategy.

Relationship between amount spent on five big publishers per year and GDP per capita

Calculation: Amount spent annually on 5 big publishers / GDP per capita

Interpretation: the result represents the number of people that need to work for one year (person/year), given a certain GDP per capita, in order to reach the same monetary value as the cost of the five big publishers in that country.

GDP per capita: source Eurostat (data from 2016)



** Data for 2 publishers
 *** Data for 3 publishers
 **** Data for 4 publishers

Summary – Institutional policies on Open Access to Research Publications and Research Data

Existence of institutional policies

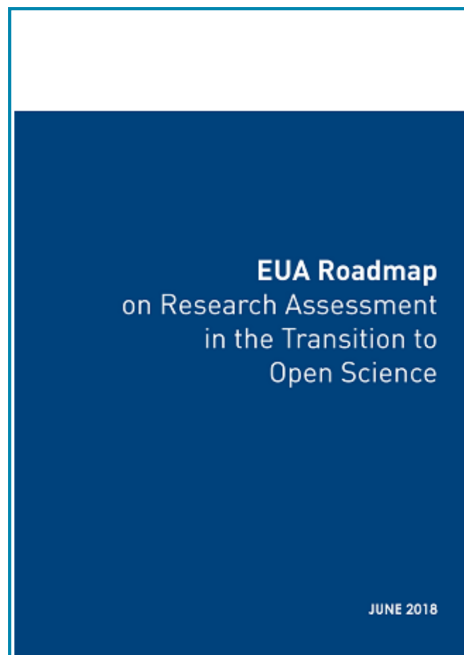
- OA to research publications: 62% of universities
- Research and data management (RDM): 21% of universities
- OA to research data: 13% of universities

Existence of institutional repositories: 89% of universities

After the adoption of an OA policy: 75% of universities saw an increase in publications' deposit rates in the repository

Monitoring the number of publications in OA:

- Green OA:** 69% of universities
- Gold OA:** 43% of universities



Source:

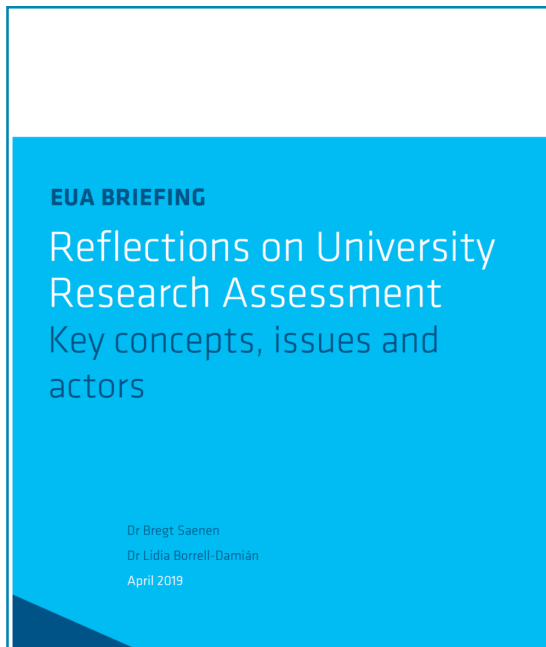
EUA (2018) [EUA Roadmap on Research Assessment in the Transition to Open Science](#)

The dominance of the journal impact factor leads to two main problems:

- 1.the quality of an article produced by researchers is not evaluated directly, rather through a proxy, i.e., the reputation of the journal it is published in;
- 2.this situation reinforces the dominant position of commercial academic publishers and disproportionately adds to their power in shaping the way research is funded and conducted.

EUA commitment

Raise awareness and support universities in the improvement of research assessment approaches that focus on research quality, potential and future impact, and that take into account Open Science practices.



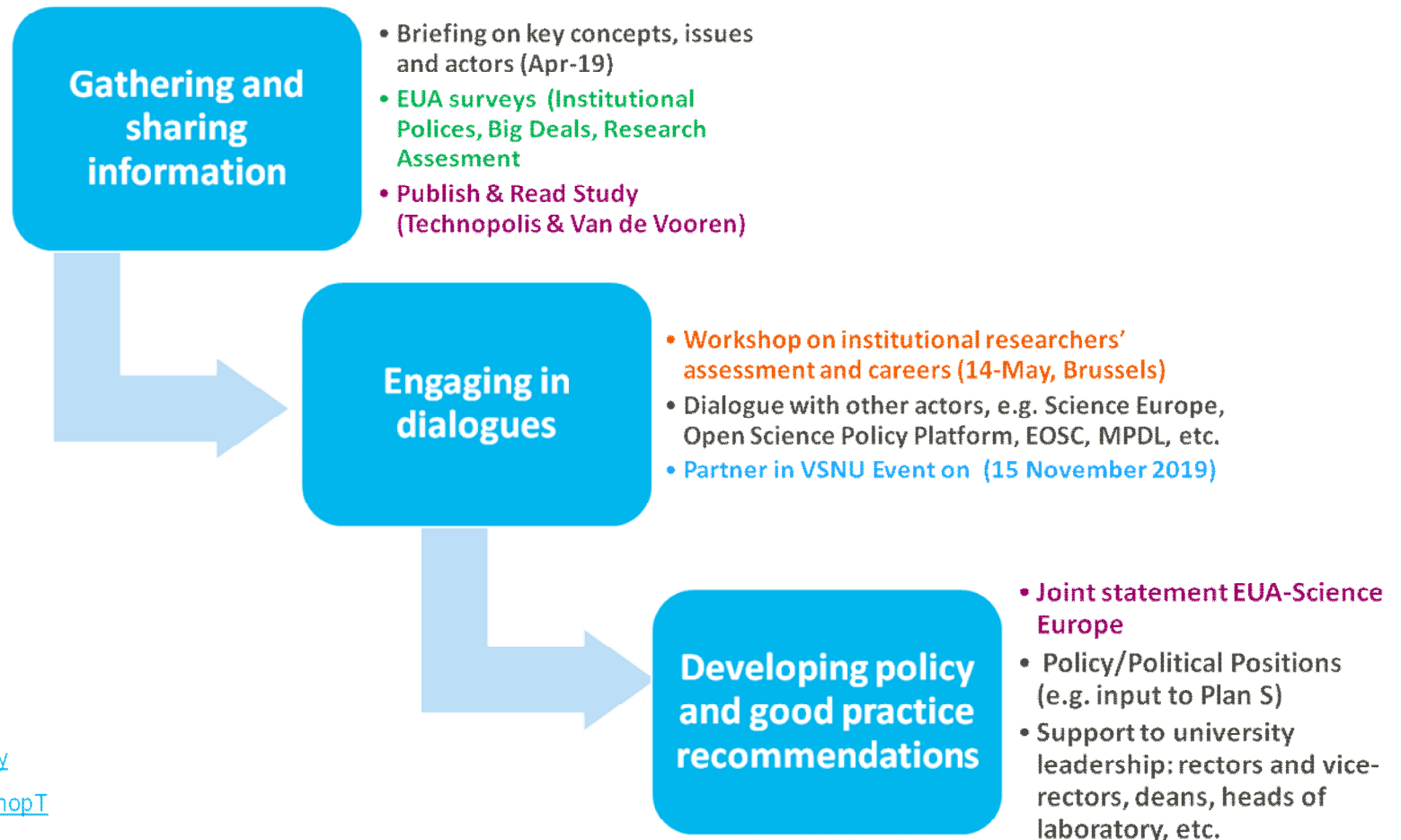
Researchers, universities and other research performing organisations, research funders and policymakers are revisiting their approaches to research assessment:

- Current approaches related to negative trends in academia
- Discussion about the current state and future direction of scholarly research, as well as technical discussions
- Sprawling field involving a wide variety of actors, creating the need for a concerted approach

Source:

EUA (2019) [Reflections on University Research Assessment: Key concepts, issues and actors](#)

EUA Actions with its universities and other stakeholders



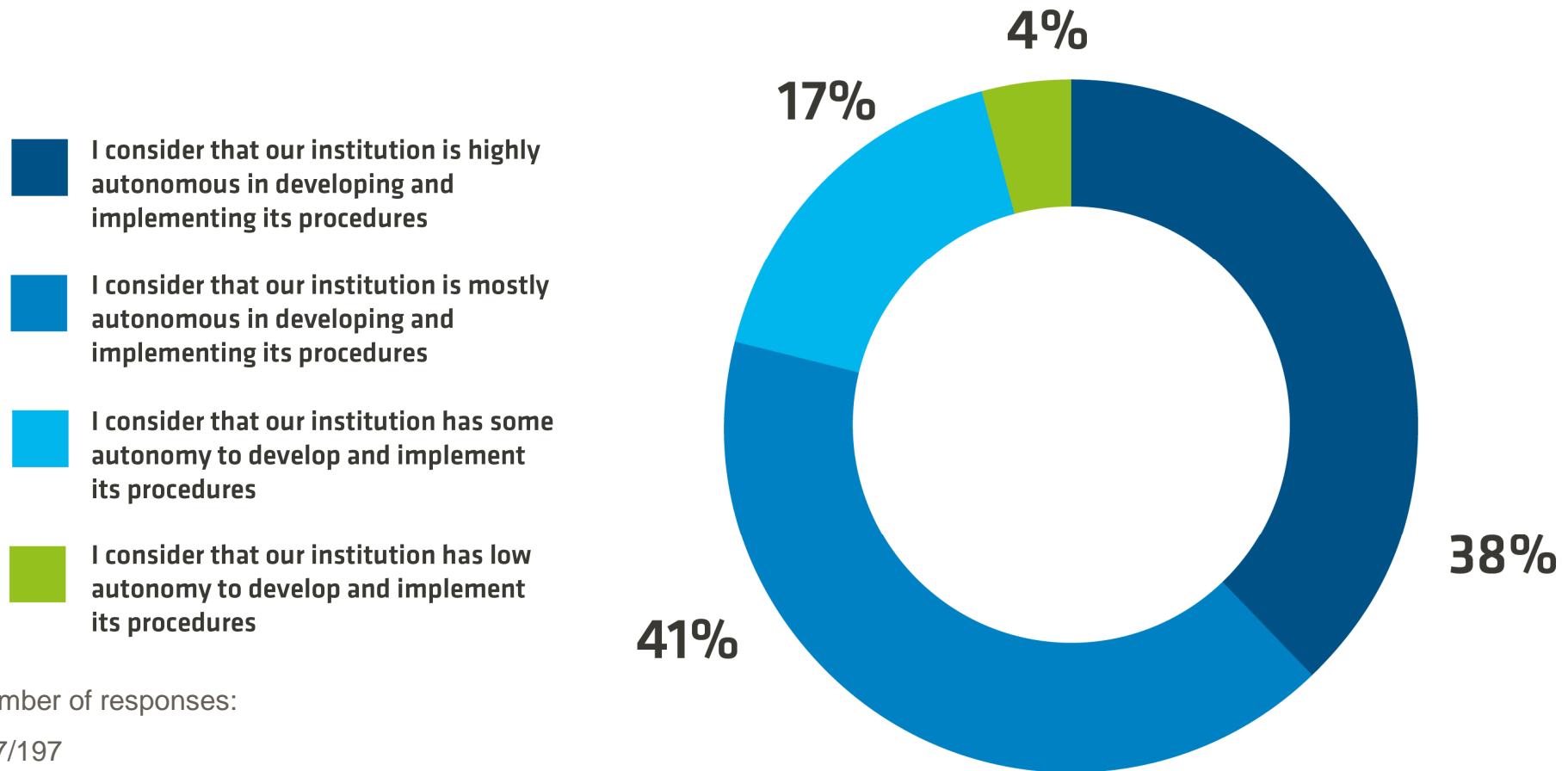
More information:

Briefing: <http://bit.ly/EUARAbriefing>

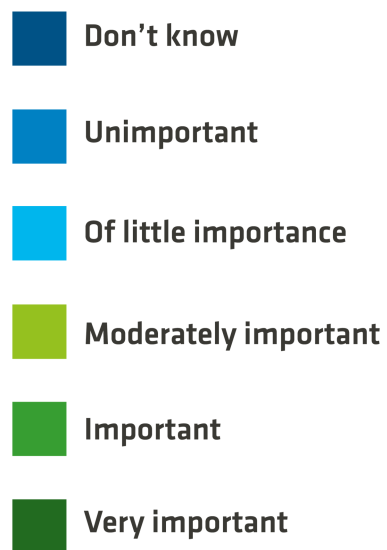
Survey: <http://bit.ly/EUA2019RASurvey>

Workshop: http://bit.ly/EUA_RAworkshopT

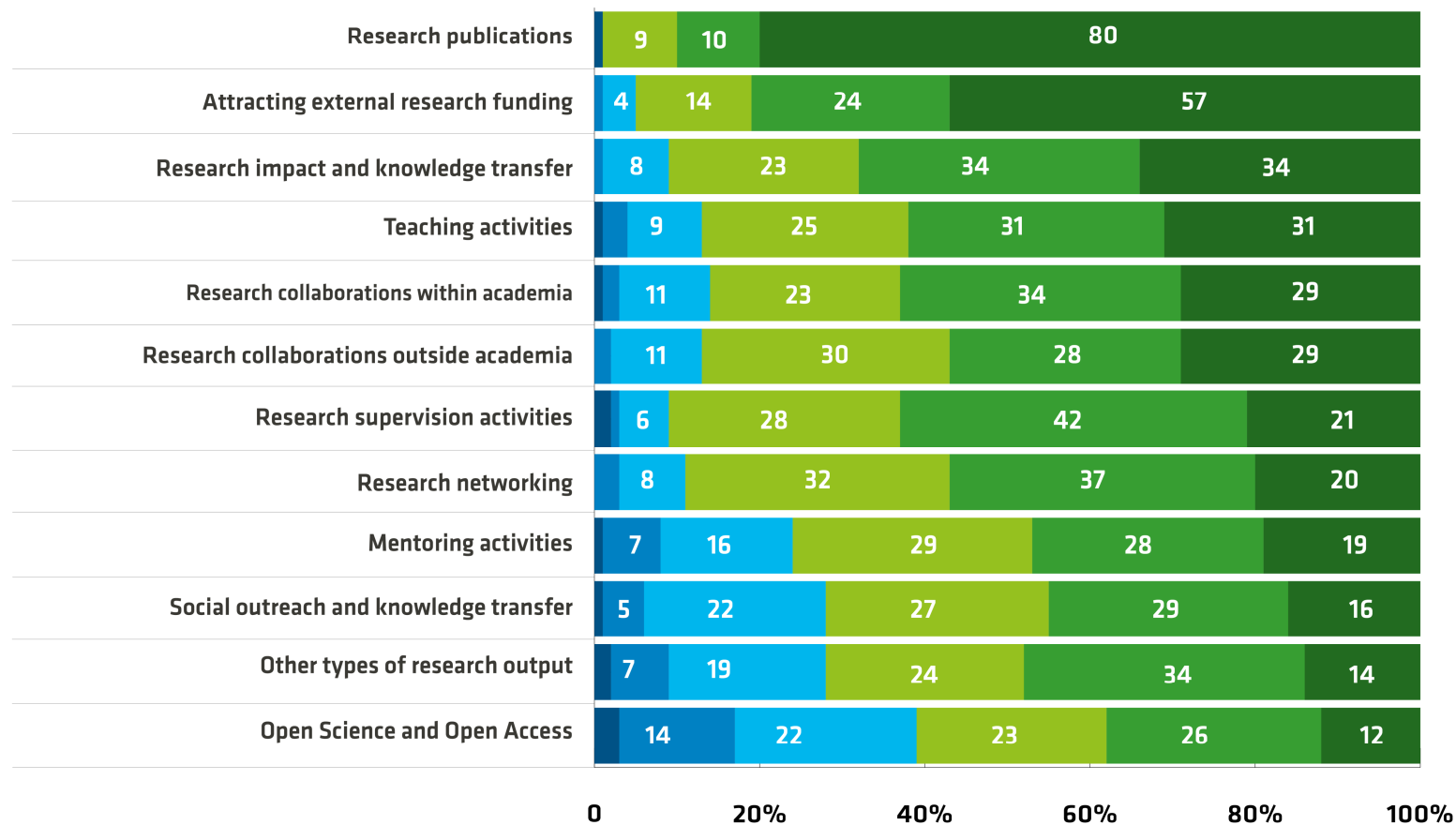
Autonomy to develop and implement research assessment procedures for the purpose of careers in research



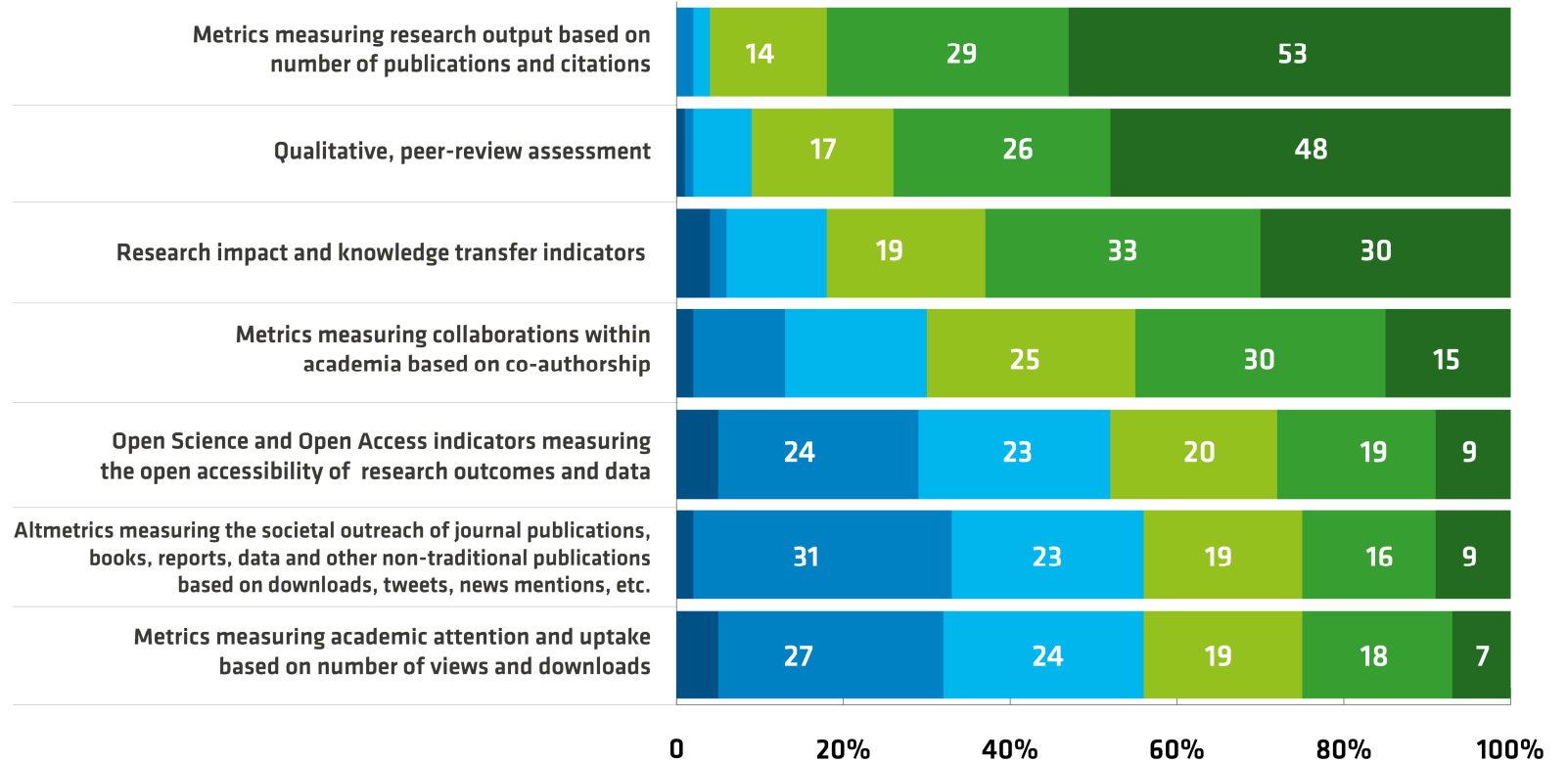
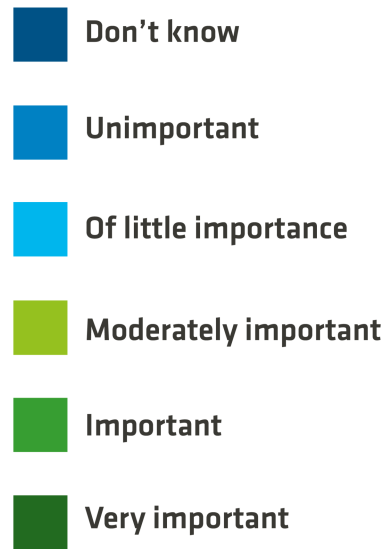
Which types of academic work matter most for research careers?



Number of responses:
between 191-195/197

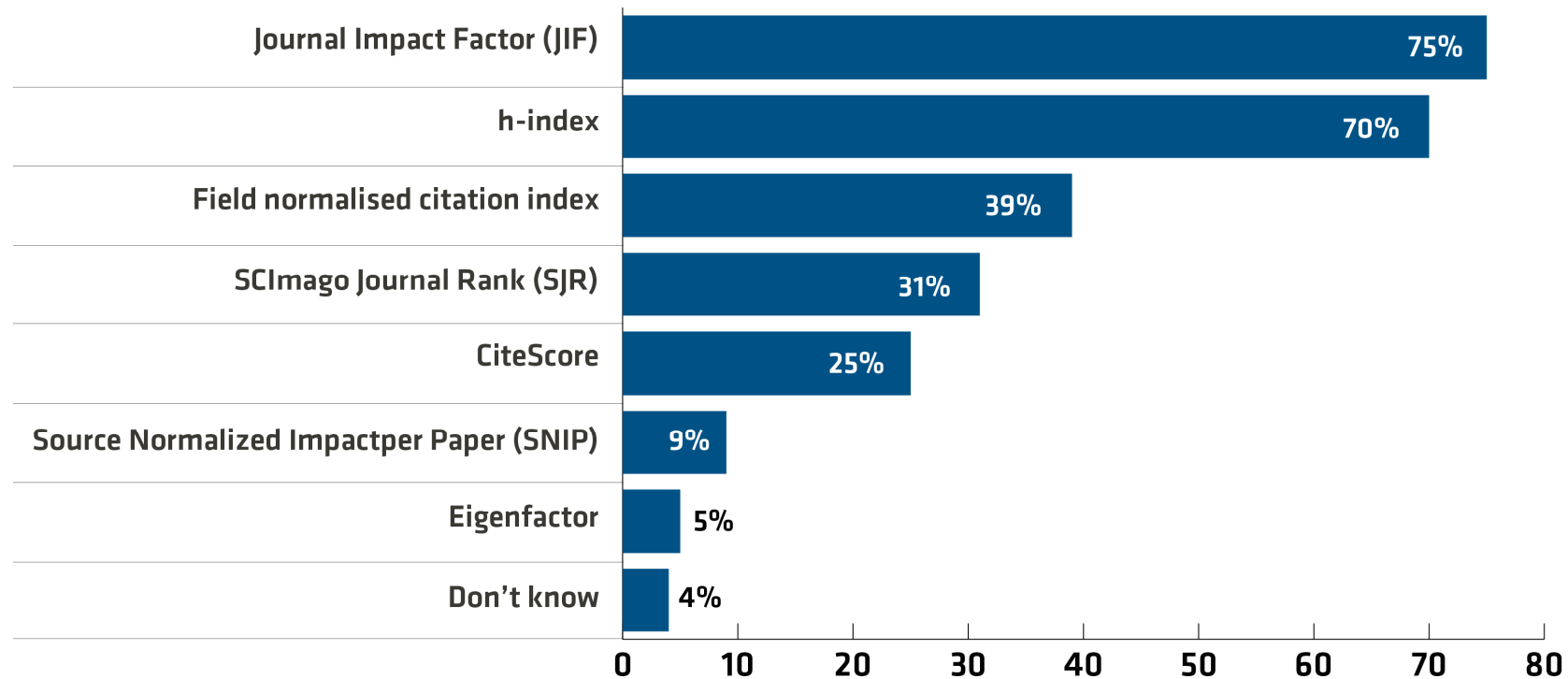


How is academic work evaluated for the purpose of research careers?



Number of responses:
between 194-195/197

Metrics measuring research output based on number of publications and citations

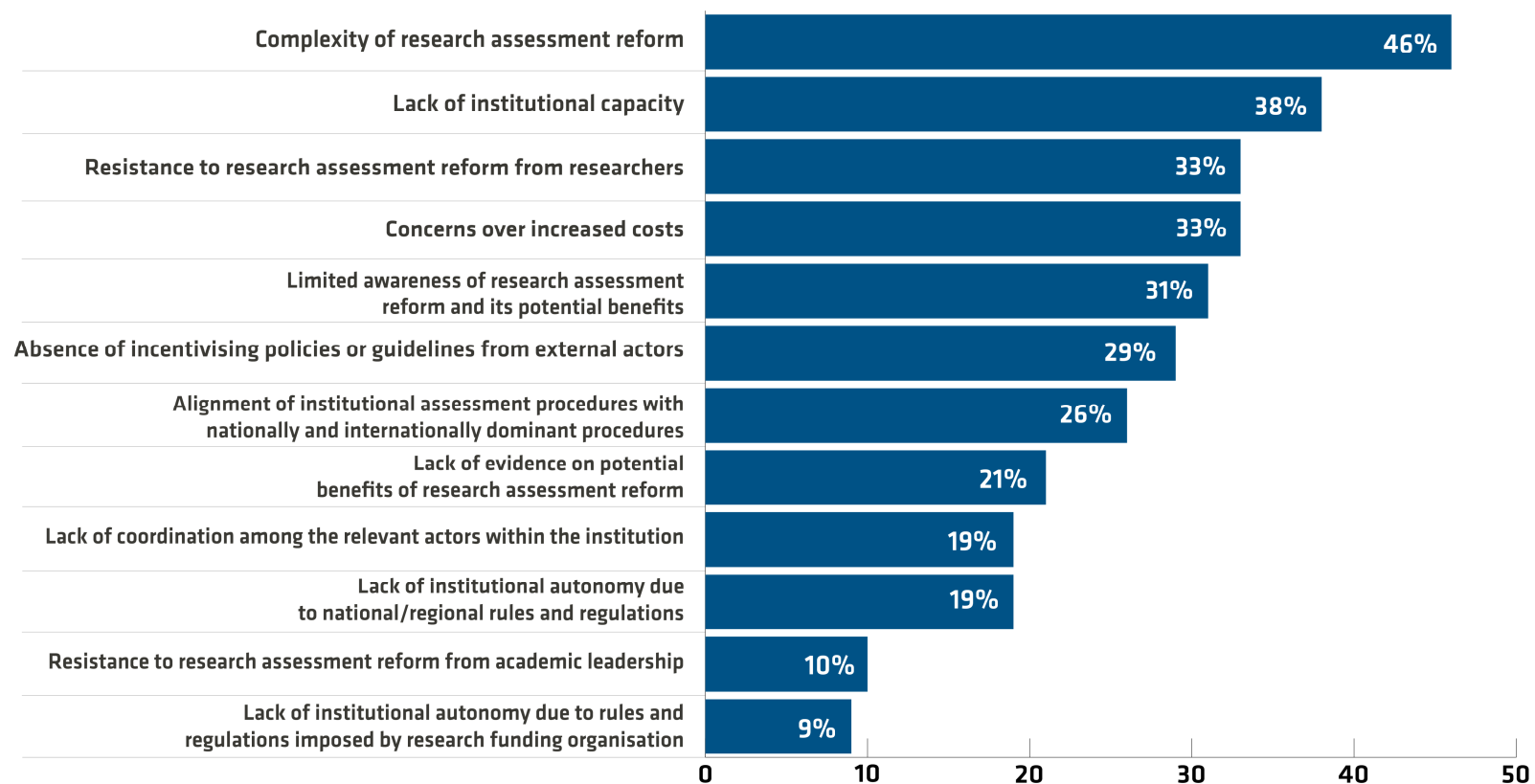


Multiple-choice question

Number of responses:

185/186

Main barriers and difficulties to review research assessment procedures



Multiple-choice question

Number of responses:

233/254

Key messages – Outlook at European systemic level

- **Transparency of costs and conditions** – research investments, research publication costs, related transparency laws
- Evolution of **research assessment exercises in a context of Open Science**
- Reinforcement of application of **Open Science policies** – institutional, national, supranational (e.g. Plan S).
- **Investment in research infrastructures** – national, supranational, e.g. European Open Science Cloud (EOSC).
- **Engagement, at system level, of researchers and university leaders, and research organization leaders, funders**
- **Doctoral Education has a clear role in addressing the future of the European Research and Innovation System**

Thank you for your attention

Lidia Borrell-Damian
lidia.borrell-damian@eua.eu

