

## Amplifying the societal impact of university Research & Innovation

Stephane Berghmans Director for Research & Innovation La "Terza Missione" degli atenei: dai piani strategici all'impatto sulla società 5 October 2023





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#### european UNIVERSITY ASSOCIATION

### EUA has 866 members based in 51 countries (as of 1 April 2023)





### EUA Innovation Agenda 2026

February 2023

### Link to the EUA Innovation Agenda

### For the purposes of this Agenda, innovation is understood to be:

"a process of knowledge co-creation and transfer that generates social, economic, and environmental benefits by means of novel ideas, approaches, technologies, or ways of organising. It is based on open and systematic interactions between academia, government, the private sector, and the general public. It draws on the entire research and development chain from curiosity-driven fundamental research to applied research and development activities, on the sphere of education and training as well as on capabilities and resources for innovation uptake which are determined by political, cultural, and economic systems. It entails close, strategic collaboration between key stakeholders from these different spheres, and is usually rooted in local/ regional nodes often known as innovation ecosystems.

The following examples are a non-exhaustive list of innovation achievements:

- Specific infrastructures, such as: start-up hubs, technology clusters, science parks.
- Strategic partnerships with companies, government agencies or civil society groups.
- Joint university-industry laboratories/institutes, industrial doctorates.
- Patenting and IP, technology transfer offices.
- Social innovations aimed at widening community participation in local development through enhanced cohesion and social equity.
- Innovation processes and outcomes stemming from interdisciplinary initiatives addressing societal challenges.
- Bottom-up mobilisation of multi-stakeholder networks addressing societal challenges.
- Promoting entrepreneurial and innovation mindsets and competences among students and staff.
- Educational approaches that enable more flexible learning paths, project and challenge-based learning, flipped and international classrooms, etc."

### **EUA survey on universities and innovation**



### Universities as key drivers of sustainable innovation ecosystems

Results of the EUA survey on universities and innovation

Kamila Kozirog, Sergiu-Matei Lucaci, Stephane Berghmans

This report provides in-depth analysis of the results of the first-ever Europe-wide survey on universities and innovation.

Designed to gather evidence about the state of innovation at European universities, the EUA survey took stock of how these institutions pursue their third mission and help deliver the sustainable and digital transitions. As such, it continues EUA's long-standing work showcasing universities' key contributions to innovation ecosystems, in a context of multiplying societal challenges and the increasing relevance of knowledge to devising new solutions.

The report also provides examples of innovation good practice at universities that can serve as a source of inspiration for policy makers, funding agencies and universities themselves. It concludes with a number of recommendations stemming from the key findings. These are meant to help ensure that the university sector's innovation ambitions can be achieved.



Survey report

**Dataset** 

Policy position and recommendations



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### **Priority 1: A comprehensive understanding of innovation**





**Innovation** is a process of knowledge co-creation and transfer that generates social, economic, and environmental benefits by means of novel ideas, approaches, technologies, or ways of organising.

### Key objectives for the university sector

- Innovation processes should build on a systemic and multidisciplinary view.
- The education, research and innovation missions must be more closely integrated.
- The **transferability** of fundamental research to innovation should be improved.
- The effects of innovation on **society** and the value of **social and policy innovation** must be better recognised.
- A broader notion of **entrepreneurship** is needed, going beyond the for-profit mindset focusing only on business creation, economic impact, or product development.

EUA seeks to promote a **broader understanding of innovation activities** among all relevant stakeholders:

- importance of fostering favourable conditions for innovation, rather than focusing purely on the outcomes of innovation processes;
- critical engagement with the rising emphasis on mission-driven approaches and directionality;
- policy makers do not always recognise this **multifaceted nature of innovation**, nor do they demonstrate sufficient awareness of it.

### **Priority 2: Institutional innovation capacity, competence and culture**



"Leading innovators" are institutions with high innovation capacity, a strong commitment to societal impact, and mature innovation policies and processes that feature strong collaborations with external partners.

"Emerging innovators" are in the process of developing their innovation capacity. These institutions are strong in one or several innovation areas, and eager to raise their innovation profile, e.g., by learning from others.

### Key objectives for the university sector

- All university departments, faculties and services, must **engage strategically** in innovation.
- University staff and students need broader career development & incentives to pursue innovation and entrepreneurial activities.
- Reform academic **career assessment** to recognise a wide range of contributions, including innovation activities.
- **EU & national funding** should be aligned with universities' pursuit of both bottom-up and challenge-driven projects.
- Further develop efficient institutional **governance** structures and promote university **autonomy** as a fundamental value.

EUA seeks to address the various issues which distinguish "leading innovators" and "emerging innovators" (EUA innovation survey report, 2022):

- **resource** constraints, e.g., limited funding to fulfil all university missions;
- limited staff with entrepreneurial experience and the capability to deliver business-skills education
- limited incentives to increase staff motivation to engage in innovation, particularly through career assessment;
- lack of common institutional innovation vision and culture, lack of effective coordination between central leadership and other services<sup>6</sup>

### Priority 3: Universities as honest brokers in innovation for a sustainable future european UNIVERSITY ASSOCIATION



**Honest brokers** are trusted providers of advice based on independent, neutral evidence, who enable the connection and mediation between different stakeholders' interests and perspectives (EUA innovation survey report, 2022).

### Key objectives for the university sector

- Universities' unique assets as custodians of innovation and partners and mediators across sectors and borders should boost the sustainability of local communities.
- Broader pursuit of mutual interests between universities & private sector and durable partnerships with companies of all sizes.
- Wide adoption of an Open Innovation paradigm should enable the integration of the **public sector & citizens** in innovation processes.
- Enhanced cooperation of universities with **civil society** and better usage of tools such as **citizen science**.
- Adoption of frameworks supporting staff in collaborating with external stakeholders and being aware of possible conflicts of interest in innovation.

EUA seeks to promote universities' role as **honest brokers**, but also recognises that a proactive role of the university sector is necessary to articulate specific societal needs and be agents of change:

- universities can take a critical distance from more conventional innovation paths of policy makers or other stakeholders;
- cooperation between different players in the innovation ecosystem is nearly as important as qualified staff and funding to carry out innovation;
- universities work with large companies, SMEs and start-ups to a smaller extent than with public authorities, other universities in their countries and research organisations.





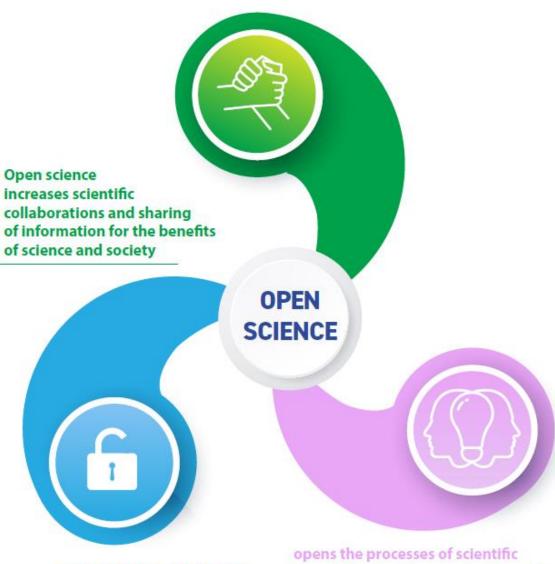
### The EUA Open Science Agenda 2025



Link to the EUA Open Science Agenda

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makes multilingual scientific knowledge openly available, accessible and reusable for everyone opens the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.

### Background



### From principles to practices: Open Science at Europe's universities 2020-2021 EUA Open Science Survey results

2020-2021 EUA Open Science Survey results

Rita Morais, Bregt Saenen, Federica Garbuglia, Stephane Berghmans and Vinciane Gaillard

This report presents the findings of the 2020-2021 EUA Open Science Survey and provides evidence-based recommendations for institutions, researchers, research funders and policy makers on the transition towards Open Science.

With more than 270 responses from 36 European countries, the survey report focuses on the level of development of Open Science in European universities. It also addresses the role of Open Science in institutions' strategic priorities and its implementation in institutional practices.







### From principles to practices: Open Science at Europe's universities

2020-2021 EUA Open Science Survey esults

Rita Morais, Bregt Saehen, Federica Garbuglix, Shiphane Berghmans and Vinciane Gaillard July 2021

### Survey report

**Dataset** 

Follow-up report on academic assessment

Follow-up report on open access

Follow-up report on research data practices

### By 2025, Europe's universities will be part of a scholarly ecosystem characterised by

A responsible, transparent,

and sustainable research

assessment system



Academic ownership of scholarly communication and publishing



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A just scholarly publishing ecosystem



FAIR research data as the norm in producing and sharing scientific knowledge



New professional profiles for data-intensive careers



An active engagement in EOSC

Assessment approaches balancing qualitative and quantitative metrics

**Priority 1** 

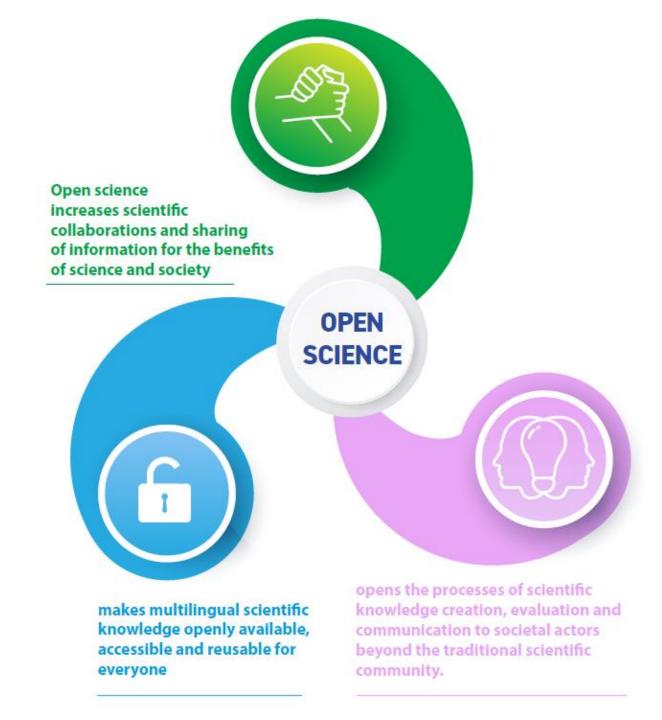
Universal and perpetual Open Access to scholarly outputs, in a just scholarly publishing ecosystem  $\odot$   $\odot$ 

### **Priority 2** FAIR research data

**Priority 3** Institutional approaches to research assessment

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Open Science as an integral part of research assessment practices

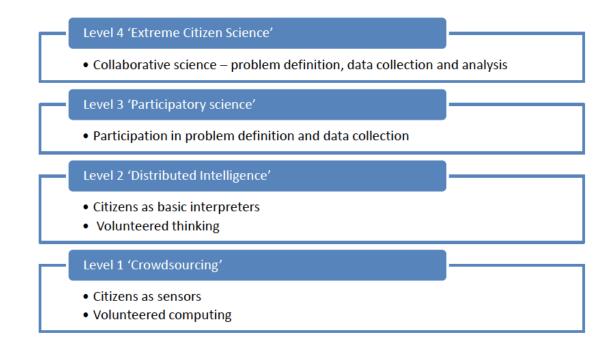






Citizen and participatory science

- Open engagement of societal actors: Open science provides the basis for citizen and community involvement in the generation of knowledge and for an enhanced dialogue between scientists, policymakers and practitioners, entrepreneurs and community members [...] (Unesco Recommendation on Open Science)
- **Citizen Science**: scientific activities in which non-professional scientists volunteer to participate in data collection, analysis and dissemination of a scientific project (Haklay, M., 2013)





Citizen and participatory science in universities: state of play and challenges

- At institutional level, **universities are increasingly exploring the potential of citizen science** and providing institutional support for researchers from different disciplines in engaging in this practice.
- However, if compared with other, more established areas of Open Science, citizen science is still at a much earlier stage of implementation at institutional level.
- Several **bottlenecks** still prevent a wider implementation of citizen science practices in universities:
  - Not well integrated into institutional open science strategies and policies.
  - **Perceived as less important** in comparison with other open science areas.
  - Distrust in the quality of citizen science projects' results and questions about the ownership of the research process (how to credit citizen scientists?)
  - Ranking low among the indicators used to assess academic careers.



Bringing forward the potential of citizen science and participatory science

- Fostering the implementation of citizen science is a responsibility that needs to be shared among the institutional, national and European levels.
  - Support, incentives and rewards are needed to encourage researchers to pursue citizen science at institutional level.
  - **Common national frameworks** are crucial to removing potential ethical, legal and other barriers accentuated by the involvement of citizens in the research process.
  - **Targeted actions** are needed to develop a shared definition of citizen science and participatory science, as well as heterogenous framework conditions across European countries.



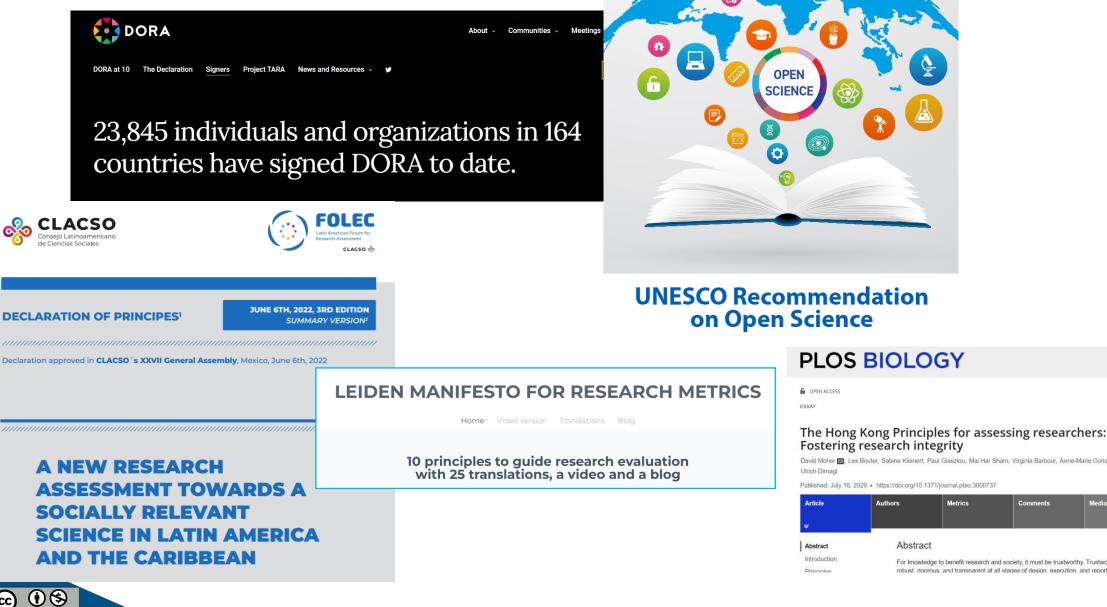
### Rethinking research and academic assessment





### **INTERNATIONAL CONTEXT**

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David Moher @, Lex Bouter, Sabine Kleinert, Paul Glasziou, Mai Har Sham, Virginia Barbour, Anne-Marie Coriat, Nicole Foeger,

Published: July 16, 2020 • https://doi.org/10.1371/journal.pbio.3000737

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### **EU POLICY CONTEXT**

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Council Conclusions on the new ERA (Dec 2020) and on research careers (May 2021) Invited MS, RFOs, RPOs and the EC to work together towards a revised system for research assessment and strengthen European coordination.	Paris Call on Research Assessment Calls for the creation of a coalition if RFOs, RPOs and assessment authorities		Council Conclusions on research assessment and implementation of Open Science Highlights the need to advance in a concerted effort towards reforming the various research assessment systems and practices for research, researchers, research teams and institutions to improve their quality, openness, performance and impact.					
December 2020 – May 2021	February 2022		June 2022					
November 2021			2022					
Council Conclusions on "Future governance European Research Area (ERA)" incl. ERA Agenda 2022-2024 Include an action to advance towards the res the assessment system for research, research and institutions to improve their quality, performance and impact.	<b>A Policy</b> eform of	"Adv Syste impr	<b>ERA Forum</b> d commitment from MS to include ERA Action 3 ance towards the reform of the Assessment em for research, researchers and institutions to ove their quality, performance and impact" in RA Policy Agenda 2022-2024.					



Research Policy Volume 46, Issue 4, May 2017, Pages 868-879



### Work organization and mental health problems in PhD students

Katia Levecque <sup>a, b</sup> 은 쩓, Frederik Anseel <sup>a, b, c</sup> 쩓, Alain De Beuckelaer <sup>d, e, a</sup> 쩓, Johan Van der Heyden <sup>f, g</sup> 쩓, Lydia Gisle <sup>f</sup> 쩓

RESEARCH ARTICLE

Perceived publication pressure in Amsterdam: Survey of all disciplinary fields and academic ranks

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#### Abstract



 Publications determine to a large extent the possibility to stay in academia ("publish or perish"). While some pressure to publish may incentivise high quality research, too much publication pressure is likely to have detrimental effects on both the scientific enterprise and on

- Research assessment refers to the qualitative and quantitative practices used to evaluate the quality and impact of research activities
- Current focus on proxy indicators (e.g. journal and publication-based metrics) rather than on the merits of research itself
- Negative consequences (e.g. quantity and speed at the expense of quality and rigour, risk-adversity, waste of efforts)
- Need to develop and implement more responsible, transparent and sustainable evaluation practices for research activities and careers.



### **RESEARCH PUBLICATIONS AND RESEARCH FUNDING MOST IMPORTANT ACADEMIC ACTIVITIES**



	Research publications	9	10		80					
How important are the following	Attracting external research funding	4	14	24		57				
aspects of academic	Research impact and knowledge transfer	8		23	34			34		
work within your institution's research	Teaching activities	9		25		31			31	
assessment	Research collaborations within academia	11		23	34		4	29		
approach for the purpose of careers	Research collaborations outside academia	11		30		28 29		29		
in research? In other	Research supervision activities	6		28			42		21	
words, which of these aspects are	Research networking	ig <mark>8</mark>		32		37		20		
taken into account	Mentoring activities	7	16		29		28		19	
most when	Social outreach and knowledge transfer	5	22		27		29	Ð	16	
evaluating researchers?	Other types of research output	7	19		24		З	34	14	
	Open Science and Open Access	14		22		23		26	12	
		0	2	0%	40%	D	60%	80%	100	)%
	Open Science: 2019 EUA Open Science		Don't know			Moderately important			Ν	lumber of respondents: 191-195/197
			Unimportant			Important				
CC D S BY NC		Of little	importa	ance		Very imp	ortant			19



		Journal Impac		75%								
Which of the following does your institution use to measure the research output of researchers?	es		h-index	(						70	1%	
	sure	Field normalised c	itation index	(	39%							
		SCImago Journa	al Rank (SJR)		31%							
	) <u>{</u>		CiteScore	2		25%						
Sou	urce Nor	malized Impactper	Paper (SNIP)		9%							
			Eigenfacto	r	5%							
			Don't know	1	4%							
Research ass	sessmer	nt in the transition to		0	10	20	30	40	50	60	70	80

Number of respondents: 185/186. Multiple-choice question.

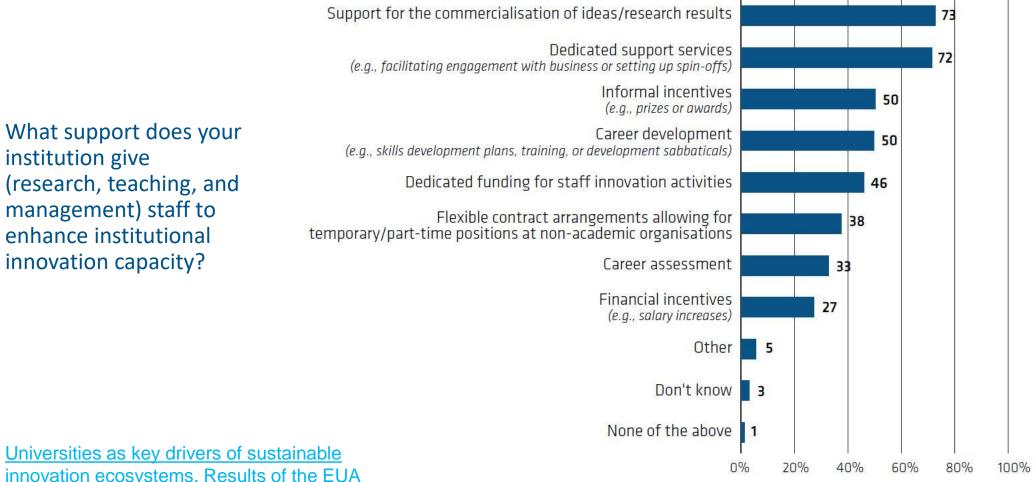
<u>Nesearch assessment in the transition to</u> <u>Open Science: 2019 EUA Open Science</u> <u>Survey results</u>

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Number of respondents: 165/166. Multiple-choice question.

innovation ecosystems. Results of the EUA survey on universities and innovation

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Reforming academic careers is a **strategic priority** for EUA (Universities without walls, a vision for 2030)

Importance of **core academic values** (e.g. research integrity, cooperation, openness, knowledge sharing)

Current **research culture does not recognise the diversity and richness** of research practices and contributions

Need to develop research assessment approaches that **focus** on the **broad range of scholarly outputs** and outcomes, including research quality potential, future impact and Open Science contributions

Universities without walls: A vision for 2030 Europe's universities shaping the future: EUA Strategic Plan

### **CHANGE IS HAPPENING**

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#### **CASE STUDY REPORT**

### Reimagining Academic Career Assessment: Stories of innovation and change

regt Saenen (EUA), Anna Hatch (DORA), Stephen Curry DORA), Vanessa Proudman (SPARC Europe) and Ashley akoduk (DORΔ)

anuary 2021

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**Tools to Advance Research Assessment** (TARA) is a project to facilitate the development of new policies and practices for academic career assessment.

 
 Dashboard
 Toolkit

 An interactive online dashboard
 A toolkit of resources informed that tracks criteria and
 by the academic community to standards academic

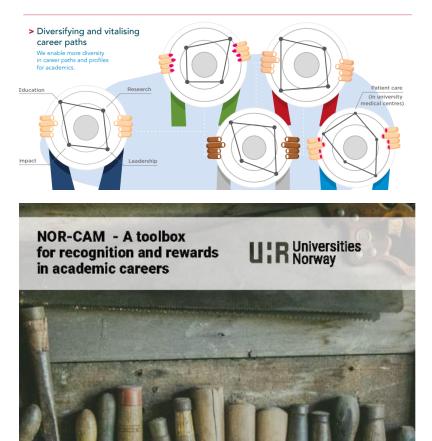
 standards academic
 support academic institutions institutions use for hiring, review, promotion, and tenure
 working to improve policy and practice.

around the world.

Survey
rmed A survey of U.S. academic
ity to institutions to gain a broad
ions understanding of institutional
and attitudes and approaches to
research assessment reform.

### Room for everyone's talent

towards a new balance in the recognition and rewards of academics



<u>Link Report</u> Link Repository



Go for open accurate, transparent, and responsible practices Focus on raising awareness, community engagement, and building capacity

Aim for institutional initiatives backed by a concerted approach





Source: Reimagining Academic Career Assessment: Stories of innovation and change



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MOre than our rank

an inorms initiative

### More Than Our Rank: EUA supports global initiative on responsible assessment systems

21 December 2022

The European University Association (EUA) is pleased to become a supporting organisation for the *More Than Our Rank* initiative, promoted by the International Network of Research Management Societies (INORMS).

*More Than Our Rank* has been developed in response to some of the problematic features and effects of global university rankings. It aims to provide an opportunity for academic institutions to demonstrate a commitment to responsible assessment and acknowledge a broader and more diverse definition of institutional success that goes beyond the results of international rankings.

### eua

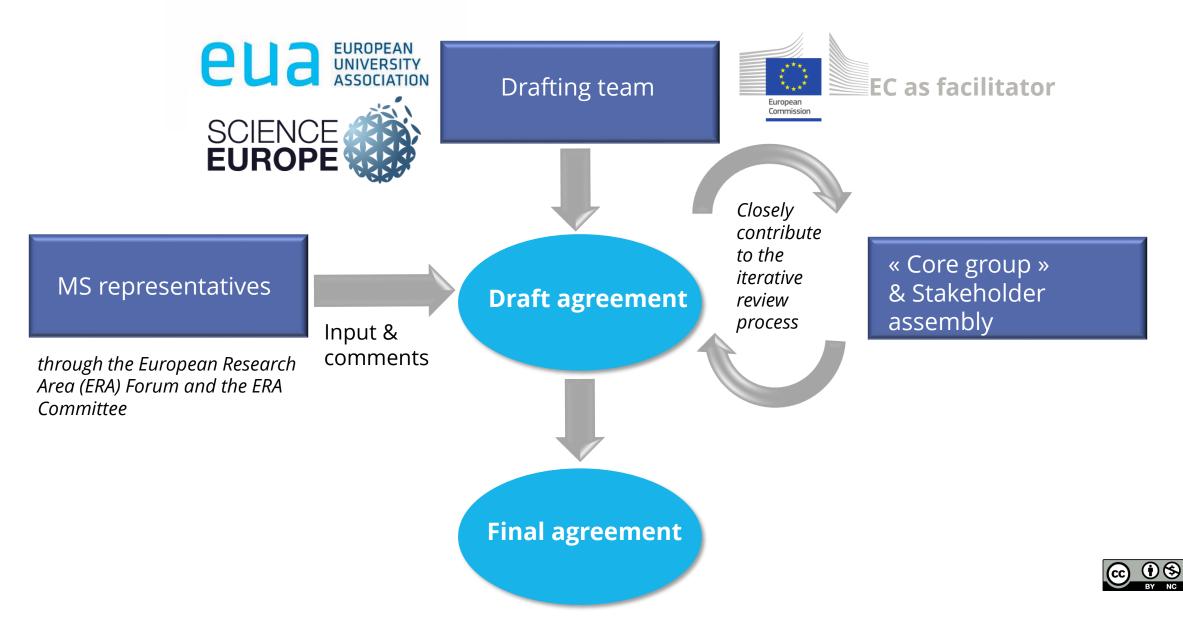
AGREEMENT ON REFORMING RESEARCH ASSESSMENT 20 July 2022

### Coalition for Advancing Research Assessment

Our vision is that the assessment of research, researchers and research organisations recognises the diverse outputs, practices and activities that maximise the quality and impact of research. This requires basing assessment primarily on qualitative judgement, for which peer review is central, supported by responsible use of quantitative indicators.

### www.coara.eu

### Drafting an Agreement, a co-creation exercise





### Universities needed to bring about change





Universities should make an informed decision on this process



Universities should be properly represented in the future coalition and its governing bodies



Only a substantial number of universities joining the coalition will guarantee that the interests of the sector are taken into account in the reform process



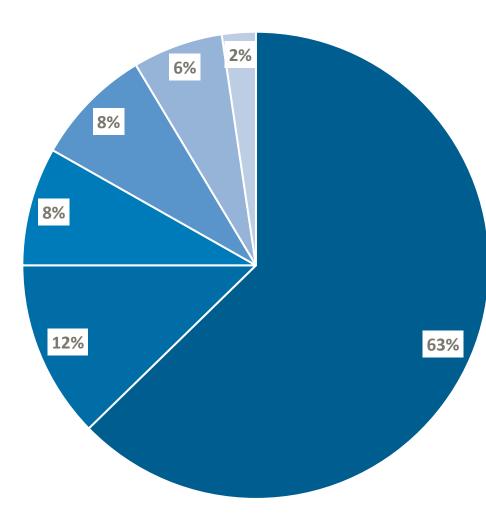
### CoARA membership by type of organisation

580 signatories

 (264 EUA members)

 512 CoARA members

(236 EUA members)



Universities and their associations

- Research centres, research infrastructures, and their associations
- Academies, learned societies, and their associations, and associations of researchers
- Public or private research funding organisations and their associations
- Other relevant non-for-profit organisations involved with research assessment, and their associations
- National/regional authorities or agencies that implement some form of research assessment and their associations

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- **Reforming Academic Career Assessment** (ACA, lead: European University Association)
- Early-and-mid-Career Researchers (EMCRs) Assessment and Research Culture (lead: Eurodoc)
- Supporting the alignment of research assessment systems with CoARA in biomedical disciplines through administrative reforms and governance (lead: Charité Universitaetsmedizin Berlin)
- Towards Open Infrastructures for Responsible Research Assessment (lead: OpenAIRE)
- Improving practices in the assessment of research proposals (lead: European Commission)
- Experiments in Assessment Idea generation, co-creation, and piloting (lead: Luxembourg National Research Fund)
- Recognizing and Rewarding Peer Review (lead: cOAlition S)
- Multilingualism and language biases in research assessment (lead: TSV)
- Responsible metrics and indicators (lead: Poznan University of Economics and Business / German Psychological Society)
- Towards Transformations: Transdisciplinarity, Applied/Practice-Based Research, and Impacts (lead: Leibniz Institute of Ecological Urban and Regional Development / Leibniz Association / Hochschullehrerbund Bundesvereinigung)

### AND... 5 first CoARA National Chapters (Italy, Norway, Poland, Ukraine & Spain)

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CoARA WG on Reforming Academic Career Assessment (ACA) "Assessment frameworks, criteria and practices for academic careers should recognise the comprehensive set of skills and activities of academics, including research, teaching and learning, and service to society. This WG will develop an adaptable toolbox addressed to higher education institutions and the academic community, considering all university missions."

**Objectives:** 

- Define the objectives and principles of reforming ACA, identifying requirements, potential benefits and challenges from the perspectives of institutions and academic staff being assessed.
- 2) Develop an adaptable toolbox for ACA, considering all university missions and the broad scope of activities, skills and competences of academic staff at different stages of their career. The toolbox will be flexible, sustainable and cater for different institutional profiles and national contexts. It will also provide room for a diversity of career focuses and trajectories.



CoARA WG on Reforming Academic Career Assessment (ACA)

- 32 partners
- Co-chairs: EUA (Pastora Martínez Samper) and the Young Academy of Europe (Moniek Tromp)
- **15 University associations/networks** (EUA-CDE, YERUN, NRCs from BE, CH, DE, ES, FR, HU, LT, NL, NO, PL,SE; Alliance of Rhine-Main Universities, Berlin University Alliance)
- **8 Individual universities** (AT, DE, FR, HR, IE, NL, PL, PT, North Macedonia)
- **3 Researchers organisations** (Eurodoc, ALLEA, GYA)
- 1 Association of research centres (EU-Life)
- 1 National/regional authority: ANVUR
- 1 association of learned societies: (TSV)
- CRAC-Vitae

### Next steps: EUA Task & Finish Group on Academic Careers



A cultural shift is required to reflect the holistic mission of universities Advisory group on reforming academic careers, building on the following dimensions:

- making academic careers less precarious and more attractive as life choices to develop and retain talents;
- promoting further **parity of esteem** between different career paths, including parity of esteem between research and teaching;
- providing more flexibility for academic careers (i.e., intersectoral mobility);
- incentivising activities with different forms of impact, including research, teaching and learning, innovation, open science, citizen science, dissemination, supervision, mentoring, management/leadership and service to society;
- using a **broader set of evaluation practices** for academic careers, which include a wide definition of impact, beyond traditional bibliometric indicators.



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### Thank you for your attention



