

The societal impact of Open Science

Prof. Jean-Pierre Finance
Chair of EUA Expert Group on Science 2.0/Open Science

Dr. Lidia Borrell-Damian
EUA Director for Research & Innovation

EUA Annual Conference, 2018

EUA's vision to support universities in their transition towards Open Science

Open Science is:

Changing the way scientific research is being conducted, accessed and utilised both by scientists and society at large

Generating new and alternative ways for researchers to conduct, publish and disseminate their research.

Open Science has an impact on the whole academic landscape as well as the whole society:

- researcher career progression
- publication quality assessment
- scientific reputation systems
- increase the quality of interactions between academia and society
- fostering political debate on science and society

As the **Open Science** movement is **gaining momentum** globally at **political, institutional and scientific** levels, it is now the time to **progress towards a more open, fair, transparent and sustainable scientific eco-system.**

EUA' Strategy to support universities in their transition towards Open Science

- EUA will aim to issue recommendations and guidelines, supporting institutions in negotiating with scientific publishers, raising awareness of the importance of Open Science for researchers and university leaders and making efforts to accelerate the transition towards a more open scientific system.
- In doing so, the effects of this transition will be closely followed up, to ensure that its benefits extend to all institutions and researchers across Europe.

**Modus operandi:
Broad Vision, Expert Input, Focused Actions**

EUA activities in Open Science

- **EUA current committees in the area (I):**
- **Supporting European universities in the transition towards Open Access and Open Science**
- **in a scholarly and cost effective way**
- **Expert Group on Science 2.0/Open Science (since 2015), members designated by NRCs (rectors, vice rectors, high-level experts – 20 members):**
 - **Implementation of EUA OA Roadmap from 2016**
 - **OA Institutional Survey : yearly design and analysis of results**
 - **Policy recommendations on Open Access to Research Publications and Research Data to institutions, EU and national governments**
 - **Input to EU Digital Agenda legislation: copyright, data base, etc.**
 - **Representing EUA in EC Open Science Policy Platform (OSPP) and European Open Science Cloud (EOSC)**
 - **Addressing the evolution of research assessment and researchers career assessment (Roadmap adopted by EUA Council April 2018!)**

- **EUA current committees in the area (II):**
- **Supporting European universities in the transition towards Open Access and Open Science**
- **in a scholarly and cost effective way**
- **High-Level Group on Big Deals (since 2016), members designated by NRCs (rectors, high-level Big Deal negotiators – 13 members):**
 - **Big Deals Survey design and analysis of result (2016, 2018)**
 - **Good practice in national negotiations ('avantgarde')**
 - **Policy recommendations**
- **Negotiators Group (since 2017), members identified by NRCs (high-level country negotiators – 30 members):**
 - **Data Share point**
 - **Good practice sharing**

EUA Roadmap on Open Access to Research Publications (February 2016)

- **List of Policy positions**

- Response of EUA to the European Commission's Communication on **Copyright** (February 2016)
- Updated EUA response to the European Commission proposal for a Directive for **Copyright** in the Digital Single Market (February 2017)
- Towards Full Open Access in 2020: aims and recommendations for university leaders and NRCs on **open access to research publications** (June 2017)
- Towards Full Open Access in 2020: aims and recommendations for university leaders and NRCs on **Research Data Management and Text and Data Mining** (October 2017)
- **EUA Statement on Open Science** to EU Institutions and National Governments (October 2017)




Response of EUA to the European Commission's Communication on copyright

12 February 2016





EUA ROADMAP ON OPEN ACCESS TO RESEARCH PUBLICATIONS

February 2016

Updated EUA response to the European Commission proposal for a Directive on copyright in the Digital Single Market

9 February 2017




Towards Full Open Access in 2020

Aims and recommendations for university leaders and National Rectors' Conferences


JUNE 2017



Towards Open Access to Research Data

Aims and recommendations for university leaders and National Rectors' Conferences on Research Data Management and Text and Data Mining

OCTOBER 2017



OCTOBER 2017

EUA Statement on Open Science to EU Institutions and National Governments

Achieving Open Access to Research Publications and Research Data Must be a Priority for Europe

Open Science holds great promise for improved scientific systems and for society as a whole. As stated in the Amsterdam Call for Action on Open Science of the EU Dutch Presidency in 2014: "Open science has impact and has the potential to increase the quality and benefits of science by making it faster, more responsive to societal challenges, more inclusive and more accessible to new users [...] Reality, however, has not caught up yet with the emerging possibilities" (p.2).

The move towards an open science system needs to be supported by developing new cultures of sharing, creating new models and infrastructures for dissemination, preservation and reuse of research results and providing adequate legal frameworks for conducting research (e.g. TDM, for teaching, and for open licences). EUA welcomes the efforts of National Governments and the European Commission in promoting these values in their national research funding schemes and in the EU Research and Innovation Framework Programme, respectively. In particular, EUA strongly supports EU policies such as [Open Access to Publications and Research Data](#), EU-wide open science platforms such as [Open@SE](#), and the upcoming creation of the European Open Science Cloud (EOSC). EUA also concurs with the principles outlined in the [EU FAIR data guidelines](#), for Findable, Accessible, Interoperable and Reusable research data. Nevertheless, much more needs to be done by governments and all stakeholders in a concerted effort.

In parallel with the efforts to persuade researchers to practice Open Science, and the need to develop new research assessment methodologies that fairly assess the scientific quality of the research outcomes independently of indirect metrics such as the journal impact factor, there is a recognition of the need to change the current publishing system, making it more transparent, cost-effective, innovative and closer to the interests of the research community and research institutions.

Regarding cost effectiveness, some studies indicate that savings can be made in the transition to an open access scholarly system (of up to 45%). An EUA study showed that subscriptions to three top publishers in 20 European countries amount to, at least, EUR 280 million per year. This conservative figure implies a potential saving of ca. EUR 170 million which could be re-allocated, for example, to research activity and/or moving towards Open Access (green, gold or other open access publishing models).

EUA has several key messages for EU Institutions and for National Governments. The messages follow the recommendations that EUA has provided to its membership based on current good practice ([Open Access to Research Publications](#), and on [Research Data Management and Text and Data Mining](#)), and are fully in line with EU policies.

1 Schimmet, R., Seuchon, K. K., & Vögler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access. doi: 10.17617/1.3. Available at: <http://dx.doi.org/10.17617/1.3>

EUA Open Access Survey

Results survey 2016/17

Questionnaire on Open Access

Key Characteristics

Focused on the degree of implementation of institutional policies on:

- Open Access to research publications
- Research Data Management
- Open Access to research data

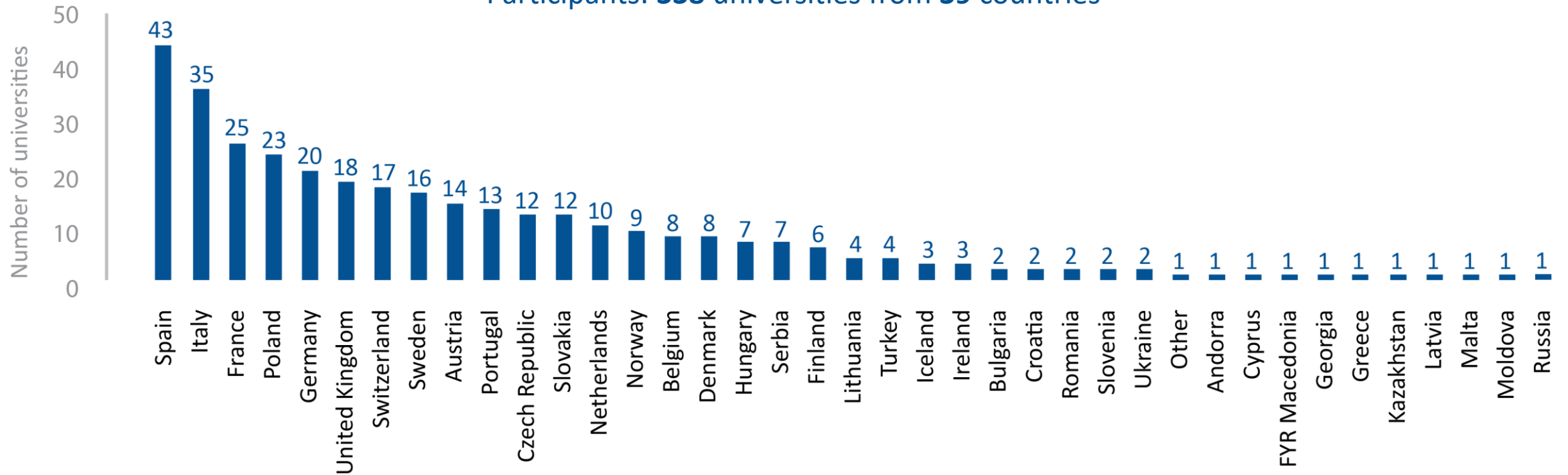
Deadline for responses: 31 March 2017

Respondents:

- 338 universities from 39 countries (2015/16: 169 institutions; 2014: 106 institutions; 100% increase compared to 2015/16)





Questionnaire on Open Access 2016/17

Participants: **338** universities from **39** countries

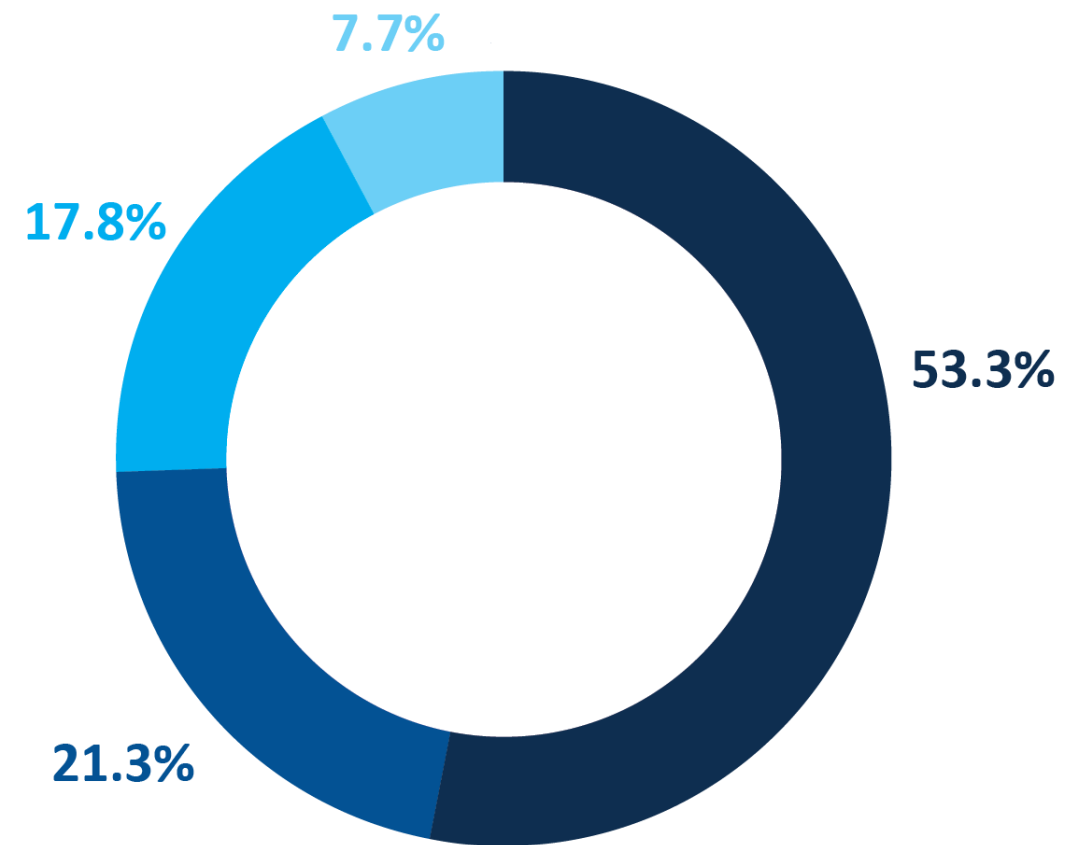


Institutional policies on Open Access





Share of institutions which have a policy of Open Access (OA) to research publications

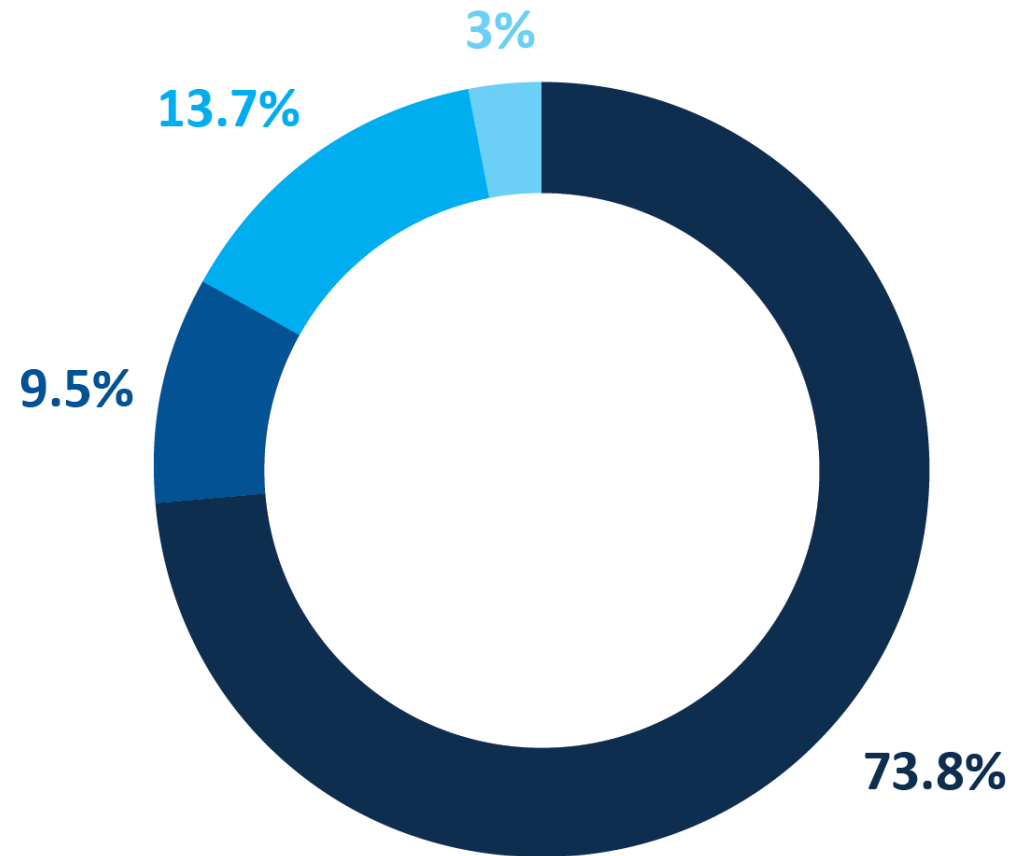
-  Yes
-  My institution is in the process of developing an Open Access policy (and expects to have one in place within 12 months)
-  My institution is planning to develop an Open Access policy (but does not expect to have a policy in place within 12 months)
-  My institution is not planning to develop an Open Access policy

Number of respondents: 338/338







Institutional repositories

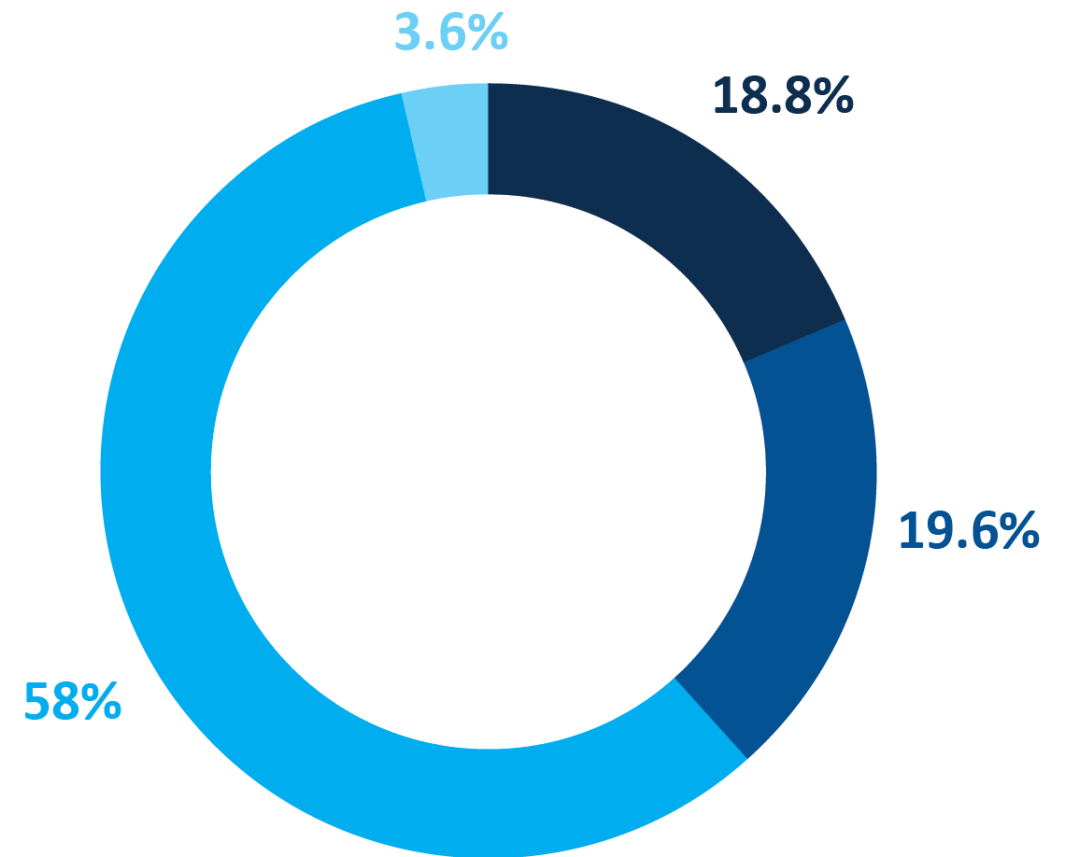
-  Yes, my institution has an institutional repository
-  Yes, my institution participates in a shared repository
-  No
-  Don't know



Number of respondents: 336/338

Existence of institutional guidelines on research data management

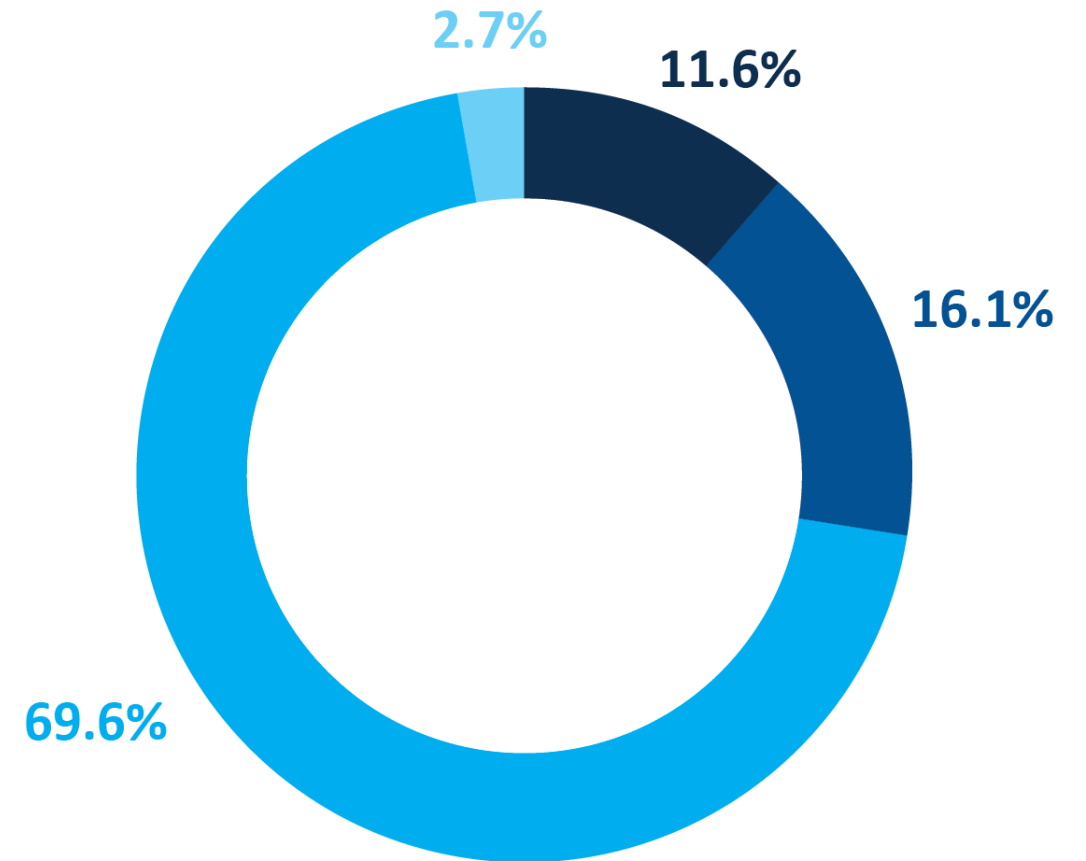
-  Yes, institutional guidelines
-  Yes, informal guidelines (guidelines not institutionally formalised, but apparent in the institutional practices)
-  No
-  Don't know



Number of respondents: 336/338

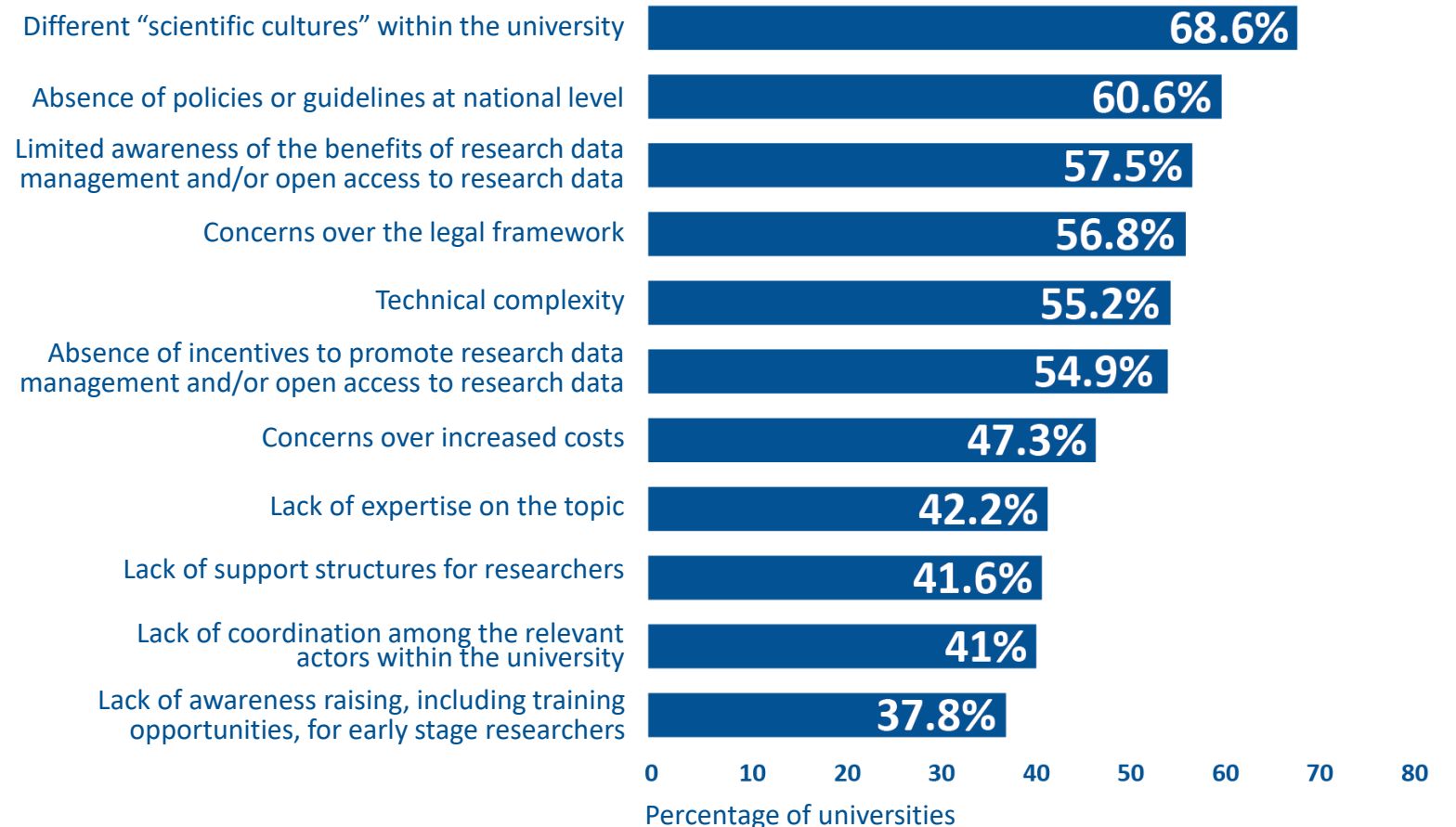
Existence of institutional guidelines on OA to research data

- Yes, institutional guidelines
- Yes, informal guidelines (guidelines not formalised, but apparent in the institutional practices)
- No
- Don't know



Number of respondents: 336/338

Main barriers at institutional level in promoting RDM and/or OA to research data



Number of respondents: 315/337.
Multiple-choice question.

EUA Statement on Open Science to EU Institutions and National Governments

October 2017

EUA Statement on Open Science to EU Institutions and National Governments

- Achieving Open Access must be a priority in Europe by:
- Developing **new cultures of sharing, creating new infrastructures for dissemination** and preservation of research results and providing adequate legal frameworks for conducting research
- **Changing the current publishing system by transforming it into a more transparent, cost-effective and innovative** one—regarding cost effectiveness, savings of up to 45% can be made in the transition to an open access system

- **EUA key recommendations to EU Institutions**

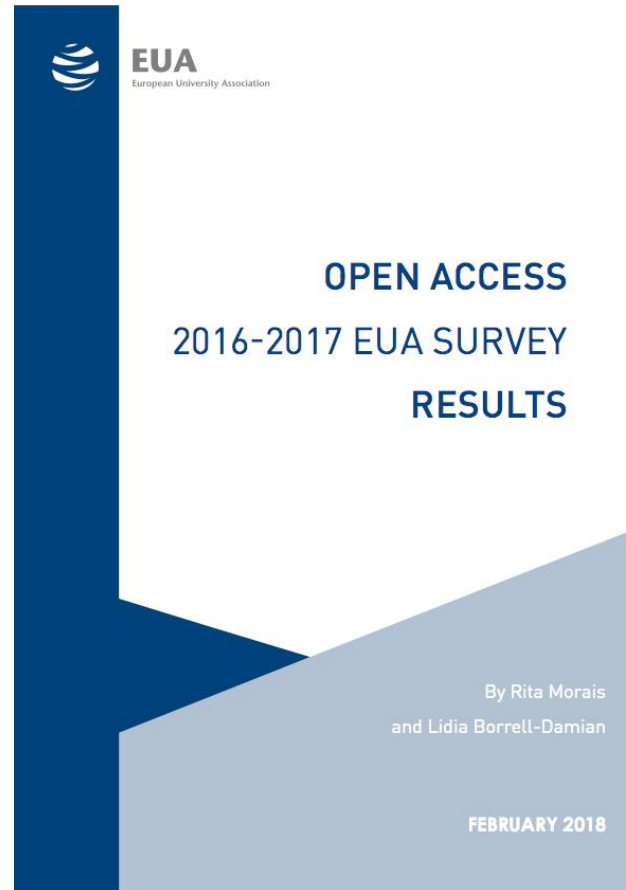
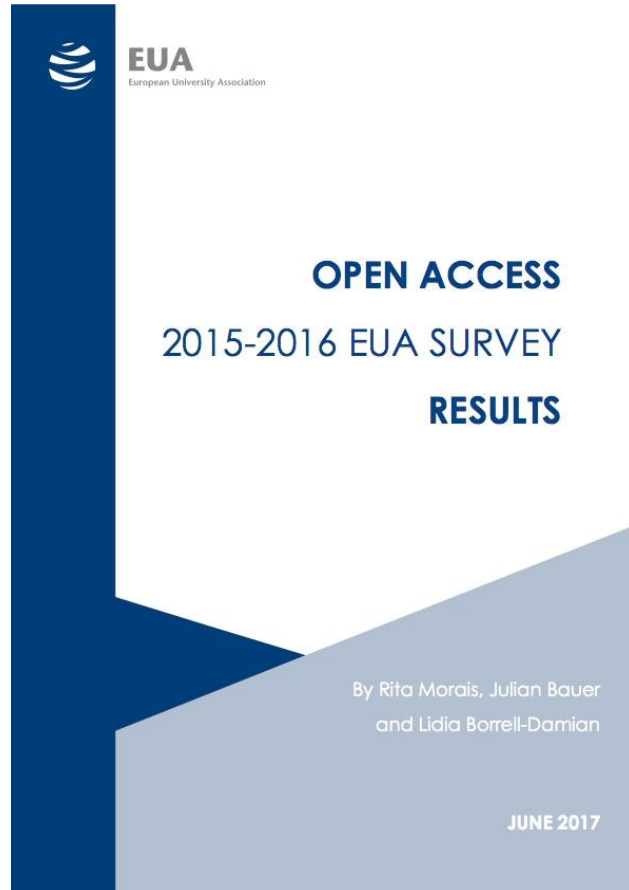
- Support the creation of new European **infrastructures** like the European Open Science Cloud and a European-wide publishing platform, which is accessible and open to all stakeholders
- **Embed Open Science in all parts of the next Framework Programme (FP9):**
- Craft a **coherent EU legislation** package that ensures lawful access, use and re-use of both research publications and research data
- Support the development and implementation of **new research assessment approaches**, e.g. through supporting pilot programmes, in dialogue with member states and stakeholders
- Ensure **easy and straightforward access to and reuse of outputs, including publications and data**, which requires supporting TDM-related e-infrastructure and tools developments.

EUA key messages for National Governments

- Ensure the **compatibility of national policies and regulations with European Union policies**
- **Incentivise researchers** to adopt open practices, including creating incentives for the publication and dissemination of high-quality articles in an OA form
- **Embed Open Science in all nationally funded research projects** in similar terms as recommended to EU institutions
- Take into account both the **gold and green routes, or other convenient routes**, to immediate OA at the date of publication
- **Provide political support for open access** to research publications and data, favouring the principles of ensuring that data should be “as open as possible, as closed as necessary”
- Take a proactive role in adopting **national legislation** that facilitates OA to research outputs (publications and data), **in line with EU Directives** including developing, modifying and/or adapting existing national regulations to ensure the lawful use of TDM

EUA data gathering

EUA Open Access Survey addressed to universities



- EUA Open Access Survey 2017-2018: open for participation until **27 April!**

Key Questions

- **Key question 1: How are institutions are taking into account Open Science (OS)?**
- **Key question 2: Mobilizing researchers**
- **Key question 3: Impact of OS in assessment**
- **Key question 4: Science and society / citizen science**

Key question 1: How are institutions are taking into account Open Science (OS)?

- **Policy and strategy in favor of OS:**

- Policy to strengthen open access to publications (research, education ..)
- Policy in favor of open access to research data based on FAIR principles (data sets are **F**indable, **A**ccessible, **I**nteroperable and **R**eusable)
- Strategy to embedded Open Science in institutional policy and regulations: reinforcing scientific integrity, research careers management, etc.

- **Implementation at institutional level:**

- Infrastructures: repositories
- Regulation to promote openness
- Job creation in Open Science

Based on your institutional and on your own experience, could you say that:

1. Currently OS is deeply transforming my institution (OA to publications? OA to research data?)
2. Currently OS is a very small part of my institution's strategy
3. My institution is progressing, in a constructive way, toward OS

Key question 2: Mobilizing researchers

- Promote the integration of new academic activities (research, teaching, managing) and methods based on OS
- Train the researchers, the teachers and the staff so that they incorporate the tools of OS

Questions:

1. How is OS being promoted at institutional level ?
2. Is it necessary to train researchers and staff to make OS more effective? How?
3. What are the obstacles to making a wider use of OS in research methods and activities?

- New methods to assess research projects, research institutions and researchers:
 - Avoiding unfair bibliometric indicators (mainly journal impact factor)
 - Taking into account various criteria
 - New peer review methods
- Impact on researcher careers

Questions:

1. Do you have examples of new methods for evaluating scientific publications, in particular using open access?
2. In your country, are the national assessment institutions (Ministry, Evaluation agency, funding agency) promoting OS? How?
3. In your institution is there an evolution in researchers' evaluation? Is there impact on the management of careers?

Key question 4: Science and society / citizen science

- “A systemic change towards open science is driven by new technologies and data, the increasing demand in society to address the societal challenges of our times and the readiness of citizens to participate in research.”
 - Amsterdam Call for Action, p. 4.
- **Citizen science** is a partnership between professional researchers and volunteers in which the volunteers implement tasks which have traditionally been implemented by scientists” (GAIA 26/1(2017): 22–26)
- **Main challenges:**
 - Strengthen the trust in science: fight against fake scientific evidence, promote values like integrity
 - Be aware of the possibilities and of the limitations of science
 - Developing crowd funding

Question:

What can we do, at institutional level, to face these challenges?

Thank you for your attention

www.EUA.eu

Lidia Borrell-Damian | Director, Research and Innovation
[@LidiaBorrellDam](https://twitter.com/LidiaBorrellDam) Lidia.borrell-damian@eua.eu