EUROPEAN UNIVERSITY ASSOCIATION

2017-2018 EUA Open Access Survey Results

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April 2019

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Acknowledgements

The authors would like to thank all the universities and higher education institutions that participated in the 2017-2018 EUA Open Access Survey. The authors would also like to acknowledge the important role of the members of the EUA Science 2.0/Open Science Expert Group for their contribution to the EUA Open Access Survey and this report. Special thanks are extended to Professor Jean-Pierre Finance, Chair of the Expert Group, for his ongoing support for the development of this report.

Preface

The publication of the results of the fourth EUA Open Access Survey coincides with the emergence of two important approaches in the construction of an Open Science environment. The first is „Plan S", signed by an increasing number of research funding organisations. The second is the development of „Publish and Read" models in negotiations with publishers by scholar negotiating consortia.

These can be considered as complementary in the sense that the first aims to rapidly expand Open Access to research publications, and the second to control the total amount of funds spent by research performing organisations, that is, universities and research institutes, to publish in and to have access to scientific journals. The need to address these two major aims concurrently is the main goal of the work of the EUA Expert Group on Science 2.0/Open Science, and more generally EUA's central objective for the future of scientific publications.

In this context, it is clear that there is a need to observe, understand and characterise the strategies of research funding organisations, most of which are universities, in the area of Open Science. The EUA Open Access Survey, therefore, is a major tool in monitoring these strategies. Indeed, with 321 respondents from 36 countries this year, and a total of 527 different institutions involved in the four editions, it is possible to observe different longitudinal trends. Notable examples include the increase in the number of deposits in institutional archives, and the difficulty universities have in monitoring and controlling the number of and costs associated with article processing charges paid each year.

In addition to the management and openness of research data, the fourth edition of the EUA Open Access Survey also introduces a first question on research evaluation methods. This is one of the critical areas to address in changing habits focused on the artificial notoriety and reputation of journals which, in turn, are based on flawed criteria such as the impact factor. Promoting good practices in research assessment among the research community is thus needed. In this vein, EUA's work is moving heavily in the direction of focusing more on research assessment in the broader framework of its Open Science initiatives.

I truly hope this report enriches readers with interesting data, and contributes to raising more awareness on the evolution of Open Access and Open Science from the perspective of universities.

Finally, I would like to express my warm appreciation to the EUA team responsible for the report for its excellent work, in particular Rita Morais and Lidia Borrell-Damian.

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

1 Introduction

Since 2014, EUA has conducted the Open Access Survey as part of its Open Science and Open Access activities, in order to support European universities in the transition towards Open Access. Each year, the survey is developed and refined by the EUA Expert Group on Science 2.0/Open Science.

This report presents the outcomes of the fourth wave of the EUA Open Access Survey, which was conducted in 2017-2018. It gathered data from 321 institutions in 36 European countries. It focussed on Open Access to research publications, research data management and research data. Questions concerning these subjects were refined in the light of the 2016-2017 survey outcomes. Additional questions on data skills were also added.

As developments in Open Science and Open Access are occurring at a fast pace, other relevant areas for universities in the transition to Open Access are also becoming more visible and relevant, namely research assessment. In this vein, the 2017-2018 EUA Open Access survey also included questions about research assessment for the first time. This is line with EUA's recent commitment to engage in the search for more accurate, transparent and responsible approaches, as stated in the EUA Roadmap on Research Assessment in the Transition to Open Science.

A longitudinal analysis of some of the key issues addressed in EUA's Open Access Surveys between 2014 and 2018 is also presented in this report. The aim is to show the evolution in the implementation of Open Access policies, the main challenges and priority actions from the perspective of European universities. It is also worth noting that more than 500 individual institutions have taken part in the EUA Open Access Survey since 2014.

The outcomes of this survey will continue to inform EUA's work on Open Access and Open Science, particularly related developments in this policy area. Specifically, EUA is keen to contribute to increasing transparency about publishing, particularly from a university perspective, through its work on Big Deals with scientific publishers. EUA has recently published a preview of the results of the latest edition of its Big Deals Survey. EUA's work on the Open Access Survey also complements its recent positions on other European-level initiatives concerning Open Access publishing, specifically Plan S. This Open Access publishing initiative was launched by an international group of research funders (cOAlition S) in 2018. In its recent response to the Plan S Consultation, EUA supported this initiative, while also expressing some concerns: that the effective implementation of Plan S requires further efforts from cOAlition S and more collaboration with stakeholders such as universities.

2 Methodology and Participants

This section describes the EUA Open Access Survey methodology and participation levels. First, it describes the 2017-2018 survey cohort methodology and participants' characteristics. Then, it presents evolutions in EUA Open Access Survey participation levels since 2014. Finally, it explains the methodology used for the longitudinal analysis of the surveys' results between 2014 and 2018.

2.1. METHODOLOGY AND PARTICIPANTS IN THE 2017-2018 SURVEY COHORT

The 2017-2018 EUA Open Access Survey comprised 34 questions groups, divided into three main sections:

- General Information (including questions about the institution and its profile)
- Institutional Policies and Strategies for Open Access to Research Publications
- Research Data Management and Open Access to Research Data

Like previous EUA Open Access Surveys, the 2017-2018 questionnaire included both open-ended and closed questions, covering a variety of topics related to institutional Open Access policies, awareness of Open Access initiatives, barriers to Open Access and potential actions to accelerate the transition towards a more open scientific system.

For the first time, the 2017-2018 survey also included questions about research assessment in the transition to Open Science. This is part of EUA's commitment to raise awareness and support universities in the development of more accurate, transparent and responsible research assessment approaches, as stated in the EUA Roadmap on Research Assessment in the Transition to Open Science.

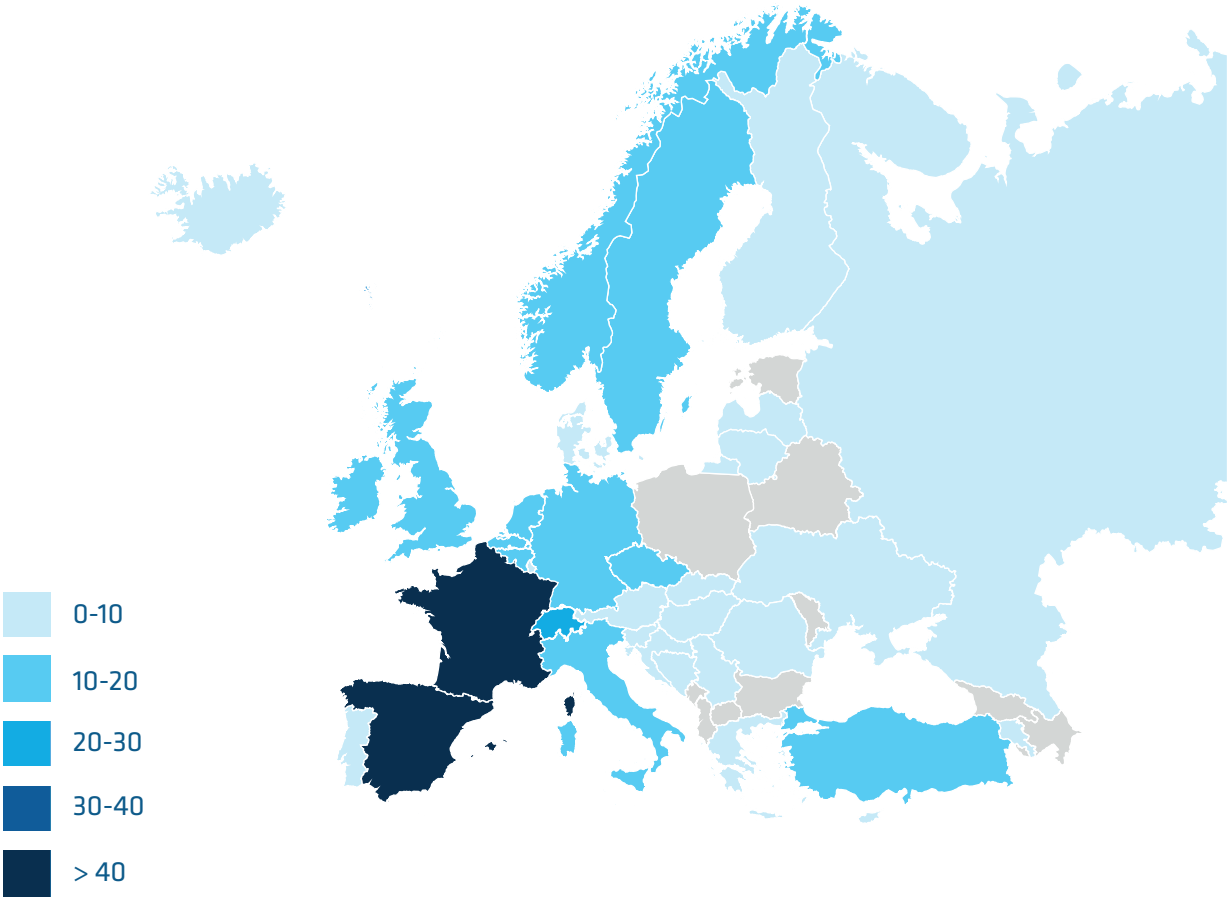
The Research Data Management and Open Access to Research Data section built on the outcomes of the 2016-2017 survey and included a wider range of questions related to research data management skills.

The survey was open from 22 February until 30 April 2018. Institutions were asked to submit a single response.

The analysis in this report is based on the responses of 321 institutions[1] from 36 European countries. The geographical distribution of responses is presented in Figure 1.

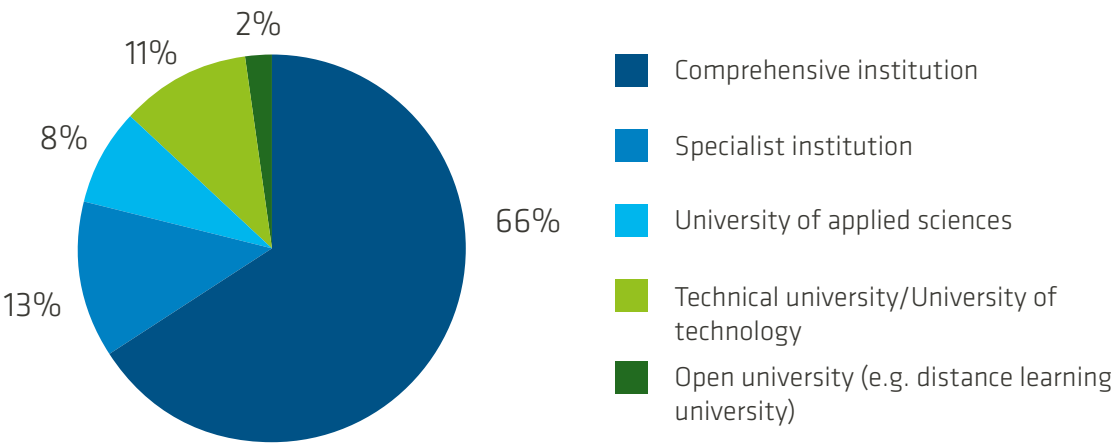
1 This figure includes nine research organisations, which were included in the final sample for analysis, as the results were identical to using the full sample.

Figure 1. Number of respondent institutions per country



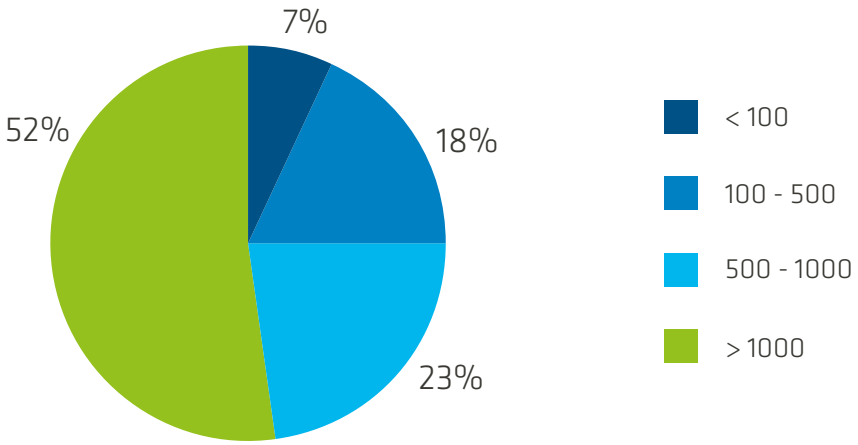
As shown in Figure 2, comprehensive institutions represent almost 70% of the sample. Specialist institutions (for example, medical or art schools) and technical universities represented 13% and 11% of the sample respectively. Over half of the institutions surveyed had over 1,000 researchers (full time equivalent) while higher education institutions with between 500-1000 researchers represented 23% of the sample, as shown in Figure 3.

Figure 2. Profile of surveyed institutions



Number of respondents: 318/321.

Figure 3. Number of researchers (FTE) at the institutions surveyed



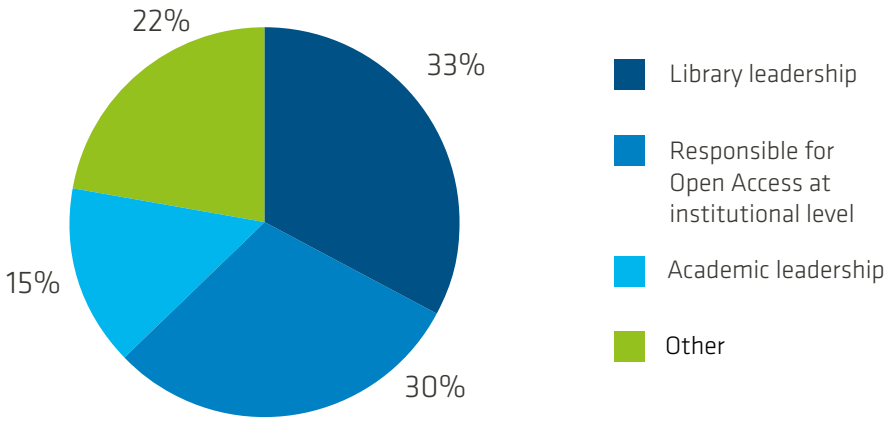
Number of respondents: 319/321.

Respondent profiles

Most survey respondents (33%) were members of the library leadership, and this category was followed closely by Open Access managers (30%), as shown in Figure 4.

Most universities that answered Other (22%) referred to other library staff (75%) or university research administration or research office personnel (17%).

Figure 4. Survey respondents



Number of respondents: 320/321.

2.2. EVOLUTION IN EUA OPEN ACCESS SURVEY PARTICIPANTS LEVELS

Table 1 shows EUA Open Access Survey participation levels since the survey began in 2014. Participation increased substantially between the first and third waves, and stabilized in the current year. The number of participating countries has also increased since 2014, contributing to a good geographical spread.

Table 1. Participation in the four waves of the EUA Open Access Survey

EUA Open Access Survey		
	Number of institutions	Number of countries
1st wave 2014	106	30
2nd wave 2015-2016	169	33
3rd wave 2016-2017	338	39
4th wave 2017-2018	321	36

Table 2 shows the number of individual institutions that took part in each Open Access Survey wave. In total, and since 2014, 527 different institutions have taken part in the survey. This represents 70% of EUA membership.

Table 2. Number of independent higher education institutions that took part in the EUA Open Access Survey

Participation	Number of individual institutions
Only in 1 wave	263
In 2 waves	142
In 3 waves	89
In 4 waves	33
Total	**527**

This survey's broad coverage (both in terms of the number of participating institutions and countries covered) therefore offers a comprehensive view of the evolution of Open Access at European universities in recent years. While the response rate is very high, it is not possible to use the results reported to generalise about other institutions due to the nature of the data (convenience sample[2]).

The current report focuses on the results of the 2017-2018 EUA Open Access Survey. A comparison with the results of the 2016-2017 survey is also provided where appropriate and relevant.

2.3. METHODOLOGY FOR THE 2014-2018 LONGITUDINAL ANALYSIS

The results of the four waves of the EUA Open Access Survey (from 2014 until 2018) were compared to gain a better understanding of the evolution of Open Access policies at European universities. A few questions were selected based on their comparability across the years in order to perform this longitudinal analysis. It therefore focuses on key issues and questions included in most of the survey waves. Where appropriate, further details about question formulation and answer scales are included (see Chapter 3).

2 Convenience sampling is a type of non-probability sampling in which participants are selected because of their accessibility or proximity to the researcher. All EUA members were invited to take part in the EUA Open Access Survey. The sample comprises participating institutions.

3 Evolutions in institutional Open Access policies, 2014-2018

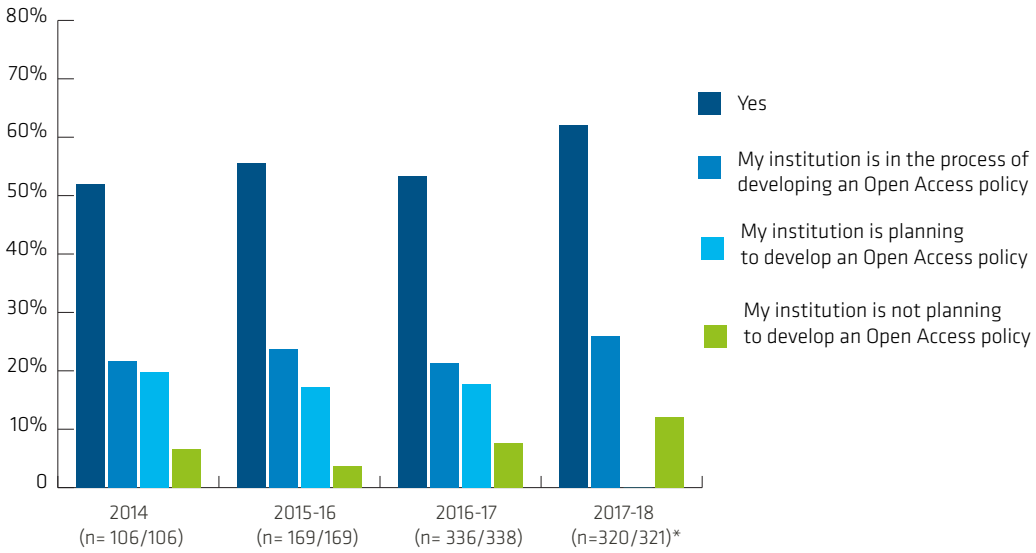
This section of the report sets out a longitudinal review of selected questions since the first EUA Open Survey in 2014.

As 171 institutions took part in the surveys conducted both in 2016-2017 and in 2017-2018, further analysis was performed taking into consideration the full 2016-2017 sample (n= 338) and institutions that only participated in 2017-2018 (n= 150, or the total of 321 institutions minus the 171 that also participated in 2016-2017).

3.1. POLICIES ON OPEN ACCESS TO RESEARCH PUBLICATIONS

Figure 5 shows that between 52% and 62% of surveyed institutions had established an Open Access policy on research publications since 2014. The proportion of institutions developing or planning to develop a policy in future remained relatively stable since 2014.

Figure 5. Does your institution have a policy on Open Access to research publications?



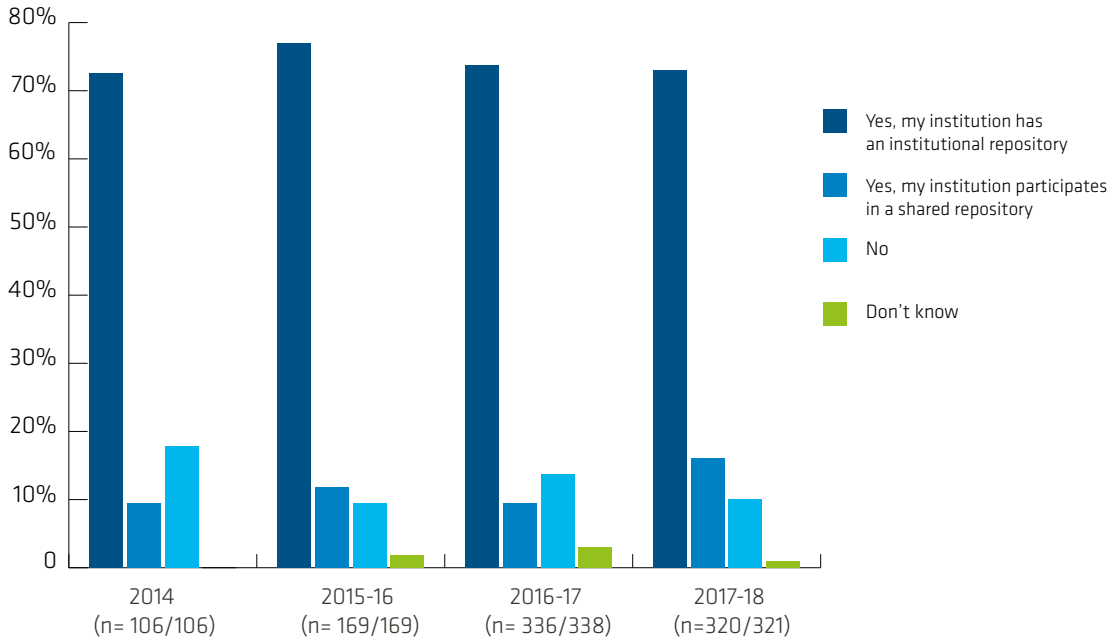
Notes: *2017-2018 answer options differed slightly from the previous survey waves: the My institution is planning to develop an Open Access policy option was not included.

Looking specifically at the 2016-2017 and 2017-2018 results (excluding any institutions that took part in both waves from the most recent cohort) reveals similar proportions of universities that have implemented an Open Access policy on research publications in both surveys 2016-2017 (53%) and 2017-2018 (57%).

3.2. REPOSITORIES AND DEPOSIT RATES

The proportion of institutions with their own repository has also remained stable since 2014 (Figure 6). The vast majority of institutions in all survey waves (72-77%,) indicated having their own repository. The proportion of institutions participating in a shared repository (10-16%) or with neither type of structure (10-18%) also remained stable, although these groups are relatively small.

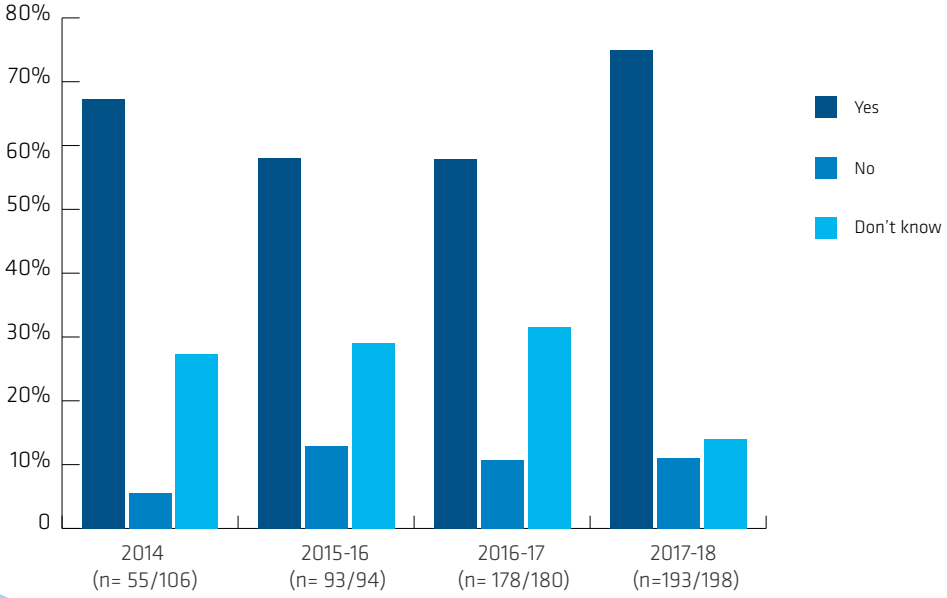
Figure 6. Does your institution have its own/a shared repository?



The same results pattern was verified in the 2016-2017 and 2017-2018 cohort comparison (excluding any institutions that took part in both waves from the most recent cohort). The proportion of universities with their own institutional repository was the highest (74% in 2016-2017 and 63% in 2017-2018). The proportion of institutions participating in a shared repository increased from 10% in 2016-2017 to 20% in 2017-2018.

Most institutions with an Open Access policy on research publications saw an increase in the number of publications deposited in their repositories (Figure 7). This increase seems to have been slightly more pronounced in 2017-2018.

Figure 7. Has the deposit rate of publications in the institution/shared repository increased?



Notes: this question only applied to institutions that answered yes to having a policy on Open Access to research publications in place.

This is confirmed when looking specifically at the 2016-2017 and 2017-2018 cohorts (excluding any institutions that took part in both waves from the most recent cohort). In 2017-2018, 74% registered an increase in deposits in their repository, against 58% in the 2016-2017 cohort.

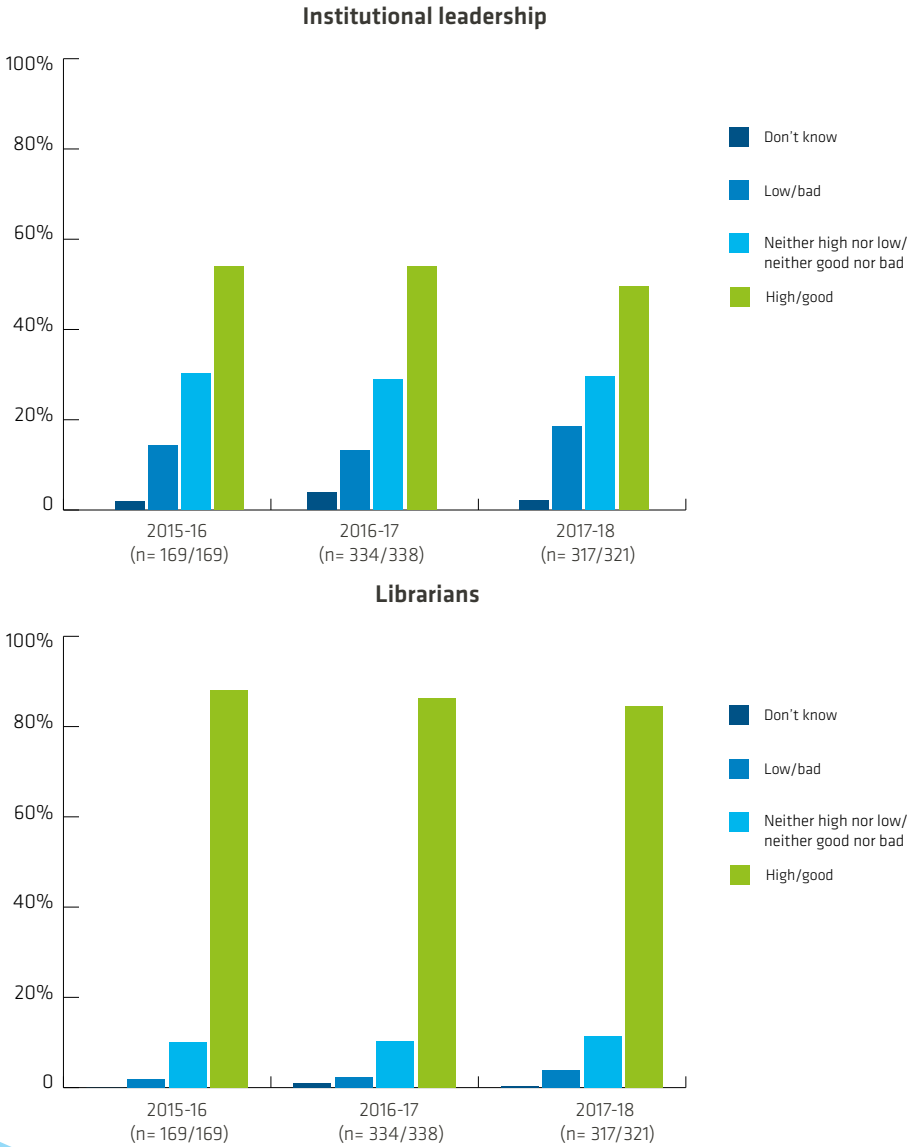
It is also worth noting that, throughout the four survey waves, many universities noted that implementing procedures to monitor repository deposit rates takes time. Therefore, it will only be possible to demonstrate any meaningful changes over a relatively long period.

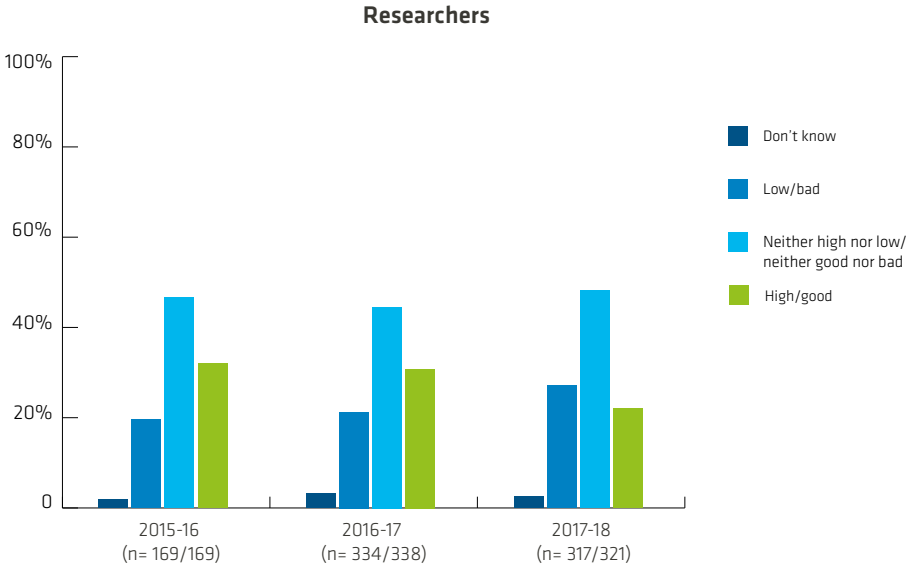
3.3. AWARENESS LEVELS

Different university professional groups' awareness of publishers' Open Access policies is presented in Figure 8.

Institutional leadership awareness of publishers' Open Access policies was rated High/good at about 50% of the institutions surveyed since 2015-2016. Over 80% of institutions considered their librarians as having High/good awareness in all survey waves. However, most institutions considered researchers as having Neither good nor bad awareness. In the three survey waves, only 22-32% of universities rated their researcher's awareness of publishers' Open Access policies as High/good.

Figure 8. Awareness of scientific publishers' Open Access policies



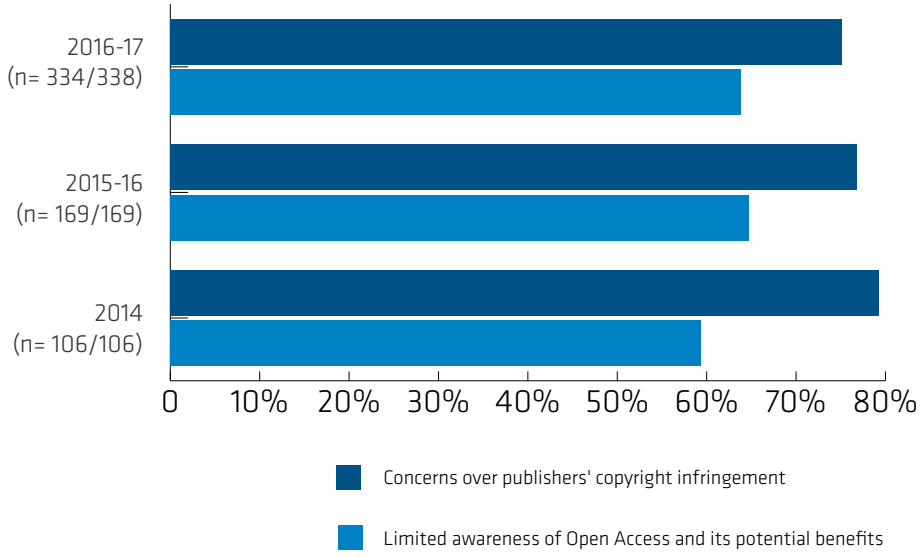


Notes: in the 2015-2016 and 2016-2017 survey waves, the answer options were: Don't know, Very bad, Bad, Neither good nor bad, Good and Very good. In the 2017-2018 survey, the answer options were: Don't know, Very low, Low, Neither high nor low, High, Very high. For the purposes of this analysis, the Very bad, and Bad categories were combined, as were the Very low and Low categories, as they were considered equivalent and included in the above charts as Low/bad. The Good and Very good categories, as well as the High and Very high categories were also combined and considered equivalent; they are included in the above charts as High/good. Results from the 2014 survey are not included in the above charts, as the answer options provided were substantially different, and not directly comparable to those in subsequent editions.

3.4. BARRIERS TO OPEN ACCESS

Two items were chosen for the longitudinal analysis of researcher concerns about self-archiving research publications at the institution's repository, as these items were identically formulated in all survey waves. Figure 9 presents the results of this comparison and shows that concerns over copyright infringement and limited awareness of the potential benefits of Open Access are very much prevalent, irrespective of the year under consideration, and have not subsided in recent years.

Figure 9. Barriers to Open Access – seen as important or frequent



Notes: 2017-2018 survey wave results were not included as the answer scale was substantially different from previous years. The 2014 and 2015-2016 survey answer scales focused on frequency (for example, Very frequent, Frequent but in

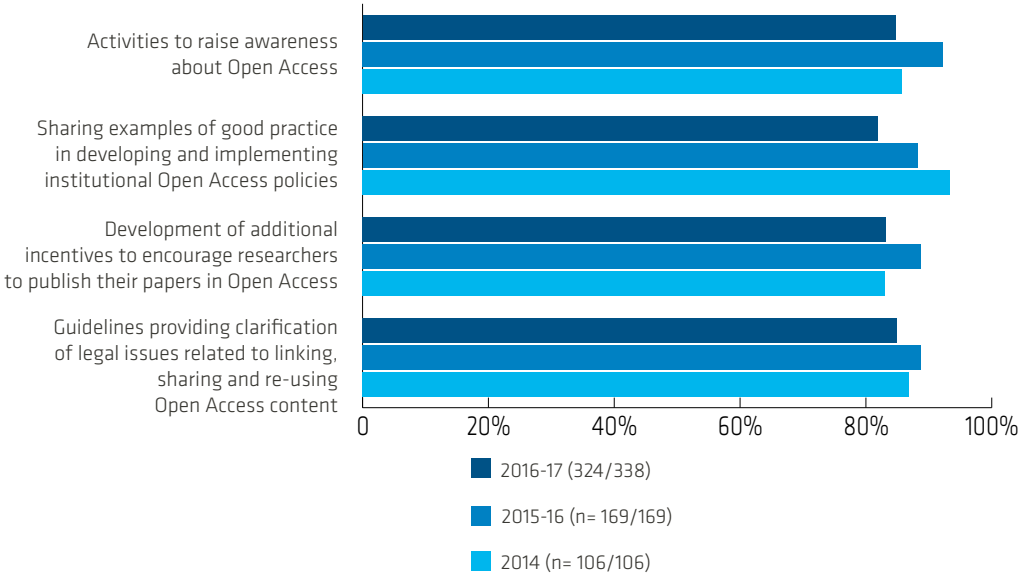
2016-2017, the answer scale focused on importance (for example, High importance). For the purposes of this analysis High importance and High frequency were considered equivalent.

In 2017-2018, the answer scale for this question was substantially different from those used in previous surveys. Nevertheless, publisher copyright infringement was still the most prevalent concern (see Chapter 4).

3.5. PRIORITY AREAS FOR OPEN ACCESS TO RESEARCH PUBLICATIONS

Figure 10 shows university views on different priority areas to promote Open Access to research publications. The 2014, 2015-2016 and 2016-2017 survey waves asked universities about how far they agreed with different European-level priority actions A very high proportion of these universities (over 80%) agreed strongly with all of the priority areas listed in Figure 10. This indicates the continuous need for these different actions at European level.

Figure 10. European level priority actions for Open Access to research publications – strong agreement



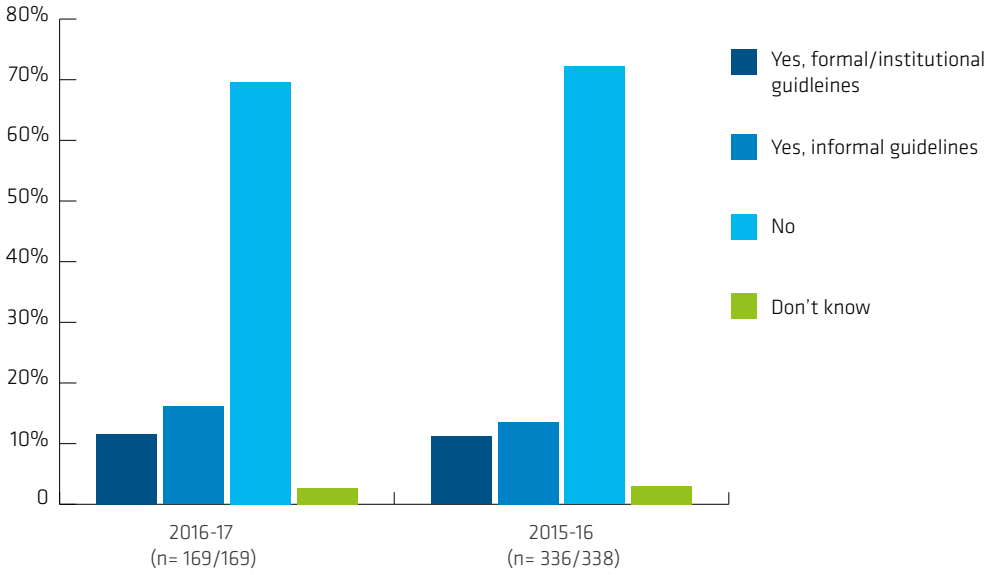
Notes: 2017-2018 survey results are not included, as the answer scale was substantially different from previous years.

In 2017-2018, universities were asked to prioritise different actions to promote Open Access to research publications, without specifying whether these would be at European or national level. The three most important priority areas identified by 79-85% of these respondents included raising awareness about Open Access, developing incentives for researchers and suitable national regulatory frameworks to facilitate Open Access.

3.6. POLICIES ON OPEN ACCESS TO RESEARCH DATA

Figure 11 shows the evolution of institutional policies on Open Access to research data between 2015-2016 and 2016-2017. In both survey waves, about 70% of institutions did not have such a policy and only between 11-16% had either formal or informal guidelines.

Figure 11. Existence of institutional policies on Open Access to research data



This question was also included in the 2017-2018 survey, albeit with a different answer scale, which included the options Yes, No, but we are in the process of developing them, No and Don't know. In the 2017-2018 cohort, 13% of the institutions surveyed indicated having this policy in place and 41% noted that they were in the process of developing one, but that the policy had not yet been implemented. Some 42% of institutions reported not having or not developing an Open Access to research data policy. This chapter focuses on the degree to which institutions have implemented Open Access policies for research publications. It covers a variety of topics, including the existence and use of institutional repositories, drivers and barriers to self-archiving, institutional awareness of Open Access and actions needed to further promote Open Access

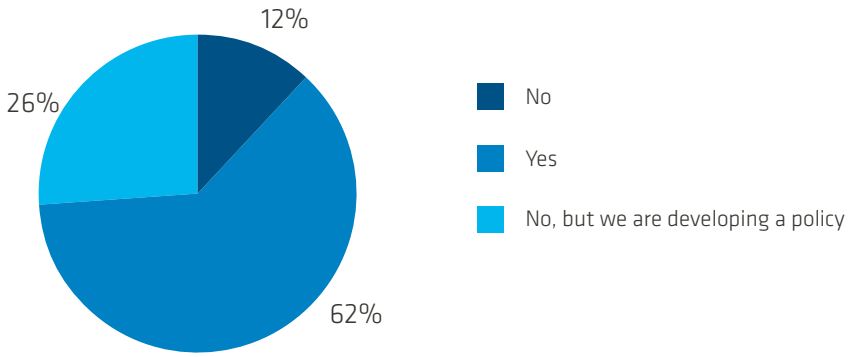
4 Open Access to Research Publications

This chapter focuses on the degree to which institutions have implemented Open Access policies for research publications. It covers a variety of topics, including the existence and use of institutional repositories, drivers and barriers to self-archiving, institutional awareness of Open Access and actions needed to further promote Open Access to research publications.

4.1. INSTITUTIONAL POLICIES

Over 60% of the institutions surveyed already had a policy on Open Access to research publications in place and just over 25% were in the process of developing one (Figure 12). Only 12% reported having no Open Access policy and not being in the process of developing one.

Figure 12. Institutional policy on Open Access to research publications



Number of respondents: 320/321.

Comparison with 2016-2017 results

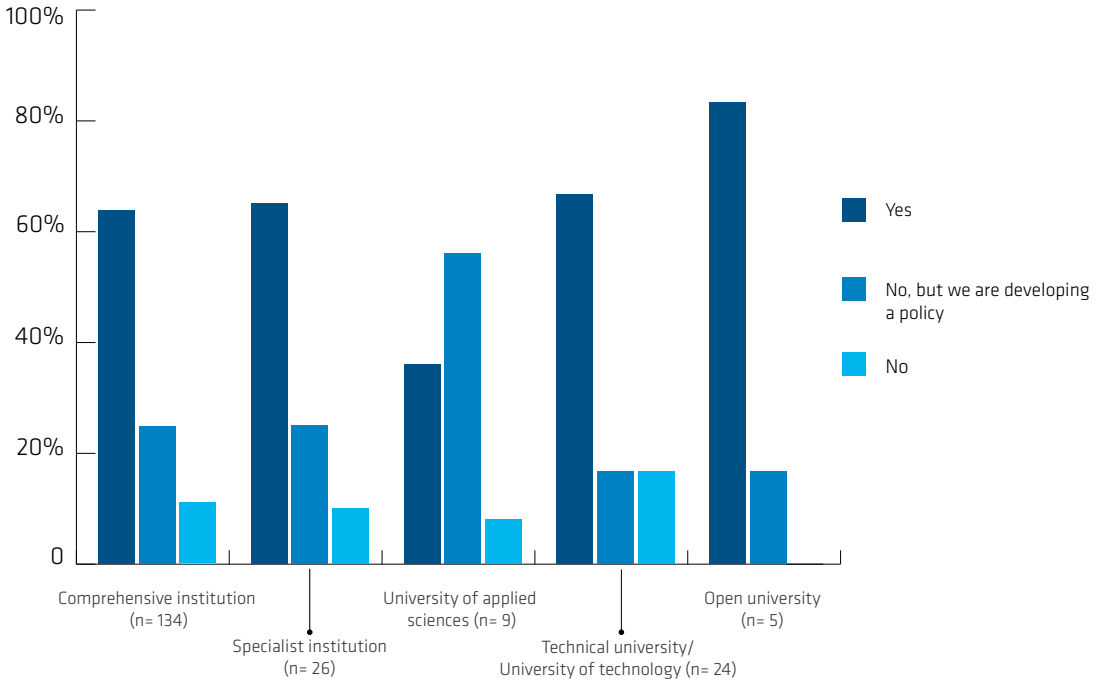
The 2016-2017 survey response options differed slightly from the current survey. However, the pattern of responses is identical. In 2016-2017, 53% of institutions had already implemented an open access policy for research publications and 21% were in the process of developing and establishing one in the next 12 months.

Relationship between institution type and the existence of a policy on Open Access to research publications

Most comprehensive and specialist institutions, as well as technical universities had an Open Access to research

publications policy, with only 10-25% of institutions in the process of developing this type of policy (Figure 13).

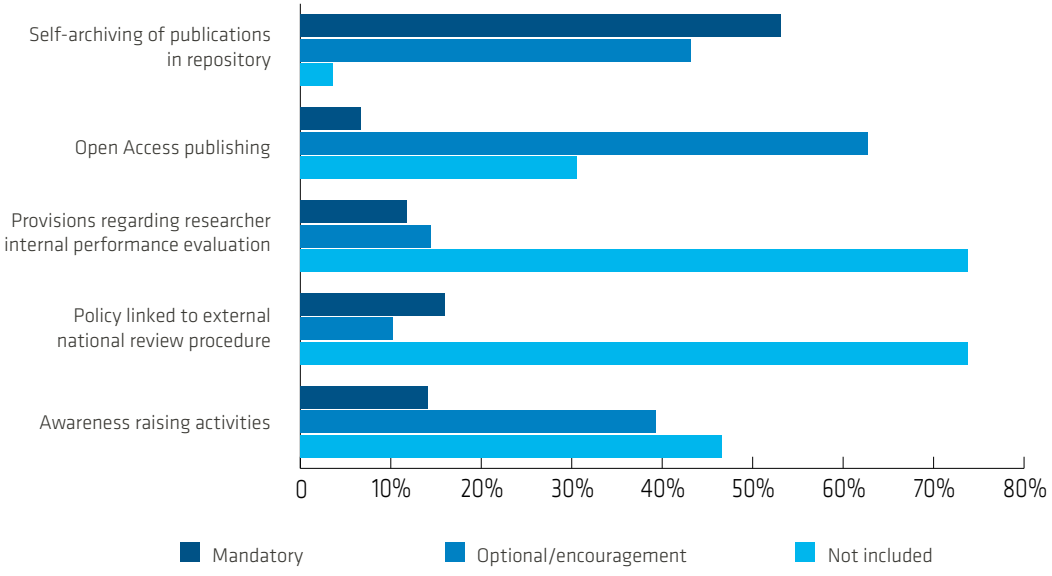
Figure 13. Institutional policy on Open Access to research publications by institution type



Elements of institutional policies on Open Access to research publications

Most institutions with an Open Access policy in place (53%) required their researchers to deposit publications in their repository, while only 43% encouraged this (Figure 14). However, publishing in Open Access journals and linking the institution's Open Access policy to internal or external evaluation exercises were seldom mandatory. In fact, most institutions (over 70%) do not include any provisions on linking Open Access to research evaluation exercises in their policy.

Figure 14. Elements of institutional policies on Open Access to research publications



Notes: this question only applies to universities that replied Yes, under Figure 12. The sub-sample for this question is 198.

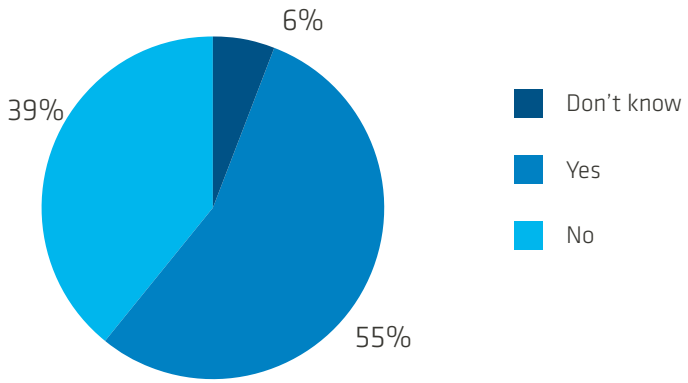
Multiple-choice question. Number of respondents 187/198.

Comparison with 2016-2017 results

Although the 2016-2017 survey response items and response options were different, a small proportion of universities had policy provisions linking research assessment and open access (about 12%). However, in 2016-2017 it was more common to simply encourage researchers to deposit their publications in the institution's repository than in 2017-2018, (60% vs. 43%, respectively). In 2017-2018, a higher proportion of institutions seem to have instructed their researchers to deposit publications in the repository (53% vs. 29% in 2016-2017), although this could be due to the different answer options included in the 2017-2018 survey.

Just over 50% of the institutions with an existing policy on Open Access to research publications have registered their repository in ROARMAP (Figure 15).

Figure 15. Institutional repositories registered in the Registry of Open Access Repository Mandates and Policies (ROARMAP)



Notes: this question only applies to universities that replied Yes under Figure 12. The sub-sample for this question is 198. Number of respondents: 196/198.

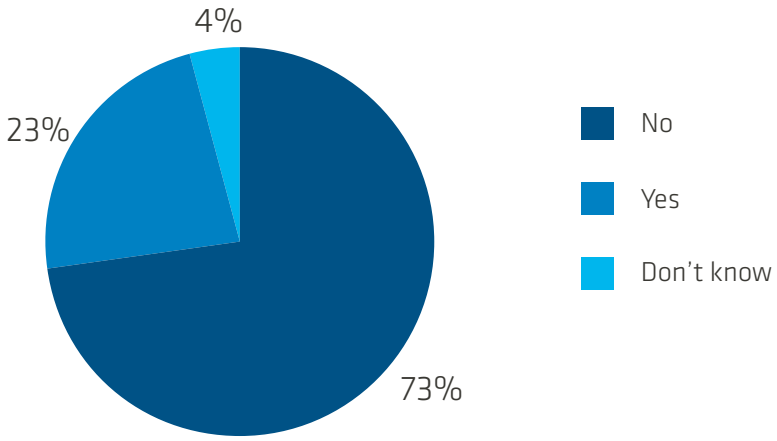
Comparison with 2016-2017 results

2017-2018 and 2016-2017 results show a very similar pattern: in 2016-2017, 60% of the institutions with an open access policy on research publications had registered their policy in ROARMAP.

Open Access targets

Importantly, and despite the fact that most surveyed institutions had implemented an Open Access policy on research publications, 73% had not defined specific Open Access targets or timelines (Figure 16).

Figure 16. Existence of specific Open Access targets and timelines



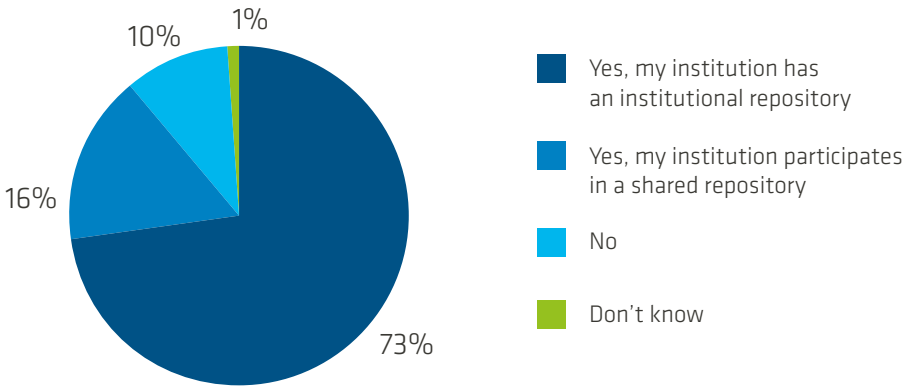
Number of respondents: 320/321.

4.1.1. Repositories and deposit rates

This section includes information about the existence and use of institutional repositories, and participation in the OpenAIRE portal[1].

Figure 17 shows the proportion of surveyed institutions with their own repository or that participate in a shared repository. Over 70% of universities have their own repository and 16% use a shared repository. The OpenAIRE portal aggregates 65% of institutions' own or shared repositories (Figure 18).

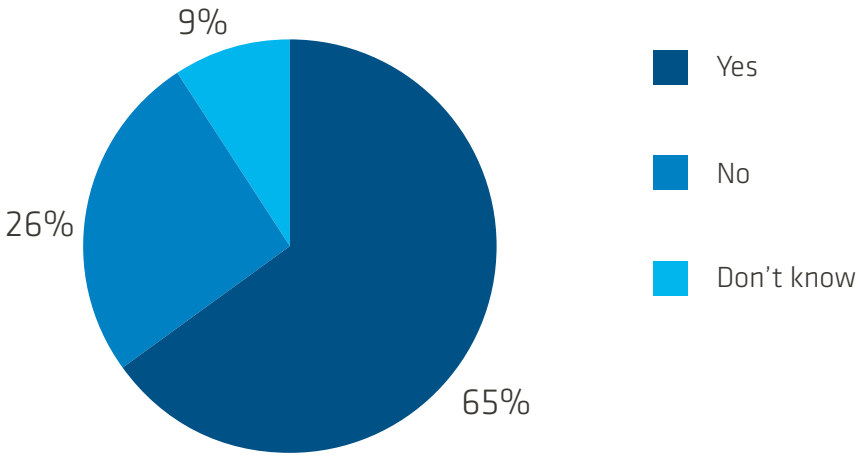
Figure 17. Existence of the institution's own/a shared repository



Number of respondents: 320/321.

1 According to the OpenAIRE website, "OpenAIRE is a European project supporting Open Science. On the one hand OpenAIRE is a network of dedicated Open Science experts promoting and providing training on Open Science. On the other hand OpenAIRE is a technical infrastructure harvesting research output from connected data providers. OpenAIRE aims to establish an open and sustainable scholarly communication infrastructure responsible for the overall management, analysis, manipulation, provision, monitoring and cross-linking of all research outcomes."

Figure 18. Institution's repository aggregated by the OpenAIRE portal/infrastructure



Notes: this question only applies to universities that replied Yes, institutional repository or Yes, shared repository under Figure 17. The sub-sample for this question is 284. Number of respondents: 280/284.

Comparison with 2016-2017 results

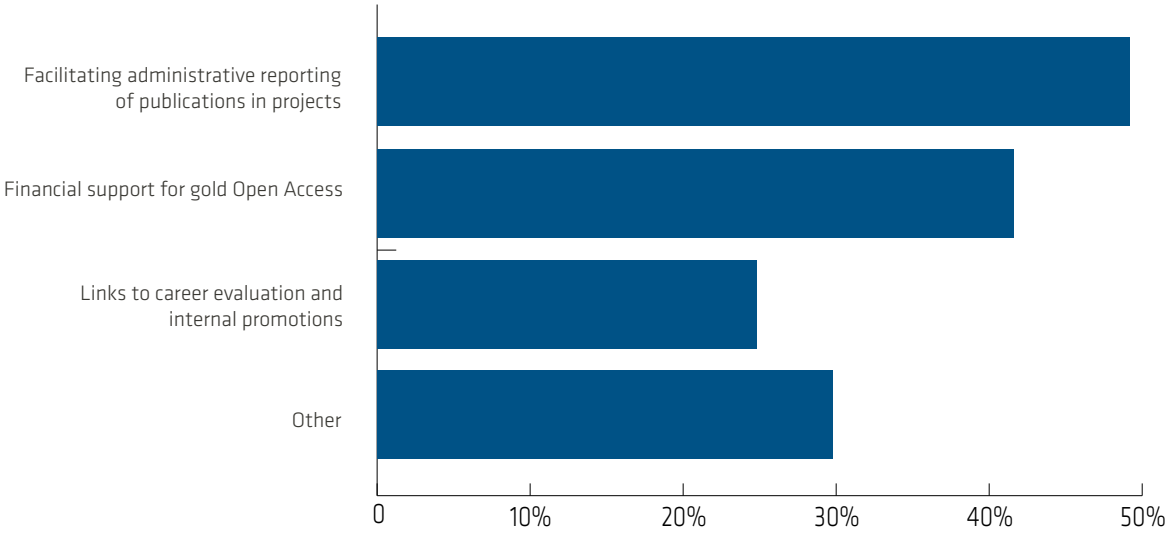
The 2016-2017 survey results were broadly similar to those of 2017-2018. In 2016-2017, 74% of universities had their own repository and 10% participated in a shared repository. However, the number of institutions that did not have their own or participate in a shared repository decreased slightly in 2017-2018, with the results showing10% as opposed to 14% in 2016-2017.

The proportion of institutions with repositories aggregated in the OpenAIRE portal were identical in 2016-2017 and 2017-2018 (65%).

4.1.2. Drivers of and barriers to researcher self-archiving

In order to encourage researchers to deposit their publications in the institutional repository or to publish in Open Access journals, most institutions report trying to facilitate administrative reporting of publications in projects and provide financial support for Open Access publishing (Figure 19). The Other category includes a variety of situations, such as awareness raising and training activities, copyright advice, increasing visibility of researchers' publications on campus and online. However, many institutions also indicated not providing any type of incentive for their researchers to publish Open Access or to deposit their publications in the repository.

Figure 19. Incentives for researchers to self-archive or publish in Open Access

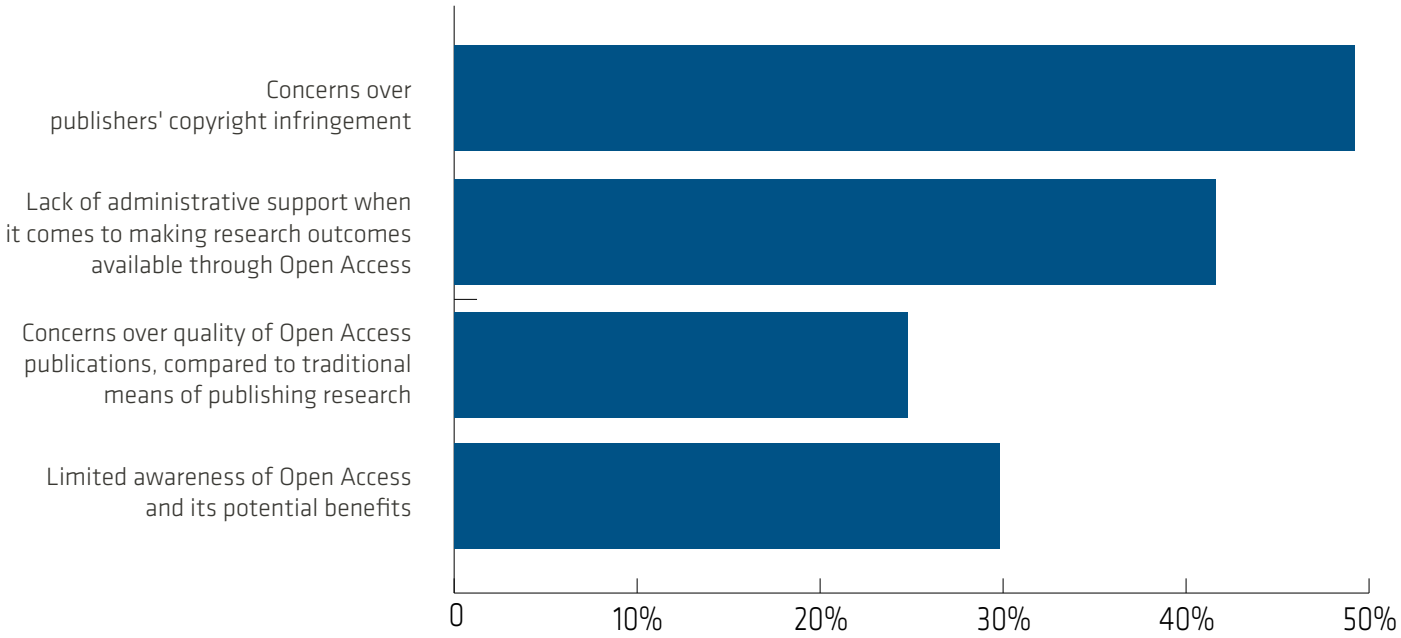


Researchers' concerns about self-archiving

Note: multiple-choice question. Number of respondents: 321/321.

Most institutions considered concerns over publishers' copyright infringement to be researchers' main concern (32%) about self-archiving publications in a repository, followed by the lack of administrative support and concerns over the quality of Open Access publications, (which both scored 25%), (Figure 20).

Figure 20. Researchers' concerns about self-archiving publications in a repository (green route/green Open Access)

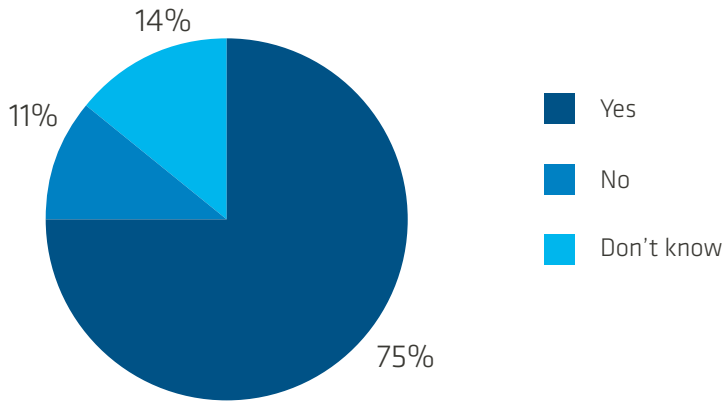


Note: multiple-choice question. Number of respondents: 318/321.

4.1.3. Institutional monitoring of Open Access to research publications

Following the adoption of an Open Access policy on research publications, 75% of these universities reported an increase in the number of publications deposited in the repository (Figure 21).

Figure 21. Increase in the publication deposit rate at the institution/shared repository following adoption of an institutional policy on Open Access to research publications



Notes: this question only applies to universities that replied Yes under Figure 4. The sub-sample for this question is 198. Number of respondents: 193/198.

Comparison with 2016-2017 results

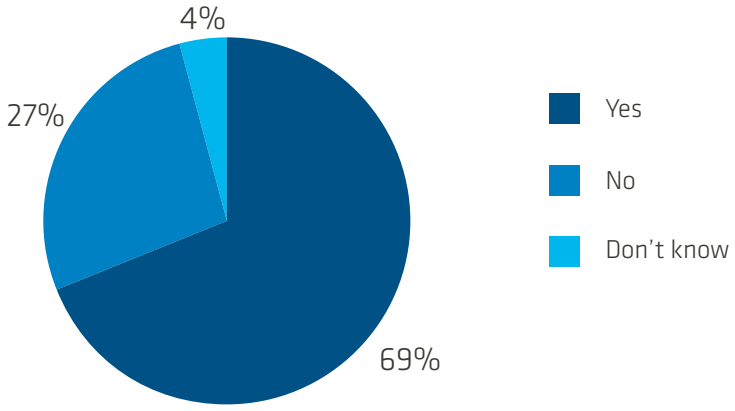
TIn 2016-2017, 56% of institutions with an open access policy indicated that repository deposit rates had increased since adopting the policy. However, about 31% indicated that they did not know whether or not there had been an increase. This figure fell to only 14% in 2017-2018. In both 2016-2017 and 2017-2018, 11% of institutions indicated that there had been no increase in deposit rates.

Institutional Open Access monitoring mechanisms

Institutions were also asked whether or not monitoring mechanisms to determine the number of researcher publications in both repositories and Open Access journals were in place. The results are presented in Figures 22 and 23. While almost 70% of institutions reported monitoring the number of publications in the repository, only 43% indicated monitoring publications in Open Access journals. It is worth highlighting the fact that less than 33% of the universities surveyed reported monitoring the cost of publications by their researchers in Open Access journals, i.e. Article Processing Charges (see Figure 24).

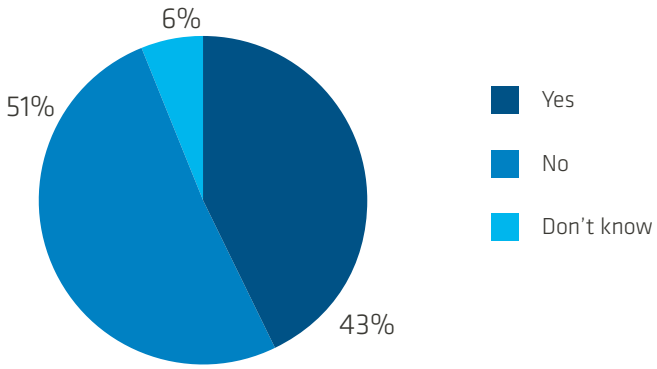
EUA work in this area, specifically the most recent Big Deals Survey, obtained a similar pattern of results: a large number of the consortia negotiating Big Deal contracts across Europe currently do not monitor Article Processing Charge costs.

Figure 22. Monitoring the number of publications deposited in the repository (green Open Access)



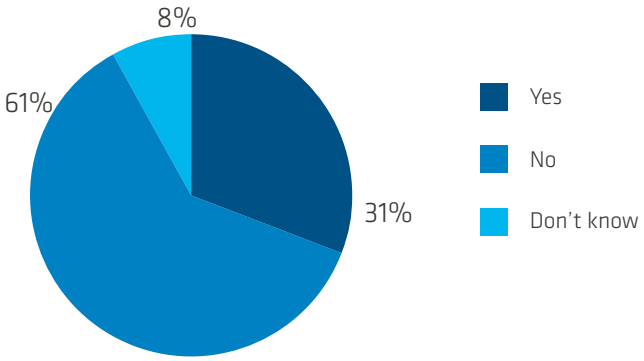
Number of respondents: 320/321.

Figure 23. Monitoring the number of publications published in Open Access journals (gold Open Access)



Number of respondents: 319/321.

Figure 24. Monitoring the cost of publications published in Open Access journals



Number of respondents: 320/321.

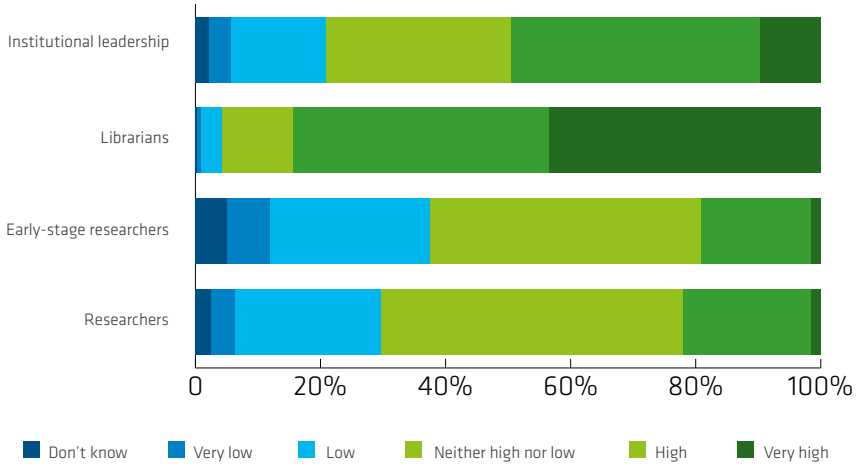
4.2. INSTITUTIONAL AWARENESS OF AND FINANCIAL SUPPORT FOR OPEN ACCESS

The survey included questions about different groups' awareness of different Open Access aspects, namely institutional leadership, librarians, early-stage researchers (for example, doctoral candidates, post-docs) and researchers (for example, faculty).

Level of awareness of publishers' Open Access policies

Librarians and institutional leaders were seen as having the best awareness of publishers' Open Access policies (Figure 25). 85% of institutions considered librarians awareness as High or Very high and 50% of universities gave institutional leadership the same score. However, this figure dropped 22% for researchers and 19% for early-researchers.

Figure 25. Different university populations' awareness of scientific publishers' Open Access policies

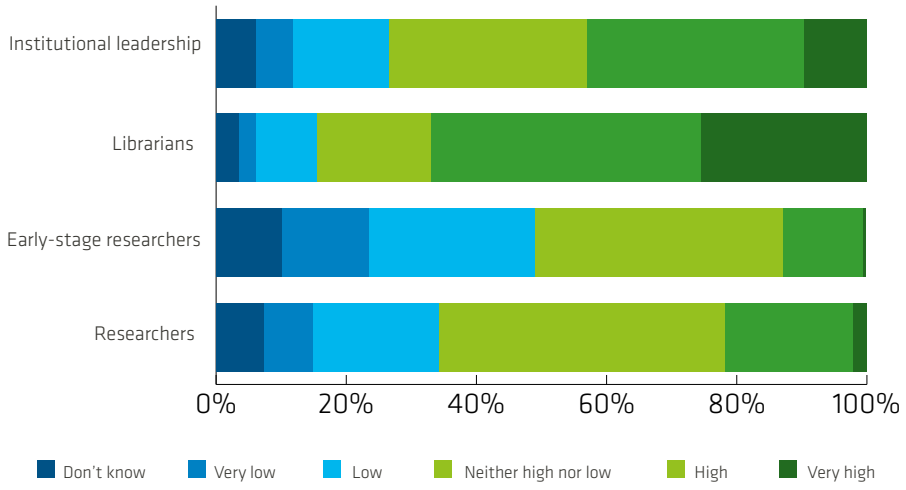


Notes: number of respondents: 317/321, except for institutional leadership 318/321. Early researchers means doctoral candidates and post-docs and Researchers means faculty and other research professionals.

Level of awareness of Horizon 2020 Open Access rules

Survey results showed a similar pattern of awareness of Horizon 2020 Open Access rules (Figure 26). Early-stage researchers and researchers were considered to have lower levels of awareness: only 19% and 22% of institutions considered that these groups had High or Very high levels of awareness respectively. These figures contrast with the 67% of institutions that considered librarians to have High or Very high awareness of these rules, and the 43% stating the same opinion of their institutional leaders.

Figure 26. Awareness of the Open Access rules defined in Horizon 2020 - the current EU framework programme for research and innovation



Notes: number of respondents: 318/321, except for early-stage researchers and researchers 316/321. Early researchers means doctoral candidates and post-docs and Researchers means faculty and other research professionals.

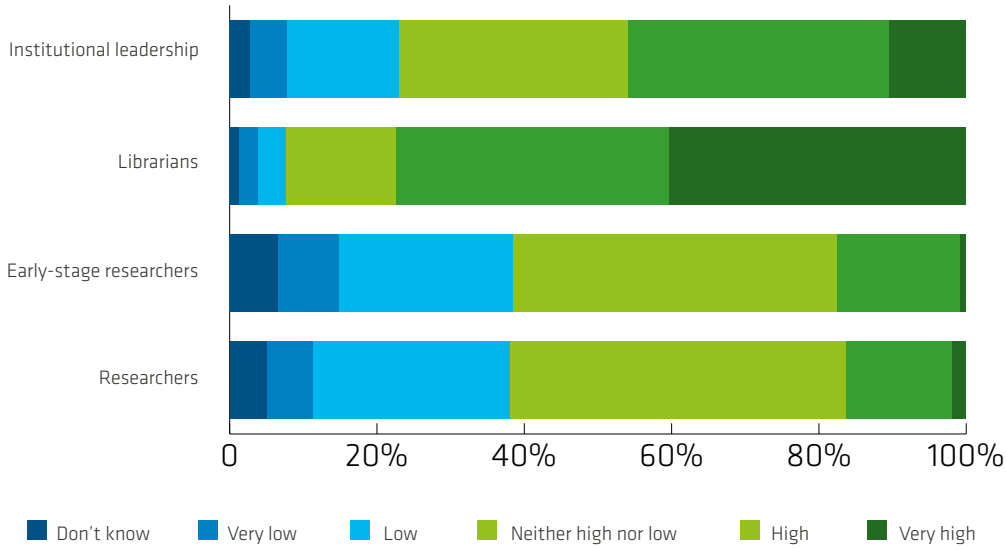
Comparison with 2016-2017 results

The 2017-2018 results are consistent with the results of the 2016-2017 survey. In 2016-2017, librarians and institutional leaders were considered most knowledgeable about publishers' open access policies (86% of universities considered librarians awareness to be Good or Very good while institutional leaders scored 54% in these categories) and Horizon 2020 open access rules (for example, 66% indicated librarians awareness of these was Good or Very good and 47% gave institutional leaders the same rating). This figure dropped to around 30% for early-stage researchers and researchers' awareness of both publishers' open access policies and Horizon 2020 open access rules.

Level of different institutional communities' engagement in Open Access

Institutions were also asked about their perception of different groups' engagement in Open Access activities (Figure 27). Only 18% and 16% of institutions respectively felt that early-stage researchers and researchers had a High or Very high level of engagement in Open Access activities. This figure increased to 77% for librarians and 46% for institutional leadership.

Figure 27. Engagement level in Open Access activities at the institution

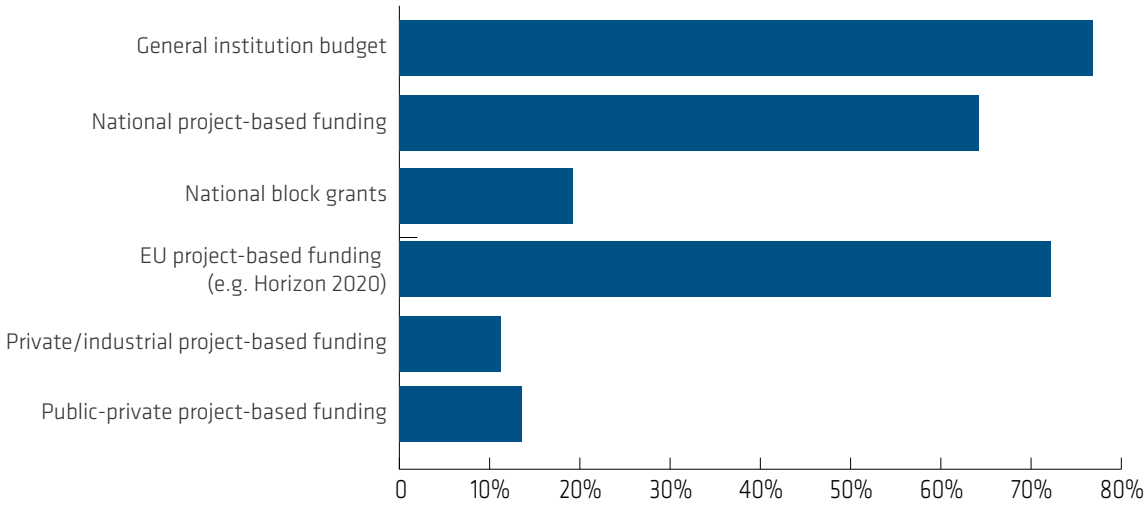


Notes: number of respondents: 318/321, except for librarians: 319/321. Early researchers means doctoral candidates and post-docs and Researchers means faculty and other research professionals.

Financial support for Open Access to research publications

Most institutions indicated that financial support instruments for Open Access (Figure 28) were mainly provided from both the university's general budget (77%) and EU project funding (72%). National-based project funding was also available and used by 64% of institutions.

Figure 28. Sources of funding for Open Access to research publications



Number of respondents: 318/321. Multiple-choice question.

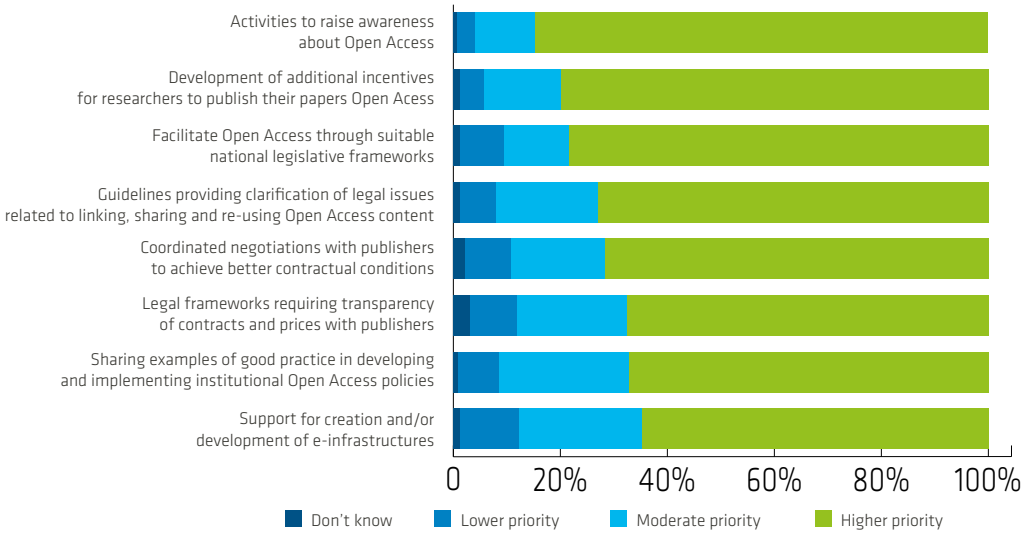
Comparison with 2016-2017 results

Although the 2016-2017 response options for this question were slightly different to those available in 2017-2018, the General institution budget, European and national funding were also the most common open access funding sources (60-67%).

4.3. PRIORITY AREAS FOR PROMOTING OPEN ACCESS TO RESEARCH PUBLICATIONS

Institutions were asked to prioritise different actions to promote Open Access to research publications (Figure 29). Raising awareness about Open Access, developing incentives for researchers and suitable national regulatory frameworks were the three most important actions to facilitate Open Access identified by 79-85% of universities.

Figure 29. Open Access to research publication priorities



Number of respondents: 317/321.

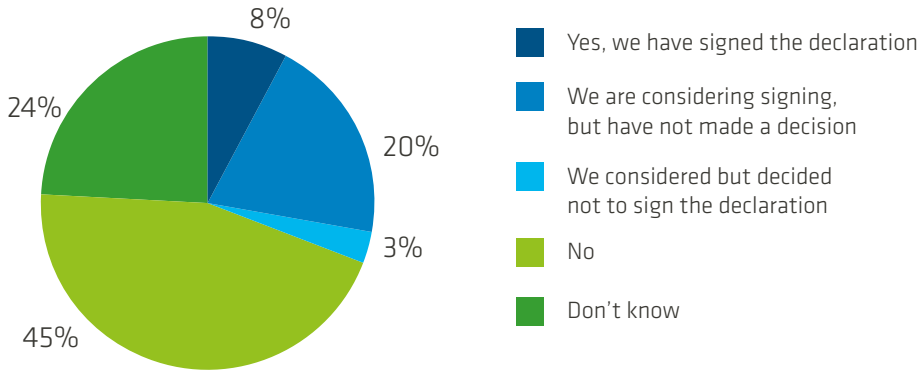
Comparison with 2016-2017 results

The 2016-2017 survey included a different set of priority actions and asked universities to prioritise actions at both national and European levels. In 2016-2017, Developing additional incentives for researches to publish their work in open access, the Existence of guidelines providing clarification on legal issues and Awareness raising activities were considered as very important by between 38-55% of institutions, both at national and European levels. However, these results are not directly comparable to those of 2017-2018, as both the questions used and the answer options were different.

4.4. RESEARCH ASSESSMENT

The 2017-2018 EUA Open Access Survey series asked universities about research assessment for the first time. The survey question focused on whether universities had signed the San Francisco Declaration on Research Assessment (DORA). The results are shown in Figure 30.

Figure 30. University positions on the DORA declaration



Number of respondents: 320/321.

Only 8% of the institutions surveyed reported having already signed the DORA declaration, while 20% were considering but had not yet signed it. Nearly 50% of the universities surveyed indicated that they had not signed this declaration and almost 25% answered that they were unaware if DORA had been signed. The high Don't know rate was probably due to the respondents' positions: most were library managers or the person responsible for Open Access at institutional level, and they may not have been so knowledgeable of their institution's research assessment policies.

Institutions that declared having signed DORA noted that the main steps taken to implement its recommendations included: awareness raising activities, internal promotion of DORA and the DORA principles, the establishment of university working groups dedicated to including other criteria in research assessment exercises, and removing journal impact factor criteria from internal university evaluations.

Institutions that had not signed DORA were asked whether they had taken steps to implement new research assessment methods beyond the journal impact factor. Most institutions reported that they had not yet done so and several highlighted that they are obliged to follow national evaluation rules. Several universities also indicated having initiated discussions on how to include a broader range of criteria and indicators in research assessment exercises or were already considering alternative indicators like Altmetrics. It is worth noting that DORA is not the only set of principles available to universities looking for more accurate, transparent and responsible approaches to research assessment. The Leiden Manifesto for Research Metrics is another example.

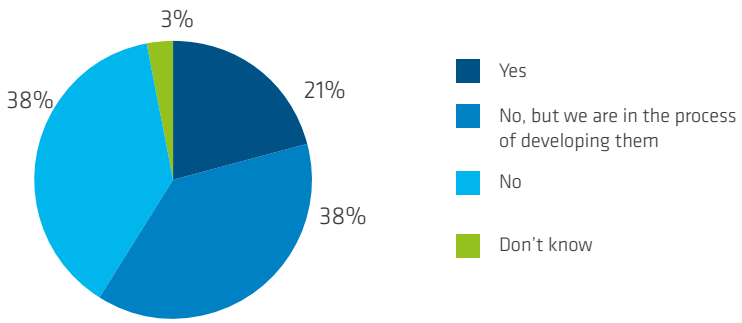
5 Research Data Management and Open Access to Research Data

The second part of the survey focused on research data management and Open Access to research data. The 2017-2018 wave included new questions building on the results of the 2016-2017 survey. This chapter focuses on the implementation of institutional policies on research data management and Open Access to research data, related infrastructure and resources, as well as barriers and priority actions needed to make further progress in these areas.

5.1. INSTITUTIONAL POLICIES AND AWARENESS

Institutional policies on research data management were in place at 21% of the surveyed institutions, while 38% were in the process of developing them. However, almost 40% said that they lacked or were not in the process of developing such policies (Figure 31).

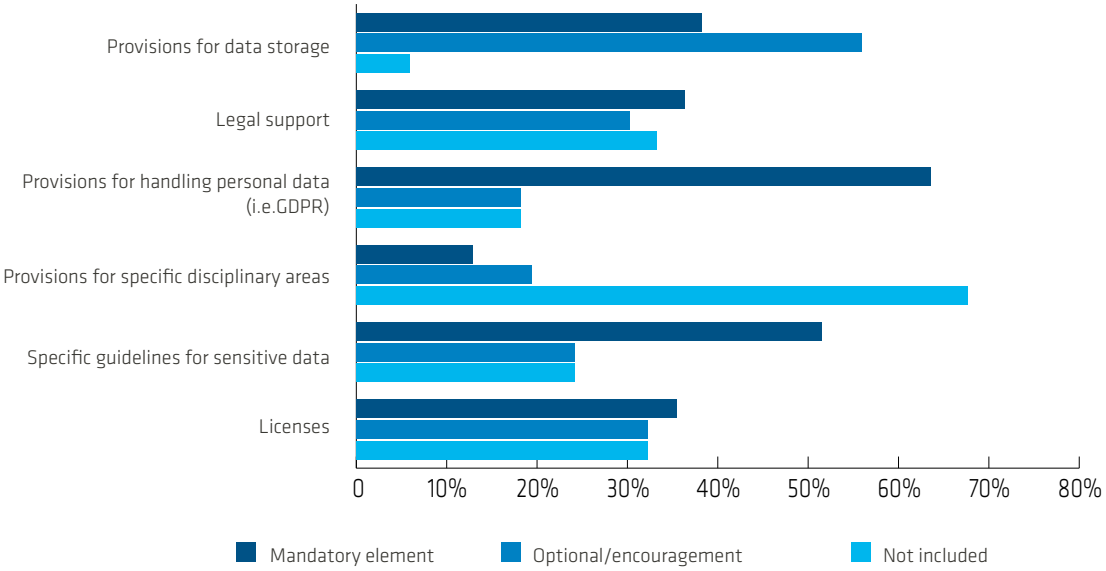
Figure 31. Existence of institutional policies on research data management



Number of respondents: 319/321.

Most universities with a research data management policy in place included compulsory provisions on personal data processing, research integrity and ethics, and guidelines for sensitive data (Figure 32). Policies also frequently included terms on data storage and legal support, but these were usually optional or simply an encouragement.

Figure 32. Elements covered by institutional policies on research data management

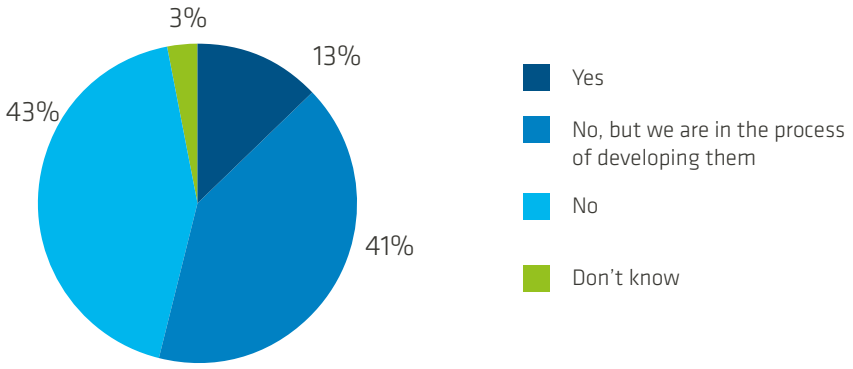


Number of respondents: 65/67. Only applies to institutions that answered Yes to having a research data management policy in place in Figure 23.

Institutions were also asked whether they had specific research data management policies for public-private research contracts. Over half (56%) of those surveyed indicated not having this type of policy and 24% reported they were considering drafting one. Only 7% indicated having specific policies for public-private research contracts in place.

Only 13% of the surveyed institutions indicated having a policy on Open Access to research data (Figure 33). About 40% were considering developing one and 43% did not have this kind of policy in place.

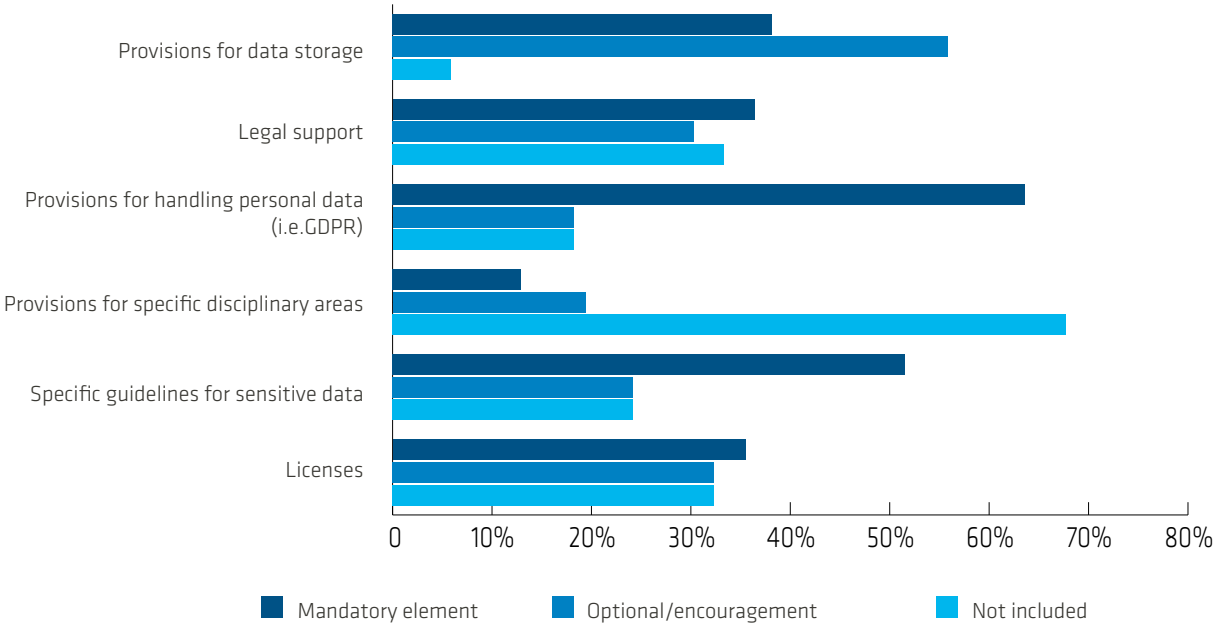
Figure 33. Existence of institutional guidelines for Open Access to research data



Number of respondents: 318/321.

The most frequent mandatory provisions at institutions with an Open Access policy to research data, included those related to personal and sensitive data processing. Data storage provisions were also frequently included in the institutions' policies, but only as an option or encouragement (Figure 34).

Figure 34. Elements included in institutional guidelines for Open Access to research data



Number of respondents: 31/42. Only applies to institutions that indicated having a policy on Open Access to research data in Figure 25.

Additionally, 60% of all surveyed institutions reported not having specific policies on Open Access to research data for public-private research contracts in place. In fact, only 4% indicated having such policies and 22% reported being in the process of considering their implementation.

Comparison with 2016-2017 results

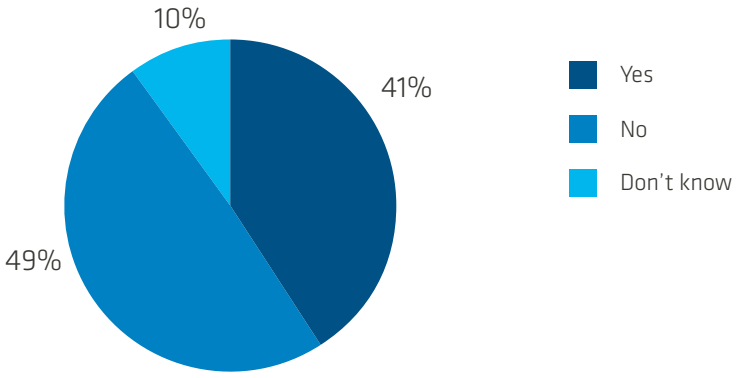
The proportion of institutions without research data management policies was much higher in 2016-2017 than in 2017-2018 (58% vs. 38%). The same was true for open access to research data: 70% of the institutions surveyed said that they did not have this kind of policy in place in 2016-17, but this figure dropped to 43% in 2017-18.

The proportion of institutions with research data management and open access to research data guidelines and policies was considerably lower than those with policies regarding open access to research publications in both survey waves.

5.2. SPECIALIST STAFF, ORGANISATIONAL STRUCTURES AND DATA INFRASTRUCTURE AT INSTITUTIONAL LEVEL

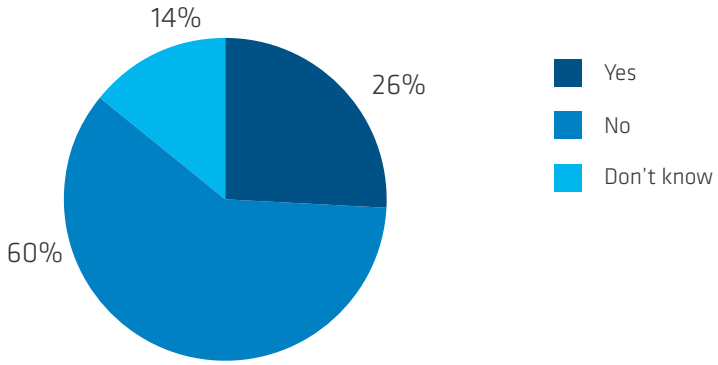
Universities were asked whether they had created specific research data management and Open Access to research data positions at institutional level. Only 41% of institutions had a Data Protection Officer (Figure 35). Other data management positions, such as data stewards, had only been established at 26% of the universities surveyed (Figure 36).

Figure 35. Existence of a Data Protection Officer



Number of respondents: 319/321.

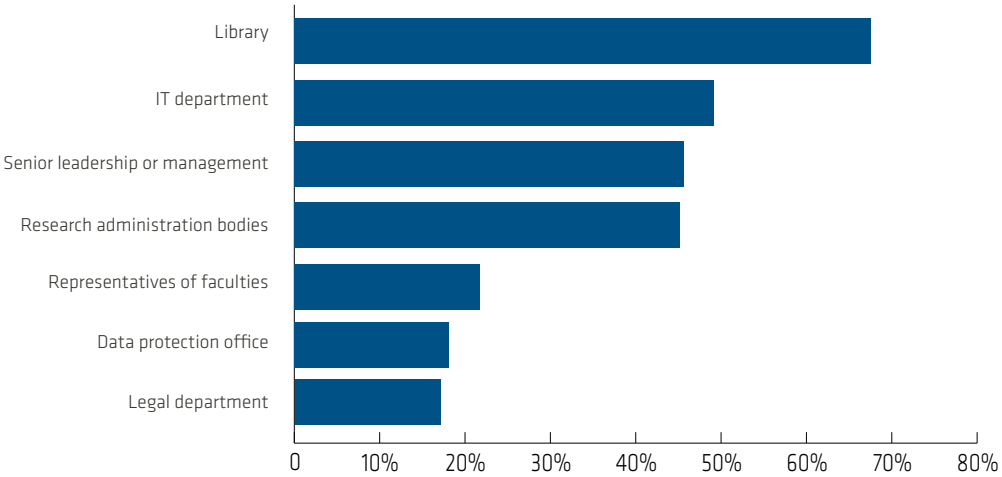
Figure 36. Creation of other data support roles



Number of respondents: 320/321.

The library is most often responsible for coordinating research data management and/or Open Access to research data (Figure 37). The IT department, senior leadership and research administration bodies are also frequently involved.

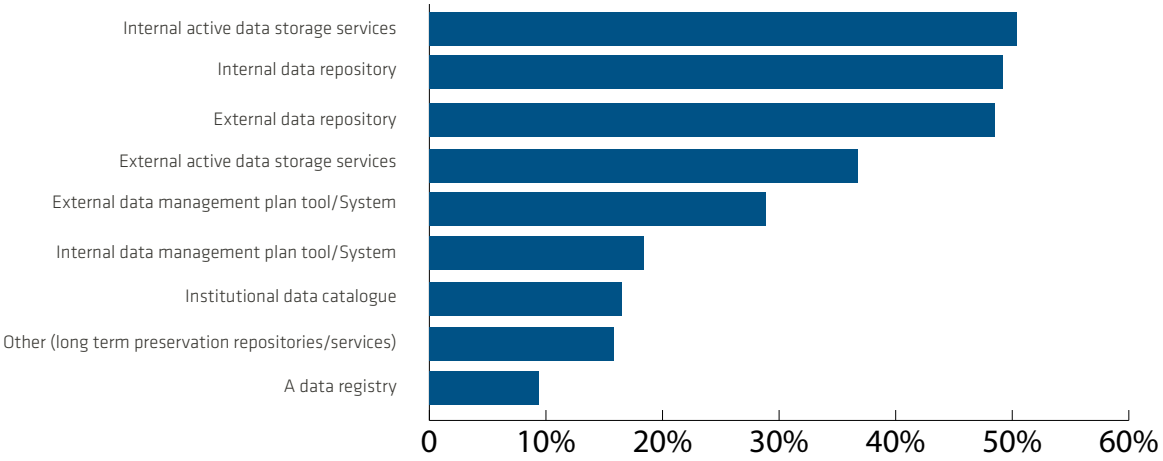
Figure 37. Groups responsible for coordinating research data management and/or Open Access to research data



Number of respondents: 319/321. Multiple-choice question.

Nearly 50% of universities use internal active data storage services, internal data repositories and external repositories (Figure 38) in research data management and as part of Open Access to research data.

Figure 38. Use of research data management and/or Open Access to research data infrastructure

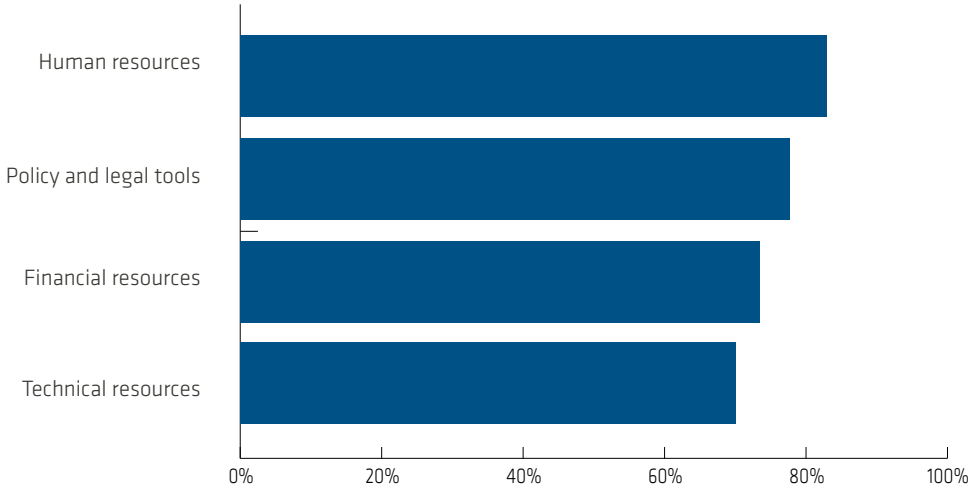


Number of respondents: 320/321.

5.3. DATA MANAGEMENT AND OPEN ACCESS TO RESEARCH DATA RESOURCES AND AWARENESS

The survey included a series of questions focusing on the resources and skills needed to further develop research data management and Open Access to research data at institutional level. Most of the institutions surveyed selected Human resources and Policy and legal tools along with Financial and technical resources as current needs (Figure 39).

Figure 39. Resources needed to streamline research data management at institutional level

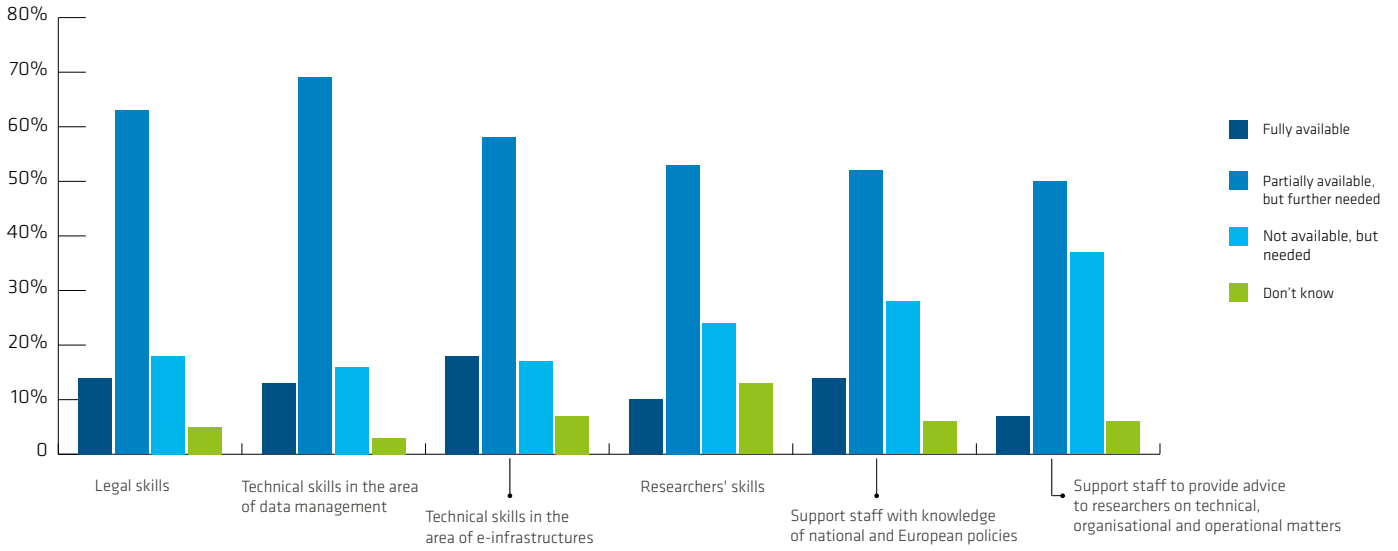


Number of respondents: 318/321. Multiple-choice question.

Availability of human resources and related skills at institutional level

Institutions were also asked about the availability of different research data management and Open Access to research data skills profiles. A large majority indicated the availability (to a certain extent) of a vast range of skills, including legal, technical, research and support staff (Figure 40), but also noted outstanding needs. In fact, only a tiny proportion of institutions indicated complete availability of the different skill profiles. Additionally, 28-37% noted the current absence and further need for support staff with knowledge of national and European policies, and for support staff to provide advice to researchers.

Figure 40. Availability of the different skills needed to further develop research data management and Open Access to research data

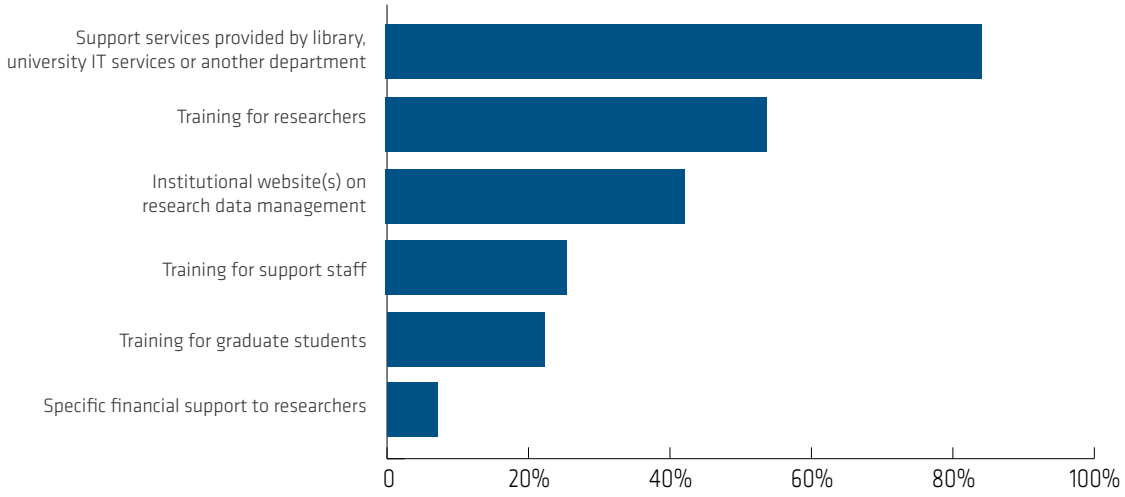


Number of respondents: 312/321.

Support for researchers

Institutions also provide specific support services to researchers interested in Open Access to research data (Figure 41). Most institutions (84%) provide support services through the library or IT department and 56% provide specific training for researchers. However, training for support staff and graduate students is much less prevalent, at 26% and 22%, respectively. Financial support for Open Access to research data is seldom reported (7%).

Figure 41. Institutional support for researchers interested in Open Access to research data

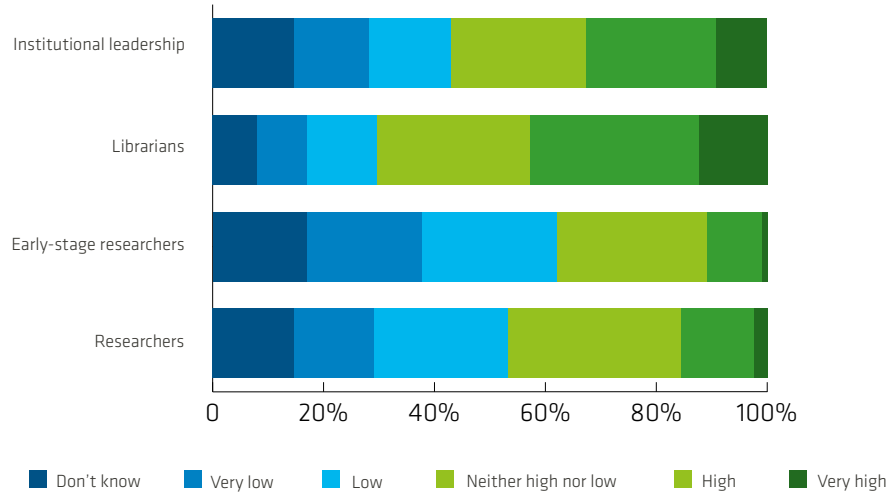


Number of respondents: 317/321. Multiple-choice question.

Awareness of the Horizon 2020 Open Research Data Pilot

Awareness of the Horizon 2020 Open Research Data Pilot was generally viewed as modest in all groups (Figure 42). Librarians and institutional leaders were considered to have the best knowledge of this topic (43% and 33% ranked High or Very high respectively). These figures dropped to 11% and 16%, respectively, for early-stage researchers and researchers.

Figure 42. Awareness of the current EU Framework Programme for Research and Innovation Horizon 2020 Open Research Data Pilot (including ERC grants)

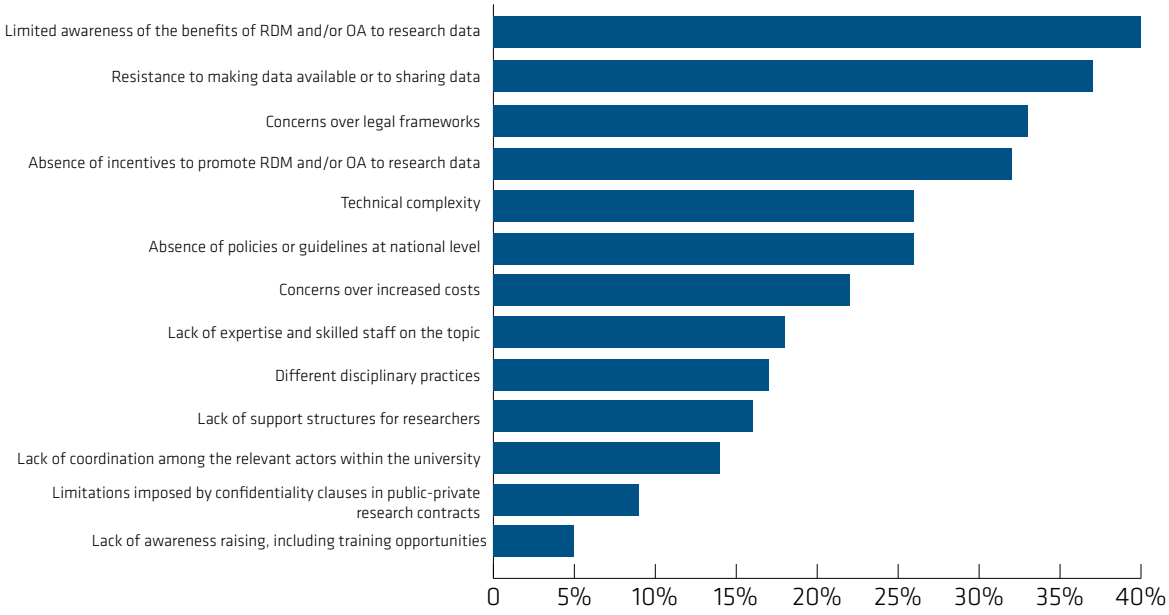


Number of respondents: 312/321.

5.4. BARRIERS TO INSTITUTIONAL RESEARCH DATA MANAGEMENT AND OPEN ACCESS TO RESEARCH DATA

Institutions identified a wide range of barriers to research data management and Open Access to research data (Figure 43). The most prevalent challenges included limited awareness, resistance to making data available and sharing data, concerns over the legal framework and the absence of incentives to promote research data management and Open Access to research data.

Figure 43. Institutional barriers to promoting research data management and/or Open Access to research data



Number of respondents: 317/321.

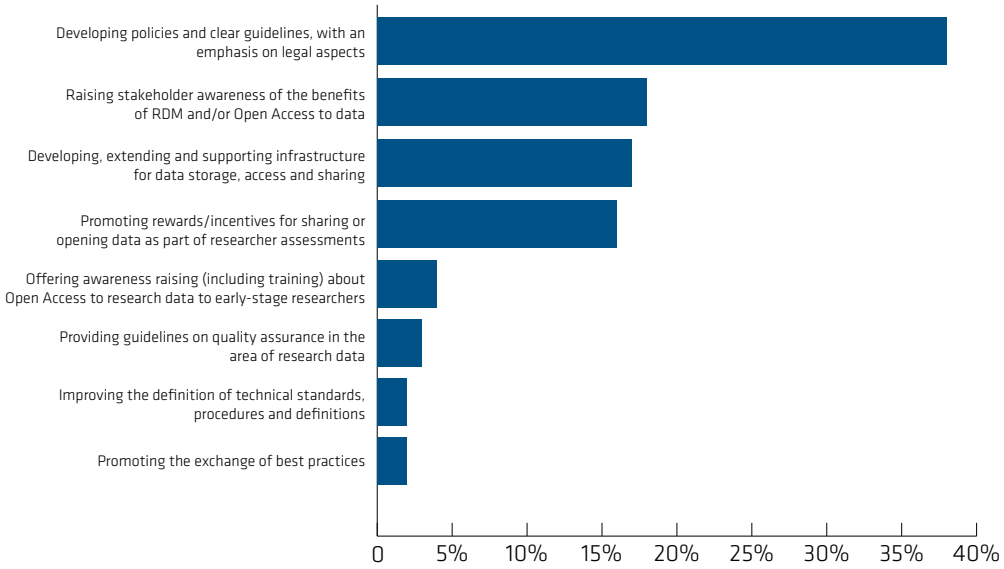
Comparison with 2016-2017 results

Although the 2016-2017 answer options were slightly different from those available in the 2017-2018 survey, the main barriers to research data management and open access to research data identified at institutional level were generally similar. Limited awareness of the benefits, legal framework concerns and the absence of incentives were some of the most common challenges identified by universities in both cohorts.

5.5. ACTIONS TO PROMOTE RESEARCH DATA MANAGEMENT AND OPEN ACCESS TO RESEARCH DATA

Institutions identified the development of policies with clear legal guidelines (38%) as the most important course of action to support university transitions to research data management and Open Access to research data. Raising awareness of the benefits, developing infrastructure and promoting incentives for sharing data in research assessment evaluation were also frequently identified as important courses of action (Figure 44).

Figure 44. Importance of different actions to help institutions make the transition to research data management and Open Access to research data



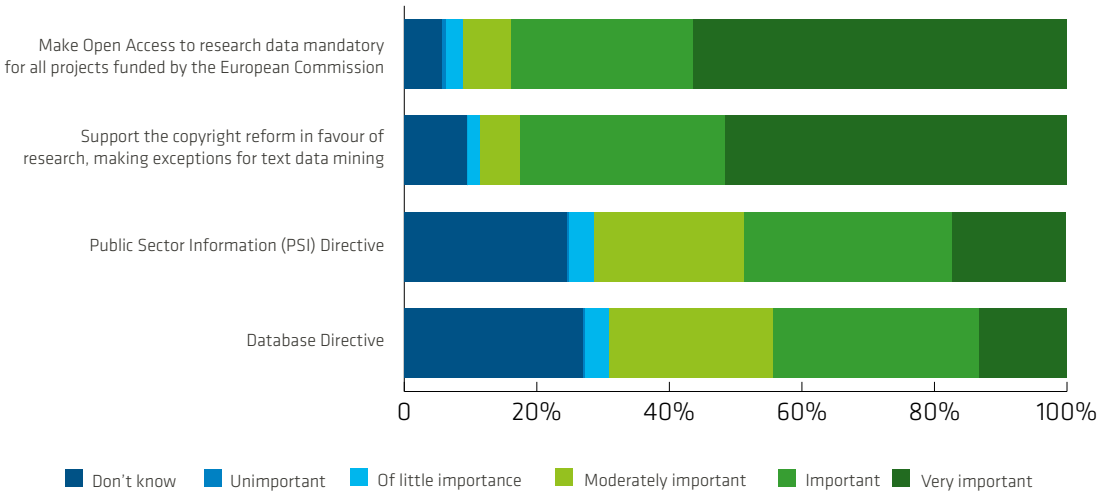
Number of respondents: 310/321.

Comparison with 2016-2017 results

Although the response options and scale used in the 2016-2017 survey were slightly different, the vast majority (69%) of institutions in that survey wave also considered the development of policies and guidelines as the most important course of action. The exchange of best practices and guidelines on research data quality assurance were also considered very important.

Regarding European level measures to support a more open research system, universities considered that making Open Access to research data mandatory for all EU-funded projects was one of the most important courses of action. Supporting copyright reform in favour of research, with exceptions for text and data mining (TDM) was also considered very important by over 50% of the surveyed institutions.

Figure 45. Importance of European level measures to support research data management and Open Access to research data



Number of respondents: 314/321.

6 Conclusions

The 2017-2018 EUA Open Access Survey outcomes highlight both European universities' progress in the transition towards Open Access, and the remaining challenges, particularly in the areas of research data management and Open Access to research data. As already identified in previous editions of this survey, research data management and Open Access to research data are still at a much less mature stage (in terms of policies and implementation) than Open Access to research publications.

It is also interesting to note that over 500 different universities from more than 30 European countries have participated in the EUA Open Access Survey since 2014. This illustrates the broad scope of the survey, in terms of respondent's geographical distribution, university size, and various national and policy contexts.

The longitudinal analysis presented in Section 3 illustrates the stability of answers to the main questions comparable across survey waves. Some of main challenges persist, are still relevant and unresolved, as shown in sections 3-5. In addition, the main priority areas identified by universities have not changed substantially, showing that there is still much to do for universities to achieve full Open Access, despite the progress achieved.

The key results of the 2017-2018 EUA Open Access Survey are summarised below:

Key results regarding Open Access to research publications

- 62% of the institutions surveyed have an Open Access policy on research publications in place and 26% are in the process of drafting one.

- At institutions with an OA policy in place:
  - Almost 50% require publications to be self-archived in the repository
  - 60% recommend that researchers publish in OA
  - 74% do not include any provisions linking Open Access to research evaluation. Only 12% have mandatory guidelines linking OA to internal research assessment.

- Despite the fact that most surveyed institutions have implemented an Open Access policy for research publications, 73% had not defined specific Open Access targets or timelines.

- 70% of these institutions monitor deposits in the repository. However, only 40% monitor Open Access publishing and only 30% monitor related costs (gold OA).

- Librarians are most knowledgeable about and most committed to (~80%) Open Access (publishers' policies, H2020 rules) followed by institutional leadership (~50%). For researchers, including early-stage researchers, the figure drops to ~20%.

- Raising awareness and developing additional incentives for researchers to make their work available via Open Access are top priorities.

Key results regarding research data management and Open Access to research data

- Only 20% of institutions have a research data management policy. Only 13% of universities already have in place a policy on Open Access to research data and 40% are developing such policies.

- 70-80% noted the need for additional skilled research data management staff, policy/legal tools, financial and technical resources.

- Clear research data management and Open Access to research data guidelines are needed (reported by 38% of universities). Infrastructure development, awareness raising and incentives for researchers (assessment) are also all needed to make progress on research data management and Open Access to research data.

POLICY IMPLICATIONS

As the outcomes of the EUA Open Access Survey show, the level of maturity of institutional policies and practices in the fields of Open Access to research publications, research data management and Open Access to research is heterogeneous. Importantly, most universities still currently lack monitoring instruments, specific targets and timelines. Institutional policies on Open Access to research publications and research data are critical for further acceptance and take up of Open Access by researcher communities in both fields.

Universities highlight that EU frameworks, such as mandatory policies on Open Access to research publications and on research data management are highly relevant drivers for progress in this area. Related legislative developments, for example the Directive on the re-use of public sector information (PSI) and the General Data Protection Regulation (GDPR), are also seen as important. In the area of Open Access to research publications, the next EU research and innovation framework programme - Horizon Europe, is likely to continue the Open Access article publication obligation and not reimburse hybrid Article Processing Charges (APCs). Plan S also follows a similar approach, in unison with national funders and the European Research Council (ERC).

Several developments are also foreseen in the area of research data management. Horizon Europe is expected to make Data Management Plans (DMPs) and FAIR data mandatory. The PSI Directive may implement similar principles for public research organisations, which will be dependent on the transposition of the directive into national legislation. Under the ScienceEurope umbrella, research funding organisations are in the process of adopting common DMP guidelines for their funding programmes. In addition, the GDPR already requires the existence of Data Protection Officers (DPOs). Universities should therefore be aware of these developments and improve monitoring mechanisms to enable progress tracking. Institutions also need to support their researchers during this transition period, as they are key to making Open Access ubiquitous.

The results of the different EUA Open Access Survey editions have also shown that researcher awareness of and engagement in Open Access are much lower than that of librarians and institutional leaders. Their knowledge is therefore currently not sufficient to ensure the transition to Open Access. Universities also continue to identify awareness raising activities as a priority for promoting Open Access. It is crucial to incentivise researchers to engage in Open Access activities for a better use of public funds invested in research. It is also important that researchers increasingly share results to facilitate scientific progress. These developments should, in turn, shape the evolution in the way research is assessed.

Research assessment, specifically researcher recruitment and promotion evaluations, play an important role in incentivising researchers. Current research assessment approaches do not yet incentivise or reward Open Access and Open Science

contributions, like making datasets available following the FAIR data principles, or publishing in Open Access journals. Instead, they often use the journal's reputation or prestige as a proxy for research quality. As a result, this indirect indicator (the journal impact factor) is often more decisive than the quality and impact of the research. Consequently, prevailing assessment practices need to be reformed. While journal-level metrics, namely the journal impact factor, still dominate researcher assessment procedures, an increasing number of relevant stakeholders, including the EU, are highlighting the pernicious effects of the current system and the need to develop multi-dimensional assessment criteria. This change in research assessment practices is critical to providing incentives for researchers to engage in Open Access practices.

EUA is involved in discussions on research assessment reform. In the EUA Roadmap on Research Assessment in the Transition to Open Science, the Association commits "[...] to raise awareness and support [universities] in the development of research assessment approaches that focus on research quality, potential and future impact, and that take into account Open Science practices." EUA's priorities are to gather and share information, start a dialogue between stakeholders and make policy and good practice recommendations, in order to support the evolution of research assessment systems in the framework of Open Science.

The results of the current survey have also shown that European universities seldom monitor their Open Access activity, namely: publication in Open Access journals, and its related costs, for example, article processing charges (APCs) and page fees. Related EUA work, specifically the most recent results of the Big Deals Survey, have shown that more than €1 billion is spent every year across Europe in electronic resources, of which more than €700 million is spent on periodicals alone. Universities cover about 72% of these costs. These conservative figures demonstrate the magnitude of university spending on big deals with scientific publishers. Considering the weak monitoring mechanisms at many universities across Europe, the need for more transparency over publishing costs and better monitoring instruments at institutional, consortia and national levels is clear.

EUA will continue to feed the results of the EUA Open Access Survey and other related activities into its policy work on Open Science and into supporting European institutions in the transition towards Open Access. The next EUA survey will focus primarily on research assessment in the framework of Open Science.

EUROPEAN UNIVERSITY ASSOCIATION

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 a 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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