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EUA'S OPEN ACCESS CHECKLIST FOR UNIVERSITIES: A PRACTICAL GUIDE ON IMPLEMENTATION

EUA
European University Association

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Introduction

EUA's work on Open Access

Open Access (OA) to research publications has received increased attention from the academic community, scientific publishers, research funding agencies and governments. This movement has been growing exponentially in recent years, both in terms of the increasing number of Open Access journals[1] and the proliferation of policies on this topic[2].

EUA, too, has been monitoring developments in Open Access, namely from an institutional perspective. Already in 2007, EUA created a working group tasked with providing initial recommendations on Open Access[3] to its membership and, in 2012, in the framework of the Memorandum of Understanding (MoU)[4] signed between EUA and the European Commission, EUA committed to encourage universities to implement Open Access policies at the institutional level. In this context, EUA created a task force composed of experts representing three National Rectors' Conferences[5], with the aim of monitoring developments in the area of Open Access and providing support to EUA in European-level dialogues on this matter.

More recently, EUA has published a briefing paper on Open Access to research publications, with an emphasis on European policy developments[6], which showed that, for the wide variety of stakeholders considered in the paper (e.g. National Rectors Conferences, university and science associations):

> "(…) *the*[ir] *positions remain aligned in terms of their support for an OA policy to research publications, either through the green or gold routes. The stakeholder positions provide pertinent information highlighting, for instance, the importance of developing institutional policies and strategies that foster the availability of research findings in general, and the establishment of institutional repositories in particular.*"

The briefing paper also identified some key topics that EUA will continue to monitor and explore, in order to support its membership in the area of Open Access. These topics include business models and costs of Open Access, requirements for self-archiving publications in repositories, peer-review and quality assessment in Open Access, assessing the progress of Open Access and its impact on the advancements of research, as well as implications for key stakeholders (e.g. researchers, institutions, policy-makers, scientific publishers).

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[1] http://doaj.org/

[2] http://roarmap.eprints.org/

[3] European University Association, 2008, *Recommendations from the EUA Working Group on Open Access adopted by the EUA Council on 26 March 2008(University of Barcelona, Spain)* (Brussels, EUA). Available at: http://www.eua.be/Libraries/Research/Recommendations_Open_Access_adopted_by_the_EUA_Council_on_26th_of_March_2008_final_1.sflb.ashx

[4] European University Association, 2012, *Memorandum of Understanding (MoU) between the European Commission and the European University Association* (Brussels: EUA). Available at: http://www.eua.be/Libraries/Research/MemorandumEUA.sflb.ashx

[5] The National Rectors' Conferences of France (CPU), the Netherlands (VSNU) and the Rectors' Conference of the French Community of Belgium (CRef).

[6] Lourenço, J., & Borrel-Damian, L., 2014, *Open Access to Research Publications. Looking Ahead. An overview of policy developments and positions from a European University Perspective* (Brussels, EUA). Available at: http://www.eua.be/Libraries/Publication/OA_Briefing_Paper_Final.sflb.ashx

Following the publication of EUA's briefing paper on Open Access to research publications, a survey addressed to the EUA membership on the topic of Open Access was conducted in the last quarter of 2014[7]. Its aim was to collect institutional information on the key topics on Open Access identified in the briefing paper, as well as to provide a more in-depth understanding of the state of play in the development of institutional policies on Open Access and their degree of implementation in European higher education institutions. The results of this survey revealed institutions' perceived need for practical guidelines on Open Access implementation.

This checklist has therefore been developed with a view to help fulfil this need and to complement EUA's work on Open Access – providing key information on Open Access policies and supporting the development of Open Access in European universities.

What is the Open Access checklist?

The Open Access checklist is intended as a general guide to key matters that should be considered when institutions plan to develop a policy on Open Access to research publications.

Who is the checklist addressed to?

This checklist is primarily addressed to higher education and research institutions that are developing, or planning to develop, a policy on Open Access to research publications. The checklist can be used by a variety of different actors at the institution, including the leadership, administration staff, librarians and researchers.

Scope of the checklist – areas covered

The checklist covers contextual factors/components that typically need to be considered when planning to develop an institutional policy on Open Access. It also includes references to valuable OA resources.

Organisation of the checklist

This checklist is organised in two main chapters. The first chapter provides some key information on Open Access, such as benefits, challenges and ways of implementing Open Access. The second chapter describes a set of topics that institutions should consider when developing and implementing their policies on Open Access. This chapter is divided in three parts – strategic, practical and economic aspects in developing an Open Access policy.

[7] The key results of this survey are presented in Annex 1.

Chapter I: Open Access – basic concepts and definitions

Open Access to research publications: definitions, benefits and challenges

Open Access refers to the free availability of research publications on the internet, for which readers have permission to read, download, copy, distribute, print and search content[6]. The Budapest Open Access Initiative[8] (2002), the Bethesda Statement on Open Access[9] (2003) and the Berlin Declaration[10] (2003) encompass the three widely used formal definitions of Open Access, which have come to be known as the "BBB definition"[11]. According to Suber (2004)[11], although these three definitions differ in some small ways, they agree on the most important aspects, namely providing free online access (removing price barriers) and giving readers "permission for all legitimate scholarly uses" (removing permission barriers). For example, the definition proposed in the Budapest Open Access Initiative reads:

> *"By "open access" to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited."*

Open Access to scholarly articles can bring about various benefits to researchers, institutions and to the society in general, namely increasing access to research findings for different audiences (e.g. scientific community, professionals, practitioners, general public). Open Access can also enhance the use and visibility of research and may contribute to its faster development; it can increase research impact, facilitate interdisciplinary research, contribute to a better management and assessment of research and allow the generation of new knowledge from existing research findings, through ICT-enabled data and text mining[12,13,14]. In addition, and especially important for researchers and research institutions, Open Access can also contribute to an increase in citations[15,16,17].

A wide and free access to research publications and the potential for a more effective and efficient use of research outcomes is particularly important for publicly funded research. For example, to

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[8] http://www.budapestopenaccessinitiative.org/read
[9] http://legacy.earlham.edu/~peters/fos/bethesda.htm
[10] http://openaccess.mpg.de/286432/Berlin-Declaration
[11] http://legacy.earlham.edu/~peters/fos/newsletter/09-02-04.htm#progress
[12] Swan, A., 2012, *Policy Guidelines for the Development and Promotion of Open Access* (Paris, UNESCO). Retrieved from http://unesdoc.unesco.org/images/0021/002158/215863e.pdf
[13] http://www.openscholarship.org/jcms/c_6157/en/open-access
[14] Text and data mining "*is a research process where computing tools are applied across multiple research articles to analyze their content and create new knowledge by combining information gathered from them. They look for facts, entities and relationships within the text, and extract that information for analysis. Importantly, they can analyze information across a broad range of fields and across many articles - hundreds of thousands if necessary - taking analysis to a different level than that which the human brain can manage. Although still in its relative infancy, these technologies hold great promise for the future and are already proving their worth in fields such as pharmaceutical, biomedical, and chemical research*." (http://sparc.arl.org/resource/developments-publishers%E2%80%99-text-and-data-mining-tdm-policy).
[15] Swan, A., 2010, *The open access citation advantage: studies and results to date* (Southampton, University of Southampton). Retrieved from: http://eprints.soton.ac.uk/268516/
[16] http://opcit.eprints.org/oacitation-biblio.html
[17] http://www.openscholarship.org/jcms/c_6235/advantages-and-benefits-of-open-access

improve the circulation of knowledge and to foster a higher scientific and social return on public investment, the European Commission has established that all peer-reviewed publications resulting from research projects financed through the current Framework Programme for Research and Innovation – Horizon 2020 – should be made Open Access[18].

However, the implementation of Open Access is not without its challenges. For example, there is a need to raise awareness and promote Open Access within the academic community, to explore the opportunities and consequences of Open Access for researchers and for institutions[6] and to address institutions and researchers' concerns on making their work Open Access[19]. Universities are also faced with the need to explore sustainable and cost-effective institutional business models for Open Access[6].

Providing Open Access to scholarly articles

Open Access can be provided through two distinct routes: the green route and the gold route[18,20]. In the **green route**, also called self-archiving, the researcher deposits a copy of her/his research article in an Open Access repository, therefore making the article freely available in the repository. For journal articles, subject to a peer-review process, the deposit in the repository may be done before (preprint), after (postprint) or alongside the publication process in the journal. Repositories include the metadata[21] (e.g. for journal articles, this can include the name of authors and their institutional affiliation, title of the article, journal, volume, pages, keywords, abstract) for each article in a specific technical format[22], which makes the different repositories interoperable. Open Access repositories are indexed by Web-search engines and therefore articles in the repository can be easily accessed: "These search engines systematically harvest the contents of the archives worldwide, forming a database of current global research"[23].

Researchers can also publish their papers in Open Access journals – the **gold route**. Open Access journals are peer-reviewed journals and allow readers to access the articles for free, i.e., without needing to pay a fee. Some Open Access journals levy a fee for the publication, known as Article Processing Charges (APCs). These fees may be covered by the authors, the researcher's institution or the research-funding agency. Other Open Access journals do not charge for the publication of articles and have adopted alternative funding/business models to support the publication process[24,6].

There are two main types of Open Access journals: (i) full Open Access or 'pure gold' Open Access journals, and (ii) hybrid Open Access journals. In full or 'pure gold' journals the articles are made Open Access from the moment of their publication. In hybrid journals, authors can pay a fee to make their article Open Access (Article Processing Charges – APCs), while the remaining articles in the journal remain subject to subscription fees. Some publishers reduce the price of the subscription costs due to the added revenue from APCs. However, other journals do not do so. This practice, commonly termed

[18] European Commission, 2013, Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020. Version 1.0. (Brussels, European Commission).
[19] http://www.openscholarship.org/jcms/c_6234/en/author-concerns-about-open-access
[20] League of European Research Universities, 2012, *Statement on Open Access to Research Publications* (Brussels, LERU).
[21] Metadata can be defined as ""information about the context, content, quality, provenance, and/or accessibility of a set of data" (http://researchdata.wisc.edu/manage-your-data/xml-metadata-tools/).
[22] Repositories comply with the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH; http://www.openarchives.org/OAI/openarchivesprotocol.html)
[23] http://www.openscholarship.org/upload/docs/application/pdf/2009-01/briefing_paper_open_access.pdf
[24] http://oad.simmons.edu/oadwiki/OA_journal_business_models

"double dipping", has been documented (e.g. Pinfield et al., 2015[25]) and criticized by research funders and institutions[26].

Disentangling access rights from user rights

As stated by Suber "The green/gold distinction is about venues or delivery vehicles, not user rights or degrees of openness"[27]. That is, the green and gold routes to Open Access refer to two different ways in which readers can access journal articles free of charge. However, what readers can do with the information contained in the articles (e.g. text, pictures, charts), i.e., re-using information, is a matter that falls under licensing. In fact, the main definitions used in the Open Access movement, such as the Budapest Open Initiative (2002)[8] and the Bethesda Statement on Open Access Publishing (2003)[9], covered both the issue of access and of re-use of the material included in the articles:

> *"The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship, as well as the right to make small numbers of printed copies for their personal use."* (Bethesda Statement on Open Access Publishing, 2003)

The terms 'gratis' Open Access and 'libre' Open Access have been coined by Stevan Harnad and Peter Suber to describe different types of user-rights. In 'gratis' Open Access, the permission is limited to reading the article and any further re-use of the article is not allowed. 'Libre' Open Access, on the other hand, provides for the re-use of the article. As noted by Swan (2012)[12], re-use can encompass both "human re-use" (e.g. use components of the article for presentations, teaching materials or for other scientific articles) and "machine re-use", whereby computers can extract and re-use the information in the articles, such as in text and data mining.

A large proportion of articles in institutional repositories are 'gratis' and, according to Swan (2012), formal licensing ('libre' type) remains infrequent: "formal licensing is not yet ubiquitous in Open Access practice, despite the advantages it brings. Licensing an article or book clarifies what users may do with it and, by instilling confidence in the user about how they might use the work, encourages use"[12].

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The development of policies on Open Access for research publications by research institutions, research funding agencies and governments is increasing, as well as the licensing and copyright regulations. The following list of topics, in the form of a checklist, aims to identify some of the key aspects that should be considered by universities when developing (or planning to develop) an institutional policy on Open Access to research publications.

[25] Pinfield, S., Salter, J. and Bath, P.A., 2015, *The 'total cost of publication' in a hybrid open-access environment: Institutional approaches to funding journal article-processing charges in combination with subscriptions.* Journal of the Association for Information Science and Technology (in press). Available at: http://eprints.whiterose.ac.uk/81227/

[26] Science Europe, 2013, *Science Europe Position Statement: Principles for the Transition to Open Access to Research Publications*(Brussels, 2013).

[27] http://legacy.earlham.edu/~peters/fos/overview.htm

Chapter II: Topics to consider when developing an institutional policy on Open Access to research publications

Part I: Strategic aspects in developing an Open Access policy

Defining the type of policy

In developing its Open Access policy, the institution will first need to define its institutional strategy in regard to this area; a dedicated structure for this purpose should be considered at the governance level (e.g. task force, committee). The institution will need to reflect on and decide the nature of the policy – **mandatory or encouragement measures**. The latter relies on the voluntary action of researchers, encouraging or requesting they make their work Open Access. The former, a mandatory policy, obliges researchers to provide their articles in an Open Access format.

Evidence suggests that encouragement policies have a negligible effect in increasing researchers' self-archiving rates; only mandatory policies seem to boost self-archiving of research articles in the institutions' repositories[28,29]. In addition, there is also evidence to suggest that researchers generally have a favourable attitude towards mandatory policies[30].

In addition, institutional policies may also include provisions for seeking rights over future publications of its staff. Several typologies of policies on Open Access have been identified, according to the presence or absence of rights-retention provisions and requirements in terms of the deposit in the repository[12,31], but for the purpose of this checklist two situations have been considered: i) when the institution seeks rights over future publications; ii) when the institution does not seek rights over future publications.

In the first case, in which **institutions seek rights**, the policy establishes that the institution may retain some non-exclusive rights to future publications published by their researchers[32]. This is the case, for example, in Harvard University (USA), in which "*faculty authors (…) grant the university a nonexclusive, irrevocable right to distribute their scholarly articles for any non-commercial purpose*"[33]. According to Schieber and Suber, this type of policy *"frees faculty from the need to negotiate with publishers. It secures the rights even when faculty fail to request them. It secures the same rights for every faculty member, not just the rights that a given faculty member might succeed in obtaining from a given negotiation with a given publisher*"[31]. Schieber and Suber also consider that, in case the policy seeks to retain rights for the institution, the adoption of the policy should be made by faculty, since this type of policy establishes that faculty grant some non-exclusive rights to future publications to the

[28] http://www.openscholarship.org/jcms/c_6226/en/open-access-policies-for-universities-and-research-institutions
[29] http://www.openscholarship.org/jcms/c_6215/effectiveness-of-open-access-policies
[30] http://www.openscholarship.org/jcms/c_6194/researchers-attitudes-towards-mandatory-open-access-policies
[31] https://cyber.law.harvard.edu/hoap/Drafting_a_policy
[32] Another possibility is that the policy requires researchers to retain some non-exclusive rights in their future publications. Schieber and Suber, however, caution against some hurdles that may arise with this type of policy: "*it requires faculty to negotiate with publishers in order to retain the needed rights. That is difficult to do. Many faculty are intimidated by the prospect and will not to do it. Even if all tried it, some will succeed and some will fail. Some will get one set of rights and some will get another. That will make access uneven and multiply implementation headaches*." (https://cyber.law.harvard.edu/hoap/Drafting_a_policy).
[33] https://osc.hul.harvard.edu/policies

institution: "*the kind of policy we recommend includes a grant of non-exclusive rights from faculty to the institution, and this grant of rights should be grounded in faculty consent*"[34]. The application of this type of policy, however, may depend on national legislation; for example, legal regulations in the USA allow this type of policy, but this is normally not the case in Europe. This type of policy typically also provides for waivers (also known as "opt-out"); this point is further developed in the section below 'Providing waivers'.

In the second case, in which the **institution does not seek rights** over future publications, the rights remain either with the author and/or with the publisher (depending on each specific case). For example, this is the case in the University of Liège[35] (Belgium), in which the institutional policy does not seek to acquire rights over the publications of its faculty, but researchers are nevertheless requested[36] to self-archive their publications in the institutional repository upon acceptance for publication[37]. Open Access to the articles is then provided upon the end of the embargo period defined by the scientific publishers (the metadata becomes immediately available upon acceptance for publication)[38].

It is also important to note that the Open Access policy, once approved, only applies to future publications. Whether the institution seeks rights or not, and whether it requires the deposit of publications in a repository, this will only apply to future publications, i.e., the policy is not retroactive. In the case of self-archiving, the institutional policy may, however, *encourage* the deposit of already published articles in the repository[30].

Providing waivers

When the institution's policy provides for the retention of some "non-exclusive" rights to future publications, typically a waiver option is provided to researchers. The waiver is, in fact, an "opt-out" from the policy, decided on a one-for-one basis for each article which the author wishes to publish[39]. A waiver is usually used when the university has a rights-retention policy and a faculty member wishes to publish in a journal whose publisher requires the full copyright to be transferred to the publisher. The article can be made Open Access afterwards, after securing permission to do so either by the author or by the publisher:

[34] http://cyber.law.harvard.edu/hoap/Adopting_a_policy

[35] www.eprints.org/openaccess/policysignup/fullinfo.php?inst=Universit%C3%A9%20de%20Li%C3%A8ge

[36] The policy of the University of Liège on Open Access also establishes that only the publications deposited in the institutional repository may be considered for internal assessment procedures (http://orbi.ulg.ac.be/files/extrait_moniteur_CA.pdf).

[37] If a researcher deposits his/her publication in the repository but the article is subject to an embargo period before becoming open access, this is often termed a "dark deposit". During this period, the full-text version of the article is not available in Open Access, only the metadata is made Open Access from the moment the article is deposited in the repository. Metadata is not subject to copyright and, thus, is not covered by the embargo period.

[38] Although during the embargo period the articles are not Open Access, interested readers can request a copy of the article directly to the author, by using the 'eprint request' button (see also section 'When to deposit').

[39] As put by Schieber and Suber: "*A waiver option creates an "opt-out" policy. In that sense it "shifts the default" from lack of permission for OA to permission for OA. After a rights-retention policy is adopted, faculty who don't lift a finger are granting the institution permission to make their future work OA; if they want a different outcome, they must lift a finger and obtain a waiver (…)The waiver option or opt-out means that faculty remain free to choose for or against OA for each of their publications*"
(https://cyber.law.harvard.edu/hoap/Talking_about_a_policy#.22Opt-out.22_and_.22opt-in.22).

> *"A waiver for a particular article means that the institution does not receive the policy's usual bundle of non-exclusive rights for that article. Hence, for that article the university will not have permission from the policy to provide OA. But the university may have permission from another source, such as the author (who may have retained rights from the publisher) or the publisher (who may give standing permission for repository-based OA after a certain embargo period)."*[40]

It is also important to mention that waivers apply to the publication of an article (specifically to the permissions for publication), but not to its deposit in the repository. If the institutional policy requires the articles to be deposited in the repository upon acceptance for publication, the article published with a waiver will still need to be deposited in the repository according to the institution's policy ("dark deposit"[37]). Once the university has permission to make the article open access, such as upon the end of the embargo period established by the publisher, it can do so.

Deciding on Open Access routes

As mentioned previously, there are two main routes to implementing Open Access to research publications – the green route (self-archiving in a repository) and the gold route (publishing in Open Access journals).

The policy should clearly state the institution's choice regarding the Open Access route(s) to be implemented (green, gold or both) and define for the chosen route(s) if the policy *requires* or *encourages* the use of a particular route (see section above 'Defining the type of policy'). It is important to mention that while for the green route – self-archiving – the institutional policy may encourage or mandate its use, for gold open access this is usually not the case. Gold Open Access, i.e., publishing in Open Access journals, can be *encouraged* by the policy, but it should not be mandated. If this were the case, the institutional policy would be limiting the possible pool of scientific journals in which faculty could publish and, more importantly, this would hinder researchers' freedom to choose in which journals they wish to publish.

Green Open Access and gold Open Access can both co-exist in the same policy (e.g. encouragement or mandate for the green route and encouragement for the gold route); an institution can maintain an individual or shared repository and, at the same time, encourage publication in Open Access journals. However, Schieber and Suber[31] caution against some common misconceptions of faculty regarding gold Open Access and how this can hinder the acceptance of an institutional policy on Open Access.

> *"A university requiring green OA (deposit in OA repositories) may also encourage gold OA (publishing in OA journals). But it should be careful about doing both in the same document. Where it has been tried, faculty too easily come to believe that the policy requires gold OA, or publishing in OA journals, and thereby limits their freedom to submit new work to the journals of their choice. Part of the background here is that many people still mistakenly believe that all OA is gold OA, and therefore that a policy trying to assure OA must be trying to assure gold OA or to require publishing in OA journals."*

Identifying compliance mechanisms and sanctions

In order to improve researchers' compliance with the institutional policy on Open Access, incentives, such as advocacy strategies could be identified in the policy. Advocacy can include a wide range of

[40] https://cyber.law.harvard.edu/hoap/Drafting_a_policy#Waiver_option

activities, such as publicising the repository usage, awarding prizes, providing impact statistics, among others[12]. Compliance may also be improved if the use of the repository is linked to researchers' professional evaluation and career progress[41] (e.g. promotions) and to the assessment of research[42]. Imposing sanctions for non-compliance may also be defined in the policy, although institutional leadership and administration should carefully consider the benefits and pitfalls of such measures.

Implementing an institutional policy on Open Access

The policy can also define the institution's structure that will be responsible for implementing the policy (e.g., a specific committee or office). Special care should also be taken in drafting and selecting the contents that should go into the policy document and into the implementation plan. For example, Schieber and Suber recommend these two documents to be distinct, so that the policy document can be kept as brief and concise as possible, leaving the implementation details to its own document[31].

Part II: Practical aspects in developing an Open Access policy

The following topics are especially relevant for universities that develop a policy encouraging or mandating green Open Access, i.e., self-archiving publications in a repository. It is also important to mention that, while institutions enjoy autonomy in deciding on the specifics of their Open Access policies, national regulations may apply (e.g. copyright, embargo periods).

Where to deposit

Regarding where research articles should be deposited, i.e. the "deposit locus", there are currently a wide variety and number of repositories, including centralised subject-specific repositories (e.g. arXiv for physics, RePEc for economics, PubMed Central (PMC) for health sciences), institutional repositories, shared repositories among different institutions and even national repositories (e.g. Norwegian Open Research Archives, NORA).

Green Open Access policies usually encourage or mandate the deposit of articles in the institutional repository[43] or shared repositories with other institutions; alternatively, research funders may also request the deposit in central repositories or discipline-specific repositories. When developing an Open Access policy, the institution should therefore clearly identify the repository that faculty should use to deposit their articles.

Sometimes, researchers can be bound to different policies, such as their institution's and the research funder's, requiring deposit in different repositories. Technology exists that allows researchers to deposit their articles in a repository and for it to be copied/duplicated into other repositories. Swan (2012)[12] recommends that *"the optimum arrangement, one that accommodates the needs of all stakeholders, and has the potential to collect the greatest amount of Open Access content, is for a network of institutional repositories to be the primary locus for deposit and for centralised, subject-specific collections to be created by harvesting the required content from that network of distributed*

[41] This is the case, for example, in the University of Liège (Belgium), the University of Luxembourg (Luxembourg) and the University of Minho (Portugal). For more information see http://roarmap.eprints.org).
[42] https://cyber.law.harvard.edu/hoap/Implementing_a_policy
[43] Institutional repositories are an important tool for university management, as they are the only integrated source of information for all the research outputs produced in the institution. In addition, the institutional repository "provides a management information tool for monitoring and assessing research activity" (http://www.openscholarship.org/jcms/c_6193/en/business-aspects-of-institutional-repositories).

repositories". Other solutions in place include the option in which the university is responsible for making the deposit required by the research funder or harvests a copy from the article deposited in the funder's repository[42].

What to deposit

The institutional Open Access policy should clearly identify the **types of content** that should be deposited in the repository. Journal articles, peer-reviewed articles are typically included. Additional types of content that can be identified in the policy may include: masters and doctoral thesis, technical reports, working papers, conference proceedings. Books, book chapters and monographs cannot be mandated to be self-archived, because they (may) generate royalties. However, the policy can encourage the deposit of monographs/books/book chapters, should all legal and copyright permissions allow it[44].

For journal articles, it is also important to consider the **article version** that should be deposited in the repository. Typically, the author's final version of the peer-reviewed article is deposited. This version is commonly termed the 'accepted author manuscript' (AAM) or 'postprint'. The postprint version should include all the article's elements that the author has permission to deposit: the text, but also the charts, graphics and illustrations – "*it should include post-review copy-editing done collaboratively between author and journal. It need not include any post-review copy editing done unilaterally by the journal, the journal's pagination, or the journal's look and feel"*[45]. If the scientific publisher allows the deposit of the journal's edited version of the article (including specific formatting of the journal) then it could also be deposited in the repository. The institutional policy can also encourage researchers to deposit the preprint version, i.e. the article prior to peer-review and acceptance for publication (e.g. the article submitted to the journal).

When to deposit

The policy should define when full-text articles (or other content) should be deposited. Regarding this issue, there are three different options[46]:

(a) Immediate deposit with immediate Open Access: the article is deposited immediately upon acceptance for publication, i.e., after the peer review process and once the final corrections and modifications have been made, and is promptly made Open Access if authorised by the publisher.

(b) Later deposit, after the embargo period: the article is only deposited in the repository upon publication and after expiration of the embargo period established by the publisher[47].

(c) Immediate deposit with optional later access: the full-text article is immediately deposited upon acceptance for publication, but if it is submitted to a journal with an embargo, then the policy permits access to be opened only at the end of the embargo period ("dark deposit"). The metadata for the article, however, becomes immediately available, since it is not subject to copyright and, therefore, is not covered by the embargo period. Typically, when researchers self-archive their articles, they can

[44] http://legacy.earlham.edu/~peters/fos/overview.htm
[45] https://cyber.law.harvard.edu/hoap/Drafting_a_policy#Deposited_version
[46] http://www.openscholarship.org/jcms/c_6223/types-of-policy-wording
[47] In this option there is an increased risk of the author forgetting to deposit the article, since a relatively long period of time may have elapsed between the time of publication and the end of the embargo period (http://www.openscholarship.org/jcms/c_6223/types-of-policy-wording).

indicate to the repository software the end of the embargo period and the article becomes Open Access automatically after that date. When articles are still under the embargo period, interested readers can send an email request to the authors for a copy of the article, through the 'eprint request' button.

Embargo periods

Scientific publishers may require an embargo period before the published articles are made Open Access. Embargo periods vary by journal and also by scientific area (e.g. 6-months for science, engineering and technology disciplines, up to 2-years for humanities and social sciences). As it was mentioned before, researchers can deposit the full-text article in the repository and indicate to the repository software the embargo period, after which the article becomes Open Access.

Copyright and licensing

As it was mentioned in the section 'Type of policy', institutional policies may retain some non-exclusive rights to future publications of their faculty or not. In the latter case, the rights remain with either the author or the publisher.

When institutions have secured rights regarding the publications (and the author has not requested for a waiver), the institutional policy itself gives permission to the institution to make the article Open Access.

However, institutional policies often do not retain rights over publications, and these lie with the author before he/she submits the article for publication. Typically, when submitting an article for publication, authors sign a copyright transfer agreement (CTA), giving the publisher the whole "bundle of rights", including the right to publish. In this case, if the author wants to deposit his/her article in a repository, he/she will need to request permission to the scientific publisher to do so. However, researchers can submit their articles to a journal and publish it without relinquishing all their rights:

> *"It is perfectly possible for scientists to have their work published without signing over all rights. Some rights can be retained by scientists, allowing them to do what they want in terms of dissemination through alternative channels as well as through the journal in which they have chosen to publish." (Swan, 2012)*[12]

The most common way of doing this is to add an 'author addendum' to the publisher's CTA, such as granting the publisher a License to Publish (LTP), while the author retains the rest of the bundle of rights[48]. There are currently a wide variety of author addenda, specifying different rights that authors can retain. The addenda from SPARC/Science Commons[49] and from SURF/JISC[50] are commonly used.

Regarding Open Access journals, it is important to mention that they do not have any copyright restrictions: *"they allow the copyright to remain with the author of an article and they permit the author to do anything he or she wants with the article, including making unlimited numbers of copies for distribution, using them for teaching and so forth"*[51].

On copyright matters, it seems that the major priority is to inform researchers of their rights and of the scientific publishers' rules (e.g. most publishers allow self-archiving with an embargo period

[48] http://www.openscholarship.org/jcms/c_6224/en/basic-issues-involved-in-wording-an-institutional-open-access-policy
[49] http://scholars.sciencecommons.org/
[50] http://copyrighttoolbox.surf.nl/copyrighttoolbox/authors/
[51] http://www.openscholarship.org/jcms/c_6234/author-concerns-about-open-access

before the article becomes Open Access). Researchers can also be encouraged to check publishers' permissions for the journals in which they wish to publish (e.g. ROMEO[52]).

As mentioned in the section above 'Disentangling access and user rights', if an article does not include license information, it is unclear for readers what they can do with the article – only reading or re-using information[44]. In addition, formal licensing is still not frequent in Open Access (Swan, 2012)[12].

In this respect, the Creative Commons organisation[53] has developed several licenses with varying purposes that can be used by authors and publishers. According to Swan (2012)[12]:

> *"Some Open Access publishers use Creative Commons licences to ensure that the content of the articles published in their journals are reusable in the widest (libre Open Access) sense: that is, they can be reproduced, abstracted, 'mashed up' with other material to produce new information, crawled by text-mining and data-mining tools and so on."*

All the topics mentioned above are relevant when institutions are developing (or planning to develop) a policy on Open Access to research publications. These topics are particularly pertinent when the institutional policy focuses on green Open Access, as most of the topics covered above relate to repositories. Moreover, the institutional policy on Open Access can encourage or mandate green Open Access and, at the same time, also encourage gold Open Access. Indeed, both routes lead to Open Access to research publication for readers. When the institutional policy encourages Gold Open Access, the policy should cover the topic of Article Processing Charges (APCs).

Article-Processing Charges (APCs)

The Open Access policy should define whether or not the institution will participate in the provision of fees to cover APCs requested by Open Access journals and, if so, under what conditions (e.g. what is the amount available, what are the conditions for authors to have access to these funds). In addition, the policy should also include information on whether authors can use these funds to pay for APCs in hybrid journals that engage in "double dipping", i.e., receive revenues from the APCs and maintain high subscription fees[12].

Part III: Economic aspects of Open Access relevant to universities

This section focuses on some economic aspects universities should take into account when transitioning to Open Access, either via the green route, with the creation of an institutional repository, or via the gold route, when encouraging researchers to publish in Open Access journals. It includes also some information on the economic impact of Open Access at the institutional and country level.

Costs involved in creating and managing institutional repositories (green Open Access)

Institutional repositories[54] may fulfil a variety of functions, which extend well beyond that of a platform where publications can be deposited and freely accessed by users. The institutional

[52] http://www.sherpa.ac.uk/romeo/
[53] https://creativecommons.org/licenses/
[54] For the purposes of this checklist on Open Access we focus on institutional repositories. However, there are other types of repositories and associated business models (e.g. community model, commercial model); for

repository can have a critical role in enhancing the university's visibility and in promoting its research outputs. It can also be a useful tool in research assessment exercises, such as promotions and appraisals of researchers or evaluations of the institution's research activity[55].

Although institutions incur in costs when establishing and maintaining an institutional repository (e.g. financial, human resources, infrastructure), the return on investment is not measured in terms of financial profit, but rather in helping to fulfil the institution's mission and supporting its strategic aims[56,57]:

> *"The business case for a repository cannot rest upon promising a cash return since generating cash is not central to the business mission of digital repositories (…) The business case is thus made on the basis of enhanced visibility of the institution, measurably better impact for its research, more effective institutional marketing, better management of intellectual assets, easier assessment of research outputs, the facilitation of collaborative and interdisciplinary research and the facilitation of workflow for researchers and teachers."*[56]

It is also important to mention that institutional leaders and senior managers have a crucial role in ensuring the long-term operational and financial sustainability of the repository and that the existence of a clear institutional policy on Open Access is instrumental in ensuring researchers' commitment to self-archiving their publications. When researchers are responsible for depositing their publications in the repository, rather than the library staff, the university is able to reduce the costs of maintaining the repository (e.g. less time dedicated by the library staff to collect information and deposit articles)[55,58].

Setting-up an institutional repository

The costs involved in setting-up an institutional repository have been estimated to vary from a few thousand euros upwards[59] and, in Europe, establishing a repository averages a cost of around EUR 10,000[56]. Regarding the infrastructure needed to create a repository, universities may be able to use their own server computers (depending on sufficient availability of space needed to create the repository); in addition, open source software (free software) is typically used to run repositories. Universities may also outsource the development and hosting of the repository to external entities[56]. In terms of staff, creating a repository has been estimated to require between 1.5 and 3 full time equivalents (FTE) for a period of six months to one year. This includes not only library and IT staff, but also other staff profiles needed to define the goals and plan the implementation of the repository (e.g., university administrators)[56].

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more information on this topic see Swan, A., 2008, The business of digital repositories. In Weenink, K., Waaijers, L., & van Godtsenhoven, K. (Eds.), *A DRIVER's Guide to European Repositories (Amsterdam, 2007).* Amsterdam: University Press (available at: http://eprints.soton.ac.uk/264455/).

[55] http://www.openscholarship.org/upload/docs/application/pdf/2008-12/repositories_for_research_management_and_assessment_white_2008-12-29_13-59-43_233.pdf

[56] http://www.openscholarship.org/jcms/c_6193/business-aspects-of-institutional-repositories

[57] Swan, A., 2008, *Use of repositories to aid institutional strategy*. At EuroCRIS: CRIS - the strategic centre of the business, Brussels (available at: http://eprints.soton.ac.uk/266726/)

[58] http://www.openscholarship.org/jcms/c_6162/en/repositories

[59] Swan, A., 2008, The business of digital repositories. In, Weenink, K., Waaijers, L., & van Godtsenhoven, K. (Eds.), *A DRIVER's Guide to European Repositories (Amsterdam, 2007).* Amsterdam: University Press (available at: http://eprints.soton.ac.uk/264455/).

A study conducted by Swan in 2008[59], using several case studies from across Europe, showed that for repositories that were built by universities themselves ("in-house built repository") the average cost involved in setting-up the repository averaged EUR 9250 (including hardware and software costs) and the average staff dedication was 1.5 full time equivalent (FTE). For universities with the repository hosted at the institution but developed externally ("outsourced repository hosted at the home institution") the average cost to set-up the repository was EUR 7000, while for universities who preferred to outsource both the development and the hosting of the repository the costs increased to an average of EUR 38,000.

Maintaining the institutional repository

The costs involved in maintaining an institutional repository are quite variable and mainly depend on the functionalities of the repository and the activities for which it is used. Staff needs have been estimated to vary between 0.5 and 2.5 FTE to run the repository[56]. In Swan's study (2008)[59], the average staff allocation was 2.5 FTE.

For a repository to be sustainable in the long-term, universities need to ensure that it is adaptable to meet future demands and users' needs:

> *"Setting up a repository is only the start of the process and is relatively easy in the overall scheme of things. Once established, there are challenges in collecting content, in looking after that content in the face of the ever-changing digital information world, in adding value to the content and maximising its usefulness, and in ensuring that the bases on which repositories operate are legally sound."*[59]

Repository managers should try to ensure that their institutional repositories are flexible in respect to deposit practices (e.g. researchers self-archiving their publications instead of library staff), content types (e.g. different types of material that can be deposited, such as text, figures, data, charts, videos, which may require specific technical provisions in the system) and enhancements in metadata, which will likely become more complex and require new skills and tasks from the library staff. In terms of costs, universities should also plan for increasing costs in terms of software development (modifications and/or repository software updates), increasing content of the deposited material, development of services for the repository and the position of the repository in the business cycle (higher and unforeseen costs are more likely in recently created repositories, compared to consolidated, mature repositories: "repositories at start-up or growth phases are likely to encounter unseen costs, whereas maturing repositories can forecast their costs much more accurately"[59]).

Costs involved in encouraging researchers to publish in Open Access journals (gold Open Access)

As indicated in the section 'Article Processing Charges (APCs)', when researchers wish to publish their work in Open Access journals, APCs may be charged depending on the journal. Institutions and/or research funders may choose to support authors in meeting these publication costs, by allowing researchers to use their grant funds to pay for the APCs (in the case of research funders) or to request supplemental funds (in the case of universities and/or research funders). Institutional (and research funders) policies should also define if the extra funds made available to pay for the APCs apply to journals that engage in the practice of "double dipping" (see section above on 'Article Processing Charges (APCs)').

According to Suber (2009)[60], institutions and/or funders should, whenever possible, contribute to covering APCs, in order to incentivize authors to publish in Open Access journals:

> *"If you can afford it, offer to pay the fees. If you can, offer supplemental funds for the purpose. When journal publication fees must compete with equipment, assistants, and supplies, grantees may have a disincentive to publish in OA journals, which is the opposite of what's intended. But if you can't offer supplemental funds, allowing grantees to use grant funds is better than nothing."*

A study conducted by Swan (2010) with British universities showed that when subscription journals co-exist with publishing in Open Access journals, the amount saved by institutions is dependent on the level of APCs charged by those journals. With lower APCs, it is likely that most universities would save funds, but higher APCs could diminish the savings to be made by research-intensive universities[61].

Economic impact of Open Access

Transitioning to an Open Access publishing model can bring about economic benefits both at the institutional and national level. For example, Houghton has conducted several economic modelling analyses for different countries, showing that savings at the national level could be made by switching to Open Access. For example, savings were estimated to amount to GBP 400 million/year in the United Kingdom[62], EUR 80 million/year in Denmark[63] and EUR 133 million/year in the Netherlands[64].

Economic savings resulting from Open Access can also be estimated at the institutional level. Based on the studies of Houghton, Swan (2010)[61] has modelled the economic benefits at the institutional level for a group of universities in the United Kingdom. Overall, the main findings point to the benefits of transitioning to Open Access, although the author notes that some universities could incur additional costs, mostly due to APCs[65].

> *"Moving to Open Access as the basis for disseminating research outputs can bring economic and academic benefits for all universities, though the most research-intensive universities may face additional costs under some conditions."*

More specifically, this study showed that savings could amount to between GBP 500,000 – 600,000/year for a typical UK university. The author further detailed that savings could be made in

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[60] http://legacy.earlham.edu/~peters/fos/newsletter/02-02-09.htm#choicepoints

[61] Swan, A., 2010, *Modelling scholarly communication options: Costs and benefits for universities*, Truro: Key Perspectives (available at: http://eprints.soton.ac.uk/268584/1/Modelling_scholarly_communication_report_final.pdf)

[62] http://www.jisc.ac.uk/publications/documents/economicpublishingmodelsfinalreport.aspx

[63] http://www.deff.dk/fileadmin/user_upload/dokumenter/DEFF/Publikationer/Andre_rapporter/Houghton-rapporten_om_Open_Access_i_Danmark.pdf

[64] www.surf.nl/binaries/content/assets/surf/en/knowledgebase/2009/Benefits+of+Research+Communication+_April+2009_+FINAL_logos2.pdf

[65] According to Swan (2010), *"If universities switch from the current subscription-based system to publishing all their articles in Open Access journals that charge an article-processing fee, there would be savings for all universities when the article-processing fee is 700 GBP per article or less (…) When article-processing fees for Open Access journals are 2000 GBP per article, there would still be savings for two of the four universities studied. When APCs are more than 2000 GBP per article, it is likely that most universities would spend more money than for the current subscription-based system. As with all other article-processing fee price points under this option, though, the direct costs of APCs would not all fall to the universities: some of the costs may be covered by external research grants as is current practice."*

relation to different areas. For example, in universities that have both an institutional repository and continue to pay for subscription-based journals (the most frequent case), savings can range from GBP 100,000 to GBP 1.3 million/year. According to the author, these savings result from higher efficiency levels in the research and library processes.

Research-system savings were also estimated. In moving to an Open Access system, the savings arising from subscriptions, library-handling services, article purchases and easier access to articles could amount to between GBP 800,000 and GBP 5.1. million/year for the universities under study. In addition, there are also economic benefits to be made from the contribution of Open Access to the research process itself and the greater accessibility of research to wider society:

> *"The value of the 'return to R&D' from Open Access – an economic measure of the value of the contribution to the research community as a whole (including to funders, institutions and researchers) arising from better accessibility of research information; savings derived from less duplication, reducing plagiarism, greater overall accessibility of information, facilitation of interdisciplinary research, and so forth – ranges from 0.3 million GBP to 2.8 million GBP per annum for the universities studied."*[61]

Final remarks

This Open Access checklist seeks to provide European universities with a practical guide to develop institutional policies on Open Access. It complements and extends previous EUA work in the area of Open Access, namely the recent briefing paper and the survey on the implementation of institutional policies on Open Access conducted amongst European universities in 2014. In the future, EUA will continue its work in providing its membership with key information on Open Access developments and policies and in monitoring their implementation across European universities. Specifically, EUA is planning to conduct the Open Access survey on a regular basis, as well as to develop recommendations for universities aiming to implement institutional policies in the area of Open Access.

Discussions in the EUA Council have concluded so far that, in addition to Open Access to research publications, the range of topics that are gaining traction in the scientific, academic and policy-making communities, including, *inter alia*, the 'Science 2.0' movement and related topics on open data and text and data mining, need to be addressed collectively. Moreover, more expert dialogue amongst universities is necessary at European level, as well as dialogue with other stakeholders and with governments. To assist EUA in these complex processes, and building on the work of the Task Force, a new expert group with a broader remit is being established to continue to support EUA universities in these areas and to find common grounds to inform policy developments.

Open Access Resources

The following list includes useful resources for institutions and researchers interested in knowing more about institutional Open Access policies, Open Access archives and publishers' copyright policies.

- ROMEO: Provides a searchable database of publishers' copyright and self-archiving policies for pre-prints and post-prints.
- ROAR (Registry of Open Access Repositories): Tracks the growth of existing Open Access Archives.
- ROARMAP (The Registry of Open Access Repositories Mandatory Archiving Policies): Tracks the growth of institutional self-archiving policies.

Annex 1

Open Access Survey

EUA's survey on Open Access was conducted in the last quarter of 2014 and it focused on the development and degree of implementation of institutional policies on Open Access. One hundred and six universities from 30 European countries participated in this survey, reflecting the diversity of EUA's membership, both in terms of geographical spread and university size. Results from this initial survey show there has been progress on Open Access institutional policies and provide important insights into the state of play of Open Access in a variety of European higher education institutions and countries.

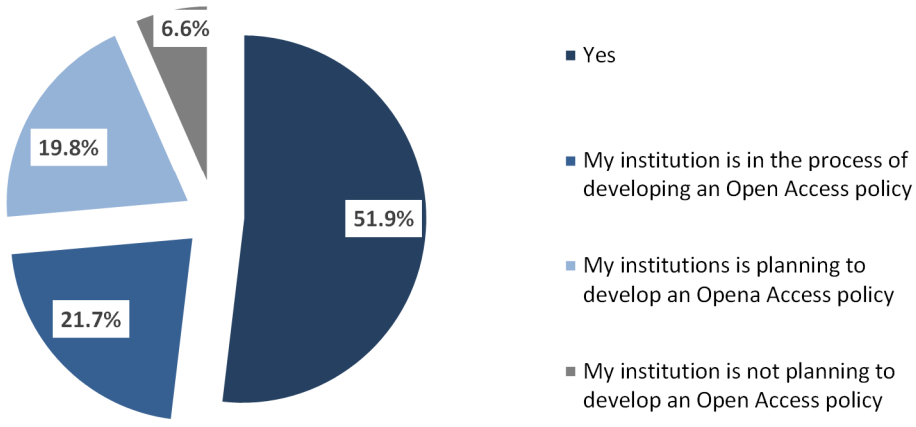
In order to continue monitoring the progress of EUA's university membership in Open Access, and hence to inform EUA's continuing work in this area, it is planned that the Open Access survey will be repeated annually (next wave foreseen in the last quarter of 2015).

Key results of the Open Access survey 2014

Institutional policies on Open Access

(a) **More than nine in 10 universities (93.4%)** indicated having an **Open Access policy in place**, being in the process of **developing** one **or planning its development** (Figure 1)**.**

Figure 1. Existence of an institutional policy on Open Access to research publications



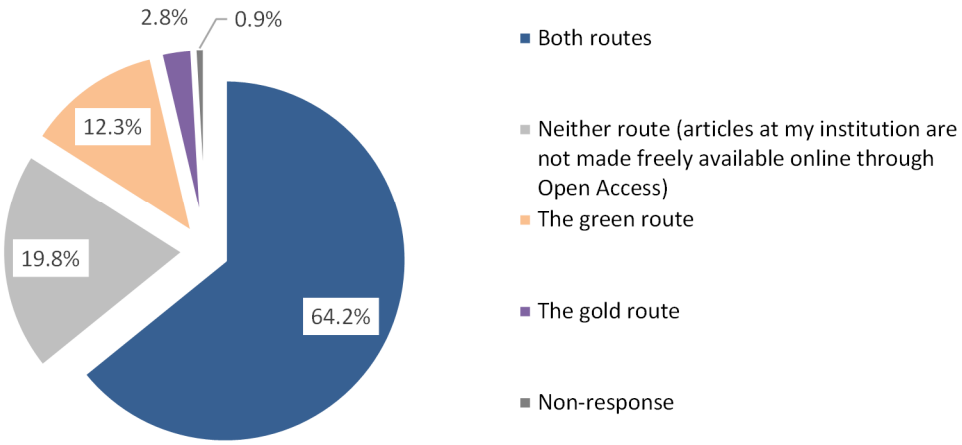
(b) For these universities, the main element in their institutional policy on Open Access was **encouraging researchers to deposit their publications in an institutional or shared repository (61.6%)**. Mandatory requirements for the green or gold route were much less frequent.

Institutional repositories and Open Access routes

(c) More than eight in 10 universities (**82%**) indicated having an **institutional or a shared repository**.

(d) About eight in ten universities (**79.3%**) reported making their **articles Open Access** using the green route, the gold route or both (Figure 2).

Figure 2. Open Access routes



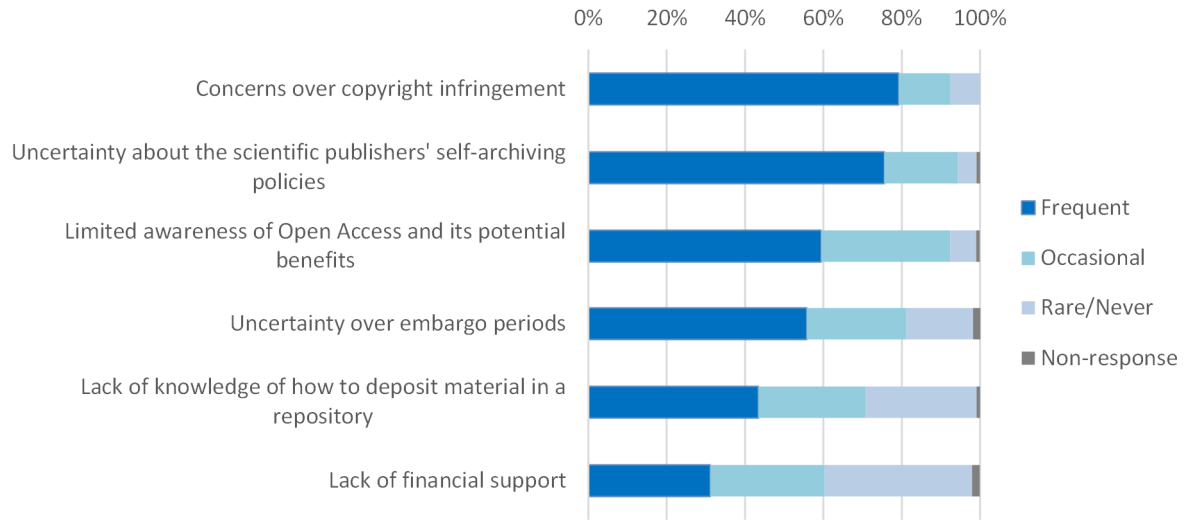
(e) 67.3% of universities who had an Open Access policy in place reported an **increase in the deposit rate of publications** in the institutional/shared repository since the policy had been adopted.

Increasing knowledge and adherence to Open Access: Challenges and ways forward

(f) Awareness of the scientific publishers' policies on Open Access was assessed as **"excellent" or "very good"** for **librarians** by **67.9%** of respondents, for the **institutional leadership** by **25.5%** of respondents and for **researchers** by **9.4%** of respondents.

(g) Concerns over copyright infringement were identified by almost 80% of universities as the **most frequent barrier** regarding self-archiving publications in a repository (Figure 3), followed by uncertainty on the scientific publishers self-archiving policies, which was considered a "frequent" barrier by 75.5% of institutions.

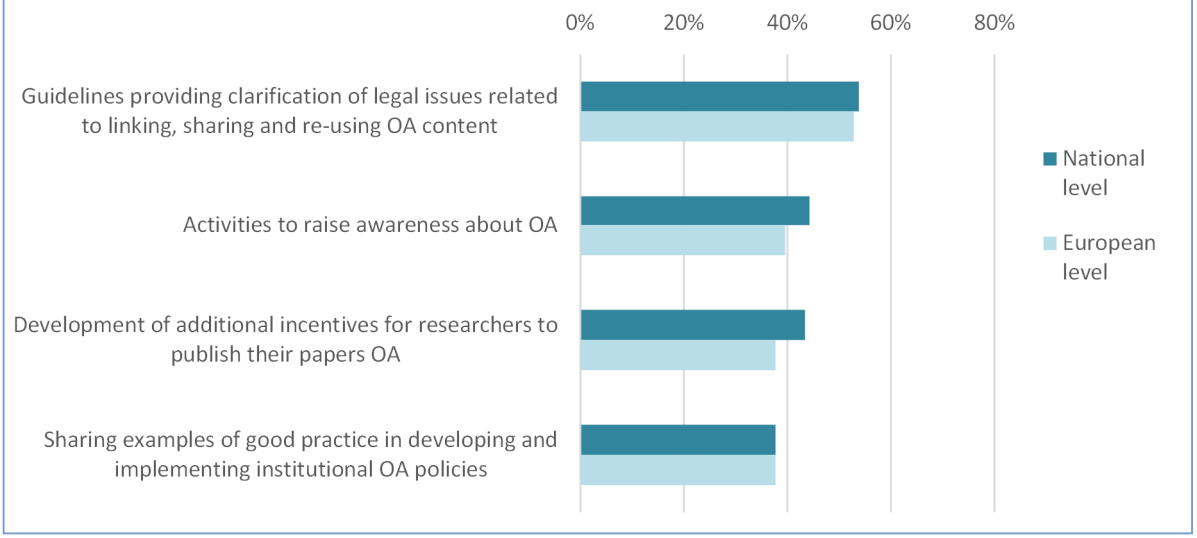
Figure 3. Barriers to self-archiving (green Open Access)



(h) In order **to encourage researchers to self-archive** their publications in a repository, maximising the **visibility of research** to relevant communities, increasing the **number of citations** and **promoting the work of researchers** should be sought.

(i) The **provision of guidelines to clarify legal issues** related to Open Access was perceived as the most important course of action to be followed both at **national and European level** (Figure 4).

Figure 4. Actions needed in the area of Open Access



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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, website and publications.