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LERU roadmap towards Open Access

LERU open access working group

Summary. Money which is not directly spent on research and education, even though it is largely taxpayers´ money. As Harvard University already denounced in 2012, many large journal publishers have rendered the situation "fiscally unsustainable and academically restrictive", with some journals costing as much as $40,000 per year (and publishers drawing profits of 35% or more). If one of the wealthiest universities in the world can no longer afford it, who can? It is easy to picture the struggle of European universities with tighter budgets. In addition to subscription costs, academic research funding is also largely affected by "Article Processing Charges" (APC), which come at an additional cost of €2000/article, on average, when making individual articles Gold Open Access. Some publishers are in this way even being paid twice for the same content ("double dipping"). In the era of Open Science, Open Access to publications is one of the cornerstones of the new research paradigm and business models must support this transition. It should be one of the principal objectives of Commissioner Carlos Moedas and the Dutch EU Presidency (January–June 2016) to ensure that this transition happens. Further developing the EU´s leadership in research and innovation largely depends on it. With this statement "Moving Forwards on Open Access", LERU calls upon all universities, research institutes, research funders and researchers to sign this statement and give a clear signal towards the European Commission and the Dutch EU Presidency. [**Int Microbiol** 18(3):195-202 (2015)]

Keywords: Open Access

LERU: League of European Research Universities

Universiteit van Amsterdam - Universitat de Barcelona - University of Cambridge - University of Edinburgh - Albert- Ludwigs-Universität Freiburg - Université de Genève - Ruprecht-Karls-Universität Heidelberg - Helsingin yliopisto (University of Helsinki) - Universiteit Leiden - Katholieke Universiteit Leuven - Imperial College London –University College London - Lunds universitet - Università degli Studi di Milano - Ludwig-Maximilians-Universität München - University of Oxford - Université Pierre et Marie Curie, Paris - Université Paris-Sud 11 - Université de Strasbourg - Universiteit Utrecht - Universität Zürich

Executive Summary

- The LERU Roadmap towards Open Access represents a conscious decision by the League of European Research Universities to investigate new models for scholarly communication and the dissemination of research outputs emanating from LERU universities.
- The European Commission has singled out "the dissemination, transfer and use of research results, including through open access to publications and data from publicly funded research", as one of the action points to be pursued in order to achieve a well-functioning European Research Area (ERA).[1] Access to research information must be optimised if the European research community is to operate effectively, producing high-quality research that has a wider social and economic impact.[2]
- We are seeing a growing interest across the world in the moves made in recent years to stimulate an 'Open Access' environment, where scholarly literature is made freely available on the internet, so that it can be read, downloaded, copied, distributed, printed, searched, text mined, or used for any other lawful purpose, without financial, legal or technical barriers, subject to proper attribution of authorship.[3]

1 See *Europe 2020 Flagship Initiative Innovation Union*. European Commission. COM (2010) 546, 6 October 2010.
2 See *Overcoming barriers: Access to research information content*. Research Information Network, London, 2009. Available at http://www.rin.ac.uk/system/files/attachments/Sarah/Overcoming-barriers-report-Dec09_0.pdf and Friend, F.J. (2007) *UK Access to UK Research*, in *Serials*, vol. 20 (3), pp. 231-34. Available at http://eprints.ucl.ac.uk/4842/.

- The idea of Open Access is not new; the first major international statement on Open Access was set out in the Declaration of the Budapest Open Access Initiative in 2002.[4] However, 'the pathway' to Open Access is not a smooth one. Many parties are involved and there are many competing interests. There are costs and there are advocates, agnostics and critics. There are gains and impacts which need to be carefully assessed.
- This Roadmap traverses some of this landscape and aims to assist LERU members who wish to put in place structures, policies and practices to facilitate Open Access. Whilst the Roadmap is primarily intended for LERU members, other European universities may find it useful.
- The two basic mechanisms through which researchers can make their work freely available are often termed as the 'gold route' and the 'green route.' The adoption of either or both routes could lead to a transformation in the means of disseminating research outputs by LERU and other universities across the globe.
- LERU and/or other universities can consider having Open Access repositories into which, copyright permissions allowing, copies of their members' research outputs could be deposited. Those who already have such repositories are continuing to develop them. Many universities have found the Green route a helpful one to follow as a means of improving the dissemination of research outputs. In Webometrics listings of the impact of institutional repositories, LERU universities are significant contributors. The July 2010 listing shows that five of the top ten European universities listed are members of LERU.[5] Further guidance, including some costing information, on implementing the Green route is given in section III.
- Several universities have supported the Gold route for Open Access, whereby authors in these institutions either publish in Open Access journals or pay publication charges (funded by the research funder or from an institutional Open Access fund) to make their article available in Open Access on publication. Some research funders, such as the Wellcome Trust in the UK, the Austrian Science Fund (FWF) and the Netherlands Organisation for Scientific Research (NWO), will fund such publication payments. The Gold route is a bold route, which may also change the pattern of publication. Further information, including some financial information, is given in section IV.
- All of the changes described in this Roadmap require leadership. Universities could usefully nominate a senior person who can lead on Open Access issues for the whole university. These people could, in turn, work together collaboratively to take forward the Open Access agenda in Europe, making links as appropriate to other bodies in Europe who support Open Access developments. At an institutional level, the senior Open Access champion could usefully draw together a pan-university committee, with representatives from disciplines/ support services to take the agenda forward.

I. Open Access in a wider context: Open Scholarship and Open Knowledge

1. Open Access is not a new phenomenon and can be seen, for example, in Stevan Harnad's work in 1990.[6] As with any Roadmap, understanding the directions requires a knowledge of the surrounding landscape; Open Knowledge and Open Scholarship.

2. Open Knowledge is 'any kind of information –sonets to statistics, genes to geodata– that can be freely used, reused, and redistributed' (Open Knowledge Foundation definition).[7] Open Scholarship refers to research that generates Open Knowledge. While the LERU Roadmap focuses on more traditional research outputs, it is important to note that 'Open Knowledge' is much broader than this, and would encompass primary data, associated software, and educational resources. The reason for focusing on Open Access to more traditional research outputs is that they have common issues around making them freely available that make it reasonable to consider them together, and separately from other types of knowledge.

3. In brief these issues are around:

- Costs –Open Knowledge costs nothing to the user, but needs sustainable business models.
- Time –Open Knowledge is available immediately and permanently. Open Access research outputs may be

3 See *Getting your feet wet: An introduction to Open Access*, http://www.rin.ac.uk/our-work/using-and-accessing-information-resources/introduction-open-access.

4 See http://www.soros.org/openaccess/view.cfm.

5 See http://www.webometrics.info/top100_continent.asp?cont=europe.

6 See Harnad, S. (1990) *Scholarly Skywriting and the Prepublication Continuum of Scientific Inquiry*; available at http://cogprints.org/1581/.

subject to publisher embargos, which have to be balanced with the public interest as expressed, for example, by research funders' conditions of grant.
- Rights and rewards –Open Knowledge is available for people to use in any lawful way, including for commercial purposes. For Open Access research outputs, this maximises the impact of the research, and acceptable ways need to be found to assess and reward that impact.
- Technology –Open Knowledge is made available in ways that enable computer-based tools to exploit it, via aggregation, data-mining, annotation and so on, as well as supporting tools to assist disabled people, such as screen readers.

4. Open Access, therefore, is one element in a broader landscape of Open Scholarship and Knowledge, which could rapidly change the way research is undertaken and communicated globally. Universities leading these changes will be well-placed to attract the best researchers and students, and show how they contribute to the growing European knowledge economy and society.

II.Benefits accruing from Open Access for researchers, Universities and Society

5. Open Access brings benefits for a variety of constituencies. Open Access has its philosophical roots in the traditional values and goals of the academy –collegiality, research and knowledge creation as a shared endeavour, a collaborative approach to enquiry, the furtherance of human understanding and the diffusion of knowledge to the benefit of Society at large. Open Access has appeared and the advent of the Internet enables the realisation of these things in a way not possible in the print-onpaper age.

Researchers

6. The authors of academic works enjoy increased visibility, usage and impact for their research outputs when they are made in Open Access.[8] Because Google and other web search engines index Open Access repositories, authors' work is easily found and, being Open Access, can be retrieved for use by everyone.

7. Open Access also allows different types of research to be undertaken –using the literature as data, alongside other data.

8. This visibility and usage are new: before Open Access, the only way to see academic work was by paying for subscriptions to journals or by paying a fee to view an article on the publisher's website. This restricted access to those who could afford to pay for access in these ways.

9. It is sobering to note that the World Health Organisation found in a survey conducted at the start of the millennium that more than half of research based institutions in lower-income countries had no current subscriptions to international research journals, nor had they had any for the previous five years.[9] Unsurprisingly, researchers in developing countries rank access to the research literature as one of their most pressing problems.[10] By making work available in Open Access, researchers are helping to create a global knowledge commons so that all may benefit, not just the relatively wealthy.

10. There have been some important efforts made to address issues affecting researchers and policy makers in the developing world.
- For example, the HINARI Programme, set up by the World Health Organisation (WHO) together with major publishers, enables the poorest developing countries to gain access to one of the world's largest collections of biomedical and health literature.[11] Institutions in countries with GNI per capita below $1,600 are eligible for free access. Institutions in countries with GNI per capita between $1,601–$4,700 pay a fee of $1,000 per year/institution.
- Under the Oxford Journals Developing Countries Offer, institutions within qualifying countries based on country incomes as established by the World Bank

7 See http://okfn.org/.

8 See aggregations of studies on the Open Access impact advantage: Swan, A. (2010) *The Open Access citation advantage: Studies and results to date*, ECS EPrints, 17 Feb 2010; Wagner, A. B. (2010) *Open Access Citation Advantage: An Annotated Bibliography*, Issues in Science and Technology Librarianship, No. 60, Winter 2010.

9 Note that many developing countries do not qualify for schemes that supply journal access at cheap rates. See eligibility rules for Research4Life, for instance: http://www.research4life.org/institutions.html.

10 Aronson, B (2004) *Improving Online Access to Medical Information for Low-income Countries*, in New England Journal of Medicine, 350, pp. 966–968 at http://content.nejm.org/cgi/content/full/350/10/966.

11 See http://www.who.int/hinari/en/.

Report (2006) can apply for free or greatly reduced online access to the full Developing Countries collection, the Humanities and Social Science subset, or the Science, Technical and Medical subset.

Universities

11. Universities benefit from the aggregated impact of their researchers. The new audiences that Open Access brings to research can use this access to build on research findings and to make further discoveries. A university's mission is to create knowledge and to disseminate it; Open Access may help universities to fulfil this mission. Having university research open and showcased to the world potentially boosts a university's profile and enables the uptake and use of the fruits of research effort funded for the benefit of Society.

Society

12. The free diffusion of knowledge into Society in general from Europe's universities aids the building of a knowledge economy and the raising of scientific and cultural literacy.

13. There are potential economic benefits, too, and these accrue to the research sector and to Society as a whole. Economic modelling by the Australian economist, Professor John Houghton of Victoria University, Melbourne, has shown that in all the countries modelled so far (Australia, UK, Netherlands, Denmark and the USA) Open Access works out as the most cost-effective option for disseminating research. It increases accessibility and the efficiency with which researchers can do their work, and streamlines library operations.[12] With worldwide Open Access, researchers would spend less time looking for and accessing research information for their reading, writing and peer reviewing activities; far less time would be spent gaining permissions from publishers to re-use researchers' own and others' work; and avoiding blind alleys and duplication of research would be easier. And libraries would spend far less on buying content and handling journal administration. There are costs associated with Open Access dissemination models, of course, but these are far outweighed by the economic benefits across the system from free and easy access to all research outputs. Houghton and his team estimate that savings would be many times the costs in every case modelled and could amount to substantial sums: for example, the Netherlands could enjoy economic benefits every year to the value of around €133 million.[13] Benefits and costs fall unevenly however.

14. It is important to note that the Houghton report remains controversial and debated: publishers, a major stakeholder, were not consulted in the research and some of the input data in the models is disputed. In addition, many of the savings would only be achievable if all information went Open Access, not just that from LERU members. Otherwise universities would end up paying subscriptions and all of the associated costs, as well as Open Access costs for their research. For research intensive universities, such as the LERU members, a direct comparison of Gold Open Access charges compared to current subscription costs shows that they would pay more under the Gold Open Access route; under a Green Open Access model, universities incur new costs with no immediate savings on subscriptions. However, a new study by CEPA, Heading for the Open Road,[14] in which the Publishing Research Consortium was a partner, looks again at financial modelling and concludes that a prudent approach for policy makers wishing to promote access would be to encourage the take-up of Green and Gold Open Access.

15. Economic benefits can accrue across Society, outside the research sector. Businesses, such as biotechnology companies, that innovate using basic research as their raw material –creating wealth in Society in the process –benefit from Open Access to the information they need. The professional sector, including examples such as family doctor practices, legal businesses, and the secondary and higher education communities, can access and use hitherto unavailable research material. The practitioner community –such as civil engineering firms, software engineers, consultancies and the financial sector –can transfer knowledge from basic research into their commercial practices.

16. Through Open Access, Europe's populations can be better informed, not only by their own efforts at seeking out specific research information on topics of interest, but through better-informed media bringing to their attention new develop-

12 For example, the average handling times (minutes per journal per year) calculated by university libraries involved in a recent study were: Print journals 143 minutes, electronic journals 56 minutes, Open Access journals 10 minutes. For more data see Swan, A. (2010) *Modelling scholarly communication options: costs and benefits for universities.* Technical Report, Scholarly Communications Group, JISC, at http://eprints.ecs.soton.ac.uk/18584/.

13 For John Houghton's comparison of Denmark, The Netherlands and the UK in June 2009, see http://www.knowledge-exchange.info/Default.aspx?ID=316.

14 See http://www.publishingresearch.net/documents/RINHeadingforopenroadDynamicsoftransition.pdf.

ments and findings from basic research. Knowledge societies can be built around the world much more strongly and effectively if knowledge is easily accessed and spread. Open Access is a key to this transformation.

III. LERU and the Green route for Open Access

Overview

17. The Green route has been defined as the route where copies of peer-reviewed research outputs are made freely available on the web, using an Open Access repository, alongside any formal published versions.

18. In this model research is deposited into the institutional repository, subject to copyright/license permissions. Many journal publishers do allow deposition after embargo periods (e.g., 12 months) and these embargo periods are maintained to ensure the continued value of subscriptions and therefore ensure sustainable business models for commercially-published journals. Many book publishers do not allow full deposition (of the full work) into institutional repositories. It should be noted, however, that advocates of Open Access would wish to keep embargo periods as short as possible.

19. For journal materials, this does lead to more than one version of the article being available (the postprint version as well as the version of record). Some feel that this benefits research, others worry that it is confusing to readers and can be dangerous in, for example, medical areas. Under the Green route, however, it is possible to isseminate the publication of errata.

Green Route - Stage 1: Getting Started

20. An institution that has established such an Open Access repository has the technical tools that enable it to manage and share its research outputs on the web. In doing so, it joins a broad range of European institutions with such tools. Such repositories should use standard protocols.

21. There is a significant body of literature which can inform institutions in their decision making processes when establishing a repository.[15]

22. The costs of establishing an Open Access repository vary from institution to institution. The costs to establish the Southampton Institutional Repository in the UK amounted to approximately €13,000 for technical costs, a 0.5 FTE senior post as Institutional Repository manager, a 0.5 FTE Research Fellow for advocacy and 0.7 FTE support staff.[16] From a range of UK universities consulted, the annual costs of holding research papers in a repository range from €30,000 to €242,000.[17] Further clarity on the costs of Open Access will be obtained by LERU universities exchanging information and from studies that will result from such collaboration.

23. In parallel with the establishment of an institutional repository or repositories, universities should consider creating a communications and advocacy strategy, which informs the academy of both the drivers for establishing a repository system and also how university researchers can submit their outputs to the new dissemination system. Regular monitoring will identify what proportion of the university's research output is available via the institutional repository.

24. An important part of the university's strategy for advocacy will be to identify the benefits which Open Access may bring both to the researcher and the institution. These benefits are listed in section II.

25. Universities should be clear on the type of materials which can be deposited. By way of example, the University of Helsinki requires researchers to deposit copies of their research articles published in academic journals in HELDA, the open digital repository maintained by the University of Helsinki. It is also possible to store other types of publications in the repository, such as popular articles, other published documents, the University's publications as well as monographs and teaching material, if permitted by publishing contracts. Where such materials have been peer reviewed in commercial publications, this should be noted in the metadata accompanying the full text.

26. There may be differing views within the academic community, and policies set that are appropriate for each disciplinary area. There are those who suggest that there must be an academic quality control process for repositories, and that only those items at or above the threshold quality should be made public. This is why some repositories, for example, will only accept peer reviewed outputs. Others contend that rather than restrict the type of item, what is important is that their exact status be described (so, for example, the reader can distinguish between a draft working paper and a copy of an item published by a peer reviewed journal).

15 See http://www.sherpa.ac.uk/ and also an important RAND Europe evaluation of the London SHERPA-LEAP consortium at http://eprints.ucl.c.uk/13760.
16 See http://www.driver-repository.eu/PublicDocs/D7.2_1.1.pdf, p. 171.
17 Swan, A. (2010) *Modelling scholarly communication options: costs and benefits for universities.* A report for the JISC. http://eprints.ecs.soton.ac.uk/18584/.

27. Harvard University provides an interesting case study in Open Access policy making. With support from the Office for Scholarly Communication, Open Access policies are now in place in more than half of the Harvard Schools (as at April 2011). These policies apply only to 'scholarly articles' in the form of a final manuscript sent to the publisher after the completion of the peer review process.

28. Using terms from the Budapest Open Access Initiative, Harvard Faculty's scholarly articles are articles that describe the fruits of their research and that they give to the world for the sake of inquiry and knowledge without expectation of payment. Such articles are typically presented in peer reviewed scholarly journals and conference proceedings.

29. Not included under this notion of scholarly article are: books, popular articles, commissioned articles, fiction and poetry, encyclopedia entries, ephemeral writings, lecture notes, lecture videos, or other copyrighted works. This is not to denigrate such writings. Rather, they are generated as part of separate publishing or distribution mechanisms that function in different ways, the integral qualities of which, if any, the present policies do not and are not meant to address.[18]

30. At an early stage, the institution can embed their Open Access efforts into pan-university strategies. This is important because work on Open Access needs to be fully aligned with an institution's mission. Institutional strategies in at least the following areas can be aligned with the new developments:

- Research/Teaching and Learning
- Copyright/Intellectual Property Rights (IPR)
- Publications

31. LERU recognizes that LERU and/or other universities can work together in collaboration to avoid duplicating effort. Such collaborative activity can also embrace working with research funders, who have their own strategies and requirements for the dissemination of funded research outputs. National/regional examples of guidance will help to shape work at an institutional level.

Green Route - Stage 2: Embedding the Green route

32. In many ways, a real sign of success at an institutional level is to agree an institutional mandate where, copyright permissions allowing, all research outputs from the institution are deposited in Open Access in the institutional repository. Such a step is a bold one and will need explicit support from the academy. Commonly, such a policy is agreed by the institution's academic Senate, as was the case in UCL (University College London) which is described in more detail in section V.

33. If the mandate requires self-archiving by the authors, this can be facilitated by friendly and simple systems, preferably integrated with current research information systems. Utrecht University, for example, has created a simple "Upload Full text button" in their (mandatory) research registration system.

34. LERU and/or other universities can consider adopting Open Access mandates for their research outputs. Where materials are lodged in subject-based Open Access repositories, or published in Open Access journals, or in journals that make materials
available after a certain period of time, cross-linking can make all such materials visible in one search. Partnerships with publishers and research funders will help to avoid unnecessary duplication of activity.

35. LERU and/or other universities are able to take a proactive stance on copyright issues, safe in the knowledge that the vast majority of commercial journals allow some form of archiving of an author's own research outputs. Where assignment of copyright is required by a publisher as a condition of publication, researchers should instead consider the use of a Licence to Publish, where copyright is retained by the author and a licence to publish granted to the publisher by the author.[19] It is the author's responsibility to check the policies of the journals they are publishing with, but mechanisms to check they are abiding by the license they have published should be in place.

Green Route - Stage 3: Furthering the process

36. It is important that universities actively continue current investigations into the feasibility of storing open primary data in repositories, linking the open data to the secondary research publication. This is potentially a new area for repositories and will bring to light different issues and concerns. Primary data, across all subject areas, forms the building blocks from which secondary research articles and monographs are

18 See http://osc.hul.harvard.edu/policies#articles.
19 See the Copyright Tool Box, produced by the JISC and SURF, and listed below in section V for further information.
20 See http://bulletin.sciencebusiness.net/ebulletins/showissue.php3?page=/548/6589/20007.
21 Available at http://base.ub.uni-bielefeld.de/en/about_sources_date_dn.php?menu=2.
22 Available at http://www.europeana.eu/portal/.

created. Such primary data, once available in Open Access, can be interrogated by researchers, or re-used to avoid duplication of research effort. Universities that have well-developed repository infrastructures are well placed to meet the new challenges which such a development will bring, a position which is in line with developments in the EU.[20]

37. The relationship of the BASE search interface[21]for Open Access with the Europeana portal[22] and with other information providers needs to be clear, to avoid duplication of effort and to ensure that the European user has access to the best possible tools for search and retrieval.

38. There is currently a gap in the provision of a secure digital curation infrastructure across Europe for the contents of Open Access repositories and Open Access journals. European universities, research funders and other stakeholders can usefully work together to identify and put in place the infrastructure that is needed.

IV. LERU and the Gold route for Open Access

Overview

39. The Gold route has been defined as journal publishing operating with a business model not based on subscription, but rather on either publication charges (where the author or an organization on behalf of the author funds the publishing costs) or on subsidy. Gold Open Access journals do not charge readers and grant extensive usage rights in accordance with the authoritative definition of the Budapest Open Access Initiative.[23]

40. Substantial changes are taking place in the scholarly communications process. These changes may well affect all universities across the world and LERU universities are no exception.

41. In the production of scholarly monographs and research articles, peer and editorial review and indeed improved peer review are of paramount importance and therefore business models that support their sustainability need to be in place.

42. As it is proposed by LERU that Open Knowledge is beneficial to research efficiency, institutions can work for change in the existing publishing system in the direction of sustainable business models for Open Access publishing.

43. There are two types of journal under which authors can adopt Gold Open Access: full Open Access journals and hybrid (or optional) journals. Whilst Gold Open Access has been shown to increase usage, there is no decisive evidence to date that it increases citations. Many full Open Access journals are young journals and so may not have the same profile or impact factor of their more traditional/established competitors, but this not reflect their future influence.

44. Some publishers 'double dip' –i.e. charge full subscription prices as well as charging authors publication fees in hybrid journals. LERU members have the choice to push back on such pricing or to require their researchers not to pay Open Access fees in such publishers' journals.

Gold Route - Stage 1: Getting started

45. LERU and/or other universities may advocate the benefits for their researchers and for European research in publishing in Open Access journals.[24] LERU and/or other universities may also consider allocating funds to pay for publication charges in those Open Access journals which charge for submissions and publication, where funding is not provided by the research funder.[25]

46. In order to maximize the investments in paying for publication charges, there is a need to investigate the feasibility of LERU and/or other universities as a group entering into agreement with Gold Open Access publishers for membership and/or bigger discounts on publication charges.[26] Guidance on this can be made available to European university groupings and consortia as a whole.

47. As with the Green route, universities should embed their approach to Open Access publishing in panuniversity strategies.

Gold Route - Stage 2: Embedding the Gold route

48. The research community can lobby to convince research funders and other stakeholders that meaningful chang-

23 See http://www.soros.org/openaccess.

24 The recommendation is primarily to publish in fully Open Access journals, where such journals exist in a subject field.

25 It is recommended that an institutional Publication Fund is primarily allocated for paying publication charges for fully Open Access Journals (Gold), not for Hybrid Journals in the first resort. Hybrid journals are subscription-based journals operating with an Open Access publishing option, whereby an author pays a publication fee allowing the specific article to be Open Access. Both roads lead to Open Access and are examples of how publishing models are changing (at different speeds) to support Open Access. Implementation is not easy. For example, who decides on the allocation of funds? Is it 'first come-first served' until the annual allocation runs out? Or does every researcher have a credit limit?

26 For example, BioMed Central, Public Library of Science (PLoS), Hindawi, Copernicus, Springer Open.

es to the existing model for scholarly publishing require investments (transition costs); LERU and/or other universities can liaise with other university associations on this matter.

49. Given that European scholarly monograph publishing (especially in the humanities and social sciences) is in flux, and that LERU institutions are involved in institution-based monograph publishing (especially in non-English languages), European institutions could connect to the activities of the OAPEN net-work[27] or other Open Access monograph publishing initiatives, in order to promote Open Access publishing of scholarly monographs. Guidance can be made available to the wider university community.

Gold Route - Stage 3: Furthering the process

50. As in the Green route LERU and/or other universities can work together in collaboration wherever possible.

51. In order to contribute to changes in the existing model for scholarly publishing, there is a need for an overview of institutional involvements in commercial non-Open Access journal and peer reviewed monograph publishing, by means of an investigative study of the yearly institutional output in terms of numbers of articles and books, subject spread and the in-kind editorial and refereeing work done by institutional employees for different journals and peer reviewed monographs. Creating such an overview could offer a valuable starting point for approaching specific journals and/or publishers to discuss whether the overall contribution to specific journals could be addressed in terms of bringing a journal into an Open Access publishing mode, thereby potentially unlocking those journals from 'big deal' subscription packages. Such a study would help inform possible future developments in publishing activity, including Gold Open Access publishing.

V. External Subject-Based, Discipline-Based or Funder Repositories

52. Whilst this Roadmap focuses largely on University Green and Gold Route Open Access initiatives,[28] it is important to note that there are subject-based, discipline-based and research funder repositories which seek to curate and provide access to research publications (of varying kinds) and/or to research data.

53. One of the challenging questions for universities is how their repositories relate to these other repositories. At a practical level, for example, would a researcher be asked to deposit work in both their university repository and, say, an international repository? If they submit work to one repository, should metadata tags be used to ensure cross-linking?

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27 See http://www.oapen.org/. OAPEN is an initiative in Open Access publishing for humanities and social sciences monographs. The consortium of University-based academic publishers who make up OAPEN are all active in Open Access publishing. The OAPEN partners consist of a number of European university presses and universities. The OAPEN project will explore ways of publishing scholarly work in Open Access, providing access to important peer reviewed research from across Europe and exploring new business models.

28 See sections III and IV of this Roadmap.