

Roadmap for Open Science – University of Edinburgh Self-Assessment January 2024

The following table contains a self-assessment on the University of Edinburgh’s readiness for Open Research, based on the criteria set out in the LERU Open Science Roadmap. This self- assessment has been carried out by staff in the Library Research Support (LRS) Team. This is a working document, and we would welcome the views on the accuracy of the self-assessment and the recommendations made.

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Topic	Question	Assessment of progress	Proposed next steps	RAG Status	
Cultural change					
1	Leadership	Has your university appointed a senior manager to lead Open Science approaches across all eight pillars of the Open Science debate identified by the European Commission?	<p>There is not, currently, a senior academic within the University who has responsibility to lead across all 8 pillars for all colleges.</p> <p>A new Head of Research Cultures has recently been appointed they will have responsibility for delivery of the Research Cultures Action Plan and Delivery Plan (https://support-for-researchers.ed.ac.uk/research-cultures).</p> <p>Dr. William Cawthorn (Lecturer, Centre for Cardiovascular Science, CMVM) has the role of LERU Open Science Ambassador (OSA) while Dominic Tate (Head of Library Research Support) leads on Open Research for the Library.</p> <p>A number of other senior researchers have taken very active roles in areas of Open Science, including Andrew Millar, Malcolm McLeod (via the UK Reproducibility Network and REIRG) and Emily Sena. In addition, as part of the recent REF submission, various School and Centres have identified a senior academic with a remit for open science.</p> <p>An Open Research team has been formed within the library consisting of an Open Research Coordinator and Citizen Science & Participatory Research Engagement Officer who are working to develop a programme of cultural change. Initially by liaising with relevant teams and committees across the university to identify key stakeholders and champions and raising awareness of Open Research. The Open Research Co-Ordinator has created a network of Open Research champions from across the University. These are primarily senior academics who have a responsibility for, or strong interest in, Open Research in their School, and school or college Research Support Staff who have a direct role in promoting and supporting Open Research. This network will work together to</p>	<p>Schools and Colleges should consider engaging Open Research Champions at a local level.</p> <p>The Open Research Co-Ordinator will also identify any other researcher-led Open Research work going on within the University. Once identified the Library will offer support to these groups as well as encouraging them to work with EORI and other existing groups so that they can learn from and support each other.</p> <p>Edinburgh Research Office is involved in discussions and events focussing on research integrity and trust in science; we will seek to work with them to catalyse researchers and reach senior academics in the Colleges.</p> <p>The Library Open Research team will work closely with the new Head of Research Cultures to ensure that the culture change needed to embed OR across the university is reflected within their work.</p>	

ensure coordinated action in designing and implementing strategies for advancing the University's progress on the eight pillars. Dr. Cawthorn Chairs this network as part of his LERU Open Science Ambassador role.

In addition, the Library Research Support Team is co-ordinating efforts on components of Open Science, e.g. Open Access publication, open data, open electronic notebooks, software management, and preservation of protocols and workflows.

Grassroots networks of Open Research champions have emerged, such as the Edinburgh Open Research Initiative (EORI: [@edinburgh open, https://edopenresearch.com/](https://edopenresearch.com/)) and ReproducibiliTea sessions, organised by interested postgraduate groups.

The College of Arts, Humanities, and Social Science's (CAHSS) open research sub-committee members act as open research champions in their schools, planning open access training and events and sharing best practice.

2	HR	<p>Has your university developed a programme of cultural change, which is necessary to support the changes in principle and practice which Open Science brings?</p>	<p>The Research Culture Working Group established by IAD, and with representation from across the University, has looked at how cultures across the University can be changed to prioritise and promote Open Research, although this was a minor part of their work, and the working group has now ended. This is part of a larger programme of work which will also look at other types of culture change required across the University.</p> <p>The UoE Research Cultures Action Plan was published in Feb 2023 and includes OR as a crucial part of ensuring Responsible Research. Key actions in this plan include introducing research ethics & integrity training for all staff and students which includes transparency, reproducibility, and ongoing support for an annual Open Research Conference.</p> <p>Human Resources has not yet been formally consulted about potential changes to recruitment, reward, and progression with regards to Open Science.</p> <p>CAHSS formed a sub-group of College Research Committee to look at these issues, and there are a number of initiatives coming out of the College of Medicine and Veterinary Medicine. School of Philosophy, Psychology and Language Sciences has incorporated Open Research in academic's job descriptions.</p>	<p>The University might consider whether it wishes to make changes to criteria for recruitment and rewards to incentivise Open Research.</p> <p>We should work with the relevant committees to set out a timetable for consultation.</p>
3	Advocacy	<p>Does your university have advocacy programmes to identify the benefits of Open Science approaches, whilst being realistic about the challenges?</p>	<p>Robust outreach programmes exist in Open Access publication and Research Data Management. The Digital Research Services outreach project may help to address this as well. Additionally, Data and Software Carpentries are being used increasingly across the University.</p> <p>The Library has a full-time Citizen Science Engagement Officer who coordinates advocacy and support for Citizen Science & Participatory Research (https://www.ed.ac.uk/information-services/research-support/open-research/participatory-research)</p> <p>In June 2019 a symposium on FAIR Science was held at the</p>	<p>The Open Research Co-Ordinator is working with Colleges and the Institute for Academic Development (IAD) to develop new advocacy programmes on Open Research. These could include workshops/symposia (in-person and/or virtual). Support and input would also be welcomed from the group of Open Research Champions, once this has been established. The Digital Curation Centre, Software Sustainability Institute, and Center for Data, Culture & Society (CDCS) could be utilized internally to help spread the word.</p>

			<p>Queen’s Medical Research Institute, attracting over 100 attendees from across the University. A key outcome was raising awareness of Open Research approaches and challenges.</p> <p>A key aim of the Edinburgh Open Research Initiative (EORI) is advocacy and awareness, for example by organising workshops. The Edinburgh ReproducibiliTEA group has held monthly or fortnightly meetings to discuss Open Research approaches. These continued throughout the pandemic via their Teams channel and continue to go from strength to strength attracting a broad range of speakers and attendees to engage in discussion on issues relating to OR. https://www.ed.ac.uk/information-services/research-support/open-research/reproducibilitea-eori</p>	<p>The Citizen Science Engagement Officer has begun developing targeted communication strategies for reaching the diverse communities within the university. Although still in their early stages, these strategies will allow us to identify the most effective way to reach different research communities and ensure that they are effectively supported.</p> <p>Other communications strategies include our EORI Teams group, our Open Research Newsletters and blog posts (as described here: https://www.ed.ac.uk/information-services/research-support/open-research)</p>	
4	Communication	Does your university have communication strategies which enable the whole university body to become familiar with Open Science practices?	<p>The REF Open Access Policy and process ensures University-wide communication about OA publication. The Research Data Support team has developed and maintains a communications plan and provides training and outreach for data management and sharing, including open data.</p> <p>The Library has set up a new “Open Research” webpage on the University web estate. This will link out to various policies, initiatives, and sources of help.</p> <p>The Edinburgh Open Research Newsletter has now published 14 issues and increased its readership from an initial 93 subscribers to 348 subscribers. All issues carry a mixture of material from the Library, college OR reps, and grassroots OR initiatives. These grassroots groups will be encouraged to promote and report on events and activities and there will be regular articles by Open Research Champions.</p> <p>EORI communicates Open Research developments regularly via its Twitter account (~500 followers) and other channels, such as the fortnightly newsletter of the Centre for Cardiovascular Science (CMVM).</p>	<p>The narrative should shift towards “Open Research” rather than “Open Access” or “Open Data”. Communications should start to reflect the bigger picture of openness. Communications within the University of Edinburgh are encouraged to use the more inclusive term “Open Research” over “Open Science”.</p> <p>The library will update its own Open Research webpages on a regular basis and publish a bi-monthly Newsletter and Blog to promote all Open Research activities.</p> <p>Consider formalising the communication of Open Research via Twitter and other social media channels, e.g. by adopting the EORI account as an official University of Edinburgh Open Research channel.</p> <p>Workshops/symposia should also be organised (as described above, point 3) as</p>	

CAHSS has a monthly Open Research newsletter that is shared amongst schools, as well as a Twitter account for general updates. Ad-hoc communications are sent for relevant policy changes.


another effective approach for communicating Open Research practices.

The 3rd Edinburgh Open Research Conference will be held in May 2024, it will bring together researchers and PGRs from across the university and beyond to discuss different aspects of Open Research in the context of the major global challenges we are all now facing.

The future of scholarly publishing

5	Compliance	Does your university have institutional mandates to support the move to full Open Access and does it monitor implementation of these mandates?	<p>The University currently has a ca. 92% compliance rate with the REF open access mandate and 90.8% OA rate in 2023 Leiden Rankings (https://www.leidenranking.com/ranking/2023/list).</p> <p>Monthly reports from our Current Research Information System are compiled into Power BI dashboard to present visualisations.</p> <p>The new Research Publications & Copyright Policy (2021) was fully implemented in 2022. Extensive work has been done by Scholarly Communications to inform publishers of our new policy and our use of a Rights Retention Statement in all publications. They have also completed extensive outreach work to communicate the policy to researchers across the university and encourage compliance.</p> <p>Monthly reports on OA are shared with research managers across schools. Compliance with policy is strictly monitored.</p>	<p>Work will continue to ensure compliance with the new policy so that all publications can be made Open Access at the point of publication.</p> <p>We are aware of forthcoming requirements regarding Open Access to monographs, which provides an opportunity for both the University and its associated publisher - Edinburgh University Press - to develop sustainable approaches to Open Monograph publishing.</p> <p>Development of the university-wide fair publication policy, a plan to measure compliance, and a framework to deal with issues of non-compliance is a key deliverable under the research cultures delivery plan.</p>
6	Planning	Can relevant stakeholders work together to deliver a roadmap for how they, or specific groupings, can develop agreed plans for the future of scholarly publishing in their institution?	<p>Open Access for journal articles is well-established however we are looking at other research outputs, for example monographs and data papers. A paper has been presented at Research Strategy Group (RSG) looking at how the University can support OA monographs for the next REF.</p> <p>In addition, the Scholarly Comms team has contributed to national and international initiatives around Plan S and rights retention:</p> <ul style="list-style-type: none"> • Working with cOAlition S Ambassadors to promote adoption of Rights Retention Policies by funders and UK institutions. • Assisted Jisc with online focus groups to draft Rights Retention use cases to refine and prioritise sector needs. • Helped the UK Reproducibility Network (UKRN) review and publish a primer on Rights Retention https://osf.io/2ajsg/ 	<p>The Library will review staffing to deal with the additional workload in scholarly communications caused by Plan S.</p>

7	Advocacy	Does your university advocate the use of author identifier systems such as ORCID across the institution?	<p>ORCIDs are integrated with Pure (our Current Research Information System, or CRIS) and Library Research Support is investigating how to increase adoption rates. It is on the RDM Roadmap to integrate ORCIDs in Edinburgh DataShare (institutional data repository).</p> <p>The University's Research Publications & Copyright Policy (2021) strongly advocates for the use of ORCIDs.</p>	<p>The recommendation to use ORCIDs should be included in mandatory training for researchers, e.g., the 'Managing your Research Teams' training for PIs and incorporated into the Concordat to Support the Career Development of Researchers.</p> <p>We will undertake a review of PURE records to see how many of them contain ORCIDs, this will help us to identify areas for more focused advocacy and support. This information can also be shared with the relevant schools/institutes so they can also encourage greater uptake.</p>	
8	Innovation	Has your university considered supporting new forms of scholarly publishing from third parties, such as OpenEdition and Knowledge Unlatched, which are dedicated to Open Access approaches?	<p>In April 2023 Library Committee approved a proposed updated Library Materials Budget model which included an allocation to support new OA publishing models. To guide prioritisation for investment in OA publishing initiatives to support a market that is inclusive and sustainable LRS developed a set of criteria based on the following topics: Transformative Influence, Local Impact, Diversity Equality and Inclusion, Sustainable Infrastructure and Financial Considerations.</p> <p>This investment in OA community publishing models has initially funded several Open Access publishing initiatives, including, amongst others, Open Book Collective and Open Library of Humanities.</p>	<p>The Library should work with the Colleges and Schools (in particular in CAHSS) to consider how funding mechanisms might work for open monograph publishing. Advocacy and communication strategies should also address emerging innovation in scholarly publishing, for example, Review Commons (for open peer review) and the use of Registered Reports.</p>	

9	Innovation	<p>Where appropriate, has your university established new mechanisms for scholarly publishing based on the good practice identified in this chapter?</p>	<p>LRS run a service for hosted OA journals using the Open Journal Systems (OJS) platform called Edinburgh Diamond. Currently there is a portfolio of 20 journals with more in the pipeline.</p> <p>Edinburgh Diamond is now well established and offers Open Monograph publishing alongside the Open Access journals it hosts. This service is free to university staff and students.</p> <p>UoE Library staff joined the Editorial Board to draft OA Journals Toolkit which was recently published by OASPA and DOAJ. https://libraryblogs.is.ed.ac.uk/openscholarship/2023/07/03/new-oa-journals-toolkit/</p> <p>Edinburgh University Press offers paid Open Access options for journals and monographs, and has just announced a Subscribe 2 Open option for a couple of their journals.</p> <p>LRS is a founder member of the Scottish Universities Press, a new publisher operated on behalf of University Libraries in Scotland, through the Scottish Confederation of University and Research Libraries (SCURL).</p>	<p>The Library will investigate if further investment in Edinburgh Diamond is required.</p> <p>The Scholarly Communications team will continue to actively engage with emerging Open Publishing initiatives both internally and externally to ensure that the University is delivering the best services possible to authors and meeting funder and REF requirements.</p>	
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	Topic	Question	Assessment of progress	Recommendations for the University	RAG Status
FAIR data					
10	Institutional policy	Has your institution a research data policy or strategy?	<p>Yes, the first policy was passed by Court in 2011 and has been the basis for the development of the Research Data Service.</p> <p>An updated policy is in place from January 2022. See https://www.ed.ac.uk/is/research-data-policy</p>	Review every 12 months.	
11	Institutional policy	Does your institution research data policy or strategy include FAIR principles?	The new policy includes a section on the FAIR principles, which is fully endorsed and supported by the university.	Library Research Support will update the University's Research Data Policy, as stated above. A significant amount of awareness raising has gone on around the new policy and this will continue.	
12	Institutional support	Has your institution established a dedicated service to provide data stewardship to its researchers?	The RDS provides services for the management of active data (DataStore) as well as its publication (DataShare) and long-term retention (DataVault). DataShare and DataVault are both FAIR compliant and metadata relating to DataShare and DataVault is made public through the PURE CRIS system.	<p>Continue to develop these tools and support researchers to use them. Promote the use of DMPOnline through training and outreach, and encourage users to use this as a point of contact with Research Data Support.</p> <p>Additionally, a Digital Research Ambassadors programme has been adopted, in which postgraduate research students are assigned to research projects based on need and skills. A similar data stewards programme is being considered, in partnership between central services and research units.</p>	

13	Infrastructure	<p>Does your institution provide access to an infrastructure storage and publication of research data? If it does not, does your institution inform its researchers of available infrastructures that follow the FAIR principles?</p>	<p>Yes, we have services for active management of data as well as publication and long-term retention as part of the Research Data Service. Edinburgh DataShare is FAIR-compliant, but it could be made more obvious.</p>	<p>LRS should add a “FAIR” banner to the DataShare homepage.</p> <p>DataShare will be upgraded to the latest version of DSpace in 2024, this will improve functionality and stability of the service.</p>	
14	Data	<p>Does your institution gather information about the data archived and published by its research community?</p>	<p>Yes, we provide regular reports to our academic-led steering group, and download statistics are freely available and accessible on Edinburgh DataShare. There is a knowledge gap, however, in that we do not collect statistics about where our researchers archive their data when it is not with us.</p>	<p>Propose running a project to examine recent research publications, identify which include Data Access Statements, and where the underlying datasets have been deposited.</p> <p>Once this evaluation is complete we intend to roll out the Data Monitor on a repository by repository basis. This should give us a much better idea of what data is being deposited outside the university infrastructure.</p>	

15	Metadata	Does your institution publish all metadata about research data generated or obtained within its research community?	<p>Yes, we use Pure, our CRIS as a data asset register, so there is metadata about data items in DataShare, DataVault and external repositories.</p> <p>The Data Monitor function in the university's PURE instance has recently been turned on we are in the process of evaluating the quality of the metadata records it provides.</p>	<p>This has been addressed in the latest revision of the Research Data Management Policy.</p> <p>The new Archiving your Research Data course also encourages the creation of metadata records in Pure for datasets deposited externally.</p> <p>Once this evaluation is complete we intend to roll out the Data Monitor on a repository by repository basis. This should give us a much better idea of what data is being deposited outside the university infrastructure.</p>	
16	Assessment	Does your institution include research data as a valuable output in research assessments?	<p>We understand that datasets tend only to be presented for assessment in certain groups, such as Informatics. However, in other fields (e.g. biomedical research) there is increasing awareness and practice of depositing source data when manuscripts are published (some publishers require this).</p>	<p>Further input from the Colleges is required. Given the stakes involved, incentives may be required. Communication and advocacy are also important for raising awareness about the benefits and platforms available for making research data openly available.</p> <p>The Research Data Support team will ensure that the value of Open Data as part of research assessments is emphasised in all courses and whenever we speak with researchers.</p>	

The European Open Science Cloud

17	Infrastructure development	Has your university established a data repository, or does it have access to a 3rd party repository/repositories which can interact with the EOSC?	<p>Yes, Edinburgh DataShare is well-established. It is not yet understood how to interface with EOSC, but it is built on standard open-source repository software (DSpace) that is generally interoperable.</p>	<p>Keep infrastructure performance under regular review.</p> <p>DataShare will be upgraded to the latest version of DSpace in 2024, this will improve functionality and stability of the service. This should also enable easier federation with EOSC in the future.</p>	
18	Metadata	Does your institution publish all metadata about research data generated or obtained within its research community?	<p>Yes, we use Pure, our CRIS as a data asset register, so there is metadata about data items in DataShare, DataVault and external repositories.</p> <p>There is a small but growing uptake of use of Pure to record externally deposited or locally held datasets, but there is not much incentive unless OA compliance officers create the records.</p> <p>We do not hold any records about 'active' data, and are unlikely to in the medium term, unless researchers or funders start to demand it.</p>	<p>This has been addressed in the latest revision of the Research Data Management Policy.</p> <p>The new Archiving your Research Data course also encourages the creation of metadata records in Pure for datasets deposited externally.</p> <p>The use of Data Monitor should improve the metadata we hold and publish about externally hosted datasets.</p>	

19	Assessment	Does your institution include research data as a valuable output in research assessments?	We understand that datasets tend only to be presented for assessment in certain groups, such as Informatics. However, in other fields (e.g. biomedical research) there is increasing awareness and practice of depositing source data when manuscripts are published (some publishers require this).	Further input from the Colleges is required. Given the stakes involved, incentives may be required. Communication and advocacy are also important for raising awareness about the benefits and platforms available for making research data openly available. The Research Data Support team will ensure that the value of Open Data as part of research assessments is emphasised in all courses and whenever we speak with researchers.	
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Education and skills

20	Training	Does your institution offer skills training specifically in Open Science (in all or certain of the eight areas, or other Open Science aspects)?	<p>Currently no centrally provided training addresses all 8 pillars in the EC or LERU papers. Data and software carpentry training does address tools and methods for making research reproducible.</p> <p>Comprehensive training is already available for both Research Data Management and Open Access and research publication.</p> <p>MANTRA (https://mantra.ed.ac.uk/) offers a course on FAIR sharing and access with regards to research data, and includes information in other courses (including documentation and metadata, and data management planning) which provide an overview of open research in the context of research data.</p> <p>Webinars are also regularly scheduled to encourage the uptake of Electronic Notebooks which can facilitate better management and sharing of research methodologies and results.</p> <p>Training on Open Data, Open Access, etc, for post-graduate students and ECRs is routinely offered and a key part of this is raising awareness of OR more widely. Open Research is embedded within training and outreach work done by the Research Data Service team.</p> <p>The Concordat to Support Researchers is a framework to ensure research careers are supported and information is accessible. Open Research is a section of the Institute for Academic Development Research Staff Hub, a webspace used to communicate and coordinated information related to the Concordat, and representatives working in Open Research sit on our Concordat Implementation Group.</p> <p>https://support-for-researchers.ed.ac.uk/getting-started/doing-research/open-research</p>	<p>Library Research Support will work with Colleges and IAD to develop new discipline-specific Open Research courses. Training could also be incorporated in existing mandatory courses and assessments, e.g. for Principal Investigators via the training on 'Managing your research teams'; for postgraduate students as part of their first-year review (i.e. it should be mandatory to attend University of Edinburgh course(s) on data management); and (for postdoctoral and other researchers) via the Concordat to Support the Career Development of Researchers.</p> <p>A number of schools already request bespoke RDM training for their new staff and PGR (postgraduate research) students and this training now includes Open Research and its benefits. We will continue to work with schools to encourage them to run these courses and ensure that staff and students attend.</p> <p>We will also investigate the possibility of implementing a credit system for future Open Research training.</p> <p>Specific training on Open Research is under development and we hope to launch it in the 2024-25 academic year.</p> <p>Research data management information included in Fundamentals of PhD Research online modules as of 2022-23.</p>
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			<p>Fundamentals of RDM are addressed in the Data Mindfulness course which is included in LibSmart and targeted at undergraduates and taught post-graduates. (https://www.ed.ac.uk/information-services/library-museum-gallery/academic-support-librarians/libsmart)</p>	<p>Researchers at all career stages are encouraged to attend OR training and the OR team will also deliver bespoke awareness raising and training sessions for research supervisors and PIs whenever possible.</p> <p>CAMARADES courses provide training in experimental design and reproducibility (https://www.ed.ac.uk/clinical-brain-sciences/research/camarades/about-camarades). This could be expanded to include researchers from other centres.</p>	
21	Audience	<p>Is any Open Science skills training mandatory, and for which categories of staff / researchers / students?</p>	<p>To date, we have not mandated Open Research training at Edinburgh but have favoured grassroots, peer-led evolution. Communicating benefits and incentivising compliance</p> <p>Open Research courses could be made mandatory for certain groups of students, such as PGRs. The speed at which the move to Open Research is happening means we should now consider compulsory training.</p>	<p>Work is ongoing to find out what level of Research Data Management training is mandated for PGRs in their school, DTP, or DTC, this could be expanded to ask about OR more generally.</p> <p>This research should provide a baseline against which we can measure future improvements in OR awareness and good practice.</p> <p>All teams within the LRS will need to work together to embed OR training and good practice at all levels of the University.</p> <p>Some good progress has been made with a small number DTCs which now require RDM training for new cohorts of students and the creation of a DMP for the students' project. We will continue to expand this into other DTCs as quickly as possible.</p>	

22	Assessment	Does your institution monitor or assess the provision, uptake, and impact of Open Science skills training?	Yes, we monitor attendance at RDM and scholarly communications training. We would continue to report on attendance at Open Research training sessions.	Bring together all types of OR training under a single banner and measure attendance and feedback in same way to improve quality of information.	
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Recognition and rewards

23	HR policy	Does your institution integrate Open Science in its HR and career frameworks as an explicit element in recruitment, performance evaluation and career advancement policies?	No, but we understand that UCL has provided an exemplar of this being put into practice in a UK HEI.	<p>Human Resources has not yet been formally consulted about potential changes to recruitment, reward, and progression with regards to Open Science. This is a potentially difficult area as it will require working with Unions and professional bodies and will have to be done in the context of the national pay and reward negotiations that already take place annual.</p> <ul style="list-style-type: none">• The Research Cultures Action Plan includes a section on Career Pathways and Progression which addresses many aspects of this. It includes the following key measures that the university should aim to achieve: Integrating citizenship and collegiality into criteria for academic, professional services & technician promotion, review, and mentoring. To encourage and reward research citizenship, contributions to collegiality should be recognised in career progression and appraisal.• Reducing reliance on metrics and embracing the narrative CV. Processes for recruitment, promotion and review should align with the sector-wide shift away from reliance on narrow sets of metrics, including through adopting the narrative CV.
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24	Assessment	Does your institution assess the extent to which individuals, teams or units integrate Open Science in their daily practice? And does it recognize and/or rewards them for this?	<p>Monthly OA compliance reports are compiled by School for RSG. But no recognition or reward follows. There are challenges around recognition and reward, due to inconsistencies in recording compliance data in the schools.</p>	<p>This would be picked up as part of any work taken forward to develop new HR policies to incentivise Open Research.</p> <p>We need to consider if it would be better to change the terminology here to incentivising “FAIR research outputs” rather than “Open Research” as Open can be off-putting and sometimes unachievable for those working with highly sensitive data.</p>	
25	Communication	Does your institution make information about its policies on researcher evaluation open and easily accessible?	<p>The University is a highly devolved institution, and researcher evaluation is carried out differently in the three constituent Colleges.</p> <p>The Metrics group working on DORA implementation found that this was not systematic, but was available for specific instances such as ESAT/ECAT, SBS Fellows policy.</p>	<p>The Library could seek to work with HR, ERO, and the three Colleges to gain a clearer understanding of existing policies, and potentially seek to influence their future development. In addition, as part of the recent REF submission, each school/college has identified a senior academic with a remit for open science; these individuals could be contacted to collate information on existing policies within each School/College.</p>	

	Topic	Question	Assessment of progress	Recommendations for the University	RAG Status
Next-generation metrics					
26	Policy development	Will your university develop a bibliometrics policy grounded in the principles outlined in this paper, with the aim of changing the culture in the academic community about research assessment?	<p>The University is a signatory to DORA and has developed a policy on responsible metrics. There are several examples of this being successfully implemented, e.g. the Centre for Cardiovascular Science newsletter no longer includes journal names when reporting recent publications from its researchers.</p> <p>The university has also signed up to the Coalition of Advancing Research Assessment (CoARA), a European initiative that seeks to establish a common direction for research assessment reform.</p> <p>The University's statement on the Responsible Use of Research Metrics was published in 2019.</p>	<p>Excellent progress has been made with DORA, governance for which is managed by the Responsible Research Metrics Group. Progress should be reviewed annually to judge school level progress.</p> <p>The statement on the Responsible Use of Research Metrics is due to be reviewed and updated, if necessary. This is the responsibility of ERO in collaboration the Research Cultures forum and other stakeholders such as LRS.</p>	
27	HR	Will your university embed the new forms of research evaluation in its internal processes for promotion/reward and research evaluation?	<p>Embedded changed into ESAT processes so that DORA is followed.</p> <p>A revised UoE promotion process was introduced in 2022 with a narrative CV element, and also reminding applicants of DORA compliance.</p> <p>The same has not been implemented for appointments, most of which are decentralised, so this depends on College/School/Institute action.</p>	This would be picked up as part of any work taken forward to develop new HR policies to incentivise Open Research.	
28	Best practice guidance	Will your university, via appropriate internal bodies, construct guidance for research administrators and academics on good and bad practice in the use of traditional bibliometrics and	<p>The University is a signatory of DORA and has a policy on responsible metrics. William Cawthorn, the University of Edinburgh LERU OSA, is also a member of the LERU ad hoc group on next-generation metrics.</p> <p>The Responsible Metrics working group established an online resource with information and training links, hosted by ERO, to support managers and academics in implementing DORA - https://www.ed.ac.uk/research-office/research-talent-and-culture/research-evaluation-and-responsible-metrics</p>	<p>Library Research Support will seek to highlight the responsible metrics policy as part of researcher training.</p> <p>Examples of best practice should be identified by working closely with the OR Network and senior researchers who work with next generation metrics.</p> <p>This all forms part of the wider working being done to deliver the Research Cultures Action Plan.</p>	

		<p>in the development of new metrics, working with the scientific community in this endeavour?</p>			
29	<p>Training for early-career researchers</p>	<p>Will your university give particular focus to early career researchers, particularly those embarking on a course of doctoral study, providing training to enable them to embrace the change of culture and practice which the responsible use of metrics brings?</p>	<p>The Edinburgh Open Research Initiative and Reproducibility groups involve numerous early career researchers; we will continue to support these initiatives and develop Open Science training in conjunction with the Institute for Academic Development and other internal bodies.</p>	<p>Library Research Support will continue to work with the Colleges and IAD to develop new discipline-specific Open Research courses aimed at early-career researchers.</p>	

Research integrity

30	Communication	Does your institution promote awareness amongst the research community of how Open Science can ensure the highest standards of research?	Courses on research ethics and integrity mention the benefits of openness, as do Scholarly Communications and Research Data training.	Library Research Support will work with IAD & ERO to ensure that we give a consistent and coherent message about the benefits openness can bring to research ethics and integrity, and the systems and services already in place to support this.	
31	Policy	Does your university have a research integrity code which embraces the principles of Open Science? If not, does your institution abide by the European Code for Research Integrity (ALLEA Code) and the Open Science provisions it contains?	Yes, the University has actively endorsed the UK Research Integrity Office Code of Practice for Research. This underpins the Universities UK Concordat to Support Research Integrity. https://research-office.ed.ac.uk/research-integrity/our-commitment	The Research Ethics and Integrity Review Group has developed a new Research Ethics policy and is responsible for informing all aspects of research ethics and integrity and ensuring consistency in across schools. https://research-office.ed.ac.uk/research-integrity	

Citizen science

32	Policy	Does your university recognise citizen science as an evolving set of research methods, as well as its societal and educational benefits?	<p>The University is adapting its policies to streamline citizen science and participatory research activities in general. The College of Medicine and Veterinary Medicine have recently revised their ethics procedures for this purpose, and are working to revise financial procedures to streamline payments to participants involved in projects.</p> <p>The Open Research Team has helped to ensure that relevant bodies are aware of the key policy changes that may facilitate citizen science and participatory research activities, and shifts in the wider research landscape that may motivate new policies, such as requirements from funding agencies.</p> <p>Many aspects of the University's strategic directions, such as experiential learning and community plan, intersect with citizen science and reflect positively changing attitudes towards involvement.</p>	<p>A new researcher network supported by the library and led by ERO is currently being formed with the primary aim of addressing key policy challenges (e.g. with finance and ethics). Over 70 researchers from across the University have expressed an interest in being involved.</p> <p>In the coming year, we will use our channels to further support the network and to support cross-collegiate learning with respect to necessary local level policy changes.</p> <p>At a local level we will also work to adapt library services to fit with the needs of researchers, focusing on EDI and best practice in community work.</p> <p>We will also continue to form connections with European and other international partners and projects (such as COESCO, and the various associations) to feed back to the University for guidance and support.</p>	
33	Communication	Is there a single point for citizen science within your institution?	<p>In addition to the new participatory research network, which will act as a policy contact point, we also have a Library Citizen Science and Participatory Research Engagement Officer.</p> <p>Their role and the service they are setting up acts as an additional point of contact and support alongside more local level (school, collegiate and network related) teams and services.</p> <p>A central resource for internal staff and students has been set up https://uoesharepoint.com/sites/library-participation with key</p>	<p>In the coming year, we will:</p> <ul style="list-style-type: none"> • Add new resources and services to the catalogue already on offer • Raise the profile of the central services • Continue to work with the Network and support its activities. • Begin a library-based community of practice that will further raise the profile of involvement and central 	

			<p>services requested by staff working in involvement activities. This site will expand as new resources become available.</p> <p>The Engagement Officer is also working closely with local-level projects and networks to promote and support involvement activities and raise the profile of the central services.</p>	<p>support for citizen science and participatory research, and act as a central forum for discourse and mutual support between support staff, researchers, and communities.</p>	
34	Communication	Does your university raise awareness amongst researchers of criteria for successful citizen science?	<p>The University currently has a significant number of materials distributed across the various schools, colleges, and central services. As part of other activities, the profile of citizen science and the requirements of successful projects are raised though, usually as part of other activities.</p>	<ul style="list-style-type: none"> • The Library is collaborating with Edinburgh Research Office (ERO) and the Groundswell project team to develop a repository for support materials. This will be open access and publicly available, and act as a central resource centre for researchers. • The first Citizen Science Showcase will take place in June. Coordinated by the Library, the event will emphasise best practice case studies and give attendees an opportunity to meet and discuss best practice. • Heritage collections discovery sessions will run throughout the year allowing researchers to think of new ways of conducting involvement activities. • The community of practice will include training, workshops, and a reading group to promote good practice in citizen science. • The Library/UKRI FLF partnership “Community Reads” will result in support materials for best practice participatory research. 	

35 Assessment

Are citizen science contributions assessed and research evaluation and reputation systems adapted accordingly?

Currently there is room for improvement in this area, with non-standard research outputs (common in citizen science and involvement) frequently undervalued.

Other challenges, such as work essential for the underpinning of best practice in citizen science (such as engagement activities and community relations) is overlooked and undervalued. This affects both researchers engaging in this work, and non-research staff (such as engagement officers).

In addition to examining the new REF guidelines to better understand their requirements, we will:

- Provide forums for communication
- Support the new network in its work
- Provide resources to researchers generating non-standard research outputs to raise their profile.
- Support engagement teams playing a key role in projects and raising awareness of the necessity of such work.

36 Policy

Do proposals for granting bodies for citizen science projects include long-term commitment for infrastructures and data repositories?

This will vary from funder to funder. It is not a well-understood landscape, but there may be existing studies.

It is likely that this reflects the broader research picture, with a similar rate of commitment from citizen science/involvement projects.

The University will work with projects involving citizen science to gain a better understanding of the landscape and unique challenges facing citizen science and involvement regarding these areas.