

**Open Research Action Plan<sup>1</sup>  
2021/22—2023/24  
Keele University**

**Approved by University Research Committee (25<sup>th</sup> November 2021)**

***Maximising transparency, integrity, &  
impact through Open Research***

**Motivation**

Maximising the transparency and openness of the research pipeline is essential to maximise the integrity and impact of the work conducted at Keele University and its partners. Engagement with Open Research practices aligns closely with UK research funders—including [UKRI](#)—who are increasingly expecting full compliance and engagement with development of Open Research practices.

Open Research aligns with the [UK Government Research & Development roadmap](#), which states “...we will strongly incentivise open data sharing where appropriate, so that reproducibility is enabled, and knowledge is shared and spread collaboratively”. In addition, a lack of openness in research practice has been cited as a contributor of the so-called “reproducibility crisis”, and will likely be a central theme in the upcoming [UK Parliament inquiry into Reproducibility and Research Integrity](#).

[As an early Institutional Partner of the UK Reproducibility Network](#), Keele has an outstanding opportunity to lead on the enhancement and impact of our research through widespread engagement with Open Research practices. This will be bolstered by [Keele’s inclusion in the successful £4.5million grant from Research England Development Fund](#) to develop and evaluate high-quality training in Open Research, and to develop and evaluate institutional best-practice.

This paper outlines an action plan over the next 3 academic years to increase the awareness of—and engagement with—a variety of Open Research practices at Keele University. The action plan has been developed and agreed by the Research Integrity & Improvement Team<sup>2</sup>.

The plan is centred on 5 themes:

- **Theme A: Training Researchers**

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<sup>1</sup> Based on the Open Research Plan at University of Reading (a fellow [UKRN](#) partner), shared under [Creative Commons Licence CC BY 4.0](#)

<sup>2</sup> Academic Lead for Research Integrity & Improvement (Dr Jim Grange), Director of Research Strategy (Dr Tracy Nevatte), FNS Research Integrity Champion (Dr Sue Sherman), FMHS Research Integrity Champion (Dr Sarah Hart), and UKRN Local Network Lead (Dr Charlotte Hulme).

- **Theme B: Developing Researchers**
- **Theme C: Infrastructure**
- **Theme D: Embedding Open Research in Institutional Practice**
- **Theme E: Establishing & Nurturing External Partnerships**

The implementation of this plan will be informed—and consequently dynamically adapted—by Keele's membership with the [UK Reproducibility Network](#), and in particular by activity surrounding the [UK Reproducibility Network's Research England Development Fund grant](#).

As such, the plan is designed not be fully prescriptive from the outset, allowing responsiveness to progress, new ideas, and needs expressed by each Faculty and School (noting that the state of readiness and common practice varies between disciplines), as well as a changing external landscape.

### **Theme A: Training Researchers**

**A1. Develop “Introduction to Open Research” course, initially to Year 1 and Year 2 PhD students through the Keele Doctoral Academy. The course will introduce the rationale for an Open Research environment, as well as introduce the major concepts and practices of Open Research, and emphasising the benefits of engaging with Open Research during doctoral training (e.g., benefits to research, benefits to CV etc.)**

**2021/2022:** Spring Semester. Develop & trial the course to PhD students as an optional training module. Developed materials to be shared with Faculty Integrity Champions and Local Open Research Networks.

**2022/2023:** Run course 2/3 times per year, becoming mandatory for all new science and social-science PhD students to attend once.

**2023/2024:** Run course 2/3 times per year, becoming mandatory for all new science and social-science PhD students to attend once.

**A2. Develop “Introduction to Open Research” course for academic and research / research support staff. Although some overlap with the PhD training course, this course directed at academic and research/support staff will include additional training on more advanced topics (i.e., data management plans for UKRI grant applications)**

**2021/2022:** Spring Semester. Develop material, informed from the PhD trials. Offer to research and academic staff as an optional training module.

Developed materials to be shared with Faculty Integrity Champions and Local Open Research Networks.

**2022/2023:** Run course 2/3 times per year. Explore embedding Open Research training within probationary training material for new academic staff within relevant disciplines.

**2023/2024:** Run course 2/3 times per year. Aim for training to be mandatory as part of probationary training material for new academic staff within relevant disciplines.

**A3. Develop more specialised training modules for academic and research staff (e.g., Beyond Open Research, Pre-Registration, Registered Reports, ORCID, Altmetric, Author Contributor Statements etc.). Closely aligned with [Research England Development Fund grant activity](#)**

**2021/2022:** Scoping exercise of extant training; identify gaps and needs with Faculty Integrity Champions.

**2022/2023:** Development & delivery of specialised Open Research training.

**2023/2024:** Development & delivery of specialised Open Research training.

**A4. Ensure sufficiency of statistical skills training to PhD students and researchers**

**2021/2022:** Scoping exercise of extant training; identify gaps and needs with Faculty Integrity Champions.

**2022/2023:** Develop plan for—and start to deliver—additional/alternative training needs, if required.

**2023/2024:** Continue delivery of training. Continuously monitor needs.

**Theme B: Developing Researchers**

**B1. Establish Open Research Networks within each Faculty at the PhD / Early Career level, to champion the growth of Open Research within local disciplines, developing grass-roots engagement with local Open Research issues, including the organisation of journal clubs, seminars, and workshops**

**2021/2022:** Via the UKRN Local Lead, to identify interested parties, and establish Faculty-wide Open Research Networks via introduction of [ReproducibiliTea journal club](#) events.

**2022/2023:** Develop knowledge base of Open Research networks through peer-learning workshops.

**2023/2024:** As 2022/23.

## **B2. Support researcher-led projects / initiatives to drive uptake of engagement with Open Research locally**

**2021/2022:** Support 3 projects (one per Faculty), up to £500 each.

**2022/2023:** Support 3 projects (one per Faculty), up to £500 each.

**2023/2024:** Support 3 projects (one per Faculty), up to £500 each.

## **B3. Establish Open Research Award for Research/Academic Staff and PGRs**

**2021/2022:** Initiate 1x Academic/Research Staff award (prize money of £500) and repeat 1x PGR Award (prize money of £100).

**2022/2023:** 1x Academic/Research Staff award (prize money of £500) and repeat 1x PGR Award (prize money of £100).

**2023/2024:** 1x Academic/Research Staff award (prize money of £500) and repeat 1x PGR Award (prize money of £100).

## **B4. Open Research Case Studies for internal communication and website presence**

**2021/2022:** Target one case study per Faculty.

**2022/2023:** Target two case studies per Faculty.

**2023/2024:** Target two case studies per Faculty.

## **Theme C: Infrastructure**

**C1. Ensure adequate costing within eligible grant applications for activity around maximising Open Research compliance. Engaging with Open Research takes time, and it's essential this is appropriately costed to ensure delivery**

**2021/2022:**

- With support of RIE, conduct scoping review of baseline inclusion of Open Research activity in grant costings. Conduct informal audit of compliance with activity outlined in Open Research statements within grants.
- Develop awareness with School Research Directors to engage with early drafts of grant applications to ensure Open Research activity is represented in eligible grants, and that it is appropriately costed.
- Develop recommendations for boilerplate Data Management Plans providing overview of Institutional commitment & support/infrastructure for Open Research at Keele

**2021/2022:** Develop recommendations for changes to how Open Research activity is costed within grants and how any associated institutional costs (e.g., for data storage) are covered by grant overheads.

**2021/2022:** Seek approval and implement recommendations

**C2. Establish tracking of Open Research metrics in Symplectic & across other systems to ensure progress with Open Research compliance is quantifiable**

**2021/2022:** Implement Open Data prompt in Symplectic systems.

**2021/2022:** Evaluation of engagement with new systems and roll out of extensions to system prompts (e.g., prompts for Open Code / Open Material / Pre-Registration protocols).

**2021/2022:** Seek University approval of recommendations and funding if applicable.

**C3. Review of Open Research output repositories, including Symplectic and the Keele Data repository. Review existing provision and evaluate alternative providers, with the aim to maximise openness (of data and traditional and non-traditional research output) as well as policy compliance (Plan S and/or UKRI requirements)**

**2021/2022:** Horizon scanning.

**2021/2022:** Evaluation of options and reporting of recommendations.

**2021/2022:** Seek University approval of recommendations and funding if applicable.

### **Theme D: Embedding Open Research in Institutional Practice**

#### **D1. Embedding Open Research culture and practice within research planning at Faculty, School, and individual researcher level**

**2021/2022:** Consultation with Research Deans and School Research Directors how best to embed Open Research culture and practice within research plans

**2022/2023:** Embedding of Open Research culture and practice within Faculty strategy. Introduction of optional inclusion of Open Research discussion in School and Individual research plans.

**2023/2024:** Widespread introduction of Open Research discussion in individual research plans.

#### **D2. Embedding of Open Research criteria—and used appropriately—within recruitment, reward, promotion, and performance assessment.**

**2021/2022:** Informed by best practice (e.g., UKRN's Hiring Policies Certification Scheme), Research Integrity & Improvement Team to develop recommendations to bring to Research Committee of how to embed Open Research criteria within recruitment practices. Ensure [Keele's Statement on Responsible use of Research Metrics](#) is provided to all recruitment, probation, and promotion committees.

**2022/2023:** Implementation of embedding Open Research criteria into recruitment, reward, promotion, and performance assessment.

**2023/2024:** Monitor implementation.

#### **D3. Review of Data Management Plans & Institutional Expectations within Research Ethics applications**

**2021/2022:** Review current practice and develop recommendations.

**2022/2023:** Implement recommendations.

### **Theme E: Developing External Partnerships**

1. [UK Reproducibility Network](#). UKRN is an independent network of stakeholders in the UK dedicated to improvement in the quality and reproducibility of academic research output. Keele joined UKRN in 2019 as formal member. Currently, Dr Jim Grange is the UKRN Institutional Lead, and Dr Charlotte Hulme is the Local Network Lead; both will engage with UKRN and Keele through their agreed roles.
  2. [Center for Open Science \(COS\)](#). COS has an international mission to increase openness, integrity and reproducibility of research, and provides a range of tools to facilitate this. Explore establishing formal membership.
  3. [UKRI Concordat on Open Research Data](#). Keele is a member, and concordat will be observed.
- 4. Library Research Engagement Networks.**
- a. [UKCORR](#). Organisation for repository and Open Access professionals, and a strong national advocate for sustainable Open Access infrastructure and services.
  - b. [Digital Curation Centre](#). A national centre of expertise in digital curation with a focus on building capability and skills for research data management.
  - c. [JISC](#). A provider of digital solutions for UK HE, providing infrastructure and supporting service innovation for managing, curating, sharing and reporting on research.

**Budgetary Implications:** £6,300 requested over the 3-year period of the action plan:

- **2021/22:** £2,100 total (£1,500 for activity B2; £600 for activity B3)
- **2022/23:** £2,100 total (£1,500 for activity B2; £600 for activity B3)
- **2023/24:** £2,100 total (£1,500 for activity B2; £600 for activity B3)