1. **Introduction: A detailed articulation of what issues the CoP will address, how this CoP is aligned with the RDA mission, and how this CoP would be a value-adding contribution to the RDA community.**

e-ReproNim fulfils the RDA's mission to build the social and technical bridges that enable open sharing and re-use of data in the domain of neuroimaging. The CoP envisions a neuroimaging research landscape in which knowledge is generated in a reproducible fashion (in terms of data, analysis and computation) and coupled with the ability to reuse and extend these studies by others in the community. We aim to shift the way neuroimaging research is performed and reported, with the development and implementation of technology that supports reproducibility at the levels of data management, analysis and utilisation for both within- and between-lab opportunities, including the use of widely distributed and/or large populations to address basic and clinical research questions. In short, the ReproNim vision is to help neuroimaging researchers: Find and Share data in a FAIR fashion (discover resources); Comprehensively describe their data and analysis workflows (describe research processes); and Manage their computational resource options (do analysis).

2. **User scenario(s) or use case(s) the CoP wishes to address, and what triggered the desire for this CoP in the first place.**

The stark realisation that scientific results do not always readily replicate has led some to investigate the root causes of the so-called "reproducibility crisis". Such self-critical appraisal has been so far more prevalent in Psychology and Neuroscience than in other disciplines, and typically highlight statistical issues, like inadequate statistical designs, as well as poor computational training; problems that are only likely to worsen as data grow larger, become more widely shared, and advanced techniques are imported from fields of engineering, like machine learning.

Specifically, neuroimaging data, in both clinical and fundamental research, have the particularity that they involve a large number of processing steps on a very heterogeneous set of equipments and infrastructures, from the moment they are gathered in proprietary devices (magnetic resonance imaging scanners, electro-encephalography systems, etc) through preprocessing, analysis to annotation, curation and finally deposited into open repositories for others to use in upstream research. A lot of this pipeline remains an error-prone, manual process that relies on the researcher's voluntary (and unpaid) efforts to acquire an understanding of the infrastructure available and their technical knowledge to use it, to ensure the traceability and provenance of the data, the reproducibility and replicability of the work, and the production of FAIR open datasets.

The successful integration of such data into routine neuroimaging practice thus requires neuroscientists to develop skills that fall outside of ordinary training curricula, which should also include data curation, data handling, high performance and on-demand computation (in the "cloud"), semantic web annotation, as well as statistics suitable for large scale inference. The researchers who have been the most receptive to exploring and developing such techniques are typically early career researchers, motivated by the desire to learn, apply and share robust practices. e-ReproNim seeks to alleviate some of the biggest challenges they face: They are not formally trained and teach themselves these new data practices following online resources, in isolation and on a voluntary basis.

The CoP thus fills this gap of support, by pooling interests, experiences and expertises into a platform available globally.

3. **Objectives: A specific set of focus areas for discussion and action.**

e-ReproNim takes a train-the-trainer approach and aims to create a CoP focusing on 1) creating, consolidating and providing formal training to fifteen aspiring trainers ("EOSC/RDA e-ReproNim Fellows"), and 2) engaging the community in an interdisciplinary examination of the gaps that remain, and identifying the resource and infrastructures available in Europe, including EOSC and JISC services. Our project is intended to be partnered with our other CoP proposal ("Building a Psychology RDA Community of Practice", coordinated by Dr Stewart), as well as national, like national Reproducibility Networks (UKRN, FRRN, Swiss RN, etc) and international partners, like TESS/ELIXIS or the North American sister CoP ReproNim.

4. **Value Proposition: A specific description of who will benefit from the creation and animation of the CoP and what tangible impacts should result**

Within the year, fifteen EOSC/RDA e-ReproNim Fellowships will be awarded to early career researchers (ECRs) in Neuroscience engaged with open and transparent research activities at their home institutions within the EU and the UK. These fifteen Fellows complement fifteen additional fellows from the EOSC/RDA CoP "Building a Psychology RDA Community of Practice". The RDA fellowships will allow these fellows to 1) fund time for software and data management training for themselves, and 2) organise training on the principles of software and data management at their home institutions.

Fellows are selected according to their current role and experience of training students and researchers at their local institutions, and within the scope of their 1-year fellowship, we expect the Fellows to build from the support of the CoP to develop a curriculum of training activities they will supervise and conduct themselves. Additionally, the Fellows will participate in the design and elaboration of online resources, to build the online presence of the CoP.

Moving forward, we expect the CoP to grow as the train-the-trainer approach leads to more researchers being able to consolidate their understanding of a robust data practice, and skills in teaching it.

5. **Engagement with existing work in the area: A specific description, with tangible outputs and metrics, of the planned dissemination and communication, outreach and engagement, incentivisation, endorsement and adoption activities. This area should also address how participation with the community internal and external to RDA will be established and the plan for collaborative relationships. Key elements to include are:**
- A brief review of related work and plan for engagement with any other existing RDA groups;
- Eventual new IGs and/or WGs to be proposed directly by the CoP;
- Interaction with key stakeholder organisations within the proposed discipline/research domain;
- Description of the CoP's planned approach to engage with their discipline/research domain and its key stakeholder organisations and planned approach to encourage broader community engagement and participation, including proposed ambassadors;
- Outline of proposed collaboration and partnerships with industry, associations, organisations and media as well as discipline/domain-specific funding opportunities.

This CoP has been proposed by Dr Roesch (U. Reading, UK), who acts as Coordinator of the project. He is helped by Prof Andrew Stewart (U. Manchester, UK, Coordinator of the CoP "Building a Psychology RDA Community of Practice"), Dr Michael Dayan (U. Geneva, CH), Dr Karolina Finc (Nicolaus Copernicus U., PL), Dr Camille Maumet (Inria, FR), Dr Nicholas Hedger (U. Reading, UK) and Dr Romain Valabrègue (Paris Brain Institute, FR). An Advisory Board provides friendly advice, and includes Prof Carole Goble (U Manchester, UK), Prof David Kennedy (U. Mass, USA) and Prof Jean-Baptiste Poline (McGill, CA).

All partners on the CoP are involved in both national and international efforts, complementary and in support of the CoP. These include national Reproducibility Networks, national and international programmes.

Specifically, Dr Roesch and Prof Stewart are the main partners involved. They are both co-investigators on the 5-year Research England Development (RED) Fund programme of research "Growing and Embedding Open Research in Institutional Practice and Culture". This £8.5m project aims to increase the skills base amongst UK researchers (across disciplines) to allow them to adopt transparent research practices in their own programmes of research. Andrew is also a Fellow of the Software Sustainability Institute (whose focus is on the recognition of the importance of research software, including the provision of best-practice software development skills, in research in the research environment). Dr Roesch is on the UK Reproducibility Network steering group. Both Dr Roesch and Prof Stewart are UKRN Institutional Leads representing their home institutions, and both are qualified Carpentry Instructors. Dr Stewart is also a Fellow of the Sustainable Software Institute. This CoP will interact closely with the UKRN and other national and international programmes. It will also interact with partners such as ELIXIR (the co-lead for which sits on our advisory board). Initial activity of this CoP will be funded via the RDA/EOSC Community of Practice award, and via interactions with other Psychologists within the UKRN.

Both neuroscience and psychology CoP will be hosted on a common platform, to consolidate material and engagement with the community in Europe and globally. Both CoP will engage with their Fellows and respective communities according to their own schedule of work, composed of tailored training sessions and workshops, and at least once a year, will organise a General Assembly with members of the CoPs, to assess activities and make plans for the future.

6. **Outcomes: Outline what the CoP intends to accomplish and how it plans to measure achievement. Include examples of WG topics or supporting IG-level outputs that might lead to spin off IGs and/or WGs later on.**

The main focus of this CoP will be to provide Neuroscientists with the knowledge and technical skills needed to adopt effective and open data and research management practices. Activities organised for and by the fellows will be monitored. Projects that will arise from the CoP will be made available on the website.

7. **Adoption Plans (optional): If applicable, please provide specific plans for adoption or implementation of RDA outcomes within the organizations and institutions represented by CoP members, as well as plans for adoption more broadly within the community.**

n/a

8. **Operational Mechanisms:**

Leadership: Describe how the CoP will be managed, how often it will meet and how it will maintain momentum between Plenaries. Include details on how the CoP will develop consensus, address conflicts, stay on track and within scope, and move forward during operation.
Provide a description of the CoP's mode and frequency of operation (e.g. on-line and/or on- site, how frequently will the group meet, be updated, etc.).
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Fellows will meet monthly for sustained interaction and community building. Tailored activities, workshops and training will be organised as and when possible, and include software carpentry workshops, interventions by partners and other CoPs and projects.

9. **Timeline: Describe draft milestones and goals for the first 18 months, including the mandatory Public report to be submitted to Council for review every 18 months.**

Date	Milestone Description	Notes
Start date as agreed in contract (Month 0)	Start of the project	
M+1	Adverts circulated	Starts 8 weeks period for applicants to submit (including motivations, experience, scope of community, and letter of support by host institution)
M+4	Decision announced	Email invitations, institutions send invoices to Manchester and Reading to receive Fellowship funding
M+5	All fellowships paid	
M+5	Kick off event	
Every month	Meet up	Alternating between round table and expert-led discussion (together psych + neuro) using Gather Town. These experts will include representatives from RDA, EOSC, UKRN, SSI, and related organisations.
Ongoing	Keeping in touch via Gather Town	
Ongoing	Fellow organised (PI, Co-I facilitated) training sessions	
M +11	Reports from each of the funded fellows on training experience, evidence of engagement, feedback etc	
M + 12	Our report to RDA/EOSC	

10. **Potential Group Members & Supporting Organisations:**
- Leadership: Include proposed chairs/initial leadership and eventual plans for chair rotation. Refer to the "**Leadership**" section on the "**Creating and Joining a CoP**" page.
- Member Participation: Outline which communities will be involved, what skills or knowledge should they have, and how will you engage these communities.
- Supporting Organisations / Institutional Commitment: include evidence of support from key stakeholder organisations, associations, etc. (**see letter of support template**).

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The University of Reading is the main supportive institution, and will manage finances. Leveraging the roles of the Coordinators in partnering institutions and projects, and that of the Advisory Board, we will ensure the CoP is engage with the relevant communities and aware of developments in the field.

11. Adherence to RDA Guiding Principles and Code of Conduct: the application must include a confirmation that the CoP will operate according to the [RDA Guiding Principles](#) and [Code of Conduct](#).

I confirm that this CoP will operate according to the RDA Guiding Principles and Code of Conduct.