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## 23rd Plenary Meeting Collaborative Notes

**Group(s) name(s) organising the session:** [Reproducibility IG](#)

**Session link:** [Reproducibility at RDA and beyond: What do we know and what do we need](#)

**Session scheduled date/time/breakout session:** Wednesday, 13 November, Breakout 4, 10:00 – 11:30 CST

**Venue:** Edificio de Ingeniería, Classroom 206

**Slides:**  [RDA Reproducibility IG P23 Presentation.pptx](#)

**Mapping activity:**  [RDA P23 Reproducibility IG: Mapping Activity](#)

**This document:** <https://bit.ly/4fjML7Y>

### Session summary (for Group co-chairs)

We will use the content in the table below to highlight your work to the RDA community as a report organised by the Technical Advisory Board and to a wider audience through English & Spanish social media mentions.

Please complete ALL fields below by **Friday, 29th November, close of business** to be included in the report & social media activities.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Summarise the session in three sentences:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <i>The Reproducibility IG discussed and built on previous work around surfacing internal RDA and external groups that focus on reproducibility efforts. Attendees worked on a document to categorise the types of work that are happening with the aim of making this into a resource that can be shared out to disseminate information on current efforts. After discussion with attendees, the Reproducibility IG is looking to start working groups that continue to focus on consensus building around reproducibility.</i> |
| <b>Key outcomes/actions/takeaways</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <ol style="list-style-type: none"> <li><i>1. Group members found our efforts at surfacing internal and external groups working on reproducibility to be useful for their own work.</i></li> <li><i>2. The information we have gathered and worked on in the plenary will be turned into a more digestible format for anyone to access as an RDA output.</i></li> <li><i>3. A number of ideas for possible WGs were put forward and the co-chairs will explore these with group members.</i></li> </ol>                          |

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**Synergies and/or possible collaborations identified with RDA groups and other groups:**

By design the Reproducibility IG aims to have crossover with multiple RDA groups. The RDA groups listed in our resource document (see [mapping document](#)) are those that have been identified so far. Following this plenary, the co-chairs will explore collaboration on a WG with the Evaluation of Research IG.

**Highlight text that will be used in social media mentions (please make sure the text is clear and appropriate for public consumption & comprehension)**

The [RDA Reproducibility IG](#) have been working on raising awareness of groups both inside RDA and externally that work on reproducibility. To find out more join the group and take a look at our home page.

**Direct link to Group home page**

<https://www.rd-alliance.org/groups/reproducibility-ig/>

Get involved in [RDA Community](#)  
Check out [P23 programme sessions](#)

This meeting will take place according to the [RDA Code of Conduct](#)

## Attendee Check-in

Please complete this table to indicate your attendance (add rows as needed):

| Full Name          | Affiliation            | Location | Email                                                                          |
|--------------------|------------------------|----------|--------------------------------------------------------------------------------|
| Limor Peer         | Yale University        | USA      | limor.peer@yale.edu                                                            |
| Lauren Cadwallader | PLOS                   | UK       | lcadwallader@plos.org                                                          |
| Mandy Gooch        | UNC Chapel Hill        | USA      | agooch@unc.edu                                                                 |
| Allyson Lister     | University of Oxford   | UK       | <a href="mailto:allyson.lister@oerc.ox.ac.uk">allyson.lister@oerc.ox.ac.uk</a> |
| Christian Pagé     | CERFACS                | France   | christian.page@cerfacs.fr                                                      |
| Daniel S. Katz     | University of Illinois | USA      | d.katz@ieee.org                                                                |

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|                  |                                                                                                |               |                                                                                    |
|------------------|------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------|
|                  | Urbana-Champaign                                                                               |               |                                                                                    |
| Ayla S. Kenfield | University of Illinois Urbana-Champaign                                                        | USA           | astein@illinois.edu                                                                |
| Maud Medves      | Inria                                                                                          | France        | <a href="mailto:maud.medves@inria.fr">maud.medves@inria.fr</a>                     |
| Claire Austin    | Government of Canada                                                                           | Canada        | claire.austin@ec.gc.ca                                                             |
| Grant Gibson     | Canadian Research Data Centre Network                                                          | Canada        | grant.gibson@crdcn.ca                                                              |
| Ashley Rojas     | Local Contexts                                                                                 | USA           | ashley.rojas@localcontexts.org                                                     |
| Amy Nurnberger   | Massachusetts Institute of Technology                                                          | USA           | nurnberg@mit.edu                                                                   |
| Matthew Lucas    | Social Sciences and Humanities Research Council                                                | Canada        | <a href="mailto:Matthew.lucas@sshrc-crsh.gc.ca">Matthew.lucas@sshrc-crsh.gc.ca</a> |
| Lisa Mayer       | NIH                                                                                            | USA           | Lisa.mayer@nih.gov                                                                 |
| Rossella Aversa  | Karlsruhe Institute of Technology                                                              | Karlsruhe, DE | rossella.aversa@kit.edu                                                            |
| Hassan Oukhouya  | Laboratory LMSA, Department of Mathematics, Faculty of Science, Mohammed V University in Rabat | Morocco       | hassan_oukhouya@um5.ac.ma                                                          |
| Ramiro Bravo     | University of Manchester                                                                       | UK            | ramiro.bravo@manchester.ac.uk                                                      |
| Leslie McIntosh  | Digital Science                                                                                | UK            | l.mcintosh@digital-science.com                                                     |

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|                    |                                    |            |                                                                                    |
|--------------------|------------------------------------|------------|------------------------------------------------------------------------------------|
| Gaby Pino          | Universidad Nacional               | Costa Rica | <a href="mailto:gabriela.pino.chacon@una.ac.cr">gabriela.pino.chacon@una.ac.cr</a> |
| Rob Quick          | Indiana University                 | US         | <a href="mailto:rquick@iu.edu">rquick@iu.edu</a>                                   |
| Sveinung Gundersen | ELIXIR Norway / University of Oslo | Norway     | <a href="mailto:sveinugu@uio.no">sveinugu@uio.no</a>                               |

## Collaborative Session Notes *(To be used by participants and chairs during the session)*

Slides:  [RDA Reproducibility IG P23 Presentation.pptx](#)

### Agenda:

#### Welcome

- Introduction of co-chairs
- Definition of computational reproducibility used by the IG

#### History of the Reproducibility IG

- Origins
- Reestablishment & Charter

#### Objectives of the Reproducibility IG

#### Overview of Asynchronous Discussion from May 2024

- Groups involved
- Questions asked
- Overview document summarising the event:
  -  [Overview: Reproducibility work at RDA and beyond, May 2024](#)

#### Activity: Mapping RDA Internal and External Groups

- *Mapping activity document:*  [RDA P23 Reproducibility IG: Mapping Activity](#)  
**\*\*Please add any comments on the mapping activity to the mapping activity document\*\***
- This is the original document we sent out to groups about the asynchronous conversation:  
[https://docs.google.com/document/d/1p56BsyVt74ySilogGKwsAf96EKaoVw7b6sQ8gr21\\_Ng/edit?tab=t.0#bookmark=id.j8yv9mtfyc5i](https://docs.google.com/document/d/1p56BsyVt74ySilogGKwsAf96EKaoVw7b6sQ8gr21_Ng/edit?tab=t.0#bookmark=id.j8yv9mtfyc5i)

#### Discussion and Next Steps

- Mapping exercise:
  - Do you have the information you need?
  - Are you able to take the next steps? Does this lead you to action?
  - Would you use it?
  - How to maintain this information?
  - Are there gaps?
- Next for IG

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- Spin off working groups on areas of interest (for example these ideas have come up)?
  - Reproducibility checklists (e.g., <https://fairerdata.github.io/FAIRER-Aware-REPRODUCIBILITY-Assessment/>) (<https://libguides.uvic.ca/researchdata/about/reproducibility>)
  - Assessment of reproducibility (when is it important to do it, how do we know if the research is reproducible, etc.)
  - Reproducibility best practices in different contexts or disciplines
  - Metadata and provenance for reproducibility
  - Reproducibility at research institutions
  - Other ideas?
- Tighten collaboration with aligned RDA groups (e.g., Evaluation of Research) and external groups
  - How?
- Tighten collaboration with key communities (e.g., researchers)
  - How? (volunteer community manager?)
- Plans for P24

## Community notes

[please include and identify any action items]

Funders could also fund the third party activities on reproducibility, eg funding reproducibility studies. However, we need to make sure that we draw distinctions between reproducible data and reproducible processes.

Some disagreement on what reproducibility is and whether or not it's distinct from reusability.

- Note - there's a lot of disagreement and lack of community accepted definition of what reusability is, let alone reproducibility.
  - Here's an article (full disclosure, I co-wrote it) that goes into detail about definitions of reusability of digital materials (including data) and also incorporates reproducibility into this model defining reuse
    - Kenfield, A.S., Woolcott, L., Thompson, S., Kelly, E.J., Shiri, A., Muglia, C., Masood, K., Chapman, J., Jefferson, D. and Morales, M.E. (2022), "Toward a definition of digital object reuse", Digital Library Perspectives, Vol. 38 No. 3, pp. 378-394. <https://doi.org/10.1108/DLP-06-2021-0044>

Dan Katz made a point that reproducibility can mean different things depending on whether or not you're trying to reproduce the data or the software.

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In 2023, the international consortium, Common Infrastructure for National Cohorts in Europe, Canada, and Africa (CINECA) stated (in Deliverable D7.3, First recommendations for implementation in IT Framework, including a Data Management Plan) that: \* "While the FAIR principles have become a guiding technical resource for data sharing, legal and socio-ethical considerations are equally important for a fair data ecosystem for further uses of ... data. FAIR data should be FAIRER, including also ethical and reproducible as key components" \* (CINECA 2023).

Proposed extended definition of reproducibility: Reproducible data and code means that the final data and code are computationally reproducible within some tolerance interval or defined limits of precision and accuracy, i.e. a 3rd party will be able to verify the data lineage and processing, reanalyze the data and obtain consistent computational results using the same input raw data, computational steps, methods, computer software & code, and conditions of analysis in order to determine if the same result emerges from the reprocessing and reanalysis. "SAME RESULT" can mean different things in different contexts: identical measures in a fully deterministic context, the same numeric results but differing in some irrelevant detail, statistically similar results in a non-deterministic context, or validation of a hypothesis. All data and code are made available for 3rd-party verification of reproducibility. Note that reproducibility is a different concept from REPLICABILITY. In the latter case, the final published data are linked to sufficiently detailed methods and information for a 3rd-party to be able to verify the results based on the independent collection of new raw data using similar or different methods but leading to comparable results.

### Discussion on next steps

Feedback that it is helpful just to read through the document and discover new groups.

Ideas for the future:

- Just share out the document and highlight its usefulness to people
- Host conversations based on the groups in different categories in the mapping doc to hear more about the different initiatives and progress made
- Is there a place in this IG for work around making research more trustworthy in general?
  - The mapping document might be missing some RDA groups who focus on trust issues
  - Idea of having a WG to define what it means to have reproducible research
  - Or a group that collects/collates the different elements of trust in science from the various viewpoints

### Appendix

Key take-aways for the IG from P21 (from [notes](#))

1. There is a lot of community support for an initiative, like this IG, that brings together different stakeholders to drive forward the reproducibility agenda.

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2. The IG should try not to limit the scope of what is included to only research producing data and code or to what outputs are necessary to achieve reproducibility.
3. There is a consensus that the measurement/evaluation of reproducibility is an important topic that the IG should focus on initially.
4. There are several groups/organisations external to RDA that work on reproducibility and the IG will aim to bring these stakeholders together with RDA members to maximise conversations.

Current list of groups that are engaged with aspects of reproducibility:

For more information on each, see

[Overview: Reproducibility work at RDA and beyond, May 2024](#)

#### RDA Groups

- FAIRsharing WG
- Metadata IG
- FAIR Principles for Research Hardware IG
- Engaging Researchers with Data IG
- Sharing Rewards and Credit (SHARC) IG

#### External Groups

- iRise
- ACM Reproducibility EIG
- Cornell Social Science Center
- cascadi
- Institute for Replication
- UKRN
- TIER2
- ScreenIT
- Project TIER
- TRACE
- Social Science Data Editors
- CODECHECK
- SciScore
- Knowledge Exchange
- SciCodes



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