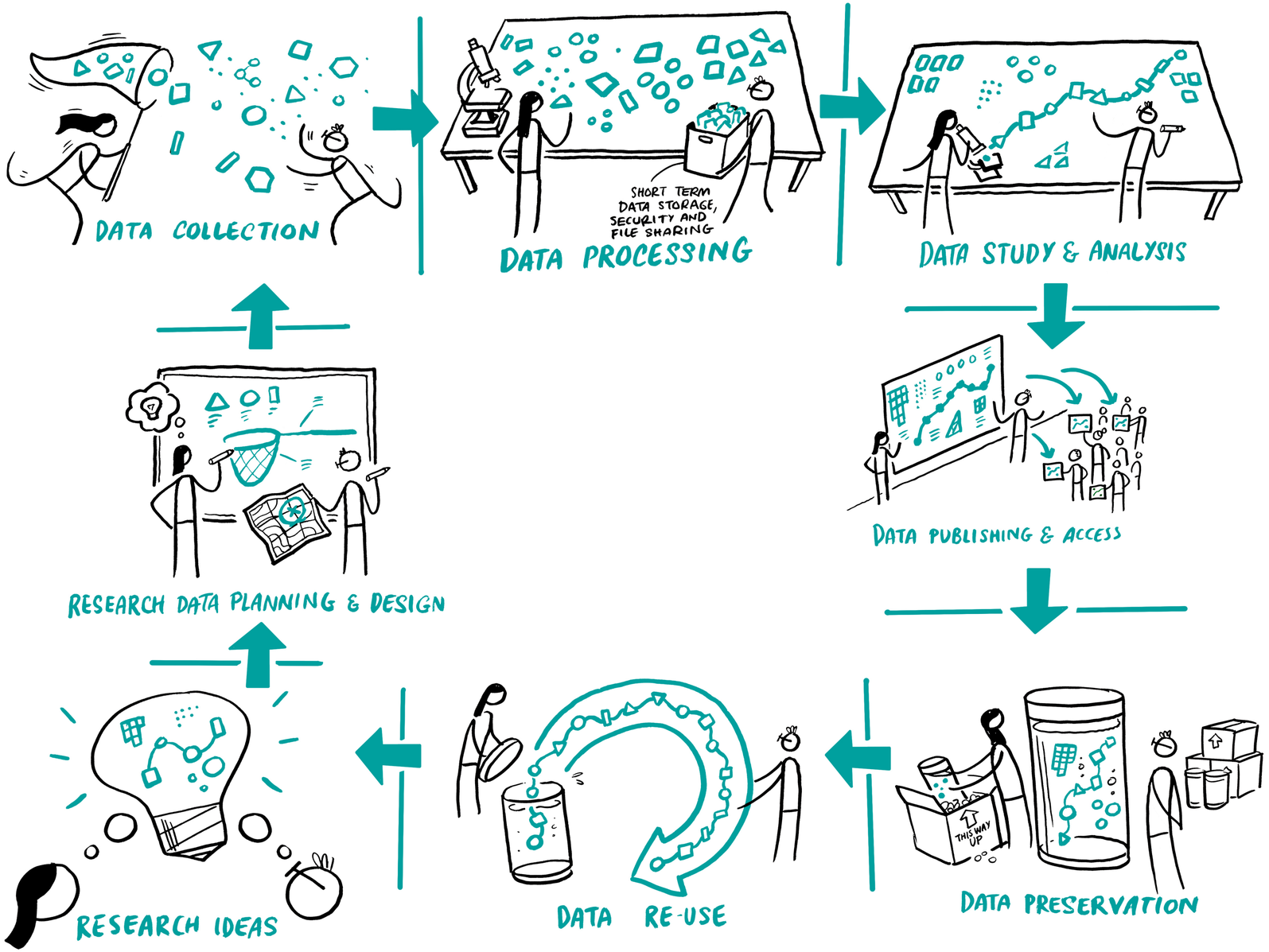
OAI

The Geneva Workshop on Innovations in Scholarly Communication

Incentivising sustainable and collaborative research

Dr. Rachael Ainsworth
Research Software Community Manager
Software Sustainability Institute, University of Manchester

@rachaelevelyn
@rainsworth
https://doi.org/10.6084/m9.figshare.14986890



Academic criteria for promotion and tenure in biomedical sciences faculties: cross sectional analysis of international sample of universities

Danielle B Rice,[1,2] Hana Raffoul,[2,3] John P A Ioannidis,[4,5,6,7] David Moher[8,9]

For numbered affiliations see end of the article.

Correspondence to: D Moher
dmoher@ohri.ca
(or @dmoher on Twitter
ORCID 0000-0003-2434-4206)

Additional material is published online only. To view please visit the journal online.

Cite this as: *BMJ*2020;369:m2081
http://dx.doi.org/10.1136 bmj.m2081

Accepted: 6 April 2020

ABSTRACT

OBJECTIVE
To determine the presence of a set of pre-specified traditional and non-traditional criteria used to assess scientists for promotion and tenure in faculties of biomedical sciences among universities worldwide.

DESIGN
Cross sectional study.

SETTING
International sample of universities.

PARTICIPANTS
170 randomly selected universities from the Leiden ranking of world universities list.

MAIN OUTCOME MEASURE
Presence of five traditional (for example, number of publications) and seven non-traditional (for example, data sharing) criteria in guidelines for assessing assistant professors, associate professors, and professors and the granting of tenure in institutions with biomedical faculties.

RESULTS
A total of 146 institutions had faculties of biomedical sciences, and 92 had eligible guidelines available for review. Traditional criteria of peer reviewed publications, authorship order, journal impact factor, grant funding, and national or international reputation were mentioned in 95% (n=87), 37% (34), 28% (26), 67% (62), and 48% (44) of the guidelines, respectively. Conversely, among non-traditional criteria, only citations (any mention in 26%; n=24) and accommodations for employment leave (37%; 34) were relatively commonly mentioned. Mention of alternative metrics for sharing research (3%; n=3) and data sharing (1%; 1) was rare, and three criteria (publishing in open access mediums, registering research, and adhering to reporting guidelines) were not found in any guidelines reviewed. Among guidelines for assessing promotion to full professor, traditional criteria were more commonly reported than non-traditional criteria (traditional criteria 54.2%, non-traditional items 9.5%; mean difference 44.8%, 95% confidence interval 39.6% to 50.0%; P=0.001). Notable differences were observed across continents in whether guidelines were accessible (Australia 100% (6/6), North America 97% (28/29), Europe 50% (27/54), Asia 58% (29/50), South America 17% (1/6)), with more subtle differences in the use of specific criteria.

CONCLUSIONS
This study shows that the evaluation of scientists emphasises traditional criteria as opposed to non-traditional criteria. This may reinforce research practices that are known to be problematic while insufficiently supporting the conduct of better quality research and open science. Institutions should consider incentivising non-traditional criteria.

STUDY REGISTRATION
Open Science Framework (https://osf.io/26ucp/?view_only=b80d2bc7416543639f577c1b8f756e44).

WHAT IS ALREADY KNOWN ON THIS TOPIC

Academics tailor their research practices according to the evaluation criteria applied within their academic institution

Ensuring that biomedical researchers are incentivised by adhering to best practice guidelines for research is essential given the clinical implications of this work

Changes to the criteria used to assess professors and confer tenure have been recommended, but no systematic assessment of promotion and tenure criteria being applied worldwide has been done

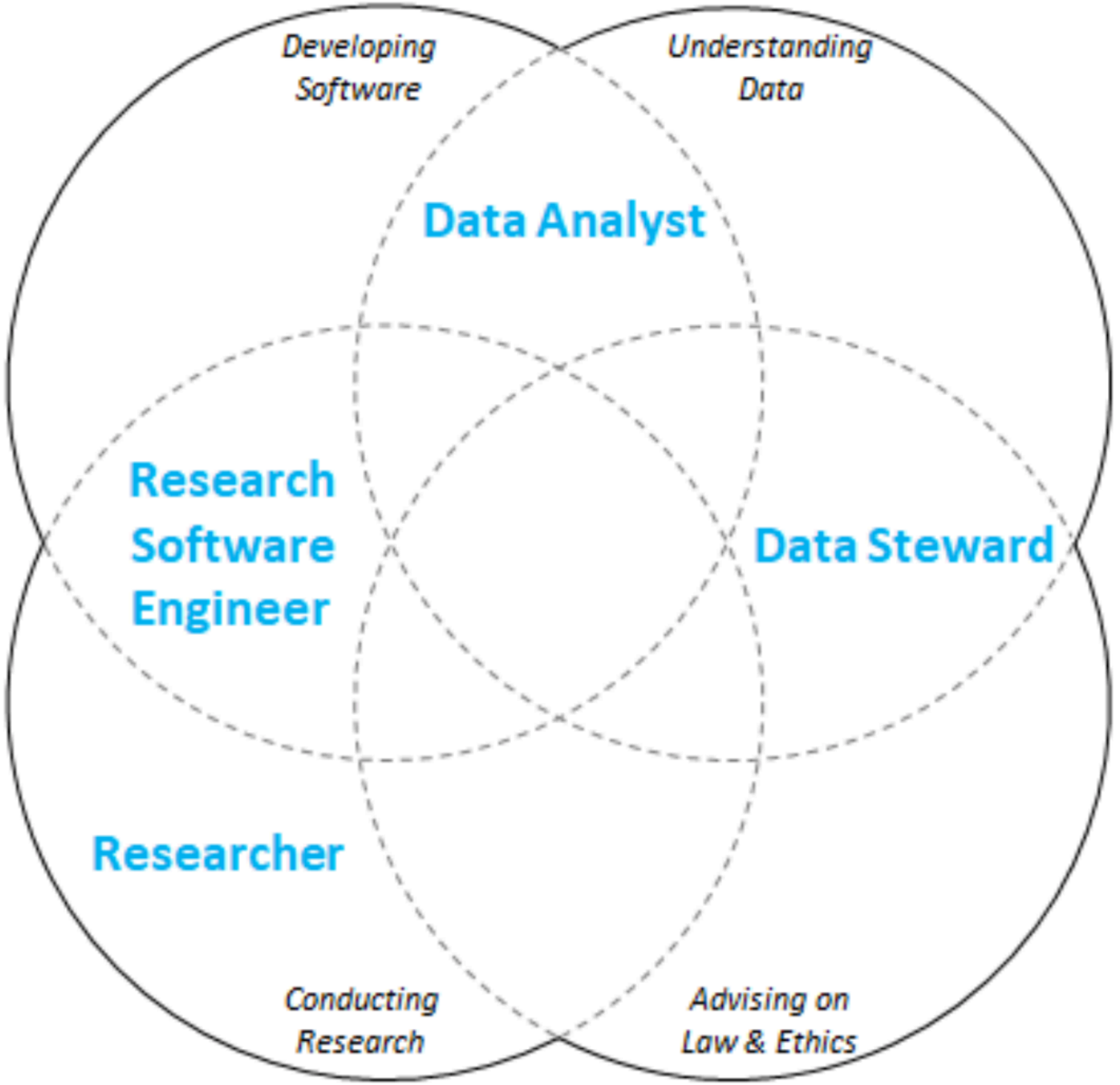
WHAT THIS STUDY ADDS

Across countries, university guidelines focus on rewarding traditional research criteria (peer reviewed publications, authorship order, journal impact, grant funding, and national or international reputation)

The minimum written requirements for promotion and tenure criteria are predominantly objective in nature, although several are inadequate measures to assess the impact of researchers

Developing and evaluating more appropriate, non-traditional indicators of research may facilitate changes in the evaluation practices for rewarding researchers

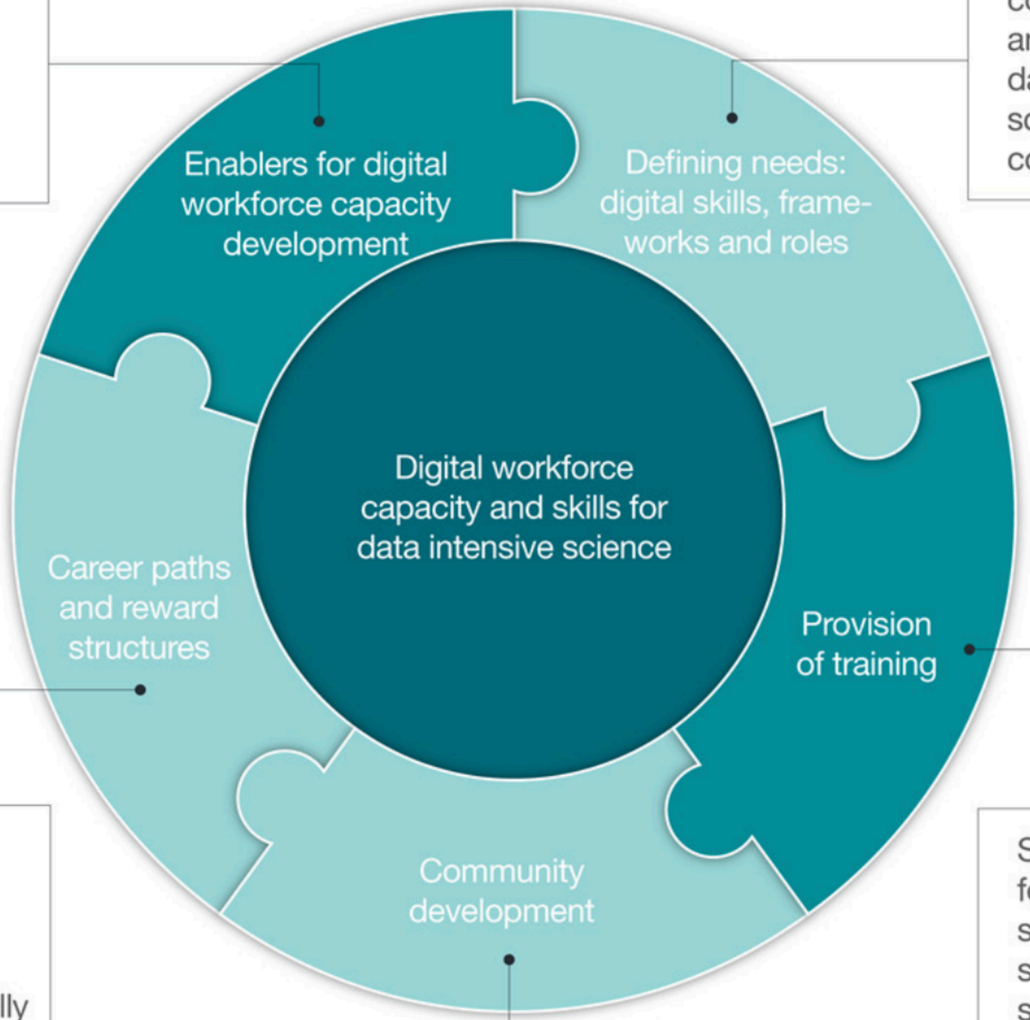
Rice et al. 2020. https://doi.org/10.1136/bmj.m2081



Building digital workforce capacity and skills for data-intensive science. OECD 2020. https://doi.org/10.1787/e08aa3bb-en

Integrate digital workforce capacity development into broader science policy frameworks and actions.

Identify the key competencies, skills and roles required for data-intensive science in different contexts.



Change academic evaluation and reward systems in order to attract and retain diverse digitally skilled staff.

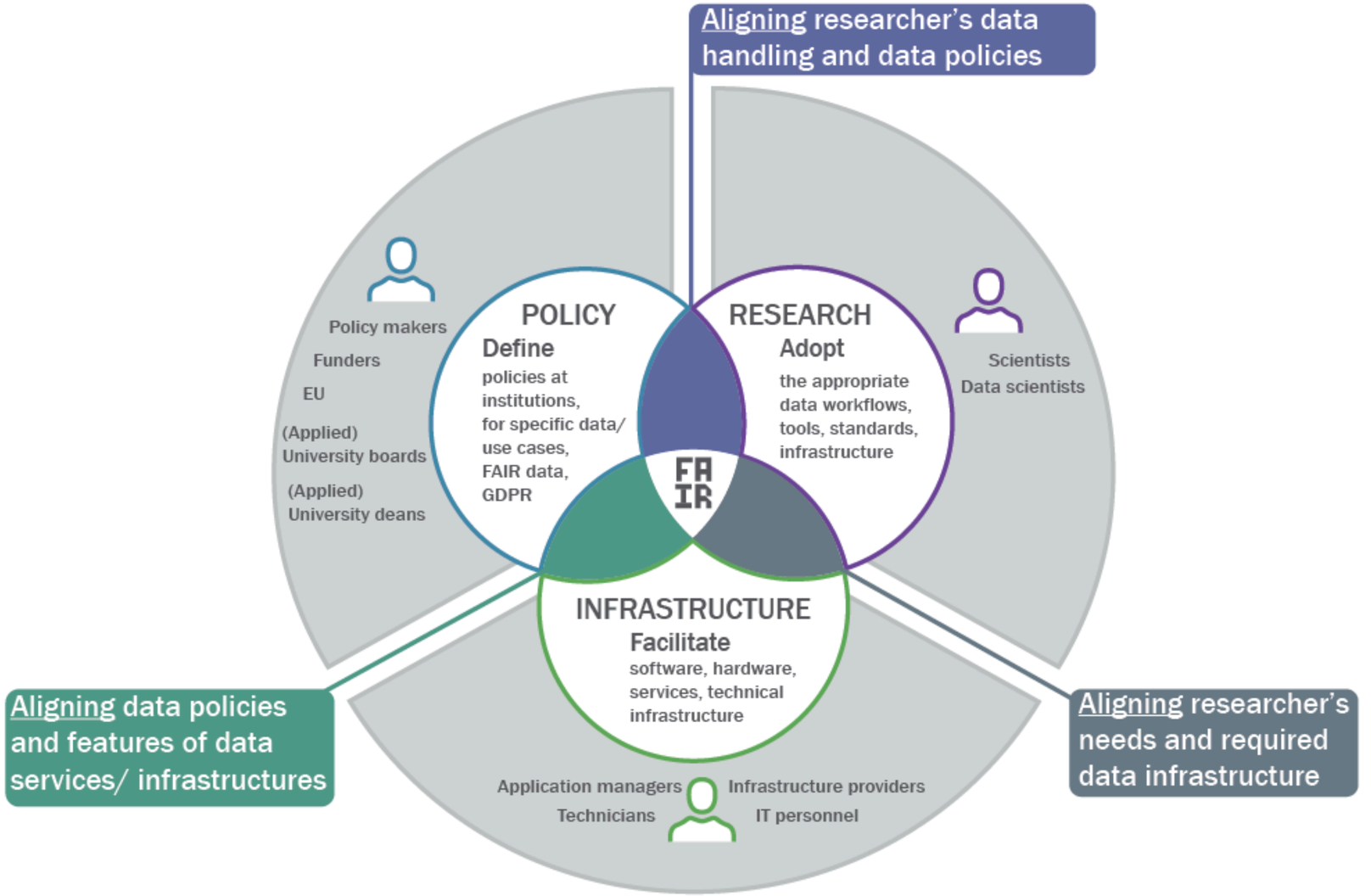
Support development of communities for new professional roles, learners and trainers.

Support training in foundational digital skills and more specialised skills for scientists and research support professionals.

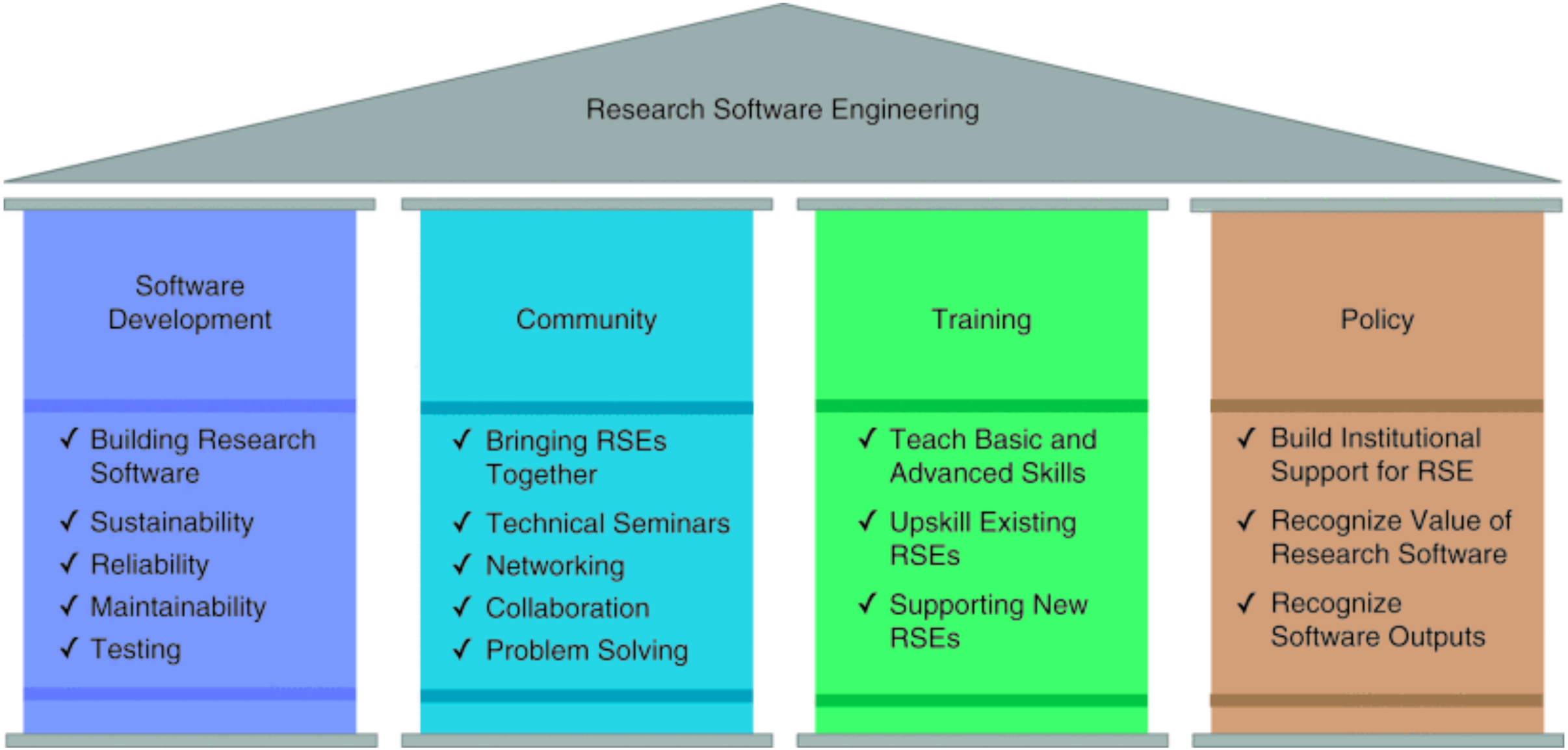
Building digital workforce capacity and skills for data-intensive science. OECD 2020. https://doi.org/10.1787/e08aa3bb-en

Emerging roles that enable reproducible, sustainable and collaborative research

Implementation areas for data stewardship



Report: Towards FAIR data steward as profession for the lifesciences. Scholtens et al. 2019. https://doi.org/10.5281/zenodo.3471707



The Four Pillars of Research Software Engineering. Cohen et al. 2021. https://doi.org/10.1109/MS.2020.2973362

A path to the light: stopping ‘secret’ software, managing maintenance and evidencing impact

Posted by j.laird on 27 May 2021 - 10:00am

By Yo Yehudi, Mario Antonioletti, James Graham, Matthew Brown and Shoaib Sufi.

This blog post is part of our Collaborations Workshop 2021 ***speed blog series****.*

Research software is a critical part of the research landscape and contributes to scientific discoveries across the full breadth of research. However, when it comes to grant-writing, software maintenance has the perception of being taboo - a phrase not to be uttered for fear of invoking sentiments like ‘lacking novelty’ or ‘incremental’. This has driven software maintenance underground, leading to a lack of visibility to funders, a sense of underappreciation from the developers, and reduced long-term planning.

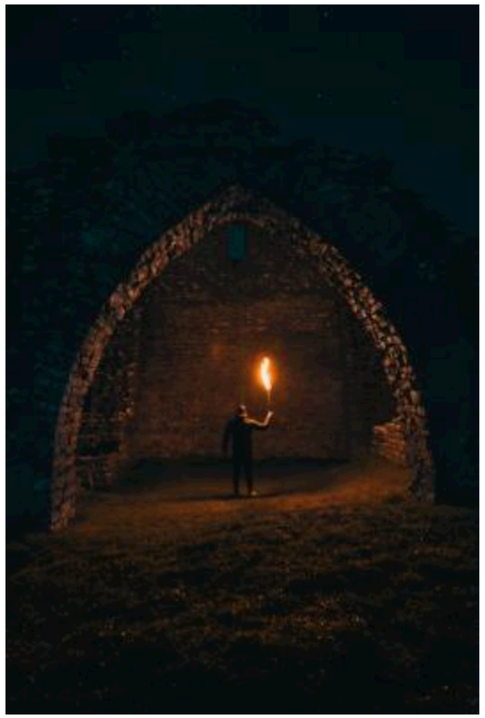


Photo by ***Linus Sandvide***

Tags

- Yo Yehudi
- Mario Antonioletti
- James Graham
- Matthew Brown
- Shoaib Sufi
- CW21 speed blog posts
- CW21
- Community

https://software.ac.uk/blog/2021-05-27-path-light-stopping-secret-software-managing-maintenance-and-evidencing-impact

How do we persuade funders to support software maintenance?

Posted by j.laird on 10 June 2020 - 9:30am

By Emmy Tsang, Tania Allard, Becca Wilson, Neil Chue Hong, David De Roure and Jez Cope (Editor).

*This post is part of the **CW20 speed blog posts series**.*

*Photo by **Liam Riby***

Most modern-day research **involves the use of software**, and research software itself is increasingly recognised as a key output of research by the research community. While it is encouraging that more funders are recognising the importance of providing **funding for the development of research software**, the differences between software and other types of research output often go unacknowledged. One of the key differences is that software requires maintenance to remain useful, and that calls for a long-term, sustained investment. What does software maintenance entail and why is it important? What should funders consider when establishing a funding scheme for software maintenance and what would success look like?

Tags

- Jez Cope
- Emma Tsang
- Tania Allard
- Rebecca Wilson
- Neil Chue Hong
- David De Roure
- Collaborations Workshop 2020
- CW20 speed blog posts
- Community

https://software.ac.uk/blog/2020-06-10-how-do-we-persuade-funders-support-software-maintenance

UK Research and Innovation

Apply for funding | Our work | News and views | About us | Our councils

Search

Funding finder | Before you apply | Funding for COVID-19 research | How we make decisions

Manage your funding | Projects we've funded | Horizon Europe: help for UK applicants

Software for research communities

Opportunity status:	Open
Funders:	Engineering and Physical Sciences Research Council (EPSRC)
Funding type:	Grant
Total fund:	£4,500,000
Publication date:	29 June 2021
Opening date:	29 June 2021
Closing date:	14 October 2021 16:00 UK time

Last updated: 2 July 2021

Start application ▶

Apply for funding to adapt or maintain existing software used by researchers.

Timeline

29 June 2021
Opening date

14 September 2021 16:00
Intention to submit deadline

14 October 2021 16:00
Full proposal deadline

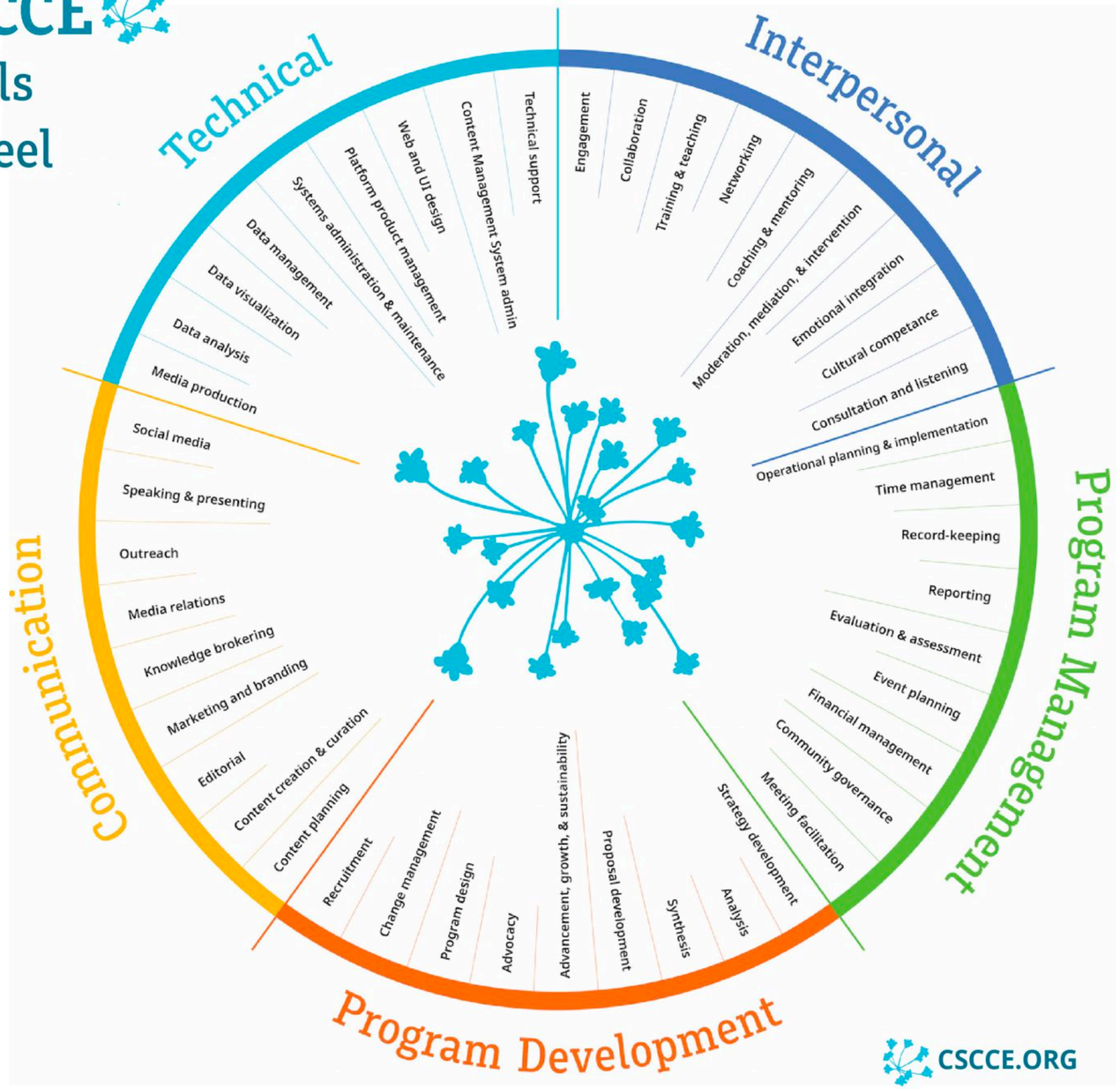
January-February 2022
Panel

Early March 2022
Funding decision

1 April 2022
Grant start date

https://www.ukri.org/opportunity/software-for-research-communities/

CSCCE Skills Wheel



CSCCE

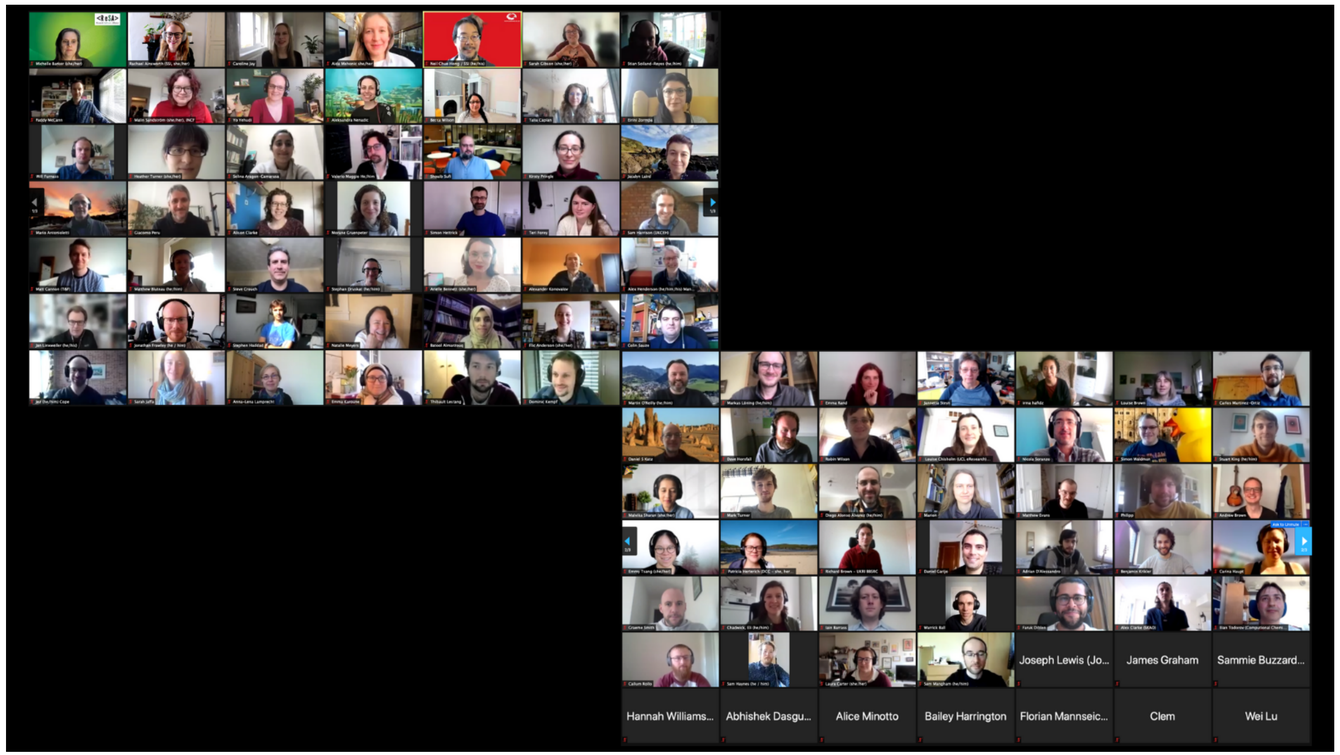
The CSCCE Skills Wheel

Five core competencies and 45 skills to describe the role of the community engagement manager in STEM

Lou Woodley, Katie Pratt, Malin Sandström, Elisha Wood-Charlson, Jennifer Davison, and Andreas Leidolf

The Center for Scientific Collaboration & Community Engagement Skills Wheel. Woodley et al. 2021. https://doi.org/10.5281/zenodo.4437293

Software
Sustainability
Institute



https://software.ac.uk/

Collaborative ways of working

The Turing Way

Search this book...

- Welcome
- Guide for Reproducible Research
- Guide for Project Design
- Guide for Communication
- Guide for Collaboration
- Guide for Ethical Research
- Community Handbook
- Afterword

Visit our GitHub Repository
This book is powered by Jupyter Book

Contents

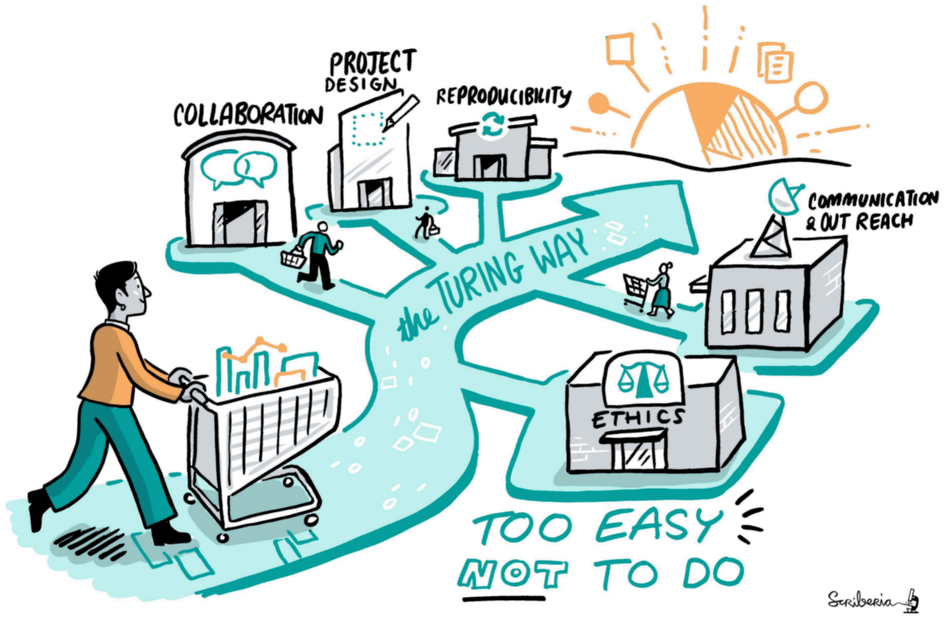
Welcome to The Turing Way handbook to reproducible, ethical and collaborative data science.

The Turing Way project is open source, open collaboration, and community-driven. We involve and support a diverse community of contributors to make data science accessible, comprehensible and effective for everyone. Our goal is to provide all the information that researchers and data scientists in academia, industry and the public sector need to ensure that the projects they work on are easy to reproduce and reuse.

Top Tip

The Turing Way is not meant to be read from start to finish. Start with a concept, tool or method that you need now, in your current work. Browse the different guides that make up the book, or use the search box to search for whatever you would like to learn about first.

All stakeholders, including researchers, software engineers, project leaders and funding teams, are encouraged to use *The Turing Way* to understand their roles and responsibility of reproducibility in data science. You can inspect our resources on GitHub, contribute to the project as described in our contribution guidelines and re-use all materials (see the License).



The Turing Way. The Turing Way Community et al. 2019. https://doi.org/10.5281/zenodo.3233853

RDMkit

Home | About | Contribute | GitHub | Search RDMkit

- Data life cycle
- Your role
- Your domain
- Your problem

All tools and resources

- Tool assembly

Are you working with data in the Life Sciences? Do you feel overwhelmed when you think about Research Data Management?

The ELIXIR Research Data Management Kit (RDMkit) is an online guide containing good data management practices applicable to research projects from the beginning to the end. Developed and managed by people who work every day with life science data, the RDMkit has guidelines, information, and pointers to help you with problems throughout the data's life cycle. RDMkit supports FAIR data — Findable, Accessible, Interoperable and Reusable — by-design, from the first steps of data management planning to the final steps of depositing data in public archives.

The RDMkit organises information into the six sections displayed below, which are interconnected but can be browsed independently.

Data life cycle

Start here to get an overview of research data management. Click on a section of the diagram below to get an introduction to that stage of the data management life cycle.

ELIXIR (2021) Research Data Management Kit. https://rdmkit.elixir-europe.org