ESOF2020
EUROSCIENCE OPEN FORUM
TRIESTE

Challenges in Assessing Contributions to Reproducible Research and Open Science

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Community Manager - *The Turing Way,* The Alan Turing Institute

Co-founder - Open Life Science

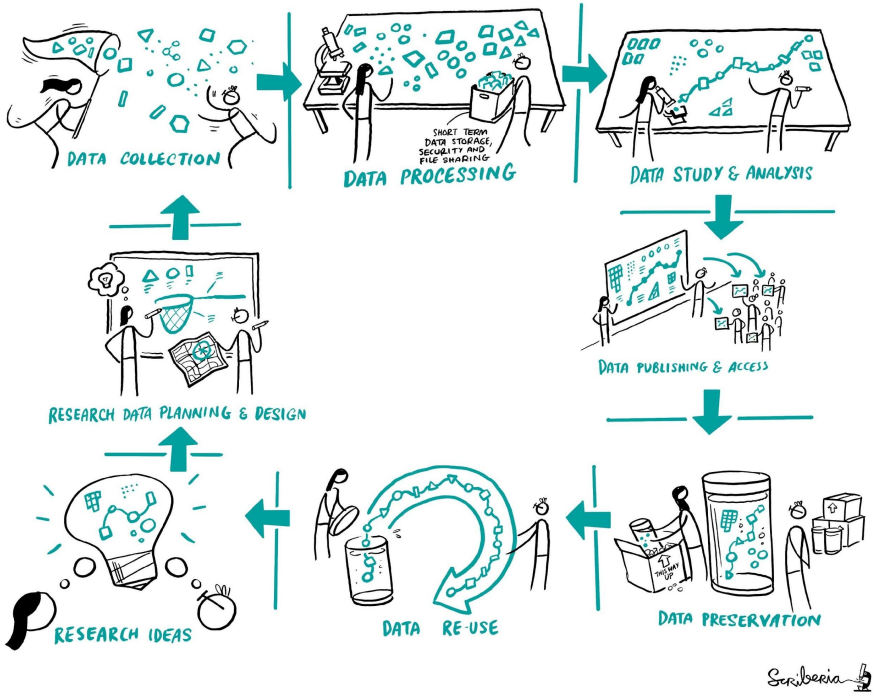
Pronouns: she/her

Euro Science

Fondazione Internazionale Trieste

Reproducible research

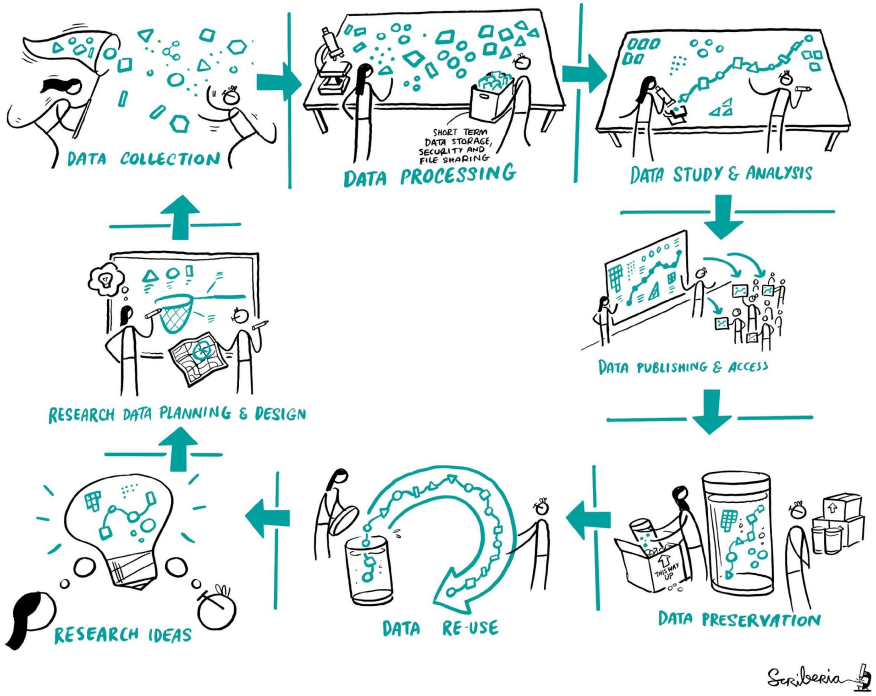
Same analysis steps on the same dataset produces same answer



Reproducible research

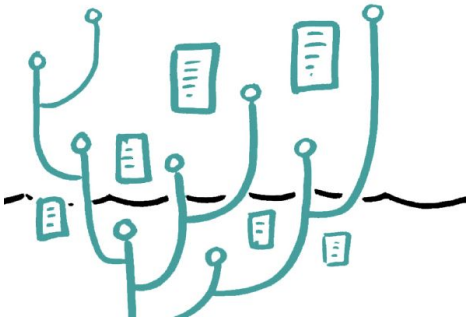
Same analysis steps on the same dataset produces same answer

- Metric of quality
- Involves many crucial tasks
- An overwhelming process
- Not mandatory for publication

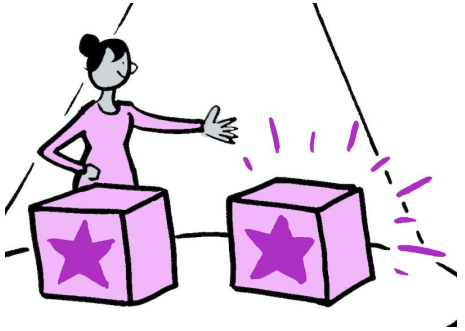


Visible contributions to open science (communities)

Visible leadership roles

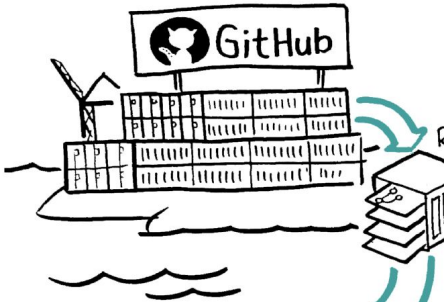


Publications and preprints

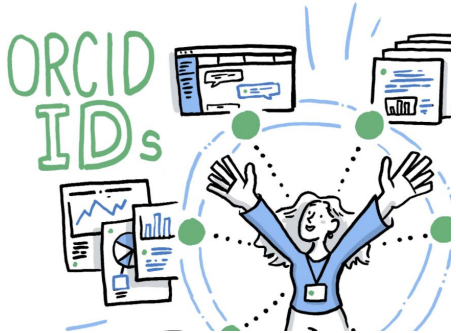


Successful grants

Community's growth



Code base and documents

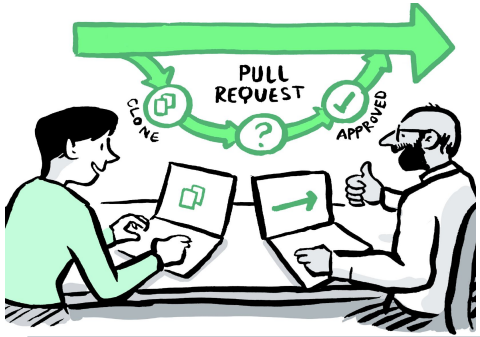


DOI and citations

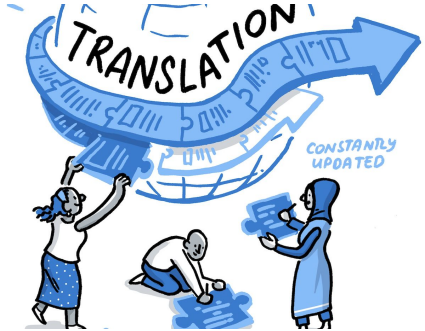
Invisible contributions to open science (communities)

Shared leadership efforts

Communicating research



Supporting others



Accessibility and inclusion

Archiving and maintenance

Teaching and mentoring

Challenges in recognising contributions

Most of these contributions are **not fairly incentivised**

Require skills that are often **not formally taught**

Require resources that are not equitably available

Invisible contributions are **hard to assess**, but efforts are ongoing

Metrics/practices for visible contributions are **not widely adopted**

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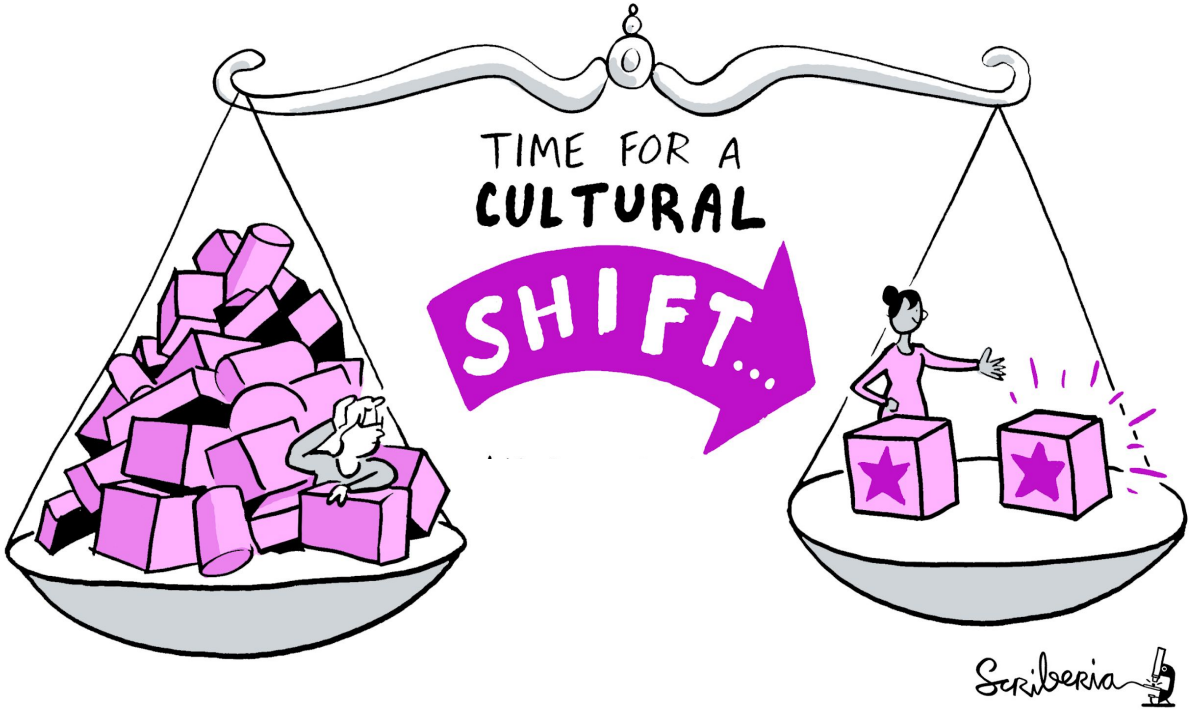
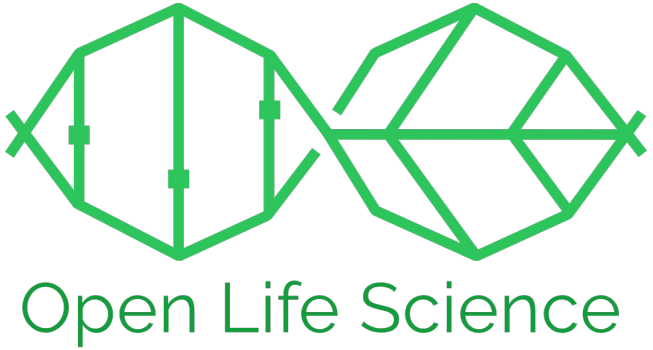
Metrics/practices for visible contributions are **not widely adopted**

See: *DORA, Research Excellence Framework, The hidden REF, CRediT, JOSS, CHAOSS metrics*

Recognising & assessing “less traditional” research contributions



Exploring some examples from my work

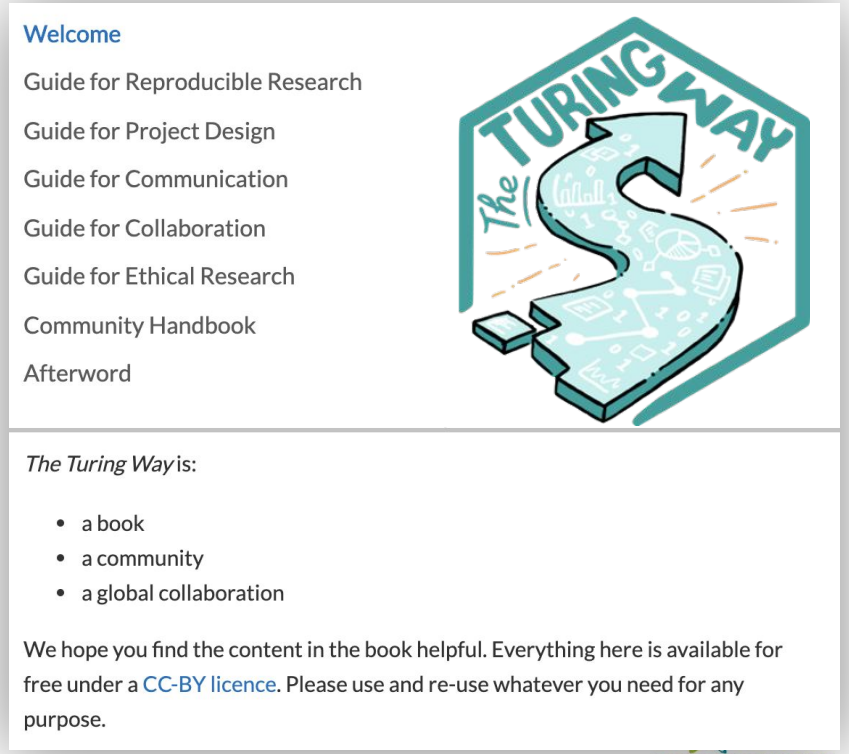


The Turing Way

The Turing Way is an **open source** community-driven **book-project** that **involves and supports diverse contributors** in developing guides to reproducible, ethical, inclusive and collaborative research.

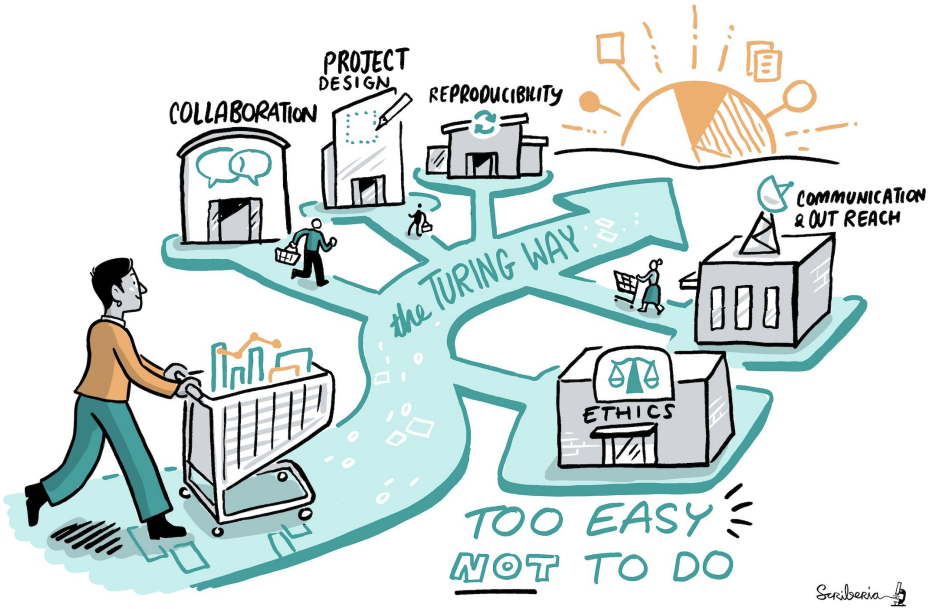
Project lead: Kirstie Whitaker

Website: https://the-turing-way.netlify.app



The Turing Way: A book on reproducibility

- 27 chapters
  - 100 subchapters
- A growing community
  - 1.5 yrs, 175 contributors
  - 1000s of user and readers



Moonshot goal is to make reproducibility 'too easy not to do'

The Turing Way: Assessment & Acknowledgement

- *Eligibility*: **Everyone is welcome** to contribute
- *System:* Promotes a **collaboration** and shared ownership
- *Recognition*: **Records and highlight contributions**
  - Chapter developers are named authors of the book
- *Quality*: Contributions are **reviewed and openly acknowledged**
  - participation guideline, community-led efforts, engagement and support
- *Community:* Involves **diverse contributors** and their perspectives

Open Life Science

A community-oriented **mentoring and training program** that helps individuals gain **open leadership skills** to design and implement **inclusive research** projects.

16 weeks cohort-based program

Co-founded with: Bérénice Batut and Yo Yehudi

Website: http://openlifesci.org/

Open Life Science: Assessment & Acknowledgement

- *Eligibility*: researchers of **diverse backgrounds, identities and projects**
- *System*: Broaden **access to open leadership** skills
- *Recognition*: **Platform** for total 52 projects, ~40 mentors and ~70 experts
  - Support, professional training, currently setting an honorarium system
- *Quality*: **Commitment to learning** and developing project for 16-weeks
  - Peer-networking, mentor guidance, check-ins, graduation, certification
- *Community*: Empowers to **design inclusive and community projects**

Addressing ‘some’ of the discussed challenges

Incentivising **volunteer work in open science**

Teaching and mentoring (and incentivising them too!)

Identifying resources to **ensure inclusive research** is possible

Developing metrics for **recognising invisible labour**

Supporting open* projects in recognising contributions and **improving metrics of assessment**

Acknowledgement

– Kirstie Whitaker, Whitaker Team Members

– *The Turing Way* community, collaborators & readers

– Open Life Science co-founders Yo Yehudi, Bérénice Batut

– Open Life Science mentors, mentees and experts community

The Turing Way links

– Book: the-turing-way.netlify.com, Twitter: twitter.com/turingway
– GitHub: github.com/alan-turing-institute/the-turing-way

Open Life Science links

– Website: http://openlifesci.org, Twitter: twitter.com/openlifesci

Original artwork by Scriberia: https://doi.org/10.5281/zenodo.3332808

The Alan Turing Institute

Open Life Science

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Thank you!

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