

The Alan Turing Institute

Building Open Communities of Collaboration

Malvika Sharan

Pronouns: she/her



The Turing Way



An Open Source guide on Data Science.

We involve and supports a **diverse community** to make data science **reproducible, ethical, collaborative and inclusive** for everyone.

The Alan Turing Institute

The national institute
for data science and
artificial intelligence



The Turing Way Book on Reproducibility



Kirstie Whitaker

Lead of Tools, Practices
& Systems Programme

The Turing Way is a lightly opinionated guide to reproducible data science.

Our goal is to provide all the information that researchers need at the start of their projects to ensure that they are easy to reproduce at the end.

This also means making sure PhD students, postdocs, PIs, and funding teams know which parts of the "responsibility of reproducibility" they can affect, and what they should do to nudge data science to being more efficient, effective, and understandable.

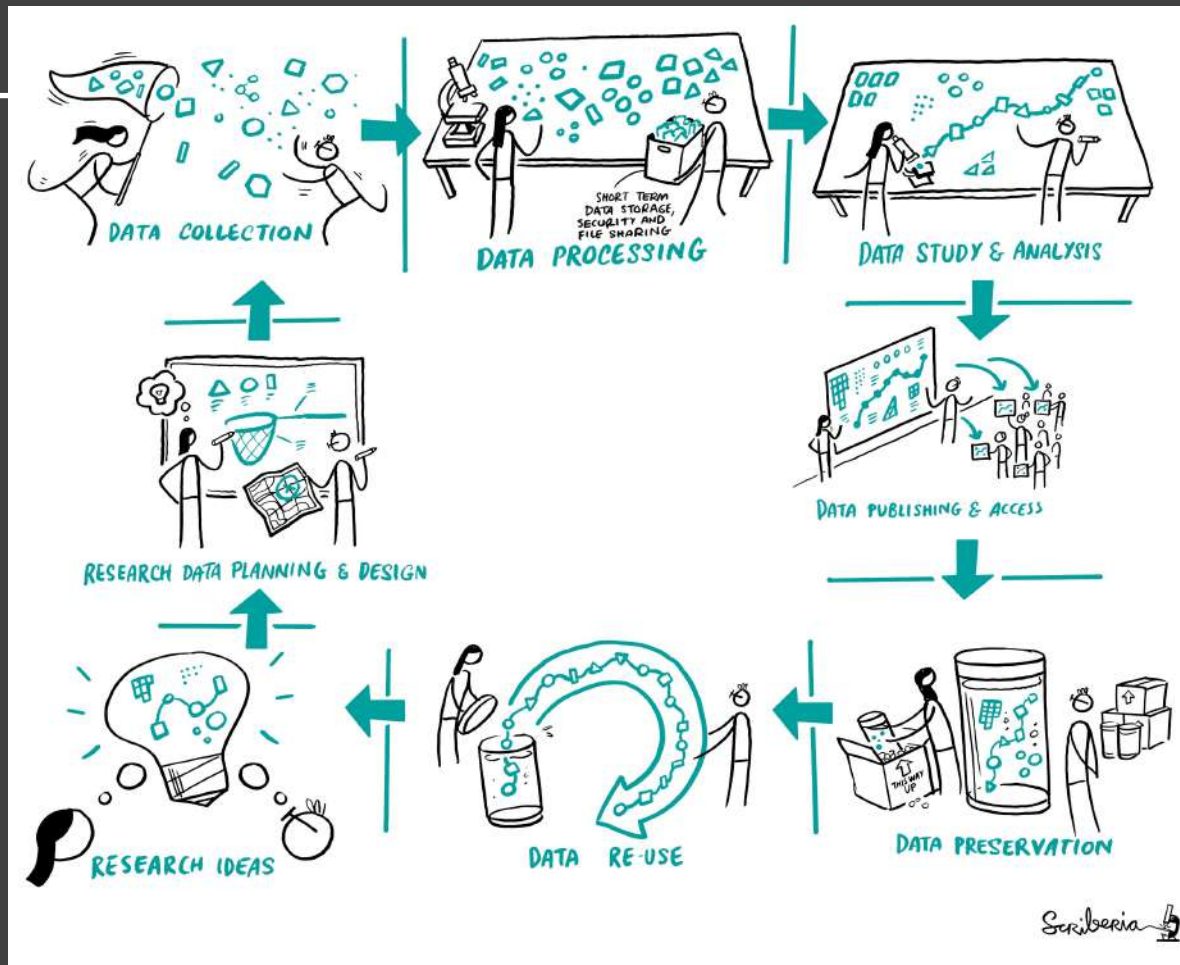


Reproducibility

		Data	
		Same	Different
Analysis	Same	Reproducible	Replicable
	Different	Robust	Generalisable

Reproducibility

		Data	
		Same	Different
Analysis	Same	Reproducible	Replicable
	Different	Robust	Generalisable



Scriberia

Expansion of Scope

Guide for Reproducible Research

- Overview
- Open Research
- Version Control
- Licensing
- Research Data Management
- Reproducible Environments
- BinderHub
- Code quality
- Code Testing
- Code Reviewing Process
- Continuous Integration
- Reproducible Research with Make
- Research Compendia
- Credit for Reproducible Research
- Risk Assessment
- Case Studies

Welcome

The Turing Way is an open source community-driven guide to reproducible, ethical, inclusive and collaborative data science.

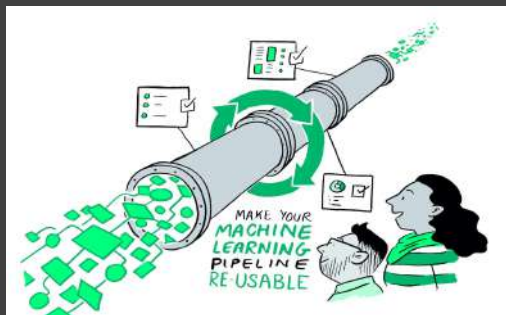
Our goal is to provide all the information that data scientists in academia, industry, government and the third sector need at the start of their projects to ensure that they are easy to reproduce and reuse at the end.

The book started as a guide for reproducibility, covering version control, testing, and continuous integration. However, technical skills are just one aspect of making data science research "open for all".

In February 2020, *The Turing Way* expanded to a series of books covering reproducible research, project design, communication, collaboration, and ethical research.



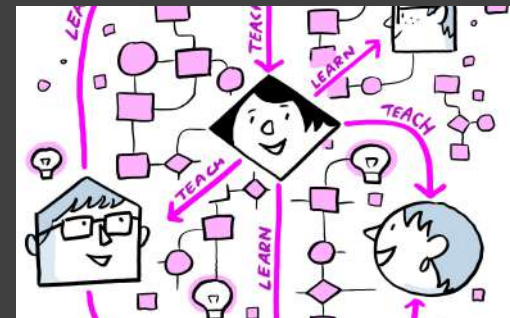
The Turing Way Guides



Reproducibility



Project Design



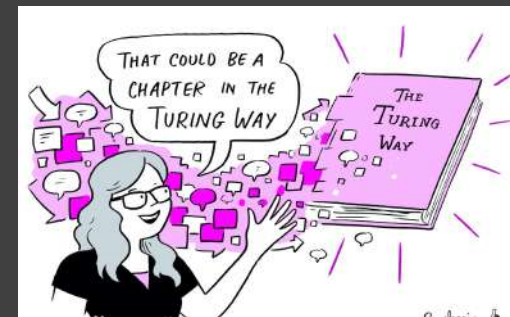
Communication



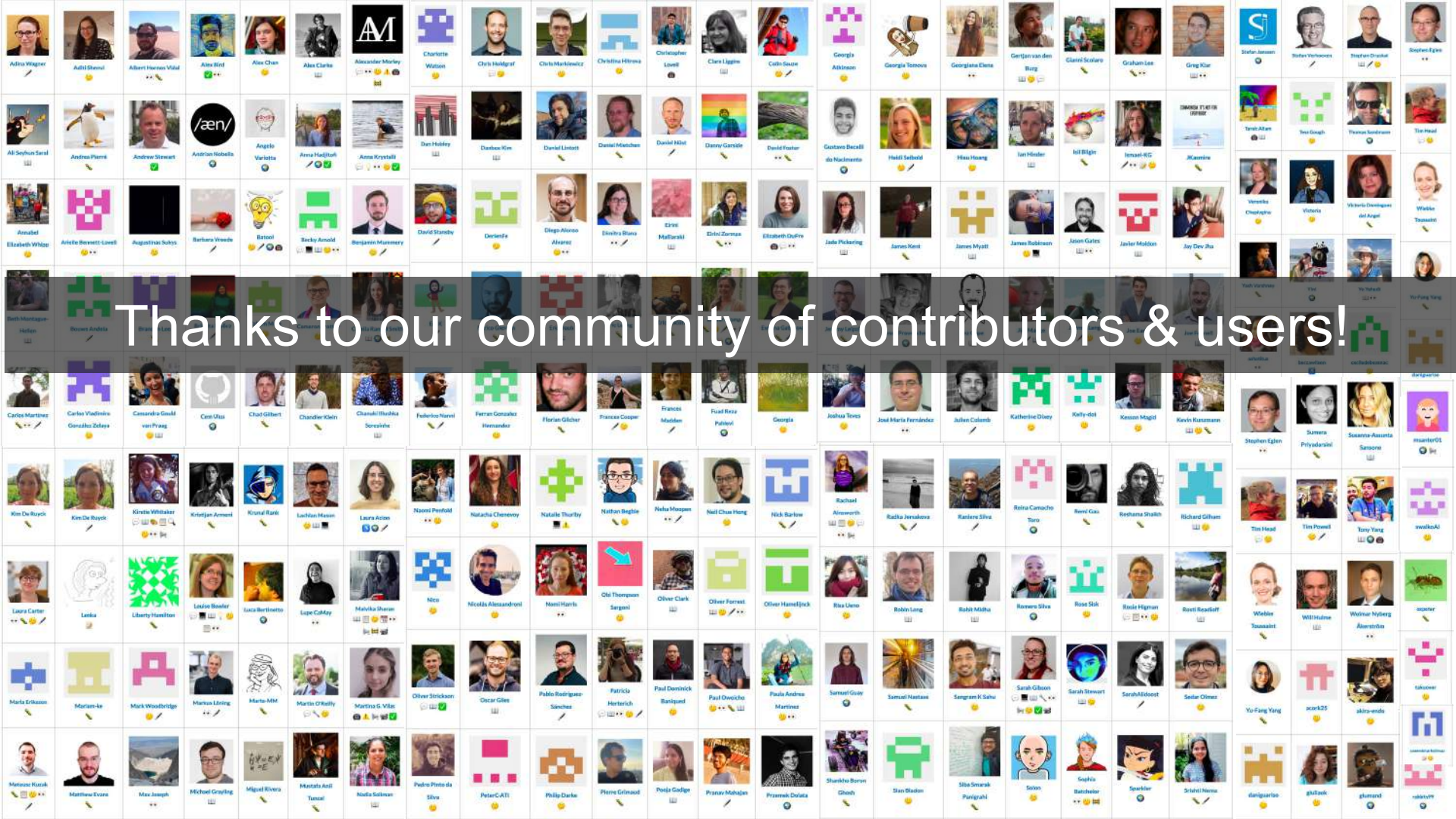
Collaboration



Ethical Research



Community Handbook



Thanks to our community of contributors & users!

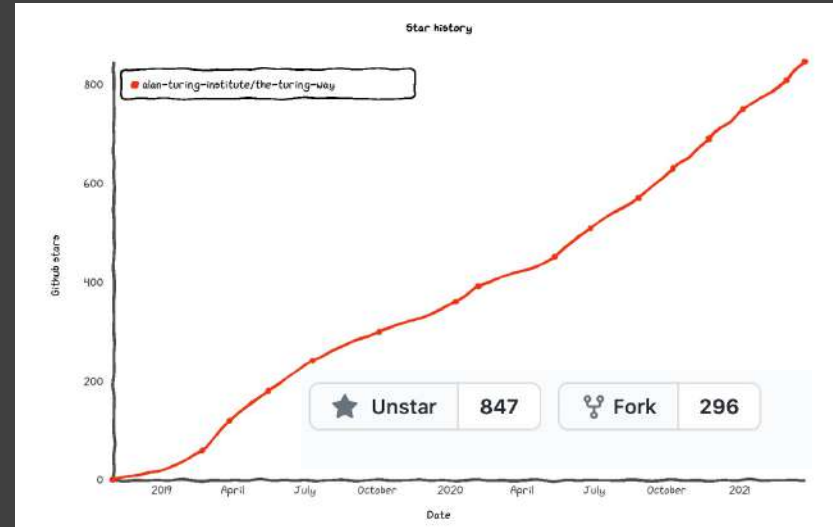
Notable Impacts Beyond the project

Resources are being used by learners, educators, community builders, policy makers and researchers globally

- Reproducibility of scientific results in the EU 2020 (report)
- An Emerging Technology Charter for London (policy)
- Innovation Scholars: UKRI grant 2020 (funding)
- CodeRefinery and Library Carpentries (training)
- Cited by peer-reviewed articles & open source projects

Project and Community Growth

- 2 years, >150 subchapters
- Community resources, guidance, templates, training
- >250 direct GitHub contributors and thousands of users



<https://zenodo.org/record/4323154>



3,659

views

4,717

downloads





Terminology

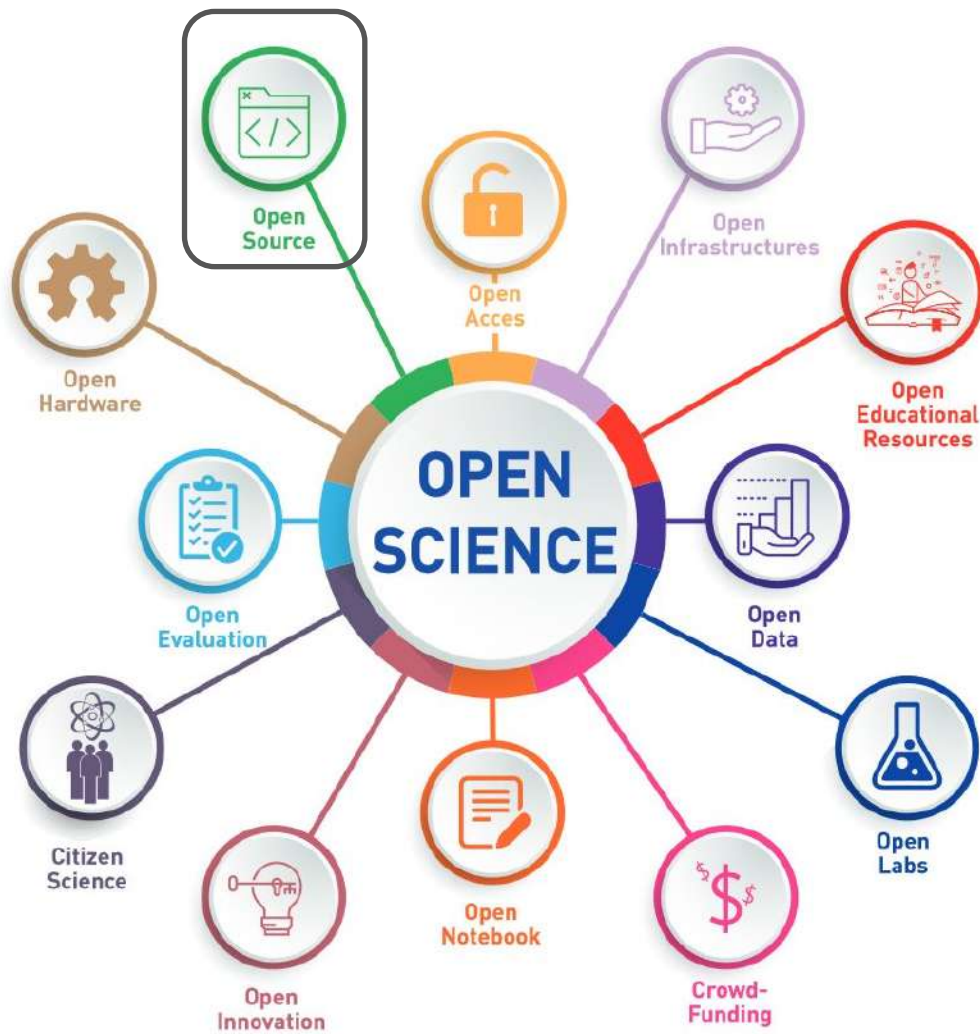
- Open Source
- Community of Practice (CoP)
- Community Building
- Building Open Community of Collaboration



An **open source** project

- Everyone can freely read, reuse, distribute, modify and advance.
- **Framework for collaboration, peer production and project sustainability.**





Toward a UNESCO Recommendation on Open Science: Canadian Commission for UNESCO By Ella Chan, Dick Bourgeois-Doyle, Michael Donaldson, and Eleanor Haine-BennettOttawa, Canada, April 2020

Community

A social unit of people who share common values and mission.

Community of Practice (CoP)

A social unit of people who share common values and mission – who want to gain knowledge and expertise through informal interaction.

Open Community of Practice

A social unit of people who share common values and mission – who want to gain knowledge and expertise through informal interaction – using open source framework for collaboration, peer production and project sustainability.

Building Open Communities of Practice



Building Open Communities of Practice

Process of **granting access** to skills and support an individual or group needs to **participate in the open CoP** -- *and influence decision-making process.*

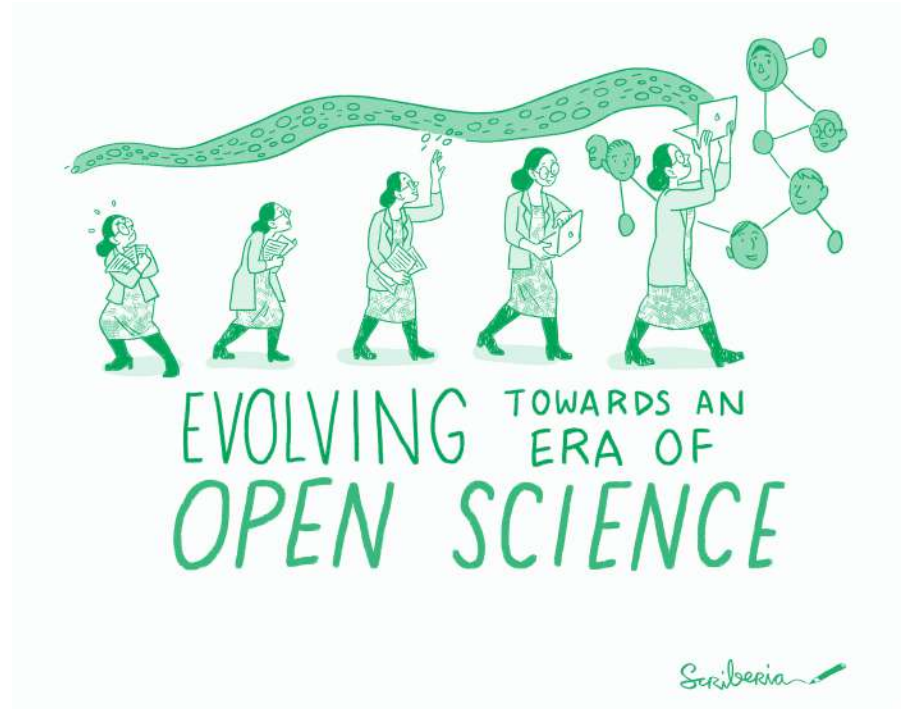


Building Open Communities of Collaboration

Open is by default not:

- Inclusive
- Accessible
- Community-led

Intentional collaboration





Book:
the-turing-way.netlify.app/

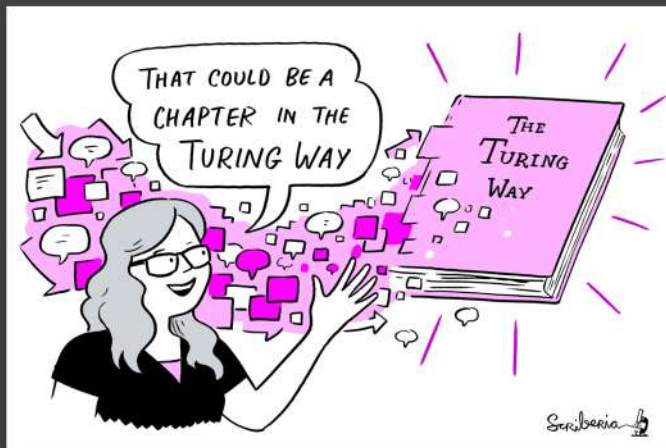
GitHub:
github.com/alan-turing-institute/the-turing-way

Twitter:
twitter.com/turingway

Email:
theturingway@gmail.com

CC-BY 4.0, *The Turing Way*

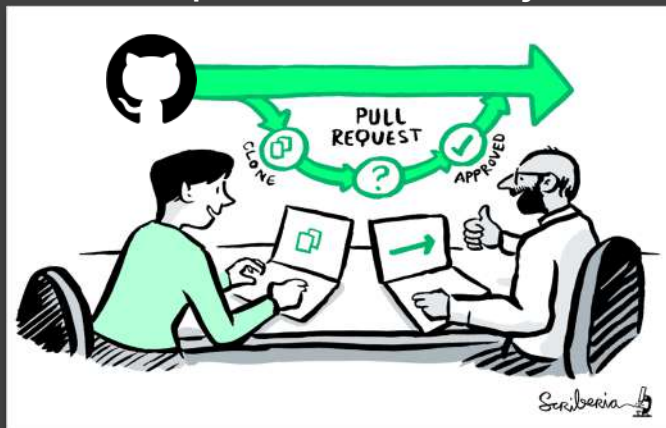
A Book



A Community



An Open Source Project



A Culture of Collaboration



Building Open Communities of Collaboration



Design

for Collaboration



Document

Processes



Create

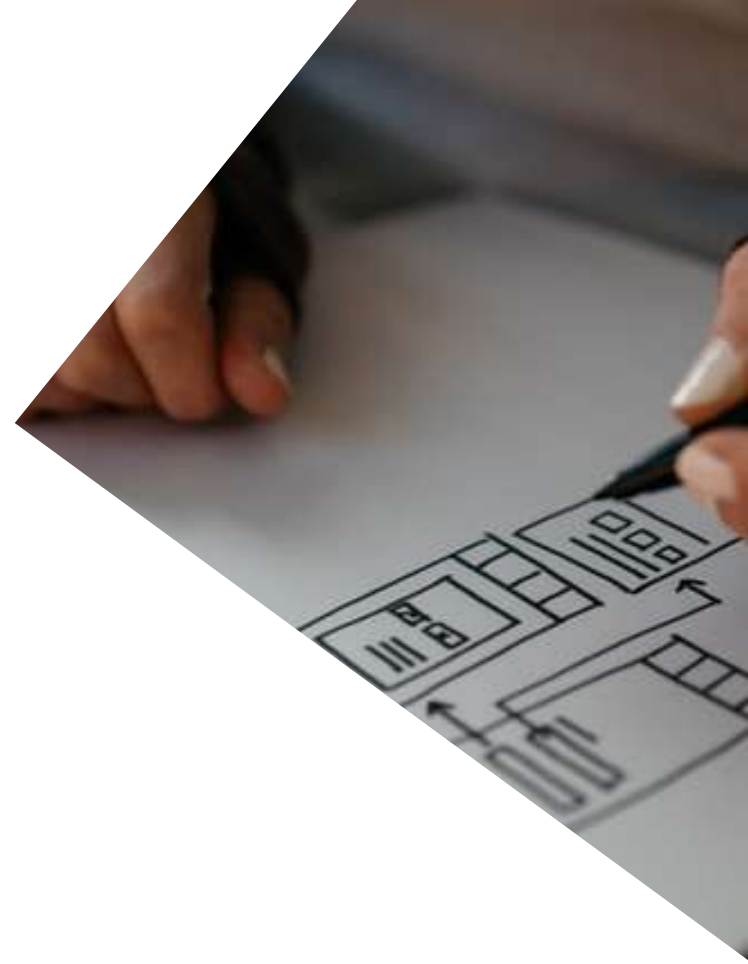
Shared Ownership



Recognise

All Contributors

1. Design for Collaboration



Open leadership is a set of practices and skills people can use and build projects that allows them to collaborate within inclusive communities.

Design for Collaboration



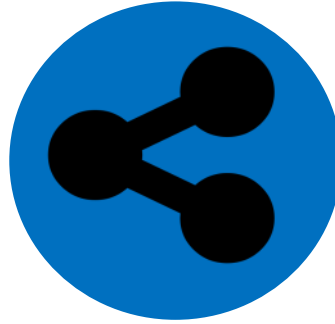
Understanding

Your work is clear, authentic
and widely accessible

Design for Collaboration



Understanding



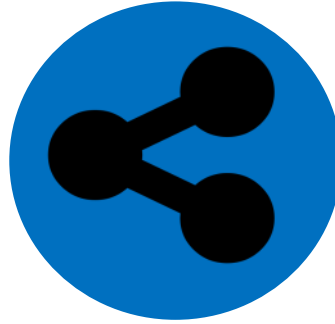
Sharing

Your work can be adapted,
reproduced, and built upon

Design for Collaboration



Understanding



Sharing

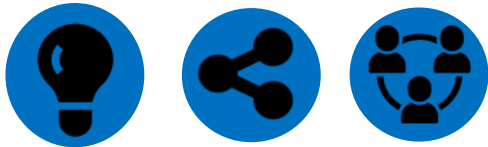


Participation & Inclusion

Creates a shared ownership
that inspires contributions

Every contribution counts

The Turing Way fosters a culture of collaboration



Open Leadership principles



Pathways for Collaboration



Develop & share



Maintain & improve



Share resources



Review and update



Make it global



Share best practices

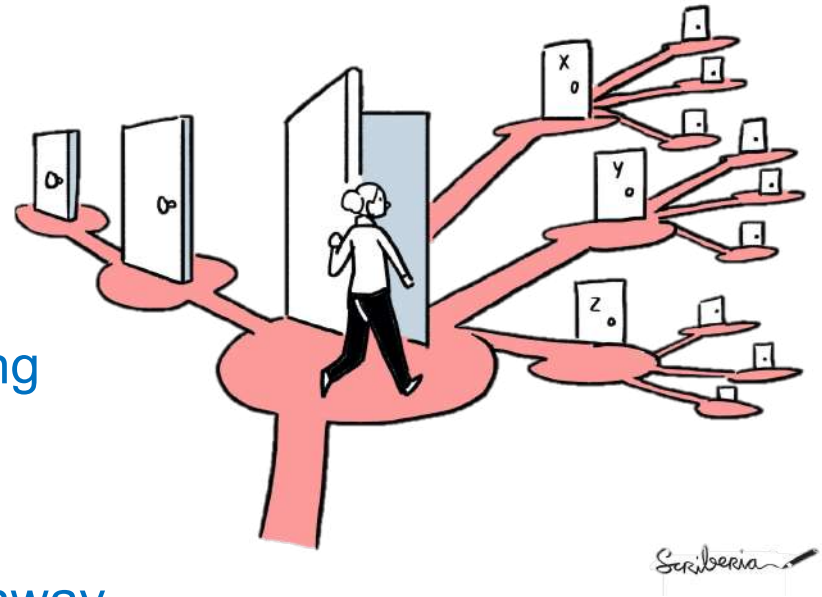
2. Document Processes



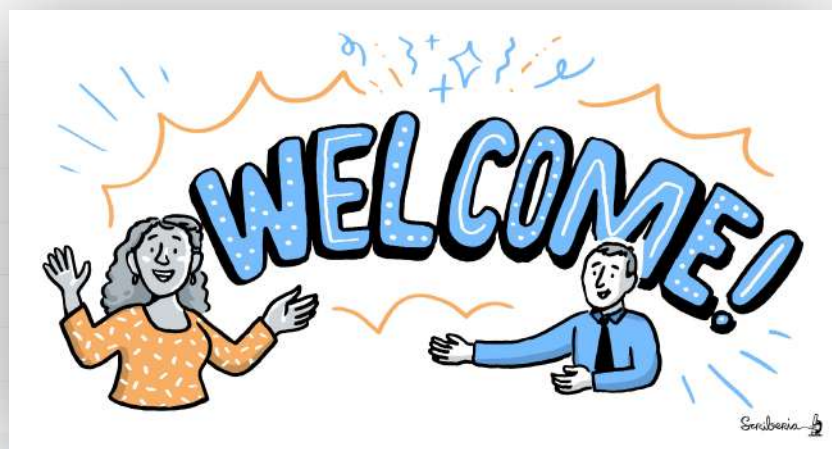
Social norms drive behaviour and affect community culture. To avoid detrimental impact of **unwritten rules**, we **transparently communicate** them with the community.

Community Resources

- [README](#), online repository
- [Contribution guideline](#), norms
- [Recommended practices](#), access
- Technical needs, [learning & mentoring](#)
- [Roles & rewards](#), support, policies
- Transparent reporting, [feedback pathway](#)



📁 .github	Remove prettier configuration	
📁 book	minor update	
📁 communications	Fix typos	
📁 conferences	Add KW formatting pedantry	
📁 project_management	Update online-collaboration-cafe.md	
📁 templates	Updating Github templates	
📁 tests	Add "et cetera" as a deprecated Latinism	
📁 workshops	Remove mis-pasted text	
📄 .all-contributorsrc	Merge pull request #991 from alan-turing-institute/all-contributors/a...	5 days ago
📄 .gitignore	ignore pptx in workshop folder	9 months ago
📄 .travis.yml	add html-proof file again	last month
📄 <u>CODE_OF_CONDUCT.md</u>	her -> their	6 months ago
📄 <u>CONTRIBUTING.md</u>	Update CONTRIBUTING.md	2 months ago
📄 GOVERNANCE.md	Read through months later	5 months ago
📄 LICENSE.md	Fix typo in licence	2 months ago
📄 <u>README.md</u>	Merge pull request #991 from alan-turing-institute/all-contributors/a...	5 days ago
📄 book_skeleton.md	Update book_skeleton.md	13 months ago
📄 contributors.md	Add myself to contributors.md	11 months ago
📄 tips_and_tricks_survey.md	Update tips_and_tricks_survey.md	14 months ago
📄 ways_of_working.md	Adjust team contact section	5 months ago



GitHub:
[https://github.com/
 alan-turing-institute/
 the-turing-way](https://github.com/alan-turing-institute/the-turing-way)

The Turing Way Community Handbook

Community Handbook

Code of Conduct

Ways to Enter the Project

Style Guide

Maintaining Consistency

Chapter Templates and
Contribution Workflow

Acknowledging Contributors

Monthly Newsletters

Book Dash Events

Community Coworking Calls

Template Collection

**NO ISSUES
NO USERS**



**ERRORS
CAN PROVIDE
VALUABLE
OPPORTUNITIES
TO PARTICIPATE**

Scriberia

3. Create Shared Ownership



We **avoid individual authorship** in favour of establishing shared ownership and agency in this project. The **project belongs to the community** and is always a ‘work in progress’.

📖 alan-turing-institute / the-turing-way

🚫 Issues 323

🔗 Pull requests 58

All Contributors

Recognize All Contributors

Including those that don't push code

Enable Jupyter Book / Enable collaborative annotation in the book #1561

BatoolMM merged 12 commits into `master` from `hypothesis` on 20 Nov 2020

Discussion 8 Commits 12 Checks 8 Files changed 3



BatoolMM commented on 10 Nov 2020 • edited

Collaborator

Reviewers

yochannah

malvikasharan

After a discussion in slack regarding the book-layout, @lauracion and @SamGuay suggested implementing `hypothes.is`. I gave it a try and made changes in `_config.yml`. After that, I tried to build up the Jupyter book locally and it worked. It became easy to highlight any text and to add any notes in the book.



martinagvilas commented on 12 Nov 2020

Collaborator

Thanks @yochannah ! I created a `_static` folder with a file that contains your suggestion, and it seems to work in local deployment. I will make a commit soon to show.

And thanks for noticing about the footer in the sidebar, it seems that we need to change the `_config` file.



BatoolMM commented on 13 Nov 2020

Collaborator Author

Thank you so much @yochannah for the detailed explanation 🙌 . I didn't realise that @martinagvilas fixed it until she mentioned it in shareout/presentation. You are awesome Martina ❤️

👍 2

❤️ 1

🚀 1

Supporting Development



! Important

Please note that these requirements are not exhaustive or definitive, and neither are their classifications rigid. Moreover, no items are inherently more important than the other.

If you identify more consistency issues that need to be addressed, join the conversation [here](#).

Opportunities for Connections



Co-working Calls & Collaboration Cafés

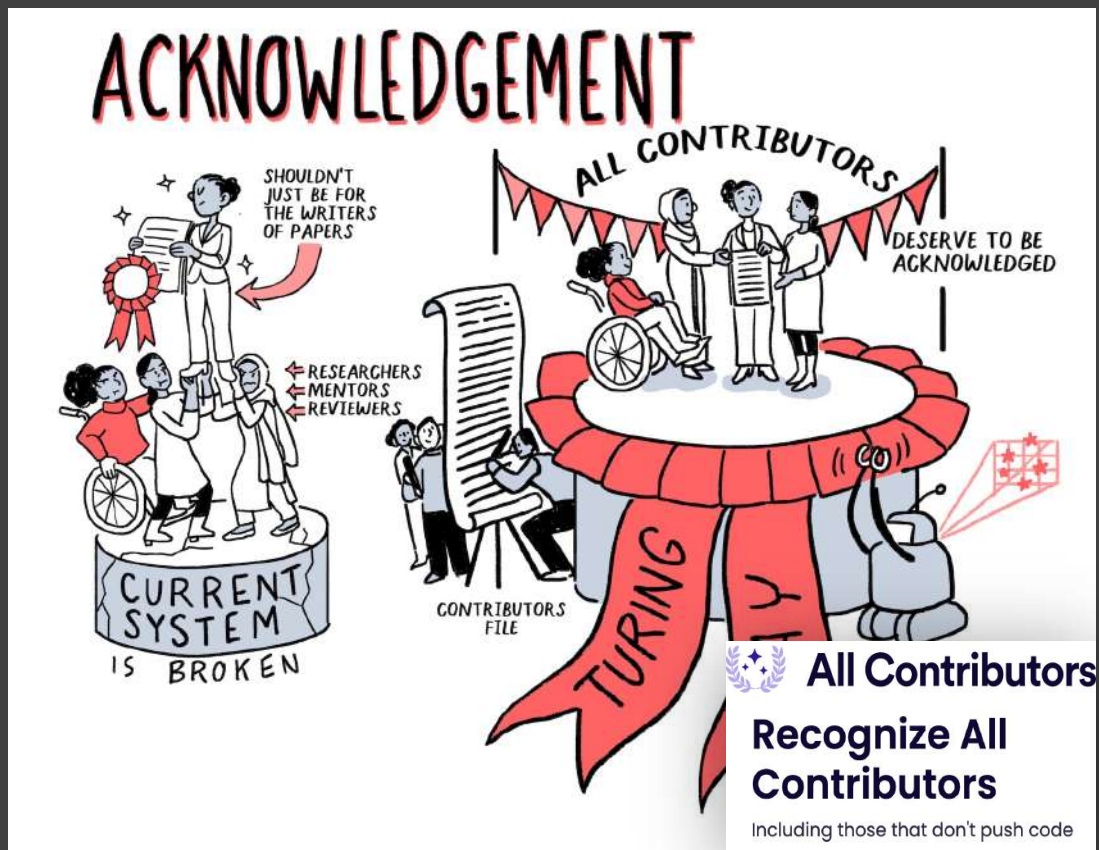


Four Book Dash Events

4. Recognise All Contributions

D A N K E !

Recognise All Contributions



Esther Plomp

- Role: Book Dash February 2020 Attendee, semi regular co-working call crasher
- GitHub id: [EstherPlomp](#)
- ORCID: [0000-0003-3625-1357](#)
- Twitter: [@PhDToothFAIRy](#)
- Short bio:

I'm a Data Steward at Delft University of Technology in the Netherlands, where I support researchers with their data management and open science practices. For my PhD research I analysed human teeth for their isotopic/chemical composition in order to say something about human mobility patterns (fields of forensics, archaeology, osteology).

- Personal highlights:

Thanks to the Turing Way I really learned how to work collaboratively using GitHub. The book dash was a great kick start to actually practise and directly apply these skills, which now allows me to contribute more confidently to other projects as well! I primarily contributed to the Reproducible Research Chapter, to the Research Data Management section. I reviewed existing content and I'm working on adding a section on Data Management Plans and how to handle personal data. I also made a [The Turing Way poster](#) that I presented during a conference. I hope to pay it forward and facilitate others in learning how to work with GitHub through The Turing Way or The Carpentries workshops. I'm very grateful to be part of this great and inclusive community!

Collaborating Projects

Afterword

Glossary

Bibliography

Contributors Record

Collaborating Organisations

When members participate in The Turing Way community with the in-kind support of their funders and organisation, we acknowledge each member individually and list their organisations as "Collaborating organisations". Such organisational supports are applicable when one or multiple members from a project or community collaborate to build resources in The Turing Way.

netherlands

eScience center

jupyter {book}

binder

FAIR cookbook

#CS4RL

Citizen Science 4
Research Libraries



SIMULATION
REPLICATION
CHALLENGE

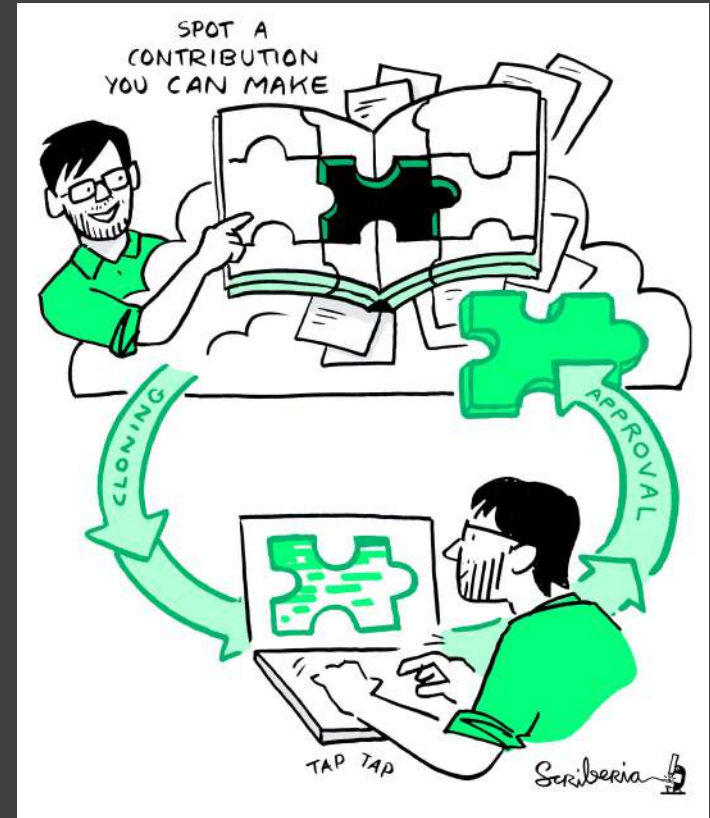


Turing
Data
Stories

Meeting you where you are!

- i. Join the community
- ii. Learn a new skill
- iii. Share your skills
- iv. Collaborate with others
- v. Mentor others' contributions
- vi. Represent this community

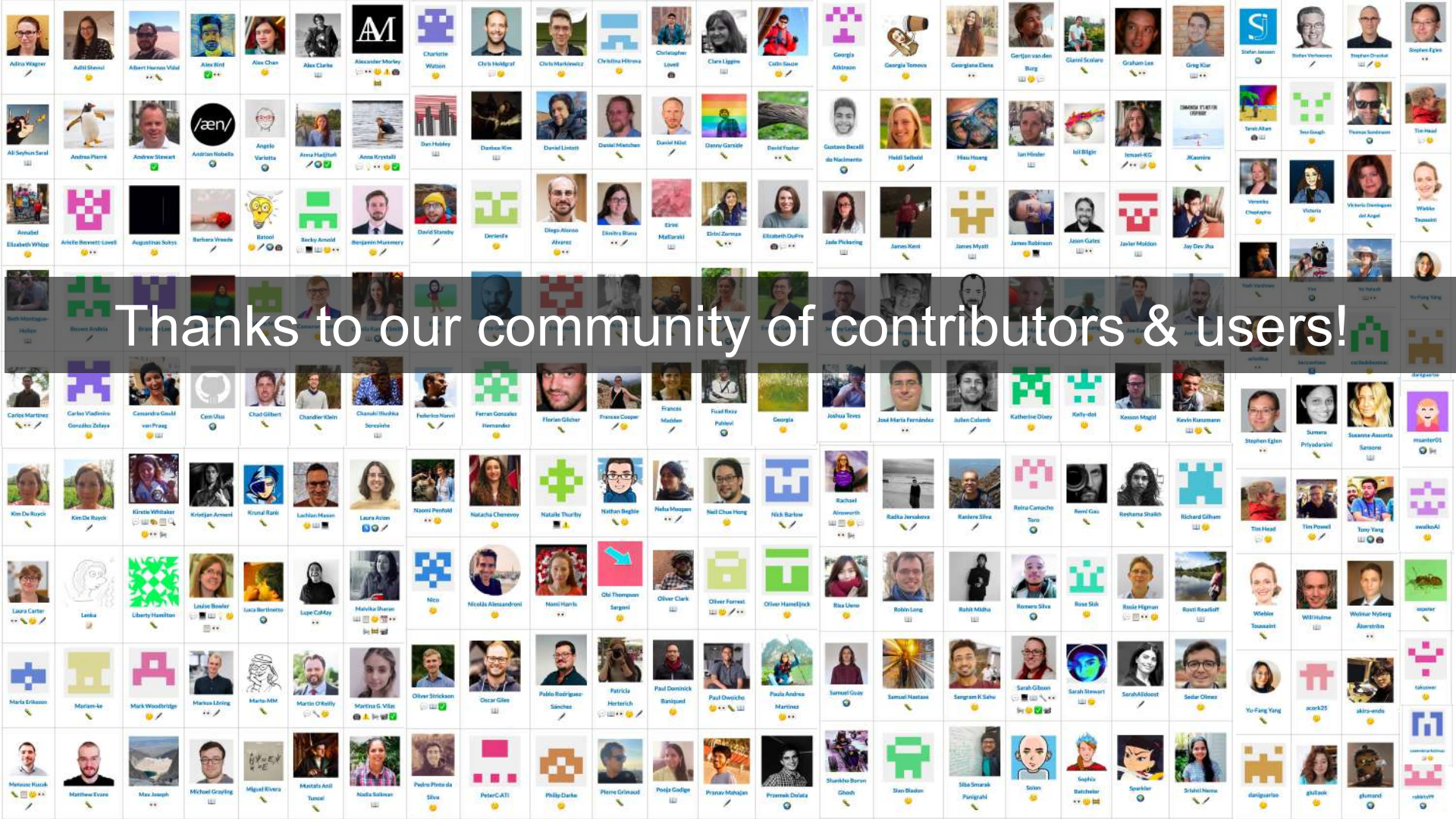
We value your participation!



Communities of Collaboration

1. Design for collaboration
2. Document processes
3. Create shared ownership
4. Recognise all contributions





Thanks to our community of contributors & users!

Join a community event

- Contributor Celebration: 21 May
 - 10:00 & 16:00 UTC
- Collaboration Cafes
 - 1st & 3rd Wednesdays (14:00 UTC)
- Community coworking
 - Mondays (10:00 UTC)
- Onboarding & Catch-up
 - Fridays (17:00 UTC)

<https://hackmd.io/@turingway/demo-intro>

Email Malvika: msharan@turing.ac.uk



The Alan Turing Institute

Acknowledgements:

- Kirstie Whitaker, Whitaker Team Members
- *The Turing Way* community, friends & collaborators

- **Book:** the-turing-way.netlify.com
- **Twitter:** twitter.com/turingway
- **Newsletter:** tinyletter.com/TuringWay
- **Chat:** gitter.im/alan-turing-institute/the-turing-way
- **GitHub:** github.com/alan-turing-institute/the-turing-way
- **Original artwork by Scriberia:** <https://doi.org/10.5281/zenodo.3332808>





Open Life Science

A mentoring & training program for **Open Science Ambassadors** in **Life Science**

Project leads:
Bérénice Batut
Emmy Tsang
Malvika Sharan
Yo Yehudi

Sharing

Connecting

Empowering

Join the program



1:1 mentoring



Training calls on Open Science

Talks from experts
Break out discussions



Training for mentors

OLS-3 Graduation in May, OLS-4 Starts in Sept
Apply individually or in team to join the cohort

About:
16-week program
volunteer-driven
application-based

Email:
team@
Openlifesci.org

Cohort update:
groups.google.com
/g/ols-news

 openlifesci

Visit our website: openlifesci.org

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