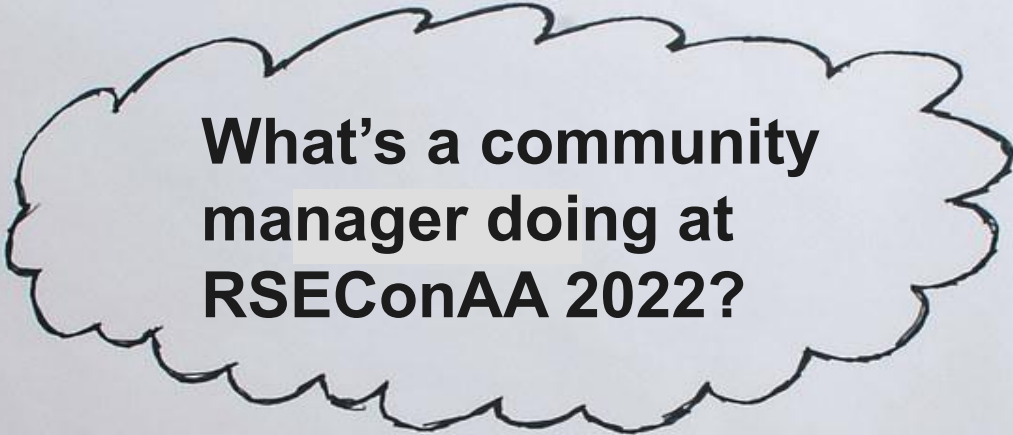


Changing culture through open practices: mapping a journey in open scholarship

RSECon AA 2022
14 September 2022
Anne Lee Steele
she/her



**What's a community
manager doing at
RSEConAA 2022?**

Mapping my open journey

2011 - 2017
Studied anthropology &
community-led development

2017
Followed open source
investigations (#OSINT)

2019
Joined “Frictionless Fellows” program
at Open Knowledge Foundation

2018
Started using open source
tools for data journalism

2021
Joined Wikimedia Deutschland
“Unlock” Accelerator

2020
Conducted ethnographic study of
OpenStreetMap community

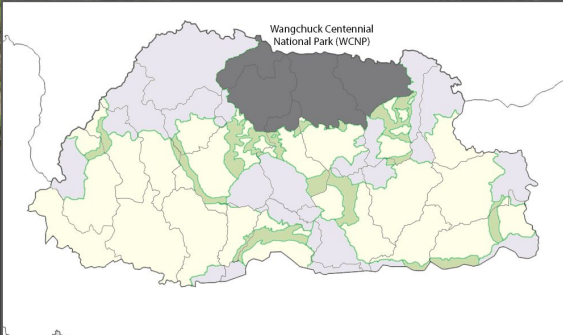
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2021
Joined early career fellowship at
Internet Society

2022
Joined *The Turing Way* as
Community Manager



Beginnings: Anthropology & Community-led development



- Anthropologists study “culture” within communities (defined broadly!)
- Connecting individual experiences to wider processes (small → big)
 - Rituals, Kinship, Belonging
 - Social norms within communities → Societies at large
 - Example: social/economic “capital”
- Focused on how communities govern natural resources Bhutan & Nepal

Energy Exploration and Development

The South China Sea holds an estimated 190 trillion cubic feet of natural gas and 11 billion barrels of oil in proved and probable reserves, with much more potentially undiscovered.

OIL AND GAS BLOCKS

Sort oil and gas licensing blocks by country.

- ☒ China
- ☒ Vietnam
- ☒ Malaysia
- ☒ Philippines
- ☒ Brunei
- ☒ Indonesia
- ☒ Joint Development Areas

SEARCH

CLAIM LINES

See where blocks lie in relation to regional continental shelf claims and China's nine-dash line.



- ☐ Show claim lines
- ☒ Hide claim lines



CSIS-iLab
The Dracopoulos Ideas Lab is CSIS's internal digital agency for web development, video, and design.
Washington, DC <http://csis.org/program/ideas-lab> @CSIS iLabmedia@csis.org Verified

[Overview](#) [Repositories](#) 56 [Projects](#) [Packages](#) [People](#) 4

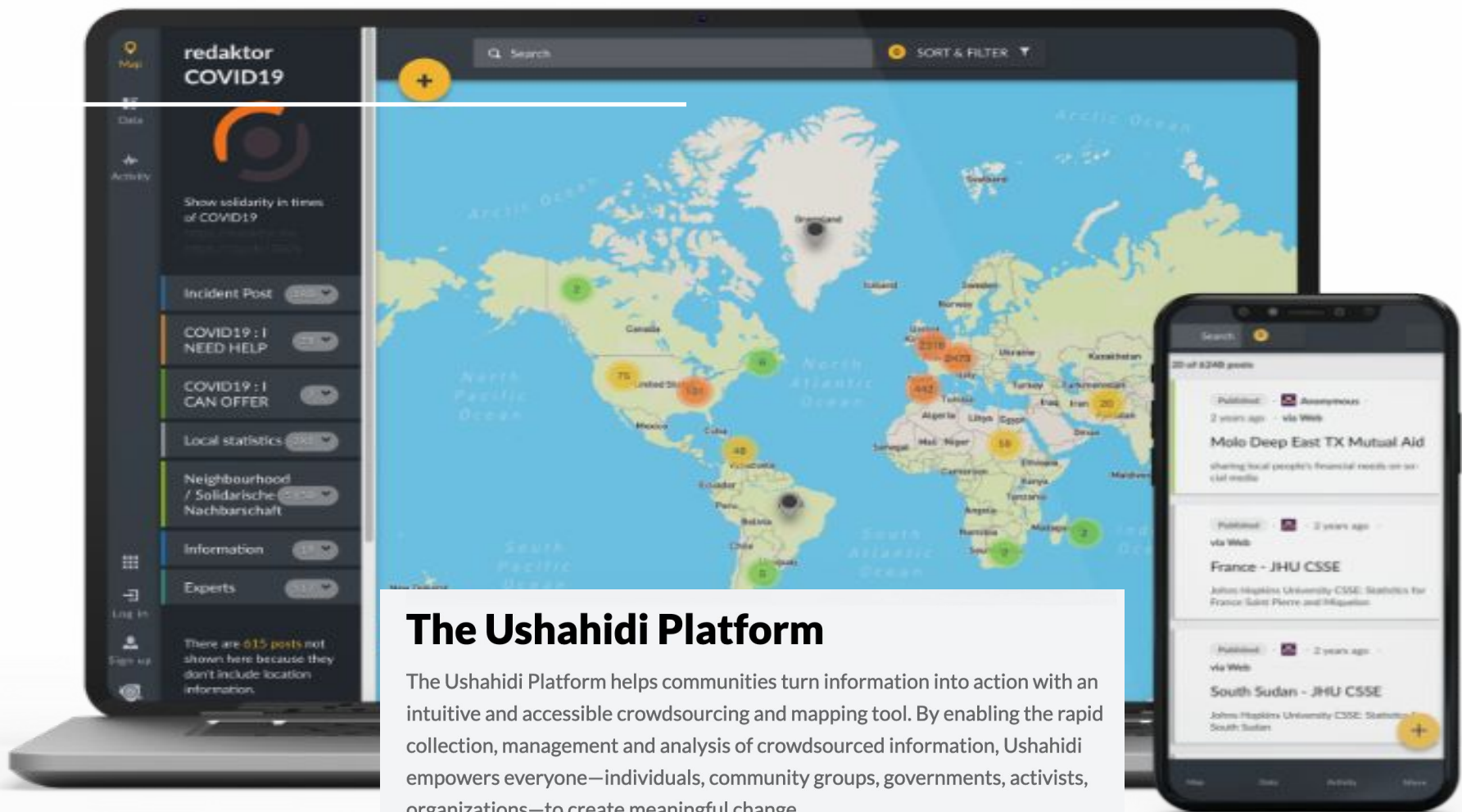
Pinned

- **highcharts-templates** Public
Reusable templates for the HighCharts library
JavaScript ☆ 3
- **mapbox-custom** Public
Custom map applications made with CARTO and Mapbox
<https://csis-iLab.github.io/mapbox-custom/>
JavaScript 🔗 4

Repositories

Find a repository... Type Language Sort

- india-states** Public
India states microsite project.
HTML ☆ 3 🔗 2 🔗 1 🔗 2 Updated 5 hours ago
- js-viz** Public
For javascript-based viz
HTML ☆ 3 🔗 1 🔗 0 🔗 12 Updated 6 hours ago
- anti-viz** Public
Home to data viz projects for the AMTI website.
JavaScript ☆ 0 🔗 2 🔗 0 🔗 4 Updated 7 hours ago
- reconasia_wp** Public
The WordPress site for Reconnecting Asia.
SCSS ☆ 0 🔗 0 🔗 1 🔗 4 Updated 6 days ago
- hidden-reach-viz** Public
HTML ☆ 0 🔗 0 🔗 0 🔗 0 Updated 12 days ago



The Ushahidi Platform

The Ushahidi Platform helps communities turn information into action with an intuitive and accessible crowdsourcing and mapping tool. By enabling the rapid collection, management and analysis of crowdsourced information, Ushahidi empowers everyone—individuals, community groups, governments, activists, organizations—to create meaningful change.

bellingcat

Electric substation



Cement factory



Using Citizen Science to Assess
Environmental Damage in the Syrian
Conflict

Finding an open news ecosystem... a community of communities



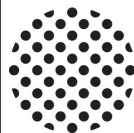
GEOLOCATION

News Nerdery

An international meta organization to foster news nerd collaboration and knowledge sharing

Resources

Chat Archive



OpenNews

We help people strengthen relationships across organizations and build a more equitable future for journalism. Through interactive events and programs, we help peers share knowledge and care for a community grappling with complex problems. [Get involved.](#)

What I learned from #OSINT & open news

1. Hold the powerful to account, using the tools you know how to use.
2. Collective power comes from collaboration.
3. Community is everywhere, even in the most unexpected of places.

"Never believe that a few caring people can't change the world. For indeed that's all who ever have." - Margaret Mead



Returning to research

MAP FOR PEOPLE IN NEED

Join a global community that is mapping the places most vulnerable to disaster and poverty in order to support humanitarian aid and sustainable development across the world.

[Start mapping](#)

[Join the community](#)

133.8M

Buildings Mapped

2.8M

Mapped Roads (Km)

173.1M

Total Map Edits

406K

Total Mappers

61

Mappers Online



Search

Where is this?

Go




Mapping the mappers on OpenStreetMap

1000 km

1000 mi

Frictionless Data Fellowship → Open Knowledge Foundation



FRictionless
DATA

[Home](#) [Syllabus](#) [Resources](#) [Lessons](#) [Blog](#) [About](#)

Welcome to the Frictionless Data for
Reproducible Research Fellows Programme!



What is the Reproducible Research Fellows Programme?

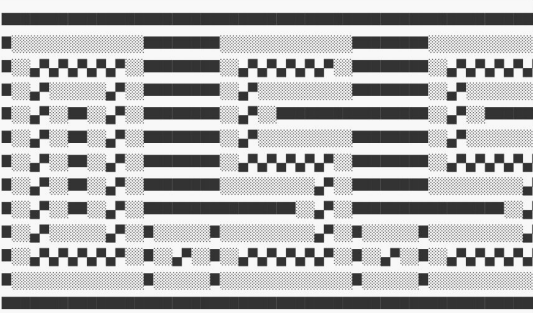
With the Frictionless Data Reproducible Research Fellows Programme, supported by the Sloan Foundation and Open Knowledge Foundation, we are recruiting and training early career researchers to become champions of the Frictionless Data tools and approaches in their field.

- Interoperability
- Introduced to open science
- Reproducibility
- Open access
- Data Best practices

<https://fellows.frictionlessdata.io/blog/anne-final-blog/>

Wikimedia Deutschland + Open Source Social Science

[Program](#) [About us](#) [FAQ](#) [Blog](#)




Open Source Tools for Social Science Researchers

Tools for social scientists of all kinds, conducting research with people online.

UNLOCK

of Free



What is the UNLOCK Accelerator?

We support open source software projects and non-technical projects under free licenses. The UNLOCK Accelerator is committed to promoting solutions that make the world's knowledge more diverse, more accessible and inclusive for everyone.

What I learned from open data & civic tech

1. Open is context-dependent: never forget this!
2. Everything has a culture (or cultures!)
3. What you make is as important as how you make it: the theory affects the practice.

"Never believe that a few caring people can't change the world. For indeed that's all who ever have." - Margaret Mead



The Turing Way: Changing the culture of data science





The Turing Way

An **Open Source** project that involves and supports its **diverse community** to make data science is **reproducible, ethical, collaborative and inclusive** for everyone.

Reproducibility Crisis

- Many scientific studies are difficult or impossible to reproduce
- Often mentioned in regards to psychology and medicine but is pervasive across many scientific fields
- Range of causes: questionable research practices, 'publish or perish' culture, statistical issues
- Link with open science movement- push for openness and transparency

GREGORY HANDEL BUSINESS SEP 16, 2019 7:00 AM

Artificial Intelligence Confronts a 'Reproducibility' Crisis

Machine-learning systems are black boxes even to the researchers that build them. That makes it hard for others to assess the results.





Photo credit: Serg from the [Swarmrobot.org](#) project via Wikipedia

Data Science's Reproducibility Crisis

What is Reproducibility in Data Science and Why Should We Care?

Hot off the heels of Joelle Pineau's brilliant talk on [Reproducibility, Reusability, and Robustness in Deep Reinforcement Learning](#) at this year's [International Conference on Learning Representations \(ICLR\)](#), it seems like everyone in the data science world (or at least in the data science research world) is talking about replicability and reproducibility.


This problem isn't unique to data science. In fact, according to 2016 survey by *Nature* magazine, [most scientific fields are facing a reproducibility crisis](#). Ironically, according to survey respondents, one of the most important factors

 **Molecular Brain**

Home About Articles Submission Guidelines

Editorial | [Open Access](#) | [Published: 21 February 20](#)

No raw data, no science: another possible source of the reproducibility crisis

[Tsuyoshi Miyakawa](#) 

[Molecular Brain](#) 13, Article number: 24 (2020) | [Cite this article](#)

50k Accesses | 63 Citations | 2240 Altmetric | [Metrics](#)

Abstract

A reproducibility crisis is a situation where many scientific studies cannot be reproduced.

Turing Way beginnings: Reproducibility



Kirstie Whitaker
Lead of Tools,
Practices & Systems
Programme



Malvika Sharan
Senior Researcher,
Tools, Practices &
Systems

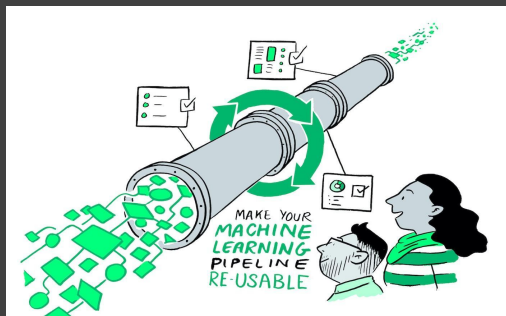
The Turing Way is a lightly opinionated guide to reproducible data science.

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.



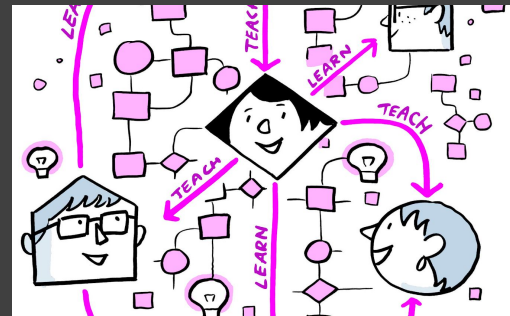
The Turing Way Guides



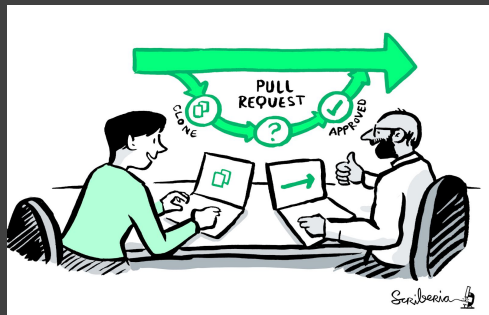
Reproducibility



Project Design



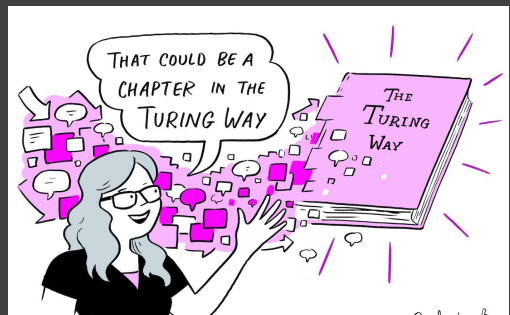
Communication



Collaboration



Ethical Research



Community Handbook

Community of Communities



Mentors



Maintainers



Advocates



Book Dash Planning
Committee



Translators

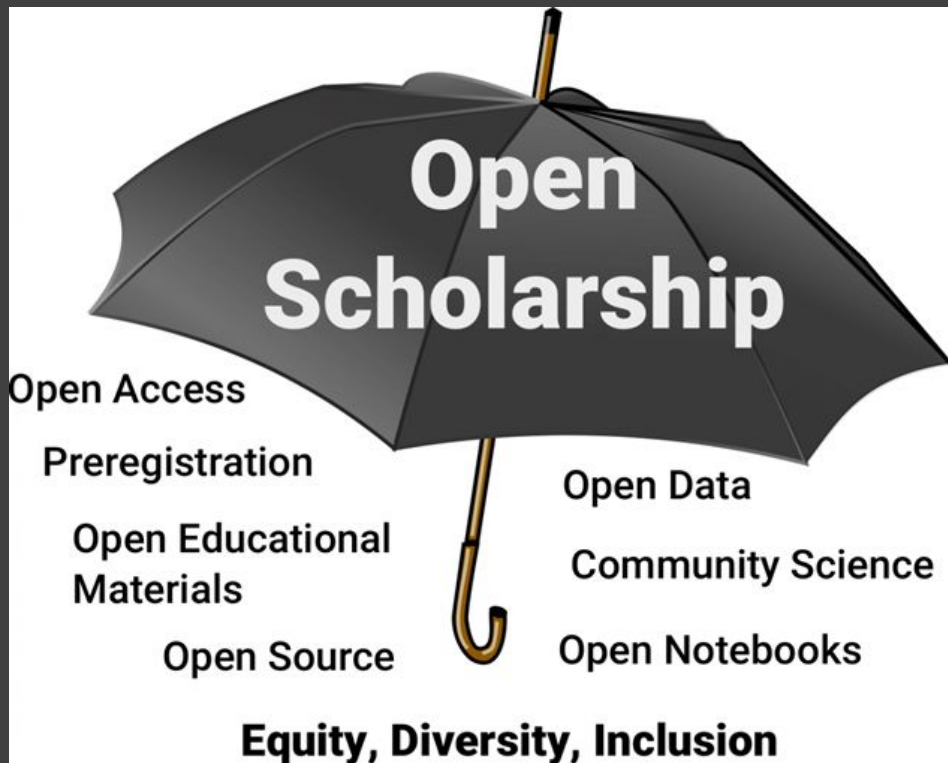


Writers & Editors

“Open” for improved equity

- There are many different definitions of “open”.
- All these practices should be with a goal of furthering equity, diversity and inclusion.

Whitaker & Guest, 2020; derived from Robinson & Champieux, 2018, itself adapted from Berlin Open Science Meetup. <https://osaos.codeforscience.org/what-is-open>

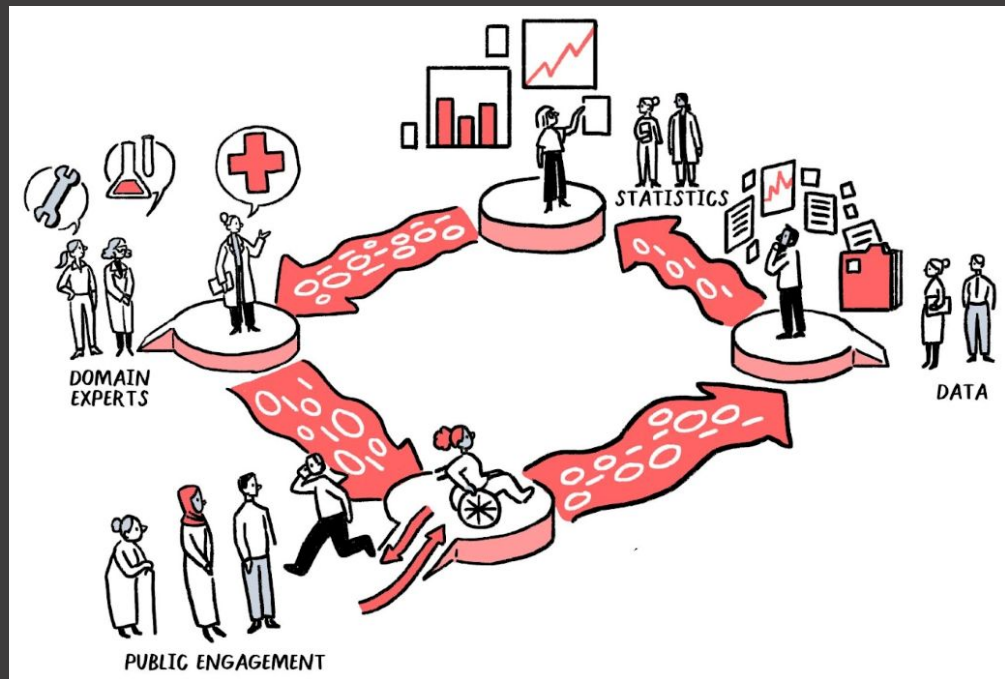


Join our community on twitter: [@turingway](https://twitter.com/turingway), GitHub: <https://github.com/alan-turing-institute/the-turing-way>.

Book: <https://the-turing-way.netlify.app>, Images by The Turing Way community and Scriberia under CC-BY 4.0 License

Investing in human infrastructure for culture change

Coordinating the people of collaborative data science projects is - often - one of the biggest blockers in addressing large scale, ambitious research questions.

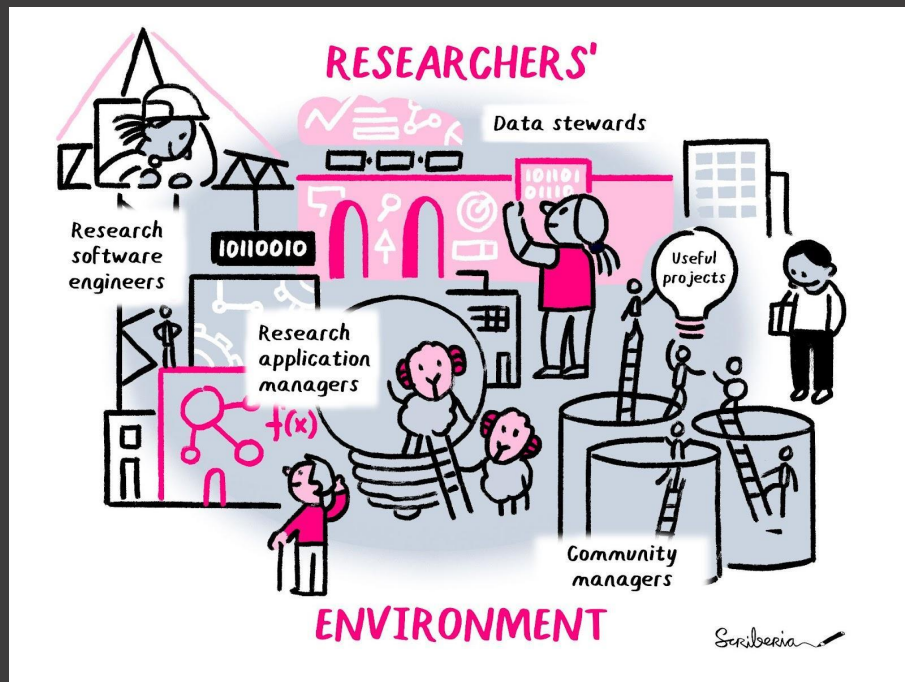


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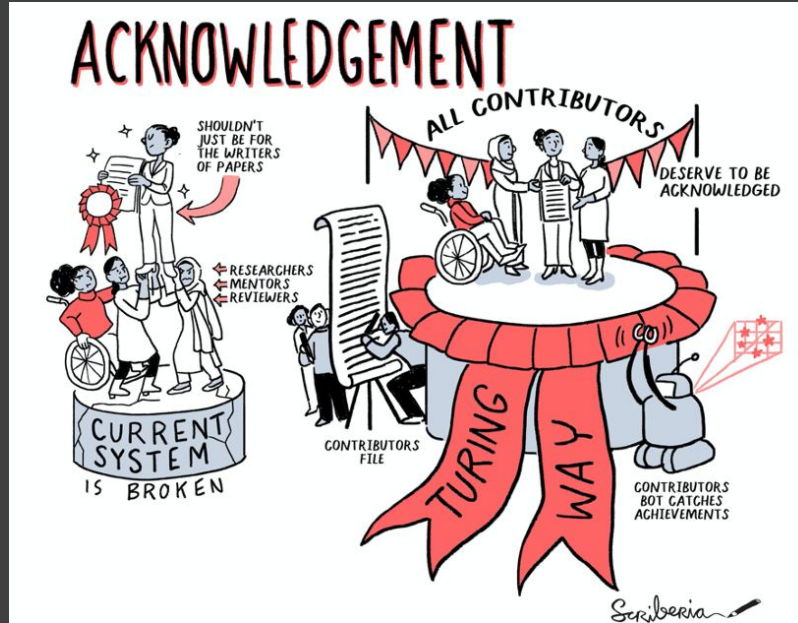
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Providing career pathways for culture change

- Data Stewards
- Research Software Engineers
- Community Managers
- Research Application Managers (RAMs)



A community-oriented collaborative book



Batool Almarzouq

- Role: Book Dash November 2020 Attendee
- ORCID: [0000-0002-3905-2751](https://orcid.org/0000-0002-3905-2751)
- Short bio:

I'm the founder of R-Ladies in Saudi Arabia (Dammam). I initially majored in pharmacology but quickly developed an interest in biochemistry, structural biology, and bioinformatics. I enjoy applying deep learning to answer biological questions.

- Personal highlights:

I am currently co-developing a chapter on "CI services". I have helped upgrade the Jupyter Book Infrastructure and add hypothes.is to enable collaborative annotation of *The Turing Way* chapters. I have also translated the README.me chapter in Arabic. Personal quote: "I find it hard to express my personal thoughts and feelings in words. This was such an amazing experience. It helped me to develop my technical skills. Thank you so much to everyone I met in this Book Dash event :heart:."

Acknowledging all contributions

The Turing Way

This README.md file is also available in Dutch ([README-Dutch](#)), French ([README-French.md](#)), German ([README-German.md](#)), Indonesian ([README-Indonesian](#)), Italian ([README-Italian](#)), Korean ([README-Korean](#)), Portuguese ([README-Portuguese](#)), and Spanish ([README-Spanish](#)) (listed alphabetically).

Total Contributors:

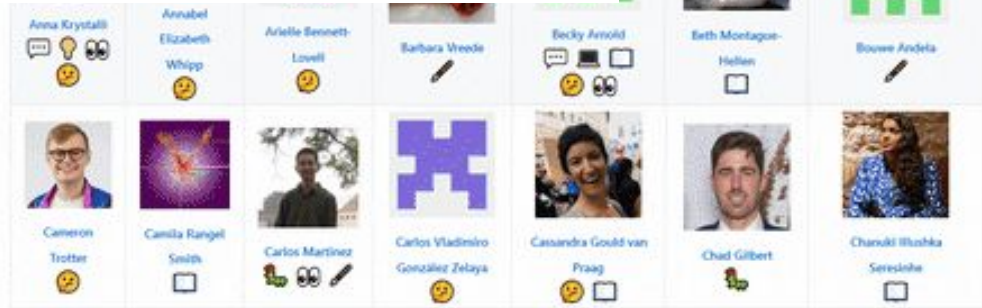
all contributors 324



All Contributors

Recognize All Contributors

Including those that don't push code



Notable impacts beyond the project

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

- Featured in Goldacre Review (2022)
- Highly commended project in The Hidden REF Competition (2022)
- An Emerging Technology Charter by Mayor of London (policy)
- Reproducibility of scientific results in the EU 2020 (report)
- Innovation Scholars: UKRI grant 2020 (funding)
- CodeRefinery and Library Carpentries (training materials)

What I have been learning from *The Turing Way* & open science

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- Margaret Mead

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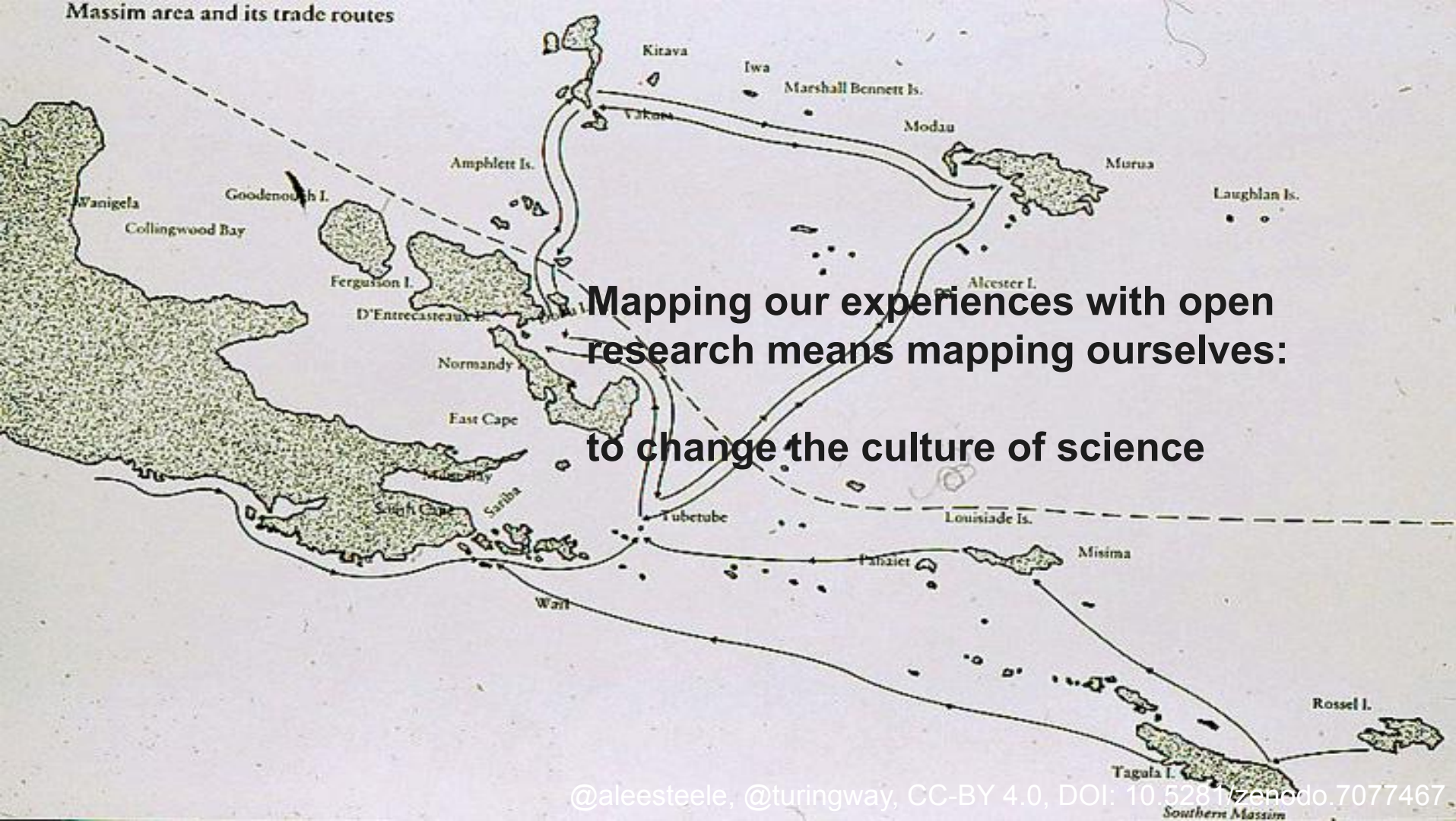
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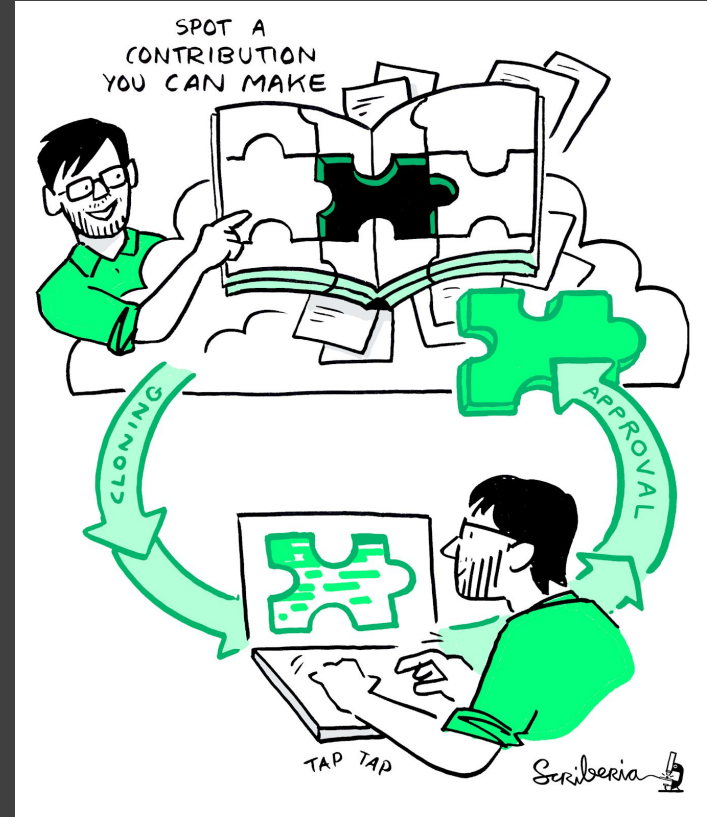
Photo by [Kees Streefkerk](#) on [Unsplash](#)
Slide template by [@drsarahlgibson](#)



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

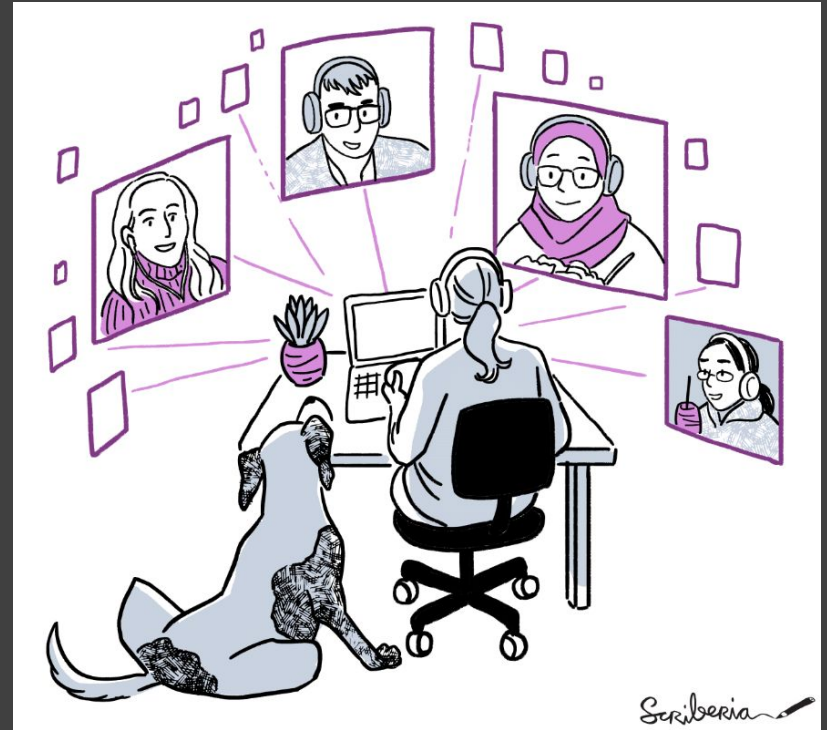
We value your participation!

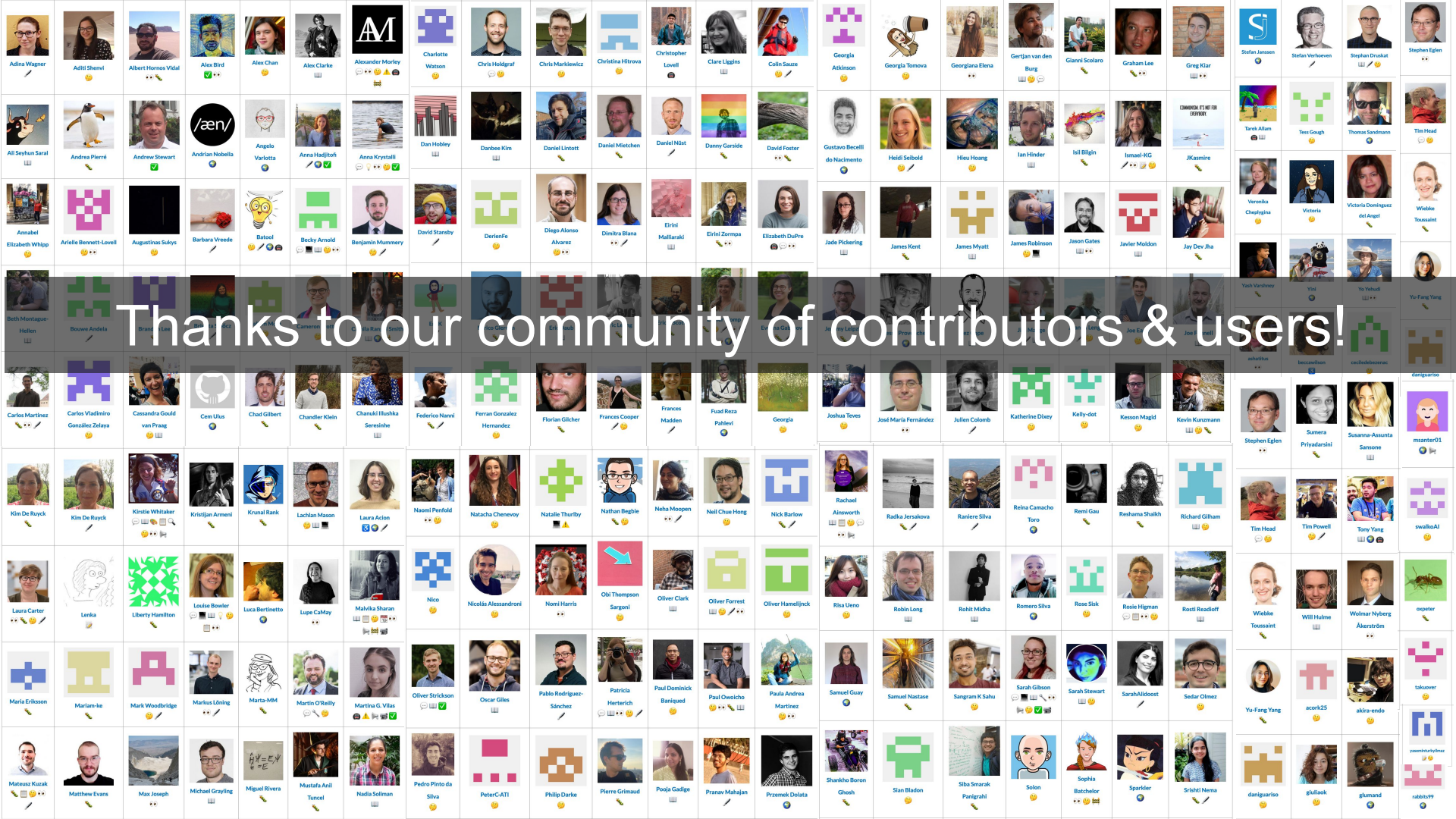


Join a community event

- *Collaboration Cafes*
 - 1st & 3rd Wednesdays (14:00 UTC)
- *Coworking Calls*
 - Mondays (10:00 UTC)
- *Onboarding Calls*
 - Fridays (17:00 UTC)
- *More ways to connect*

bit.ly/turingway





Thanks to our community of contributors & users!

The Alan Turing Institute

Acknowledgements:

- The Turing Way team, Kirstie Whitaker & Malvika Sharan
- *The Turing Way* community, contributors & collaborators
- Book: the-turing-way.netlify.com
- Twitter: twitter.com/turingway
- Newsletter: tinyletter.com/TuringWay
- Slack: tinyurl.com/jointuringwayslack
- GitHub: github.com/alan-turing-institute/the-turing-way
- Original artwork by Scriberia: <https://doi.org/10.5281/zenodo.3332807>

