



Internationalisation and Localisation of Open Science through *The Turing Way*

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Introductions



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Community Manager

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Computational Biologists

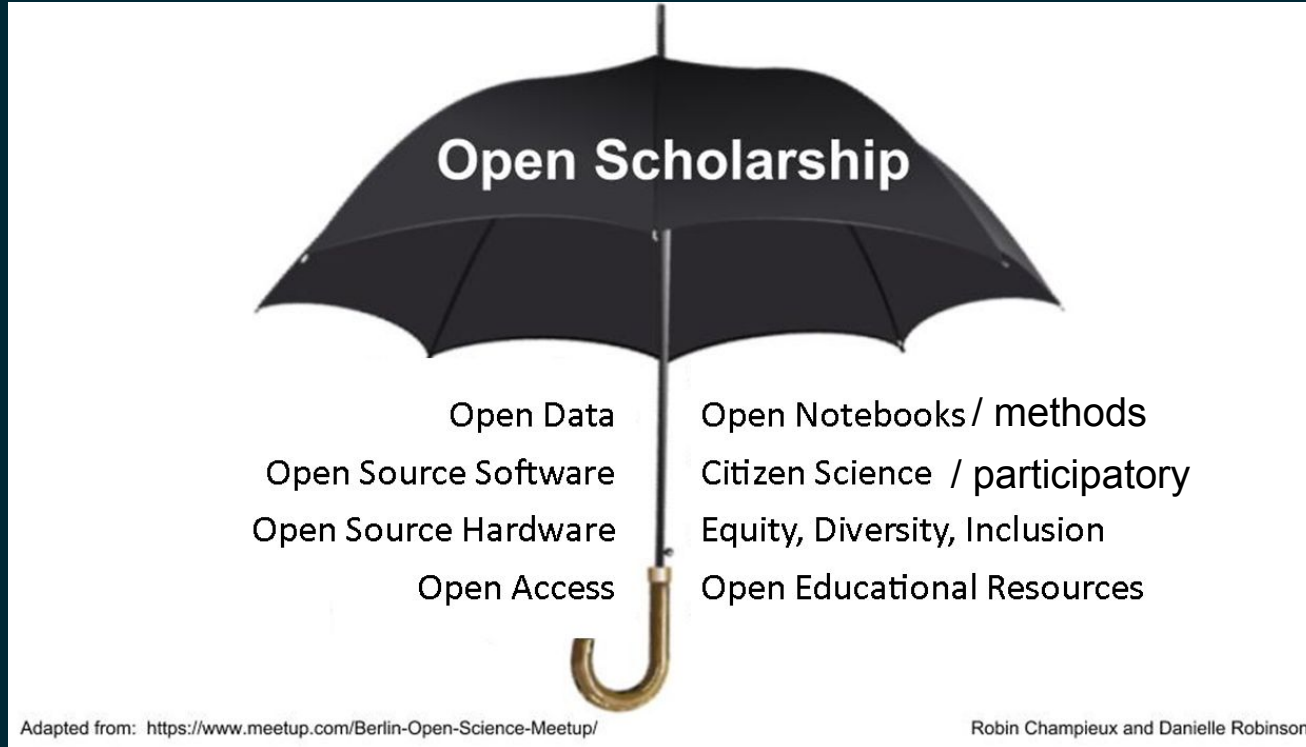
*KAIMRC, Open Science Community Saudi Arabia
(OSCSA)*



1. A brief history of *Open Science*
2. Global knowledge production & open science
3. Translation, Localisation, and Internationalisation of Open Science and *The Turing Way*

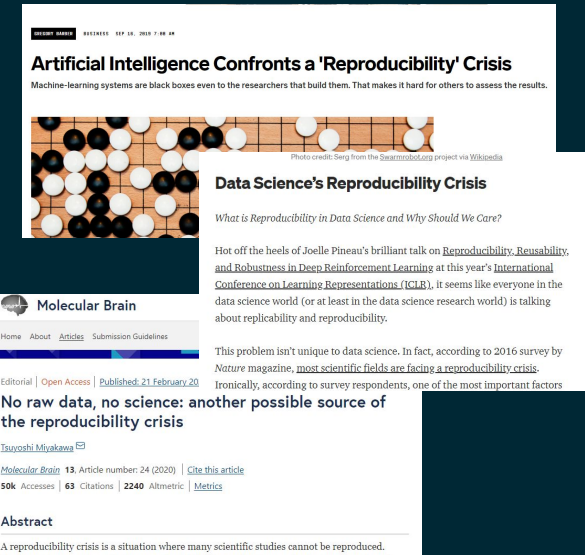


Open Science: a brief history



Open Science: a brief history

- Many scientific studies are difficult or impossible to reproduce
- Often mentioned in regards to psychology and medicine but 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



Open Science: a brief history

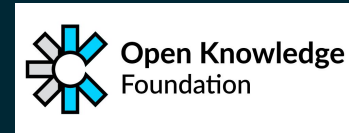


“Information is power. But like all power, there are those who want to keep it for themselves. The world’s entire scientific and cultural heritage, published over centuries in books and journals, is increasingly being digitized and locked up by a handful of private corporations.”

– Aaron Swartz, Guerilla Open Access Manifesto, 2008

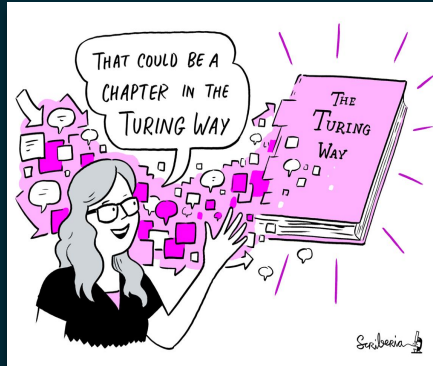
Open Science: a brief history

Open Science has roots in developing tools and ways of working that aim to **shift power in the production and publication of knowledge worldwide.**



The Turing Way

An **open** guide for data science & open research.



Open Access
Book



Open Source
Community

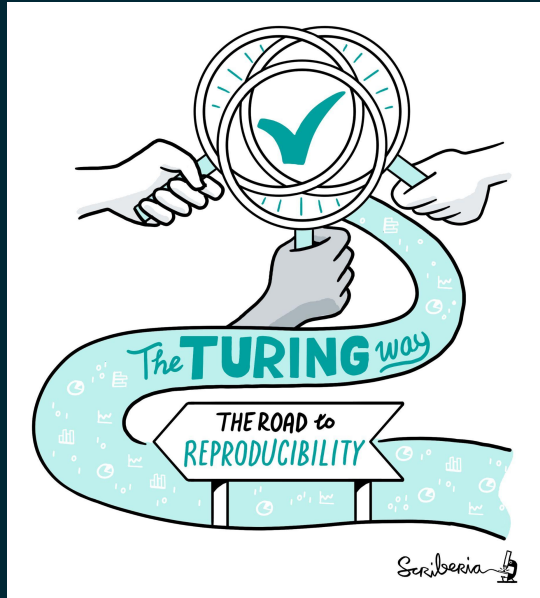


Open Tools
Open Data
Open Hardware
Open Software



Open culture

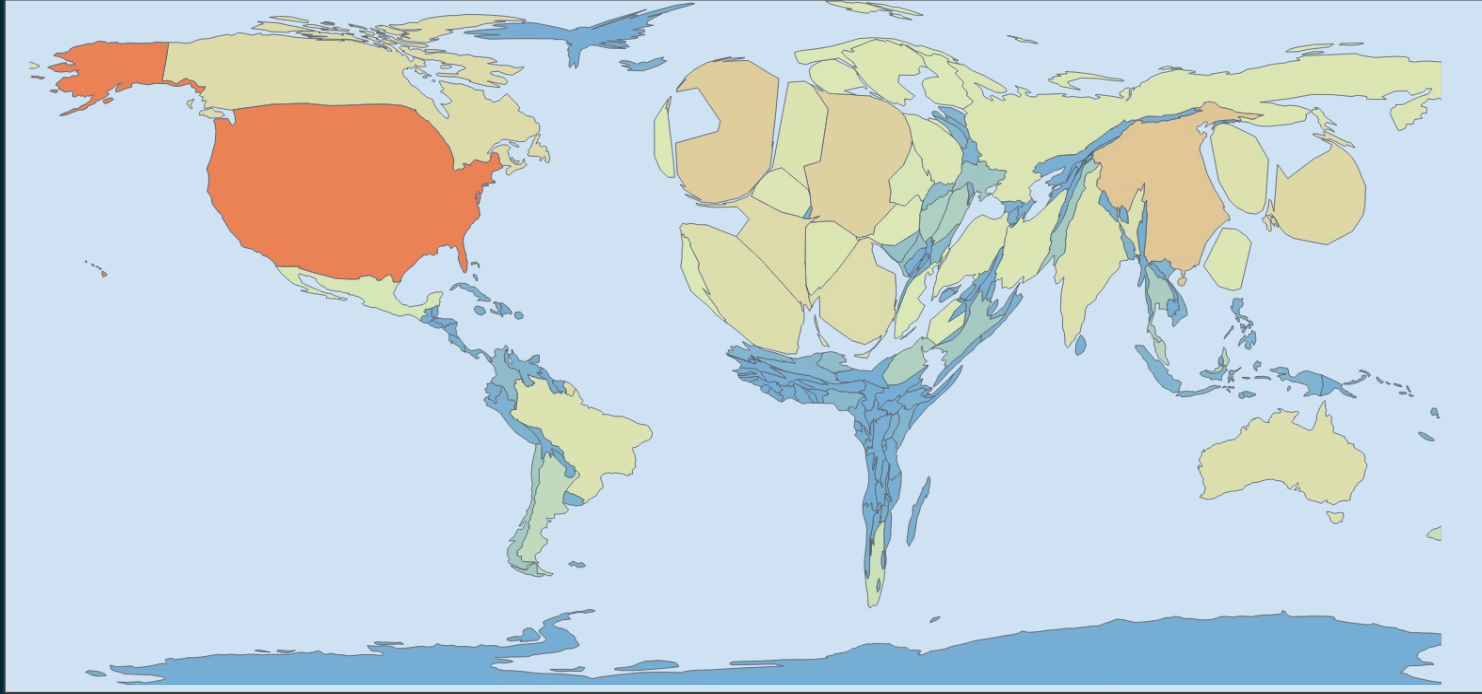
The *Turing Way*: empowering data scientists



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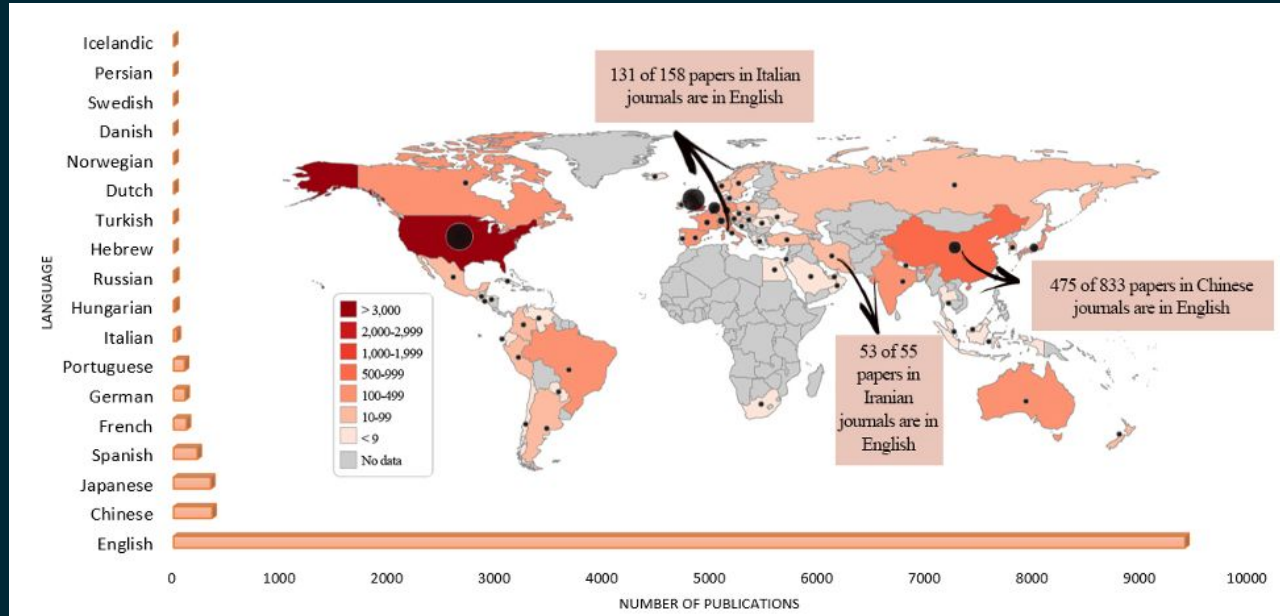


But what does this power look like?



World scaled by number of documents in Web of Science by authors living there, 2011 (source: Juan Pablo Alperin).

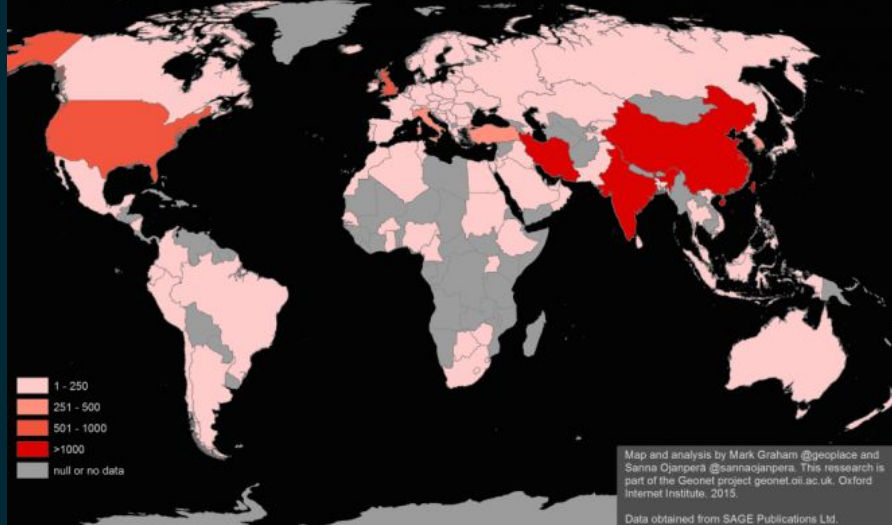
Unequal contribution and participation in Knowledge Production: language



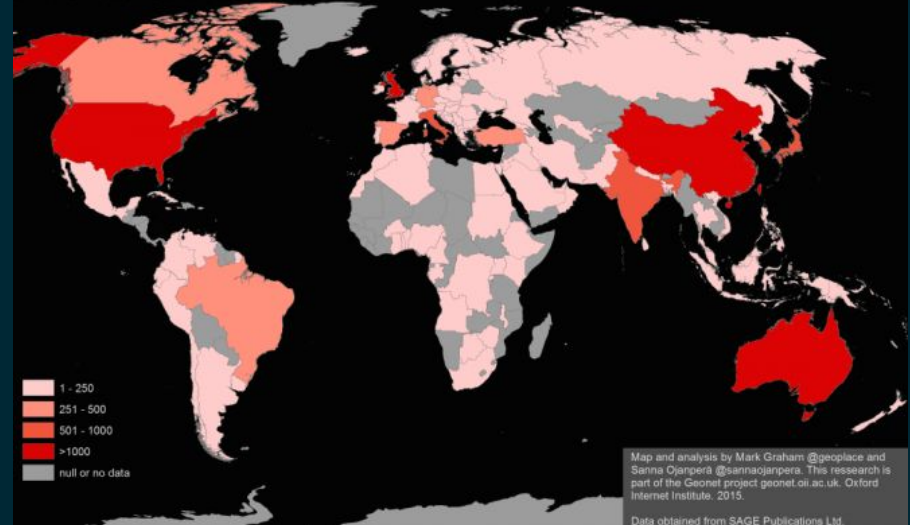
World scaled by number of documents in Web of Science by authors living there, 2011 (source: Juan Pablo Alperin).

Unequal contribution and participation in Knowledge Production: country of origin

Submissions by Country of Submitting Author to Engineering and Computing Journals in 2014

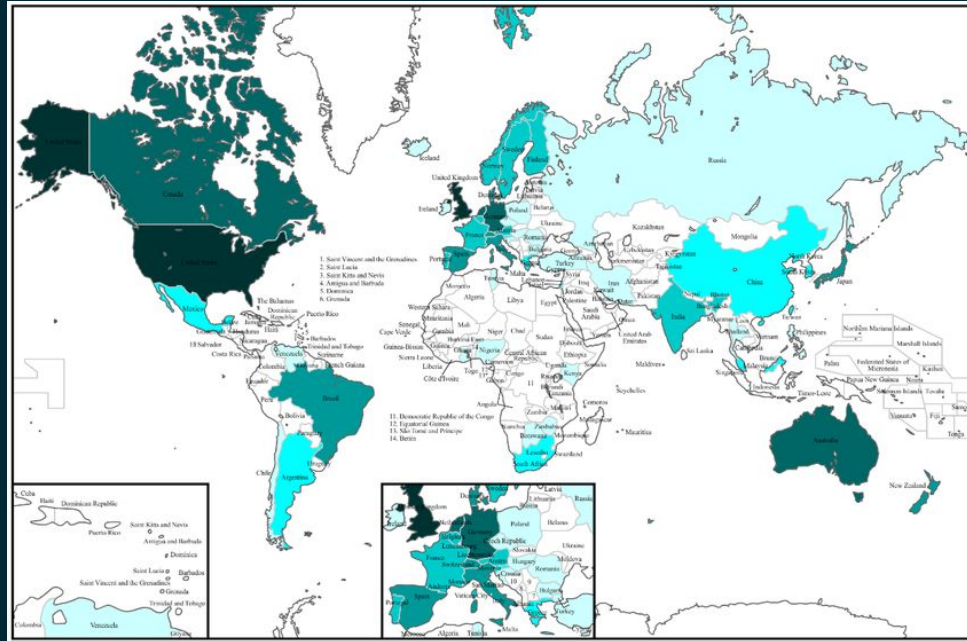


Submissions by Country of Submitting Author to Clinical Medicine and Critical Care Journals in 2014



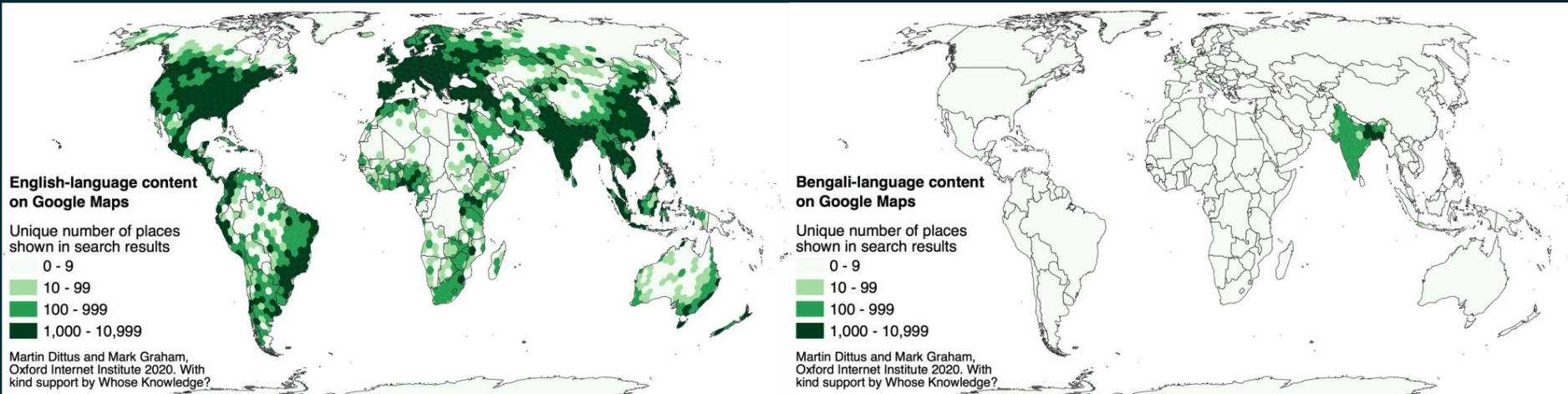
World scaled by number of documents in Web of Science by authors living there, 2011 (source: Juan Pablo Alperin).

Unequal contribution and participation in Knowledge Production: publication output



World map of scientific communication, 2017 (Márquez & Porras map)

Global language landscape extends to the Internet itself, and the global access to information



English-language content and Bengali-language content on Google Maps, from Internet Languages Project (Dittus & Graham)

Knowledge production: the role of language & geography

Information may be open (as in online), but it may not be accessible for a non-English speaking audience, or may exclude entire geographies



The Turing Way project illustration by Scriberia. Used under a CC-BY 4.0 licence. DOI: 10.5281/zenodo.3332807

Global knowledge production: openness as the first step



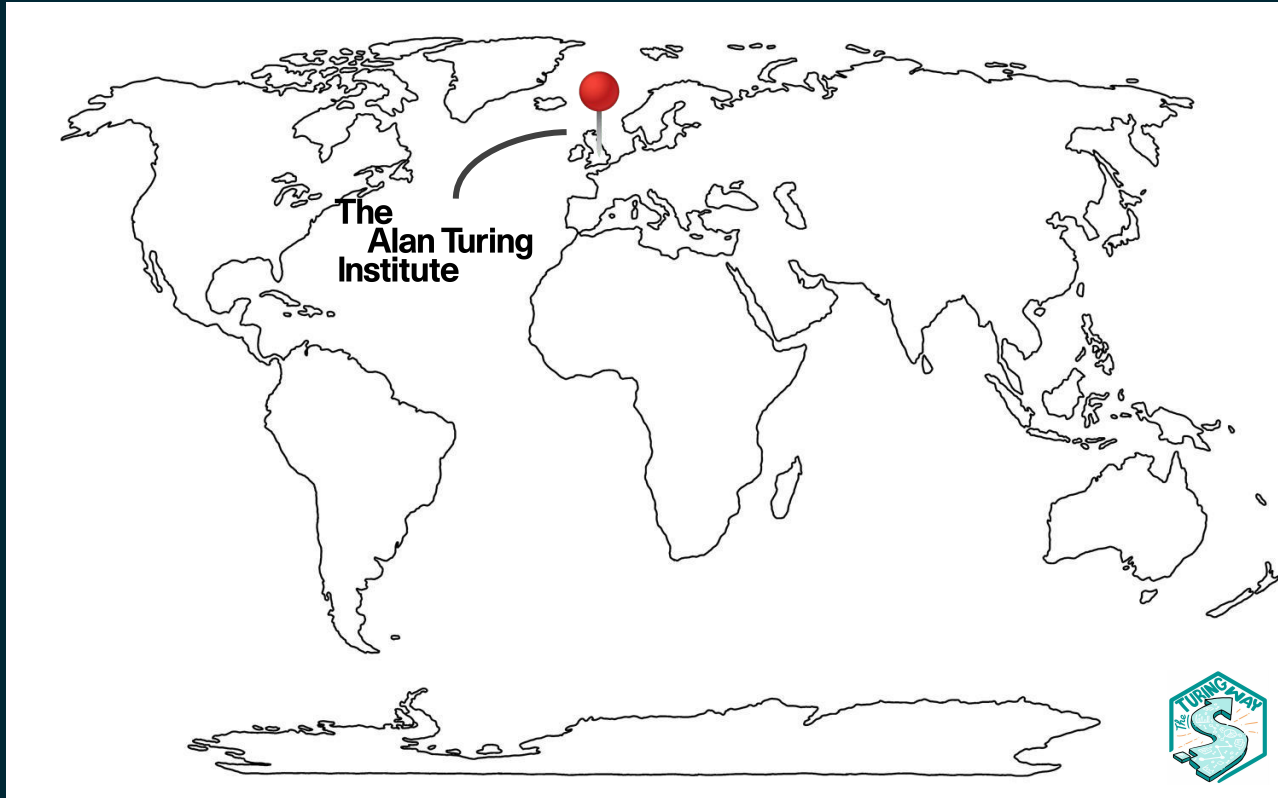
Overview of the current Open Science policies and Infrastructure around the Globe. Image adopted from Malaysian Open Science Platform by Open Science community Saudi Arabia (OSCSA), licensed under CC BY 4

Global participation in open source software



World map of open source contributions, 2021 (Meyers et al)

The Turing Way: open, but for whom?



The Turing Way(s): open for whom?



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Language facilitates accessibility of open science concepts

- Making **science open** requires diverse, multilingual and locally relevant research accessible for a wide audience.
- Open Science **has much to gain**, and much to offer, in engaging more fully with **geolinguistic diverse** audience.



Internationalising *The Turing Way*



- Language of “open science” materials is primarily in **English**
- What do best practices look like in **different cultural contexts**?
- Can *The Turing Way* be a **global resource**?

What internationalisation mean?

Internationalisation allows open-source projects to support and satisfy the needs of multiple locales.

Internationalisation facilitates **localisation**.



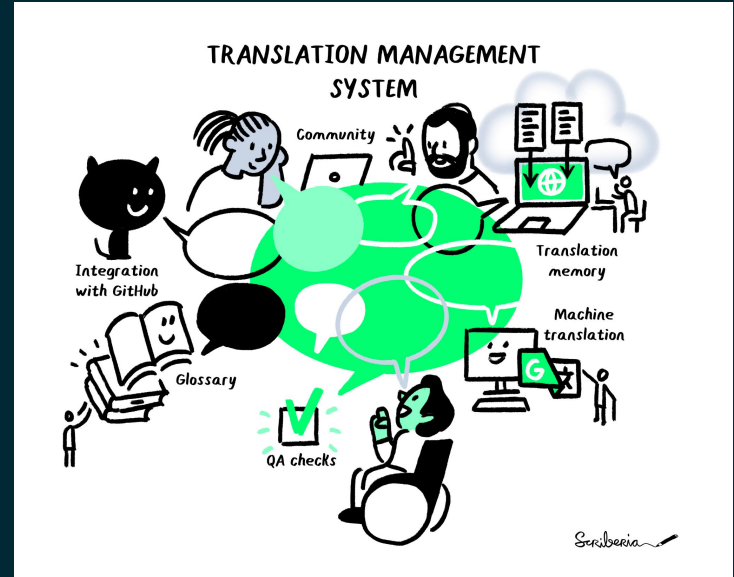
Join our community on twitter: [@turingway](https://twitter.com/turingway), GitHub: <https://github.com/alan-turing-institute/the-turing-way>.

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

Translation ≠ Localisation

Localisation is the adaptation of it to meet the language, cultural of a specific target locale.

A **Translation Management System (TMS)** manages the localisation process from the beginning of a translation process until the finished product.



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Multilingualism in Open Science



“open science is defined as an inclusive construct that combines various movements and practices aiming to make **multilingual** scientific knowledge openly available ...” UNESCO definition of Open Science

“Development and **localisation** of training materials, i.e. making sure they are suitable for use in a range of countries, regions or **languages**, is a priority under the Recommendation...” UNESCO toolkit for Building capacity for Open Science

Multilingualism for Open Science



Confederation of
Open Access Repositories

“**Multilingualism** enables locally relevant research to continue, helps create impact by disseminating research results in researchers’ own languages and promotes both the **full diversity** of scientific work and also **interaction with society** ...”

- Helsinki Initiative on Multilingualism in Scholarly Communication



The Turing Way Approach

- Localisation and Translation are **very complex** tasks
- **Capitalizing** on recent **advances in translation technologies** to develop a multilingual dissemination of OS through the Turing Way.



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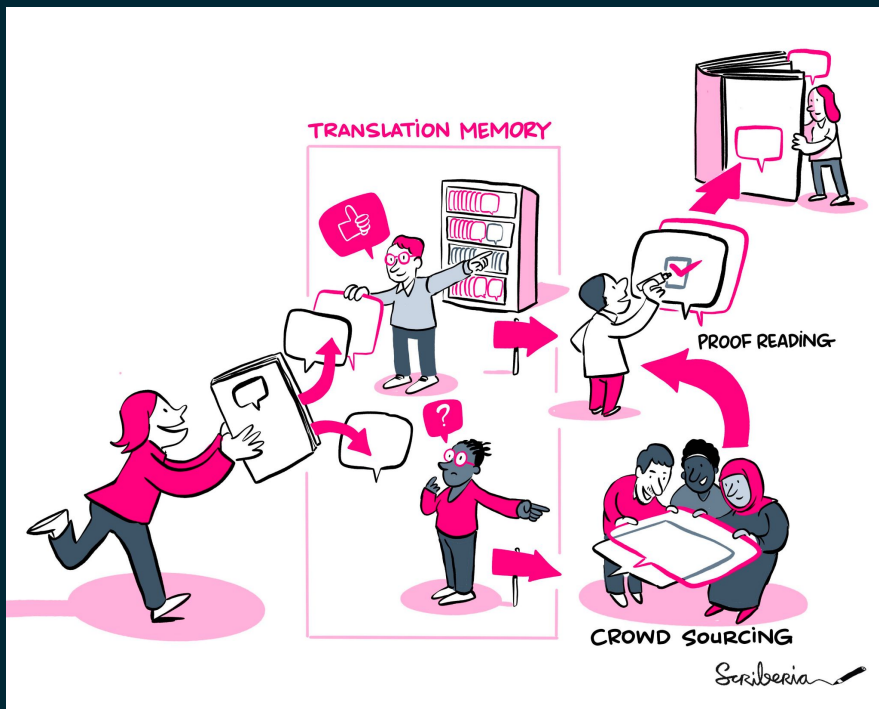
Localisation in The Turing Way



- You **love open science** and want to convey this knowledge to a wider community (of non English speakers) - join us
- Read the landing page of The Turing Way and the README file, then review the **Translation Guidelines**.
- Start translating from the **translation priority list**
- Your contribution is **recorded** and **acknowledged** in the README file and in the book.

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Choose Your Path

- Translator
- Proofreader
- Manager
- Infrastructure
- Documentation
- **Reuse** translation memory in your own project
- Onboarding/Promoting

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Documentation of Translation!

- Community Handbook
- Language-specific documentation in GitHub

Workflow for translation within TTW

By translation workflow, we do not refer only to the phases that contributors should follow during the translation process. Instead, we refer to a set of key and optional aspects that can lead to a successful and sustainable translation project. The translation process can be grouped into four distinct stages. Let's jump in each of them!

1. Before translation
2. Starting a new language translation
3. During translation
4. After translation

Community Handbook

Code of Conduct

Style Guide

Maintaining Consistency

Contributing and

Developing Chapters -

Templates and Workflow

Acknowledging

Contributors

Translation

Translation of Open
Source Projects

[Get Started Now!](#)

Crowdin 101

Translation Workflow

Monthly Newsletters

Book Dash Events

Community Coworking

Calls

Template Collection

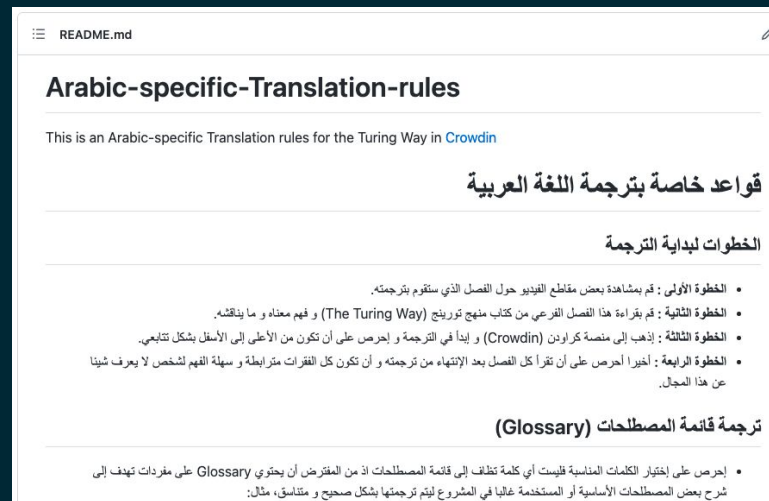
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Sharing and documenting our translation journey has proven to be important in reaching out to new members and making their contributions smoother and more accessible

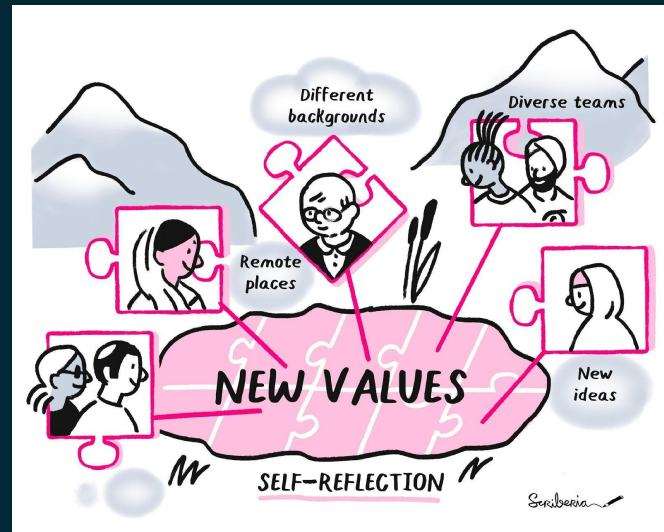


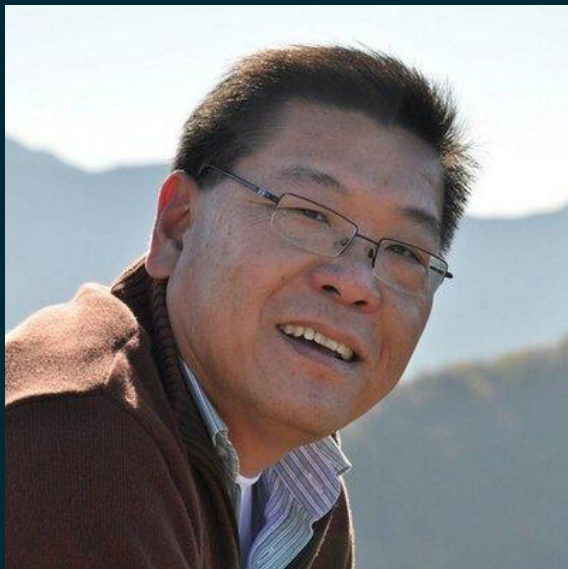
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The Turing Way Translation Channels

- *Translation co-working sessions*
 - Each Tuesday (16:00 UTC)
- *BookDash*
- *Collaboration Cafes*
 - 1st & 3rd Wednesdays (14:00 UTC)
- *Outreachy (OSCSA)*
- *More ways to connect*

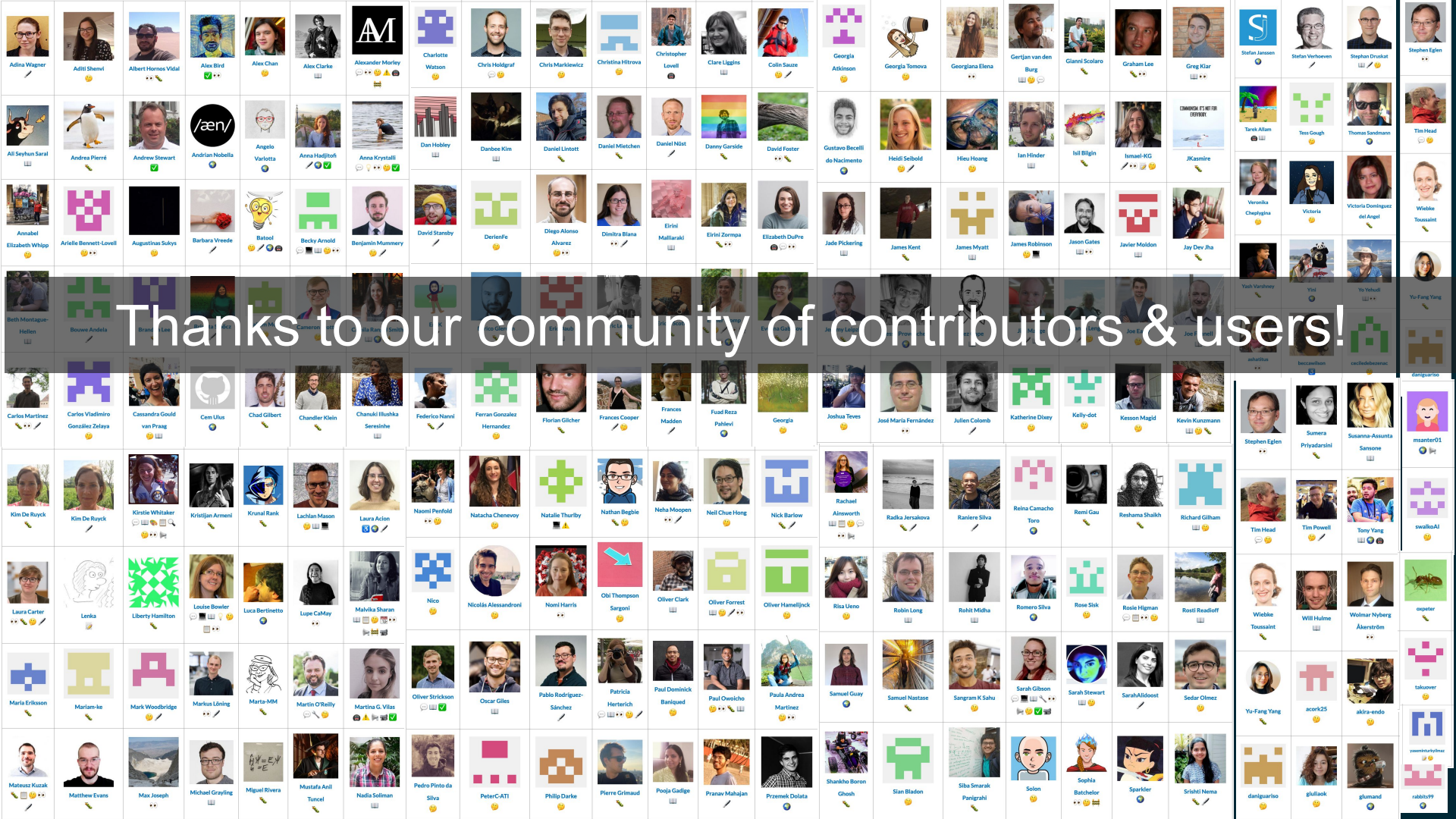




From open science to knowledge equity: “Responsible research should go beyond normative practices of doing science and be more intentional about the conditions of its production. **This requires expanding thinking about openness to include epistemic diversity, communities and excluded knowledges”**



- Leslie Chan in “Global Dynamics in Responsible Research”
symposium by The Einstein Foundation



Thank you!

Acknowledgements:

- Kirstie Whitaker, Malvika Sharan, The Turing Way community, friends & collaborators
- Many of these slides were reused previously and developed by many in *The Turing Way* community

Useful Links

- **Book:** the-turing-way.netlify.com
- **Twitter:** twitter.com/turingway
- **Newsletter:** tinyletter.com/TuringWay
- **GitHub:** github.com/alan-turing-institute/the-turing-way
- **Original artwork by Scriberia:** <https://doi.org/10.5281/zenodo.3332807>

