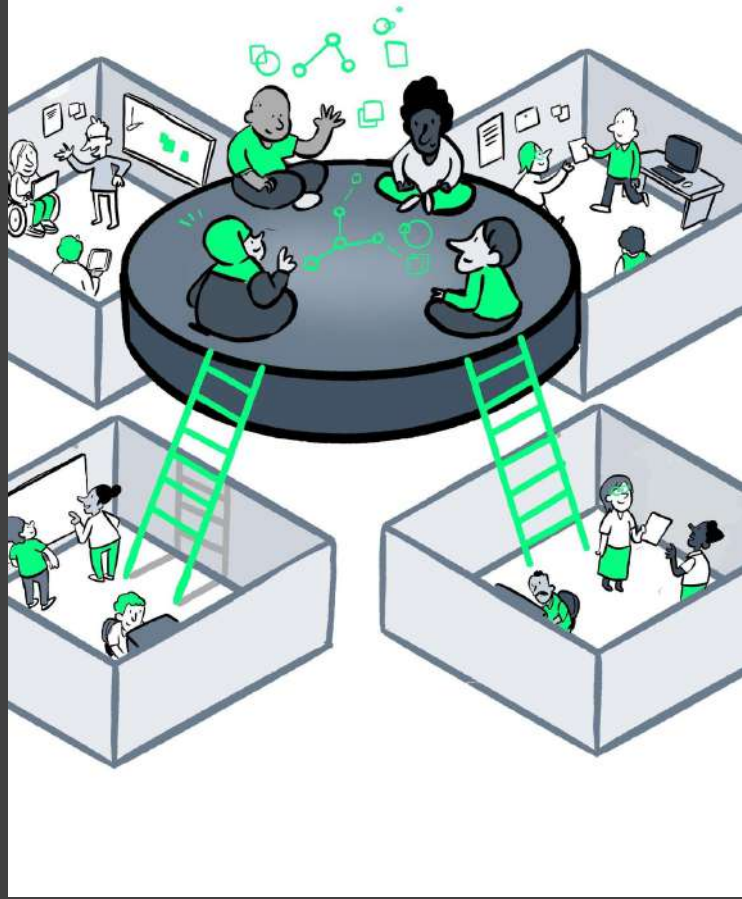
The Alan Turing Institute

Community Management in the Turing Health Programme

Dr Emma Karoune



Dr Emma Karoune

- Senior Community Manager
  - DECOVID
  - Turing-RSS Health Data Lab
- Open Researcher
  - Turing Way
  - Open Phytoliths Community
  - SSI Fellow
  - EXILIR-UK FAIR Data Fellow

DECOVID

Historic England

Software Sustainability Institute

elixir UNITED KINGDOM

EOSC-Life

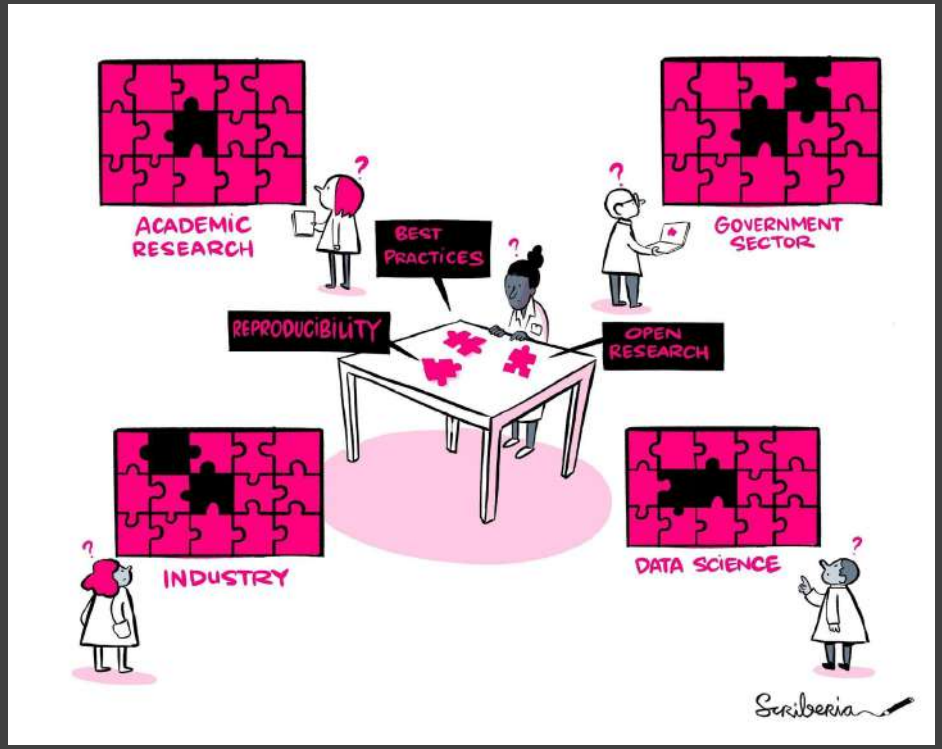
International Phytolith Society

What I’m going to talk about

- Diversifying research roles at Turing
- What community management is
- Case studies from Health programme
- How you can engage with Health programme

Evolving research and data landscape

- Interdisciplinarity
- Widening Participation
- Commitment to EDIA
- Valuing people and skills
- Better research culture
- Pathways to leadership

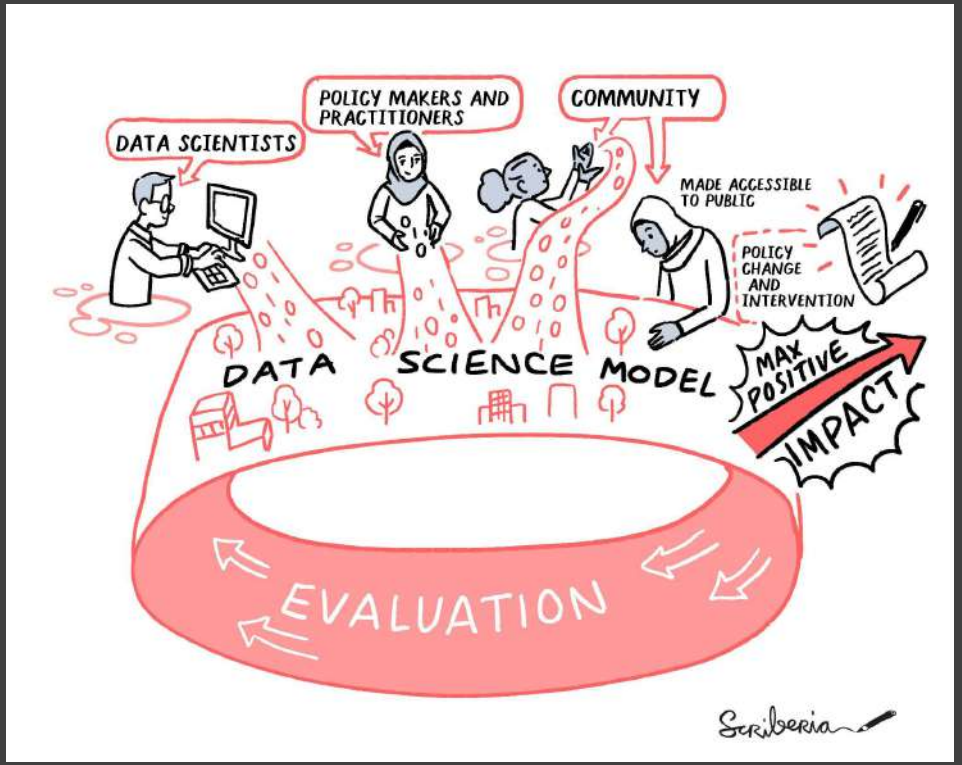


National Data Strategy - 2020. Gov.uk. Department for Digital, Culture, Media and Sport. Skills: Data skills for a data-driven economy and data-rich lives

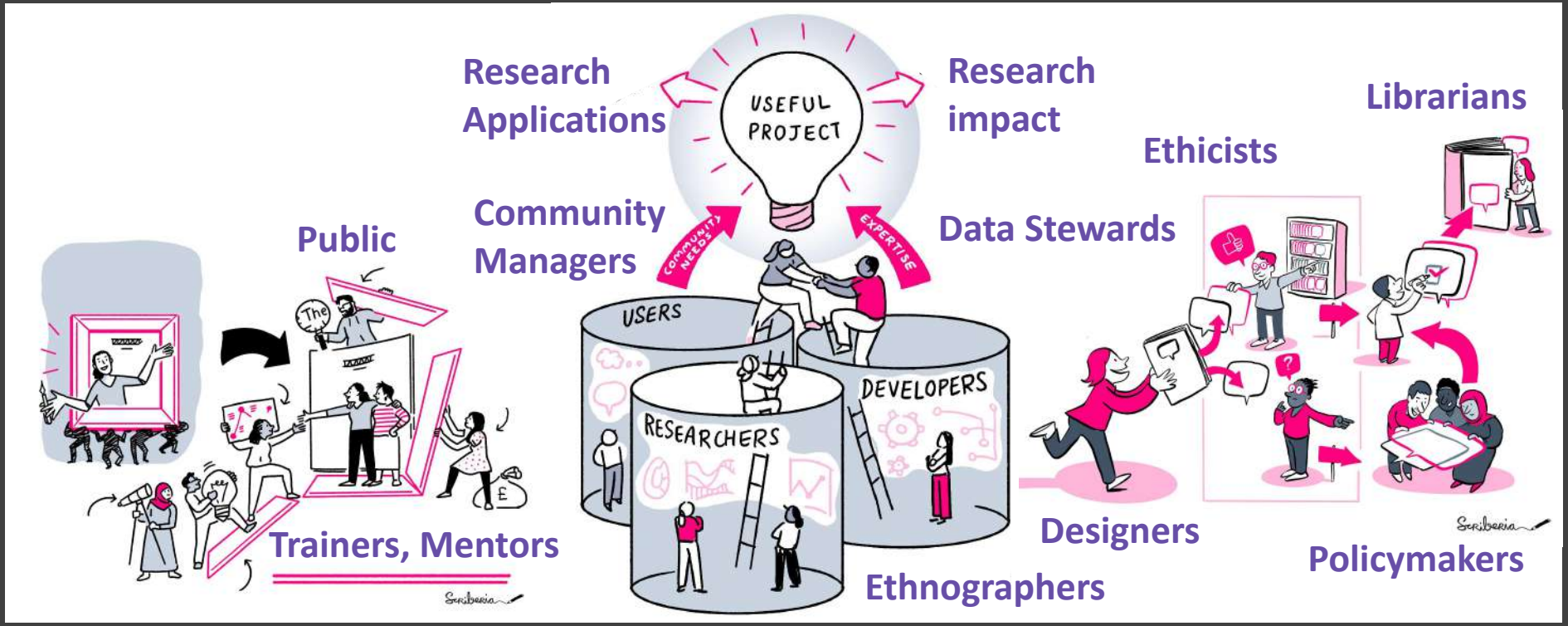
@malvikasharan, Presentation DOI: 10.5281/zenodo.7620215

Research infrastructure roles

Research infrastructure roles provide **specialised skills, expertise and services** required for effectively carrying out **high-quality research**.

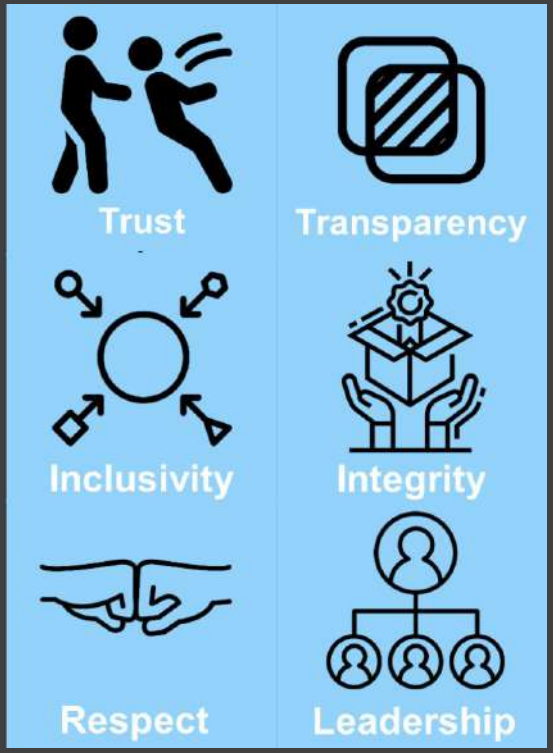


Diversifying research roles



Tools, Practices and Systems

- Trustworthy systems
- Transparent reporting
- Inclusive interoperable design
- Ethical integrity
- Respectful co-creation
- Leadership in open research

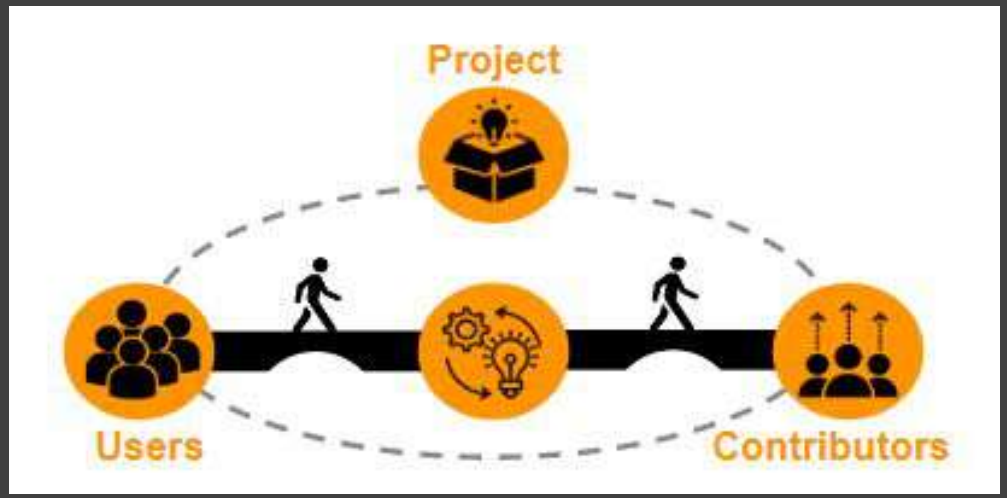


Dr Kirstie Whitaker
Director of the programme

Home + Research + Research programmes

Tools, practices and systems

Building open source infrastructure to empower a global, decentralised network of people who connect data with domain experts



Strategic and technical support for stakeholder engagement and participation

Home + Research + Research programmes

Tools, practices and systems

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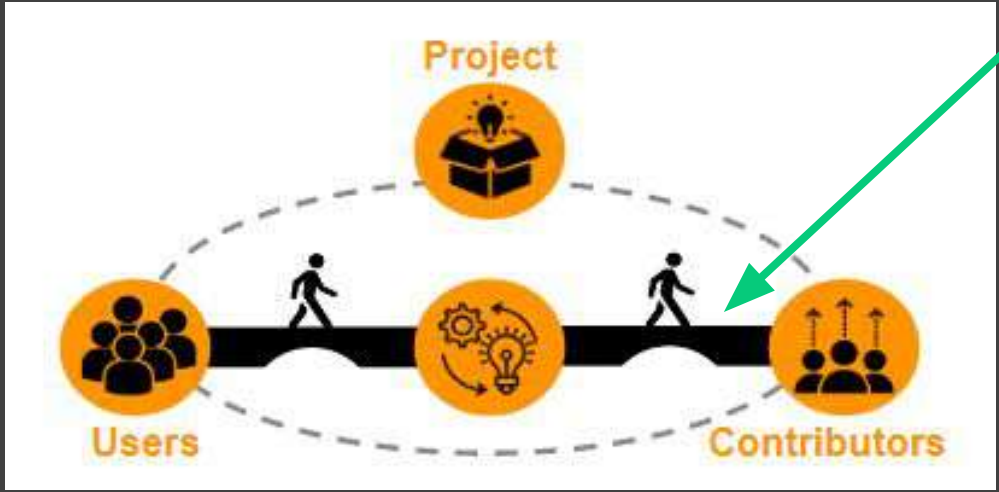

Strategic and technical support for stakeholder engagement and participation

Community Management

Dr Malvika Sharan

Researchers and collaborators


Dr Emma Karoune


Dr Arron Lacey


Anne Lee Steele


Vicky Hellon


Sophia Batchelor


Dr Eirini Zormpa


Claudia Fischer


Ayesha Magill


Bridget Nea

https://www.turing.ac.uk/research/research-programmes/tools-practices-and-systems/community-management-and-open-research

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Tools, practices and systems

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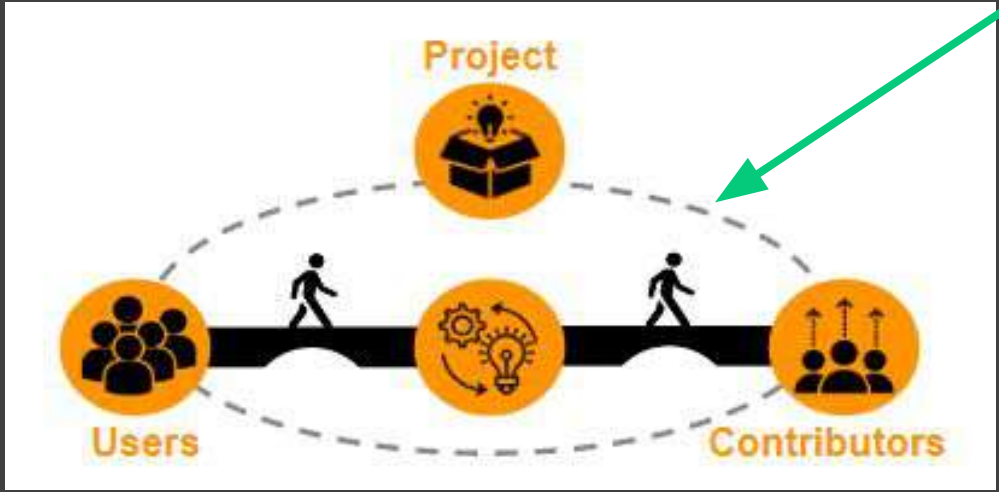

Strategic and technical support for stakeholder engagement and participation

Research Applications

Organisers


Dr Aida Mehonic


Dr Alden Conner


Jennifer Ding


Hari Sood


Shakir Laher

https://www.turing.ac.uk/research/research-programmes/tools-practices-and-systems/research-application-management

Home + Research + Research programmes

Tools, practices and systems

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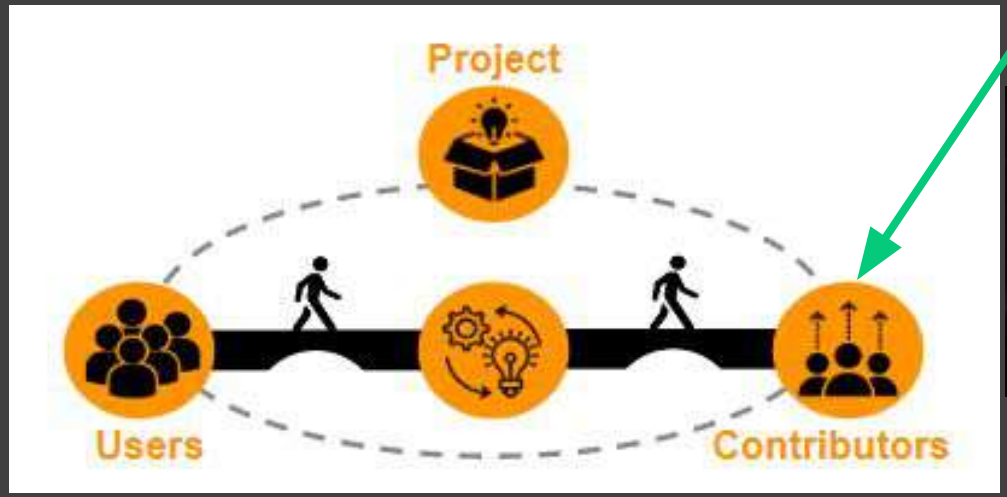
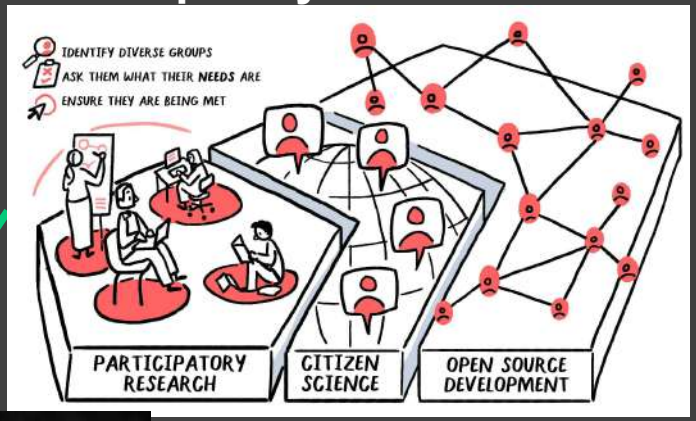


Strategic and technical support for stakeholder engagement and participation

https://www.turing.ac.uk/research/research-projects/citizen-science-platform-autistica

Participatory Citizen Science

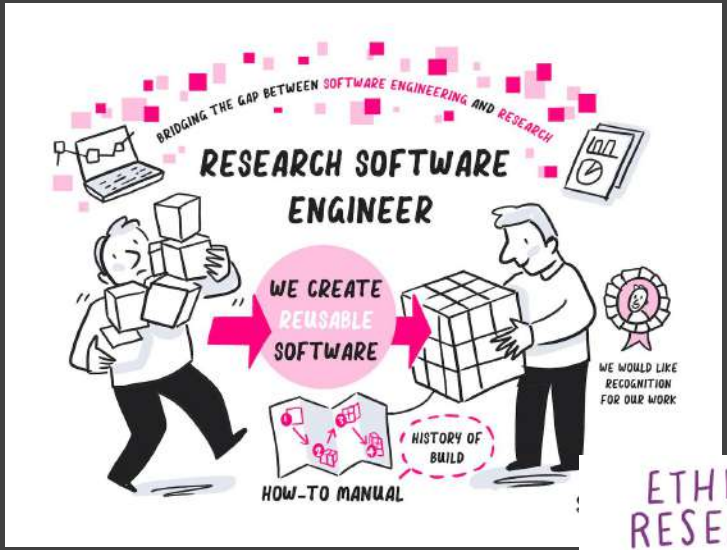


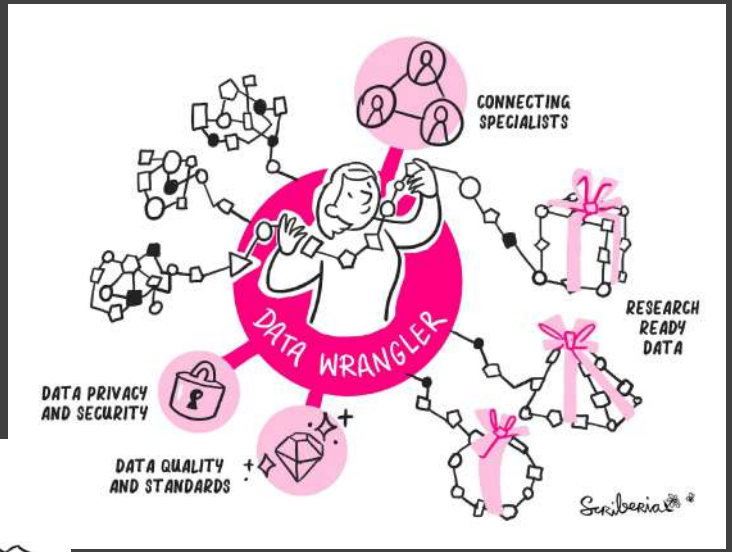
Bastian Greshake-Tzovaras
Senior Researcher, Co-lead of Autspaces

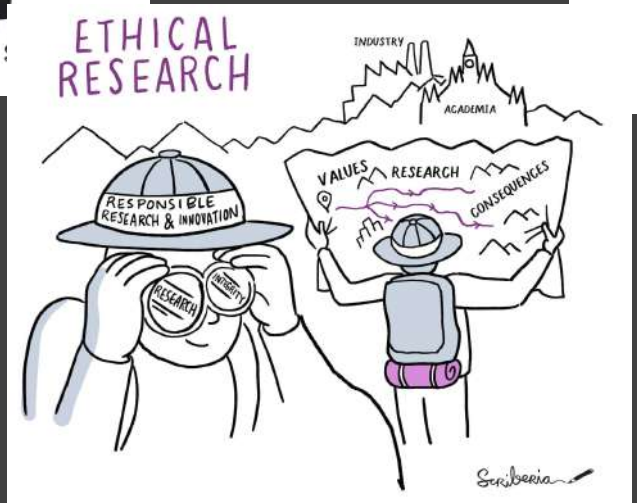
Georgia Aitkenhead
Research Assistant Autspaces

Sophia Batchelor
Community Manager for PPIE AIM-RSF, Autspaces

Other research infrastructure roles at Turing



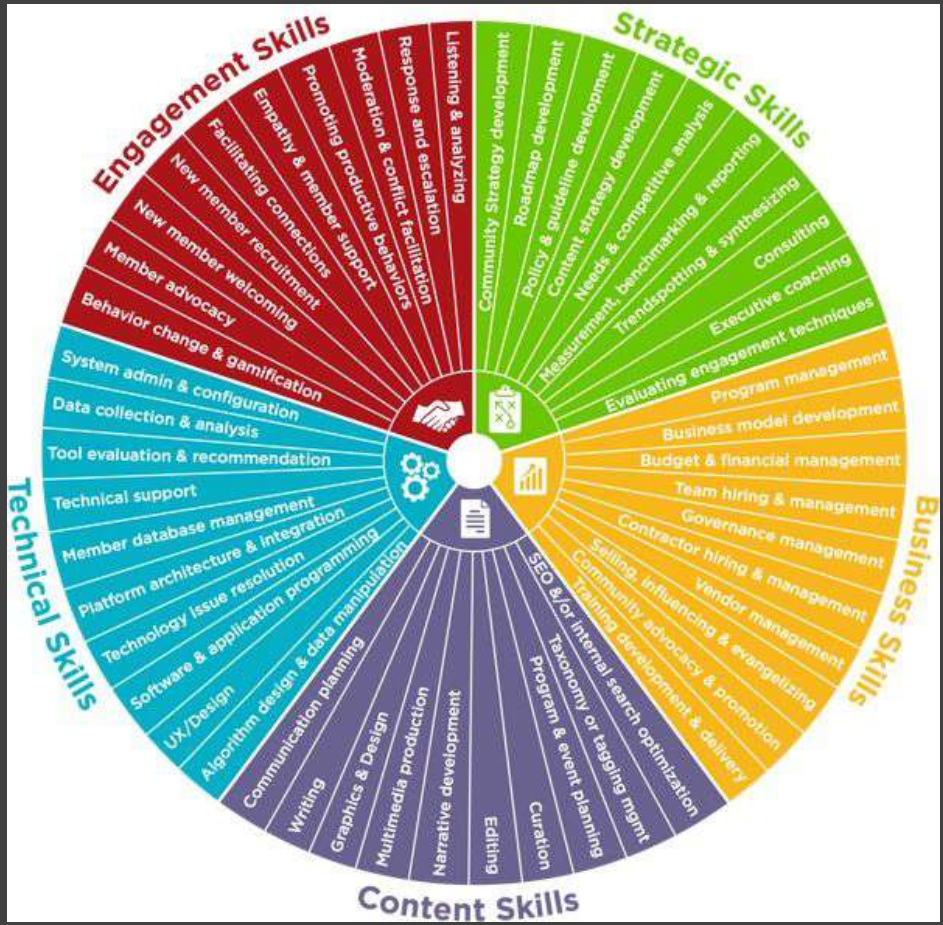




What is Research Community Management?

Building communities is a crucial process that fosters connections amongst people and creates infrastructures for these connections to happen.

- Open research skills
- Engagement skills
- Technical skills
- Content/communications skills
- Project management
- Strategic skills



Projects community managers are involved in

In Health programme:

- DECOVID
- Turing-RSS Health Data Lab
- Turing-Roche
- AIM RSF
- EDoN

Rest of Turing:

- Turing Way
- ASG
- Data Centric Engineering
- TRIC

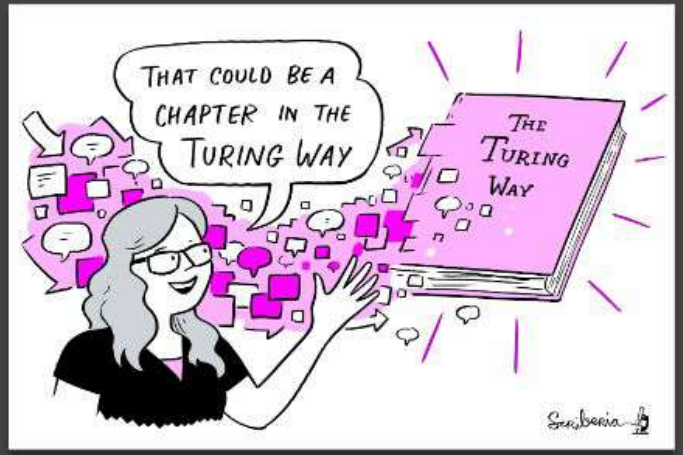
Book:
the- turing-way.netlify.app/

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

Twitter:
twitter.com/turingway

Email:
theturingway@gmail.com

A Book



A Community

An Open Source Project

A Culture of Collaboration

Community management case studies from Health programme

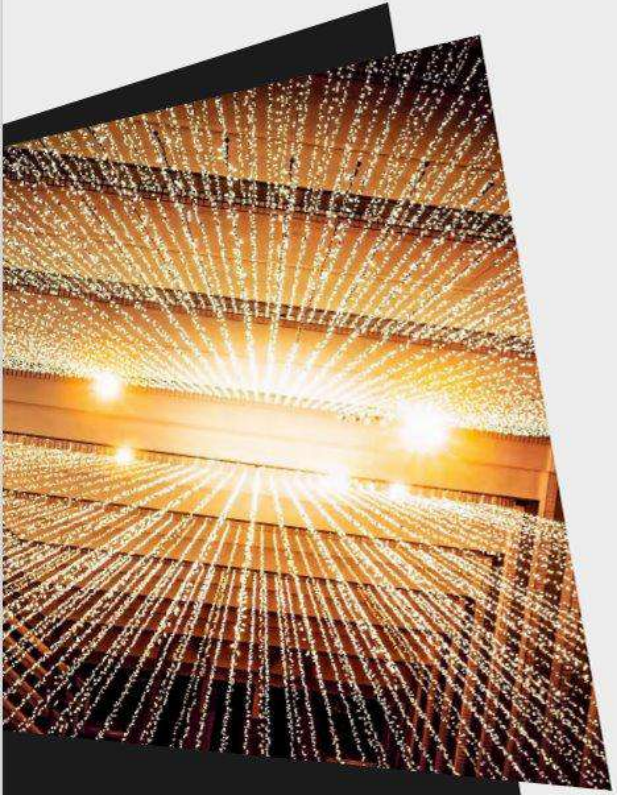
Turing-RSS Health Data Lab

Mission:

To support the UKHSA in UK health security through an embedded data science collaboration, working towards an **interoperable framework** that provides trusted quantitative evidence to decision makers.

Interoperability across all facets of project delivery providing:

- **Agility:** Rapidly communicate and interlink statistical modelling output across analyses, with components transferable across health security problems
- **Sustainability**: Development of a common high quality open-source analytics code base that grows over time
- **Transferability**: Co-ownership of projects with UKHSA teams, allowing rapid impact from academia and industry to be delivered against relevant (time-sensitive) problems
- **Preparedness.** Solutions to Covid19 problems can be quickly re-purposed to meet future public health challenges



Related programmes and teams
Health and medical sciences
Research engineering

Providing COVID-19 expertise to the UK government

The Turing-RSS Health Data Lab, a partnership established in August 2020 between the Turing and the Royal Statistical Society, has continued to provide invaluable insights to the government's UK Health Security Agency, which is responsible for public health protection in the UK.

The Lab aims to develop statistical and machine learning techniques to answer policy-relevant questions about COVID-19. It is made up of over 35 people in research, leadership and operational roles from more than 10 institutes, including Imperial College London, MRC Harwell and the University of Oxford.

In December 2021, Lab researchers published a paper in *Nature Microbiology* describing a statistical framework that combines multiple sources of COVID-19 test data to provide **more accurate estimates of local virus prevalence**. This was followed in February 2022 by a statistical analysis from the Lab, published in *The Lancet Regional Health*, which found that deprived areas in England with higher proportions of non-White people were **associated with higher COVID-19 infection rates**. However, the strength of this association varied over the course of the pandemic and for different ethnic subgroups, highlighting the importance of continual monitoring when developing policies aimed at eliminating health inequalities.

Other work at the Lab has included a project looking at the potential of diagnosing COVID-19 and other diseases by acoustically analysing someone's speech or coughs, and a statistical model that uses incomplete COVID-19 test data to **estimate ('nowcast') the total number of positive tests**. Meanwhile, a recent paper describes the Lab's **overarching approach to statistical modelling**, setting out a framework that will allow other research teams to rapidly build effective, data-driven models in response to future health emergencies.

"The Alan Turing Institute and the Royal Statistical Society came together at pace in response to the COVID-19 pandemic, providing world-class independent research and modelling expertise to the UK government. The partnership has played a highly valuable role in developing and further enhancing the data science and advanced analytical capabilities within the UK Health Security Agency, both in responding to COVID-19 and in tackling new and existing threats to UK health."

Johanna Hutchinson
Director of Analytics and Data Science, UK Health Security Agency

Knowledge sharing

Maximising collaborative opportunities – two-way exchange

- All-hands knowledge shares – invite SROs and Data scientists from UKHSA
- UKHSA Show and Tell – consistent attendance and regular presentations
- Journal Club – be involved in planning and attending

Harmonising ways of working

- Internal communications
- Creation of centralised Github repository
  - Onboarding, shared documentation
  - Data management tracking

AIM-RSF

Research support facility for AI for multiple long-term conditions

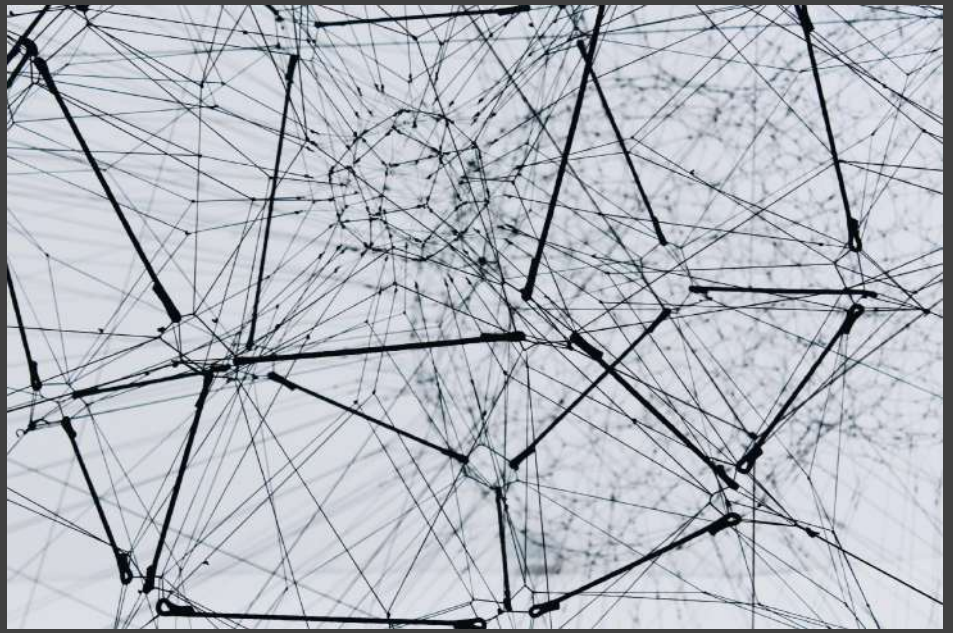
- Training
- Internal and external knowledge sharing series
- Guidance and skill in open research
- Open infrastructure
- PPIE

Dr Eirini Zormpa
Community Manager – open collaboration

Sophia Batchelor
Community Manager - PPIE

Community network mapping and evaluation

- Baseline impact assessment
- Community engagement planning and implementation
- Evaluation of impact



Turing Health-AI Summit

20 and 21 February 2023

Bringing together senior health leaders to scope the landscape for the future of AI and machine learning in health

Alisha Davies
AI for Science & Government
Health Theme Lead

Owen Rackham
Theme Lead in Cell & Molecular Medicine

Population health

Cell & molecular medicine

Open and sustainable research

- FAIR data deposition + Data Papers
- Reproducible research
- Translation – from technical to lay language

ARUK Early Detection of Neurodegeneration (EDoN)

- £multi-m programme to detect neurodegenerative diseases years before onset of symptoms
- Multi-modal data integration and longitudinal data collection
- Turing leads the Analytics Hub

Dr Arron Lacey
Senior Community Manager

Working to bring reproducible research into this community

Alzheimer's Research UK

External communication

- International lecture series
- Social media
- Web pages

Nine lectures from international experts over 2021 and 2022 including WHO, PHW, Royal Statistical Society, Uni of Oxford, Uni of Michigan.

High level of attendance (200+) – UK unis, Gov, health research orgs, and European and international health organisations.

Turing-Roche Partnership

Vicky Hellon
Community Manager

Mission

5-year strategic partnership for exploring patient heterogeneity through advanced analytics

Features

- **Research/industry-based model** to share academic and industry perspectives
- Ensuring outputs are shared for reuse
- Open knowledge sharing through events and communication channels
- Encouraging Roche researchers/practitioners to share industry practices in *The Turing Way*

The Alan Turing Institute | Roche

The Turing-Roche knowledge share series: Synthetic data →
Monday 25 Jul 2022
Time: 15:00 - 16:00

Florimond Houssiau | Marta Batlle | Finn Janson

The Turing-Roche knowledge share series: Predictive modelling in healthcare →
Monday 30 May 2022
Time: 15:00 - 16:00

Jasmina Bogojeska | Matthew Sperrin | Elif Ozkirimli | Brieuc Lehmann

The Turing-Roche knowledge share series: Modern topics in missing data →
Monday 25 Apr 2022
Time: 14:00 - 15:00

Robin Mitra | Chris Harbron

Knowledge share series

Health & Medical Sciences Programme 2.0

Our mission:
Accelerating the scientific understanding of human disease and improving human health through data-driven innovation in AI and statistical science.

Goal:
Improving the nation's health and reducing inequalities in the UK and internationally.

Stay connected for updates on Turing 2.0

Follow updates through our:

- The Turing Website: News | The Alan Turing Institute
- The Health Programme monthly newsletter: Health and medical sciences | The Alan Turing Institute (sign up).
- Slack channel: Turing slack #health (Turing community members only)
- Social media:  @turinginst  LinkedIn Turing page.
- Contact the community manager - Team website

Opportunities for Engagement:

Turing Interest Groups in Health

Researchers gather around shared areas of interest in data science and AI:

- Share ideas and knowledge.
- Spark new ideas for research collaboration and projects.
- Communicate emerging scientific concepts to the wider Institute and beyond, around a shared area of interest

- Clinical AI
- Data science for mental health
- Data science for sports, activity, and well-being
- Omics data generation and analysis group
- Precision dementia medicine
- New: Novel data linkages for health and wellbeing
- New: Health Equity

Opportunities for Engagement:

Turing-wide opportunities

- Turing PhD Students enrichment scheme: Enrichment scheme | The Alan Turing Institute
- Post-Doctoral Enrichment Awards (PDEA): New call to be launched soon Post-Doctoral Enrichment Awards (PDEA) | The Alan Turing Institute
- Turing Fellows scheme: New scheme will be launched Autumn 2023

Acknowledgements

Materials for this presentation take from:

- Malvika Sharan's talk at State of Open Con 23 - @malvikasharan, Presentation DOI: 10.5281/zenodo.7620215
- Thanks to Maya Bronfeld for Health team presentation slides

Links:

- Book: the-turing-way.netlify.com
- Relevant resources: bit.ly/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

Get in touch with me, if you want to know more: ekaroune@turing.ac.uk