



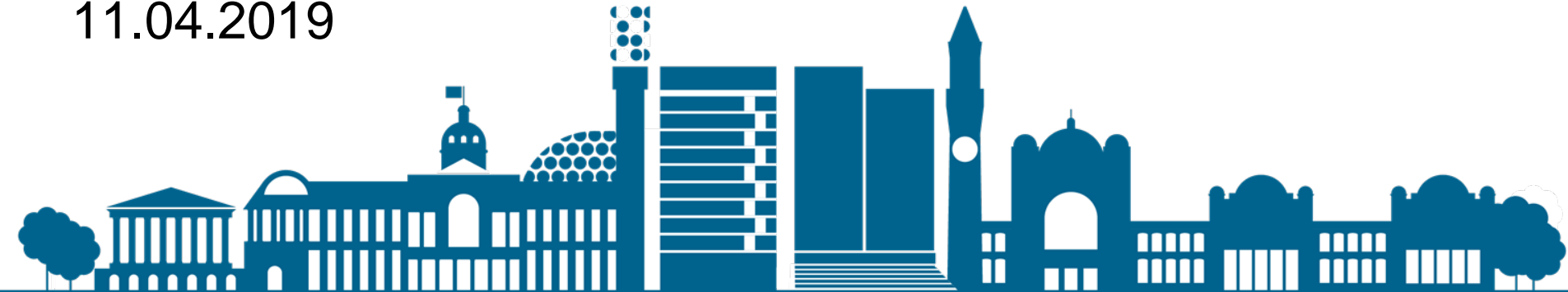
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The Turing Way - supporting reproducibility and Open Research

Patricia Herterich, Library Services, University of
Birmingham

Launch of the UK ORWG network

11.04.2019



Get in touch



@pherterich



p.s.herterich@bham.ac.uk

This talk is available on zenodo at:

<https://doi.org/10.5281/zenodo.2634185>



Who am I?



We support Open Scholarship



Adapted from: <https://www.meetup.com/Berlin-Open-Science-Meetup/>

Robin Champieux and Danielle Robinson



With services on...

□ Open Access

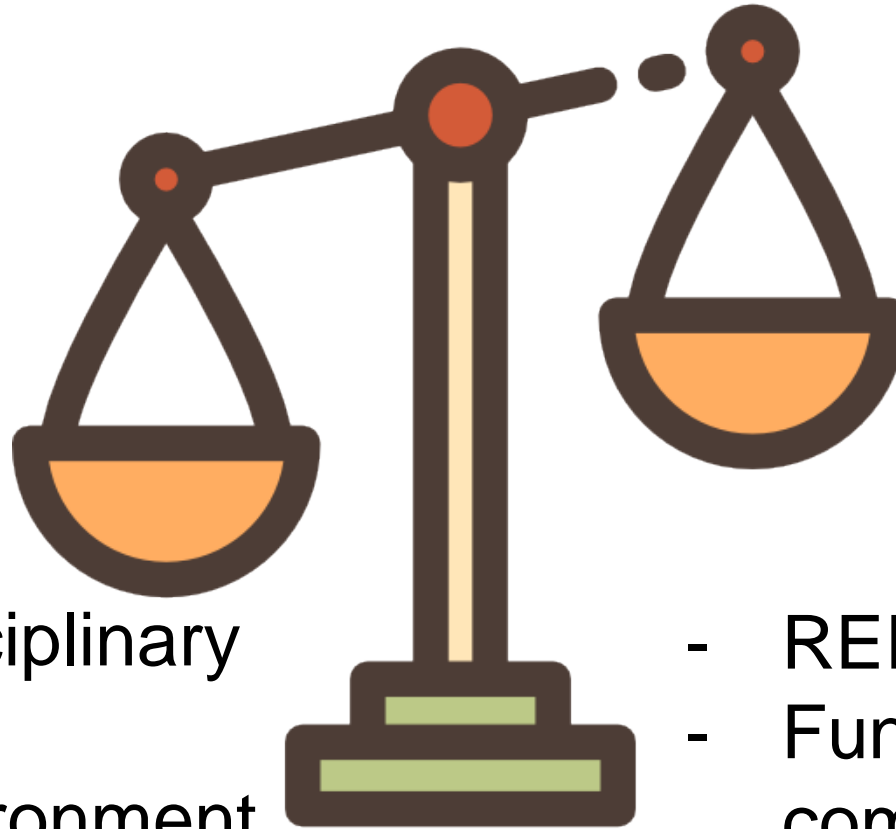
- Immediate Gold Open Access – funder budgets & internal Open Access fund
- Green OA through institutional repository
- Monograph chapters
- Theses



With services on...

- Open (Research) Data
 - Review of Data Management Plans
 - Institutional data repository
 - Guidance on data sharing, documentation, anonymization etc...





- Good disciplinary practice
- REF Environment statement

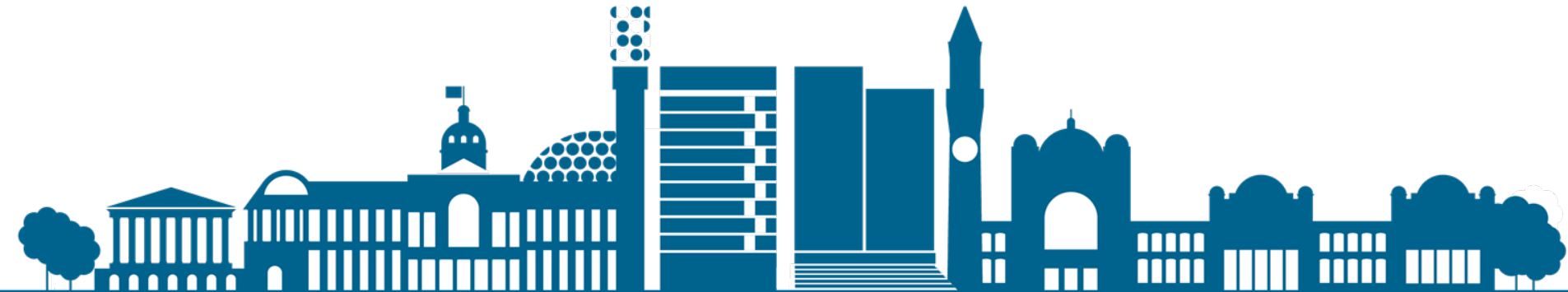
- REF
- Funder compliance
- Institutional rules





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Collaborative projects



The Turing Way project

- A lightly opinionated handbook for reproducible data science
- Openly and collaboratively developed at

<https://github.com/alan-turing-institute/the-turing-way>



The Alan Turing Institute to spearhead new cutting-edge data science and AI research after £48 million government funding boost

Tuesday 18 Dec 2018

Learn more ↓

UK Research and Innovation (UKRI) has **today announced** funding for two major new research programmes in artificial intelligence, both led in collaboration with The Alan Turing Institute.



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<https://www.turing.ac.uk/news/alan-turing-institute-spearhead-new-cutting-edge-data-science-and-artificial-intelligence>



Tools, practices and systems for AI



What do we mean by reproducible?

		Data	
		Same	Different
Analysis	Same	Reproducible	Replicable
	Different	Robust	Generalisable



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<https://doi.org/10.6084/m9.figshare.7140050>
<https://github.com/alan-turing-institute/the-turing-way/blob/master/chapters/reproducibility.md>

Why don't people do this already?

Is not considered
for promotion

Takes
time

Publication bias
towards novel
findings

Barriers to reproducible research

*Requires
additional
skills*

Plead the
5th

Support additional
users

*Held to higher
standards than others*





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Can we reduce the barriers?

Make reproducibility, “too easy not to do”





The Turing Way

Handbook

BinderHub

Community



Community - Workshops



<https://github.com/alan-turing-institute/the-turing-way/tree/master/workshops>



Binder and BinderHub



Turn a Git repo into a collection of interactive notebooks

Have a repository full of Jupyter notebooks? With Binder, open those notebooks in an executable environment, making your code immediately reproducible by anyone, anywhere.

Build and launch a repository

GitHub repository name or URL

GitHub repository name or URL GitHub ▾

Git branch, tag, or commit

Git branch, tag, or commit

Path to a notebook file (optional)

Path to a notebook file (optional) File ▾

launch

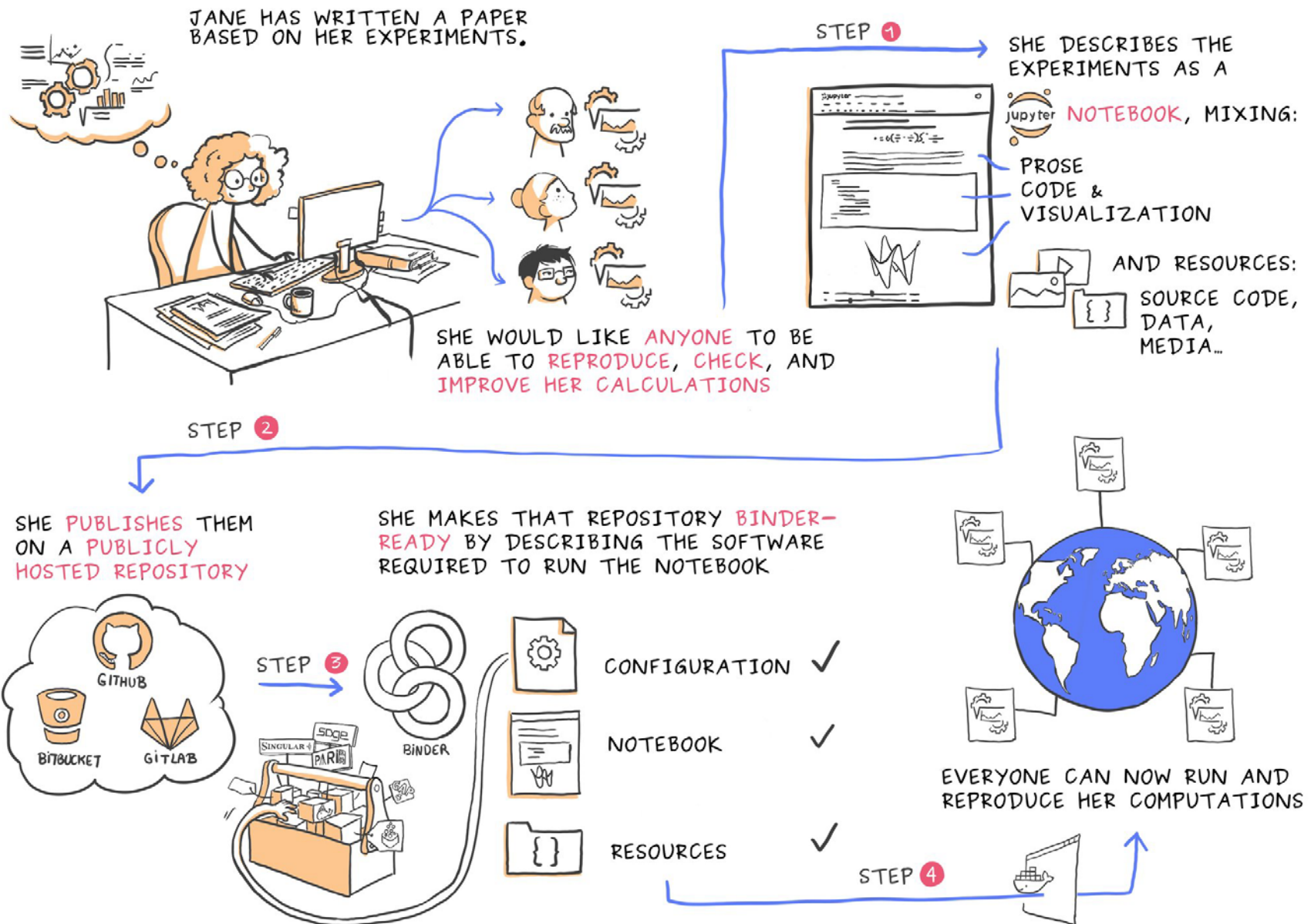
Copy the URL below and share your Binder with others:

Fill in the fields to see a URL for sharing your Binder. 📋

Copy the text below, then paste into your README to show a binder badge: 🔗 launch binder ▶

<https://mybinder.org/>

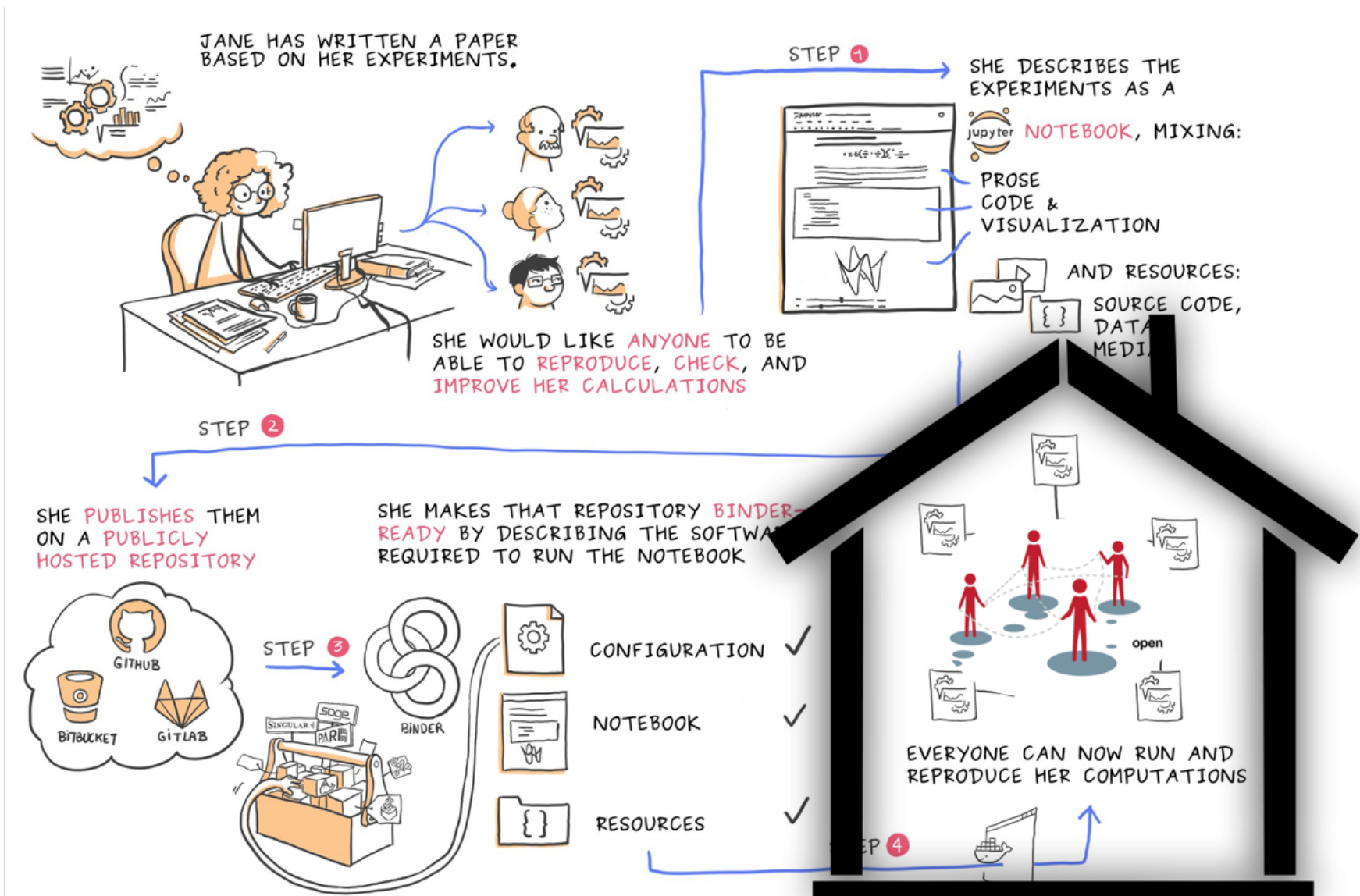




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Courtesy of Juliette Belin:

<https://twitter.com/JulietteTaka/status/1082735653929000960>



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Courtesy of Juliette Belin:

<https://twitter.com/JulietteTaka/status/1082735653929000960>

and Sarah Gibson

The handbook...

What is Jupyter Book?

*Build an online book with
Jupyter Notebooks and Markdown*



jupyter.org/jupyter-book



<https://the-turing-way.netlify.com>

<https://github.com/alan-turing-institute/the-turing-way-book>



Handbook content

- Research data management
- Open research
- Reproducibility
- Version control with git
- Your working environment (IDE, notebooks etc)
- Capturing your compute environment
- Testing for research
- Continuous integration
- Collaborating through GitHub/GitLab


















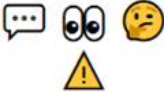










10/04/2019

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Built by a team...and you!

 <p>Becky Arnold</p> 	 <p>Louise Bowler</p> 	 <p>Jason M. Gates</p> 	 <p>sgibson91</p> 	 <p>Tim Head</p> 	 <p>Patricia Herterich</p> 	 <p>Rosie Higman</p> 
 <p>Anna Krystalli</p> 	 <p>Alexander Morley</p> 	 <p>Martin O'Reilly</p> 	 <p>Oliver Strickson</p> 	 <p>Kirstie Whitaker</p> 	 <p>Chris Holdgraf</p> 	

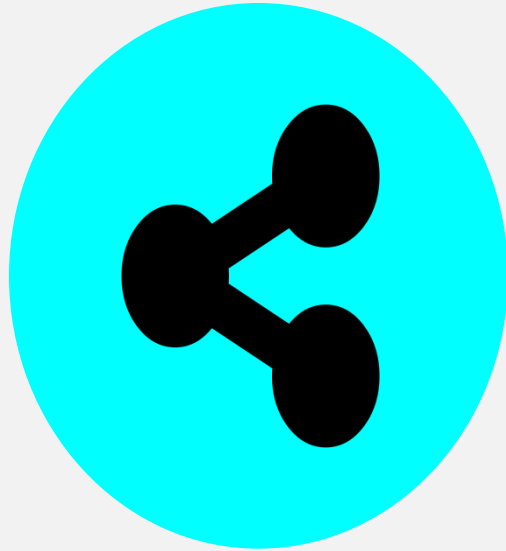


Open Leadership Principles



Understanding

You make the work accessible and clear



Sharing

You make the work easy to adapt, reproduce, and spread



Participation & Inclusion

You build shared ownership and agency to make the work inviting and sustainable for all.

Read more

<https://mozilla.github.io/olm-whitepaper>

<https://doi.org/10.6084/m9.figshare.7564682>

How can you get involved?

□ Join our book dashes!

- 1 day events to edit the handbook (& networking the evening before)
- We pay travel and accomodation
- 16 & 17 May, Manchester
- 27 & 28 May, London

Apply by 18 April 2019 at

<https://forms.gle/XdQ6qBC6rMCJRnjh6>



Submit your tips and tricks!

On GitHub directly or by filling our quick submission form at

<https://goo.gl/forms/akFqZEIy2kxAjfZW2>

or even contribute to chapters and conversations in our GitHub issues and through pull requests!



Take away messages

- Get involved in the Turing Way
- Find your friendly librarian for a chat and figure out local support services and networks



Thank you!

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

 gitter.im/alan-turing-institute/the-turing-way

 <https://tinyletter.com/TuringWay>



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LIBRARY
SERVICES

