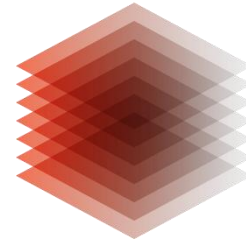LEIBNIZ-INFORMATIONSZENTRUM
TECHNIK UND NATURWISSENSCHAFTEN
UNIVERSITÄTSBIBLIOTHEK

TIB

An International Research Librarians' Guide to Citizen Science

LIBER Webinar "Citizen Science At Universities: Trends, Guidelines and Recommendations"

Simon Worthington - Twitter @mrchristian99
Open Science Lab, Berlin, 10. June 2020

Leibniz
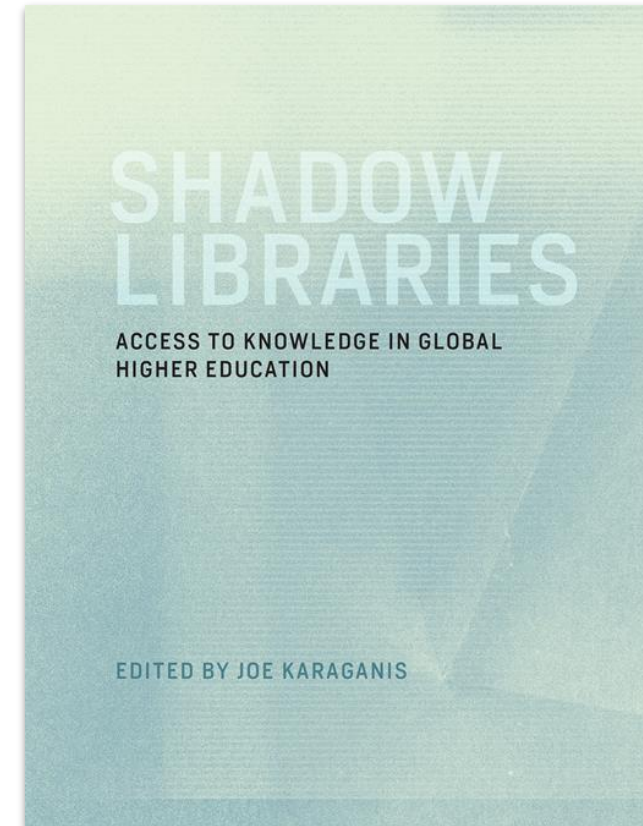Gemeinschaft

Challenges for Citizen Science

- **Open Access**
- **Open Science**
- **Online Citizen Science and COVID-19**
- **Full participation in research questions**
- **Climate Change and Climate Protests**

Shadow Libraries

About the academic project
"…universalist in principle and unequal in practice. Shadow Libraries is a study of that tension in the digital era."

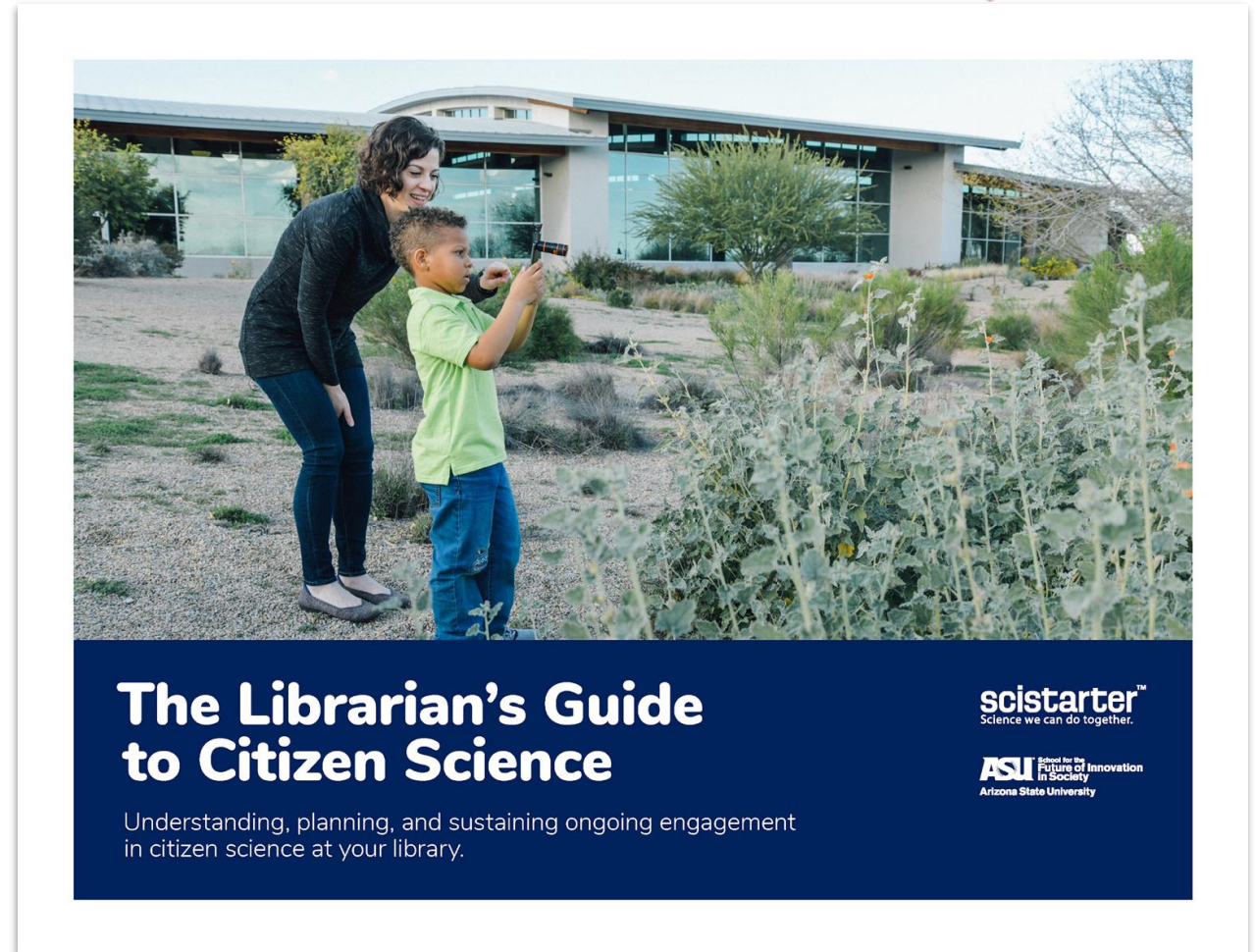**Introduction, Shadow Libraries, Joe Karaganis, Open Access, MIT 2018.**

Shadow Libraries: access to knowledge in global higher education, Edited by Joe Karaganis, (Introduction), Open Access, MIT 2018.
https://mitpress.mit.edu/books/shadow-libraries

CS: Research Library vs Public Library

An International Research Librarians' Guide to Citizen Science

- Training academics to use CS
- Data science
- Special collections
- Open Science
- The public and research skills
- Specialist communities or demographics excluded from University research access
- The list goes on...

The Librarian's Guide to Citizen Science
https://orrery-media.s3-us-west-2.amazonaws.com/curated/Librarian's+Guide+to+Cit+Sci+November+13+2019.pdf

openVirus & Library Space Technology Network

openVirus - Knowledge for citizens in the time of COVID - *Datamining*

Chris Kittel, CM, atMozfest 2015

ContentMine Workshops and Hackdays

Easily distributed software   Build application in a morning

Get started in 30 mins

Start simple: bagOfWords, Stemming, Regex, templates

Open Science Brazil, 2014-08

Stefan Kasberger, CM

ContentMine Workshops on Mining

https://github.com/petermr/openVirus

Marathon Public Library | Biblioteca de Santiago | John G. Wolbach Library | Cambridge Public Library | BM „B.P.Hasdeu"

LSTN Handbook - *Microsatellite data*
https://zenodo.org/record/3776518

Publication Roadmap

A community owned publication, drive by book sprint methods, produced as multi-format and connected to a MOOC, using modern open-source computational publishing tools and pipelines

Milestones

- Outline of publication for 49th LIBER Annual Conference June 2020
- Form advisory board, editorial board and production group (editorial and production might cross over)
- Q4 - 2020 - production groups in place and present to LIBER mid-term event
- Q1 - 2021 - first iterative section or edition
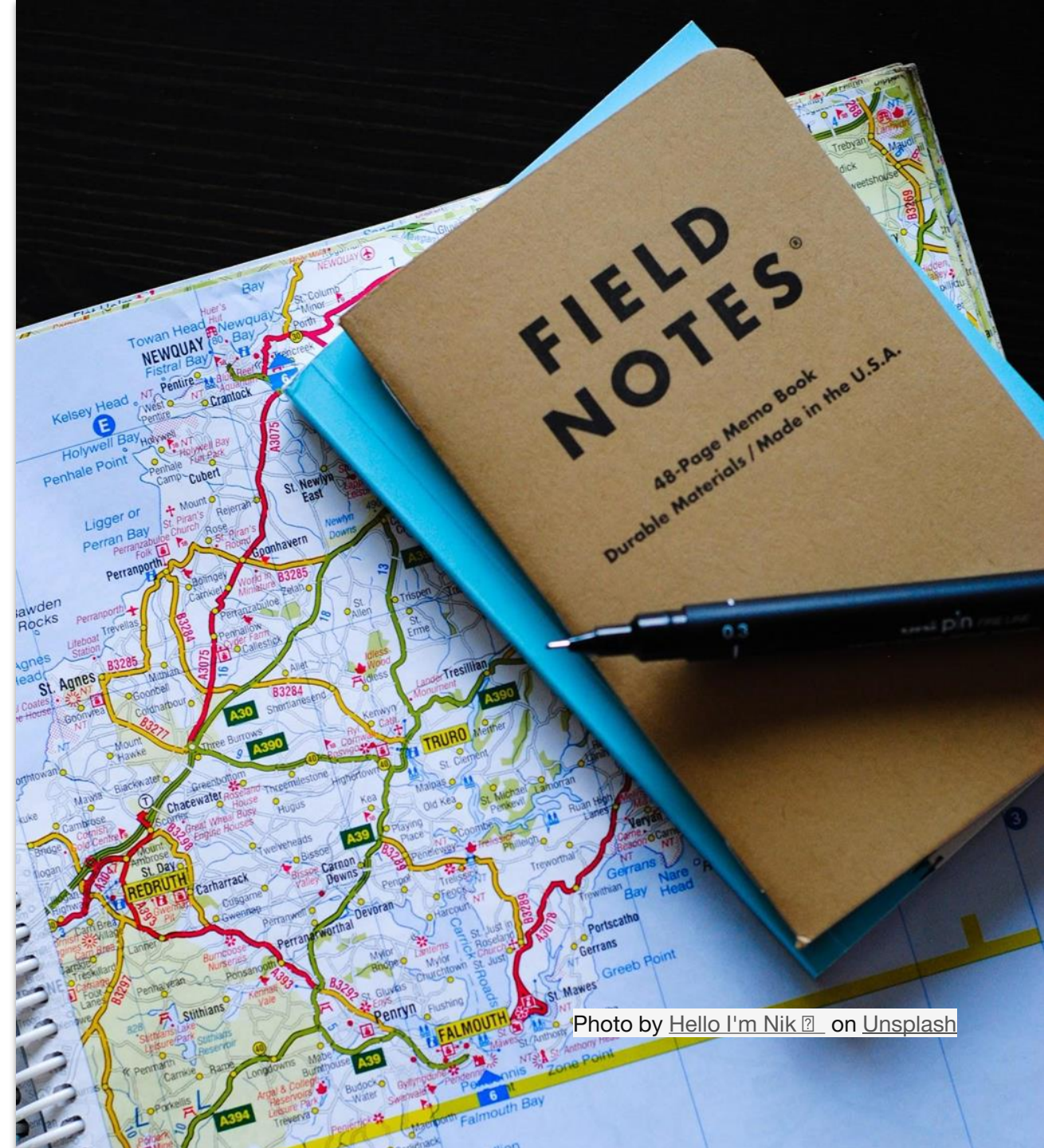- Q2 - 2021 Develop learning package

Build a Community Publication

The Turing Way - Make use of existing models of publishing

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. - *TTW*

- **Guide to FAIR data**
- **From Turing Institute - UK**
- **Based on GitHub**
- **Uses the Computational Publishing platform 'Jupyter Book' - soon to be the Executable Book Project**
- **Made by scientists for scientists**

The Turing Way (community around a publication)
https://the-turing-way.netlify.app/introduction/introduction.html
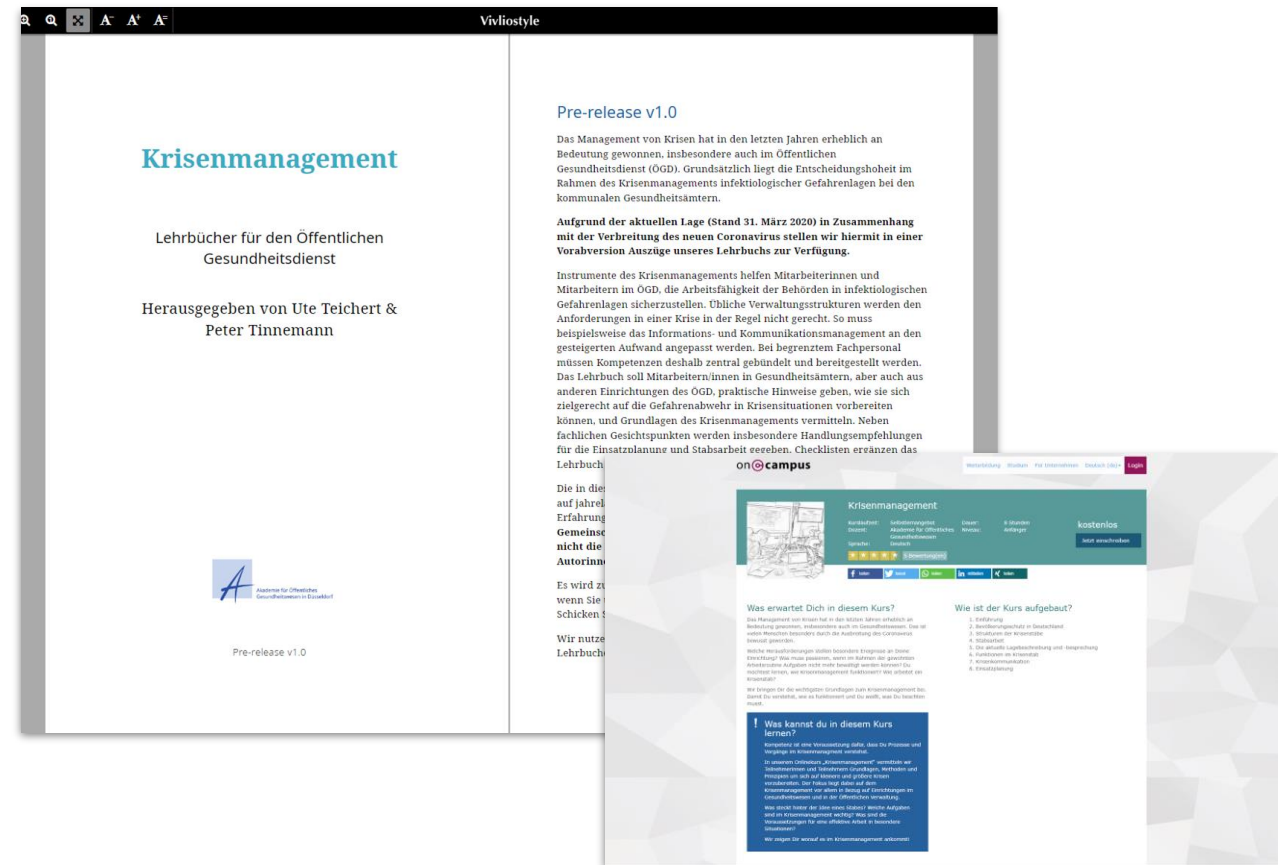
Book Sprint Methods / Rapid publishing

Goal oriented book production where contributors have a fixed time frame to author a book/chapter using online real-time collaborative tools.

First book sprint: *Wireless Networking in the Developing World* 2005 - 2 mill. downloads

Book sprints on Comparing Global COVID-19 Tracking and Tracing in Public Health Systems

- Organising book sprints for public health systems to share knowledge in two day sprints
- Then back of house 2 week reviews
- Multi-format
- Multilingual, 1st - German, then English, Korean, and Brazilian Portuguese +

Crisis Management 2020 -

https://doi.org/10.25815/h0ec-f967

The Library Carpentries

Library Carpentry focuses on building software and data skills within library and information-related communities. - LC

- **Successful community owned endeavour for training provision**
- **Train-the-trainer model (membership)**
- **Strong pedagogic methodology**
- **Something we could connect to by creating a Carpentries module from the book**

The Library Carpentries
https://librarycarpentry.org/

Connecting the book to online learning

Content Interoperability

The proposed guide is collated as content modules and can be sychronised using GitHub or GitLab to produce the core of online learning courses.

Additional questionnaires and scoring need adding, but again these are designed into the process.

Moodle is a favored platform but adapting to others is also designed from the start by being interoperable.
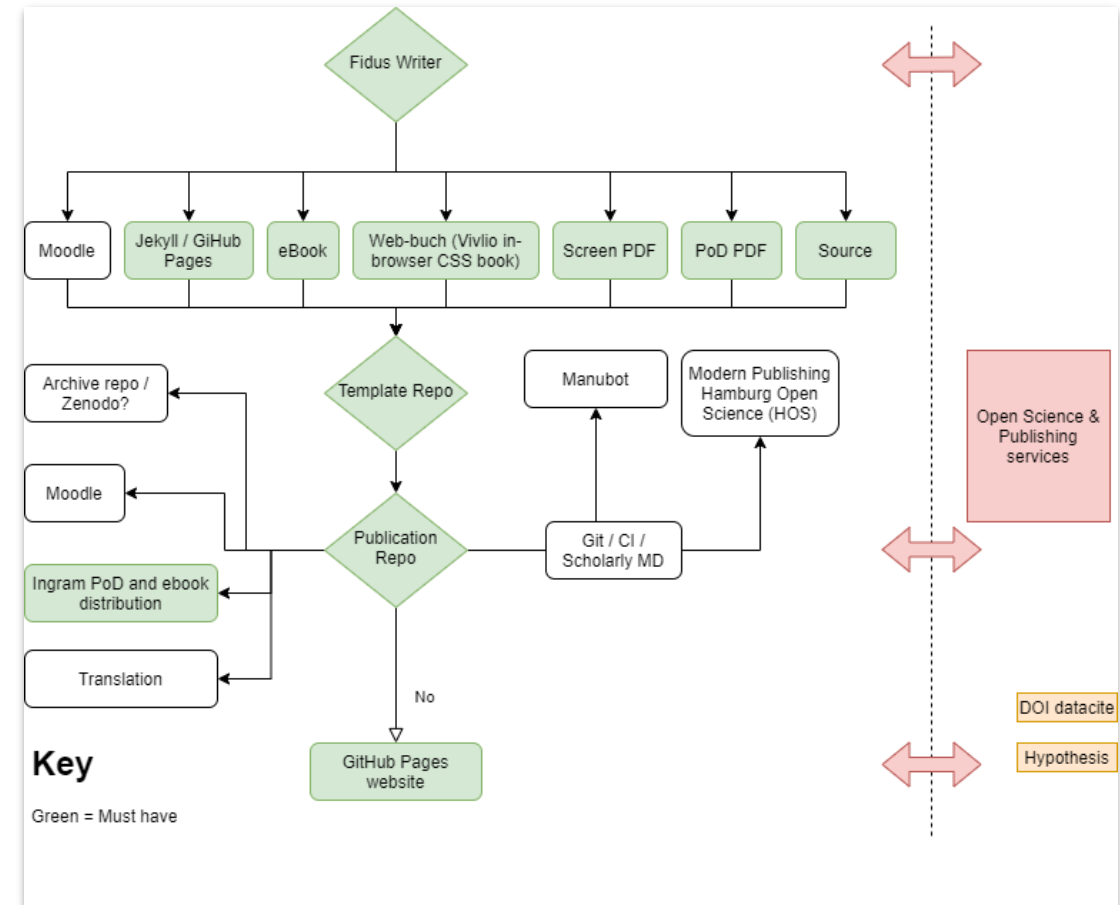

Open Science MOOC
https://opensciencemooc.eu/

Techstack

All open-source / tool chains

1. **Fidus Writer – Real-time editor**
2. **GitHub infrastructure – versioning**
3. **Scalable – modern cloud infrastructure**
4. **Multi-format publication ready outputs**
5. **Multiverse interoperability**
6. **Open Science Service Ready**
7. **Multilingual R/L, L/R translation**
8. **Real-time validation**
9. **Service metering**
10. **Interface Moodle and LMSs**
11. **Metadata – extensive, Wikidata, PIDs**
12. **Contributors and roles**
13. **Jupyter Notebooks**

ADA - Advanced Document Architecture
https://github.com/TIBHannover/Rapid-Collaborative-Health-Publishing

Project organisation

- **A project of the LIBER CSWG coordinated by Simon Worthington**

- **Groups to be setup by coordinator: Review, Editorial, and Production**

- **Invitation for LIBER members to get involved; talk to potential partners**

- **Book sprints and iterative releases**

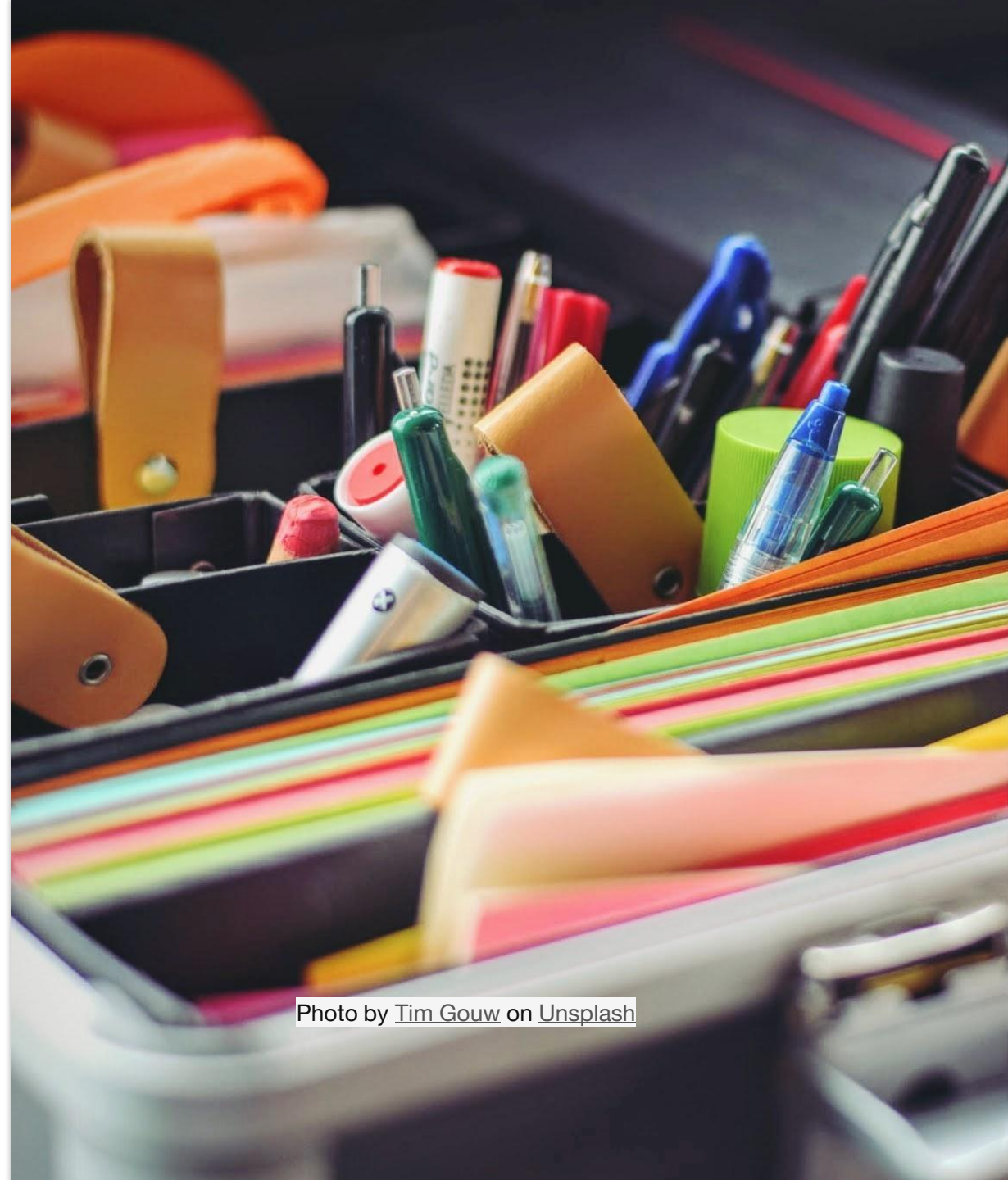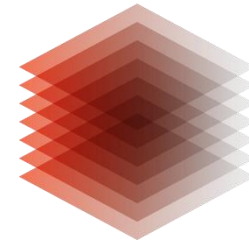- **Release on GitHub as Community owned and maintained publication**

Photo by Tim Gouw on Unsplash

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Thank you!

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