



Open Life Science

Open Data

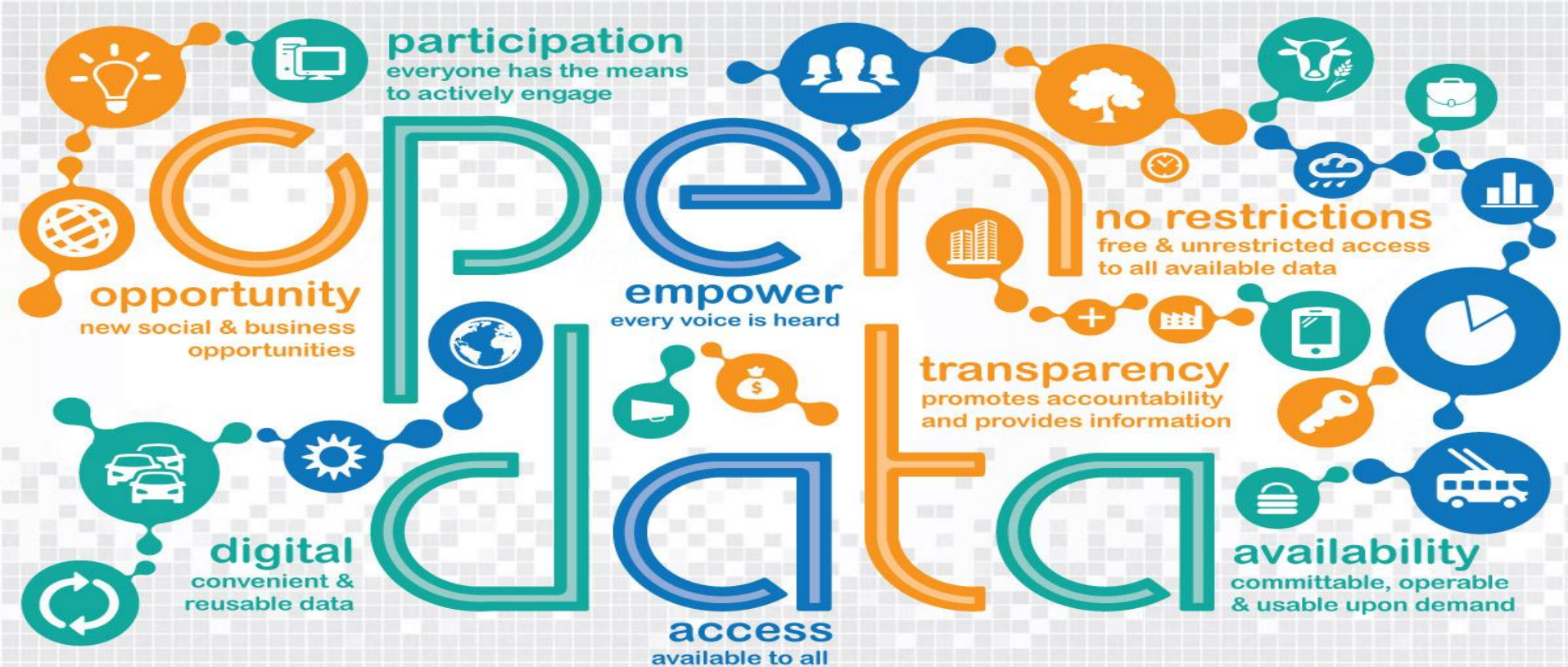
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Availability & Access

Open data must be available as a whole and at no more than a reasonable reproduction cost, preferably by downloading from the internet in a convenient and modifiable form.

Reuse & Redistribution

Open data must be provided under terms that permit reuse and redistribution including the interoperability with other datasets.

Universal Participation

Everyone must be able to use, reuse and redistribute - there should be no discrimination against fields of endeavour or against persons or groups.

Open data

Open data is data that can be freely used, re-used and redistributed by anyone

[What is open data? from the
opendatahandbook.org](https://opendatahandbook.org)



*an
unusual
invitation*

Image by [Bryan Mathers](#) CC BY-SA

5 Stars of open data

★	make your stuff available on the Web (whatever format) under an open license
★★	make it available as structured data (e.g., Excel instead of image scan of a table)
★★★	make it available in a non-proprietary open format (e.g., CSV instead of Excel)
★★★★	use URIs to denote things, so that people can point at your stuff
★★★★★	link your data to other data to provide context

Data Ethics - all the way



By [Heather Krause](#), [February 6, 2019](#) In [Case Studies](#), [Experts](#)

Linked data > the reason that open data exists

Any data exchange ecosystem requires **standards** - a **syntax** that provides a way to organize knowledge for subsequent retrieval.

Vocabularies/Ontologies > See W3.org

It explicitly describes the nature of that **relationship**. By providing **context** to its **connection**.

It creates knowledge

FAIR principles

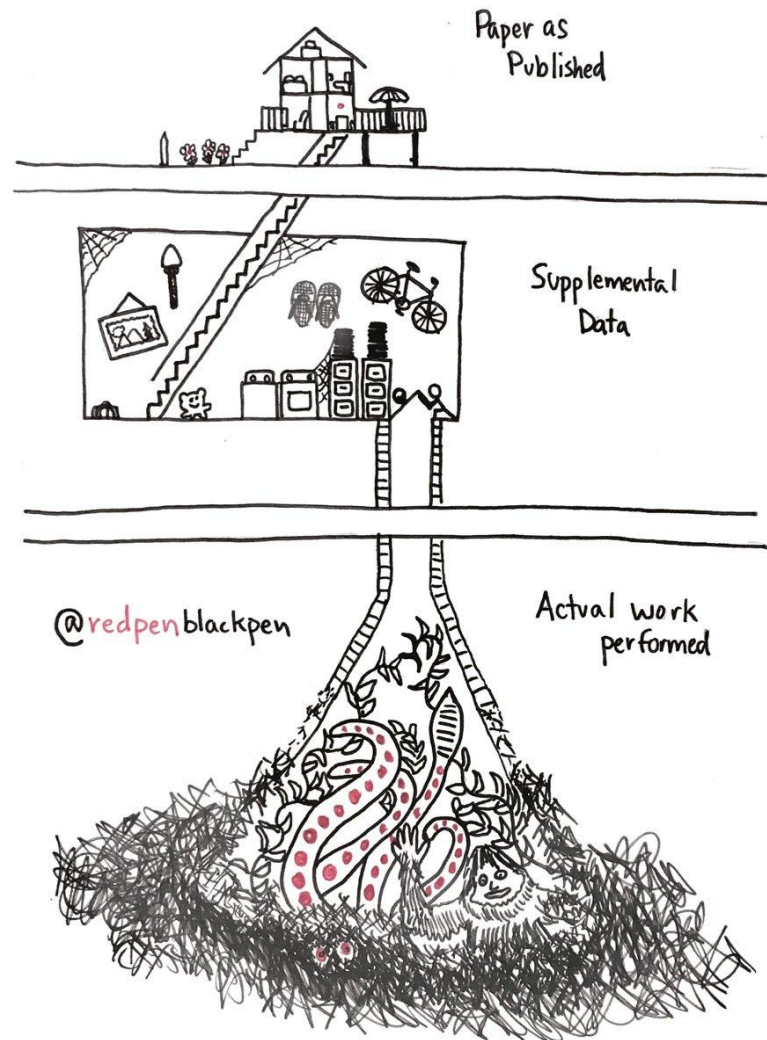
Findable

Accessible

Interoperable

Reusable

[The FAIR guiding principles for scientific data management and stewardship \(Wilkinson 2016\)](#),
[Go-FAIR.org](#), [FORCE11 FAIR Data principles](#),
[Towards FAIR principles for research software \(Lamprecht, 2019\)](#), [RDA FAIR for research software](#)



Projects/communities

- [Open Data Handbook](#) by the [Open Knowledge Foundation](#)
- Read more DCC Digital Curation Centre - [Open data](#)
- [Foster Open Science](#) - Open data materials
- [The Turing Way](#) - reproducible research
- OpenCon - a global conference [@open_con](#)
- [Research data Alliance](#) - building the social and technical infrastructure to enable open sharing and re-use of data.

Around the world we are facing a range of social, economic and environmental challenges. Do you think open data can help? - Look for a hackathon locally or online, use open data portals.

Thank you!

EVERYONE ON THE ROAD TO OPEN SCIENCE



OPEN DATA



OPEN ACCESS



OPEN EDUCATIONAL
RESOURCES



CITIZEN
SCIENCE



OPEN SOURCE



You can reach out to @orchidoo on twitter

On the road to Open Science (By Patrick Hochstenbach CC BY 4.0)