

## Summary of Day One

**KRECon 2021: Open Science - Challenges and Opportunities**

12 Nov 2021, National Library of Technology, Prague

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# About me



[@EvaHnatkova](#)

- Open Science Coordinator at
  - National Library of Technology
  - UCT Prague
- Eurodoc former president
- PhD in process engineering



# Open Science - Challenges and Opportunities

12/11/2021



# Session #1: Future of Scholarly Publishing

**Kostas Glinos**



**Johan Rooryck**



**Rebecca Lawrence**



<https://krecon.cz/event/4/page/11-speakers>

# Session #2: Future of Research Data

**Karel Luyben**



**Barend Mons**



**Wolfram Horstmann**



<https://krecon.cz/event/4/page/11-speakers>

**OPEN SCIENCE:  
JUST  
SCIENCE  
DONE RIGHT**

Melanie Imming, & Jon Tennant. (2018, June 8). Sticker open science: just science done right

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GLOBAL

# What is Open Science?

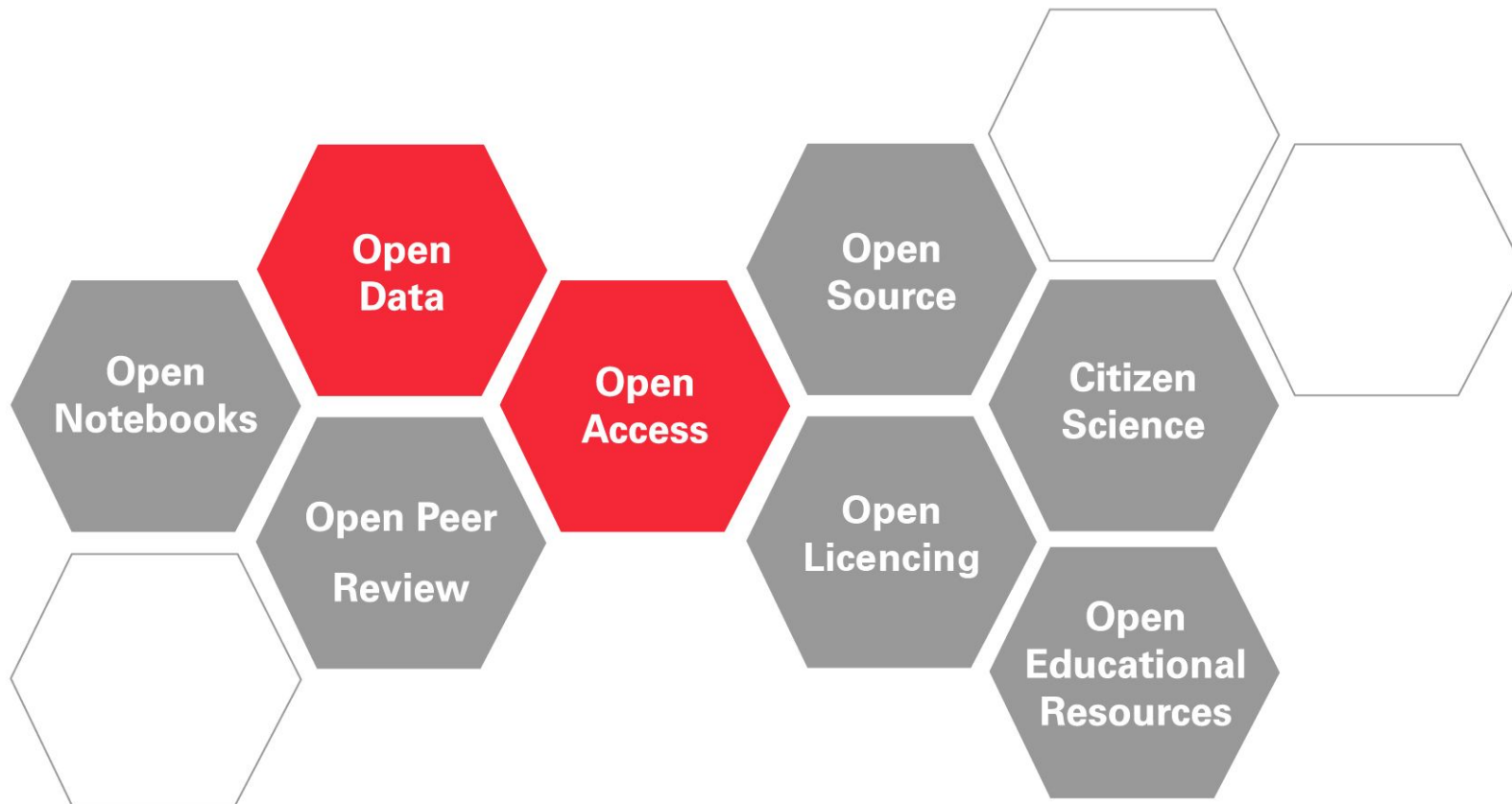
“An approach to the scientific process based on open cooperative work, tools and diffusing knowledge.”

## Definition, Horizon Europe





# Open Science: an umbrella term





# Why Opening Science Up?

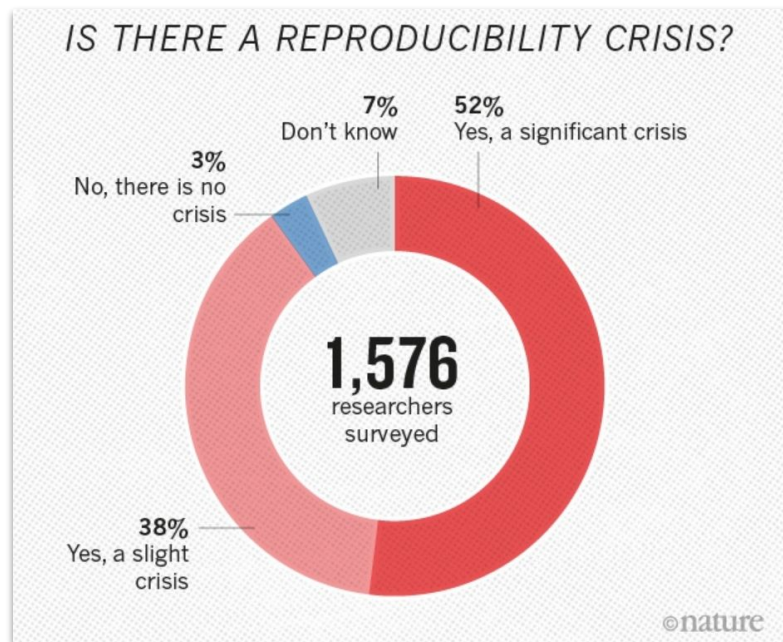
- ↑ quality of research (reproducibility, trust in science)
- ↑ benefits for society (knowledge based society)

## Various research outputs, also processes

Venues are there already (e.g. innovative publishing platforms)

# Reproducibility “crisis”

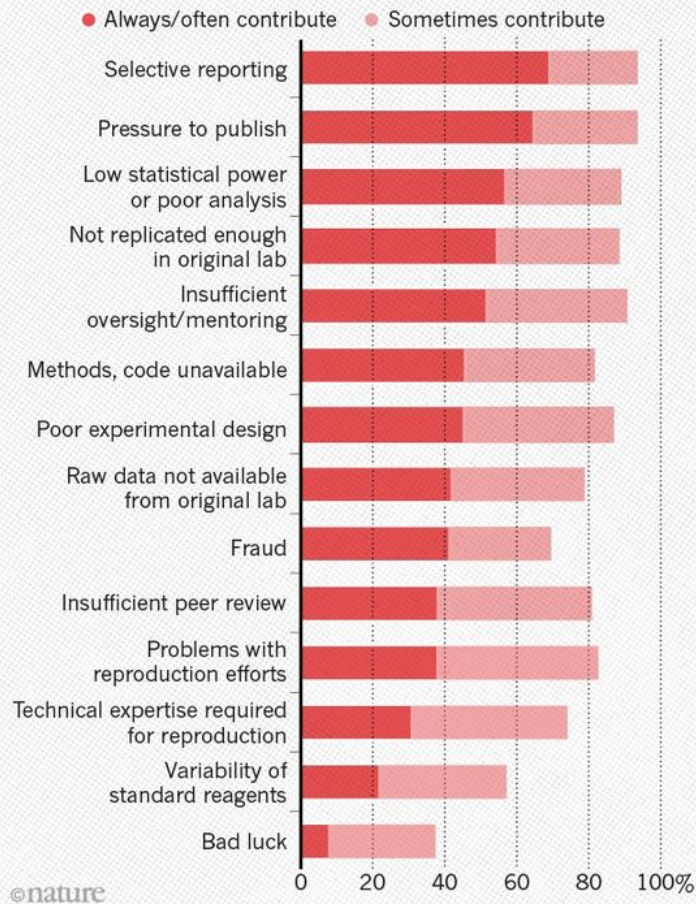
- 50% of research is not reproducible!!




[Monya Baker \(Nature, 2016\)](#)

## WHAT FACTORS CONTRIBUTE TO IRREPRODUCIBLE RESEARCH?

Many top-rated factors relate to intense competition and time pressure.



# Open Research Publishing Platforms



European Commission

Research and Innovation

## Open Research Europe

Browse Gateways & Collections How to Publish About Blog

### Rapid & Transparent Publishing

Fast publication and open peer review for research stemming from Horizon 2020 and Horizon Europe funding across all subject areas.

<https://open-research-europe.ec.europa.eu/>

## Wellcome Open Research

BROWSE GATEWAYS & COLLECTIONS HOW TO PUBLISH ABOUT BLOG MY ACCOUNT SIGN IN

### Rapid & Transparent Publishing

A new way for Wellcome-funded researchers to rapidly publish any results they think are worth sharing

[SUBMIT YOUR RESEARCH](#) [BROWSE ARTICLES](#)

Powered by F1000Research

# Research Assessment

BUT to practice Open Science we need **Incentives & rewards**

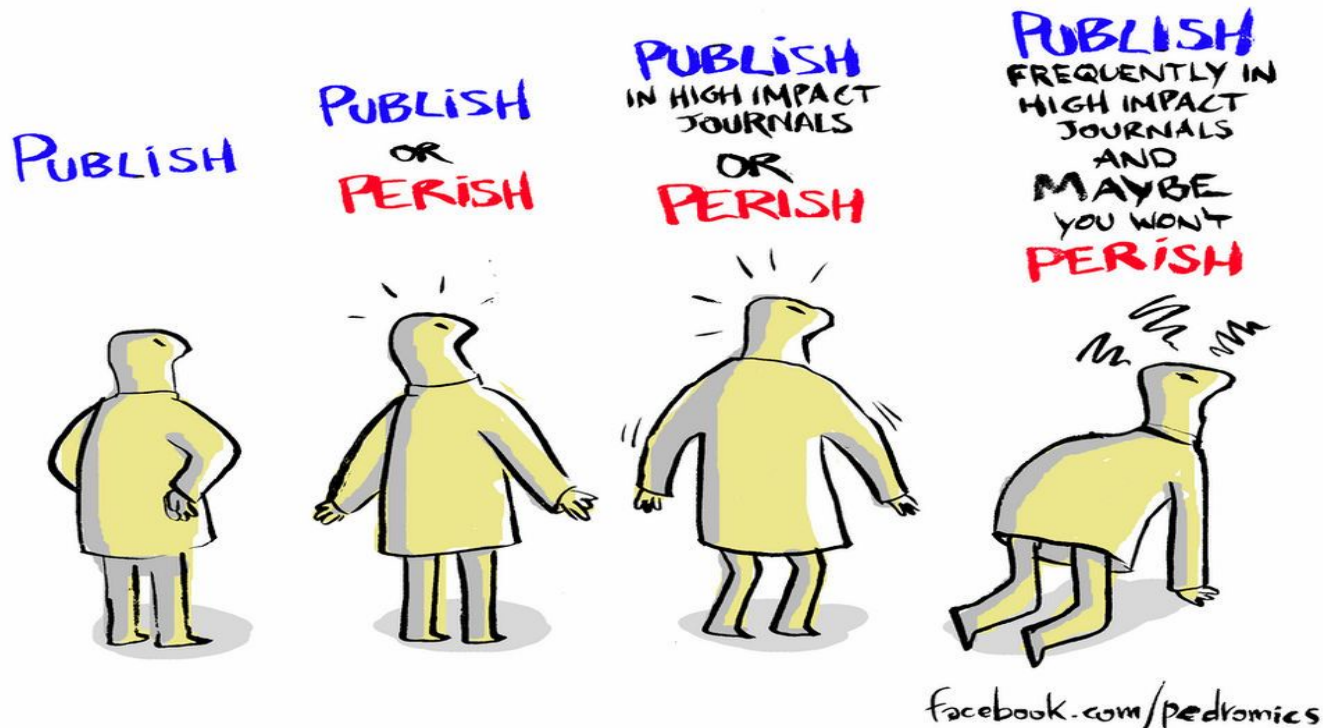
## Current system incentives bad science

- only publications (with high IF)
- not another results/outputs of research
- it encourages individuals rather than collaboration

Today it is more important when you publish rather than what you publish

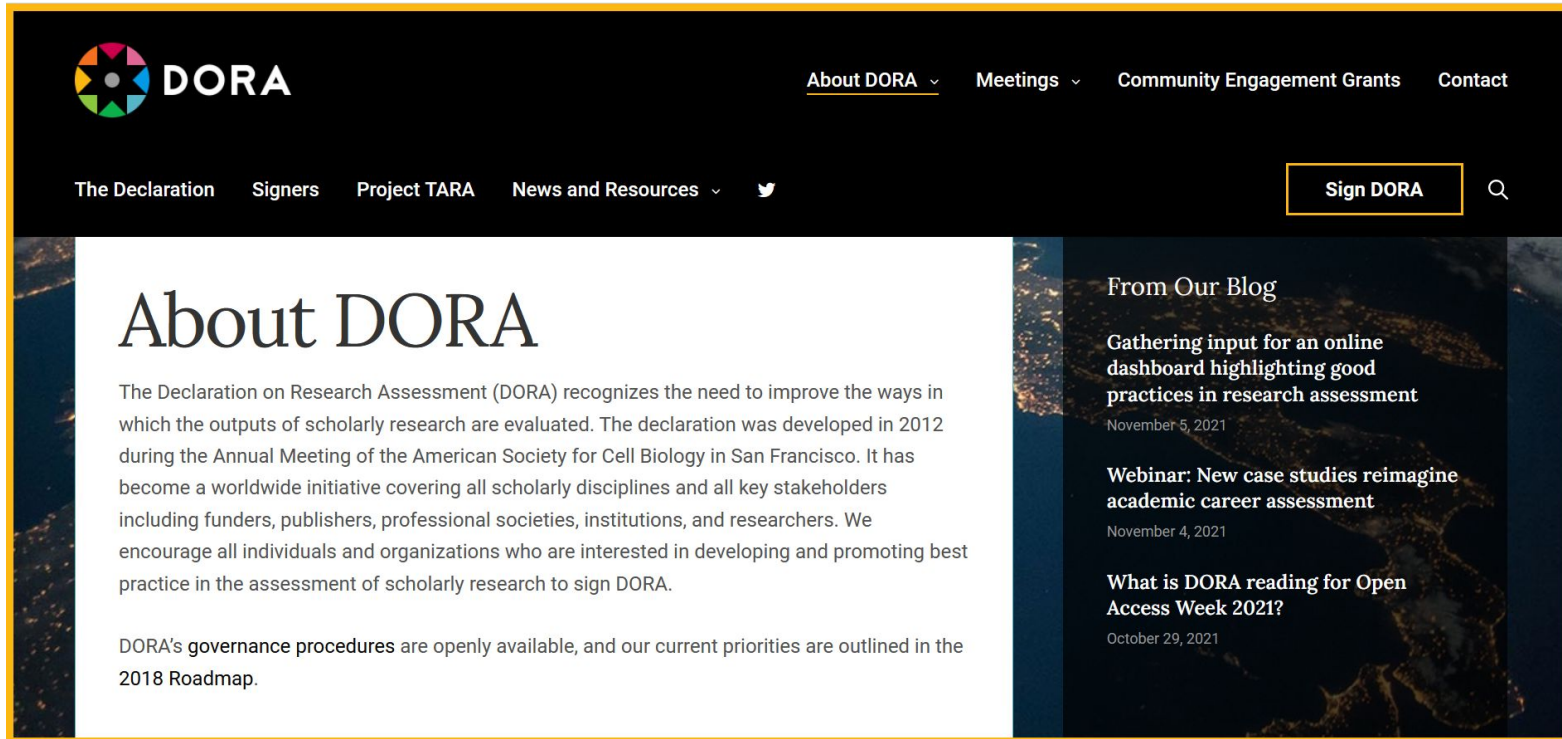
# The Evolution of Acamia

'Publish or perish' mentality





# San Francisco declaration on research assessment



The screenshot shows the DORA website homepage. The header is dark with the DORA logo (a colorful star) and the text "DORA". Navigation links include "About DORA", "Meetings", "Community Engagement Grants", and "Contact". Below the header, there are links for "The Declaration", "Signers", "Project TARA", and "News and Resources", along with a Twitter icon. A "Sign DORA" button is highlighted with a yellow border. The main content area features a large heading "About DORA" followed by a paragraph explaining the declaration. To the right, there is a "From Our Blog" section with three entries: "Gathering input for an online dashboard highlighting good practices in research assessment" (November 5, 2021), "Webinar: New case studies reimagine academic career assessment" (November 4, 2021), and "What is DORA reading for Open Access Week 2021?" (October 29, 2021).

**DORA**

[About DORA](#) [Meetings](#) [Community Engagement Grants](#) [Contact](#)

[The Declaration](#) [Signers](#) [Project TARA](#) [News and Resources](#) [Sign DORA](#)

## About DORA

The Declaration on Research Assessment (DORA) recognizes the need to improve the ways in which the outputs of scholarly research are evaluated. The declaration was developed in 2012 during the Annual Meeting of the American Society for Cell Biology in San Francisco. It has become a worldwide initiative covering all scholarly disciplines and all key stakeholders including funders, publishers, professional societies, institutions, and researchers. We encourage all individuals and organizations who are interested in developing and promoting best practice in the assessment of scholarly research to sign DORA.

DORA's governance procedures are openly available, and our current priorities are outlined in the 2018 Roadmap.

### From Our Blog

**Gathering input for an online dashboard highlighting good practices in research assessment**  
November 5, 2021

**Webinar: New case studies reimagine academic career assessment**  
November 4, 2021

**What is DORA reading for Open Access Week 2021?**  
October 29, 2021

<https://sfdora.org/>

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# Plan S: Rights Retention Strategy

**Accelerate the immediate and full OA, no embargo, CC BY**

Funders under [cOAlition S](#) (27 organization worldwide) want the authors will publish in all journals (via 3 routes):

- Gold OA - inequality with APC
- Green OA - Resistance against the [Right Retention Strategy](#), that could be changed by **copyright law**
- Transformative Agreements

cOAlition S - moving away from IF ([principle 10](#))

**The simplicity of the RRS:**  
Always include the  
CC BY claim:

*“A CC BY licence is applied to the  
AAM arising from this submission”*

and

**Your AAM is yours to reuse  
and share as you please!**



# Shift the system

## Changing minds and practices

- Work together and coordinate it at a national level
- Important is that everyone is going one direction



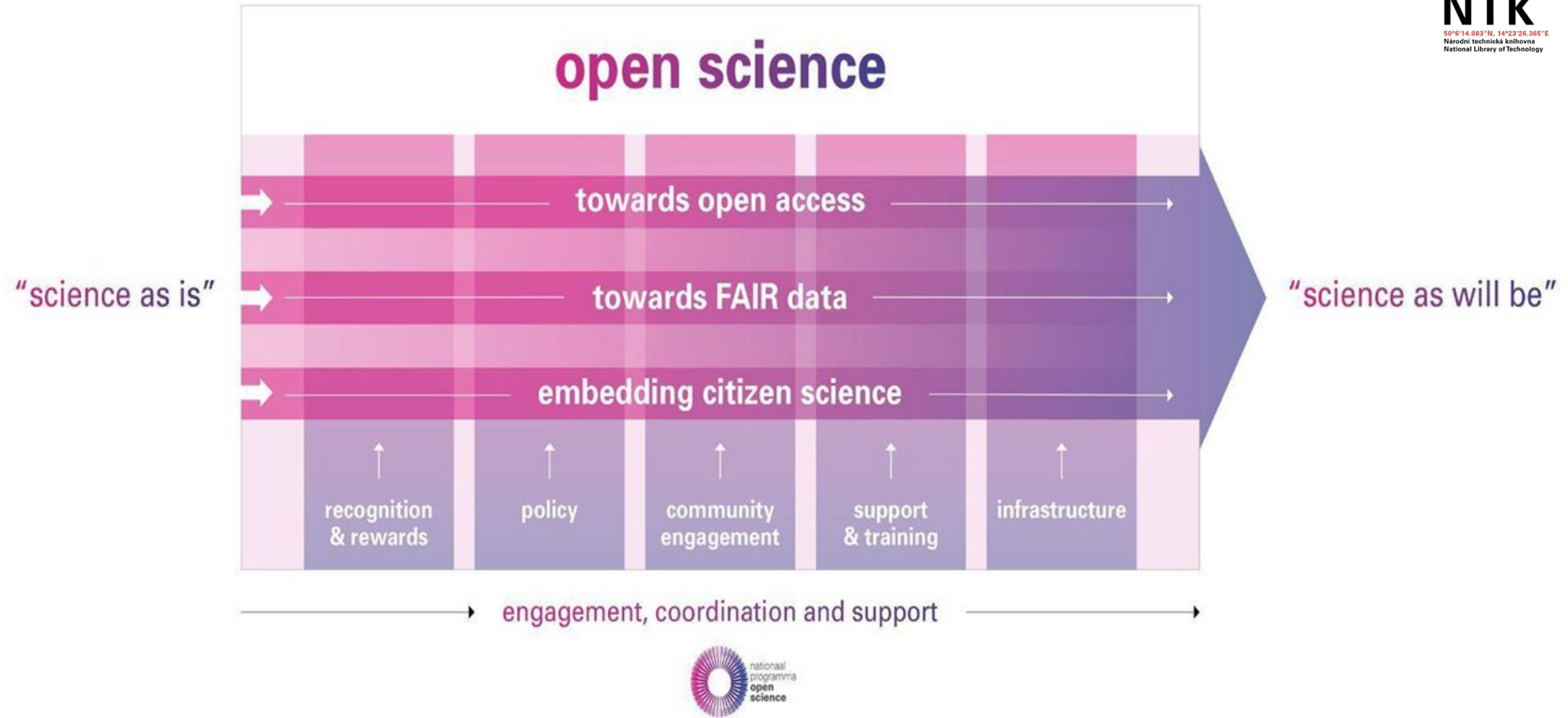
<https://www.openscience.nl/>



<https://conosc.org/>



<https://norf.ie/>



Source: Karel Luyben [presentation](https://www.openscience.nl/en/national-programme-open-science), KRECon 2021

[\[https://www.openscience.nl/en/national-programme-open-science\]](https://www.openscience.nl/en/national-programme-open-science)

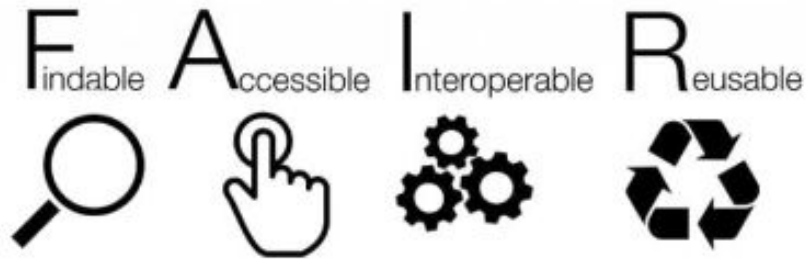
## European Open Science Cloud

an initiative of EC to promote Open Science practices

## Web of FAIR Data and related Services

- Federation of relevant existing and future data sources
- Virtual space where science producers and consumers come together
- 2040 - 50% FAIR Data

# Open vs. FAIR Data



OPEN  
DATA

## FAIR principles

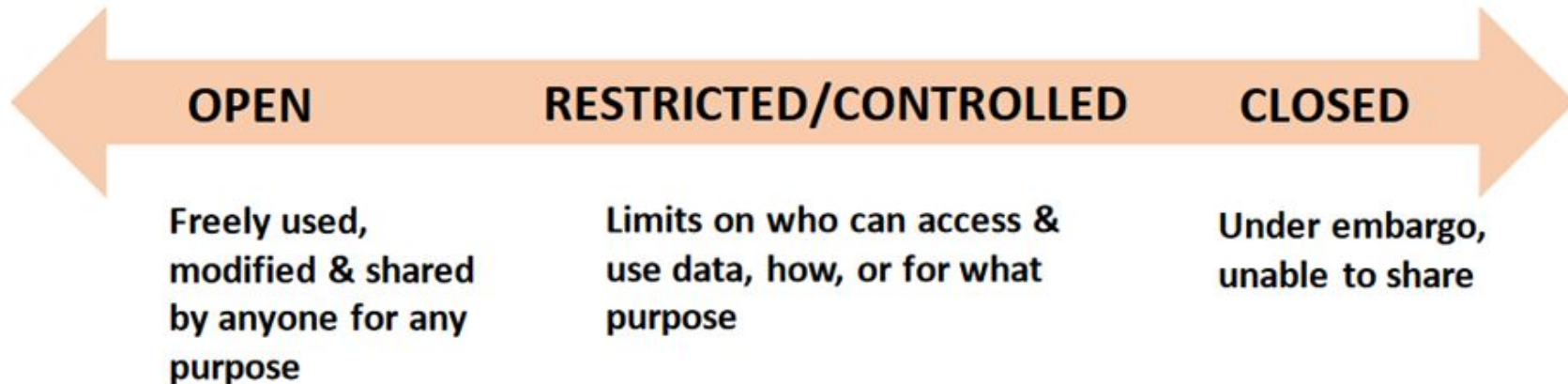
- **Findable** - rich metadata, keywords, persistent identifiers (e.g. DOI)
- **Accessible** - data in trusted repositories
- **Interoperable** - standards
- **Re-usable** - licenses



[Go FAIR](#) | [Hansen & al \(2018\)](#)

# FAIR Data – open by default

**FAIR data: “As open as possible, as closed as necessary”**





# FAIR principles



**FAIR\$FAIR**  
Fostering Fair Data Practices in Europe

**NTK**  
50°6'14.083"N, 14°23'26.365"E  
Národní technická knihovna  
National Library of Technology

## F<sub>indable</sub>

- F1. (meta)data are assigned a globally unique and persistent identifier
- F2. data are described with rich metadata (defined by R1 below)
- F3. metadata clearly and explicitly include the identifier of the data it describes
- F4. (meta)data are registered or indexed in a searchable resource

## A<sub>ccessible</sub>

- A1. (meta)data are retrievable by their identifier using a standardized communications protocol
  - A1.1 the protocol is open, free, and universally implementable
  - A1.2 the protocol allows for an authentication and authorization procedure, where necessary
- A2. metadata are accessible, even when the data are no longer available

## I<sub>nteroperable</sub>

- I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation
- I2. (meta)data use vocabularies that follow FAIR principles
- I3. (meta)data include qualified references to other (meta)data

## R<sub>eusable</sub>

- R1. meta(data) are richly described with a plurality of accurate and relevant attributes
  - R1.1. (meta)data are released with a clear and accessible data usage license
  - R1.2. (meta)data are associated with detailed provenance
  - R1.3. (meta)data meet domain-relevant community standards

Wilkinson, M., Dumontier, M., Aalbersberg, I. et al. The FAIR Guiding Principles for scientific data management and stewardship. *Sci Data* 3, 160018 (2016). <https://doi.org/10.1038/sdata.2016.18>

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# FAIR Data

- Invest 5% or more of total research budget to make research data reusable.
- 20 researchers - 1 datastewards.
- Datastewards - PhD, separate status, permanent positions.
- Otherwise there will disappear to industry.
- Machine actionable.



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WORLD VIEW | 25 February 2020

# Invest 5% of research funds in ensuring data are reusable



It is irresponsible to support research but not data stewardship, says Barend Mons.

<https://www.nature.com/articles/d41586-020-00505-7>

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% → o/o

?

POWER

SUPER POWER

POWER

POWER

POWER

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# Thank you for your attention

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