Towards a National Open Research Culture, with a Training Community of Practice

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This talk is about building open research cultures.

We'll talk about how this process benefits from both institutional support and grassroots collaborative efforts.

Our primary focus will be an open research Training Community of Practice that we are facilitating.

But before we do that, we need to address some framing questions:

What is open research?
Why is it important?
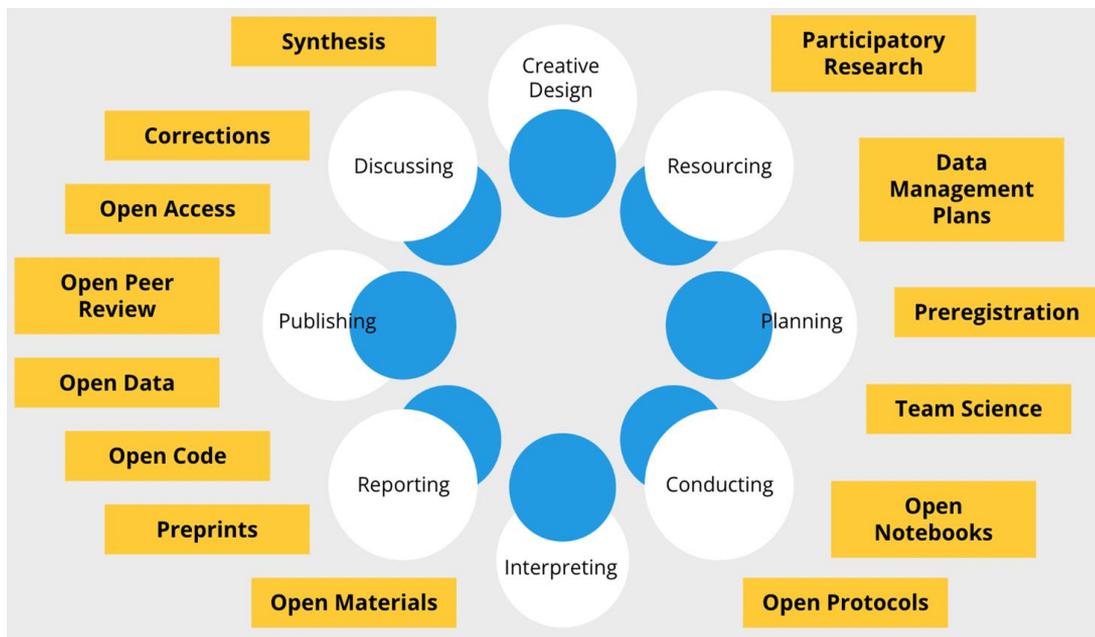How does it relate to research culture?

Open Research Practices

Using open and transparent practices throughout the research workflow.

- Study design
- Methods and materials
- Data
- Code and software
- Publication

Resulting in outputs with…

- No restrictions on access
- Licences that facilitate reuse
- Persistent identifiers (citable)
- Standardised open metadata

Image: Center for Open Science (CC BY)

Open Research <u>Principles</u>

- **Transparency, scrutiny, critique and reproducibility**
  'Show your working' reinforces the rigor of results

- **Equality of opportunities**
  Equal opportunity to access, contribute to and benefit from science

- **Responsibility, respect and accountability**
  Public accountability and trust in research

- **Collaboration, participation and inclusion**
  Collaboration over competition

'As open as possible, as closed as necessary'

UNESCO Recommendation on Open Science

Why it matters? Policy perspective

CERN WWW (1989), Budapest (2002), Berlin (2003) declarations, Open Government Initiative (2009) ...

► **REF 2029**:
- ▢ › Journals, conference proceedings, ~~and long form publications~~ will need to be open access (*although there is <u>no</u> open access requirement for data, software, supplementary information*).
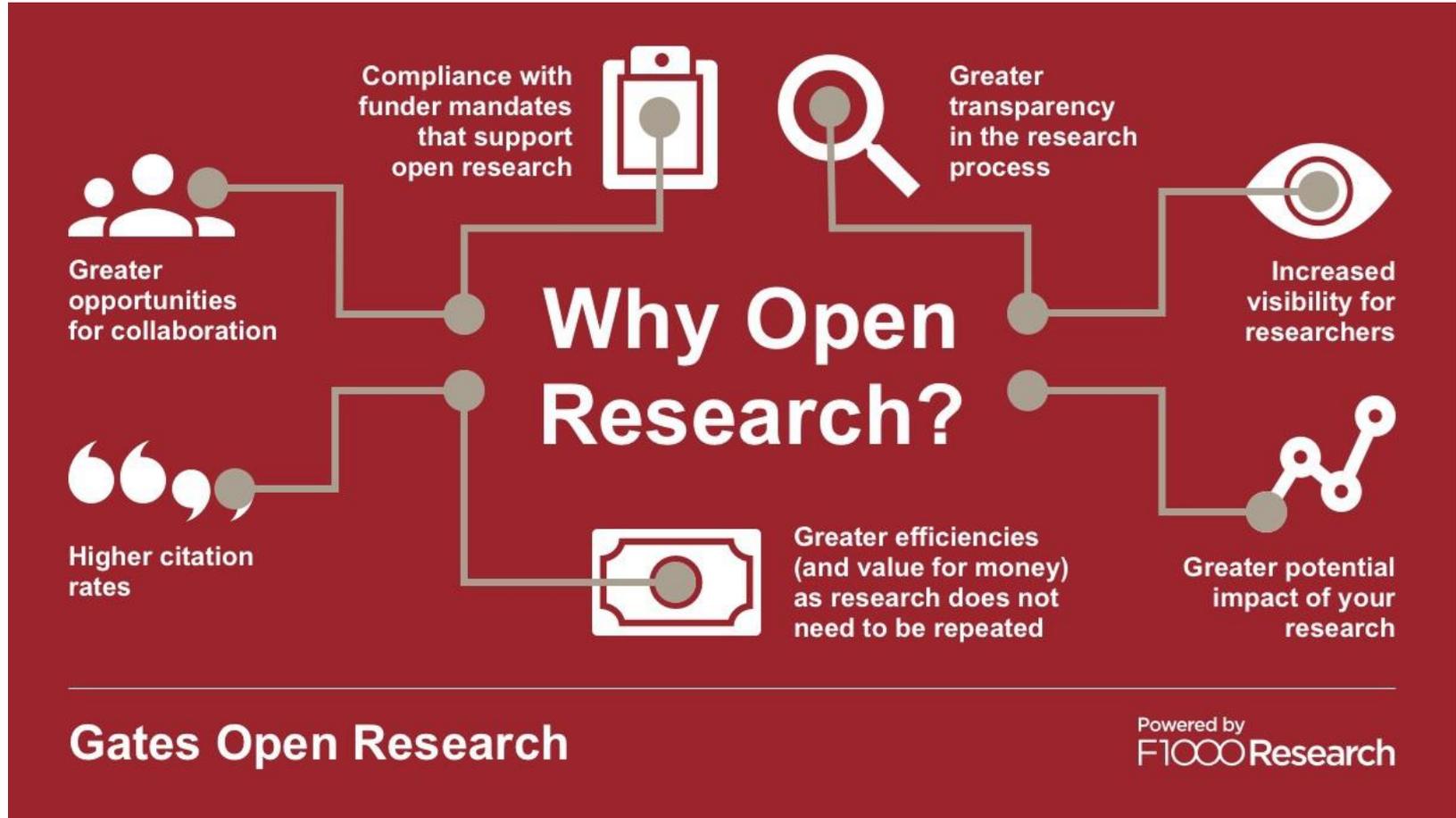- 🥕 Broader considerations around openness are expected be a key part of **People Culture and Environment**

► **UKRI**: "Publicly funded research data are a public good and produced in the public interest"

► And: "<u>Open Science is at the centre of European research policy</u>."

Why it matters? Funder perspective (e.g., Gates Foundation)

Why it matters? Institutional perspective

Institutions are both shaped by and help to shape research culture.

► At **Oxford Brookes**, senior management has expressed explicit buy-in to the relevance of openness across our strategy — and _Generosity of spirit_ is a guiding principle.
  ○ Advisory policy on open research: "_As open as possible, as closed as necessary_"

► At **Newcastle,** openness and integrity is one of our 4 pillars of research culture and a "top priority project".
  ○ _OR training, is used, e.g., to help develop open research champions._

WHAT DEFINES A POSITIVE RESEARCH CULTURE AT NEWCASTLE?

COLLABORATION AND COLLEGIALITY

FREEDOM TO GROW AND EXPLORE

FAIRNESS AND INCLUSION

OPENNESS AND INTEGRITY

https://www.ncl.ac.uk/research/culture/

Image: Center for Open Science strategy for culture change (CC BY)

Question for reflection:

There are no right or wrong answers.
Drop your thoughts in the chat!

(BTW, chat notes won't be in the recording.)

What does an open research culture look like in practice?

Open Research & Research Culture

OR and other research culture topics overlap (and interact):

- Equity, Diversity, and Inclusion (EDI) *(ensuring **all** voices & perspectives are listened to; strive for meaningful and equitable engagement).*

- Reproducibility & transparency *(thanks to open/repeatable methods and open data)*

- Career development *(helping researchers build valuable — and appropriately valued — skills)*

- Public involvement *(fostering trust, engagement, and societal impact)*

- Research Diversity *(doing research in new and innovative ways, with new kinds of outputs)*

- *etc.*

Image source: Warwick Medical School

A question for reflection

We'll discuss at the end, there are no right or wrong answers. Feel free to drop your thoughts in the chat.

How can we ensure the sustainability of open research communities?

Introducing UKRN

- Origin and aims

The UK Reproducibility Network

"UK Reproducibility Network[*] is **a peer-led consortium** dedicated to fostering a **research culture** that prioritizes rigor and transparency. Through collaboration, advocacy, and training, UKRN aims to strengthen the quality and trustworthiness of research across the UK."

*: Typically functioning as a "network of networks", with "local networks" at over 50 UK institutions

Research culture is complex

"Researchers, institutions, funders, and publishers are considering how to improve research culture and quality, but **no single part of the research ecosystem can effect change on its own**. The UK Reproducibility Network (UKRN) was established to facilitate the necessary coordination."

— "From grassroots to global: A blueprint for building a reproducibility network" *PLOS Biology* (2021)

The Open Research Programme

(aims, institutions, funding, people/roles)

Introducing the Open Research Programme

"Growing and embedding open research in institutional practice and culture"

Make it Required

Make it Rewarding

Make it Normative

Make it Easy

Make it Possible

UKRI

Research England
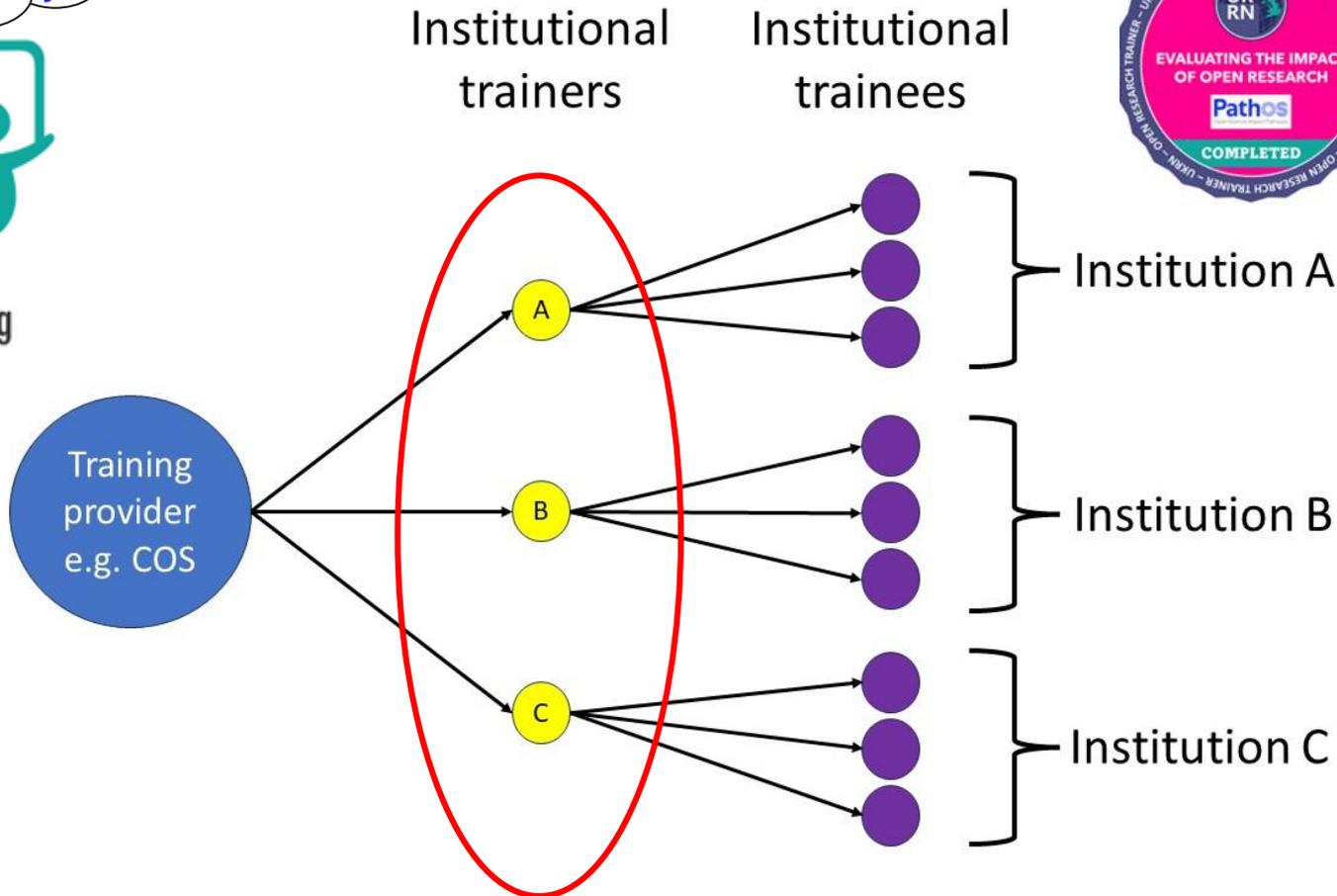
Training

Evaluation

Sharing & Integrating

Management & Sustainability

Open & Responsible Reward Recognition

A Community of Practice for train-the-trainer alumni

"**Communities of practice exist to develop members' capabilities, and to build, and exchange knowledge.** People self-select to participate in the community. The community is held together by possession, commitment, and identification with the group, and with its domain of expertise. The community lasts as long as there is sufficient interest." [paraphrase]

Communities of practice: the organizational frontier. By Etienne Wenger and William Snyder. *Harvard Business Review.* January-February 2000, pp. 139-145.

Training is important… *but* training alone isn't enough to achieve the project goals (including high uptake of training)

"… how do individuals and research groups work together to build and sustain a community invested in open research practices?" — "Growing and embedding open research in institutional practice and culture"

Benefits of a Community of Practice *for trainers*:

    - Peer learning & mentoring

    - Space for (informal) evaluation & improvement

    - Normalizing open practices by sharing resources, triumphs and tribulations.

Our experience - getting started

▶ Guidance on "How to start a community"

    ○ Community Canvas, Start your own OSC

▶ Inspiration from good practice in this area

    ○ OpenAire, RCEN

▶ Advice from our external speakers!

In the short term, RCEN aims to counter siloed working and isolation among research culture enablers, fostering a positive environment for collaboration on shared challenges.

In the medium term, RCEN strives to improve the professionalisation of research culture enablers, through opportunities to improve our thought leadership, mentoring and advocacy.

In the long term, RCEN hopes to have mobilised momentum around key challenges and to have contributed to meaningful research culture change through research on research culture projects and other collaborative initiatives.

All too often, research institutions work disparately on separate initiatives, when synergy would be far more likely to reduce duplication and achieve long-term change.

Role of the Training community of practice within the Training project

Rationale from the COS model [△] (and COM-B + NPT): training directly increases individual **capacity** — but more tangible change

["**Make it Normative**", "**Make it Rewarding**"]

requires an environment (culture) in which participants can apply open research practices, in a way that is appropriate to disciplinary norms, with support, reward and recognition.

- **We expect the national open research culture to co-develop with institutional cultures.**

Who is our community?

Numbers, %signup, roles/identity

———

About this Community

Membership (134 members, 28 institutions)

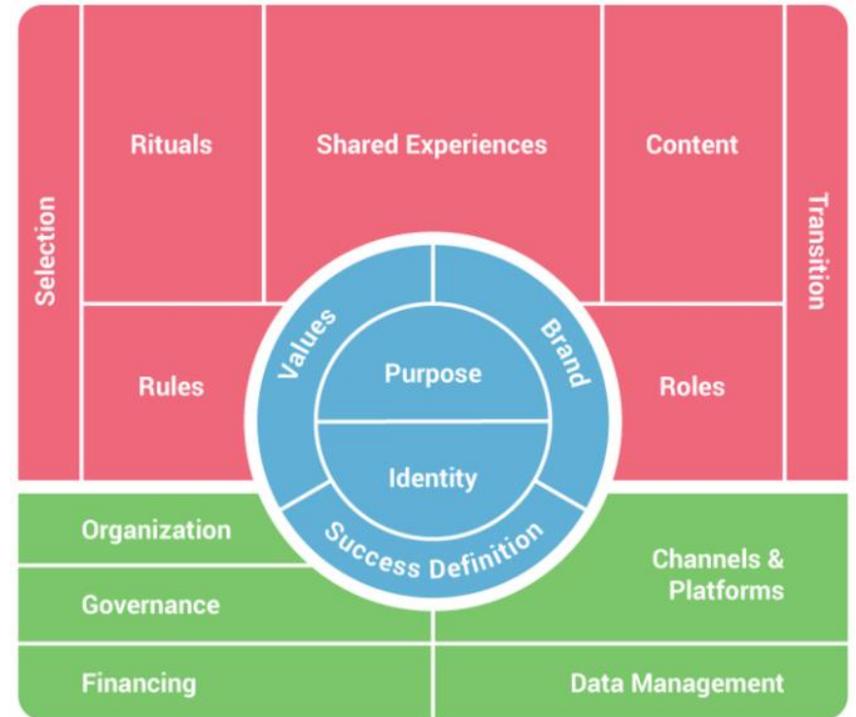- Participants of UKRN train-the-trainer courses

Purpose

- Connect with others beyond your institution to support best practice in open research training

Activities

- Reflect on training experiences, share ideas, discuss approaches and collaboratively develop resources
- Encourage community co-design

Codesign exercises

We used the Community Canvas in codesign exercises, and produced a "v1" guidebook that describes the community.

The Community Canvas

+

UKRN Open Research Training Community Co-design

The form is based on the Community Canvas (https://community-canvas.org/). We will ask you to consider aspects relating to the identity, experience a[...] community. Your contributions will help shape this community, inform future activities and contribute to the development of a community handbook.

There are 15 questions, 5 of which are open-ended, and the form is anonymous by default as long as you don't add identifying information in the free-[...] will only use submitted information for community design purposes and will delete all entries here after 3 months. Our synthesis of this information wi[...] transparently to the community in the form of a community handbook

1. Motivation to engage with community activities

Overall, how motivated do you feel about participating in activities running through this community?

1=Rarely join and never contribute; 10=Always join and often contribute.

1	2	3	4	5	6	7	8	9

2. How likely are you to participate in the following types of community activities?

	Very unlikely	Unlikely	Undecided	Likely	Very likely
Workshops (invited speakers)	○	○	○	○	○

Financing

Data Management

Open Research Training Community Guidebook

Authors (Z-A): UKRN Open Research Training Community.

This document was written collaboratively by members of the UKRN open research training community through a co-design activity based on use of the Community Canvas. It is intended to codify the identity, experience and structure of this community, including the purpose, values, rules, roles, experiences and platforms.

Contents

Purpose

Why does this community exist?

"*I hope to continue developing my knowledge of Open Research practices, and improving my capability to advocate for, and train others in, Open Research.*"

- Anon. UKRN open research training community co-design survey (2024)

The goal of this community is to help accelerate the uptake of open research practices through an increase in the quantity and quality of training provided at URKN open research programme institutions

Community Values

This is a supportive community that values **cooperation**, **collaboration** and **open sharing**. Members work together to improve the training they provide and to share lessons learned and relevant resources with this community. We also welcome **constructive feedback** on how the ORP and this community can better support members to deliver their training.

This is a place for **ongoing professional development**. Community activities are intended to **help members develop** their knowledge and skills in open research training. We **encourage members to participate** in these activities and where possible, to help support the development of other members.

We value community contributions. Where **members contribute** to community activities, take on supporting roles such as becoming a community champion or help create content intended to be shared publicly via UKRN, they will be acknowledged appropriately.

This community is **a safe space**. Nothing that is said within the community should be attributed to those who said it outside the community without their permission.

We aim to provide **a welcoming and supportive environment** for all people, regardless of background or identity. We are committed to giving everyone the opportunity to participate in community activities in ways that suit them. Community activities are run in an informal, but professional manner and using a range of participatory approaches.

Activities: Scheduled

Community-led workshops

Usually attended by 15-25 T3s

Autumn 2024/25

Date	Topic	Facilitators
Sep	Community co-design	Steve Boneham (Newcastle)
Oct	Approaches to training and CPD	Anna Korzeniowska (Surrey), Louise Saul (Southampton)
Nov	UKRN T3 resources	Kirsty Merrett (Bristol)
Dec	Open research summer school	Sam Westwood (KCL)
Jan	Community co-design review	Steve Boneham (Newcastle)
Feb	Co-producing an OR training handbook	Joe Corneli (Oxford Brookes)
Mar	Epistemic diversity and OR training	Pen-Yuan Hsing (Bristol)
Apr	Lessons from The Carpentries	Jannetta Steyn & Carol Booth (Newcastle)
May	Reward and recognition for OR	Tim Newton (KCL)

ORBook

Introduction to the Open Research Book

1. Background
2. Quick tour

Background

The initial contents of this web page are 15 scripts for videos that were produced at Oxford Brookes to introduce basic topics in Open Research. We followed an outline shared in image we first encountered care of Anton Muszanskyj. (If you know where it came from please let us know.)

We followed the high-level outline breaking the sections down into **open** Infrastructure, Methods, Communities, and Knowledge. In some cases we combined some of the topics into one script, but in general we followed the lower-level outline as well. The hope is that this can be used as a starting point for further improvements.

Quick tour

Have a look around via the menu at left. You'll notice that most of the talks include some Oxford Brookes specific pointers towards the end. These are highlighted in boxes, and labelled "⚠ Practice Example". Other related practices may be in place at

https://orbook.github.io/

New training has been created on the back of discussions in the CoP, for example:

Managing, Collaborating, Sharing and Commercialising Sensitive Patient Data in Open Research

A hybrid event, jointly developed by Nina Lewin (Oxford Brookes) and Karen Patternson & Helen Webb (BSMS), with Harvinder Virk (Leicester & UKRN) as a keynote speaker.

The content continues to develop…

Question for reflection:

There are no right or wrong answers. Drop your thoughts in the chat!

What are the benefits of community-driven approaches to research training?

What's next?

Disclaimer*: Open research isn't a magic solution for all problems (including some of the challenges of building open research communities).*

Disclosure: With the Training Community of Practice, we're at the interface between a semi-closed consortium, an "opt-in" community — and "open" research.

What's next? More practice!

Making this more of a community of *practice* with more hands-on activities (where possible).

This includes but is not limited to encouraging contribution to the Open Research Book. More activities, break out rooms, etc.

More perspectives!

Incorporating small slices of material from other existing workflows could be useful for all involved

At the time of delivery of this session, Pen's event on Epistemic Diversity will have just happened — the topic is important to what we do (including both interdisciplinary ways of working, and building on deep expertise in specific disciplines)

More interaction!

More interaction with other CoPs in the ORP

… and other communities!

(This session is a great start for that.)

More *open!*

Sharing platform on the way (OER Commons hub)

Guidance for the Training CoP

Community of Practice events

Training resources, per train-the-trainer course

How will people join the community when the ORP is over…? This is still undetermined.

Question for reflection:

*There are no right or wrong answers.
Drop your thoughts in the chat…
or come off mute :-)*

How can we organize more effective open research communities?