Open Science Training Coordinators

Community of Practice

www.openaire.eu/cop-training

Horizon Europe train-the-trainer workshop

Open Science FAIR, 22 September 2021, 09.30-11.00 CEST

For introductions we will use menti later, you can already go to the correct location for it: www.menti.com for voting code: **8548 4402**

…sharing, collaborating, contributing, coordinating

Open Science Training Coordinators

Community of Practice

www.openaire.eu/cop-training

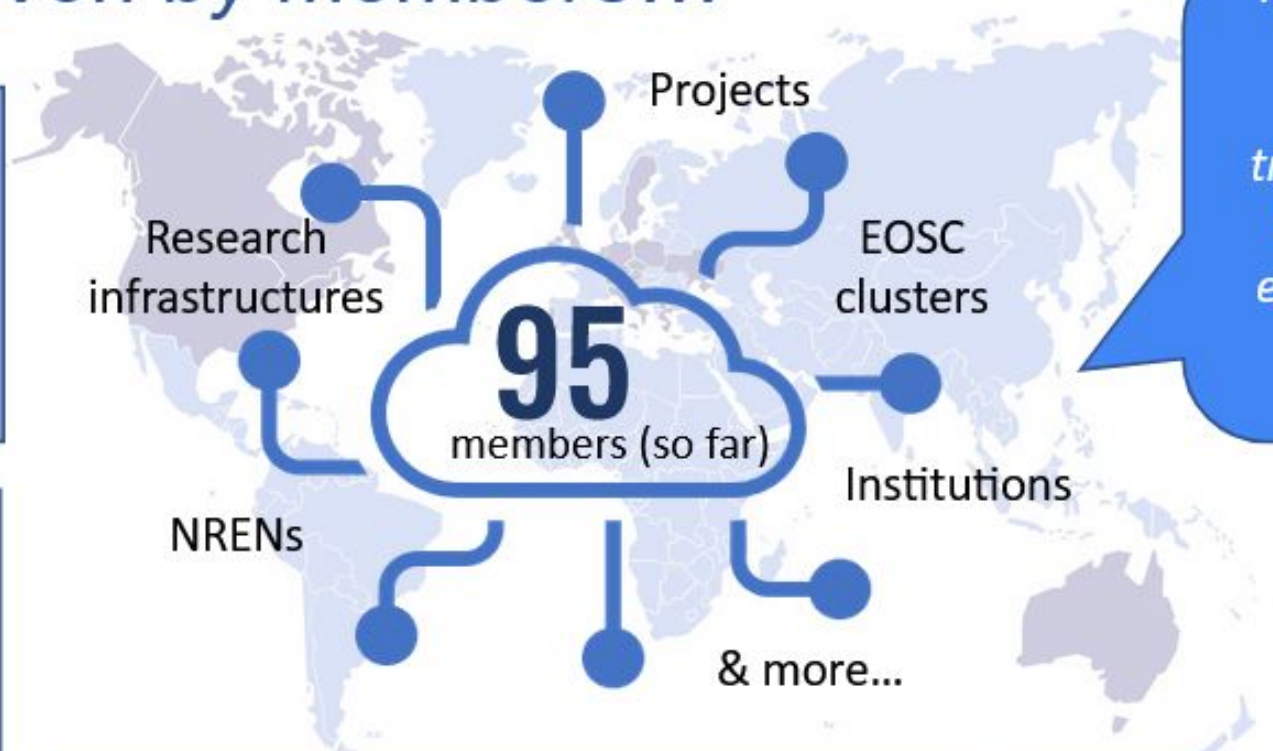
Owned and driven by members…

Set up in **2018**

OpenAIRE

Slack channel

Google Group



"The CoP can be regarded as a discipline transcending network of trainers and training organisers. We have built a community. We are exchanging information and best practices."
CoP member, 2020

36 monthly meetings **77** pages of notes! **7** events

20+ countries

Map credit: adapted from Al MacDonald @F1LT3R

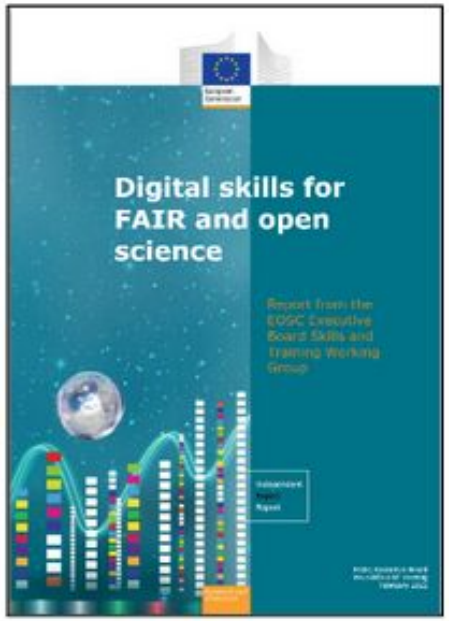
Open Science Training Coordinators

Community of Practice

www.openaire.eu/cop-training

Blog post

Workshop report & recommendations



EOSC Skills & Training WG Report

EOSC Skills & Training WG Recommendations - Training Coordinators CoP mapping to existing activities

Recommendation	Theme	Activity	Activity
1. Utilise the Framework of Actors in the EOSC Ecosystem in the development of initiatives, skills, training, reward and recognition frameworks and career paths necessary to support further development and mainstreaming of FAIR and open science.	Utilise Framework of Actors	**EOSC Association** - Task Force Data stewardship curricula and career paths	**EOSC Association** - Task Force Research careers, recognition and credit
2. Coordinate and align relevant skills curricula and training frameworks by generating a consensus on a core European higher education curriculum to deliver FAIR and open science skills at university level.	Coordination and alignment of curricula	**EOSC Future** - Task 9.1.2 Cross-domain EOSC Training alignment and EOSC wide training infrastructure (EOSC focus only)	**FAIRsFAIR** - WP6 FAIR competences
3. Encourage and support the competence centres approach as a framework for increasing coordinated provision of aligned training to support FAIR and open science.	Competence centres	**FAIRsFAIR** - WP6 Competence Centre and WP7 FAIR data science curricula and professionalisation	**EOSC Association** - Task Force Upskilling countries to engage in EOSC
4. Facilitate increased integration of FAIR and open science courses with university qualifications	Integration of FAIR & OS into curricula / qualifications	**EOSC Synergy** - WP6 Task 6.3 Embedding training resources in national education programmes	**FAIRsFAIR** - WP7 FAIR data science curricula and professionalisation

Mapping member activities to EOSC report recommendations

…sharing, collaborating, contributing, coordinating

Workshop programme

9.30 - 9.40 Welcome & introduction

www.menti.com : **8548 4402**

9.40 - 10.20 Lightning talks

- Alea Lopez de San Roman – Open Science in Horizon Europe
- Dagmar Meyer – Open Science in Horizon Europe: ERC
- Emilie Hermans: practical guidelines in Ghent University
- Ellen Leenarts: Open Science & RDM community building and support activities

10.20 - 10.50 Break-out session: exchange of approaches on 3 subjects

- Open Access to publications
- Research Data Management
- Open Science in the evaluation of proposals

10:50 – 11:00 Wrap up

Shared notes: https://docs.google.com/document/d/15mtc6Q3Y6NK5rH8yZnXiEWd7pV0tuJ-EX6d_mTJh4F0/edit?usp=sharing

Open Science in Horizon Europe

Alea López de San Román
Open Science unit, DG R&I, European Commission

Horizon Europe Train-the-Trainer Workshop
September 22, 2021

Main novelties in Horizon Europe

- **Rationale and scope:** move from open access to open science with a broadened scope of policy; open science comprises open science practices
- **Evaluation:** open science under excellence (not impact); practices beyond mandatory incentivized through evaluation; publications evaluated on basis of qualitative assessment provided (not Journal Impact Factor)
- **Intellectual Property Rights:** requirement to maintain enough rights to meet open access requirements to publications
- **Publications:** Immediate open access (=no embargo); only publication fees in full open access venues are reimbursable (=no hybrids)
- **Research data:** research data management (including data management plans) mandatory for all projects generating and/or reusing data; open access 'as open as possible as closed as necessary'
- **Qualified open access to research outputs:** specific licenses and technical standards for digital objects to enable FAIR; trusted repositories
- **Reproducibility of research:** information for validation of publications and for validation and reuse of data required; access for validation of publications must be provided (while legitimate interests safeguarded)
- **Open science and public emergencies:** immediate open access to all research outputs (non-exclusive licenses under fair and reasonable conditions to the relevant legal entities if open access not possible)

Evaluation of proposals and Open Science

“Excellence” criterion

(methodology)

- Evaluation of the quality of open science practices
- E.g.1 page to describe Open Science practices + 1 page to describe research data/output management [RIA,IA]

“Quality and efficiency of implementation” criterion

(capacity of participants and consortium as a whole + list of achievements)

- Explain expertise on Open Science
- List publications, software, data, etc, relevant to the project with qualitative assessment and, where available, persistent identifiers

Publications are expected to be open access; datasets are expected to be FAIR and ‘as open as possible, as closed as necessary‘. **Significance of publications to be evaluated on the basis of proposers’ qualitative assessment** and not per Journal Impact Factor

Open Science practices

What?	How?	Mandatory in all calls/recommended
Early and open sharing of research	Preregistration, registered reports, preprints, etc.	Recommended
Research output management	Data management plan (DMP)	**Mandatory**
Measures to ensure reproduciblity of research outputs	Information on outputs/tools/instruments and access to data/results for validation of publications	**Mandatory**
Open access to research outputs through deposition in trusted repositories	• Open access to publications • Open access to data • Open access to software, models, algorithms, workflows etc.	• **Mandatory** for peer-reviewed publications • **Mandatory** for research data **but** with exceptions (‘as open as possible…’) • Recommended for other research outputs
Participation in open peer-review	Publishing in open peer-reviewed journals or platforms	Recommended
Involving all relevant knowledge actors	Involvement of citizens, civil society and end-users in co-creation of content (e.g. crowd-sourcing, etc.)	Recommended

- Open science practices listed in the template for proposals (section excellence>methodology)
- Non-exhaustive list
- Mandatory in all calls: Model Grant Agreement or call requirement; all the rest recommended

NB on evaluation !

- Evaluation concerns mandatory and recommended open science practices
- Mandatory open science practices: score will be lowered for not sufficiently addressing them unless duly justified they are not appropriate for the project (e.g. no publications or generation of research data)
- Recommended open science practices: no impact on score if not addressed but score will be increased if sufficiently addressed (they serve as an incentive)
- All Work Programmes, except for the ERC, evaluate open science practices as outlined above (exception with some EIC programmes that for now evaluate under impact, as of 2022 under excellence)

Model Grant Agreement requirements

1. Open access to scientific publications
2. Research Data Management
3. Additional open science practices

European Commission

1. Open access to publications (1/2)

Beneficiaries must ensure **open access to peer-reviewed scientific publications** relating to their results. In particular, **they must ensure**:

- at the latest upon publication, **deposition** of the Author Accepted Manuscript or Version of Record in a trusted repository + **immediate open access via the repository** under a Creative Commons Attribution license (CC BY) or equivalent (Creative Commons Attribution Non Commercial/Non Derivatives licenses or equivalent are allowed for long-text formats)

- **information** via the repository about any research output/tools/instruments needed to **validate the conclusions of the scientific publication**

Metadata must be open under a Creative Commons Public Domain Dedication (CC 0) or equivalent, **in line with the FAIR principles** and provide information about the licensing terms and persistent identifiers, amongst others.

Open access to publications (2/2)

- Beneficiaries (or authors) **must retain sufficient intellectual property rights** to comply with the open access requirements

- Publication in venue of their choice but **publication fees are reimbursable only if publishing venue is full open access** (publication fees in hybrid venues are not reimbursed)

- Beneficiaries have the possibility to publish at no costs in **Open Research Europe**, the European Commission open access publishing platform

2. Research data management

Beneficiaries **must manage the digital research data** generated in the action responsibly, **in line with the FAIR ("Findable", "Accessible", "Interoperable", Reusable")** principles and:

- ❑ establish + regularly update a **data management plan** ('DMP') for generated (and/or collected) data
- ❑ as soon as possible and within the deadlines set out in the DMP, **deposit** the data in a trusted repository (federated in the EOSC if required in the call conditions) **+ ensure open access under CC BY, CC 0 or equivalent, following the principle 'as open as possible as closed as necessary'**
- ❑ provide information via the repository about any research output/tools/instruments needed to **re-use or validate the data**

Metadata must be open under CC 0 or equivalent (to the extent legitimate interests or constraints are safeguarded), **in line with the FAIR principles** and provide information about the licensing terms and persistent identifiers, amongst others.

Trusted repositories under Horizon Europe

- Trusted repositories are either **certified repositories** (e.g. CoreTrustSeal, nestor Seal DIN31644, ISO16363) and/or **disciplinary/domain repositories** that are commonly used/endorsed by the research communities (e.g. ELIXIR deposition databases).
- **General-purpose repositories** and **institutional repositories** are, in general, also acceptable.
- Trusted repositories share essential properties:
  - Mechanisms to ensure **integrity** and **authenticity** of contents.
  - Offer clear **information** about their **policies/services**.
  - Provide broad, and ideally **open access** to content (consistent with legal and ethical constraints).
  - Assign **PIDs**, ask for detailed **metadata** in a standardized (e.g. Dublin Core) and machine-readable way.
  - Ensure mid- and long-term **preservation** of contents, **expert curation**, **quality assurance**.
  - Meet national and/or international **security** criteria

3. Additional Open Science practices

- Where the call conditions impose **additional obligations** regarding Open Science practices, the beneficiaries must also comply with those

- Where the call conditions impose **additional obligations regarding the validation of scientific publications**

beneficiaries must provide (digital or physical) access to data or other results needed for validation of the conclusions of scientific publications, to the extent that their legitimate interests or constraints are safeguarded (and unless they already provided the (open) access at publication)

- Where the call conditions impose **additional Open Science obligations in case of a public emergency,**

beneficiaries must (if requested by the granting authority) immediately deposit any research output in a repository + provide open access to it under CC BY, CC 0 or equivalent

As an exception, if the access would be against the beneficiaries´ legitimate interests, the beneficiaries must grant nonexclusive licenses –under fair and reasonable conditions- to legal entities that need the research output to address the public emergency and commit to rapidly and broadly exploit the resulting products and services at fair and reasonable conditions. This provision applies up to 4 years after the end of the action

Guidance/resources on open science in Horizon Europe

- Horizon Europe Annotated Model Grant Agreement (p.154 ff.)
- Horizon Europe Data Management Plan Template (under reference documents of the Funding and Tenders portal).
- Horizon Europe Programme Guide (p. 38 ff. with extensive analysis of open science practices and the evaluation process)
- Proposal Template (instructions on parts A +B also including definition of open science practices and requirements)

Open Science in Horizon Europe explained

- Webinar: How to prepare a successful proposal in Horizon Europe (24 March 2021)
  - Open Science at 00:53:00
  - Q&A (including on Open Science) from 1:09:00
- Webinar: A successful proposal for Horizon Europe: Scientific-technical excellence is key, but don't forget the other aspects (21 April 2021)
  - Presentation: Open Science

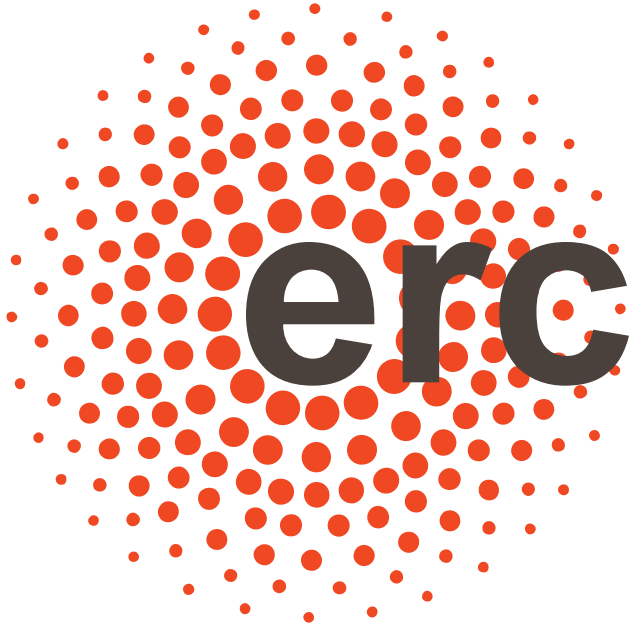
Thank you!

European Commission

The European Research Council

Dr Dagmar Meyer
ERC Executive Agency
Unit ‘Support to the Scientific Council’

Open Science Fair
Horizon Europe
Train-the-Trainer Workshop
22 September 2021



European Commission

Open science in the ERC proposal preparation & evaluation process

European Research Council
Established by the European Commission

- **No explicit evaluation** of open science practices;
- **no requirement to describe** open science practices explicitly / separately in the proposal.
- Where open science practices **improve the quality of the research design and methodology**, their use will (implicitly) positively affect assessment of 'scientific excellence'.
- In July 2021, ERC formally endorsed the San Francisco Declaration on Research Assessment (DORA), in line with the ERC's commitment to research assessment principles that **recognize the intrinsic quality of researchers' work** and the **value and impact of all research outputs**.

ERC's endorsement of DORA – changes in the 2022 Work Programme

European Research Council
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Already **close alignment with DORA principles** – small changes to text for further clarification:

- applicants invited to include in track record **any scientific achievements they deem relevant** in relation to their research field and project;
- **Journal Impact Factor banned** (but properly referenced, field relevant bibliometric indicators may be included);
- reminder that applicants can include **short narrative** describing the scientific importance of the research outputs and the role played by the applicant in their production.

Preprints in track record already accepted since WP 2019.

MGA provisions on open science – how do they apply to ERC grants?

European Research Council
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Open science requirements in the Model Grant Agreement used for ERC grants:

- **identical provisions** as for the rest of Horizon Europe;
- **no differences in interpretation** compared to grants in the general Horizon Europe Work Programme;
- but: some **conditional provisions** (part on "Additional open science practices") that apply "where the call conditions impose them" have **not been triggered** in the ERC Work Programmes 2021/2022:
  - additional obligations regarding the **validation of scientific publications**;
  - additional open science obligations in case of a **public emergency**.

ERC support to recommended repositories

European Research Council
Established by the European Commission

ERC recommends use of

- Europe PubMed Central for publications in the **life sciences** (financially supported since 2013);
- arXiv for publications in the **physical sciences and engineering** (grant in preparation under WP 2022);
- OAPEN library for **books and chapters** – particularly important for the social sciences and humanities (supported by ERC since 2015).

Europe PMC and OAPEN library metadata already closely aligned with Horizon Europe requirements; arXiv working on improvements.

ERC specific guidance/resources on open science in Horizon Europe

European Research Council
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In addition to relevant parts of the Horizon Europe MGA and the Horizon Europe Annotated Grant Agreement:

- recently updated pages on Open Science on the ERC website;
- ERC Scientific Council information document "Open Research Data and Data Management Plans" (v4.0 of August 2021);
- additional ERC specific guidance in preparation.

See also:

- entry on ERC in the DORA resource library.

Any questions?

European Research Council
Established by the European Commission

Feel free to contact the
ERCEA Open Science team at:
erc-open-access@ec.europa.eu

European Commission

GHENT UNIVERSITY
CENTRAL LIBRARY BOOKTOWER

Emilie Hermans
ORCID: 0000-0001-6594-7826

FROM HORIZON EUROPE OPEN SCIENCE MANDATE TO PRACTICAL GUIDE

A case study of the Ghent University Open Science training material

GHENT UNIVERSITY

CHALLENGES

- Translate a mandate into a practical guide
- Align internally about best practices and clarify possible ambiguities
- Move FAST – first calls already launched
- Be FLEXIBLE – adaptable to new or better information

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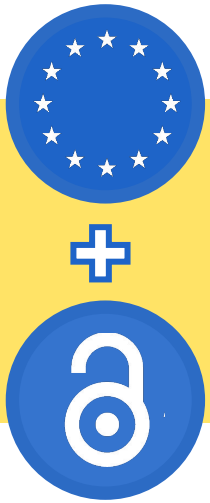
COLLABORATION

Ghent University EU-team

Expertise on EU-grants. All around support for EU-funded projects: support and advice on project proposals, and after the granting of the project.



FAST & ALIGNED RESOURCES

- Quick access to information and expertise
- Cross checking to align internally and check translation from theory to practice

Open Science Team

Expertise on Open Science on institutional, national/regional and EU-level. Experienced in creating OS training material. Includes a **Data Steward Team**.

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AGILITY

Pre-existing tools

To avoid the learning curve in learning a new tool.

Adaptable

…which we can adapt ourselves.
To include changes in policy or new insights.

Well-known

So all our energy can go to disseminate and support rather then introducing a new platform or tool.

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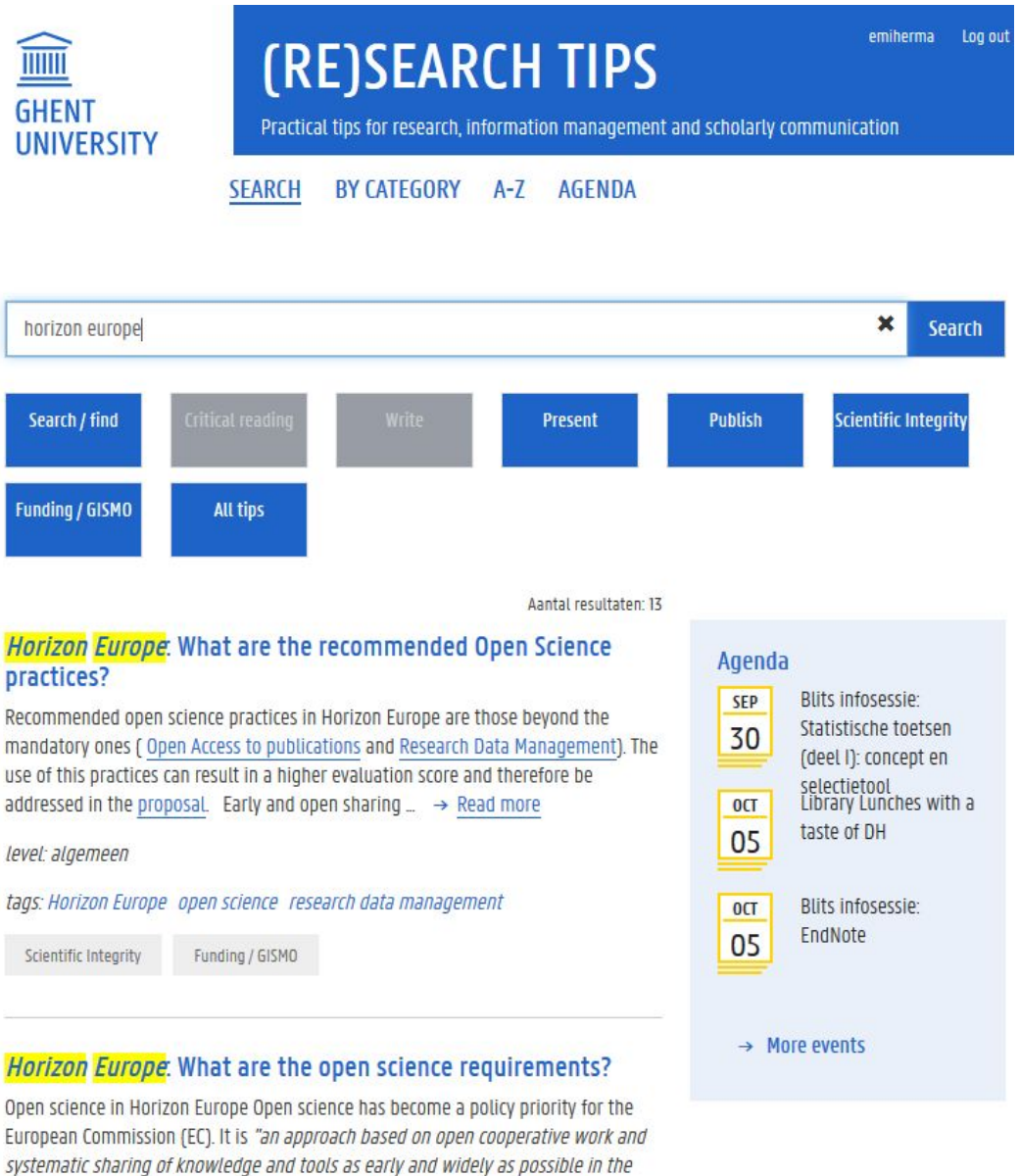
EXAMPLES – RESEARCH TIPS



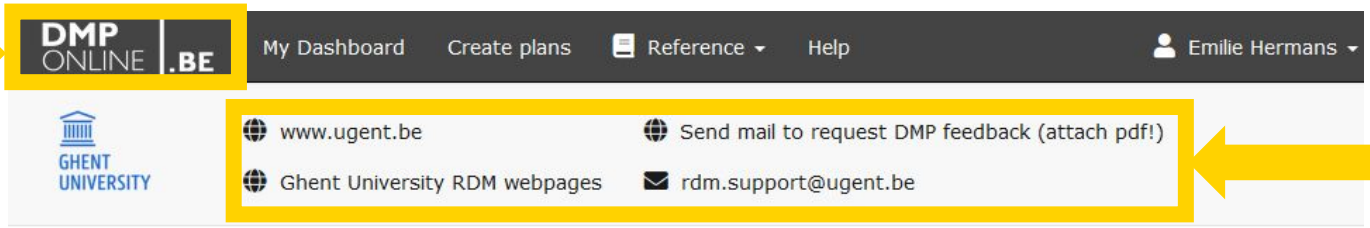
- Platform with practical, concise research information
- Works as a FAQ for researchers
- Fine-grained search control with keywords or themes
- Easy to adapt by staff
- Well-known and referenced in presentations, emails….
- At the moment tips on:

  - Horizon Europe - What are the open science requirements?
  - Horizon Europe - How do I address open science in my proposal?
  - Horizon Europe - Mandatory open science practices:
    - Open access to scientific publications
    - Research Data Management (incl. open access to data)
  - Horizon Europe - Recommended open science practices

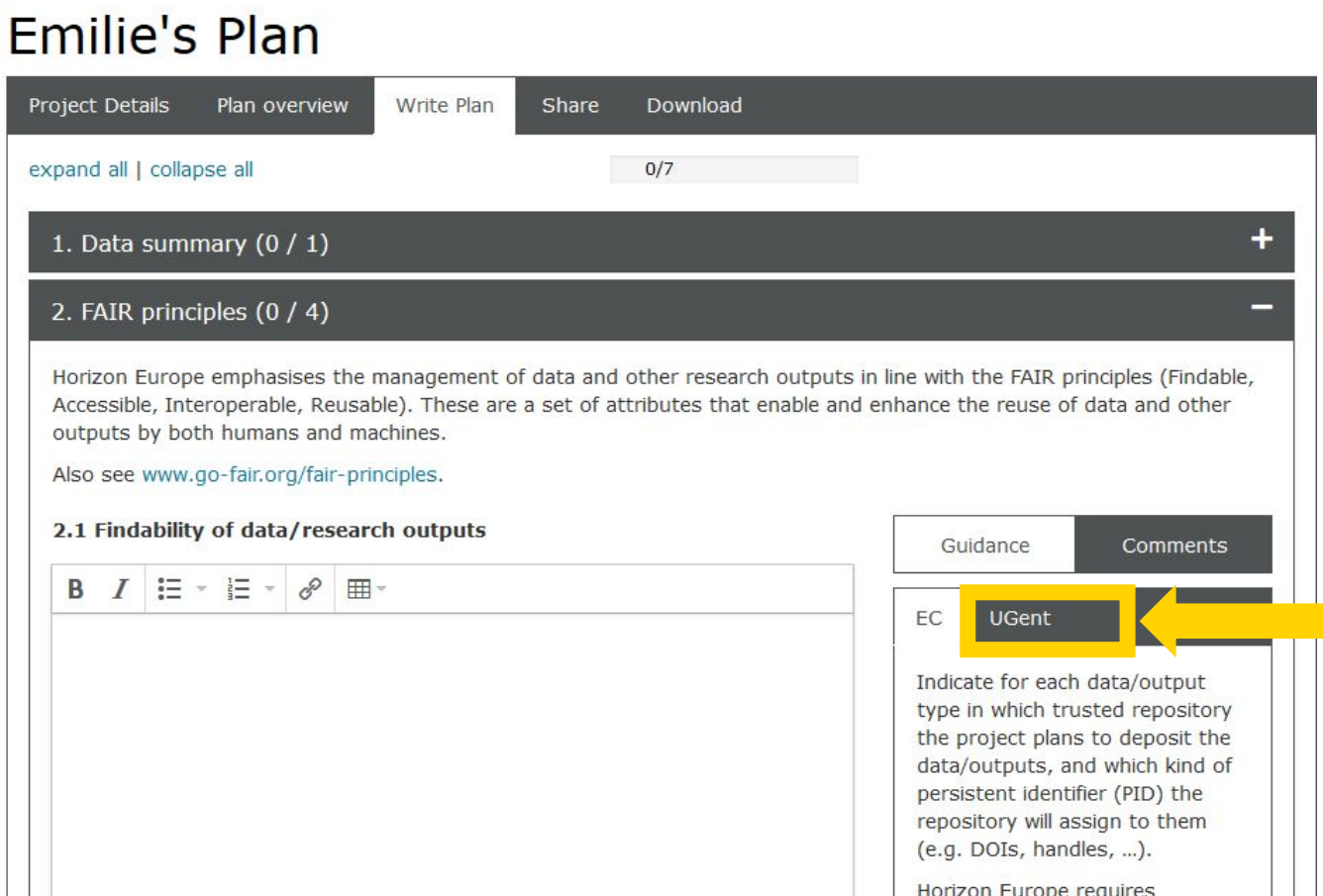
  + links to tips on Open Research Europe, OA publishing, APCs, DMPs, FAIR data….

EXAMPLES – DMPONLINE.BE

Local instance of DCCs DMPonline



Local support



Institutional specific guidelines

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LESSONS LEARNED

- **No ‘one size fits all’**
- **Collaborate and pool expertise**
- **Anticipate, use adaptable formats**
- **Don’t re-invent the wheel:**
  use available tools, expertise and existing training material

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Emilie Hermans
GHENT UNIVERSITY LIBRARY
OPEN SCIENCE TEAM

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@emiherma

www.ugent.be

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Data Archiving and Networked Services

DANS

Open Science & RDM community building and support activities

Open Science FAIR Horizon Europe train-the-trainer workshop

Ellen Leenarts

Orcid @EllenLeen @DANS_knaw_nwo

22 September Open Science FAIR

Horizon Europe & research data

- Identifiable with a persistent identifier
- Discoverable with metadata
- Harvestable metadata
- Deposited in trusted repositories
- Freely available - Access restrictions
- Interoperable by using metadata vocabularies, standards, ontologies
- References to other data
- Reusable - provide documentation, provenance of data
- Ethics and legal issues, GDPR, informed consent
- Ensuring long term preservation
- Procedures for research data management

RDM community building and support activities

DANS is a CoreTrustSeal certified trustworthy repository

- Research Data Netherlands
- CESSDA – Data Management Expert Guide
- OpenAIRE - RDM support materials
- SSHOC Training Discovery Toolkit, Training Community
- EOSC Synergy RDM & open science course
- FAIRsFAIR – handbook
- Science Europe – RDM report including DMP rubric
- Other (DANS not involved): Open Science communities

rdnl research data netherlands

4 data supporters

- ✔ Course Essentials 4 data support
  Online content, blended course, 3 per year
- ✔ Course GDPR 4 data support
  Similar, now in pilot, next year public, 3 per year
- ✔ MOOC Delivering RDM Services
  Closed content, 3 per year

https://researchdata.nl/en

4TU.ResearchData SCIENCE · ENGINEERING · DESIGN

Data Archiving and Networked Service DANS

SURF SARA

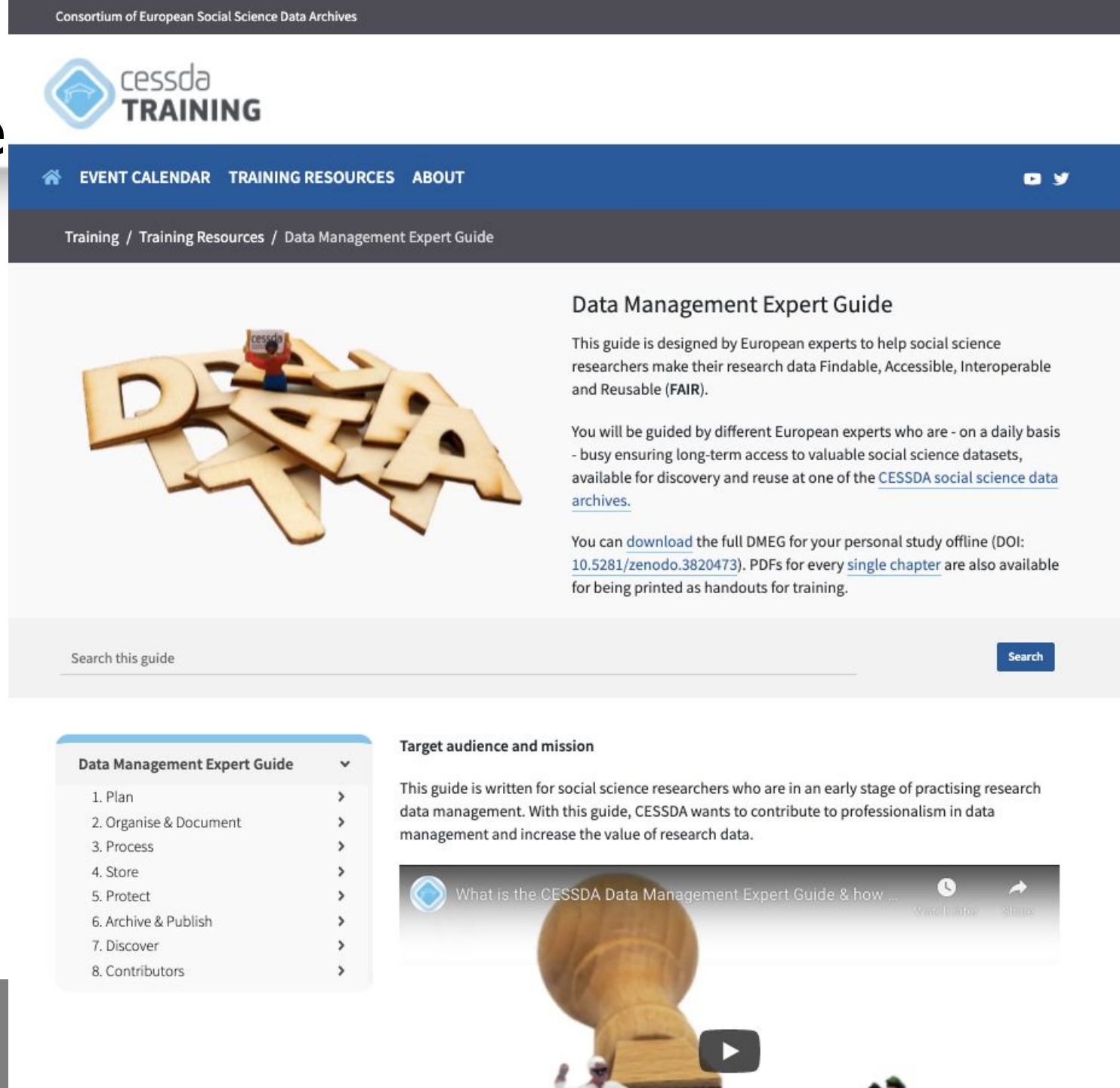
For sustainable access to and responsible use of research data - www.researchdata.nl

CESSDA Data Management Expert Guide

https://www.cessda.eu/DMEG

- Online RDM guide for researchers in social sciences
- 7 chapters following research data life cycle
- DMP checklist
- Regularly updated by CESSDA Training

Upcoming support events:
27 Sept: workshop RDM & data protection in the Social Sciences
https://www.cessda.eu



OpenAIRE Advance

https://www.openaire.eu/rdm-noads-starter-kit

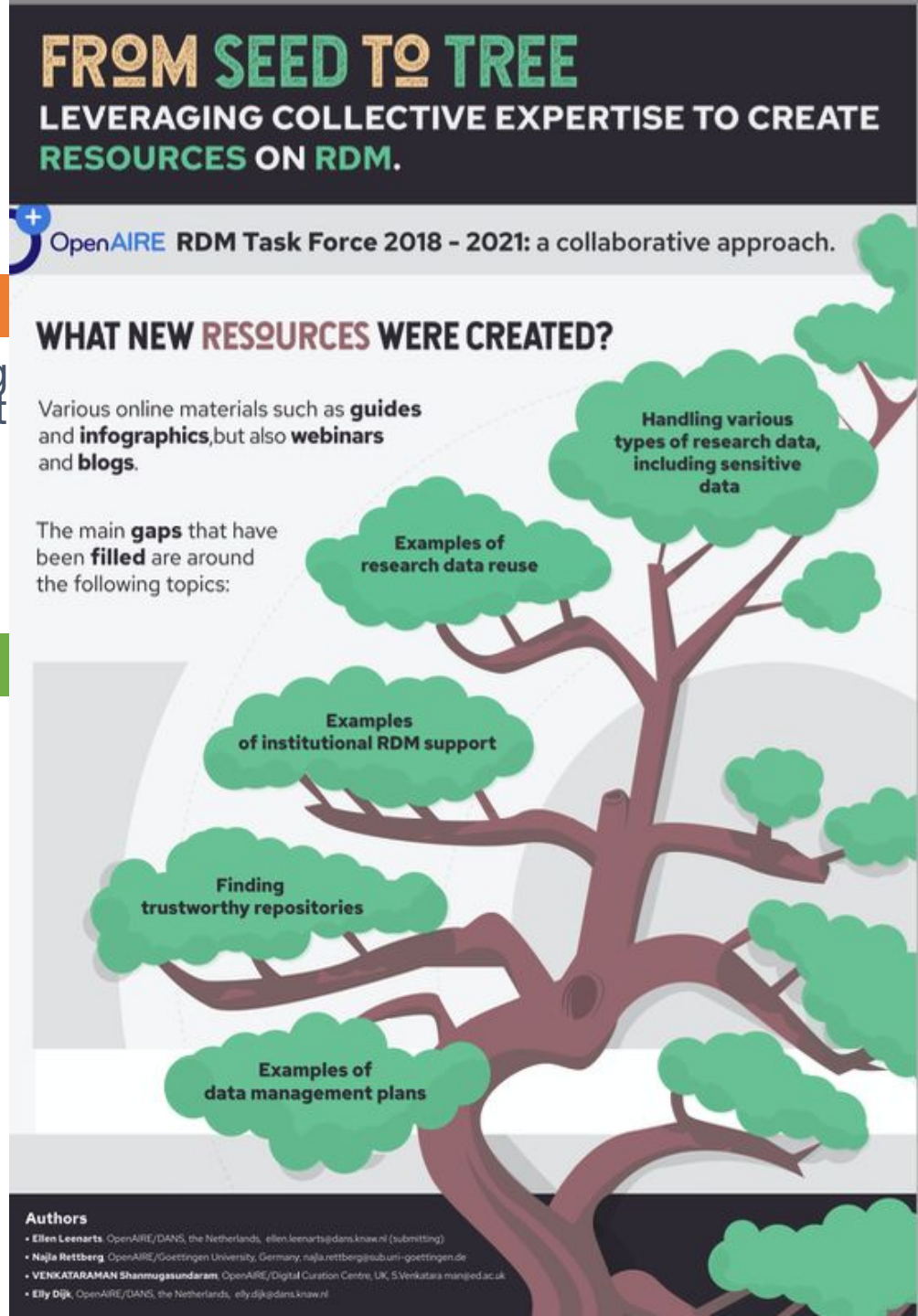
GOAL: Establish capacity and increase knowledge primarily among NOADs in order to support RDM activities, and support the Open Data Pilot/FAIR data/EOSC

HOW: Establishing working groups to examine different elements of the data life cycle; Finding gaps; Developing new materials

Output: Online guides, webinars, blog posts, infographics et cetera

- Institutional RDM support
- Data reuse examples
- The importance of long-term preservation
- Use cases DMPs of existing projects

OpenAIRE
Research Data Management
Briefing paper
Understanding Research Data Management

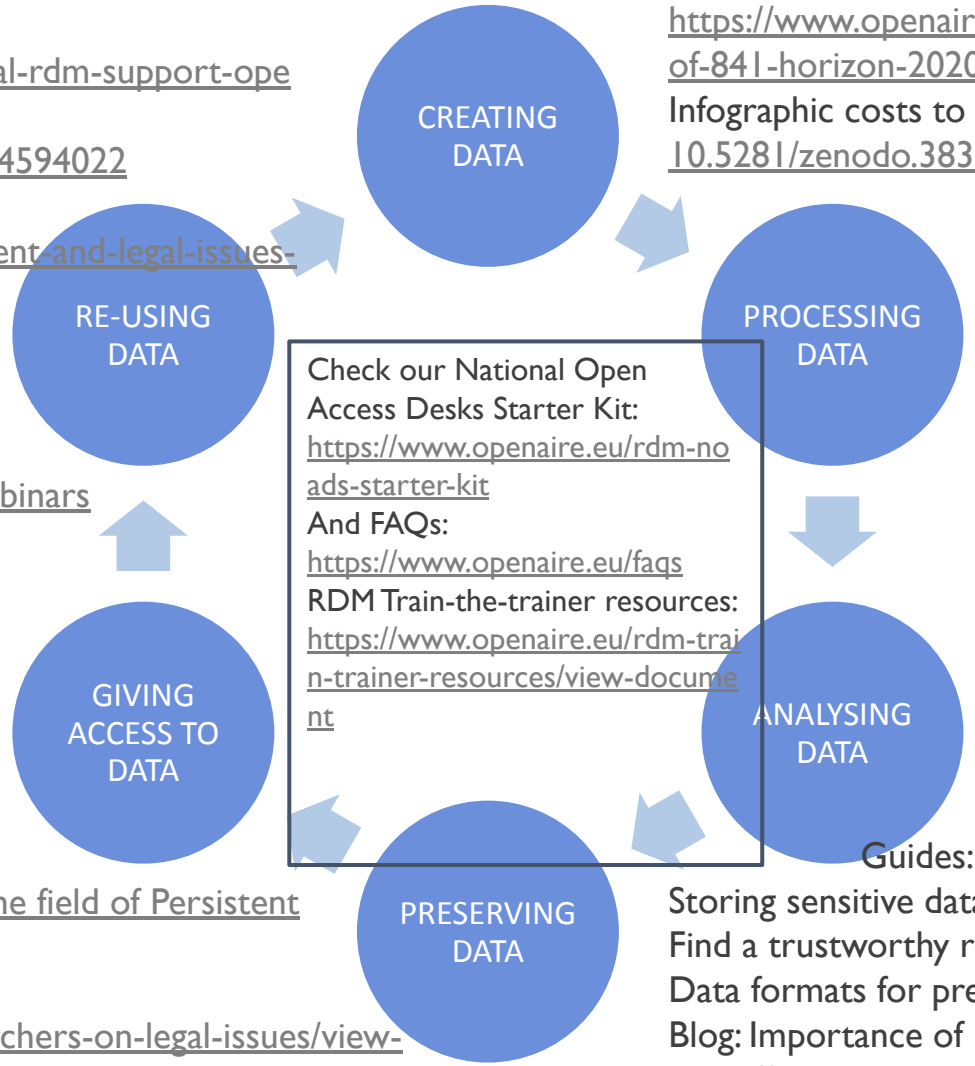


OpenAIRE Outputs

Blog series Institutional RDM support:
https://www.openaire.eu/blogs/use-cases-of-institutional-rdm-support-openaire-blog-series
Checklist RDM Service development: 10.5281/zenodo.4594022
Webinar on RDM and legal issues:
https://www.openaire.eu/item/research-data-management-and-legal-issues-related-to-research-data
Blog series on Data reuse and use cases:
https://www.openaire.eu/data-reuse-use-cases

Webinars on the reuse of data and legal aspects, 2020:
https://www.openaire.eu/item/openaire-legal-policy-webinars

List of Horizon 2020 DMPs:
https://phaidra.univie.ac.at/detail/o:1140797
And blog:
https://www.openaire.eu/blogs/establishing-a-collection-of-841-horizon-2020-data-management-plans
Infographic costs to manage and share data:
10.5281/zenodo.3837717



Guide: How to deal with non-digital data:
10.5281/zenodo.4057878
Webinar (with EOSC-hub): Data Privacy and Sensitive Data Services, 2018
Blog: Electronic Lab Notebooks, should you go 'e': https://www.openaire.eu/blogs/electronic-lab-notebooks-should-you-go-e-1?
Guide: Raw data, backup and versioning:
10.5281/zenodo.4041557

Webinar on Amnesia (data anonymisation):
https://www.openaire.eu/item/amnesia

Guides:
Identifiers to improve dissemination:
10.5281/zenodo.1051028
Managing access to sensitive data:
10.5281/zenodo.4048403
Webinar (with FREYA): New developments in the field of Persistent Identifiers, 2019.
Toolkit for researchers on Legal Issues:
https://www.openaire.eu/d3-2-toolkit-for-researchers-on-legal-issues/view-document
Diagram: Deposit your data in a long-term data repository
Ref: UK Data Archive:
http://www.data-archive.ac.uk/create-manage/life-cycle

Guides:
Storing sensitive data: 10.5281/zenodo.4048403
Find a trustworthy repository: 10.5281/zenodo.4020812
Data formats for preservation: 10.5281/zenodo.4041512
Blog: Importance of long-term data preservation:
https://www.openaire.eu/blogs/importance-of-long-term-data-preservation

SSHOC train-the-trainer bootcamps

Topics covered:

Discovery of training resources
CESSDA/UKDA Data curation tools
GDPR & social media data
RDM & Open Science games
CLARIN tools and integrated services
Costs of managing data
FAIR data tools
3rd party data
Didactics

international discussions and exchanging knowledge

you have saved me time in giving me ready materials.

The tools and teaching materials that we can easily repurpose for our instructions. Homework was very helpful to get my mind around the material and thinking about applications. Breakout discussion.

engaged participants!

Good to see real world uses

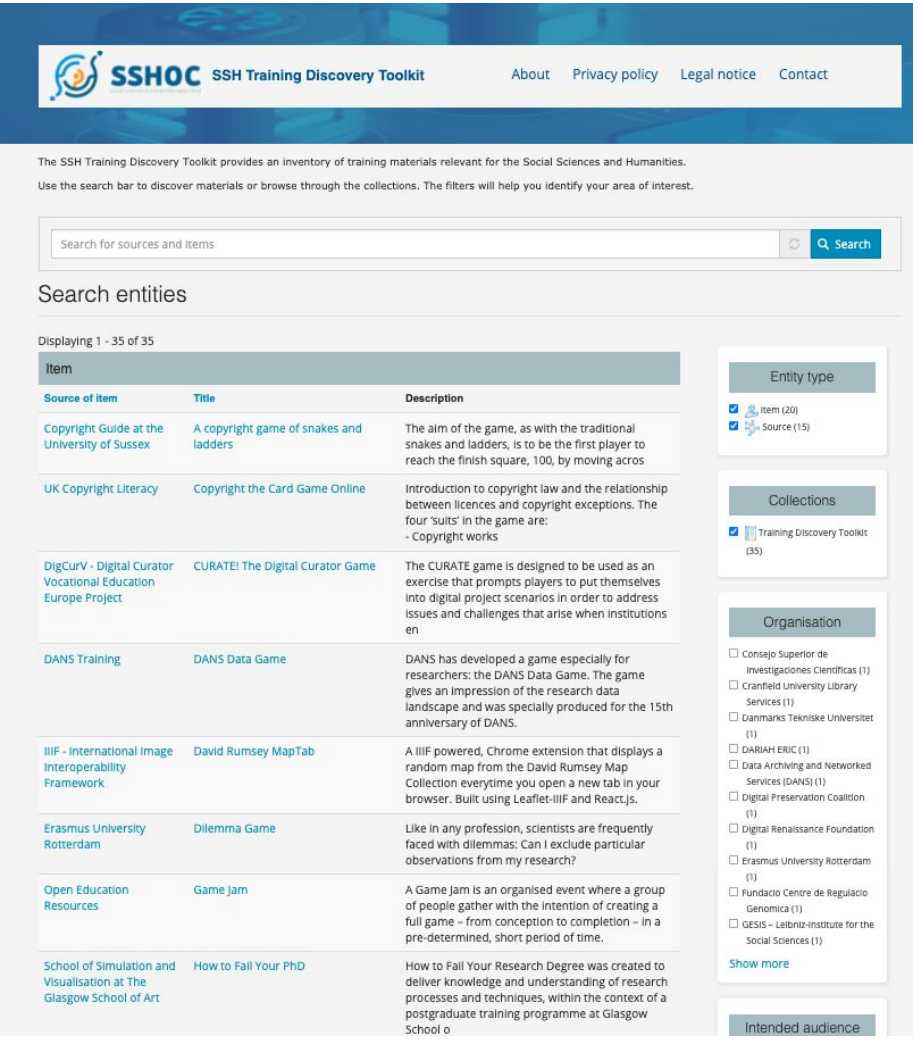
Resources available:

https://doi.org/10.5281/zenodo.3970799
sshocdariahtrainerrdmbootcamp community
https://doi.org/10.5281/zenodo.4813115

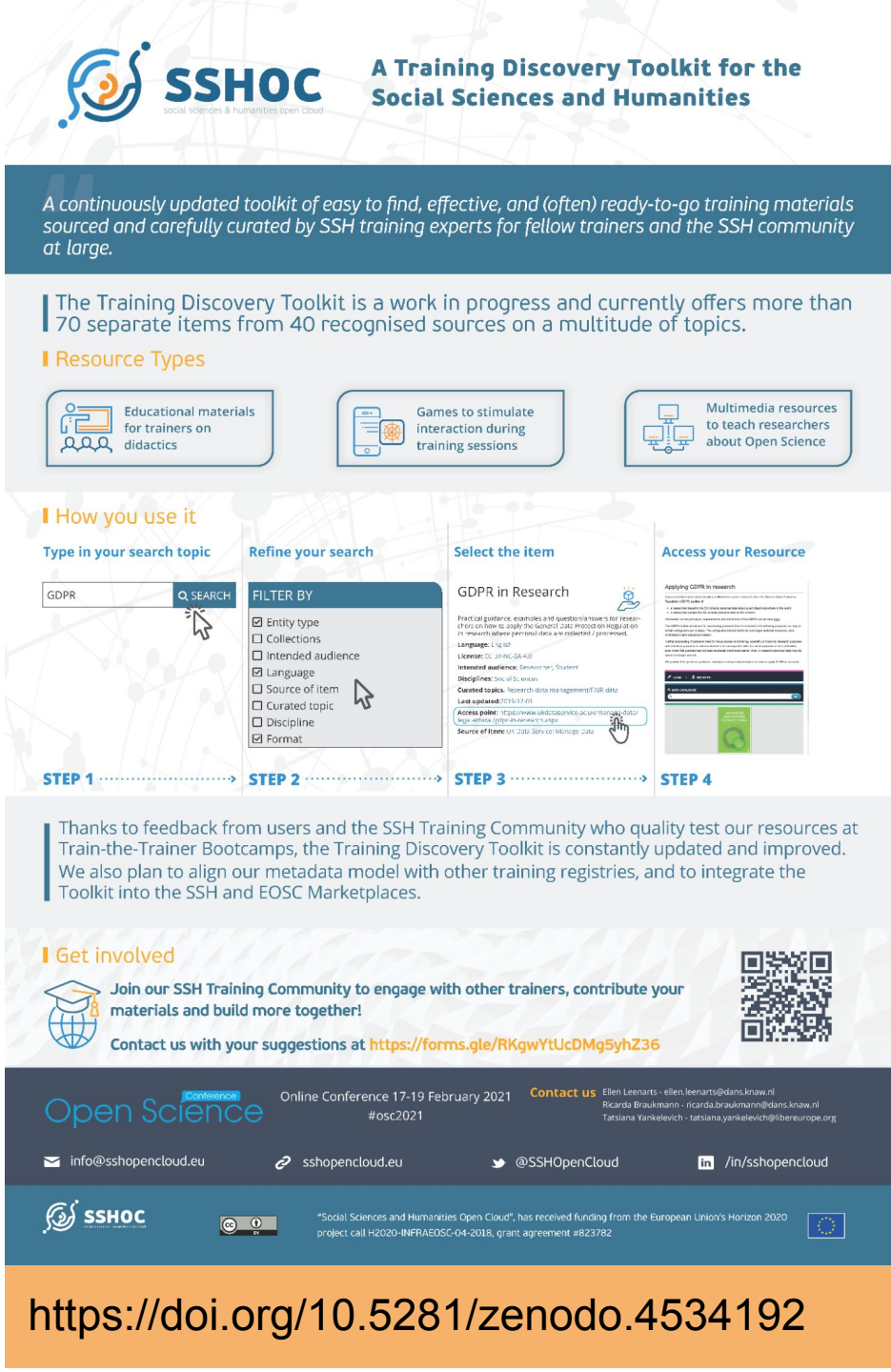
More workshops, webinars:
https://www.sshopencloud.eu/training

SSHOC
social sciences & humanities open cloud

SSH Training Discovery Toolkit



- Inventory reusable training materials
- Generic (RDM/Open Science) and discipline specific
- Faceted search
- Curation by team
- Input and feedback by the Training Community, Train-the-trainer bootcamps



https://training-toolkit.sshopencloud.eu/

https://doi.org/10.5281/zenodo.4534192

SSH Training Community & Trainers Directory

- **SSH Training Community**: community of practice for SSH trainers
  - Online monthly meetings to network and link trainers active in SSH and EOSC; using playful tools (speed dating) to exchange knowledge on:
  - (new) tools e.g. for FAIR data and
  - Improving FAIRness training materials
  - (new) services in the SSH marketplace
  - Delivery of online training: virtual brainstorming, organising conferences, making events GDPR compliant
- **SSH Trainer Directory** :
  - curated inventory of SSH trainers inspired by FOSTER - preparing for EOSC directory of trainers

This project is funded from the EU Horizon 2020 Research and Innovation Programme (2014-2020) under Grant Agreement No. 823782

SSHOC
social sciences & humanities open cloud

EOSC Synergy Online Open Science Training Handbook

EOSC Synergy - a regional European Open Science Cloud project

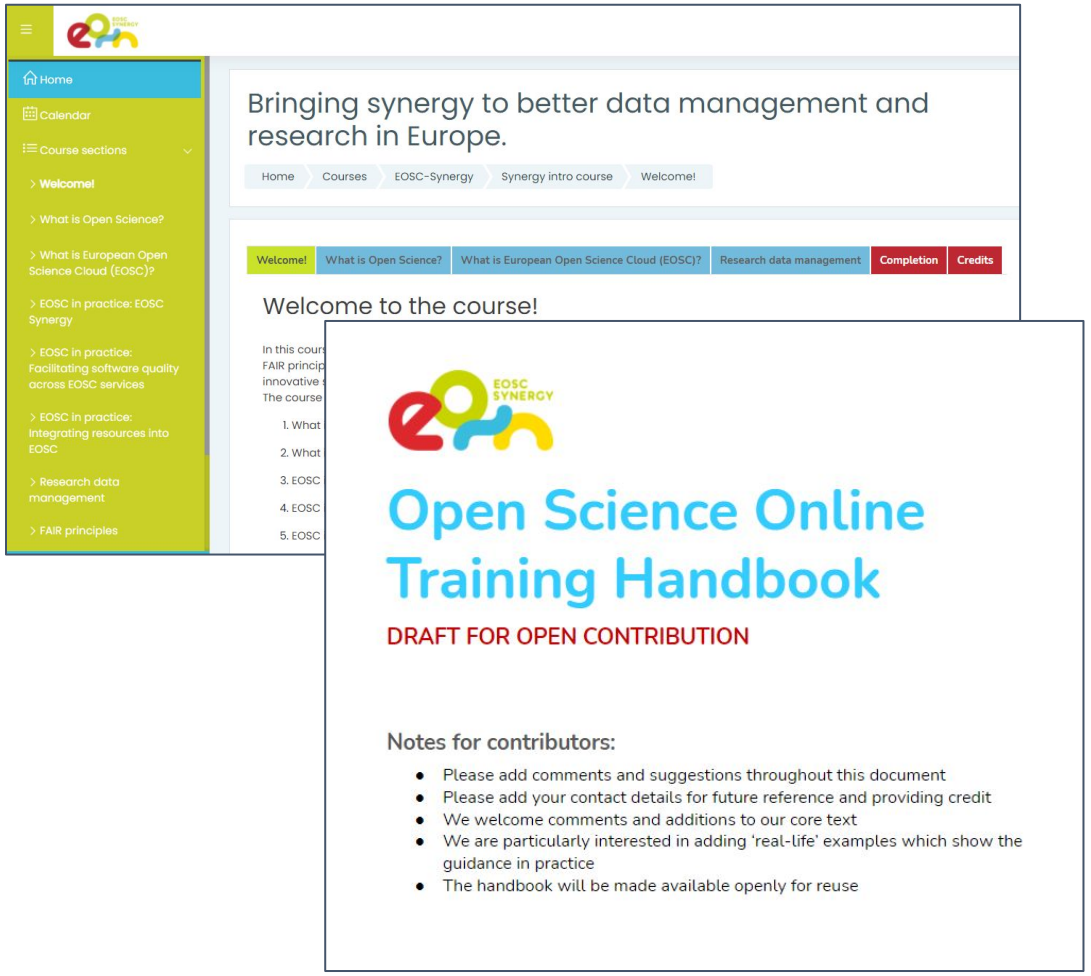
We have a learning platform to promote our service training and good practice in online training

We have a fully reusable 8 module exemplar course on RDM, FAIR data and open science

Our handbook aims to be a companion to the FOSTER Open Science Training Handbook

It's a work in progress - we would like to include your tips, experiences and examples from this session

- View and comment on the handbook here



And some more:

FAIRSFAIR
Fostering Fair Data Practices in Europe

Upcoming deliverable D7.4 in December: "How to be FAIR with your research data – a teaching and training handbook for higher education institutions"

And the FAIR Aware tool – How fair is your dataset
https://fairaware.dans.knaw.nl/

SCIENCE EUROPE

"A practical guide to the international alignment of Research Data Management"

Open Science Communities

- Starter kit to set up and foster a local open science community

Open Science Communities provide a place where **newcomers and experienced peers** interact, **inspire each other to adopt** Open Science practices and values, identify **opportunities** and **pitfalls**, and **provide feedback on policies, infrastructure, and support services**. By the same token, Open Science Communities are places where researchers and societal stakeholders can meet, inspire and co-create.