

Link to the presentation: <https://doi.org/10.5281/zenodo.17462702>

# FAIR data stewardship

## Bridging skills, practice and communities from local to European

*DeiC conference, October 28-29, 2025*

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# **Part 1 – introduction**

# Introduction - About me

## **FAIR data stewardship: Bridging skills, practice and communities from local to European**

How do we turn FAIR principles into practice? This talk shares lessons from practical FAIRification work, showing how local pilots and hands-on tools support researchers and data stewards step by step. It highlights how national guidance, training and community networks help upskill professionals and link their work to European initiatives like ELIXIR (the European life science data infrastructure) and global networks such as the Research Data Alliance (RDA). Participants will see how local experience can scale into broader capacity and collaboration, which is essential for embedding FAIR data stewardship in a trusted, sustainable research ecosystem.

## **Om Mijke Jetten**

Mijke Jetten is FAIR Data Lead and Community Manager for Data Stewardship at Health-RI, the Dutch national initiative for an integrated health data infrastructure.

She works across policy, practice and community building to help researchers and organisations make data FAIR and reusable. She coordinates guidance, training and support for RDM professionals, focusing on skills, recognition and careers. Mijke supports and connects communities, bridging local, national and global levels, including the Dutch Data Stewards Interest Group, the ELIXIR RDM community and the RDA Professionalising Data Stewardship Interest



# Introduction - About me

Involved in:

- **National - Health-RI:** as *FAIR data expert*, shaping national infrastructure for FAIR data and services
- **National - ELIXIR-NL:** coordination of data stewardship activities and training
- **National and beyond - DSIG,** Data Stewards Interest Group: as *community manager*, coordinating a community of data stewards (>2017)
- **Global - RDA PDS-IG,** Research Data Alliance Professionalising Data Stewardship Interest Group: initiator of this interest group around professionalising DS, currently still co-lead
- **Europe - ELIXIR:** contributor/co-lead to international efforts on learning paths, training, RDM ecosystem, RDM strategy and maturity (as co-lead of its RDM Community)
- **National - RDNL,** Research Data Netherlands: community lead in project: National Training and Community Platform for Research Data Professionals
- Have been a **data steward** before it even existed in the Netherlands

# Mission

Better health for citizens and patients

by

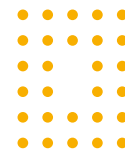
reusing health & life sciences data

with

an integrated data infrastructure

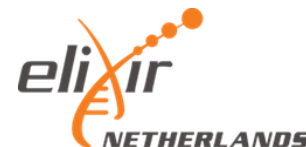
to

enable data driven research innovation and policy

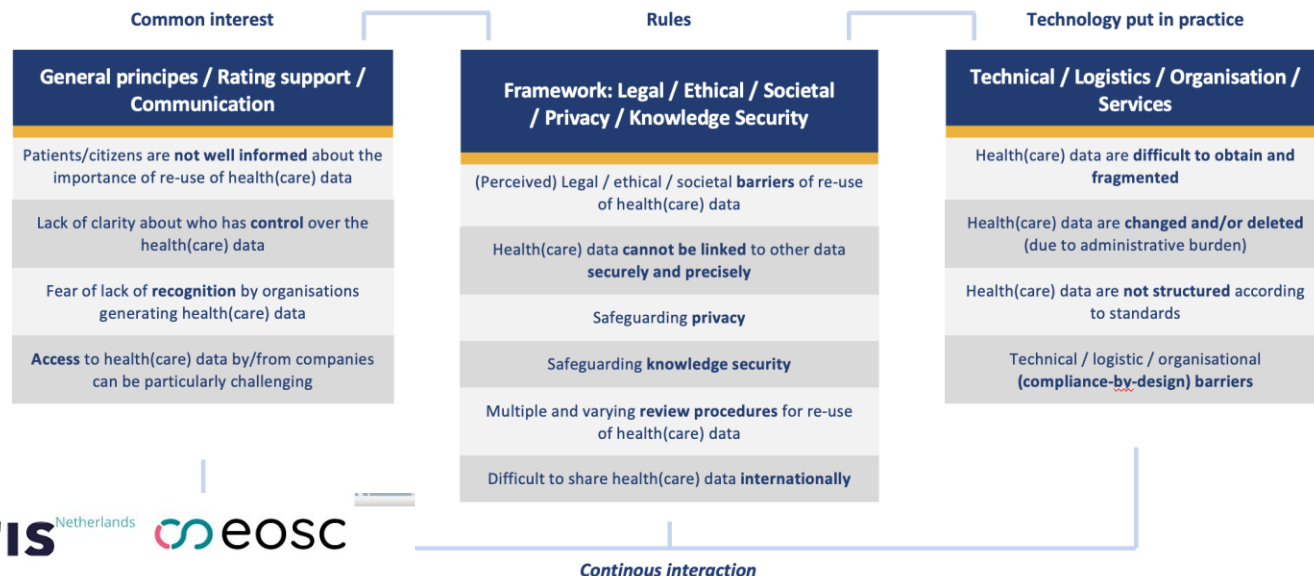


health RI

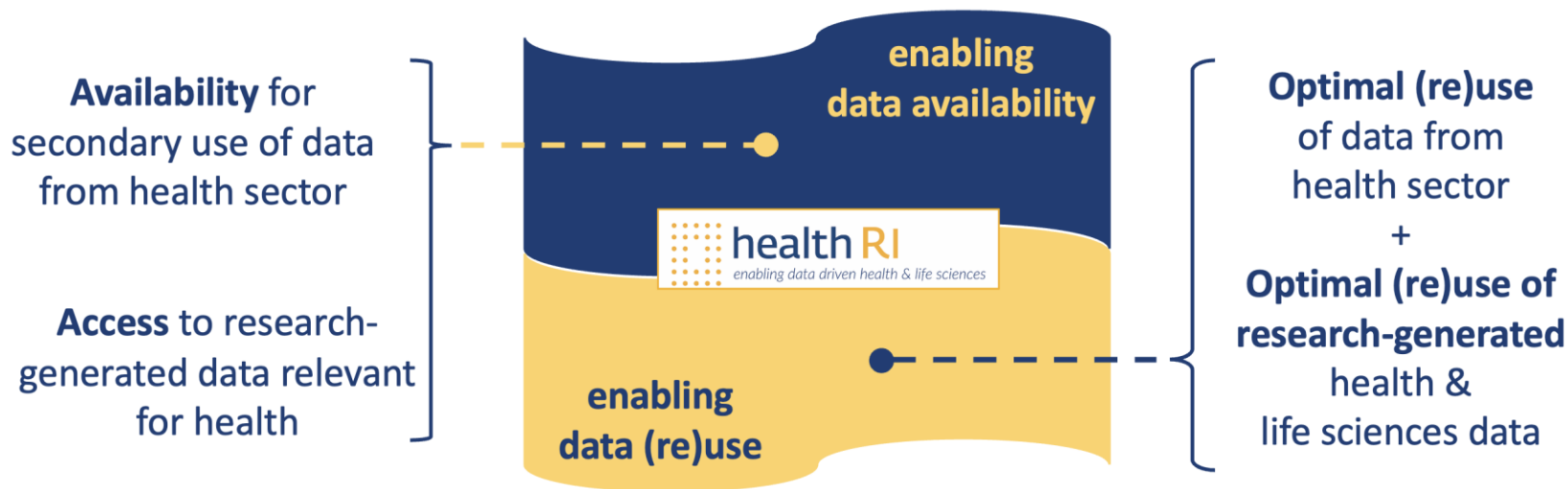
enabling data driven health & life sciences



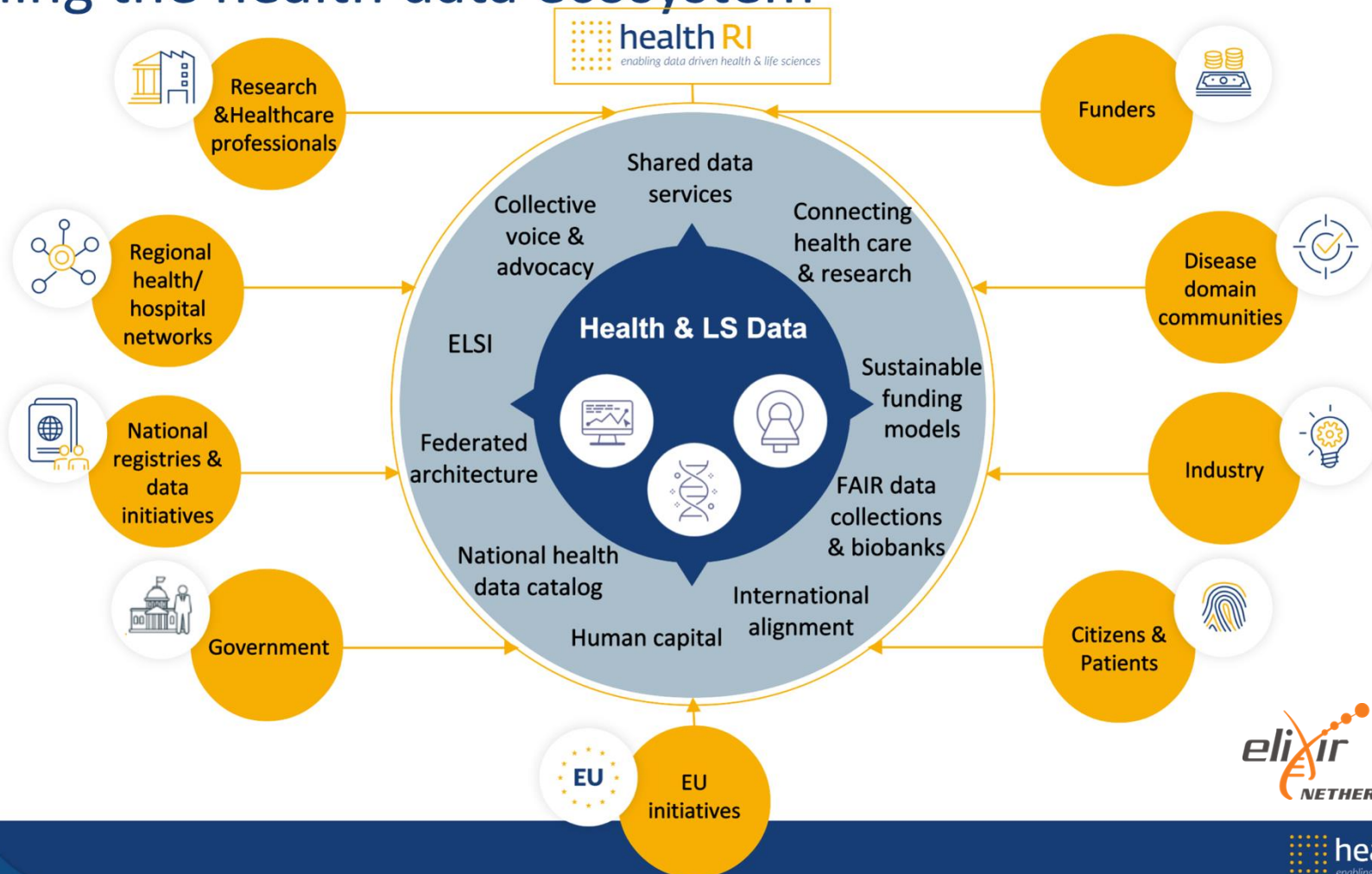
## Re-use of health(care) data: Integral approach of the obstacles to tackle



# Enabling data availability (EHDS) and enabling data (re)use for health & life sciences research & innovation (RIs)



# Aligning the health data ecosystem



# Nation-wide implementing the national health data infrastructure in a hub-nodes collaboration

1. Regional nodes

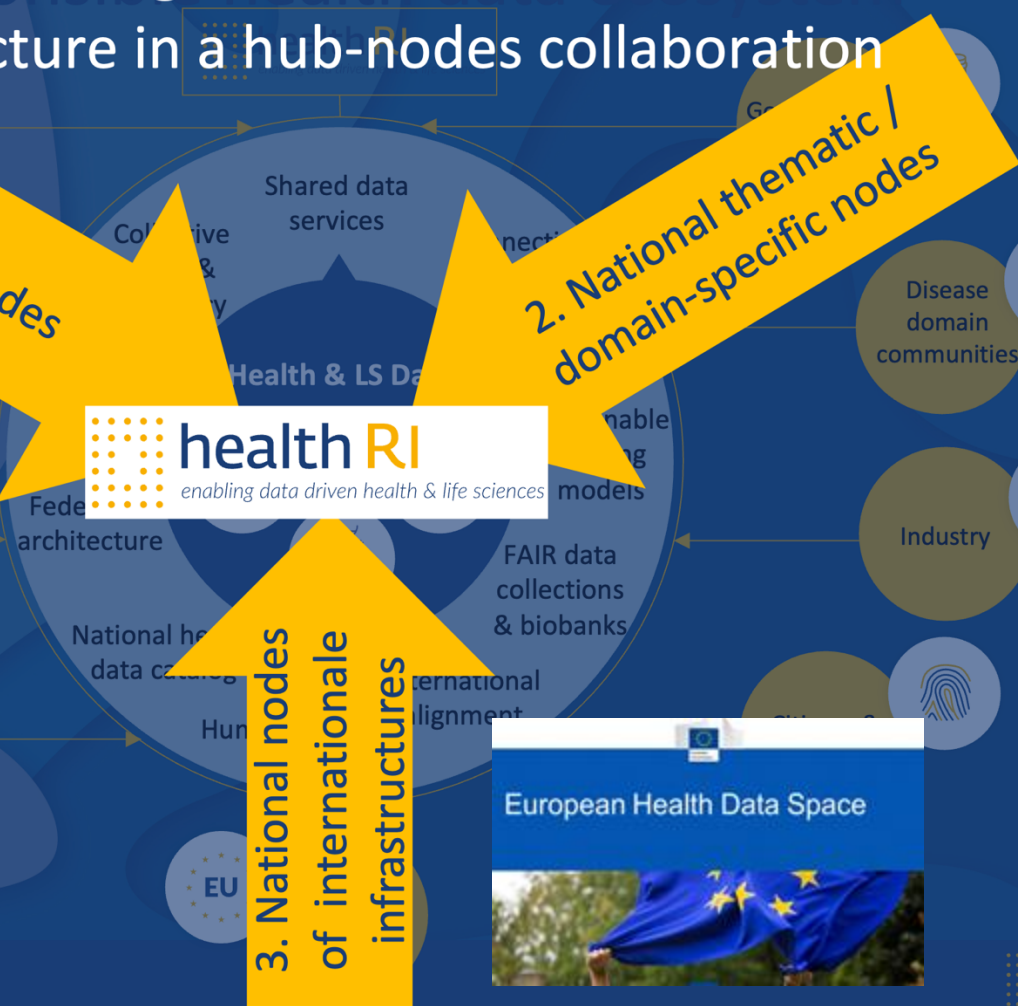
2. National thematic / domain-specific nodes

3. National nodes of internationale infrastructures



health RI

enabling data driven health & life sciences



health RI

enabling data driven health & life sciences



## **Part 2 – Challenge of data stewardship**

# The importance of data stewardship

- Data savvy researchers vs research savvy data stewards
- **Many flavours:**
  - research-, infrastructure- and policy-oriented data stewards, often with other titles than data steward
  - locally vs centrally embedded, in research departments, libraries, IT etc.
  - in public sectors and industry
  - different disciplines and domains
- Data stewardship is growing into a profession, but **roles, recognition, training and career tracks** vary widely across contexts
- **Community exchange** and informal, practice-driven learning play a vital role in building confidence, skills and shared language between data stewards and the stakeholders they engage with





**Data stewardship (from [CODATA](#)):**  
*Course of action taken by a person or group to **manage** and supervise organisational **data assets** with responsibility and commitment. Good stewardship involves adequate **care**, making use of the **FAIR** principles, and holding ownership and regulation to provide **high-quality data** (including metadata), combining trust and ethical practice*

One way or another, we are all in the field of data stewardship, so it is good to:

- discuss **skills**, **practice** and **communities** together
- **position yourself** in this complex landscape, as data steward or in relation to a data steward
- make use of the useful **resources** in this presentation to start your data steward journey right away in a very practical sense



# Professionalising data stewardship - The challenge

Role	Task	FTEs needed per 1000 researchers
Data Steward	Assisting researchers with effective management of research data	26
Trainer on data stewardship	Training researchers on data management skills	4

**That is 3 FTE per 100 researchers!**

Number adapted from OECD (2020), "Building digital workforce capacity and skills for data-intensive science"

The EC High Level Expert Group EOSC estimated 5 FTE per 100 researchers



2020, tool used from LCRDM: “Do I PASS for FAIR”

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



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

Barend Mons



Many of the world's hardest problems can be tackled only with data-intensive, computer-assisted research. And I'd speculate that the vast majority of research data are never published. Huge sums of taxpayer funds go to waste because such data cannot be reused. Policies for data reuse are falling into place, but fixing the situation will require more resources than the scientific community is willing to face.

<https://doi.org/10.1038/d41586-020-00505-7>

**That is 1 FTE per 500 – 1000 researchers!**



## Building bridges - Step by step

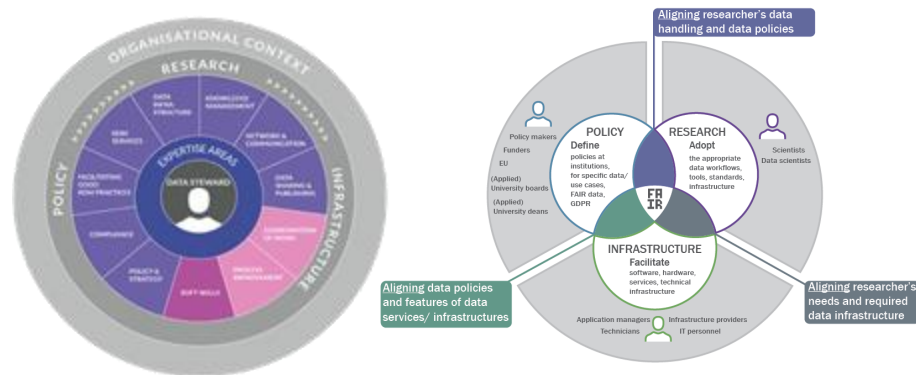
- Training is essential but not sufficient: **real-world practice** and **peer learning** complete the picture
  - *We need structured training and informal, practice-driven learning*
- Data stewardship is growing into a profession - **roles, recognition** and **training** vary widely
  - *Researchers, institutions, funders and industry increasingly rely on skilled data stewards, but the profession is still evolving*
- (Inter)national **initiatives** and **communities** help **professionalise the field**, and bridge between training and practice
  - *Community plays a vital role in building confidence, skills and shared language*





# Taking data stewards seriously

- Areas, responsibilities, tasks & competences
- Part of the **formal systems**:
  - *Basic components UFO (universities)*
  - *Three profiles for FUWAVAZ (UMCs)*
  - *UASs DS job profile*
  - *Formal RSE job profile*



## What professional stewardship looks like

- **Recognised:** The role is formally defined and supported. Including secured positions and **career** perspectives
- **Resourced:** Time, access, and authority are in place. There is clarity on tasks and expectations. Diversity of roles and types is acknowledged
- **Connected:** The steward is part of a peer network, incl. training and certification. The adoption of good practices is crucial

<https://doi.org/10.5281/zenodo.4320504>

<https://doi.org/10.5281/zenodo.3471707>

<https://doi.org/10.5281/zenodo.2669150>

[EBI Competency Hub](#)



1	Formalization of job profile data steward	
2	Data stewards are well organized and easy to find	
3	Build data steward capacity	
4	Ensure the availability of (certified) education and training of data stewards	
5	Use job profiles for career perspective data stewards	

<https://tdcc.nl/building-capacity-for-data-stewardship-in-the-netherlands-formal-job-profiles-training-and-career-perspective>

# Data stewards job profiles

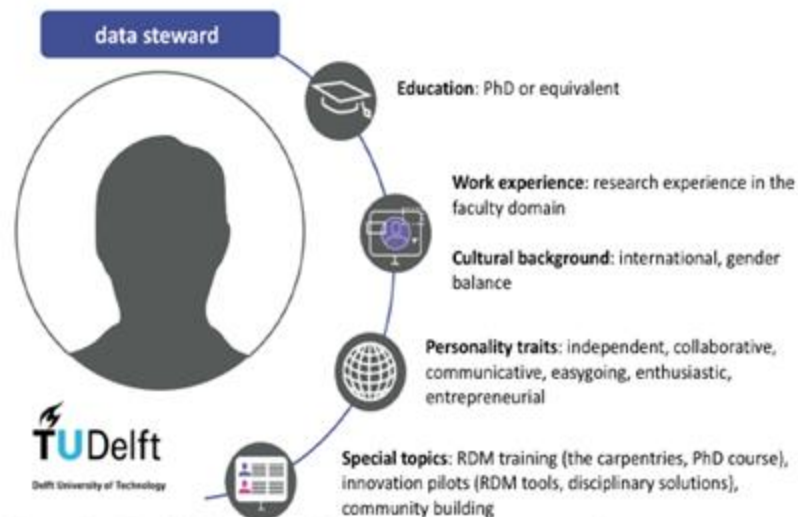


Figure 3.1 Delft University of Technology data steward

## Data steward in the organisation



1. Appointment explicit part of RDM policy
2. Positioned at the research institute
3. Additional RDM support for centralised tasks at library
4. No formal central coordination, library is informal linking pin

## Training for data stewards



1. Training organised by the coordinator
2. Formal RDM training
3. Training on TUD research support

## Learning on the job



1. Structured mentoring
2. Internal peer support (data stewards team)
3. External peer networks
4. Soft skills development: training and on the job
5. Gaining relevant research expertise

## Strengths and challenges



1. Strength: well-organised (coordination)
2. Strength: institutional buy-in
3. Strength: sustainable
4. Strength: team-feeling among the data stewards
5. Challenge: expensive (9 FTE)

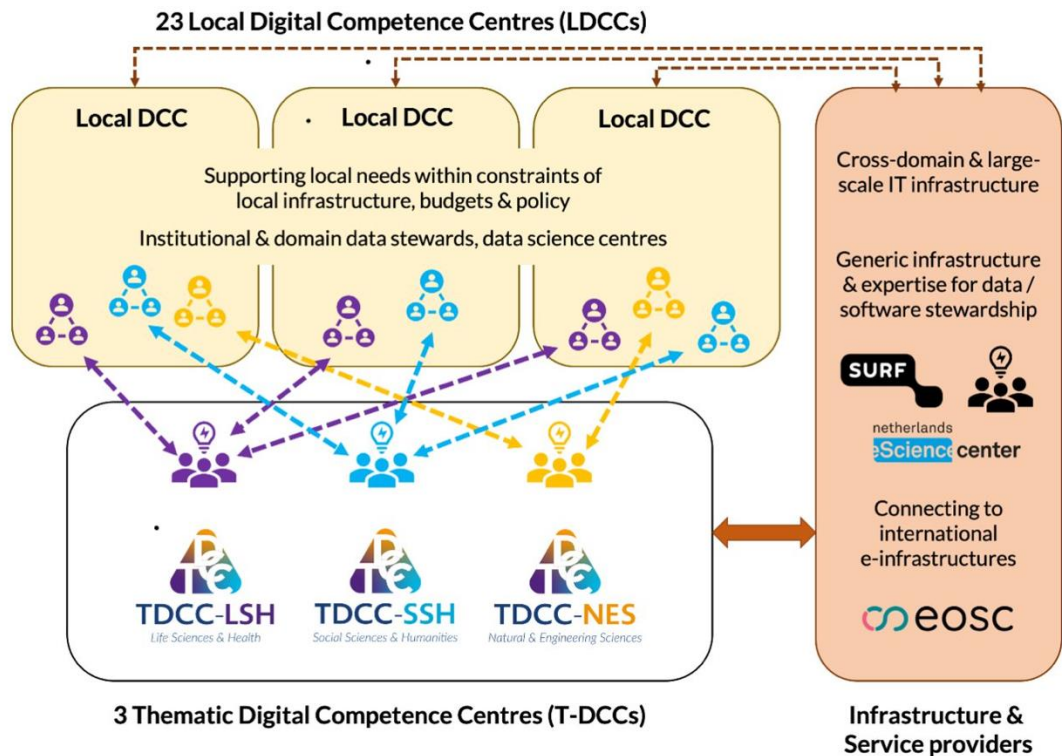
Eight case studies (universities, UASs & UMCs). Read these data stewards' full stories

<https://doi.org/10.5281/zenodo.4320504>



## **Part 3 – Data stewardship landscape**

# Community building - Local, national & international



## Leiden University Research Data Management Community

All University staff involved or interested in research data management are invited to join the Research Data Management Community.



faculty.

The Research Data Management Community communicates in English.

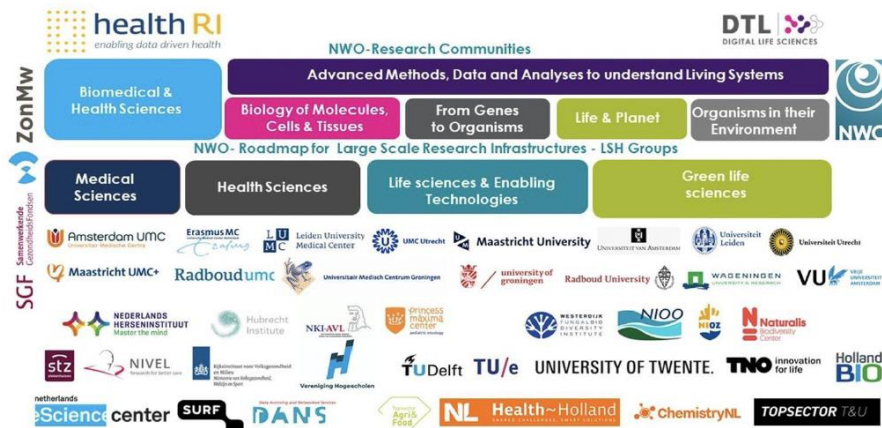
Many people across Leiden University have an interest in, or a responsibility for, good research data management (RDM) within their group, institute, or

If you are one of these people, you are invited to join the Research Data Management Community.

Organising network activities, coordinating funding programmes and stimulating collaborative projects to tackle domain-specific needs



<https://tdcc.nl/>



**RPOs**

Research performing organisations  
(e.g. Universities, UMCs, research institutes,  
HBOs including their LDCCs.)

**RSOs**

Research supporting organisations (e.g. SURF,  
DANS, NLeSC, 4TU.ResearchData, etc.)

**National  
Infrastructures**

National domain-specific research infrastructure  
initiatives (e.g. health & life sciences LSRI-  
projects)

**International  
Infrastructures**

National node teams of European infrastructure  
initiatives (e.g. health & life sciences ESFRIs,  
EOSC, etc.)

**Data stewards**

Domain-specific data stewards and other  
professionals in data driven health and life  
sciences

**Policy Drivers**

Policy Drivers of digital technology, services and  
infrastructure

**TDCC- NES &  
TDCC-SSH**

Harmonisation with other TDCC domains



## THE DATA SUPPORT COLLECTIVE

The National Coordination Point Research Data Management (LCRDM) is a national **network** of experts in the field of research data management (RDM). Together, we find **inspiration and solution**. Within the LCRDM, experts work together to address challenges that require a joint national approach.



The National Coordination Point Research Data Management (LCRDM) is the Dutch region for the Research Data Alliance (RDA).

### Start of the Research data alliance Netherlands (RDA NL)

On the 12<sup>th</sup> of June 2024 lots of members of RDA-NL came together in the DANS building in The Hague, to start shaping RDA-NL together. First some introductions were made about RDA-NL for those who didn't know all the ins and outs. Afterwards we started a 'get-to-know-bingo' game, which was really fun and opened up the 'creativity vibe' we needed to really dive into RDA-NL and think about pluses and minuses and what things can be added to put RDA-NL on the map. We have closed this session with some really good insights that we are going to use to create more awareness and popularity around RDA-NL.

### Output ▲

### RDM in

Data Stewardship

Engagement of researchers

Financial aspects of FAIR

Governance & policy

Legal aspects & privacy

Metadata & vocabularies

Sustainable software

Tools & Infrastructure

<https://lcrdm.nl>





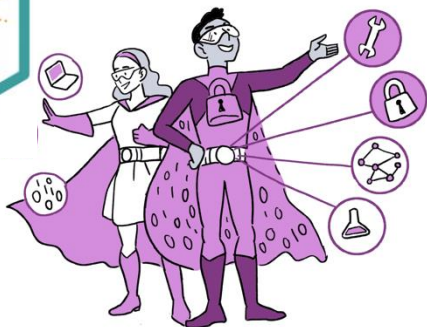
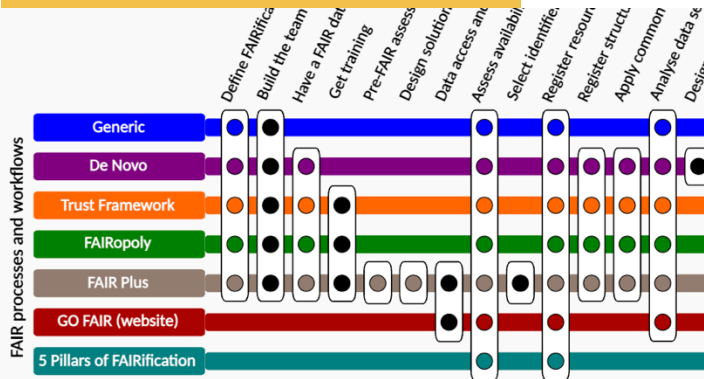
## FAIR Metroline

A step-by-step route to making data FAIR



healthRI

enabling data driven health & life sciences



# Things

for research data management



Landelijk Coördinatiepunt  
Research Data Management

### Budget for RDM

NPOS report - Project A:  
Transitiekosten Open Science

policy development

### Code of conduct

The Netherlands Code of Conduct  
for Research Integrity

ethics

### Coding and data science skills

Foundational coding and data  
science skills by Code Refinery (EU)

training

### Coding and data science skills

Foundational coding and data  
science skills training by Data  
Carpentry

training

### Community of RDM experts

Mailing list for Data Support  
Experts by JISC (UK)

community of practice

### Community of RDM experts

Mailing list for Data Support  
Experts by LCRDM (NL)

community of practice

### Community of RDM experts

Community for Data Support  
Experts by DTL (NL)

community of practice

### Community of RDM experts

Community for Data Support  
Experts by the Research Data  
Alliance

community of practice

### Community of RDM experts

Support community for Data  
Support Experts by the UKB (NL)

community of practice

### Coretrustseal Digital repository certification

Trustworthy digital repository  
certifications by Coretrustseal

data repositories

### Creative Commons Data licence

Guidelines for data reuse by  
Creative Commons (US)

licenses

### Data archiving

Archiving tips by Research Data NL  
(RDNL)

data repositories

### Data horror escape room

Escape room to use in training to  
introduce researchers to various  
topics in Data Management  
Planning

training

### Data management plan

Tool for researchers in writing  
appropriate Data Management  
Plans for themselves and for  
funders by DMP online

data management planning

### Data management plan

Software to assist Researchers in  
writing appropriate Data  
Management Plans by DMP online

data management planning outreach

### Data management plan

A tool for Data Management  
Planning that generates actionable  
DMPs

data management planning

<https://fairmetroline.org>

<https://book.the-turing-way.org>

<https://23things.sites.uu.nl>

# [fairmetroline.org](http://fairmetroline.org) as step-by-step route to making data FAIR, for different audiences and in the context of (inter)national requirements

## Apply common data elements

*Involved: Data steward, Researcher*

### Short description

A Common Data Element (CDE) is a standardised representation of a variable with a clear question and specific response format, designed to be easily understood by both humans and machines. This step offers resources to help locate CDEs or develop your own, which can then be used as a foundation for tools like electronic case report forms.

### Why is this step important?

Using Common Data Elements (CDEs) streamlines study design, improves data quality and supports interoperability by providing standardised, expert-reviewed variable definitions. They enable easy data sharing, pooling and compliance with funder, publisher and regulatory requirements.

### How-to

1. **Clarify your research context to target the right CDE repository**  
Consider your research domain, population, data type and key measures to effectively guide the search for relevant CDEs.
2. **Find the appropriate CDEs.** Check first for regulatory or domain-specific CDEs, then search general repositories and consult experts or established codebooks if none are found.
3. **Reuse CDEs where possible, adapt with care and document every change.** Reuse CDEs where possible, adapt with clear documentation when needed and add missing variables carefully maintain semantic interoperability

## Define FAIRification objectives

*Involved: Data steward, ELSI expert, Researcher*

### Short description

FAIRification sets goals for improving data findability, accessibility, interoperability and reusability through better documentation, metadata and standards. Clear objectives, often set by institutes, funders or journals, promote data reuse and increase researcher visibility and collaboration opportunities.

### Why is this step important?

Clear FAIRification objectives provide direction, enhance collaboration and set measurable milestones, enabling a structured and efficient approach tailored to your FAIR journey.

### How-to

1. **Get familiar with the FAIR principles.** Get acquainted with the FAIR principles through informative resources.
2. **Identify FAIR requirements.** Consider requirements from funders, institutions and your project to ensure alignment from the start using planning tools like DMP Online and DSW
3. **Weigh FAIRification impact, benefits and effort.** Evaluate the potential benefits of FAIRification early to ensure your objectives provide meaningful value to the stakeholders and justify the effort.
4. **Decide the appropriate FAIRification level.** Determine the appropriate level of FAIRification for your project through a pre-assessment, balancing effort with the complexity and goals of your data.
5. **Identify the resources required for the FAIRification.** Identify the expertise, tools and support required for FAIRification to ensure your project has the necessary resources in place from the start.
6. **Create an actionable plan around clear objectives.** Translate your FAIRification goals into a concrete, actionable plan by specifying steps, resources and research-driven motivations.

## Register resource level metadata

*Involved: Data steward, Infrastructure professional, Researcher*

### Short description

Resource-level metadata describes datasets, articles, software, reports or other outputs and can be made findable by registering them in searchable catalogues. These catalogues store only the metadata, linking to repositories or access points, which saves time, increases visibility and supports collaboration. This step will help registering metadata in searchable repositories.

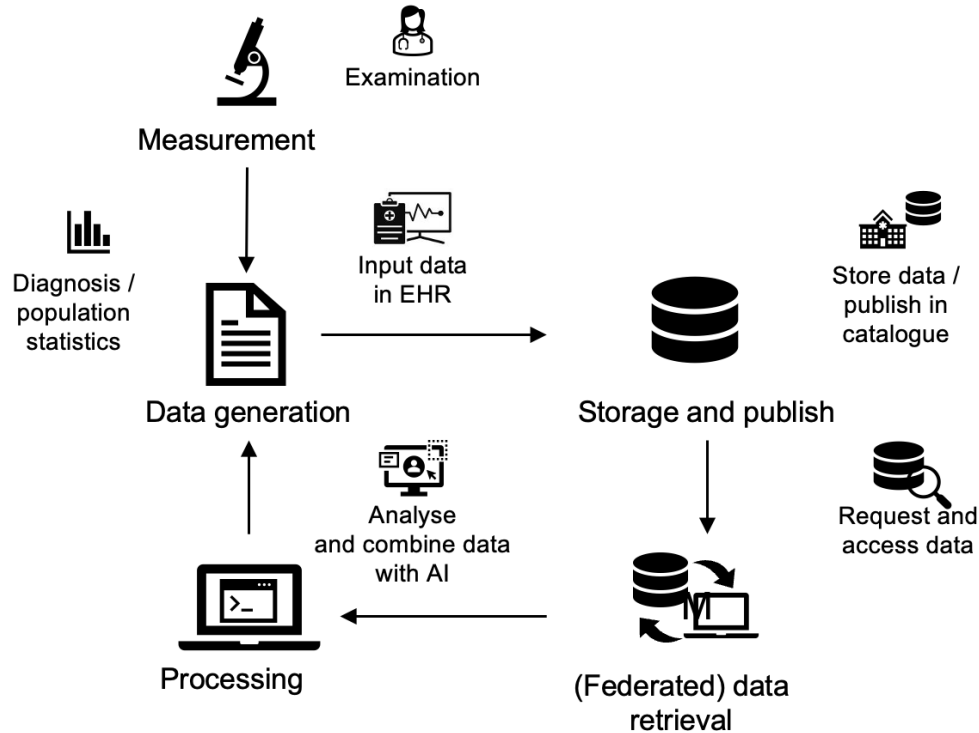
### Why is this step important?

Metadata catalogues make research resources visible and accessible even without publishing the actual data, enabling discoverability, collaboration and control over access while meeting FAIR requirements. They benefit data holders, users and the scientific community by saving time, preventing redundant work and fostering transparency and shared standards.

### How-to

1. **Inventorise resource types.** Inventorise the resources and identify their types and categories.
2. **Determine metadata elements for each resource type.** Identify and list metadata elements per resource type and align with domain practices by reusing established metadata where possible
3. **Search for metadata catalogues per resource type.** Identify and evaluate metadata catalogues to ensure proper registration and long-term accessibility of your data
4. **Select the appropriate metadata catalogues.** Evaluate the pros and cons of metadata catalogue candidates and make the decisions most appropriate for your context.
5. **Enter resource metadata required in the selected metadata catalogues.** Enter and align metadata across selected catalogues for each resource.

# How should the FAIR infrastructure work

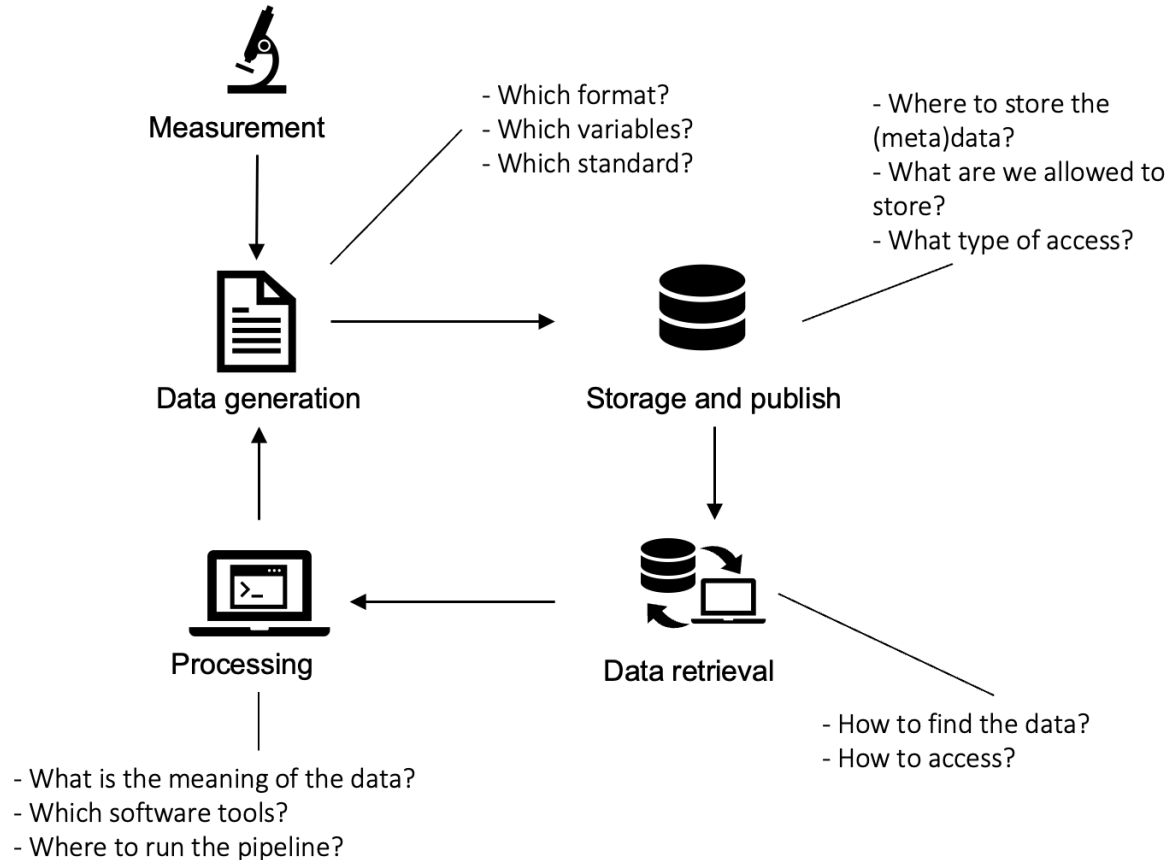


Each step can involve several different sub-steps, but the general pattern is a flow of **data** through (software) **tools**.



# The problem

Going through the process requires **data** and **tools** to be **Findable Accessible Interoperable and Reusable (FAIR)**.







# FAIR Metroline

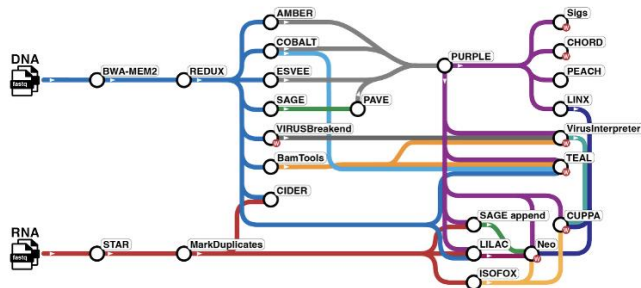
A step-by-step route to making data FAIR



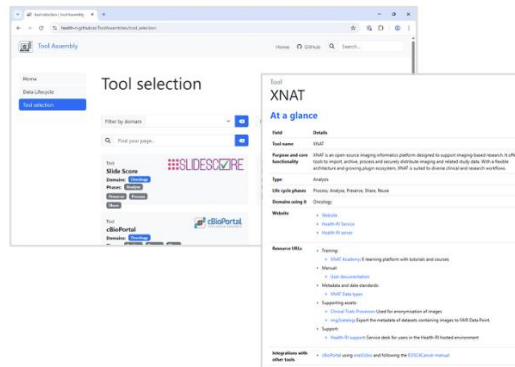
## Tool Assembly



Fully automated workflows  
generation through connection of  
tools



Catalogue of tools, bundled with  
supporting resources and  
information



FAIR guidance shaped  
towards various audiences  
and requirements

### Register structural metadata

Involved: Data steward, Researcher

#### Short description

Structural metadata describes the content, format and value systems of your data. Making this metadata available improves dataset usability, trust and helps identify suitable repositories and tools to enhance FAIRness. This step will help selecting data repositories for structural metadata.

#### Why is this step important?

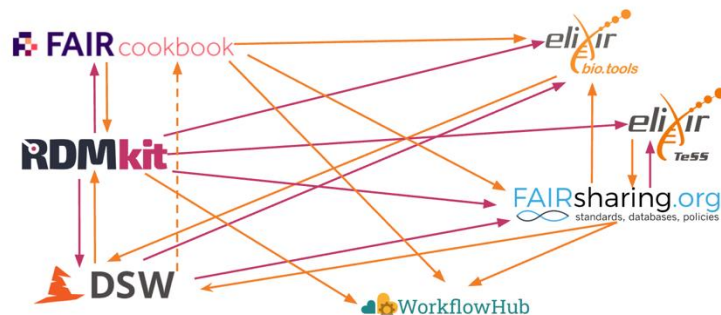
Registering structural metadata is essential for reducing ambiguity, providing context and enabling precise, harmonised definitions of data elements, which supports better integrative, findability and reuse. It also enhances interoperability, reproducibility and long-term accessibility, making datasets more meaningful and useful across different research contexts.

#### How-to

1. Prepare your codebook. Ensure your codebook is complete and aligned with community standards, clearly defining which data elements to collect and how their metadata are structured in your research domain.
2. Select the most appropriate data repository for publishing. Select an appropriate repository for publishing your codebook based on the project context and FAIR objectives.
3. Publish the codebook in the selected data repository. Publish your codebook in the selected repository making sure it is open access.
4. Enhance findability and interoperability of structural metadata. Use structured, machine-readable formats and specialised tools to improve findability and interoperability across platforms and domains.



# The ELIXIR "Research Data Management Ecosystem"



ELIXIR All Hands 2020 - ELIXIR FAIR & Research Data Management know-how ecosystem workshop - Registries Walkthrough - Bert Dreesbeke and Allyson Lister

## Research Data Management Community

RDMkit

FAIR Cookbook

FAIRSharing

Data Stewardship Wizard & FIP Wizard

BioTools

TeSS

Workflow Hub

RO Crate

FAIR Training handbook

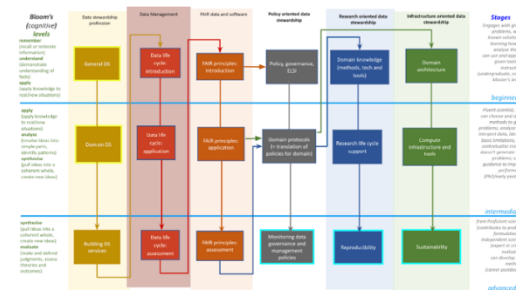
The screenshot shows the RDMkit website. At the top is the RDMkit logo. Below it is a section titled 'Data management' with a sub-section 'Data life cycle'. The 'Data life cycle' is represented by a circular diagram with eight stages: Plan, Collect, Process, Analyse, Preserve, Share, Reuse, and a central 'Data life cycle' label. Below the diagram is a navigation menu with dropdowns for 'Your role', 'Your domain', 'Your tasks', 'Assembly', 'al resources', 's and resources', and 'ing resources'.

## Research Data Management Community

Research Data Management (RDM) is central to the implementation of the FAIR (Findable Accessible, Interoperable, Reusable) and Open Science principles. Recognising the importance of RDM, ELIXIR Platforms and Nodes have invested in RDM and launched various projects and initiatives to ensure good data management practices for scientific excellence. These projects have resulted in a rich set of tools and resources for FAIR data management.

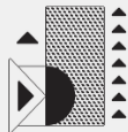
[Join this Community](#)

However, these resources remain scattered across projects and ELIXIR structures, making their dissemination and application challenging. Therefore, it is important to coordinate these efforts for sustainable and harmonised RDM practices, with dedicated forums for RDM professionals to exchange knowledge and share resources.



A practical article on the Foundational Practices of Research Data Management

## Towards a national platform: Training & Community building for Open Science



## Project aim 2025-2028

RDNL receives funding from Open Science NL to increase the capacity of data professionals in the Netherlands to contribute to the transition towards Open Science.

## What is RDNL?

Research Data Netherlands (RDNL) is a national coalition of DANS, 4TU.ResearchData, Health-RI and SURF.

RDNL's mission: build capacity and create a vibrant community of data professionals through training, sharing expertise, and national recognition initiatives.



The Turing Way Community & Scriberia.  
(2020), 10.5281/zenodo.4323154 (CC-BY)

## Current RDNL training

In-person (certified), or online-only (free) courses for data support professionals.

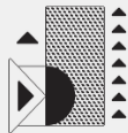
### Essentials 4 Data Support

- ▶ Build skills in research data management.

### GDPR 4 Data Support

- ▶ Navigate complexities of the GDPR in research data management.

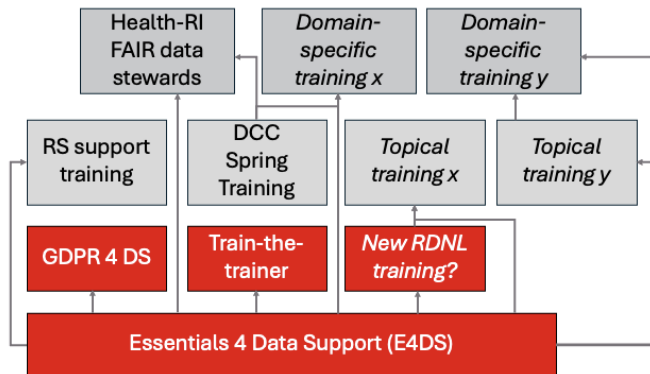
## Towards a national platform: Training & Community building for Open Science



### Curriculum & training programme

- ▶ Developing new training (content)
- ▶ Learning paths
- ▶ Certification via badges
- ▶ Collaboration with non-RDNL training providers

eScience Center, DCC-PO, DCC Spring Training Days, universities, (inter)national networks, etc.



## Community involvement

Build on and collaborate with existing communities to further enhance the training portfolio:

- ▶ **Create community profiles** to identify relevant communities
- ▶ **Install a feedback loop** to collect input for and feedback on the curriculum and platform

<https://researchdata.nl/en/home/>

<https://www.cscce.org/profiles>

## Be part of the journey

### Are you a data professional?

- ▶ Join the community event, early 2026
- ▶ Share your experiences, needs and expertise

### Do you provide training for data professionals?

- ▶ Let's create a shared national training programme together!
- ▶ Contact us via [info@researchdata.nl](mailto:info@researchdata.nl)



edu.nl/7vpbd

More about the project



## **Part 4 – Data stewardship communities**



## Building bridges between data stewards - The Data Stewards Interest Group (DSIG)

- Open to **all data stewards** and like-minded professionals, cross-domain and international (since 2017)
- A recurring structure with **informal** starts, peer **introductions** and shared notes
- Peer-driven and **bottom-up**: shaped by members' input
- Learning from each other, via *News & Newsworthy* and *In Case You Missed It's*
- Rotating roles and lightweight facilitation that invite **shared responsibility**
- **Feedback** as habit: Keep, Add, Less & More keeps the format evolving
- A culture of openness, continuity and fun. **Building trust** through showing up regularly
- *Everyone contributes in small ways, and those small contributions matter*

<https://tdcc.nl/dsig> + join our slack channel

What are some of the benefits of being part of this network?

19 Answers

Mentimeter

job offers

Keeping up to date

Finding people working on similar initiatives

Offer help

Sharing news and newsworthy

sharing knowledge

Helping each other find information

Knowing what others are doing and how they are doing it

Stay up-to-date on all things related to open science

Get to know other experiences and keep up to date

being with like-minded

How many meetings do you attend each year as part of this network?

11 Answers

Mentimeter

4-5

4-5

As many as time permits

At least 4

4-5

as many as I can (usually most of them)



Not many until now, but hopefully more often in the future

As many as possible

3-4

4/5





[Register here](#)

[Agenda and minutes of previous DSIG meeting](#)

Time	Topic	Comments/results	Owner
10:00	Informal start: joint coffee		All
10:15	1. Formal start and introduction round		Nils
10:25	2. New and Newsworthy	Share your successes with the group; Share insights from workshops and seminars you have visited	All
10:40	3. ICYMI	RDM news-bits, in case you missed it	Mijke, Nils
10:50	4. Presentation / Interactive session: Free automated multi-language text anonymization for open science (FAMTAFOS) by Maximilian Mozes	We are happy to welcome <a href="#">Maximilian Mozes</a> , who will present the free & open source tool <a href="#">FAMTAFOS</a> . This tool was developed through the <a href="#">NWO Open Science Fund 2021</a> . Participants are welcome to ask questions and provide input from their practice!	Nils
11:40	5. Closure/any other business		Nils
11:45	6. IG meeting end/feedback		All

### 1c. Roll call

Add your name to the roll call below

Name / affiliation / social media / email

- Carla Strubbia / Delft University of Technology, Netherlands / c.strubbia@tudelft.nl
- Ruud Steltenpool / Saxion hogeschool / r.g.steltenpool@saxion.nl
- Anna Volkova / Erasmus University Rotterdam / volkova@eur.nl
- Sam Heijnen / Vrije Universiteit Amsterdam, Faculty of Humanities / s.heijnen@vrije.nl
- Mijke Jetten, Health-RI/DTL, [mijke.jetten@health-ri.nl](mailto:mijke.jetten@health-ri.nl)
- Nils Arlinghaus / TDCC-SSH / Mastodon: @NilsArlinghaus@social.mastodon.social / [nils.arlinghaus@dans.knaw.nl](mailto:nils.arlinghaus@dans.knaw.nl)
- Diana Pilvar / University of Tartu / diana.pilvar@ut.ee
- Mirjam Brullemans / Radboudumc, Nijmegen / [mirjam.brullemans-spansier@radboudumc.nl](mailto:mirjam.brullemans-spansier@radboudumc.nl)
- Marina Popleteeva, LCSB, University of Luxembourg, [marina.popleteeva@univ.lu](mailto:marina.popleteeva@univ.lu)
- Anne Aarts / Tilburg School of Social and Behavioral Sciences / [a.m.w.m.aarts@tilburguniversity.edu](mailto:a.m.w.m.aarts@tilburguniversity.edu)
- Carlijn Hofhuizen / Nivel / [c.hofhuizen@nivel.nl](mailto:c.hofhuizen@nivel.nl)
- Maarten Hijzelendoorn, Leiden University, [p.m.hijzelendoorn@huron.nl](mailto:p.m.hijzelendoorn@huron.nl)
- Esther Plomp / Delft University of Technology, Faculty of Applied Sciences / [e.plomp@tudelft.nl](mailto:e.plomp@tudelft.nl)
- Katherine Marcoux / Radboud University / [katherine.marcoux@ru.nl](mailto:katherine.marcoux@ru.nl)
- Mira Stanic / TDCC-NES / [m.stanic@tudelft.nl](mailto:m.stanic@tudelft.nl)
- Andres Ramos / RIVM / [andres.ramos.padilla@rivm.nl](mailto:andres.ramos.padilla@rivm.nl)
- Willemijn Plomp / Leiden University / [w.p.plomp@fsw.leidenuniv.nl](mailto:w.p.plomp@fsw.leidenuniv.nl)
- Garrett Speed / Utrecht University Faculty of Geosciences / [g.t.speed@uu.nl](mailto:g.t.speed@uu.nl)
- Clara Boavida / Iscte-University Institute of Lisbon, Portugal / [clara.boavida@iscte-iul.pt](mailto:clara.boavida@iscte-iul.pt)
- Francie Manhardt / Radboud University, Nijmegen School of Management / [francie.manhardt@ru.nl](mailto:francie.manhardt@ru.nl)
- Sanne de Vries, Sociaal en Cultureel Planbureau (SCP) / [s.de.vries@scp.nl](mailto:s.de.vries@scp.nl)



# DTL Data Steward Interest Group

Meeting 24 April 2024

In Case You Missed It

10 RDM news-bits

## Case You Missed It

New Open Science Guide for Early-Career Researchers

<https://www.cambridge.org/9781107177772>

Open Science  
A Practical Guide for Early-Career Researchers

Contents

- 1 Welcome to Open Science
- 2 Prepare & Disseminate
- 3 Collect & Analyse Data
- 4 Write & Publish

Open & FAIR  
Sharing to  
Full Day

For  
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[illegible]

What should you think about when planning for data management during fieldwork?




### CHECKLIST FOR DATA MANAGEMENT WHEN WORKING ABROAD




**CHECKLIST FOR DATA MANAGEMENT WHEN WORKING ABROAD**

**1. Plan ahead.**

This symbol indicates steps that will be the most crucial to your success. You have a back-up plan.

**2. Plan ahead.**

This symbol indicates suggestions for planning your procedures or protocols.

**Notes:** If using a protocol of this checklist, refer back to the further information on the web.

Use the Research Support Portal to find out more about this.

**CHECKLIST FOR DATA MANAGEMENT WHEN WORKING ABROAD**

- This symbol indicates the environmental protection.
- This symbol indicates planning your group.

Note: If using a personal data device to further information on the web.

Use the [Research Support Portal](#) to find out more about University.

It highlights the needs that researchers might have and might serve as a conversation starter:



Busy working on your research project?



VRIJE  
UNIVERSITEIT  
AMSTERDAM

<https://www.huyas.nl/orbiting-see-between-researchers-and-the-science-health-research-infrastructures>

20 Projects

## Bridging the gap between researchers and the Life science & Health research Infrastructures

Strengthening ECRIS, ECRIS+, and EU-RIH topic 2 researchers



EOSC-Life

healthRI  
enabling data driven research

14th October 2023, Wednesday 14th-15th October 2023

Location: [Foshoize](#), Kromme Nieuwegein 49, Utrecht & online (hybrid meeting)

Topics a.o.:

- Data stewardship skills
- Community building
- Capacity building
- Data stewardship wizard
- FAIR cookbook
- FAIRsharing
- MDR (metadata repo for clinical research)
- Sensitive data sharing
- Biosamples and patient engagement

- **Date:** Tuesday 13th - Wednesday 14th June 2023, lunch to lunch.
- **Location:** [Pauze.nl](#), Kromme Nieuwegein 49, Utrecht & online (hybrid meeting)

- Data stewardship skills
- Community building
- Capacity building
- Data stewardship wizard
- FAIR cookbook
- FAIRsharing
- MDR (metadata repo for clinical research)
- Sensitive data sharing
- Biosamples and patient engagement

[illegible]

Manuscript accepted for publication 15/08/2009

Manage

- # qualitative-data
- # events
- 🔒 organisers-channel

```
# general
```

```
# job-ads
```

```
# welcome
```

# dsig-meetings

```
# random
```

# materials

# privacy

```
# technique
```

# dmp

**Mike Jetten** 1:20 PM

 Fellowship of the Data – RDM trainers network meeting, 21-22 June 2023 | Berlin, Germany

The RDM trainers network meeting provides opportunities for exchange and exploration along with a poster session. The meeting will feature keynote presentations and workshops. The topics for the meeting are:

- Applies to applied and community data science
- Most the FAIR implementation team.

[More information and registration](#)

Mike Jetten 1:20 PM

**Fellowship of the Data – RDM trainers network meeting, 21-22 June 2023 | Berlin, Germany**  
The RDM trainers network meeting provides opportunities for exchange and exploration along with a poster session and keynote talks. The keynote talks are chosen to instigate further reflection and networking.  
More information and registrations

Pascal Flohr 3:48 PM

**EOSC Future Train-the-Trainer Active Learning Course - 26-29 June (2 hours per day), online**  
The EOSC Future project is excited to announce another offering of its Train-the-Trainer Active Learning Course, a four-day online course - from June 26 till 29 - covers four different modules for trainers to enhance their understanding of EOSC and various related topics alongside their ability to integrate it into their training activities.  
<https://dans.knaw.nl/en/news/eosc-future-train-the-trainer-active-learning-course/>

Wednesday, May 24th -



Marlie van der Geest 3:30 PM

For everyone that's interested in federated analysis:

📢 DataSHIELD conference 2023 - registration now open!

Tuesday, May 14th:



**Mijke Jetten** 8:27 AM  
MEMIC/MURAC is looking for a data steward for the LS domain. Apply before May 29. Contact [questions](#)

**Academic Transfer**

Datascientist | MEMIC | Faculty of Health, Medicine and Life Sciences (FHML) | 0.8 fte  
Ben jij pro-actief, een natuurlijke netwerker en vind je het een uitdaging om onderzoekers te adviseren en ondersteunen als het gaat om data-gerelateerde vraagstukken en digitale innovaties en wetenschap? Dan is dit wellicht de functie die je zoekt!

Tuesday, May 23rd -

**Ricarda Braukmann (DANS)** 11-03-2014  
In case anyone is interesting in an international position, CESSDA is looking for a new Head of Info:  
<http://www.CESSDA.eu/News/CESSDA-Newsitem-nd13492>

Tuesday, May 1st.



Francie Manhardt, 02/10/2014

Hello everyone! I'm Francie from Radboud University, Nijmegen. I'm the data steward for the Institute for Human-Computer Research at the Nijmegen School of Management. Looking forward to getting inspired through this group's experiences with us!

附

Kristin Halverson 12:44 PM  
Hi everyone. I've been a member for awhile, but haven't introduced myself. I'm the data steward coordinator at the Institute of Technology in Stockholm, Sweden. Appreciate the discussions and information thus far, and look forward to continuing to take part here!

四

ricardo hartley 11/21/14



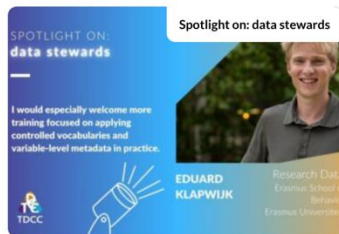
**Kars Wijnhoven** 10:03 PM

Hi everyone! I've been a member of this group for about a year and a half, but I haven't posted or introduced myself. My name is Kars Wijnhoven and I work as a central data steward at Tilburg University, the Netherlands. Looking forward to meeting you all and helping out where I can!

Tuesday, May 23rd -

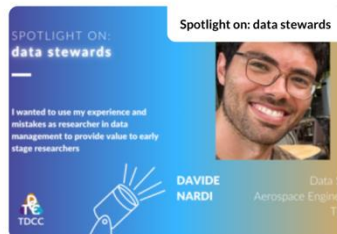


Gerhard 1:12 PM  
Hi all, I'm Gerhard, Data Steward/Teacher/Researcher at Leiden University, The Netherlands. Looking forward to getting to know you 🙌🏻 @Alesia Gambardella , thanks for forwarding!



# Spotlight on data stewards series

<https://tdcc.nl/dsig/spotlight-on-data-stewards>





**Mijke Jetten** 11:05 PM

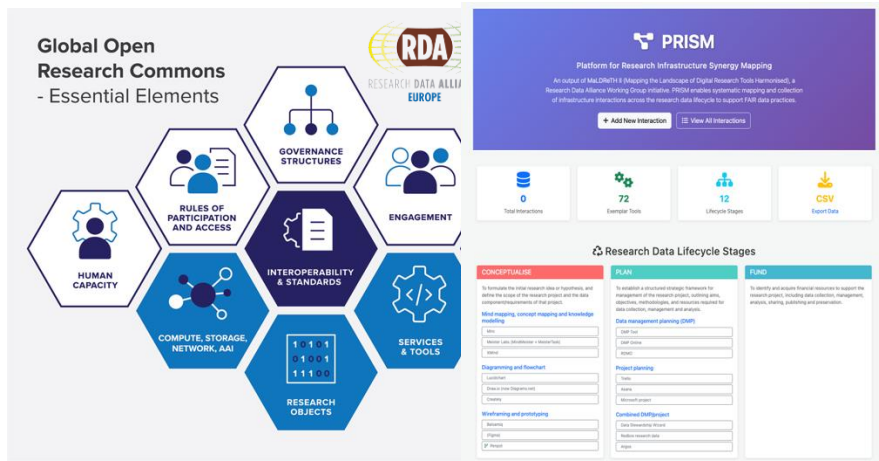
Welcome to join us for the next Data Stewards Interest Group meeting.

**Date:** November 10, 14:45 – 16:30 CET, chaired by Lena Karvovskaya (TDCC-NES)

**Topics:** In this DSIG session, C.J. Woodford and Rory Macneil will introduce two complementary RDA initiatives: the **Global Open Research Commons (GORC)** and **Mapping the Landscape of Digital Research Tools (MaLDReTH)**. Both aim to advance understanding of how research infrastructures and digital tools can interconnect to support open and FAIR science. Together, they explore how global frameworks and practical mappings can strengthen collaboration, interoperability, and sustainability across research communities

**Details:** [Agenda](#) & [Registration](#)

Everyone with an interest in data stewardship is welcome. Connect with peers, exchange insights, and reflect on the latest developments in data stewardship. (edited)

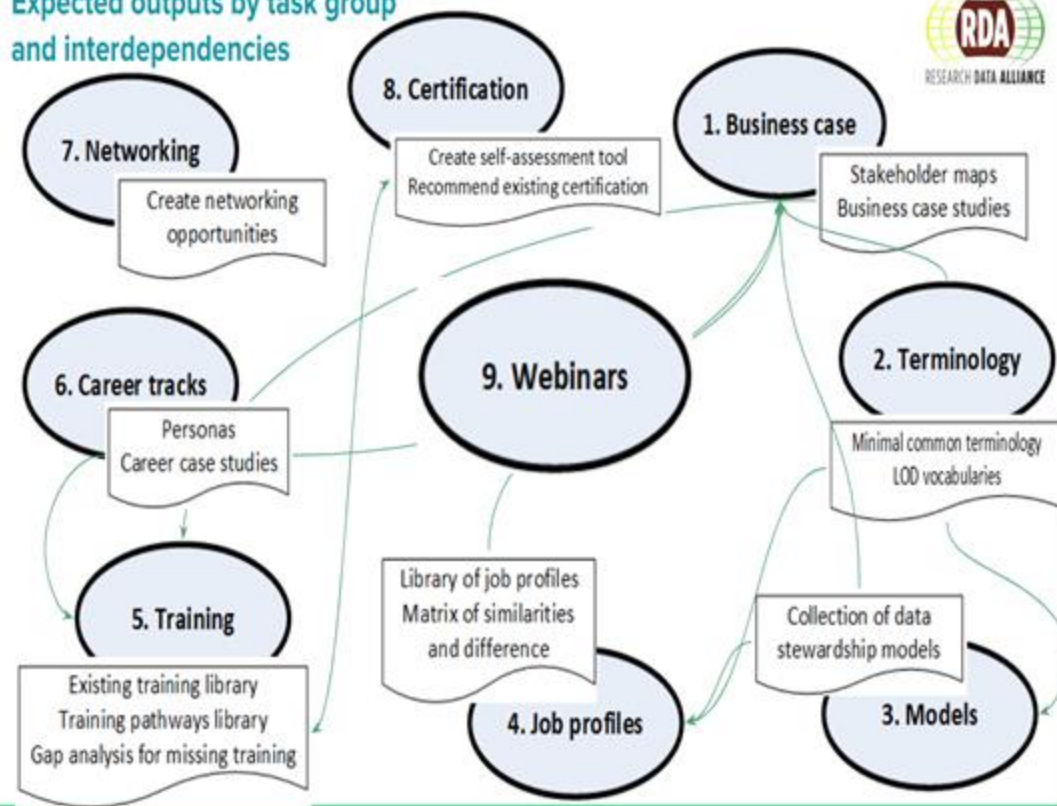


<https://www.rd-alliance.org/about/> + [RDA for newcomers](#)

Welcome to join the next DSIG meeting: [Agenda](#) & [Registration](#) (hosted by TDCC-NES)



## Expected outputs by task group and interdependencies



## About the RDA

Share [f](#) [X](#) [in](#) [e](#)

The Research Data Alliance (RDA) was launched as a community-driven initiative in 2013 with the vision that researchers and innovators can openly share and re-use data across technologies, disciplines, and countries to address the grand challenges of society.

The RDA's mission is to build the social and technical bridges that enable that vision, accomplished through the creation, adoption and use of the social, organisational, and technical infrastructure needed to reduce barriers to data sharing and exchange. Scientists & researchers join forces with technical experts in focused Working Groups, exploratory Interest Groups and Communities of Practice. Individual membership is free and open to all.

### Group Details

**Status:** recognised-and-endorsed

**Group Focus:** Not Applicable

**Chair(s):** Mijke Jetten, Romain DAVID, Biru Zhou, Yan Wang, Liise Lehtsalu, Mikala Narlock

**TAB Liaison:** Niels Deriemaeker

This is the webpage of the RDA Interest Group on professionalising data stewardship.

## Research Data Alliance: Professionalising Data Stewards Interest Group



## The European Open Science Cloud

The ambition of the European Open Science Cloud, known as EOSC, is to develop a **'Web of FAIR Data and Services' for science in Europe**. EOSC will be a multi-disciplinary environment where researchers can publish, find and re-use data, tools and services, enabling them to better conduct their work.

EOSC builds on existing infrastructure and services supported by the European Commission, Member States and research communities. It brings these together in a federated 'system of systems' approach, adding value by aggregating content and enabling services to be used together.



## Metadata and data quality

To ensure research objects can be discovered, understood and reused, as well as content can be relied on.

- ✓ FAIR Metrics and Data Quality Task Force
- ✓ Semantic Interoperability Task Force
- ✓ PID Policy and Implementation Task Force (PID TF)

## Research careers and curricula

The most important stakeholders for EOSC are the researchers.

- ✓ Data Stewardship, Curricula and Career Paths Task Force
- ✓ Research Careers, Recognition and Credit Task Force
- ✓ Upskilling Countries to Engage in EOSC Task Force
- ✓ Researcher Engagement & Adoption Task Force (REA TF)

## Technical challenges

Focus on implementing the technical architecture and interoperability in EOSC a

- ✓ Authentication and Authorization Infrastructure Architecture (AAI) Task Force
- ✓ Infrastructures for Quality Research Software Task Force
- ✓ Technical Interoperability of Data and Services Task Force
- ✓ Long-Term Data Preservation Task Force

<https://eosc.eu/advisory-groups/data-stewardship-curricula-and-career-paths>

## **Part 5 – Reach out (to each other)**

# Building bridges - RDM as a profession

## What's next for FAIR data stewardship?

- Continue bridging gaps between **training, practice** and **policy**
- Advocate for formal **roles, recognition** and sustainable **funding**
- Strengthen **collaboration** across domains, countries and communities

## What you can do!

- **Reflect** on your (team's) role in the landscape
- **Share** your lessons, needs and materials with peers, and use available **resources** (e.g. RDMkit, FAIR Cookbook, FAIRsharing) to support your next step
- Support or initiate community-driven efforts.  
**Contribute, learn, and grow together!**


Reach out to me with questions: [mijke.jetten@health-ri.nl](mailto:mijke.jetten@health-ri.nl)





## **Part 6 – Practical FAIR tips**

# Bonus materials: practical FAIR tips based from the FAIR Metroline

 FAIR Metroline

Home GitHub Search...

Home

FAIR Metroline steps ^

Define FAIRification objectives

Have a FAIR data steward on board

Pre-FAIR assessment

Design solution plan

Assess availability of your metadata

Register resource-level metadata

Register structural metadata

Apply common data elements

Analyse data semantics

Obtain informed consent

Apply (meta)data model

Assess FAIRness

Scenarios v

Contributing v

Contributors

## Define FAIRification objectives ! ↻

STATUS: RELEASED

*A FAIRification objective is the end goal that the owners of a resource [e.g. dataset, database, protocols, analysis workflow] are looking to achieve with the process of FAIRification. [EJP RD FAIRification Guidelines]*

FAIRification objectives aim to make data more Findable, Accessible, Interoperable, and Reusable (FAIR). They focus on improving how data is organised and shared, ensuring that it can be easily accessed, understood and used by both humans and machines. Achieving such objectives maximises the value of data, enhancing its usefulness and long-term usability.

### Short description

FAIRification enhances data Findability, Accessibility, Interoperability, and Reusability (FAIR) by improving documentation, metadata, and standardisation. It applies to both new and existing data. Defining FAIRification objectives is the first step in this process and can be guided by models such as FAIRopoly, A Generic Workflow for the Data FAIRification Process, and the FAIR in Action Framework.

These objectives may be set by institutes, funders, or journals to promote data reuse (see FAIRsharing). As a researcher, aligning with FAIRification efforts can increase visibility, recognition, and opportunities for collaboration. Spend some time considering your FAIRification objectives. What is your FAIR driving force?

### Why is this step important

This step will help you assess the current FAIRness level of your data. Comparing the current FAIRness to the previously defined FAIRification objectives will help you shape the necessary steps and requirements needed to achieve your FAIRification goals and help you create your solution plan, a workplan specifically designed for reaching these goals. Furthermore, the assessment can be repeated in the Assess FAIRness step, allowing you to compare the results and check the progress of your data towards FAIRness.

On this page

Short description

Why is this step important


How to


Expertise requirements for this step

Practical examples from the community

Training

Suggestions

 **health RI**  
enabling data driven health & life sciences



<https://fairmetroline.org/>

# A practical journey - From vision to practice

























Making FAIR work = a structured process. Let's take these steps together

- Step 1: **Define** goals (FAIRification objectives)
- Step 2: **Reflect** (pre-FAIR assessment)
- Step 3: **Plan** (FAIR solution plan)
- Step 4: **Act & Sustain** (tools and support)

With examples from **DEMPACT**, a Dutch national Dementia programme funded by health funder ZonMw with explicit FAIR criteria

Including tips for **EXTRACT**, a European research and innovation project coordinated by the **BSC**, focused on building advanced, **AI-powered systems to support emergency evacuation** during disasters such as wildfires, floods, or industrial incidents

## Overview Metroline steps

 Define FAIRification Objectives	 Build the Team	 Have a FAIR data steward on board	 Get Training	 Design Solution Plan
 Pre-FAIR Assessment	 Data access and retrieval	 Assess availability of your metadata	 Select Identifier Scheme	 Register resource level metadata
 Register record level metadata	 Apply common data elements	 Analyse data semantics	 Design eCRF (data collection)	 Create or reuse a semantic (meta)data model
 (ToDo) Use ontologies in the data model	 Obtain Informed Consent	 (ToDo) Enter data in eCRF (data collection)	 (ToDo) Apply core metadata model	 Transform and expose FAIR (meta)data
 Define access conditions	 Query (use) over resources	 Assess FAIRness	 Did you reach your FAIRification objectives	

# FAIR data - What's in it for you?



Applying FAIR makes your data more **useful**, more **trusted**, and more **impactful**, for you and for others

- Easier to **find** data. Rich metadata and identifiers improve discoverability
- Supports **transparency**. Enables others to verify and reproduce results
- Works **across systems**. Standards ensure data can be combined and reused
- Adds **long-term value**. Public data stays useful beyond the original project
- Meets **policy** needs. Aligns with funder and institutional requirements

**Check in: Do you relate to these benefits of FAIR data**

# Implementing FAIR - Why is it difficult

- FAIR is widely supported ideal, but hard to implement
- Principles ≠ Practice
- Unclear where to begin
- Limited time, distributed responsibilities
- No one-size-fits-all path

Name examples: What's the biggest challenge in your work when it comes to FAIR?



## Step 1 - Define your FAIRification objectives (1)

Be clear about what you want to **achieve** (scope, be realistic)

- E.g., improve machine-actionability, support better data reuse, meet funder or legal compliance
- What data. You don't need to FAIRify everything at once, baby steps are fine

Think about **who** benefits from your goals

- E.g., a funder may need evidence of compliance or reuse, fellow researchers may need well-described data for integration or analysis

Having clear **objectives** ensures your efforts are focused and meaningful

- Without them, actions remain abstract
- Shared goals help align different roles and responsibilities
- Objectives form a baseline to assess progress later

See [FAIR Metroline - Step 1](#) for detailed guidance







## Step 1 - Define your FAIRification objectives (2)

Example from DEMPACT - <https://dempact.nl/>

To meet ZonMw requirements and enable data reuse, DEMPACT defined shared FAIRification goals including:

- Making selected dementia datasets **findable** via the national health data catalogue
- Improving **metadata harmonisation** across consortia
- Aligning on **community standards** (e.g. Dublin Core, OMOP)
- Strengthening the role of **data stewards** as FAIR enablers (community building, training programme, hiring a dedicated data steward)

## Step 1 - Define your FAIRification objectives (3)

**What's next for EXTRACT or any practical project. What can you do?**

As FAIR and ethics advisor, I reviewed EXTRACT's Data Management Plan. The DMP was solid, but there is definitely room to grow. *Example taken from <https://extract-project.eu/contact/project>*

### Step 1 - Define

- Enrich **metadata** for findability
- Clarify **reuse conditions** and **licensing**
- Strengthen **preservation** and **reproducibility**
- Address **inclusiveness** and **post-deployment** risks

In such a data-intensive and ethically sensitive context as EXTRACT, **robust data governance** is essential. That's why FAIR principles, privacy, security, and transparency is best addressed early, as part of the project's operational backbone

**Reflect: did you ever take such a coordinated approach to FAIR objectives in a project?**

## Step 2 - Reflect on your data practices (pre-FAIR assessment) (1)

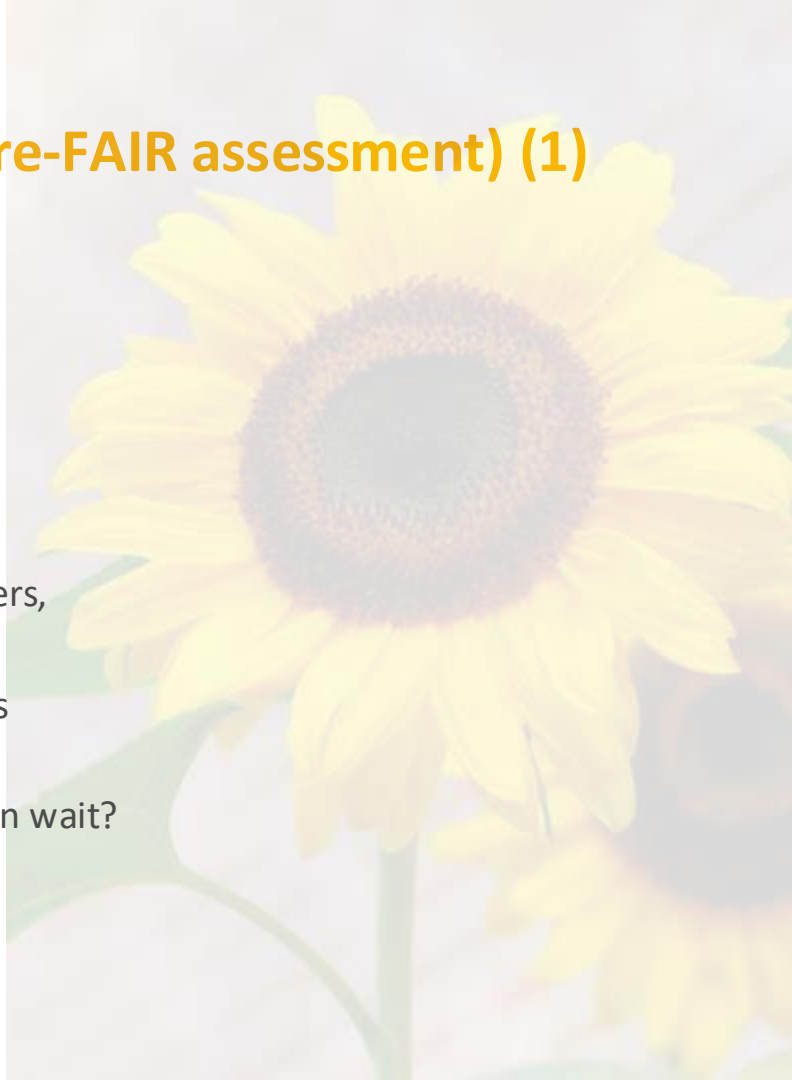
Use a **pre-FAIR assessment tool** to reflect on where you stand:

- Helps you identify strengths and blind spots
- Designed to spark discussion, not just tick boxes
- Encourages multiple perspectives, especially across roles

Practical outcomes

- **Identify** - What is already in place (e.g., metadata, identifiers, documentation)
- **Discuss** - What is still unclear, inconsistent, or varies across projects
- **Prioritise** - Which issues need attention first, and which can wait?

See [FAIR Metroline - Step 2](#) for detailed guidance





## Step 2 - Reflect on your data practices (pre-FAIR assessment) (2)

### Example from DEMPACT

DEMPACT used the FAIR-Aware tool, under guidance of Health-RI:

- **Identify** existing good practices like documentation and access control
- **Discuss** tricky issues such as persistent identifiers, metadata for machines, and long-term preservation
- **Prioritise** next steps, such as choosing a repository, clarifying licences, and reviewing metadata quality

Partners reported that the tool "helped raise awareness" and encouraged internal discussion across roles. The process laid the foundation for the **DEMPACT FAIRification Plan** and will result in regular updates to the **Data Management Plans** and the development of **Standard Operating Procedures** for dementia research.

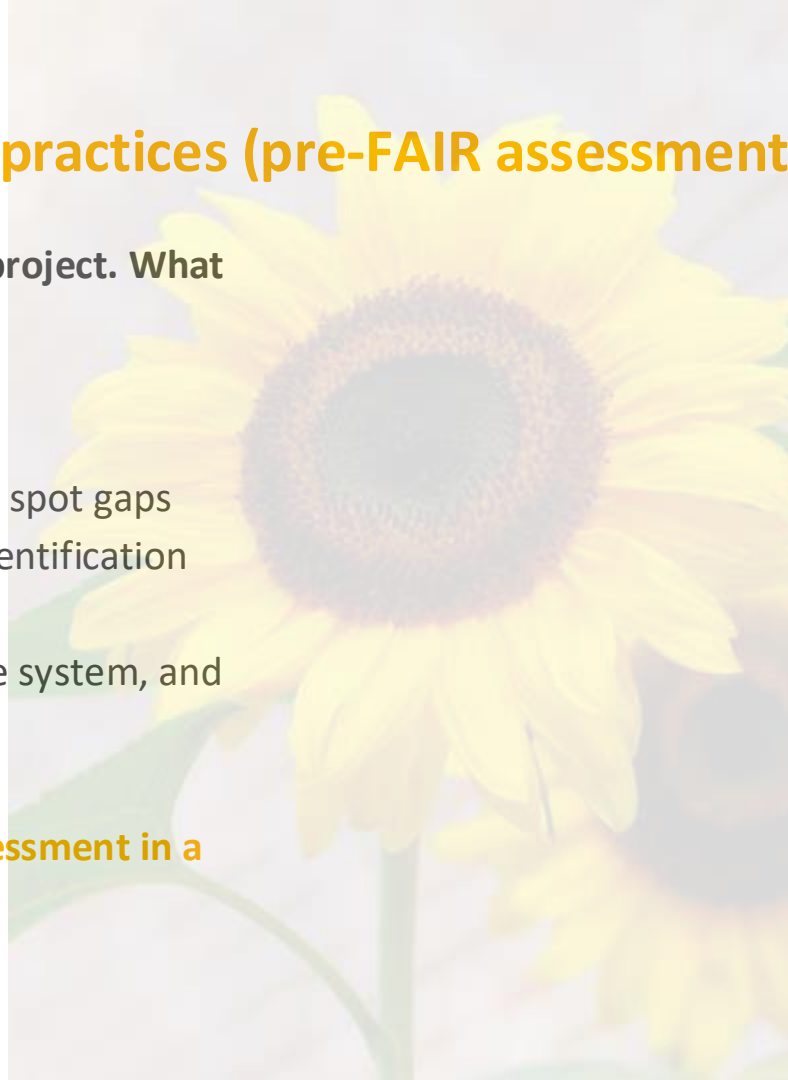
## Step 2 - Reflect on your data practices (pre-FAIR assessment) (3)

What's next for EXTRACT or any practical project. What can you do?

### Step 2 - Reflect

- Use FAIR-Aware or a guided review to spot gaps
- Discuss sensitive data scenarios, re-identification risk, and public access
- Consider equity: who's included in the system, and who might be left out?

**Reflect: did you ever take a pre-FAIR assessment in a project before?**



## Step 3 - Design your FAIR solution plan (1)

A shared action plan that bridges goals and day-to-day practice

- Shapes the **way forward** based on what was learned in Step 2
- Encourages **teamwork** and makes change manageable
- Aligns **priorities** with available capacity and roles

The plan doesn't need to be perfect, it should be realistic and team-owned

- **People are named.** Involve the right roles from the start (e.g. steward, IT, ethics)
- **Actions are phased.** Define short-, medium-, and long-term steps. Prioritise. Keep it simple (and visible)
- **Context is respected.** Tailor actions to local workflows and readiness
- **Commitment.** Use it to guide coordination. Gain commitment and organise regular check-ins

See [FAIR Metroline - Step 3](#) for detailed guidance (work in progress)







## Step 3 - Design your FAIR solution plan (2)

### Example from DEMPACT

- Alongside the FAIR-Aware assessment, DEMPACT developed a FAIRification Plan
- **Short-term:** Assign a data steward and contribute metadata to the national catalogue
- **Medium-term:** Adopt a shared metadata standard (e.g. Dublin Core)
- **Long-term:** Identify metadata gaps and align vocabularies

The plan names responsible **roles**. It is supported by workplan activities such as:

- Aligning DMPs via community meetings
- Surveying reuse obstacles
- Planning metadata publication

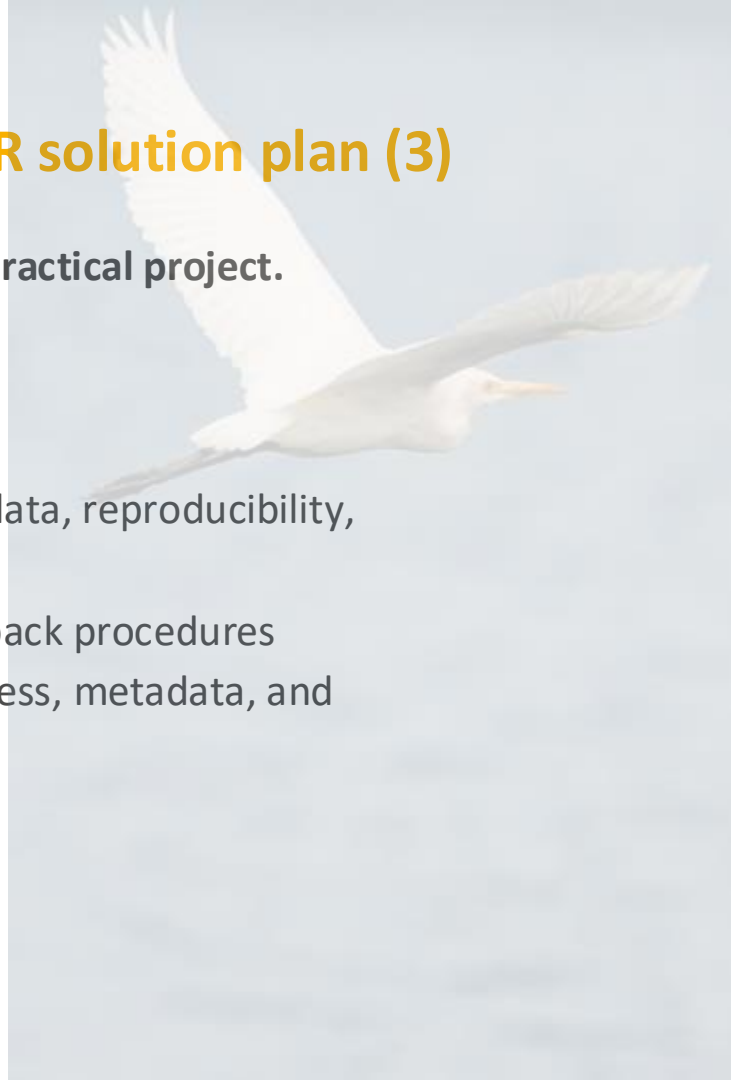
## Step 3 - Design your FAIR solution plan (3)

What's next for EXTRACT or any practical project.

What can you do?

### Step 3 - Plan

- Assign clear roles (e.g. metadata, reproducibility, ethics follow-up)
- Document pipelines and fallback procedures
- Set targets for improving access, metadata, and sustainability



## Step 4a - Act and sustain (tools and support) (1)

- Trail & error: ask for help, share experiences and build on good practices. Remember the baby steps: you don't have to build everything yourself, adapt what works
- FAIR is a team effort - add FAIR checkpoints to team routines
- Choose tools that fit your context
  - **Assessment:** FAIR-Aware
  - **Guidance:** FAIR Cookbook, RDMkit, DSW/FIP Wizard
  - **Tools:** BioTools, RDMkit, BioPortal
- Keep your DMP up to date
- Train new team members and re-align when roles or goals shift

*“Who wants to go fast goes alone. Who wants to go FAR (or FAIR) goes together”*



## Step 4a - Act and sustain (tools and support) (2)

### Example from DEMPACT

DEMPACT has not yet started full FAIR implementation, but community building will include reviewing tools, aligning plans, and learning from early adopters. **Barriers:** dedicated roles, time, priorities

### Focus on from DEMPACT preparations

- Metadata templates
- Assign Persistent Identifiers
- Track changes
- Back up data securely
- Use standard vocabularies (e.g. SNOMED, ICD) and interoperable formats (e.g. CSV)

## Step 4a - Act and sustain (tools and support) (3)

What's next for EXTRACT or any practical project. What can you do?

### Step 4 - Act & Sustain

- Improve one dataset now (e.g. metadata, licensing)
- Revisit policies each development cycle
- Embed FAIR and ethics into project routines

**Reflect: did you ever plan concrete follow-up actions as a team to make your project's data more FAIR?**



## Step 4b - DS make the difference (1)

Investing in data stewardship means investing in long-term FAIR success. Professionalising the role means it's no longer 'extra work', but becomes part of the team's core function

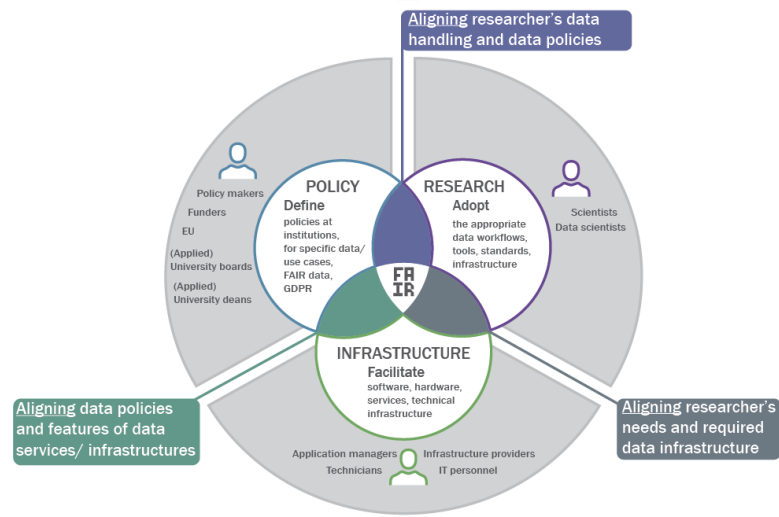
### Why DS matter

- Guide FAIR planning and implementation
- Help select tools, templates and connect stakeholders
- They ensure FAIR isn't forgotten once the plan is written

### What professional stewardship looks like

- **Recognised:** The role is formally defined and supported
- **Resourced:** Time, access, and authority are in place. There is clarity on tasks and expectations
- **Connected:** The steward is part of a peer network, incl. training

See [FAIR Metroline - Step 4](#) for detailed guidance







## Step 4b - DS make the difference (2)

### Example from DEMPACT

- Instead of treating it as “extra work,” DEMPACT recognises stewardship as essential to achieving FAIR goals
- Stewards guided the pre-FAIR assessment using FAIR-Aware
- They coordinated metadata alignment across projects
- Stewards ensure FAIR isn’t forgotten after the plan is written

### How DEMPACT supports professional stewardship

- **Recognised:** Roles are formalised in the FAIRification Plan
- **Resourced:** The workplan allocates tasks (time)
- **Connected:** A dementia data steward community is being established
- Stewards will also contribute to national resources like the FAIR Metroline

**Reflect: What is the role of a data steward in your projects?**

## From reflection to action - FAIR tips you can try tomorrow

Want to take a first (or next) step with FAIR? These small, proven actions from DEMPACT help you move forward without needing to do it all at once

- **Make your metadata count.** Use a metadata template with title, abstract, and keywords. Follow community standards (e.g. DDI, MIAME). *Quick win:* Add a checklist before uploading your data
- **Enable reuse.** Apply a standard licence (e.g. CC-BY). Document restrictions. Assign DOIs or ORCIDs. *Quick win:* Add a short reuse note and licence to your README
- **Track what changes.** Use structured filenames or Git. Keep a changelog. Document processing scripts. *Quick win:* Add a changelog.txt to your dataset folder
- **Share the workload.** Define who maintains metadata, backups, and reviews data quality. *Quick win:* Add a “roles” tab to your DMP or team sheet
- **Think beyond the project.** Use secure storage (no USBs). Choose a trusted repository. Add a preservation plan. *Quick win:* Schedule a regular backup check and update your DMP

