

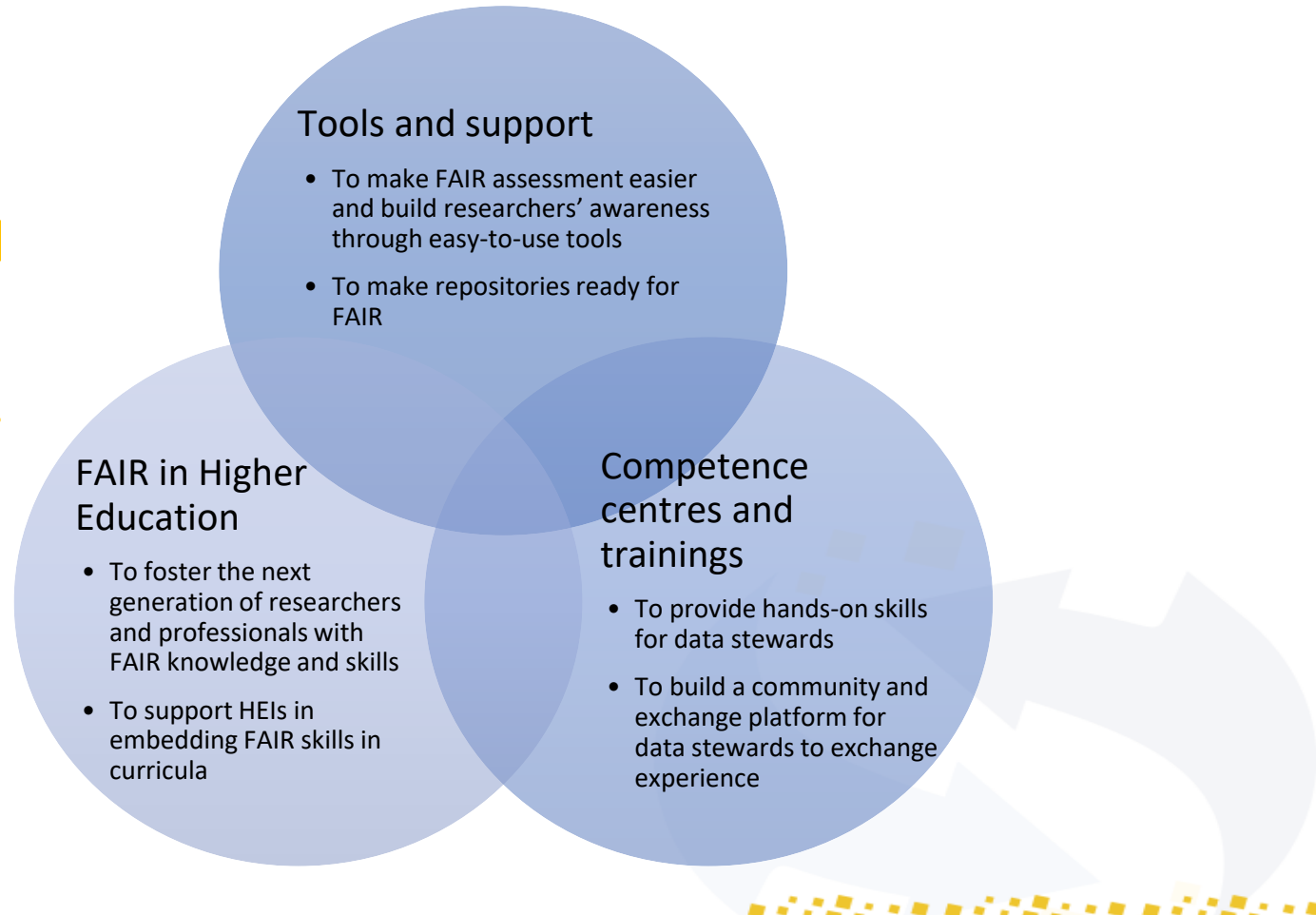
# Support, Training & Skills

**Elizabeth Newbold**

11:45–12:00



## Support, training and skills are embedded in and across various activities and work packages of FAIRsFAIR



# Support for Repositories

All repositories can improve their practices and become more **FAIR-enabling**.

Examples of support areas we are working on:

- Trustworthy repository certification support
- Improving the findability of repositories
- How and when to make use of tools like F-UJI and FAIR-Aware






FAIRsFAIR's Transition Support  
Programme for Repositories

D3.5  
10.5281/zenodo.4058340

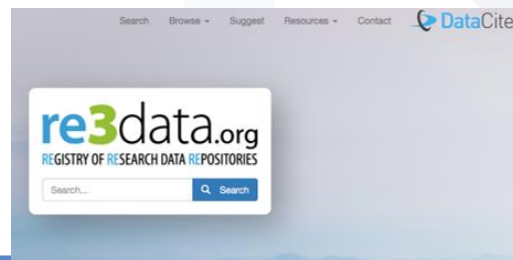
# Tools to support Researchers

Repository finder tool - developing a registry for FAIR-enabling repositories extending the re3data repository finder tool

- Improved description of repository metadata
- Supported by CoreTrustSeal+FAIR alignment of **repository practice** with **object assessment** against FAIR
- Ideal outcome: improved organizational and data collection metadata

- Search re3data for a repository to upload your data
- See the repositories in re3data that meet the criteria of the [Enabling FAIR Data Project](#)
- See the repositories in re3data that meet the criteria of the [FAIRSFAR Project](#)
- The repository provides open access to its data   
Research data hosted by the repository are accessible without restrictions.
- The repository uses persistent identifiers   
Persistent identifiers such as DOIs uniquely identifier datasets, enable the linking to publications, and help with discovery.
- The repository is certified   
Certifications make sure repositories follow community standards and best practices

[Change criteria for this search](#) 



<https://repositoryfinder.datacite.org/>

# FAIR | Aware

- For researchers and data stewards
- Online tool to raise awareness and educate on data FAIRness
- 10 simple questions with practical tips to improve data FAIRness before deposit
- Interim report (M4.9) detailing initial lessons learnt and explaining future plans for upgrades



The screenshot shows the 'FAIR questions' tool interface. On the left, the word 'FAIR' is written vertically in large blue letters. The main content area is titled 'FAIR questions' and contains four sections, each with a blue header and a table of questions:

- FINDABLE**
  - Are you aware that a dataset should be assigned a globally unique and persistent identifier when deposited with a data repository? (1)
  - Are you aware that when you deposit a dataset with a repository, you will need to provide some details (known as discovery metadata) in order to make the data findable, understandable and reusable by others? (2)
  - Are you aware that the repository providing access to your dataset should make the metadata describing your datasets available in a format readable by machines as well as humans? (3)
- ACCESSIBLE**
  - Are you aware that access to your dataset may need to be controlled and that metadata should include license information under which the data can be reused? (4)
  - Are you aware that metadata should remain available over time, even if the data is no longer accessible? (5)
- INTEROPERABLE**
  - Are you aware that the metadata describing your datasets should use controlled vocabularies? (6)
- REUSABLE**
  - Are you aware that provenance information about the collection and/or generation of data should be included in the metadata? (7)
  - Are you aware that metadata describing your data should follow the specifications of a community-oriented standard? (8)
  - Are you aware that data should be deposited preferably in a file format that is open - to support reuse - and supported by the repository for long-term preservation? (9)
  - Are you aware that maintaining your dataset FAIR over time requires professional data curation and preservation? (10)

<https://fairaware.dans.knaw.nl/>

# Competence Centre

“A shared hub of expertise in implementing FAIR data stewardship principles, offering leadership, coordination and cataloguing services to connect relevant people, guidance, learning resources and curricula”

Reviewed the landscape and set out the structure of core competence centre. Three themes:

- Advisory
- Harmonisation
- Dissemination

FAIRdata Forum (<https://fairdataforum.org>)

- Support the FAIR Competence Centre - a networking platform to support peer-to-peer knowledge exchange
- Users will be able to actively help other users.
- Signpost to resources and tools that support FAIR – initial focus on training resources and activities
- Posts form a knowledge base of shared information
- Initial use to support training activities



How can we make training materials and resource FAIR?

Apply emerging standards to describe learning resources in FAIR data stewardship.

- Promote harmonisation and coordination of efforts across communities, identifying opportunities for synergies and building on the progress of others. For example: contributing to development of **Terms4FAIRskills terminology**.  
<https://terms4fairskills.github.io/>
- Making training materials findable - RDA Education and Training on handling of research data Interest Group (ETHRD-IG)  
<https://www.rd-alliance.org/groups/education-and-training-handling-research-data.html>

# Training for Data Stewards and data stewardship

**Dissemination, instruction and training.** Delivering data stewardship training building on the CODATA-RDA Summer School for Research Data Science

## Summer Schools

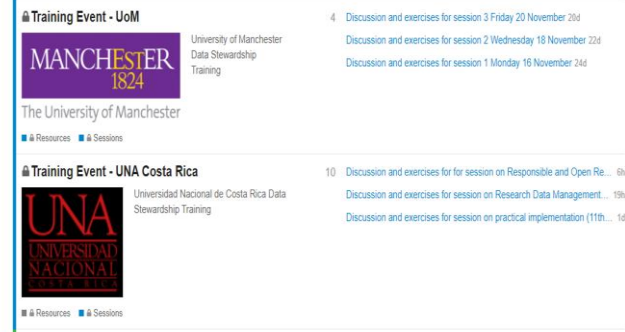
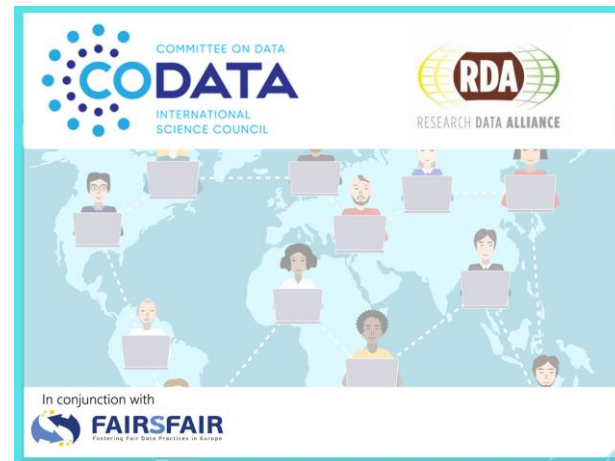
- Building on the CODATA-RDA Research Data Science Summer School – Early Career Researchers includes topics related to FAIR.
- Parallel strand for Data Stewards – first week common curriculum, second week ECRs and Data Stewards split.
- Shared exercises between the strands to facilitate shared understanding and learning.

## Train-the-Trainer and Franchised events

- In development: first activities delivered in November and December 2020
- Courses developed in conjunction with local hosts – topics selected from core list, delivered online, use of FAIRdata Forum for discussion and sharing materials in flipped learning approach

## Challenges:

- Covid-19 – impact on initial planning of in-person events
- Re-think of 2020 Summer School – became a virtual event for alumni of previous schools with some elements related to FAIR
- Training needs to be re-developed for an online approach not just “doing it on Zoom”
- Learning from new approaches, review of materials for different audiences/experience



# FAIR in Higher Education (WP7)

## Mapping of university offers and needs

Deliverable 7.1 “FAIR in Higher Education” (02/2020)

- Survey across 90 HEIs
- 2 focus groups with 50 participants
- Status quo on skills provision across Bachelor, Master, Doctoral level
- Assessment of university needs in terms of support for FAIR skills and capacity development



## Mapping of frameworks, training initiatives

Deliverable 7.2 “Briefing on FAIR Competences and Synergies” (09/2020)

- Collection and mapping of:
  - other competence frameworks,
  - training initiatives,
  - institutional practices
- Stakeholder workshop with LIBER



## Work on Competence Framework & Job Market analysis

D7.3 “FAIR Competence Framework for Higher Education” (FAIR4HE) (02/2021)

- Analysis of job profiles,
- Mapping of components from resources in D7.2 to a single framework,
- Design workshop (09/2020) and conference session (FAIR Convergence Symposium, 11/2020)

## RECOMMENDATIONS

### 1. ADDRESSING FAIR IN HIGHER EDUCATION

- Include more specific research data-related skills and competencies throughout the universities’ educational portfolio
- Establish minimum level of awareness of RDM and FAIR
- Practical guidance on the application of the FAIR principles in different domains and disciplines, and related skills and competences
- Define training programmes on research data skills and competences for researchers and professional staff, from different disciplines

## Findings

- Gap of resources for discipline specific practices and supporting material in form of frameworks and model courses or curricula.
- Bachelor or master-level students rarely listed as target groups of existing trainings.
- The practical use and impact of the frameworks in HEIs formal education is unclear.
- RDM training appears targeted at doctoral or postdoctoral level.
- However, plenty of resources are available → high potential for collaboration and mutual learning across institutional, disciplinary or national boundaries.





# FAIR4HE Framework

## Principles

- Higher education scope
- Linked to educational methodology
- Addresses job market demand in data stewardship
- Data stewards as part of data science professional family
- Verified with existing standards
- Consensus with existing frameworks

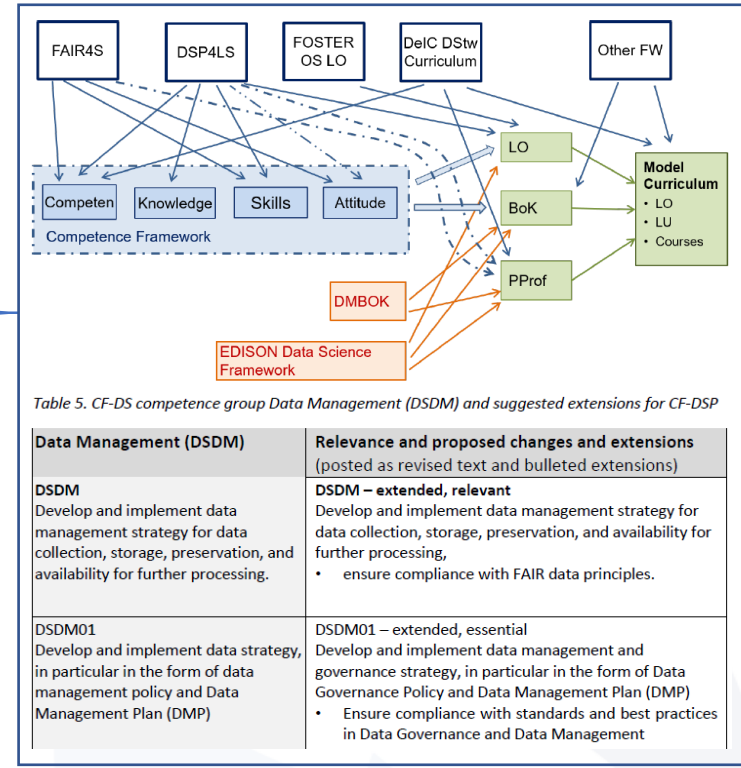
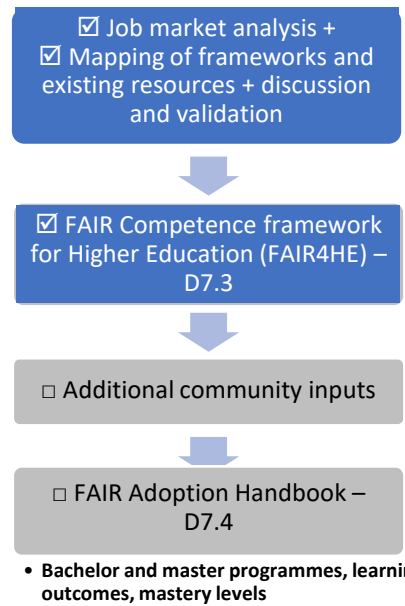


Table 5. CF-DS competence group Data Management (DSDM) and suggested extensions for CF-DSP

Data Management (DSDM)	Relevance and proposed changes and extensions (posted as revised text and bulleted extensions)
<b>DSDM</b> Develop and implement data management strategy for data collection, storage, preservation, and availability for further processing.	<b>DSDM – extended, relevant</b> Develop and implement data management strategy for data collection, storage, preservation, and availability for further processing, <ul style="list-style-type: none"> <li>ensure compliance with FAIR data principles.</li> </ul>
<b>DSDM01</b> Develop and implement data strategy, in particular in the form of data management policy and Data Management Plan (DMP)	<b>DSDM01 – extended, essential</b> Develop and implement data management and governance strategy, in particular in the form of Data Governance Policy and Data Management Plan (DMP) <ul style="list-style-type: none"> <li>Ensure compliance with standards and best practices in Data Governance and Data Management</li> </ul>

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## What's next?

### **FAIR4HE and curricula:**

Stakeholder workshop with national RDM skill initiatives (29 April)

[“FAIR data competences in doctoral education programmes”](#) (26/27 May)

Series of book sprints (1-10 June)

### **Competence centre:**

FAIRdata Forum, expand content and usage beyond initial group of users

Development and delivery of training activities

Continued contribution to emerging standards and approaches to curation of FAIR training materials identifying areas for synergy and harmonisation

### **FAIR-AWARE:**

Try the FAIR-Aware tool [FAIR-Aware \(knaw.nl\)](https://www.knaw.nl/FAIR-Aware)

