







Lennart Stoy 21 Oct 2020 .



On 8 and 9 October 2020, FAIRsFAIR organised a design workshop entitled **FAIR Competencies for Higher Education** as part of the ongoing project effort to advance the integration of data stewardship within higher education curricula.

Hosted by the University of Amsterdam and the European University Association and linked to the project activities on <u>FAIR Data Science and Professionalisation</u>, the workshop brought together 24 participants from all over Europe and different sectors to present and discuss the efforts of FAIRsFAIR and other stakeholders in this area.

#### Day 1 - Aligning initiatives and exchanging experiences

The first day was organised around several presentations on current developments and initiatives to set the scene for more detailed discussions on the second day. (Agenda <a href="here">here</a>.)

First up was **Lennart Stoy (EUA).** Drawing from the FAIRsFAIR reports <u>FAIR in European Higher</u> <u>Education</u> (D7.1) and the recent <u>Briefing on FAIR Competences and Synergies</u> (D7.2), he emphasised that universities do perceive a need for advancing data management education. This need is particularly high at the level of doctoral education, but also relevant at masters and bachelor level. An observed challenge for universities is the availability of skilled educators as well as the disciplinary integration of data





management.

Lorna Wildgaard (KB) then showcased the work on the National Coordination of Data Steward Education in Denmark. This effort entailed a job market analysis of data stewardship positions within academic and private organisations. Based on this analysis, the Danish project team developed a flexible and modular one-year Data Steward master's programme slated for introduction in 2021. A specific feature of the programme is the possibility for disciplinary specialisation within different faculties of the University of Copenhagen.



**Vinciane Gaillard (EUA)**, co-chair of the EOSC Skills & Training Working Group, contextualised data data stewardship skills in the wider landscape of EOSC skills and training. The working group developed a "360 degree" vision of the EOSC ecosystem, of which data management is an important element alongside ICT and other open science skills. This mapping is intended to help organisations and individuals to identify training needs and to inform the EOSC Strategic Research & Innovation Agenda.

**Mijke Jetten (DTL)** provided an <u>overview of activities within the Netherlands, the ELIXIR research infrastructure as well as the RDA Professionalising Data Stewardship Interest Group</u>. Mijke noted that a lack of consensus on the responsibilities and tasks of data stewards and of formal profiles is hampering adequate capacity building. A Dutch project under the umbrella of the national open science programme is supposed to tackle this at national level. This is building on work funded by the health research funder ZonMw and ELIXIR, which identified data steward roles in the life sciences with different dimensions including policy, research, and infrastructure.

**Angus Whyte (DCC)** offered an <u>update of the FAIR4S framework which was developed during the EOSCpilot project</u>. The framework includes both skills profiles and role profiles as a reference for organisations to define competences as well as support roles. Workshop participants agreed that the simple mapping of key skills to different roles as well as the definition of levels of expertise could be very helpful.







#### FAIR4S relates 10 'key skills' to roles, including researchers

Group	Competence topics – each comprising skill, knowledge, attitude	First stage researcher	Recognized researcher
Plan and Design	Plan for the stewardship and sharing of FAIR outputs	*	
Capture and Process	Reuse data from existing sources		*
Integrate and Analyse	Use or develop open research tools or services		*
Appraise and Preserve	Prepare and document data/code to make research outputs FAIR		*
Publish and Release	Publish FAIR outputs on recommended repositories		
Expose and Discover	Recognise, cite and acknowledge contributions	*	*
Govern and Assess	Apply policies to comply legal requirements, ethical, FAIR principles	*	
Govern and Assess	Develop open research strategy and vision		
Scope and Resource	Secure funding for open science and support services	*	
Advise and Enable	Lead good practice by example		

Finally, **Yuri Demchenko (UvA)** introduced <u>related industry initiatives</u> and explained how they address data science or data stewardship skills. He emphasised that the majority of university graduates will be employed in the private sector. Therefore, the needs of companies and other employers need to be duly considered in programme design. Several projects developed model courses addressing data stewardship and could be of further use for FAIRsFAIR. The idea to use badges to certify university programmes, as done by the <u>Big Data Value Association</u> (BDVA), could also be an option for the project.

### Day 2 - Moving forward with a FAIRsFAIR framework

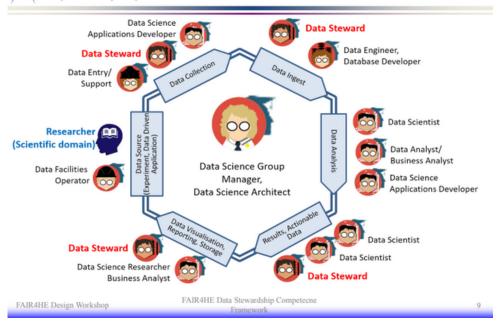
The second day of the workshop focused on the proposed FAIRsFAIR framework. In the morning, **Yuri Demchenko** kicked off the discussion and introduced the <u>six principles of the FAIR Data Competence</u>

<u>Framework for Higher Education</u>, relating to the scope of the framework, educational methodologies, job market demands, the context of data management in the wider area of data science, adherence to standards, and the relation to other frameworks.



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## Building Data Science Team – Variety of Roles (Example)



In plenary and breakout discussions, participants pointed out that training for data stewards and datarelated teaching content at doctoral level are already relatively advanced. A key question therefore is how to follow suit at the student level with a community-led answer. Others remarked that there are differences between what researchers need to know about RDM and FAIR data and what professional data stewards need to know.

Several participants agreed that there should also be training masters and bachelor students. The level of expertise needs to be nuanced and appropriate for each level, too. Participants noted a shortage of experienced staff to implement this, which points to a need for train-the-trainer programmes.

Participants also underlined the need for more work on convincing institutional leadership. This could be tackled by FAIRsFAIR through a roadmap for institutions on FAIR data skills and capacity. Outreach to decision makers could be increased as well, in order to complement bottom-up initiatives with top-down movement.

In terms of structure and content, participants finally recommended that the framework should already provide dedicated sections for different stakeholders such as institutional leadership, programme managers, or supervisors. FAIRsFAIR could also consider a series of interrelated roadmaps for different education levels or courses.

Blogpost written by Lennart Stoy, from EUA.

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