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Codebook and questionnaire for EUA-FAIRsFAIR Survey on Competences and Policies for Research Data Management and FAIR Data

Work Package	WP7
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Explanation

As part of the EOSC project family the FAIRsFAIR - Fostering Fair Data Practices in Europe - project aims to supply practical solutions for the use of the FAIR data principles throughout the research data life cycle. The FAIRsFAIR project runs from March 2019-February 2022.

FAIRsFAIR Work Package 7 “FAIR Data Science and Professionalisation” aims to develop resources and build communities that support the uptake of RDM and FAIR practice within higher education curricula.

Related documents:

This document contains the codebook used for the data collected through the *EUA-FAIRsFAIR Survey on Competences and Policies for Research Data Management and FAIR Data* (Questionnaire in Annex). Results of the survey are reported in “D7.1 FAIR in European Higher Education” (<https://doi.org/10.5281/zenodo.3629683>).

The codebook forms part of “Data for D7.1 FAIR in European Higher Education” (<https://doi.org/10.5281/zenodo.3629687>), where the data set is also made available.

Notes

- An ⊗ in a multiple-choice question indicates an exclusive response.
- The value “99” in the data file indicates a nonresponse or is used when an item was not shown to respondents.
- Data for items denoted in ~~strikethrough~~ are not available in the public version of the data set.
- Question types and display logic are indicated in *[italics]*.

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Codebook

Q1_Country

Please indicate the country of your institution *[single choice]*

- List of countries from UN Geoscheme¹ + “Other”

Q1a_Country_freeform

Please enter the country *[short text; shown only if Q1_Country was “other”]*

Q2_Name:

Please indicate the name of your institution *[short text]*

Q3.1-3 Name and contact of the person answering the survey:

- Q3.3_Name** Name *[short text]*
- Q3.3_Email** Email *[short text]*
- Q3.3_Role** Position *[short text]*

Q4_Information

Do you want to stay informed about the results of the survey, EUA or the FAIRsFAIR project by email?
[multiple choice]

- I want to receive information about the results of the survey
- I want to stay informed about EUA activities in Open Science
- I want to stay informed about the FAIRsFAIR project.
- None of the above

Q5_Profile

How would you describe the profile of your institution? *[single choice]*

- Comprehensive institution
- Specialised institution (e.g. medical science, music and arts school)
- University of applied sciences (college-type or professional education institution which does not award PhDs, or does so in only a few disciplines)
- Technical university/ University of technology
- Open university (e.g. distance learning university)

¹ <https://unstats.un.org/unsd/methodology/m49/>

Q6_Size

What is the total number of researchers (FTE), including doctoral candidates, working at your institution? *[single choice]*

- < 100
- 100-499
- 500-1000
- > 1 000

Q7.1-5

How would you rate the awareness of the FAIR principles within your institution? *[single choice]*

Variable	Group	Values
Q7.1_FAIR_Awareness_InstitutionalLeadership	Institutional leadership	<input type="radio"/> Rather high <input type="radio"/> Neither high nor low <input type="radio"/> Rather low <input type="radio"/> Don't know
Q7.2_FAIR_Awareness_EarlyStage	Early-stage researchers (i.e. doctoral candidates and postdocs)	
Q7.3_FAIR_Awareness_Researchers	Researchers (faculty and others)	
Q7.4_FAIR_Awareness_ProfessionalSupport	Professional and support staff (e.g. data stewards/managers, librarians)	
Q7.5_FAIR_Awareness_Students	Students	

Q8_RDM_policy

Does your institution have a policy on Research Data Management? *[single choice]*

- Yes
- No
- Don't know

Q9.1-12

What are the main elements of your institutional research data management policy? *[dropdown single choice, shown only if Q8_RDM_policy was "Yes"]*

Variable	Policy elements	Values
Q9.1.1_Policy_Element_DMP	Requirement for research data management planning (e.g. DMPs)	<input type="radio"/> Yes, included as a mandatory element <input type="radio"/> Yes, included as an
Q9.1.2_Policy_Element_Storage	Provisions for data storage	
Q9.1.3_Policy_Element_OA	Provisions on open access to data	
Q9.1.4_Policy_Element_FAIR	Provisions on FAIR data	

Q9.1.5_Policy_Element_Disciplines	Provisions for specific disciplinary areas	optional/encouragement element <input type="radio"/> Not included in institutional policy
Q9.1.6_Policy_Element_DMP_Integrity	Provisions on research integrity and ethics	
Q9.1.7_Policy_Element_Sensitive	Specific guidelines for sensitive data	
Q9.1.8_Policy_Element_Protection	Provisions for data protection (e.g., GDPR)	
Q9.1.9_Policy_Element_Public-private	Provisions on research data management for public-private research contracts	
Q9.1.10_Policy_Element_Assessment	Provisions on research assessment	
Q9.1.11_Policy_Element_Identifiers	Provisions on the use of unique researcher identifiers (e.g., ORCID)	
Q9.1.12_Policy_Element_IPR	Provisions on copyright and/or intellectual property	
Q9.1.13_Policy_Element_Other	Other	
Q9.1.13_Policy_Element_OtherText	Other (<i>please specify</i>)	<i>[short text]</i>

Q10.1-10

Who is primarily involved in developing research data management policies in your institution? *[multiple choice, shown only if Q8_RDM_policy was "Yes"]*

Variable	Involvement of	Values
Q10.1_Involvement_AcademicLeadership	Academic leadership/management (e.g. rector, vice-rectors, etc.)	<input type="radio"/> Yes <input type="radio"/> No
Q10.2_Involvement_FacultiesDepartments	Faculties/research departments	
Q10.3_Involvement_Administration	Research administration	
Q10.4_Involvement_ResearchersUnits	Individual researchers/research units	
Q10.5_Involvement_IT	IT department	
Q10.6_Involvement_Library	Library	
Q10.7_Involvement_Legal	Legal department	
Q10.8_Involvement_DPO	Data protection office	
Q10.9_Involvement_Other	Other	
Q10.10_Involvement_DontKnow	<input checked="" type="radio"/> Don't know	
Q10.9_Involvement_OtherText	Other (<i>please specify</i>)	<i>[short text]</i>

Q11.1-5

At what level are research data management policies primarily implemented in your institution? *[multiple choice, shown only if Q8_RDM_policy was "Yes"]*

Variable	Level of implementation	Values
Q11.1_ImplementationLevel_Institutional	Institutional/university level	<input type="radio"/> Yes <input type="radio"/> No
Q11.2_ImplementationLevel_Faculty	Faculty/department level	
Q11.3_ImplementationLevel_Discipline	Disciplinary level	

Q11.4_ImplementationLevel_Unit	Research unit level	
Q11.5_ImplementationLevel_Other	Other	
Q11.5_ImplementationLevel_OtherText	Other (<i>please specify</i>)	<i>[short text]</i>

Q12_RDMSupport

Does your institution currently have any research data support services in place? *[single choice]*

- Yes
- No
- Don't know

Q13.1-13

What type of support does your institution provide to researchers interested in making research data FAIR? *[multiple choice, shown only if Q12_RDMSupport was "Yes"]*

<i>Variable</i>	<i>Type of support²</i>	<i>Values</i>
Q13.1_RDMSupport_Training	Training for researchers (including doctoral candidates)	<input type="radio"/> Yes <input type="radio"/> No
Q13.2_RDMSupport_Website	Institutional website(s) on research data management	
Q13.3_RDMSupport_PlanShare	Planning stewardship and sharing of FAIR outputs	
Q13.4_RDMSupport_FindReuse	Finding and reusing data from existing sources	
Q13.5_RDMSupport_UseDevelop	Using or developing FAIR research tools/services	
Q13.6_RDMSupport_PrepareDocument	Preparing and documenting data/code to make outputs FAIR	
Q13.7_RDMSupport_Publish	Publishing FAIR outputs on own or recommended repositories	
Q13.8_RDMSupport_RecogniseCite	Recognising, citing and acknowledging contributions	
Q13.9_RDMSupport_DevelopStrategy	Developing open research strategy and vision	
Q13.10_RDMSupport_ComplyLegal	Complying with legal and ethical requirements, FAIR principles	
Q13.11_RDMSupport_FundingFAIR	Funding for implementing FAIR principles	
Q13.12_RDMSupport_FindingTraining	Finding (other) sources of training and advice on FAIR data	
Q13.3_RDMSupport_Other	Other	
Q13.3_RDMSupport_OtherText	Other (<i>please specify</i>)	<i>[short text]</i>

² Several types of support were derived from the FAIR4S framework, available online at <https://eosc-fair4s.github.io/framework.html>. For more, see Annex 1B of *D7.1 FAIR in European Higher Education*, available online at <https://doi.org/10.5281/zenodo.3629683>.

Q14.1-10

Who is primarily involved in supplying research data support services in your institution? *[multiple choice, shown only if Q12_RDMSupport was "Yes"]*

Variable	Involvement in support	Values
Q14.1_Support_LeadershipManagement	Academic leadership/management	<input type="radio"/> Yes <input type="radio"/> No
Q14.2_Support_FacultyDept	Faculties/research departments (e.g. embedded data stewards and/or managers)	
Q14.3_Support_ResearchAdmin	Research administration (e.g. generic data stewards and/or managers)	
Q14.4_Support_UnitsResearchers	Individual researchers/research units	
Q14.5_Support_ServiceIT	IT service	
Q14.6_Support_Library	Library	
Q14.7_Support_LegalDept	Legal department	
Q14.8_Support_DPO	Data protection office	
Q14.9_Support_Other	Other	
Q14.10_Support_DontKnow	<input checked="" type="checkbox"/> Don't know	
Q14.9_Support_OtherText	Other <i>(please specify)</i>	<i>[short text]</i>

Q15.1-5

At what level are research data support services primarily implemented in your institution? *[multiple choice, shown only if Q12_RDMSupport was "Yes"]*

Variable	Level of support	Values
Q15.1_Policy_Institutional	Institutional/university level	<input type="radio"/> Yes <input type="radio"/> No
Q15.2_Policy_FacultyDept	Faculty/department level	
Q15.3_Policy_Disciplinay	Disciplinary level	
Q15.4_Policy_ResearchUnit	Research unit level	
Q15.5_Policy_DontKnow	<input checked="" type="checkbox"/> Don't know	

Q16.1-4

Has your institution established specific research data support roles (e.g. data stewards, research data managers)? *[multiple choice, shown only if Q12_RDMSupport was "Yes"]*

Variable	Level of support roles	Values
Q16.1_Roles_FacultyDept	Yes, at institutional/central level	<input type="radio"/> Yes <input type="radio"/> No
Q16.2_Roles_Institutional	Yes, at faculty/department level	
Q16.3_Roles_No	<input checked="" type="checkbox"/> No	
Q16.3_Roles_DontKnow	<input checked="" type="checkbox"/> Don't know	

Q17_Comments_Text

Do you have any further comments about this section? *[short text, shown only if Q12_RDMSupport was "Yes"]*

Q18_SkillsStrategy

Does your institution have an approach or a strategy to address data literacy and skills of students?
[single choice]

- Yes, for the entire institution
- Yes, for faculty/department(s)/scientific discipline(s)
- Yes, for both
- No
- No, but we are developing one
- Don't know

Q19.1.1-3.5

To your best knowledge, in which broad set of disciplines and at what level is your institution addressing one or more of the above-mentioned research data-related competences? *[dropdown single choice for each matrix field]*

- Never
- Usually not
- Sometimes
- Usually yes
- Always
- Don't know
- Not applicable

Domain ³	Bachelor	Master	Doctoral
Humanities and Social Sciences	Q19.1.1_BA_SSH	Q19.2.1_MA_SSH	Q19.3.1_PHD_SSH
Life Sciences	Q19.1.2_BA_Life	Q19.2.2_MA_Life	Q19.3.2_PHD_Life
Natural Sciences	Q19.1.3_BA_Natural	Q19.2.3_MA_Natural	Q19.3.3_PHD_Natural
Engineering Sciences	Q19.1.4_BA_Engineering	Q19.2.4_MA_Engineering	Q19.3.4_PHD_Engineering
Generic / multidisciplinary	Q19.1.5_BA_Generic	Q19.2.5_MA_Generic	Q19.3.5_PHD_Generic

³ The four domains were derived from the *DFG Classification of Subject Area, Review Board, Research Area and Scientific Discipline (2016 - 2019)*, available online at https://www.dfg.de/download/pdf/dfg_im_profil/gremien/fachkollegien/amtsperiode_2016_2019/fachsystematik_2016-2019_en_grafik.pdf, last checked 13 May 2020.

Q20.1.1-3.9

To your best knowledge, what are the more specific research data-related competences delivered by your institution at bachelor, master, and doctoral level? *[dropdown single choice for each matrix field]*

- Never
- Usually not
- Sometimes
- Usually yes
- Always
- Don't know
- Not applicable

Competences ⁴	Bachelor	Master	Doctoral
Using data analytics and statistical techniques to deliver insights into research problems	Q20.1.1_DSDA	Q20.2.1_DSDA	Q20.3.1_DSDA
Using software engineering to research, design, implement new data analytics applications and/or to support data handling during the whole data lifecycle	Q20.1.2_DSENG	Q20.2.2_DSENG	Q20.3.2_DSENG
Developing and implementing a data strategy , e.g., a research data management policy and Data Management Plan (DMP)	Q20.1.3_DSDM01	Q20.2.3_DSDM01	Q20.3.3_DSDM01
Developing and implementing relevant data models, metadata using common standards and practices	Q20.1.4_DSDM02	Q20.2.4_DSDM02	Q20.3.4_DSDM02
Integrating data from multiple sources	Q20.1.5_DSDM03	Q20.2.5_DSDM03	Q20.3.5_DSDM03
Maintaining information on data handling, including reference to published data and corresponding data sources (data provenance)	Q20.1.6_DSDM04	Q20.2.6_DSDM04	Q20.3.6_DSDM04
Ensuring data quality, accessibility, interoperability, compliance to	Q20.1.7_DSDM05	Q20.2.7_DSDM05	Q20.3.7_DSDM05

⁴ Competences were derived from the ISON Data Science Competence Framework (DS-CF), release 3, version 10, available online at https://github.com/EDISONcommunity/EDSF/blob/master/data-science-competence-framework/EDISON_CF-DS-release3-v10.pdf, last checked 13 May 2020. For more, see Annex 1B of *D7.1 FAIR in European Higher Education*, available online at <https://doi.org/10.5281/zenodo.3629683>.

standards, and publication (data curation)			
Understanding and following policies on data protection, privacy, IPR and ethical issues	Q20.1.8_DSDM06	Q20.2.8_DSDM06	Q20.3.8_DSDM06
Applying general data science methods to domain-specific research problems ; using scientific domain knowledge to develop relevant data analytics applications;	Q20.1.9_DSDK	Q20.2.9_DSDK	Q20.3.9_DSDK

Q21_ExampleCurriculum_Text

Can you provide an example of a curriculum or course that includes one or more of the data-related competences mentioned above? *[text]*

Q22.1-6

Is your institution using specific frameworks for research data management, data science and open science when developing training activities or curricula? Please indicate all that apply to your best knowledge. *[multiple choice]*

<i>Variable</i>	<i>Framework used</i>	<i>Values</i>
Q22.1_Frameworks_EDSF	EDISON Data Science Competence Framework (EDSF)	<input type="radio"/> Yes <input type="radio"/> No
Q22.2_Frameworks_FAIR4S	EOSCpilot Skills and Capability Framework (including FAIR4S)	
Q22.3_Frameworks_OSCAM	Open Science Competence Assessment Matrix (OS-CAM)	
Q22.4_Frameworks_Others	Others such as national frameworks and guidelines	
Q22.5_Frameworks_None	<input checked="" type="checkbox"/> No frameworks, trainings or resources used	
Q22.6_Frameworks_DontKnow	<input checked="" type="checkbox"/> Don't know	
Q22.4_Frameworks_Others_Text	Other <i>(please specify)</i>	<i>[short text]</i>

Q23.1-7

Is your institution using resources, trainings or other services from other projects or initiatives? Please indicate all that apply to your best knowledge. *[multiple choice]*

<i>Variable</i>	<i>Project or initiative consulted</i>	<i>Values</i>
Q23.1_Resources_RDA	Research Data Alliance (RDA)	<input type="radio"/> Yes <input type="radio"/> No
Q23.2_Resources_OpenAIRE	OpenAIRE	
Q23.3_Resources_GOFAIR	GO-FAIR	
Q23.4_Resources_FOSTER	FOSTER	
Q23.5_Resources_CODATA	CODATA	

Q23.6_Resources_ResearchInfra	Research infrastructures (e.g. ELIXIR, CEESDA)	
Q23.7_Resources_Other	Others	
Q23.7_Resources_OtherText	Other <i>(please specify)</i>	<i>[short text]</i>

Q24_Comments_Text

Do you have any further comments about this section? *[text]*

Q251.1-3.4

Does your institution believe there is a need to strengthen the teaching of specific research data-related competences at the bachelor, master or doctoral level? *[dropdown single choice for each matrix field]*

- Low
- Neither high nor low
- High need
- Don't know
- Not applicable

Competence⁵	Bachelor	Master	Doctoral
Data analytics and statistical techniques	Q25.1.1_DSDA	Q25.2.1_DSDA	Q25.3.1_DSDA
Data software engineering	Q25.1.2_DSENG	Q25.2.2_DSENG	Q25.3.2_DSENG
Data management	Q25.1.3_DSDM	Q25.2.3_DSDM	Q25.3.3_DSDM
Applying general data science methods to domain-specific research problems	Q25.1.4_DSDK	Q25.2.4_DSDK	Q25.3.4_DSDK

Q26_Comments_Text

Do you have any further comments about this question? *[text]*

⁵ Competences were derived from the EDISON Data Science Competence Framework (DS-CF), release 3, version 10, available online at https://github.com/EDISONcommunity/EDSF/blob/master/data-science-competence-framework/EDISON_CF-DS-release3-v10.pdf, last checked 13 May 2020. For more, see Annex 1B of *D7.1 FAIR in European Higher Education*, available online at <https://doi.org/10.5281/zenodo.3629683>.

Q27.1-5

How would you rate the awareness of the European Open Science Cloud within your institution among the following groups? *[single choice]*

Variable	Group	Values
Q27.1_EOSC_Awareness_InstitutionalLeadership	Institutional leadership	<input type="radio"/> Rather high <input type="radio"/> Neither high nor low <input type="radio"/> Rather low <input type="radio"/> Don't know
Q27.2_EOSC_Awareness_EarlyStage	Early-stage researchers (i.e. doctoral candidates and postdocs)	
Q27.3_EOSC_Awareness_Researchers	Researchers (faculty and others)	
Q27.4_EOSC_Awareness_Professionalupport staff	Professional and support staff (e.g. data stewards/managers, librarians)	
Q27.5_EOSC_Awareness_Students	Students	

Q28.1-6

Where do you see potential benefits created by the future EOSC for your institution? Please tick only the three most important. *[multiple choice, maximum three answers]*

Variable	Potential benefit	Values
Q28.1_EOSC_Benefits_Visibility	Increasing the visibility of research data created within the institution	<input type="radio"/> Yes <input type="radio"/> No
Q28.2_EOSC_Benefits_Access	Easier access to services not available within the institution (e.g. data, repositories, cloud and high-performance computing services)	
Q28.3_EOSC_Benefits_Capacity	Strengthening of institutional capacity for data-driven science	
Q28.4_EOSC_Benefits_Opportunities	Creating opportunities for data-driven research collaboration	
Q28.5_EOSC_Benefits_Others	Other potential benefits	
Q28.6_EOSC_Benefits_DontKnow	<input checked="" type="checkbox"/> Don't know	
Q28.5_EOSC_Benefits_OthersText	Other <i>(please specify)</i>	<i>[short text]</i>

Q29.1-11

Where do you see barriers and difficulties for your institution to engage with the future EOSC? Please tick only the four most important. *[multiple choice, maximum four answers]*

<i>Variable</i>	<i>Potential barrier</i>	<i>Values</i>
Q29.1_EOSC_Barriers_Awareness	Limited awareness of EOSC and its potential benefits	<input type="radio"/> Yes <input type="radio"/> No
Q29.1_EOSC_Barriers_Capacity	Limited institutional capacity (e.g. skilled staff, support structures) to use EOSC services	
Q29.3_EOSC_Barriers_Sustainability	Concerns over long-term sustainability of EOSC and its services	
Q29.4_EOSC_Barriers_UseCases	Lack of clear use cases for EOSC	
Q29.5_EOSC_Barriers_Coordination	Lack of coordination among the relevant actors within the institution	
Q29.6_EOSC_Barriers_Training	Limited training opportunities for staff	
Q29.7_EOSC_Barriers_Costs	Concerns over increased costs	
Q29.8_EOSC_Barriers_LeadershipSupport	Lack of support / resistance from academic leadership	
Q29.9_EOSC_Barriers_ResearcherInterest	Lack of interest / resistance from researchers	
Q29.10_EOSC_Barriers_IncentivesPolicies	Lack of incentivising policies or rewards from external actors (e.g. national/regional governments, research funding organisations)	
Q29.11_EOSC_Barriers_Other	Other	
Q29.12_EOSC_Barriers_DontKnow	<input checked="" type="checkbox"/> Don't know	
Q29.11_EOSC_Barriers_OtherText	Other <i>(please specify)</i>	<i>[short text]</i>

Q30.1-8

How can FAIRsFAIR support your institution in developing and implementing FAIR data and research data management policies? Please tick only the three most important courses of action. *[multiple choice, maximum three answers]*

<i>Variable</i>	<i>Type of support</i>	<i>Values</i>
Q30.1_FAIRsFAIR_PolicySupport_RDMsupport	Training support staff in the area of research data management (e.g. metadata; data storage/management/curation; technical standards; FAIR principles)	<input type="radio"/> Yes <input type="radio"/> No
Q30.2_FAIRsFAIR_PolicySupport_eInfraSupport	Training support staff on making e-infrastructures FAIR compliant	
Q30.3_FAIRsFAIR_PolicySupport_ResearchersGeneric	Training researchers in generic research data management and the FAIR principles	
Q30.4_FAIRsFAIR_PolicySupport_ResearchersDomains	Training researchers on research data management and the FAIR principles in specific domains	
Q30.5_FAIRsFAIR_PolicySupport_PolicyTraining	Training and support for developing, coordinating and implementing research data policies	
Q30.6_FAIRsFAIR_PolicySupport_GoodPractice	Sharing of good practices and peer learning across institutions	
Q30.7_FAIRsFAIR_PolicySupport_ToolsResources	Better availability of tools and resources to inform universities about research data management	
Q30.8_FAIRsFAIR_PolicySupport_Other	Other	
Q30.8_FAIRsFAIR_PolicySupport_OtherText	Other <i>(please specify)</i>	<i>[short text]</i>

Q31.1-7

How can FAIRsFAIR support your institution in teaching research data management competences and the FAIR principles to students and early-stage researchers? Please tick only the three most important courses of action. *[multiple choice, maximum three answers]*

<i>Variable</i>	<i>Type of support</i>	<i>Values</i>
Q31.1_FAIRsFAIR_CompentenceSupport_DataScienceFramework	Provision of generic competence frameworks for Data Science	<input type="radio"/> Yes <input type="radio"/> No
Q31.2_FAIRsFAIR_CompentenceSupport_DataStewardFramework	Provision of generic competence frameworks for Data Stewardship	
Q31.3_FAIRsFAIR_CompentenceSupport_DomainFrameworkRDM	Provision of competence frameworks for domain-specific research data management	
Q31.4_FAIRsFAIR_CompentenceSupport_CurriculaGeneric	Generic model courses and curricula	
Q31.5_FAIRsFAIR_CompentenceSupport_CurriculaDomain	Domain-specific model courses and curricula	
Q31.6_FAIRsFAIR_CompentenceSupport_GoodPractices	Sharing of good practices and peer learning across institutions	
Q31.7_FAIRsFAIR_CompentenceSupport_TrainTrainers	Training of trainers	
Q31.7_FAIRsFAIR_CompentenceSupport_Others	Other	
Q31.7_FAIRsFAIR_CompentenceSupport_OthersText	Other <i>(please specify)</i>	<i>[short text]</i>

Annex – Questionnaire

EUA-FAIRSF AIR Survey on Competences and Policies for Research Data Management and FAIR Data

In the context of the FAIRSF AIR project, the European University Association ([EUA](#)) is conducting a survey on different dimensions of research data management within higher education institutions. The survey covers specifically:

- the state and nature of institutional policies and support services for research data management;
- the relevance of the FAIR principles for research data;
- the teaching of research data competences to students, researchers and staff;
- awareness of and views on the European Open Science Cloud (EOSC).

In doing so, the survey mainly addresses topics and issues that have not been studied in the [2017-2018 EUA Open Access Survey](#). Main target group of the survey is university leadership and management staff responsible for the development and implementation of research data management. EUA especially encourages universities to participate that have not yet developed institutional approaches to research data.

Purpose

Results from the survey will inform the content and structure of activities of FAIRSF AIR and EUA aimed at supporting universities to foster a FAIR research and culture, such as:

- The development of a competence framework and training resources for FAIR competences
- The design and implementation of capacity development workshops and training opportunities for researchers and professional staff within universities working on research data management and curriculum design
- Support for policy and decision-making in the fields of research data and the European Open Science Cloud.

Structure

This survey is structured in three parts which address the following areas:

1. General information about your institution and your personal contact details.
2. The current state of (FAIR) research data management policies, support services and competence integration at your institution.
3. Your institution's views on future needs for research data competences, the European Open Science Cloud and possible lines of action of the FAIRSF AIR project.

Deadline

The deadline to submit your response is **15 November 2019**.



Guidelines for filling out the survey

- The survey should be filled out by the people or departments closely involved in developing and implementing FAIR data policies, support services and competence integration at your institution. **However, please note that only one response per institution should be submitted.**
- To facilitate collaboration between people and departments within your institution, [please find here a printable PDF version](#) of the survey. In case you need to consult with others within your institution, we suggest that you review the PDF version before you fill in the survey online. Please note **only the online version can be used to submit your final answers.**
- The survey saves answers per page as you click the “**Next**” button and move to the following page. You can exit the survey if you wish and re-enter by copying the link you have received in the **same device and browser** from which you first accessed it. The pages you have filled in up to that point will be saved. Please note that you will also be able to go back and make changes to your answers before submitting them.
- Your participation in this research is voluntary, and you may decline to participate without risk. While it is useful to be complete in your responses to the survey, you are free to withdraw from the study at any time. The data from any questions that were answered before exiting the survey will be recorded.
- Once you have reached the end and submitted, you will be given a full overview over your responses that you can print out and/or save.

Confidentiality and privacy policy

Based on the commitment of the FAIRSF AIR project to the H2020 Open Research Data Pilot, the responses provided in this survey will be anonymised (removing all information that could directly identify an individual (personal information) or the respective institution) and made available in open access via a trusted repository. Neither you nor your institution will be identified in any publication from this study. Your participation in this study is confidential.

Personal data gathered in the course of the survey will be handled according to the [EUA privacy policy](#).

Do you agree with the Confidentiality and Privacy Policy?

- Yes

Questions

Should you have any questions or encounter technical problems filling out this survey, please contact us at research@eua.eu.

Glossary

European Open Science Cloud (EOSC): The envisaged European data commons for the scientific community for storing, sharing and re-using scientific data and results, supported by high-capacity cloud solutions with super-computing capacity. EOSC is intended to function as a federated, globally accessible environment, where researchers, innovators, companies and the general public can publish, find and reuse each other's data and tools for research, innovation and educational purposes under well-defined and trusted conditions. ([more](#))

FAIR (Findable, Accessible, Interoperable, Re-usable): “The FAIR Data Principles are a set of guiding principles in order to make data findable, accessible, interoperable and reusable”. ([Wilkinson et al., 2016](#)) “These principles provide guidance for scientific data management and stewardship and are relevant to all stakeholders in the current digital ecosystem. They directly address data producers and data publishers to promote maximum use of research data.” ([Liber, 2017](#)) Horizon Europe, the next European research and innovation framework programme starting in 2021 will require projects to make their research data far. In 2018, the European Commission expert group on FAIR data published a [comprehensive report](#) on actions to implement the FAIR principles in Europe.

FAIRsFAIR: A project funded under Horizon 2020 aiming to supply practical solutions for the use of the FAIR data principles throughout the research data life cycle for different stakeholders including universities. Particular emphasis is laid on fostering FAIR data culture in research and education and the uptake of good practices in making data FAIR. ([more](#))

Research Data Management: A “set of practices to handle information collected and created during research. [...] These practices involve, but are not limited to, data management planning, documentation, organization, storage, dissemination and preservation.” ([Higman et al., 2019](#))

Part 1: General information

1 Please indicate the country of your institution

- List of countries

[Instruction: If your country is not in the list] 1a Please enter the country

2 Please indicate the name of your institution

3 Name and contact of the person answering the survey:

- Name _____
- Email _____
- Position _____

4 Do you want to stay informed about the results of the survey, EUA or the FAIRsFAIR project by email?

Your contact information will be handled by EUA ([privacy policy](#)) and the FAIRsFAIR project ([privacy policy](#)). Subscriptions to newsletters can be cancelled at any time.

- I want to receive information about the results of the survey
- I want to stay informed about EUA activities in Open Science
- I want to stay informed about the FAIRsFAIR project.
- None of the above

5 How would you describe the profile of your institution?

- Comprehensive institution
- Specialised institution (e.g. medical science, music and arts school)
- University of applied sciences (college-type or professional education institution which does not award PhDs, or does so in only a few disciplines)
- Technical university/ University of technology
- Open university (e.g. distance learning university)

6 What is the total number of researchers (FTE), including doctoral candidates, working at your institution?

- < 100
- 100-499
- 500-1000
- > 1 000

Part 2 - Current research data management policies, support services and competence development

7 How would you rate the awareness of the FAIR principles within your institution?

	Rather high	Neither high nor low	Rather low	Don't know
Institutional leadership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Early-stage researchers (i.e. doctoral candidates and postdocs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Researchers (faculty and others)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional and support staff (e.g. data stewards/managers, librarians)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section 2a – Policies

8 Does your institution have a policy on Research Data Management?

- Yes
- No
- Don't know

[Instruction: If Question 8 is “No” or “Don’t know”, go directly to Question 12]

9 What are the main elements of your institutional research data management policy?

Elements	Yes, included as a mandatory element	Yes, included as an optional/encoura gement element	Not included in institutional policy
Requirement for research data management planning (e.g. DMPs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions for data storage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on open access to data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on FAIR data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions for specific disciplinary areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on research integrity and ethics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specific guidelines for sensitive data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions for data protection (e.g., GDPR)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on research data management for public-private research contracts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on research assessment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on the use of unique researcher identifiers (e.g., ORCID)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on copyright and/or intellectual property	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (<i>please specify</i>)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10 Who is primarily involved in developing research data management policies in your institution?

[multiple choice]

- Academic leadership/management (e.g. rector, vice-rectors, etc.)
- Faculties/research departments
- Research administration
- Individual researchers/research units
- IT department
- Library
- Legal department
- Data protection office
- Other (*please specify*) _____
- Don't know

11 At what level are research data management policies primarily implemented in your institution?

[multiple choice]

- Institutional/university level
- Faculty/department level
- Disciplinary level
- Research unit level
- Other (*please specify*) _____
- Don't know

Section 2b - Support Services

12 Does your institution currently have any research data support services in place?

- Yes
- No
- Don't know

[Instruction: If Question 12 is “No” or “Yes”, go directly to Question 18]

13 What type of support does your institution provide to researchers interested in making research data FAIR? [multiple choice]

- Training for researchers (including doctoral candidates)
- Institutional website(s) on research data management
- Planning stewardship and sharing of FAIR outputs
- Finding and reusing data from existing sources
- Using or developing FAIR research tools/services
- Preparing and documenting data/code to make outputs FAIR
- Publishing FAIR outputs on own or recommended repositories
- Recognising, citing and acknowledging contributions
- Developing open research strategy and vision
- Complying with legal and ethical requirements, FAIR principles
- Funding for implementing FAIR principles
- Finding (other) sources of training and advice on FAIR data
- Other (please specify) _____

14 Who is primarily involved in supplying research data support services in your institution? [multiple choice]

- Academic leadership/management
- Faculties/research departments (e.g. embedded data stewards and/or managers)
- Research administration (e.g. generic data stewards and/or managers)
- Individual researchers/research units
- IT service
- Library
- Legal department
- Data protection office
- Other (please specify) _____
- Don't know

15 At what level are research data support services primarily implemented in your institution?

[multiple choice]

- Institutional/university level
- Faculty/department level
- Disciplinary level
- Research unit level
- Don't know

16 Has your institution established specific research data support roles (e.g. data stewards, research data managers)? *[multiple choice]*

- Yes, at institutional/central level
- Yes, at faculty/department level
- No
- Don't know

17 Do you have any further comments about this section?

Section 2c - RDM competences of students

This survey seeks to know how widespread the teaching of (FAIR) research data management competences and skills currently is at universities.

This section will ask if and at what level (bachelor, master, doctoral) relevant competences and skills are taught at your institution. As competences we understand the set of competences defined in the [EDISON](#) project ([CORDIS](#) entry). At the highest level, these include

- Data analytics and statistical techniques
- Data software engineering
- Data management
- Data science methods to address domain-specific research problems

18 Does your institution have an approach or a strategy to address data literacy and skills of students?

- Yes, for the entire institution
- Yes, for faculty/department(s)/scientific discipline(s)
- Yes, for both
- No
- No, but we are developing one
- Don't know

19 To your best knowledge, in which broad set of disciplines and at what level is your institution addressing one or more of the above-mentioned research data-related competences?

[Instruction: per cell in the table below, select one of the following options:]

- Never
- Usually not
- Sometimes
- Usually yes
- Always
- Don't know
- Not applicable]

Domain	Bachelor	Master	Doctoral
Humanities and Social Sciences			
Life Sciences			
Natural Sciences			
Engineering Sciences			
Generic / multidisciplinary			

20 To your best knowledge, what are the more specific research data-related competences delivered by your institution at bachelor, master, and doctoral level?

[Instruction: per cell in the table below, select one of the following options:

- Never*
- Usually not*
- Sometimes*
- Usually yes*
- Always*
- Don't know*
- Not applicable]*

Competences	Bachelor	Master	Doctoral
Using data analytics and statistical techniques to deliver insights into research problems			
Using software engineering to research, design, implement new data analytics applications and/or to support data handling during the whole data lifecycle			
Developing and implementing a data strategy , e.g., a research data management policy and Data Management Plan (DMP)			
Developing and implementing relevant data models , defining metadata using common standards and practices			
Integrating data from multiple sources			
Maintaining information on data handling, including reference to published data and corresponding data sources (data provenance)			
Ensuring data quality, accessibility, interoperability, compliance to standards, and publication (data curation)			
Understanding and following policies on data protection, privacy, IPR and ethical issues			
Applying general data science methods to domain-specific research problems ; using scientific domain knowledge to develop relevant data analytics applications;			

21 Can you provide an example of a curriculum or course that includes one or more of the data-related competences mentioned above?

22 Is your institution using specific frameworks for research data management, data science and open science when developing training activities or curricula? Please indicate all that apply to your best knowledge.

- EDISON Data Science Competence Framework (EDSF)
 - EOSCpilot Skills and Capability Framework (including FAIR4S)
 - Open Science Competence Assessment Matrix (OS-CAM)
 - Others such as national frameworks and guidelines
-
- No frameworks, trainings or resources used
 - Don't know

23 Is your institution using resources, trainings or other services from other projects or initiatives? Please indicate all that apply to your best knowledge.

- Research Data Alliance (RDA)
- OpenAIRE
- GO-FAIR
- FOSTER
- CODATA
- Research infrastructures (e.g. ELIXIR, CESSDA)
- Others _____

24 Do you have any further comments about this section?

Part 3 - Thinking ahead: universities, research data competences and EOSC

Section 3a - Future competences

Considering the growing use of digital tools in science and other professions, an increasing number of funder mandates for research data management, as well as the opportunities that may be created by the European Open Science Cloud, it is anticipated that students and graduates across scientific domains will need more data-related competences.

25 Does your institution believe there is a need to strengthen the teaching of specific research data-related competences at the bachelor, master or doctoral level?

[Instruction: per cell in the table below, select one of the following options:

- High need*
- Neither high nor low*
- Low*
- Don't know*
- Not applicable]*

Competence	Bachelor	Master	Doctoral
Data analytics and statistical techniques			
Data software engineering			
Data management			
Applying general data science methods to domain-specific research problems			

26 Do you have any further comments about this question?

Section 3b - Universities and EOSC

27 How would you rate the awareness of the European Open Science Cloud within your institution among the following groups?

	Rather high	Neither high nor low	Rather low	Don't know
Institutional leadership	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Early-stage researchers (i.e. doctoral candidates and postdocs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Researchers (faculty and others)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional and support staff (e.g. data stewards/managers, librarians)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28 Where do you see potential benefits created by the future EOSC for your institution? Please tick only the three most important.

- Increasing the visibility of research data created within the institution
- Easier access to services not available within the institution (e.g. data, repositories, cloud and high-performance computing services)
- Strengthening of institutional capacity for data-driven science
- Creating opportunities for data-driven research collaboration
- Other potential benefits _____
- Don't know

29 Where do you see barriers and difficulties for your institution to engage with the future EOSC? Please tick only the four most important.

- Limited awareness of EOSC and its potential benefits
- Limited institutional capacity (e.g. skilled staff, support structures) to use EOSC services
- Concerns over long-term sustainability of EOSC and its services
- Lack of clear use cases for EOSC
- Lack of coordination among the relevant actors within the institution
- Limited training opportunities for staff
- Concerns over increased costs
- Lack of support / resistance from academic leadership
- Lack of interest / resistance from researchers
- Lack of incentivising policies or rewards from external actors (e.g. national/regional governments, research funding organisations)
- Other _____
- Don't know

Section 3c - Supporting universities

30 How can FAIRsFAIR support your institution in developing and implementing FAIR data and research data management policies?

Please tick only the three most important courses of action

- Training support staff in the area of research data management (e.g. metadata; data storage/management/curation; technical standards; FAIR principles)
- Training support staff on making e-infrastructures FAIR compliant
- Training researchers in generic research data management and the FAIR principles
- Training researchers on research data management and the FAIR principles in specific domains
- Training and support for developing, coordinating and implementing research data policies
- Sharing of good practices and peer learning across institutions
- Better availability of tools and resources to inform universities about research data management
- Other _____

31 How can FAIRsFAIR support your institution in teaching research data management competences and the FAIR principles to students and early-stage researchers?

Please tick only the three most important courses of action.

- Provision of generic competence frameworks for Data Science
- Provision of generic competence frameworks for Data Stewardship
- Provision of competence frameworks for domain-specific research data management
- Generic model courses and curricula
- Domain-specific model courses and curricula
- Sharing of good practices and peer learning across institutions
- Training of trainers
- Other _____

-END OF SURVEY-