

January 26, 2021

Introduction

The 15 FAIR data principles are intended to be applied to a dataset, but the acronym FAIR is also used as an adjective for other (digital) matters, such as FAIR data stewardship, FAIR data infrastructure and FAIR data services. Moreover, in the context of Open Science and scientific integrity, more and more Dutch universities and research organizations discuss a FAIR organization as an important goal, thus implementing RDM practices and support with the FAIR principles as a main driver.

Triggered by this use of the acronym FAIR for organizations, a LCRDM (National Coordination Point Research Data Management) task group explored the definition, characteristics and principles of a so-called 'FAIR enabling organization'. The task group delivered two products: (1) a definition for a FAIR enabling organization and (2) a self-assessment tool to evaluate the FAIR-ness of a research organization (research institute, university or university of applied sciences).

The self-assessment tool is a simple instrument. By answering the questions and evaluating the level (beginner, intermediate, or advanced) at which the respondents assess the performance of their organization, they are able to define the actual FAIR-ness. In addition they can define next steps to become a FAIR Enabling Research Organization using the information in de more advances level(s).

Tool versus survey

The tool can be found on zenodo: <http://doi.org/10.5281/zenodo.4080867>. It is an interactive pdf, and anyone can use it, any time, any place. The results are just for the organization/institute themselves.

The survey used the same questions, but transported into a forms, as to be able to combine the answers.

Participants

Twenty-four institutes were approached to participate anonymously. Twenty did fill out the form, between half December 2020 and half January 2021. The twenty institutes are 13 universities, Five Academic Medical Centers, one university college and 1 national research institute.

The majority of the people approached to participate were known to have been involved with RDM developments in their institutes.

Questions

The tool (and thus the survey) consists of 19 closed questions and 3 open questions.

Results

When reading the results be aware that the blue part in the pie chart reflects the answers of those who assess themselves at a **beginner's level**, red for **intermediate** and orange for **advanced level**.

Follow-up

Other institutes will be asked to participate in the coming weeks. The survey will be repeated next year. The findings are a source of inspiration for new LCRDM taskgroups.

Comments, suggestions ?

Please communicate these with us at info@lcrdm.nl.

Definition A FAIR Enabling Research Organization (FERO) is a research organization with a dedicated staff of data professionals and that has implemented policies on technical, infrastructural and organizational facilities and services to enable the researchers to create and publish FAIR data as a result of their research.

I-PASS relates to the five areas on which questions are asked: Incentives, Policy, Adoption, Services and Skills.

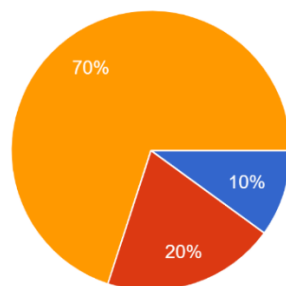
RESULTS

When reading the results be aware that the blue part in the piechart reflect the answers of those who assess themselves at a beginner's level, red for intermediate and orange for advanced level.

Policy

1. Are the FAIR principles explicitly mentioned in the data(or research data) policy of your organization?

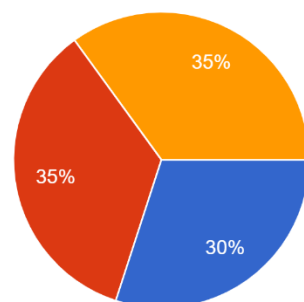
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- The FAIR principles are not explicitly mentioned, but there is a reference to sustainable and long term storage.
- The F and A principle are explicitly mentioned.
- All FAIR principles are explicitly mentioned (or there is an explicit reference to the overarching Open Science concept).

2. Is the general research datapolicy translated into faculty/institutes specific datapolicies?

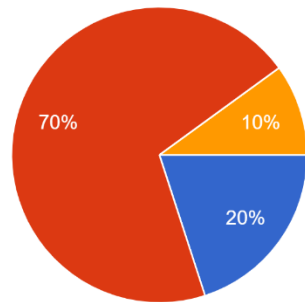
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- Less than 20% of the faculties or subunits have a specific policy.
- 20-80% of the faculties or subunits have a specific policy.
- More than 80% of the faculties or subunits have a specific policy.

3. Is the general research datapolicy supported by dedicated service units (e.g. DCC) ?

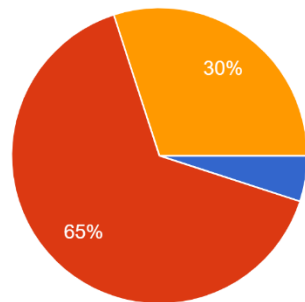
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- There are dedicated staff members responsible for the implementation of the services.
- There is a dedicated central organizational unit (either virtual or physical) to provide services needed to execute the policy. However some co...
- We provide and/or facilitate all services for all aspect, also for domain specific interoperability standards and storing large data.

4. Which means and channels are used to communicate the research data policy and services to the researchers?

20 antwoorden

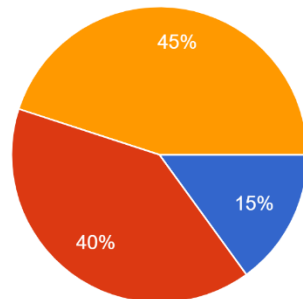


- We have a website that contains all information, and in addition we have a central (online) helpdesk.
- On top of a website with all information and a central (online) helpdesk, we provide regular workshops, webinars and training events.
- On top of a website with all information, a central (online) helpdesk and regular workshops, webinars & training events, new researchers are informed of the d...

Services

5. Which services does your organization provide in order for researchers to comply with the F principles ?

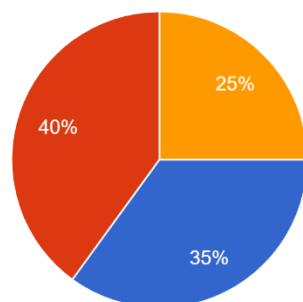
20 antwoorden



- We provide or refer to a service to deliver a PID for a data set.
- We provide or refer to service for PID and adding metadata (including reference to the dataset).
- On top of adding PIDs and metadata, we provide or refer to a service to make the data findable through indexed resources.

6. Which services does your organization provide in order for researchers to comply with the A principles?

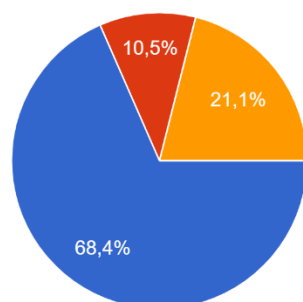
20 antwoorden



- We provide or refer to a service with a standard and open communication protocol as to access the data.
- We provide or refer to a service to enable restricted access to data and meta data (authentication protocol).
- Our organization has an archiving policy, both on data and meta data.

7. Which services does your organization provide in order for researchers to comply with the I principles?

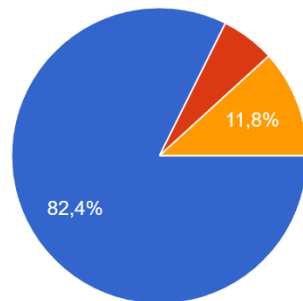
19 antwoorden



- We provide or refer to a service that enriches the dataset metadata, referencing to other datasets and articles (I3).
- We provide or refer to a service to attribute (meta)data that use a formal, accessible, shared, and broadly applicable language for knowledge re...
- We provide or refer to a service to attribute (meta)data that use vocabularies that follow FAIR principle...

8. Which services does your organization provide in order for researchers to comply with the R principles?

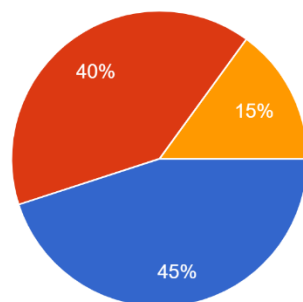
17 antwoorden



- We provide advice on licenses and provide or refer a service to add licenses in the metadata.
- We monitor the reuse of our data, both within the institute as well as outside.
- We perform quality control on the (meta)data, e.g. adequate read me file as to assure that somebody else can actually reuse the data. We assure that (meta)data meet domain relevant community standards.

9. Which services does your organization offer on Research Software Management?

20 antwoorden

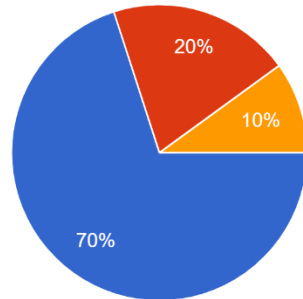


- We leave it to the researchers (i.e.: no service).
- We have research software engineers (i.e.: dedicated professionals employed).
- We distinguish between 'Software to be reused' and 'For reproduction'; we offer advice on licensing, and we archive in the appropriate repositories (e.g. GitHub, GitLab, Zenodo).

Skills

10. Does your organization have a job description in place for the different roles in data stewardship? If so, are there training standard...rtificate requirements in place for data stewards?

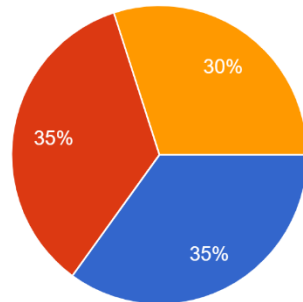
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- We are in the process of recognizing the different roles within Data stewardship.
- We have functions and role descriptions. We know how many of each is needed. We provide ad hoc trainings for the Data stewardship staff at different levels.
- We have functions and descriptions, and we have a training program for the different levels of Data Stewards.

11. Does your organization explicitly finance data science and data stewardship roles?

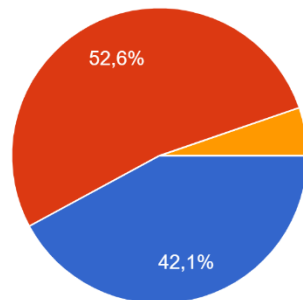
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- Budget is allocated for Data Stewardship (centrally) or Data Management support.
- Besides centrally allocated budget, Data Stewardship support research units of projects are budgeted locally (on faculty/ research group level).
- Both central and local budget is allocated, and the organization invests in Data Science innovation (and similar subjects).

12. How many DataStewards/Managers/Research Supporters (strategic, generic, embedded, centrally)(but not RSE or data scientist)does your organization have in relation to scientific staff ?

19 antwoorden

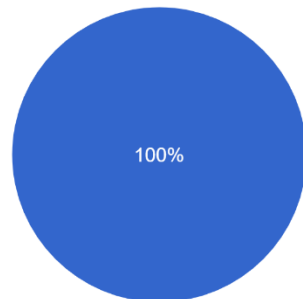


- 1 fte in relation to 500 scientific staff, including PhD (or even less).
- 1 fte in relation to 100-500 fte scientific staff (including PhD).
- 1 fte or more in relation to scientific 100 fte scientific staff (including PhD).

Incentives

13. Is FAIR data recognized and rewarded by your organization? How (for instance with policy, services, behavior and/or adoption)?

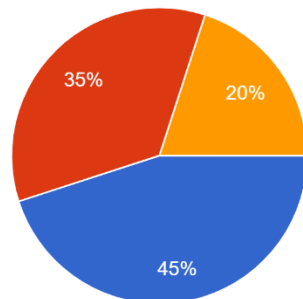
19 antwoorden



- All institute employees must endorse the Code of Conduct for Scientific Integrity (e.g. through their employment contracts or appointment decisions).
- FAIR data is part of the HRcycle, for example during performance reviews. Researchers are allocated time to make their data FAIR
- In the recruitment and selection of new researchers, FAIR Data practice is one of the important criteria.

14. Does your organization offer or take part in collaborations that work on new tools, services, expertise and other components of the FAIR data ecosystem?

20 antwoorden

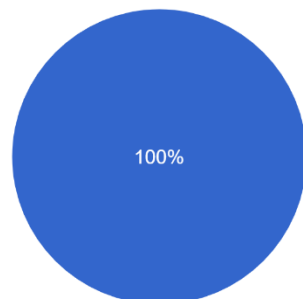


- We offer the basics in tools and expertise.
- We have pilots with new developments within the FAIR ecosystem.
- Implementing and innovating in tools/ solutions within the FAIR ecosystem is inherent to our institute.

Adoption

15. Does your organization include FAIR data as a criterion in the initial and continuous evaluation process?

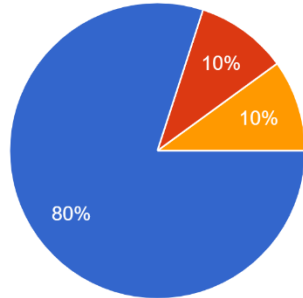
18 antwoorden



- FAIR data is a criterion to evaluate our general policy and data policies of faculties/institutes.
- FAIR data is a criterion in our HR-cycles, and of our data services (of the DCC).
- FAIR data is a criterion in evaluating HR, policies and (DCC) services.

16. Does your organization include the subject of research data in regular HR evaluations with research staff?

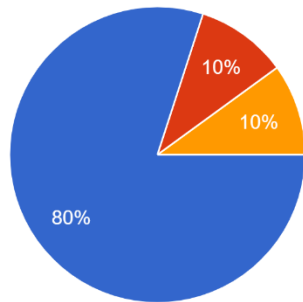
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- Subject of research data is not discussed.
- HR Policy requires executives to monitor the adoption of research data management policies.
- Research data management is a regular element in the evaluation cycle.

17. Does your organization have formal regular evaluations of the relevance and quality of all services needed to support the data policy?

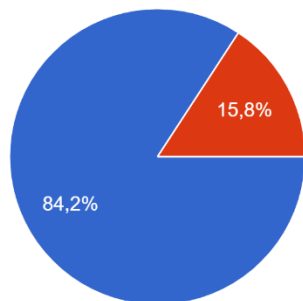
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- Irregular (ad hoc), only in response to requests.
- Simultaneous with the SEP or comparable equivalent (every 5-6 years).
- Every two years.

18. How much of your organizations scientific publications contain a DOI (or other PID) reference to the data underlying the publication over the last publication year (now 2019)?

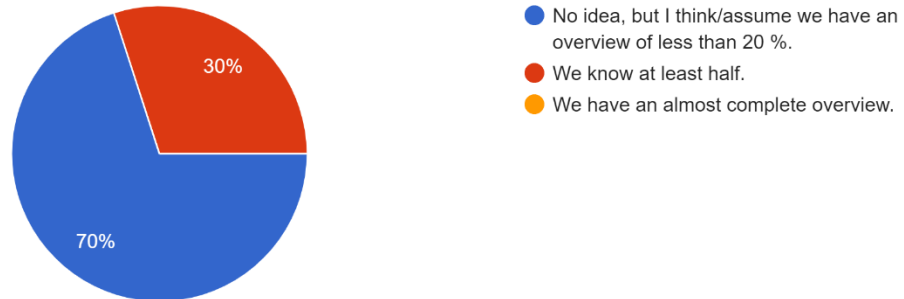
19 antwoorden



- less than 20 % of the publications contain references to the underlying data.
- 20-80% of the publications contain references to the underlying data.
- over 80% of the publications contain references to the underlying data.

19. Does your DCC know the amount of data, the number of datasets produced within your organization e.g. in the last year?

20 antwoorden



Open questions

20. What are your organization's most important barriers in becoming FAIR enabling?

Main barriers are mentioned in the Adoption and Skills areas, (13 and 12 times respectively). (Annex 1)

21. What is your organization's largest achievement, in which you take pride, in the development towards a FAIR enabling organization?

Skills (sometimes in the meaning of the present organization of Data Support) are mentioned most (12 times), followed by the providing of services(7 times).(Annex 2)

22.Which actions will you take the coming year in improving the Fair Enabling Support within your DCC/organization?

In four areas different actions (equally distributed) will be taken (Policy, Services, Skills and Adoption). No one mentions specifically actions in the Incentives area. (Annex 3).

ANNEX 1 Q. 20. What are your organization's most important barriers in becoming FAIR enabling?

	P	Se	Sk	I	A
Engagement of researchers in adopting RDM					1
Change in culture; disciplinary differences (uptake, etc)		1			1
Recognition & rewarding needs better development on the basis of national policy developments (now being developed at nat. level). I en R: R is for researchers- no barriers. Time needed.		1		1	
Decentral data stewards capacity (different roles) and IT competences (including research software engineering)			2		
lack of commitment and/or interest and/or funds on various organisational levels				1	1
Lack of sufficient resources; insufficient buy-in across the institution.			1		1
data governance policy	1				
Fte's and dedication			1		1
Resistance of researchers					1
knowledge (by the researchers individually and within the organization as a whole) and attitude			1		1
commitment and clear statement from management awareness with the researchers making data and software FAIR for researchers time and money		1		1	2
Training & personnel (data stewards)			1		
Allocating staff resources. Central management of research data storage solutions.		1	1		
Lack of incentives to researchers to adopt the FAIR principles.				1	
Knowledge (on the I and R) and staff to put time into this.			2		
Time and money				1	
Awareness, supporting interoperability			1		1
Unawareness of researchers, contracts with third parties that prohibit disclosure (Non-disclosure agreements are common); lack of incentives for researchers.	1			1	1
Develop capacity of support organisation (DCC). Raise awareness amongst researchers and non DCC support staff.			1		1
Budget, awareness and fte's available for implementing FAIR solutions			1	1	1
	2	4	12	7	13

ANNEX 2 Q. 21. What is your organization's largest achievement, in which you take pride, in the development towards a FAIR enabling organization?

	P	Se	Sk	I	A
data steward organization			1		
Research showcases with researchers and supporting units covering different aspects of FAIR and the learning effect towards the research community;					1
Everything we've achieved so far: RDM policy that is readable and understandable for all; RDM within the library as steady value. From scratch to where we are now.	1	1	1		
Extra capacity for central datastewardship; positive evaluation of central datastewardship in University; setting up solid trainingprogram; contribution to international developments			2		1
adoption of the datasteward concept					1
Appointment of data stewards as permanent members of faculty staff; Appointment of data managers and RSEs.			1		
health data platform		1			
Good RDM helpdesk			1		
Still in progress					
the effort by some of our institutes to actively use the FAIR principles and spread the knowledge.					1
well organized RDM support, both services and network/community			1		
Many current development: dataplatform, digital research environment, Dataverse instance		1			
Providing a trusted (CoreTrustSeal) data repository		1			
Our excellently attended courses in RDM and Writing a DMP in collaboration with the Graduate Schools.			1		1
Creating our own repository, so that researchers always have a good place to make their data FAIR.		1			
instalment of datasteward, pilot data archive, as step towards fair		1	1		
Being an active member of LCRDM; setting up a multi-disciplinary team for research support			1		
Strategic RDM program leading to new RDM policy, faculty data stewards and tooling like figshare from the start of 2021.	1	1	1		
We have just started, so 'pride' is a big word; a workshop on the basics about FAIR RDM is included in the general introduction for all starting PhD's			1		
	2	7	12	0	5

ANNEX 3 Q 22. Which actions will you take the coming year in improving the Fair Enabling Support within your DCC/organization?

	P	Se	Sk	I	A
getting the data from the researchers					1
implementation of DCC governance; adoption campaign (including HR)	1				1
Forming and establishing the DCC/inclusion of the Data Science Center	1				
Strengthen data stewards and research software engineers capacity within faculties; support and push faculty/institutes data management protocols; work on FAIR implementation profiles in international collaboration; collaborate with (international) thematically DCC's; expand facilities	1	2	1		
updated RDM programme	1				
Formalising the DCC; Investment in disciplinary-specific support (also on technical level); community building in science; engineering and design	1		1		1
Implementation of DCC and data stewardship implementation	1				
Data archiving and metadata standards		1			
Provide a roadmap with actions for researchers to comply with the principles					1
strengthening the cooperation between institutes and researchers, and knowledge building and dispersion.			1		1
FAIR data & software track in Open Science Programme			1		
See 21: taking steps from development to implementation	1				
Awareness raising, promotion of available services, providing FAIR solutions for long term storage of large datasets and sensitive data.		1			1
Extensive Infrastructure, Upgrade to Research Data Steward and their different roles in our organization, hiring a RSE, and extending our RDM community.		1	1		1
Brainstorms on how to implement I en R within the RDM policy.		1			
create awareness/convince the board and researchers of the importance and the advantages					1
Strengthen RDM support organisation (DCC), implementations data archive as link towards repositories.	1	1			
Enhancing awareness, more workshops by datastewards for researchers . Actively helping researchers to make data FAIR.		1	1		1
Training data stewards. Implementing policy. Pilot new tools.	1	1	1		
We will build a data stewardship network as part of our DCC, to provide more in depth knowledge and support whithin the departments than the central support can offer.		1	1		
	9	10	8	0	9