

TRAIN RESEARCH DATA MANAGEMENT

Survey Questions (Draft)

Background:

This survey is being conducted by the TrainRDM – Open Science and Research Data Management Innovative and Distributed Training Programme (2020-2023), funded as a Key Action of the EU Erasmus+ initiative to support education, training, youth and sport in Europe (Agreement no. 2020-1-RO01-KA203-080170).

All of the answers you provide in this survey will be kept confidential. The survey data will be reported in a summary fashion only and will not identify any individual person. The results of this study will be used for scholarly purposes only.

This research has been reviewed according to the ethics procedures for research involving human subjects of the Ethics Committee at the National College of Ireland. If you have any questions about the research study, please contact Dr Horacio González-Vélez at horacio@ncirl.ie

This survey will take about 20 minutes to complete.

ELECTRONIC CONSENT: Please select your choice below.

Clicking on the "agree" button below indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age

If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.

Disagree
Agree

Introduction

This survey assesses your opinions about Open Science and Research Data. Its goal is to gather feedback from individuals in Academia, Industry and the Public to ultimately analyse and map skills training needs in such areas.

As there may be a variation in how terms are used across research activities, we will be grateful if you can review the following definitions to understand their meaning for this survey. The intention is for the definitions to apply as widely as possible.

- **Research Data:** Qualitative, quantitative, or textual information upon which a novel investigation was conducted. Data can be “raw,” meaning in the form it was collected, or “cleaned” or “prepared,” meaning corrected for errors or transformed into a new form for analysis (e.g., pre-processing) or sharing (e.g., anonymisation).
- **Scholarly work:** A paper, article, book, report, research data, computer code, or other form of media artefacts communicating the outcome of academic research.
- **Open:** Content that is publicly available with minimal barriers to access, i.e. it can be viewed, licensed, and/or downloaded online without registration, payment, or approval.
- **Open Science:** A culture that is characterised by the transparency and broad accessibility of scholarly work, where researchers share *openly* artefacts almost immediately and with a very wide audience.
- **Open Source:** Software with source code that anyone can *openly* inspect, modify, and enhance.

Other Surveys Consulted

- [Swinburne Open Science Survey \(2019\)](#)
- [The Open Scholarship Survey \(2020\)](#)

Part 1: Profile of your Organisation & Overview of Open Data & Open Access

SECTION 1: ABOUT YOUR ORGANISATION (6Qs)

Q1 Is your Organisation in

- Academia. (if academia, move the Q3)
- Industry (If industry, move to Q2)
- Public Sector (if Public Sector, move to Q3)

Q2. What Industry is your Organisation in? *Select one*

- a. Agriculture
- b. Basic Metal Production
- c. Chemical industries
- d. Commerce
- e. Construction
- f. Education
- g. Financial services; professional services
- h. Food; drink; tobacco
- i. Forestry; wood; pulp and paper
- j. Health services
- k. Hotels; tourism; catering
- l. Mining (coal; other mining)
- m. Mechanical and electrical engineering
- n. Media; culture; graphical
- o. Oil and gas production; oil refining
- p. Postal and telecommunications services
- q. Public service
- r. Shipping; ports; fisheries; inland waterways
- s. Textiles; clothing; leather; footwear
- t. Transport (including civil aviation; railways; road transport)
- u. Transport equipment manufacturing
- v. Utilities (water; gas; electricity)
- w. Other *please specify*

Q3. How many employees work at your organisation in your country?

- a. Micro <10
- b. Small 10 - 49
- c. Medium 50 – 249
- d. Large Enterprise 250 or more

Q4. What percentage of your organisation is engaged in Research?

- a. 0% -10%
- b. 11- 20%
- c. Over 20%

Q5. What type of research activities does your organisation engage in? (multi selection)

- a. Market Research
- b. Academic Research solely for your institution
- c. Academic Research in collaboration with other academic institutions
- d. Academic Research in collaboration with industry
- e. Academic Research funded by your organisation
- f. Academic Research co-funded with another institution (i.e. EU)

Q6. Please tell us the name of the organisation(s) funding your Research if you selected f. above.

SECTION 2: GENDER DIVERSITY PROGRAMS (3Qs)

Q7. What is the makeup of your Research Team?

- a) All male
- b) Somewhat more male than female
- c) Equal numbers of male and female
- d) Somewhat more female than male
- e) All female

Q8. Has your organisation experienced difficulty in retaining females in Research roles?

- a) Yes
- b) No
- c) Don't know

Q8a. Does your organization have in place specific diversity programs to support female Research professionals?

- a) Yes
- b) Broader diversity programme to support female, not just in Research
- c) No
- d) Don't know
- e) If yes, please explain

Q9. Are people of all cultures and backgrounds respected and value in your organization?

- a) Yes
- b) Broader diversity programme to support different cultures and backgrounds, not just in Research
- c) No
- d) Don't know
- e) If yes, please explain

SECTION 3: HIRING & RETAINING RESEARCH & DATA ANALYTICS STAFF (6Qs)

Q10. Hiring - where did you source your existing Research staff?

- a. Recruited from within the organisation from a related/non-related role
- b. Recruited from a previous role in academia
- c. Recruited from industry

- d. As a career starter, for example a graduate or intern

Q11. Hiring – from what location do you source your Research staff (Please provide an indicative %)

- a) Nationally
- b) Europe
- c) International (outside of Europe)

Q12. Hiring - On average, how long does it take your organization to fill a Research position with a qualified candidate?

- a) < 2 weeks
- b) 1 month
- c) 2 months
- d) 3 months
- e) 6 months
- f) > 6 months or cannot fill open positions
- g) Not Applicable
- h) Don't know

Q13. Hiring/Shortage - On average, how many Research applicants are well qualified for the position for which they are applying?

- a. Less than 25%
- b. 25 - 50%
- c. 50 - 75%
- d. 75 - 100%

Q14. Shortage - Do you feel that your organization's Research team is currently:

- a. Significantly understaffed
- b. Somewhat understaffed
- c. Appropriately staffed
- d. Somewhat overstaffed
- e. Significantly overstaffed
- f. Don't know

Q15. Shortage - Does your organization have unfilled (open) Research positions?

- a. Yes
- b. No
- c. Don't know
- d. If yes, how many?

SECTION 4: SKILLS & TRAINING (4Qs)

Q16. In the last 12 months, has anyone undertaken a formal analysis of your organisation's Research skills or training needs?

- a. Yes
- b. No
- c. Don't know

Q17. Do you have a formal training program for Research employees?

- a. Yes
- b. No
- c. Don't Know

Q18. If "yes" please indicate how effective is your current training program for Research employees? (Select one)

- a. Very effective
- b. Somewhat effective
- c. Neither effective or ineffective
- d. Somewhat ineffective
- e. Very ineffective
- f. Note sure

Q19. Which of the following topic areas would you find most valuable for ongoing training and education for your organisation to be successful in Research? (Select up to three)

- a. Research Methods
- b. Report writing
- c. Data collection
- d. Analysis of information from different sources
- e. Finding information off the internet
- f. Critical thinking
- g. Planning and scheduling
- h. Interviewing
- i. Critical analysis
- j. Leadership to drive Innovation
- k. Intrapreneurship/Entrepreneurship
- l. Soft Skills

SECTION 5: OPEN DATA SOURCES (7Qs)

Q20. What is your experience with Open Data and Open Source?

- I hadn't heard of Open Data or Open Source
- I am aware of Open Data and Open Source, but have not used either in my research
- I have some experience with Open Data and Open Source, but do not use them regularly
- I regularly use Open Data and/or Open Source

Q21. In your opinion, how important is it that datasets and/or code materials are Open Data and Open Source respectively?

- Extremely important
- Somewhat important
- Somewhat unimportant
- Not at all important
- Researchers in my discipline do not use datasets and/or code materials

Q22. How have you used Open Data and Open Source (tick all that apply)

- I have made my datasets or my code Open Data and Open Source openly available
- I have used other researchers' Open Data and/or Open Source materials in my research
- I have used other researchers' Open Data and/or Open Source when peer reviewing their work
- I have used other Researcher's Open Data and/or Open Source when reading their work
- Other *please specify*: _____

Q23. Do you have any concerns about making Open Data or Open Source materials openly available?

- No
- Yes

If YES, *please list your concerns*

Q24. In your opinion, how important is it for your research field that data from published research is openly available?

- Extremely important
- Somewhat important
- Somewhat unimportant
- Not at all important
- Research publications in my field are not based on data

Q25. Have you engaged in Open Data practices? (tick all that apply)

- I have used open data from other sources (e.g., researchers, government, etc.)
- In my research
- I have used open data when peer reviewing other researchers' work
- I have used open data when reading other researchers' work
- Other – *please specify*

Q26. If you have released Open Data Datasets or Open Source Code can you provide a link to it?

SECTION 6. OPEN ACCESS PUBLICATION (9Qs)

There are two basic models for Open Access (OA) publishing:

A. Pay your publisher a fee (an Article Processing Charge) to make the final version of record available for OA in a peer-reviewed journal. Journal may be fully OA, or offers a hybrid OA option (i.e. only your article is released for OA).

B. Publish on a normal contract in a peer-reviewed journal, and deposit the final accepted version of your manuscript (peer-reviewed but not journal-formatted) in an OA repository such as an institutional repository (e.g. Swinburne Research Bank), or an external subject repository such as arXiv, bioRxiv, SocArxiv, etc. This is known as Green OA or self-archiving.

Q 27. Do you publish Research?

- a. Yes
- b. No

If **NO** please go to **Part 2: Identification of thematic needs related to Research Data & RDM**

Q28. Approximately what proportion of your publications from the last 5 years are open access?

- a. All
- b. Most
- c. Half
- d. Some
- e. None
- f. I don't know
- g. **Please provide links if you selected a,b,c, or d above**

Q29. How feasible would it be for another researcher with similar resources to attempt to conduct an identical study (including data collection and analysis).

- a. All of the information they need to conduct an identical study is in the publication(s) of my work
- b. All of the information they need to conduct an identical study is openly available
- c. They could conduct a similar study based on available information, but would require additional information from my research team to conduct an identical study
- d. Conducting an identical study would not be possible because there was a specific event (e.g., a hurricane, a terrorist event) that defined the context of the study (please explain)
- e. Conducting an identical study would not be possible for other reasons (please explain)
- f. **If you selected d or e above please explain the reasons why an identical study could not be conducted**

Q30. Which of the following Open Science practices (if any) are commonly used in your field? (tick all that apply)

- a. Study preregistration
- b. Open materials/code
- c. Open data
- d. Pre-publication archiving
- e. Open access publishing
- f. Open access archiving in a repository
- g. None
- h. I don't know about the Open Science practices of researchers in my field
- i. Other _____

Q31. Please indicate your awareness of each of the Open Science resources listed below. If there are other resources that you use or are aware of, please enter them in the "other" box at the bottom of the table.

OSTools			
	I use this (2)	I'm aware of it, but don't use it (1)	I'm unaware of this (0)
Zenodo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
OpenAIRE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Databrary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dryad Digital Repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
European Research Infrastructure Consortium (ERIC) Repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Figshare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Image Data Resource (IDR)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DBpedia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open Science Framework (OSF.io)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mendeley Data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FAIRsharing.org	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Own Institutional publication/data repository	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GitHub	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Covid19 Data Portal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other – If you use or are aware of other resources in your discipline, please list them below, including a URL for the resource, where possible (e.g. Sloan Digital Sky Survey; Additional name(s): SDSS; URL: <https://www.sdss.org/>)

Q32. Are there any barriers that prevent you from adopting Open Science practices?

- a. No
- b. Yes
- c. If “yes” what are the barriers?

Q33. The following are possible barriers to the uptake of Open Science practices. Please place a tick beside any statement that you agree is a barrier in your field (tick all that apply)

- a. Lack of funding for open access publishing
- b. Lack of credit in my institution for engaging in Open Science
- c. Lack of recognition in my field about the value of Open Science practices
- d. Lack of mandates from funders, institutions or other regulators
- e. Lack of information about Open Science practices
- f. Lack of professional staff that provide support for Open Science practices
- g. Lack of research funding to support Open Science practices
- h. Lack of training required to implement Open Science practices
- i. Lack of supporting infrastructure (e.g., open data platforms)
- j. Lack of time to engage in Open Science practices
- k. Lack of time to learn Open Science practices
- l. Lack of expertise to engage in Open Science practices (e.g., assignment of metadata)
- m. Researchers are discouraged from engaging in Open Science practices by their colleagues
- n. HDR students are discouraged from engaging in Open Science practices by thesis supervisors
- o. The Open Science community is intimidating
- p. Researchers don't want to be told how to do their research
- q. Lack of interest from researchers
- r. I do not perceive any barriers
- s. Other _____

Q34. Are there barriers to maximising the use of an institutional repository? Please explain.

Q35. Where did you learn about Open Science practices? (tick all that apply)

- a. Undergraduate courses
- b. Postgraduate courses
- c. Workshops/seminars offered by my university
- d. Workshops/seminars offered by another university
- e. External (non-university) workshops/conferences
- f. Internet resources (including social media)
- g. From my colleagues
- h. From my thesis supervisor(s)
- i. Other - *please specify*: _____

***** END OF PART 1 *****

Part 2: Identification of thematic needs related to Research Data & RDM (10 items)

Notes to assist in completing Part 2

COLUMN	DESCRIPTION
Skills Training Topic	If you wish to add a new skill training topic, please add a new row in the table above specifying beside the topic the main sub-topics covered. If you wish to add a sub-topic within an existing topic please add it at the end of the already existing sub-topics.
What training is available and might to be shared	If your institution is delivering training on a given topic, please specify the name and a summary of the covered topics. Please include a URL if available
What skillsets are missing or do you wish to have access to?	If your institution does not have an offering what new skillsets do you wish to have access to?
Target audience	Please specify: <ul style="list-style-type: none"> • For HEIs: <ul style="list-style-type: none"> ○ Student ○ Postgrad/PhD ○ Early stage researchers ○ Senior Researcher, Librarian, Data Scientist • For the entities outside HEIs
Learning contexts	Please specify one of the following, including training models – e.g. face-to-face, eLearning, or blended <ul style="list-style-type: none"> • Bachelor • Master • PhD/PostDoc • Postgraduate studies
Training resources	Please specify the training resources you have access to: platforms, hub, cloud, tools, repository, laboratory (is practical training possible?) What does this mean?
What accredited programmes / resources does your institution have?	Please specify one of the following options: <ul style="list-style-type: none"> • Credited models • Accredited CPD/ Professional courses • Professional(academic) courses and accredited CPD

Institution name:

No.	Skills training topics	What training is available and might to be shared	What skillsets are missing or do you wish to have access to?	Target audience	Learning contexts	Training resources	What accredited programmes / resources does your institution have?
1	<p>Understanding Research Data</p> <ul style="list-style-type: none"> • Research data in an array of contexts • Data management concepts: <ul style="list-style-type: none"> ○ metadata ○ research data lifecycle. • Concept of data management: <ul style="list-style-type: none"> ○ identify the roles and responsibilities of key stakeholders, ○ examine various data management tasks throughout the research data lifecycle. 						
2	<p>Data Management Planning</p> <ul style="list-style-type: none"> • Components of good DMP • DMP policies of several funding agencies • Information on data management planning tools. 						
3	<p>Working with Data</p> <ul style="list-style-type: none"> • Strategies for organizing research data: <ul style="list-style-type: none"> ○ versioning ○ file naming conventions ○ data file formatting and transformations. • Why documenting data and data citation are important. • Issues involved in storing, securing, and backing up research data 						

No.	Skills training topics	What training is available and might to be shared	What skillsets are missing or do you wish to have access to?	Target audience	Learning contexts	Training resources	What accredited programmes / resources does your institution have?
5	Archiving Data <ul style="list-style-type: none"> • Preservation needs of research data • Introduce the concepts of authenticity and integrity • Identify the different types of metadata and their role in data discovery and reuse • The role of trustworthy repositories • How repositories demonstrate their trustworthiness through audit and certification 						
6	Working with Personal and Sensitive Data <ul style="list-style-type: none"> • How to collect, share, store, and protect the sensitive data • understand the principles of good research data management • GDPR and data protection regulations, and what these mean for research and research data • relevant services and resources available to researchers at the university. 						
7	Data Cleaning with OpenRefine <ul style="list-style-type: none"> • Use essential OpenRefine functionality. • Advanced OpenRefine functions. • Reference resources for further learning. 						
8	Visualising Data <ul style="list-style-type: none"> • Introduction to data visualization • Data visualization techniques 						

No.	Skills training topics	What training is available and might to be shared	What skillsets are missing or do you wish to have access to?	Target audience	Learning contexts	Training resources	What accredited programmes / resources does your institution have?
	<ul style="list-style-type: none"> Data visualization tools Issues in data visualization 						
9	FAIR sharing and access <ul style="list-style-type: none"> Benefits and barriers to data sharing Benefits and barriers to data sharing Open data licenses 						
10	Documentation, metadata, citation <ul style="list-style-type: none"> Documentation, metadata, citation Forms and purposes of metadata Data citation as part of the scholarly record 						

END OF PART 2

END OF SURVEY