Survey: Advancing RDM at CESAER institutions

Introduction

Welcome to the survey on Research Data Management (RDM) at CESAER institutions. Its purpose is to gain a **better understanding of the challenges faced by the RDM support teams at the CESAER institutions** when providing services to researchers working in technical/engineering disciplines.

The **results of this survey will be part of a white paper** describing those challenges, and recommendations will be prepared for the senior management of CESAER institutions to help provide a strategic approach on how to tackle these challenges.

The specific **target group of this survey are persons responsible for RDM support and/or services at the CESAER institutions**. However, in many institutions RDM services do not rely on one solely office. Therefore, you are encouraged to get in touch with the appropriate collaborative offices at your institution to get an accurate picture of the challenges when providing RDM support for technical/engineering disciplines.

The survey contains a total of 36 questions organized in 4 main sections: Policy & Organization, Infrastructure & Tools, Support Services and Training.

Data protection: The name and country of the institution as well as answers which allow the identification of the institution will be anonymised and not reported in the results of the study.

If you would like to receive a summary of the preliminary results of the survey and/or if you agree that we can contact you in case of additional questions during the analysis of results, please state it in the last section of the survey and provide your name an email address.

If you have any questions regarding this survey, please contact Angelina Kraft (Angelina.Kraft@tib.eu) or Paula Martinez Lavanchy (p.m.martinezlavanchy@tudeft.nl)

Note: Mandatory questions are indicated with the symbol (*)

Content of Survey

General Questions

1. *Name of the Institution:

2. *Name of offices/departments that contributed to answering the survey:

3. *Country:

4. *Your position at the institution:
   Note: If you select the option 'Other' please specify/state double roles (e.g. scientist, PhD, professor)

    a. Data Curator / Steward
    b. RDM Supervisor / Manager
    c. IT Professional
    d. Librarian
    e. Other:

Policy & Organization

The following questions refer to the current formal organisation of RDM at your institution.These questions aim to get an idea of the framework around RDM at your institution, focusing on policy, structure, roles and responsibilities.

1. *Who oversees the implementation of Research Data Management (RDM) at your institution? (you can select more than one option):
   Note: f you select the option 'Other' please specify the organization responsible for implementation of RDM at your institution.

    a. IT-department
    b. Library
    c. Legal office
    d. Research (funding) office
    e. Business and development office
    f. Graduate school
    g. Other:

2. *Is there an RDM policy at your institution?

    a. Yes
    b. No

c. Unknown
d. Other:

3. If there is a publicly available version of the RDM policy of your institution, please provide the URL here:
   Note: The link to the policy will not be part of the results of the survey, it will be only used internally to extract additional relevant information

4. When was/will be the policy published (Year)?:

5. *Does the RDM policy explicitly mention any of these terms? (you can select more than one option)
   Note: Please select 'Not applicable' if there is no policy at your institution

   a. Open Science
   b. FAIR data
   c. Research Integrity
   d. Reproducibility
   e. Open Data
   f. Data preservation
   g. Data sharing
   h. GDPR
   i. IPR
   j. Data Management Plans
   k. Data ownership
   l. Data licences
   m. Software source code management
   n. Software source code licenses
   o. Software source code publication
   p. Not applicable
   q. Other:

6. *The policy clarifies the responsibilities regarding RDM of the: (you can select more than one option):
   Note: Please select 'Not applicable' if there is no policy at your institution'.

   a. Institution
   b. Faculties
   c. Researchers
   d. Does not clarify responsibilities
   e. Not applicable

f. Other:

7. *How is your institution implementing the RDM policy? (you can select more than one option):
   Note: Please select 'Not applicable' if there is no policy at your institution

   a. Drafting local policies at faculty/department level
   b. Providing centrally organized RDM support services
   c. Providing centrally organized RDM training
   d. Providing infrastructure (e.g. repository/-ies, secure storage, RDM tools, etc.)
   e. Appointing data curators/stewards at faculty/department level
   f. Each Principal Investigator has to implement it in her/his group as they decide to
   g. Each researcher has to implement it in her/his workflows as they decide to
   h. Not applicable
   i. Other:

8. *Which of the following incentives does your institution provide for researchers to comply with the RDM policy? (you can select more than one option):
   Note: Please select 'Not applicable' if there is no policy at your institution.

   a. RDM best practices are part of how researchers are evaluated
   b. FAIR data publication/citation is considered in researchers' metrics
   c. Financial support is provided to implement RDM best practices in research groups
   d. Financial support is provided to hire data stewards/data managers in research projects
   e. My institution does not provide formal incentives for researchers to comply with the RDM policy
   f. Unknown
   g. Not applicable
   h. Other:

9. *As a technical university, what are the challenges for the implementation of the RDM policy? (you can select more than one option):
   Note: Please select 'Not applicable' if there is no policy at your institution

   a. Lack of guidelines that consider the diversity of research data used in technical/engineering disciplines
   b. Lack of infrastructure and tools available for researchers working in technical/engineering disciplines
   c. Lack of awareness about the infrastructure and tools available for researchers working in technical/engineering disciplines
   d. Resistance for adopting best practices from researchers in technical/engineering disciplines
   e. Researchers see a conflict between the policy and the collaboration with industry

f. Lack of incentives for researchers to comply with the policy
g. Lack of resources to drive the implementation of the policy
h. Unknown
i. Not applicable
j. Other:

Infrastructure & Tools

The following questions refer to the infrastructure and tools made available for researchers at your institution. Considering the technical level of the questions, feel free to share them with the relevant offices/departments (e.g. IT-services).

1. *Does your institution provide research data storage?
   Note: In this question research data storage refers to temporary/project-related storage and not long-term storage

   a. Yes
   b. No
   c. Unknown

2. *What are the main challenges in hosting research data produced in technical/engineering disciplines on your institutional storage?
   Note: Please use bullet points to answer. Please write 'Not applicable' if your institution does not provide research data storage.

3. *Have you found technical solutions for those challenges, e.g. external services? Which ones?
   Note: Please write 'Not applicable' if your institution does not provide research data storage.

4. *Does your institution provides an institutional research data repository/archive?
   Note: This question refers to long-term data storage as provided by repository or archive system.

   a. Yes
   b. No
   c. Unknown
   d. Other:

5. *What are the main challenges for hosting research data produced in technical/engineering disciplines in your research data repository/archive?

Note: Please use bullet points to answer. Please write 'Not applicable' if your institution does not provide research data storage.

6. *Does your institution recommend specific technical/engineering oriented research data repositories/archives?

    a. Yes
    b. No
    c. Unknown

7. If yes, which ones:
   Note: Please provide your answer as a list

8. *Which RDM tools are provided by your institution? (you can select more than one option)

    a. Data management planning tool (DMP tool)
    b. Electronic Lab Notebook(s) (ELNs)
    c. High Performance Computers
    d. Versioning control system Jupyter Notebooks
    e. Data anonymization tool
    f. None of these
    g. Other:

9. If you checked the boxes for DMP tool, ELNs, Versioning control system and/or Data anonymization tool in the previous question, please provide the names of the tools here:
   Note: Please provide your answer as a list

10. *Are there any specialized RDM tools/infrastructure provided to researchers working on technical/engineering disciplines by your institution? (e.g. product data management tools, processing standards, workflow standards)

    a. Yes
    b. No
    c. Unknown

11. If yes, which ones:
    Note: Please provide your answer as a list

Support services

These questions aim to understand the structure of the RDM support team at your institution and its interaction with researchers. To answers these questions you should keep in mind the feedback received on the day-to-day interaction with researchers working in technical/engineering disciplines.

1. *Does your institution have a dedicated team to provide advice on RDM?

    a. Yes
    b. No
    c. Unknown
    d. Other:

2. If yes, this team includes: (you can select more than one option)
   Note: Please select 'Not applicable' if there is no dedicated RDM team at your institution. If you choose the option 'Other', please specify the position.

    a. Librarians
    b. Research Data officers
    c. Data Stewards
    d. IT-managers
    e. Research funding officers
    f. Other (please specify position):

3. *Name the three most difficult RDM-related topics to address with researchers working in technical/engineering disciplines (e.g. creating DMPs, data documentation, source code licensing, etc.):

4. *How relevant is the collaboration with industry for researchers at your institution?

    a. Not relevant
    b. Relevant
    c. Very relevant
    d. Unknown
    e. Other:

5. *What are the major challenges in providing RDM support to those researchers that collaborate with industry? (you can select more than one option)

    a. RDM workflows/requirements are not part of the collaboration agreements
    b. Research data publication is strongly restricted by industrial partners, in contrast with journals and funder requirements

    c. Lack of standard tools to share data within a project in collaboration with industry.
    d. Research data archiving is not permitted by industrial partners after a project is finished, making reproducibility more challenging.
    e. Researchers hesitate including RDM practices in industrial collaborations to avoid discouraging the industry partners.
    f. Other:

6. *Are there any specific RDM tools/policies/guidelines that need to be in place in order to provide support to technical/engineering disciplines?
   Note: Please use bullet point to answer

7. *Are there skills missing in your RDM service team that would facilitate the task of providing support to technical/engineering disciplines?

    a. Yes
    b. No
    c. Unknown

8. If yes, indicate which ones:
   Note: Please use bullet point to answer

9. *Are there any specific engineering/technical disciplines at your institution that are more advanced in RDM best practices?

10. *Are there any specific engineering/technical disciplines at your institution that are more resistant to incorporate RDM best practices in their workflows?

Training

These questions aim to get an overview of the current status of the training offered at your institution in general, but most importantly training with an special focus on technical/engineering disciplines.

1. *Your institution offers regular training on: (you can select more than one option)

    a. Introduction to RDM
    b. Data Management Plans
    c. Data documentation
    d. Metadata

e. Software management skills
f. Software sustainability
g. Data preservation and publishing
h. None of these
i. Other:

2. *Does your institution provide regular training tailored to technical/engineering disciplines?

    a. Yes
    b. No
    c. Unknown

3. If yes, please provide a list of the course titles organized between 2018 - 2019:

4. *Who attends these technical/engineering tailored training sessions? (you can select more than one option)
   Note: Please select 'Not applicable' if no tailored training is provided for technical/engineering disciplines.

    a. PhD students
    b. Postdocs
    c. Principal investigators
    d. Engineers
    e. Unknown
    f. Not applicable
    g. Other:

5. *Does your institution provide RDM training tailored to technical/engineering disciplines on request?

    a. Yes
    b. No
    c. Unknown

6. If yes, please provide the topics of training that have been organized between 2018-2019

7. *What are the challenges when preparing/providing training tailored to technical/engineering disciplines? (e.g. lack of ad-hoc training material, lack of interest from researchers, lack of specialized trainers):

Contact

1. I would like to receive the preliminary results of the survey via email:
    a. Yes
    b. No
2. I agree to be contacted for further questions during the analysis of the survey results:
    a. Yes
    b. No
3. Name:
4. Email:

Thank you very much for your participation!