

Survey on the Status of Research Data Management Initiatives at Domestic Institutions (2022)

This survey aims to assess the status of research data management (RDM) initiatives within universities and research institutions in Japan.

In recent years, research data management has become an essential requirement from two perspectives: the promotion of open science policies, which encourage proactive data sharing, and the need to preserve research data as evidence for scientific integrity. The establishment of concrete frameworks for implementing RDM is entrusted to each university and research institution, leading to ongoing discussions in various contexts.

In response to this situation, the Japan Consortium for Open Access Repositories (JPCOAR) is conducting this survey to facilitate the sharing of best practices in research data management across Japan and to collect data that will aid in the strategic planning of RDM service implementation. The survey results will be announced at the JPCOAR General Assembly, which is scheduled to be held annually in March, and will also be publicly available in the form of a report. We appreciate your cooperation in this effort.

This survey is being conducted in collaboration with the Research Data Management (RDM) Division of the Academic eXchange for Information Environment and Strategy (AXIES) and the National Institute of Science and Technology Policy (NISTEP). Please note that the collected data will be shared with these organizations for analysis and report preparation.

Basic Information

- **Survey Period:** November 28, 2022 – December 28, 2022
- **Number of Questions / Estimated Completion Time:** 48 questions / Approximately 60 minutes
- **Intended Respondents for Each Section (※):**
 - **Section 1 (Overview):** Email address (Q1: 1 question)
 - **Section 2 (Basic Information):** Liaison department of JPCOAR member institutions or institutional repository department (Q2–Q5: 4 questions)
 - **Section 3 (Understanding Needs):** RDM personnel or relevant department within the institution (Q6–Q10: 5 questions)
 - **Section 4 (Status of Building an RDM System):** Research promotion department / URA, etc. (Q11–Q17: 7 questions)
 - **Section 5 (Implementation Status of RDM Services):** University library (Q18–Q27: 10 questions)
 - **Section 6 (Status of Information Infrastructure Development):** Information infrastructure center (Q28–Q46: 19 questions)

- **Section 7 (About JPCOAR):** Liaison department of JPCOAR member institutions or institutional repository department (Q47–Q48: 2 questions)

※ The intended respondents may vary depending on the structure of each university or research institution. If you are responsible for coordinating responses to this survey, please direct the questions to the appropriate departments as necessary. If no suitable department exists for a particular question, you may select “Don’t know” for all responses.

Contact Information

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Handling of Collected Email Addresses and Institution Names

This survey requires respondents to provide their email addresses and institution names. The collected information will primarily be used to check for duplicate responses from the same institution. Additionally, we may contact respondents to request further details regarding their institution’s RDM initiatives. If we intend to use the collected information for any other purposes, we will request prior consent via email and will only proceed if explicit agreement is obtained.

Publication of Collected Data

The data collected in this survey will be made publicly available after removing any information that could identify the responding institution, such as email addresses, institution names, and open-ended responses containing identifiable details.

If you do not consent to the publication of your data, please indicate this in the open-ended comment section of Q47 or contact the email address provided above. Please note that once the data has been published, we may not be able to accommodate requests for deletion. We appreciate your understanding in advance.

Q1. Email address: _____

Section 2: Basic Information

2. Basic Information

First, we will ask some basic information about your institution. Intended respondents: Liaison departments of JPCOAR member institutions.

Q2. Please provide the name of your institution.*

Q3. Please select the type of your institution.*

Mark only one oval.

- ☐ National university
- ☐ Public university
- ☐ Private university
- ☐ Junior college
- ☐ College of technology
- ☐ Inter-university research institute corporation
- ☐ National research and development agency
- ☐ Other: _____

Q4. Please tell us the size of your institution.*

Mark only one oval.

- ☐ 8 or more faculties
- ☐ 5–7 faculties
- ☐ 2–4 faculties
- ☐ Single-faculty university
- ☐ Junior college
- ☐ College of technology
- ☐ Inter-university research institute corporation
- ☐ National research and development agency
- ☐ Other: _____

Q5. In this survey, please indicate which department(s) were responsible for preparing the responses (multiple selections allowed, including your own department).*

Check all that apply. (Please select at least one response per line for this question.)

1. Library (☐ Section 2 / ☐ Section 3 / ☐ Section 4 / ☐ Section 5 / ☐ Section 6 / ☐ Section 7)
2. Information Center (IT Center) (☐ Section 2 / ☐ Section 3 / ☐ Section 4 / ☐ Section 5 / ☐ Section 6 / ☐ Section 7)
3. Research Promotion/Collaboration Department (☐ Section 2 / ☐ Section 3 / ☐ Section 4 / ☐ Section 5 / ☐ Section 6 / ☐ Section 7)
4. Intellectual Property Department (☐ Section 2 / ☐ Section 3 / ☐ Section 4 / ☐ Section 5 /

- ☐ Section 6 / ☐ Section 7)
5. Institutional executive boards (☐ Section 2 / ☐ Section 3 / ☐ Section 4 / ☐ Section 5 / ☐ Section 6 / ☐ Section 7)
6. Other (☐ Section 2 / ☐ Section 3 / ☐ Section 4 / ☐ Section 5 / ☐ Section 6 / ☐ Section 7)
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Section 3: Needs Assessment

3. Understanding Needs

This section asks about the status of needs assessment within the university/research institution regarding research data management (RDM) initiatives. Intended respondents: Persons in charge of RDM within the institution / relevant department.

Q6. Has your institution ever conducted a survey of researchers, etc. regarding research data management?*

Mark only one oval.

- ☐ Yes, we have conducted one (→ Q7–Q10)
- ☐ No, we have never conducted one (→ Q11, Section 4)
- ☐ Don't know (→ Section 4)

Q7. (For institutions that answered “Yes” to having conducted a survey in Q6) What was the scope of the survey?

Mark only one oval.

- ☐ It was conducted targeting all researchers affiliated with the institution
- ☐ It was conducted targeting only some researchers (e.g. specific departments) in the institution
- ☐ It was conducted targeting specific individual researchers in the institution
- ☐ Don't know
- ☐ Other: _____

Q8. (For institutions that answered “Yes” to having conducted a survey in Q6) By what method was the survey conducted? (Multiple selections allowed)

Check all that apply.

- ☐ Questionnaire survey (using AXIES template): <https://rdm.axies.jp/sig/24/>
- ☐ Questionnaire survey (original format)
- ☐ Individual interviews (using JANUL template): <https://www.janul.jp/ja/news/20200615>
- ☐ Individual interviews (original format)
- ☐ Don't know
- ☐ Other: _____

Q9. (For institutions that answered “Yes” to having conducted a survey in Q6) Which department conducted the survey? (Multiple selections allowed)*

Check all that apply.

- ☐ Library
- ☐ Information Center (IT center)
- ☐ Research Promotion/Collaboration Department
- ☐ Intellectual Property Department
- ☐ Don't know
- ☐ Other: _____

Q10. (For institutions that answered “Yes” to having conducted a survey in Q6) Do you plan to conduct a similar survey in the future?

Mark only one oval.

- ☐ Plan to conduct about once a year
 - ☐ Plan to conduct as needed
 - ☐ Plan to do it in a different format than last time
 - ☐ No plan to conduct a survey
 - ☐ Don't know
 - ☐ Other: _____
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Section 4: Status of Building an RDM System

4. Status of Building a Data Management System

This section asks about the status of developing a research data management system at the institution.
Intended respondents: Research promotion department / URA, etc.

Q11. Has your institution started any initiatives toward building a research data management system for the entire institution?*

*Note: Efforts limited to the 10-year retention of research data as indicated in the Science Council of Japan's “Response: Improvement of Soundness in Scientific Research” (March 6, 2015) are **not** included in the scope of this question.*

Mark only one oval.

- ☐ The need is recognized, but no concrete action yet
- ☐ Being discussed/implemented in some departments
- ☐ A committee, working group, etc. has been organized to consider it institution-wide
- ☐ A system has been established and is being implemented institution-wide
- ☐ Don't know

Q12. Does your institution have any sort of policy regarding research data management?*

For this question, “policy” refers to the one expected of research institutions by the “Basic Concepts on the Management and Utilization of Research Data obtained with public funding” (<https://www8.cao.go.jp/cstp/tyousakai/kokusaiopen/sanko1.pdf>). If both “Some departments have already established or are considering a policy” and “An institution-wide policy is under

consideration by a committee or working group” apply, please select the latter.

Mark only one oval.

- ☐ No policy in place and no discussion underway (→ Q15)
- ☐ Established or under consideration in some departments (→ Q13 & Q14)
- ☐ An institution-wide policy is under discussion by a committee or WG (→ Q15)
- ☐ Institution has established a policy (→ Q13 & Q14)
- ☐ Don't know (→ Q15)
- ☐ Other: _____

Q13. (For those who answered “Established or under consideration in some departments” or “Institution has established a policy” in Q12) Is there a documented procedure for implementing research data management?

Mark only one oval.

- ☐ No implementation procedure defined
- ☐ Documented in some departments
- ☐ Institution-wide implementation procedure is under consideration
- ☐ Documented implementation procedure in line with the institutional policy
- ☐ Don't know

Q14. In discussions about the research data management system, which departments could be stakeholders or are already involved? (Multiple selections allowed)*

Check all that apply.

- ☐ Developing a research data management infrastructure
- ☐ Publication/dissemination of research data
- ☐ Promotion of research data utilization
- ☐ Long-term preservation of research data
- ☐ None in particular
- ☐ Don't know

Q15. Is budget (e.g. system costs or personnel costs related to research data management) allocated at your institution?

Mark only one oval.

- ☐ Not budgeted
- ☐ Budgeted within the operating expenses of the responsible department
- ☐ Budgeted from institution-wide operating funds
- ☐ Budgeted using external funds
- ☐ Don't know

Q16. In discussions about the research data management system, which departments could be stakeholders or are already involved? (Multiple selections allowed)*

Check all that apply.

- ☐ Library
- ☐ Information Center (IT center)
- ☐ Research Promotion/Collaboration Department
- ☐ Intellectual Property Department
- ☐ Don't know
- ☐ Other: _____

Q17. If there are any other issues or barriers considered in building your institution's RDM system, please describe them.

_____ (Free response)

Section 5: Implementation Status of RDM Services

5. Implementation Status of Research Data Management Services

This section asks about the implementation and planning of research data management services.

Intended respondents: University library

Q18. Which of the following research data management services are being implemented at your institution? (Multiple selections allowed)*

Mark only one oval per row.

- **Research Data Management Plan (DMP) support:** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)
- **Research data management training & data literacy support:** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)
- **Support for intellectual property management of research data:** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)
- **Provision of research data storage:** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)
- **Provision of data publication platform (institutional repository, etc.):** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)
- **Data curation support:** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)
- **Support for use and citation of research data:** ☐ Implemented (→ Q19) ☐ Under consideration (→ Q20) ☐ Not implemented (→ Q20) ☐ Don't know (→ Q20)

Q19. (For those who answered that some service is "Implemented" in Q18) Which departments are involved in delivering the research data management services? (Multiple

selections allowed)*

Check all that apply.

- ☐ Library
- ☐ Information Center (IT center)
- ☐ Research Promotion/Collaboration Department
- ☐ Intellectual Property Department
- ☐ Other: _____
- ☐ Responsible department is under consideration
- ☐ Don't know

Q20. During 2021–2022, did your institution hold any training sessions, workshops, symposiums, or similar events about research data management for research support staff such as librarians or URAs?*

Mark only one oval.

- ☐ Yes, we have held such event(s)
- ☐ No, we have not held any
- ☐ We are considering it
- ☐ Don't know

Q21. During 2021–2022, did your institution hold any training sessions, workshops, symposiums, or similar events about research data management for researchers?*

Mark only one oval.

- ☐ Yes, we have held such event(s)
- ☐ No, we have not held any
- ☐ We are considering it
- ☐ Don't know

Q22. During 2021–2022, has your institution's institutional repository had any cases of publishing research data?*

Mark only one oval.

- ☐ Yes
- ☐ No
- ☐ Don't know

Q23. What do you see as challenges or barriers to publishing research data in the institutional repository? (Multiple selections allowed)*

Check all that apply.

- ☐ Researchers are not aware that research data can be published in the institutional repository
- ☐ Describing metadata is difficult
- ☐ Uncertainty about appropriate licenses/terms of use

- ☐ Size of research data that is requested to be published (too large)
- ☐ Unsure of the format of research data or cannot handle it
- ☐ The repository system cannot accommodate in ways other than the above
- ☐ Institutional repository operation policies, etc. are not developed
- ☐ Uncertain how the research data will be used
- ☐ Insufficient manpower for data publication
- ☐ Insufficient funding for data publication
- ☐ Other: _____

Q24. When delivering RDM services, which services do you think have high demand from researchers at your institution? (Multiple selections allowed)*

Check all that apply.

- ☐ Support for creating Research Data Management Plans (DMPs)
- ☐ Research data management training & data literacy support
- ☐ Support for intellectual property management of research data
- ☐ Provision of research data storage
- ☐ Provision of data publication platform (institutional repository, etc.)
- ☐ Data curation support
- ☐ Support for use and citation of research data
- ☐ Don't know
- ☐ Other: _____

Q25. When implementing the support services selected above, what knowledge or skills do you think are necessary? (Multiple selections allowed)*

Check all that apply.

- ☐ Data curation skills
- ☐ ICT skills
- ☐ Knowledge of research subjects/domains
- ☐ Knowledge of research methods such as data analysis and visualization
- ☐ Knowledge of research data management and the research data lifecycle
- ☐ Knowledge of intellectual property
- ☐ Don't know
- ☐ Other: _____

Q26. In deploying research data management services at your institution, which factors are considered major challenges or barriers?*

Check all that apply.

- ☐ Lack of know-how or personnel for RDM
- ☐ Funding for RDM

- ☐ Undeveloped institutional policies or unclear division of roles between departments
- ☐ Lack of examples of RDM implementation
- ☐ None apply
- ☐ Don't know
- ☐ Other: _____

Q27. When introducing new support for research data management in the future, which initiatives do you think would be helpful? (Multiple selections allowed)*

Check all that apply.

- ☐ Developing educational materials on research data management
 - ☐ Support for managing databases held by researchers / collecting case studies of transferring such data to institutional repositories
 - ☐ Sharing best practices of research data management
 - ☐ None apply
 - ☐ Don't know
 - ☐ Other: _____
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Section 6: Status of Information Infrastructure Development

6. Information Infrastructure Development Status

This section asks about the status of information infrastructure development to support RDM services. Intended respondents: Information infrastructure center

Q28. How is the development of information infrastructure for RDM services being addressed at your institution currently?*

Mark only one oval.

- ☐ Being discussed/addressed at the institutional level
- ☐ Being discussed/addressed at the department level
- ☐ Left to individual researchers
- ☐ No particular discussion or action is being taken
- ☐ Don't know
- ☐ Other: _____

Q29. For long-term storage of research data (5+ years), what basic storage capacity per user do you think is necessary at your institution (either on-premises or commercial cloud)?*

On-premises: operating a system on the organization's own hardware and software.

Mark only one oval.

- ☐ Less than 1 GB
- ☐ 1 GB to less than 10 GB
- ☐ 10 GB to less than 100 GB

☐ 100 GB to less than 1 TB

☐ 1 TB or more

☐ Don't know

Q30. How does your institution provide storage to users?*

Mark only one oval.

☐ Provided on-premises (→ Q31, Q32, Q33)

☐ Provided via commercial cloud (→ Q31, Q32, Q33)

☐ Considering providing via one or both of the above (→ Q34)

☐ No plans to provide storage (→ Q34)

☐ Don't know (→ Q34)

Q31. (If answered “on-premises” or “commercial cloud” in Q30) What is the user authentication method for the storage service provided by your institution?

Mark only one oval.

☐ Common authentication system managed by the institution (e.g. LDAP, Active Directory)

☐ In addition to the institutional common auth system, allows access from outside the institution via GakuNin federation

☐ Common authentication system on commercial cloud (e.g. Microsoft 365, OpenID Connect)

☐ Service-specific user management

☐ Service is not provided

☐ Don't know

Q32. (If answered “on-premises” or “commercial cloud” in Q30) What is the basic storage capacity per user provided by your institution's storage service?

Mark only one oval.

☐ Less than 1 GB

☐ 1 GB to less than 10 GB

☐ 10 GB to less than 100 GB

☐ 100 GB to less than 1 TB

☐ 1 TB or more

☐ Don't know

Q33. Please provide the URL of the information page for the storage service mentioned above.

Q34. Does your institution provide a repository system for making research data publicly available? (Multiple selections allowed)*

Check all that apply.

☐ Provides a disciplinary repository (e.g. SSJDA, DDBJ) (→ Q35, Q36)

☐ Provides an institutional repository (→ Q35, Q36)

- ☐ Recommends use of a general repository (e.g. Figshare, Zenodo) (→ Q37)
- ☐ Considering a method of provision (→ Q37)
- ☐ No plans to provide a repository (→ Q37)
- ☐ Don't know (→ Q37)

Q35. (If answered “provides a disciplinary repository” or “provides an institutional repository” in Q34) What user authentication method does the repository system provided by your institution use?

Mark only one oval.

- ☐ Common authentication system managed by the institution (e.g. LDAP, Active Directory)
- ☐ In addition to the institutional common auth system, allows access from outside via GakuNin federation
- ☐ Common authentication system on commercial cloud (e.g. Microsoft 365, OpenID Connect)
- ☐ Service-specific user management
- ☐ Service is not provided
- ☐ Don't know

Q36. Please provide the URL of the system used for the repository service mentioned above.

Q37. Does your institution provide some kind of shared computing or data analysis platform to members of the institution?*

Mark only one oval.

- ☐ Provides an on-premises platform (→ Q38, Q39)
- ☐ Provides a platform operated by an academic infrastructure (e.g. HPCI, mdx) (→ Q38, Q39)
- ☐ Provides via commercial cloud services (e.g. Amazon AWS, Microsoft Azure, Google Cloud Platform) (→ Q38, Q39)
- ☐ Considering providing via one or both of the above (→ Q40)
- ☐ No plans to provide such a platform (→ Q40)
- ☐ Don't know (→ Q40)

Q38. (If answered providing any platform in Q37) What user authentication method does the data analysis platform provided by your institution use?

Mark only one oval.

- ☐ Common authentication system managed by the institution (e.g. LDAP, Active Directory)
- ☐ In addition to the institutional common auth system, allows access from outside via GakuNin federation
- ☐ Common authentication system on commercial cloud (e.g. Microsoft 365, OpenID Connect)
- ☐ Service-specific user management
- ☐ Service is not provided

☐ Don't know

Q39. Please describe the specific services provided by the data analysis platform mentioned above.

Q40. Which of the following researcher information systems does your institution maintain and manage institution-wide? If there are multiple, select the one used as the master service.*

Mark only one oval.

- ☐ e-Rad (→ Q41–Q45)
- ☐ researchmap (→ Q41–Q45)
- ☐ ORCID (→ Q41–Q45)
- ☐ Web of Science (formerly ResearcherID/Publons) (→ Q41–Q45)
- ☐ Institution's own system (→ Q41–Q45)
- ☐ Not managed (researchers manage their own information) (→ Q46)
- ☐ Don't know (→ Q46)
- ☐ Other: _____

Q41. (If answered that the institution manages researcher information in Q40) What user authentication method does your institution's researcher information service use?

Mark only one oval.

- ☐ Common authentication system managed by the institution (e.g. LDAP, Active Directory)
- ☐ In addition to the institutional common auth system, allows access from outside via GakuNin federation
- ☐ Common authentication system on commercial cloud (e.g. Microsoft 365, OpenID Connect)
- ☐ Service-specific user management
- ☐ Service is not provided
- ☐ Don't know

Q42. (If answered that the institution manages researcher information in Q40) When do you update the account information in the researcher information service managed by your institution?

Mark only one oval.

- ☐ At set times (e.g. beginning of the academic year)
- ☐ When a researcher is hired or leaves
- ☐ Based on requests from researchers
- ☐ Don't know
- ☐ Other: _____

Q43. (If answered that the institution manages researcher information in Q40) With which information infrastructures is the researcher information service (managed by your

institution) integrated? (Multiple selections allowed)

Example of data integration: Using the ID linked to researcher information for authentication to various services.

Check all that apply.

- ☐ Web mail
- ☐ Storage
- ☐ Disciplinary repository / Institutional repository
- ☐ Data analysis platform
- ☐ No integrations
- ☐ Don't know
- ☐ Other: _____

Q44. (If answered that the institution manages researcher information in Q40) If an intended user of the information service is external to the institution, to which types of external users do you provide the researcher information service?

Mark only one oval.

- ☐ Collaborative researchers
- ☐ Commissioned contractors (e.g. system development staff, external data analysts)
- ☐ Do not provide the service to external individuals
- ☐ Don't know
- ☐ Other: _____

Q45. (If answered that the institution manages researcher information in Q40) When providing the information service to external users, how do you grant them access? (Multiple selections allowed)*

Check all that apply.

- ☐ Use the GakuNin federation for access
- ☐ Issue an account of our institution to them
- ☐ Issue a service-specific account to them
- ☐ Do not allow external users to use the service
- ☐ Don't know
- ☐ Other: _____

Q46. Besides the above, if there are any other information infrastructure services that your institution contracts on an institutional level to support RDM activities, please describe them.

Section 7: About the Open Access Repository Promotion Association (JPCOAR)

7. Open Access Repository Promotion Association (JPCOAR)

This section asks about expectations for JPCOAR's initiatives, etc. (Reference: JPCOAR Research Data Working Group page – https://jpcoar.repo.nii.ac.jp/?page_id=124). Intended respondents: Liaison departments of JPCOAR member institutions.

Q47. As your institution works toward building an RDM system, what do you expect from JPCOAR? (Multiple answers allowed)

Check all that apply.

- ☐ Holding training sessions
- ☐ Development of educational materials
- ☐ Sharing of best practices
- ☐ Information dissemination and awareness-raising
- ☐ Community formation
- ☐ Proposals/reports, etc.
- ☐ Other: _____

Q48. Additionally, if you have any comments regarding the implementation of research data management at your institution or at domestic institutions in general, please let us know.