RDA for Data Management Planning

Celebrating A Decade of Data
RDA community cross-fertilisation workshop

Version: December 2022

ABOUT THE WORKSHOP

The community cross-fertilisation workshop, 'RDA for Data Management Planning', brought chairs and members of RDA Working Groups (WGs) and Interest Groups (IGs) together, with members of the wider research data community, to share and discuss challenges, solutions and initiatives associated with data management plans (DMPs). The key findings of the workshop summarised herein will be used to direct the future strategy of the RDA community. Read more about the community cross-fertilisation workshop series in commemoration of the RDA's 10th Anniversary.

CHALLENGES TO BE ADDRESSED WITHIN THE THEME OF DATA MANAGEMENT PLANNING

Raising awareness & understanding about DMPs:
- Lack of awareness that DMPs are integral to good research data management (RDM).
- Creating a DMP is often considered an extra task.
- Creating a DMP requires prerequisite knowledge and skills related to RDM, tools and services.
- Insufficient incentives, reward and credit for RDM and the creation of DMPs.

Creation, adoption & implementation of DMPs:
- Lack of clarity about roles and responsibilities for supporting DMP creation and limited staff.
- Lack of automated and machine-actionable processes and workflows to harmonise DMP creation and implementation across stakeholders, tools, services and policies.
- Unclear definitions and language (vocabularies and terminologies) make DMPs challenging to understand and complete.
- Diversity of data means generic DMPs are unsuitable for specific research disciplines.
- As primarily text documents and parts of research proposals, DMPs are not FAIR research objects that enable their utility.

Review, evaluation & assessment of DMPs:
- No clear process or assessment criteria for DMP review and evaluation.
- Lack of accountability on following through on the implementation of DMPs that support funded research.

SOLUTIONS TO ADDRESS THE CHALLENGES

- Strengthen communication and collaboration between RDA groups and members (e.g., via submission of joint RDA Plenary sessions).
- Create new WGs and IGs, and collaborate with relevant organisations and communities.
- Expand RDA community work on DMPs to focus on funders as a key stakeholder.
- Design automated, machine-actionable and interoperable processes and workflows that enable different stakeholders to collaborate more easily on co-creating, adopting and implementing DMPs.
- Ensure research performing organisations offer tools and support services that aid creation of FAIR DMPs that can be reused.
- Encourage researchers to use tools, services and workflows and advise tool providers about what tools/infrastructure is needed.
- Employ Artificial Intelligence to create and review DMPs.
- Ensure that DMPs are considered as part of the research assessment reform.

PARTICIPATING GROUPS & WORKSHOP LEADS*

DMP Common Standards WG
Workshop lead: Tomasz Miksa
Outputs: RDA DMP Common Standard for Machine-actionable Data Management Plans & Publications

See **community group card**

Active Data Management Plans IG
Workshop lead: Elli Papadopoulou
Output: RDA DMP Common Standard for Machine-actionable Data Management Plans

See **community group card**

Discipline-specific guidance for Data Management Plans WG
Workshop lead: Santosh Ilamparuthi
Output: Online survey about the current state of discipline-specific DMPs and data/code management practices.

See **community group card**

*Workshop leads collected challenges, solutions and initiatives in preparation for the workshop and explained them during the workshop on behalf of their group.

ACTIONS FOR THE RDA COMMUNITY

Collect 'gold star' DMP case studies. Real-world examples of DMPs from different institutions, disciplines and projects to demonstrate benefits of DMPs for various stakeholders. Case studies and infographics showcase best practices for how to create DMPs and integrate them into the research data lifecycle. This output supplements the 'Engaging Researchers with Data Management The Cookbook' by the RDA Engaging Researchers with Data IG.

Construction of DMP typologies. Define information, language and terminology to be included in DMPs that unambiguously describe RDM concepts and tasks. Typologies leverage existing ontologies and controlled vocabularies (E.g., T4FS, FIP ontology).

Create framework(s) for DMP evaluation and assessment. Collaborate with funding agencies (RDA Funders Forum and Research Funders and Stakeholders on Open Research and Data Management Policies and Practices IG) to create a scalable DMP evaluation framework that defines content to be assessed and evaluation criteria for DMPs dependent on institutional, disciplinary and project contexts.

Develop a toolkit for how to engage researchers in DMPs. DMP professionals, domain experts and RDM supporters co-create a step-by-step guide for how best to drive adoption and implementation of DMPs.

INITIATIVES & RESOURCES OF INTEREST

- **GO FAIR** - Bottom-up, stakeholder-driven and self-governed initiative that aims to implement the FAIR data principles.
- **The World Wide Web Consortium (W3C)** - International community where member organizations, full-time staff and the public work together to develop Web standards.
- **Higher Education Leadership Initiative for Open Scholarship (HELIOS)** - A cohort of US colleges and universities committed to advancing open scholarship within and across their campuses.
- **National Research Data Infrastructure (NFDI)** - An infrastructure to systematically manage scientific and research data, provide long-term data storage, backup and accessibility, and network the data both nationally and internationally.
- **DINI/nestor** - German Initiative for Network Information promotes the improvement of information and communication services and development of information infrastructure at universities regionally and nationally.
- **Research Data Access and Preservation Association (RDAP)** - Supports an engaged community of information professionals committed to creating, maintaining, advancing, and teaching best practices for research data, access, and preservation.
- **European Open Science Cloud (EOSC)** - An environment for hosting and processing research data to support EU science.
- **OpenAIRE** - A European-wide national policy and open scholarly communication infrastructure.
- **Alliance for Open Scholarship** - a cohort of societies and associations collaborating to identify, articulate, and socialise appropriate open scholarship norms within their disciplines.
- **FAIRsharing RDA organisational information**
- **Active DMPs** - A place where all DMP ideas meet!
- **RDMkit Data Management Plan** (ELIXIR) guides life scientists in their efforts to better manage their research data following the FAIR Principles.
- 'How to bring researchers to DMPs' **RDA workshop output** March 2022 (in French)
- **DataSeer** use AI and NLP to promote the sharing of research data. AI technology could be used to review and provide feedback on DMPs.
- **DataWorks! at FASEB DMP Challenge** including publicly-available evaluation rubric.
- **CNRS DMP Evaluation Checklist** (in French)
- **SU-EOSC Nordic 5.3.2 maDMP project** for FAIR evaluation of DMPs
- **WDS/RDA Assessment of Data Fitness for Use WG**
- **RDA FAIR Data Maturity Model WG**
- **Argos Community Call** on DMPs
- **NFDI4ing Discipline-specific DMP template for Engineering** (NFDI4ing)
- **ExPaNDS/PaNOSC DMP template for PaN (photon and neutron) sciences**
- **Ten principles for machine-actionable data management plans** (Miksa *et al*., 2019)
- Call for Papers: **Data Management Planning across Disciplines and Infrastructures**. Deadline: 15th Dec. 2022

WORKSHOP PARTICIPANTS

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36. Tuija Korhonen, University of Helsinki, Finland

For more information about the RDA community cross-fertilisation workshop series, please contact Community Development Manager, Connie Clare (connie.clare@rda-foundation.org)

To become a member of the RDA, register here