



Data & Software Management Plans

Services Roadshow by



May 27, 2025

Authors: Marisabel Gonzalez-Ocanto, Katja Diederichs,
Sabine Schönau, David Wallace, Jürgen Windeck

Getting to know...

DMP4NFDI Services

- RDMO Hosting & Service Integration
- Template Standardisation & Support for development
- Training & Support for outreach

A vision for Data Management Plans (DMPs)

From document to machine-actionability

Die Nachnutzung von Software anderer Urheber*innen wird im Sinne der guten wissenschaftlichen Praxis gemäß der Software Citation Principles¹² zitiert.

3 Dokumentation und Datenqualität

Die anonymisierten Forschungsdaten der Bedarfserhebung und die Skripte der Software R werden auf dem fachübergreifenden Repository Zenodo¹³ veröffentlicht. Von einer Veröffentlichung der Ergebnisse von RISE-DE wurde abgesehen (vgl. Abschnitt 6).

Im Sinne der FAIR-Prinzipien¹⁴ werden die Daten in Zenodo durch Metadaten beschrieben, die sich am DataCite-Metadaten-Schema¹⁵ orientieren (u.a. Abstract, freie Schlagwörter und DCC-Klassifikation). Darüber hinaus wird den Daten eine Dokumentation in Form einer README-Datei hinzugefügt, welche die durchgeführten Arbeitsschritte zur bestmöglichen Nachnutzung und Reproduzierbarkeit umfasst, und ein Codebook, das die Variablen und ihre Werte, die als Spaltenbezeichnungen im Datensatz genutzt wurden, erklärt.

Dem Datensatz wird durch das Repository Zenodo ein persistenter Identifier (DOI) automatisch hinzugefügt, der den Datensatz eindeutig referenzierbar macht und die Wiederauffindbarkeit gewährleistet. Zenodo ermöglicht zudem die Weitergabe der Metadaten an das frei verfügbare europäische Forschungsinformationssystem OpenAire¹⁶ und an die DOI-Vergabeagentur Crossref¹⁷.

Die Projektdaten werden getrennt nach Typ und Format in verschiedenen Verzeichnissen gespeichert (z. B. CSV-Dateien in einem „data/tabular“-Verzeichnis, alle R-Skripte gesammelt in einem „src“- oder „scripts“-Verzeichnis).

¹²Smith, Arfon M., Daniel S. Katz, Kyle E. Niemeyer, und FORCE11 Software Citation Working Group. 2016. Software citation principles. PeerJ Computer Science 2: e86. doi:10.7717/peerj-cs.86.

¹³Zenodo. <https://zenodo.org/> (zugesgriffen: 31.10.2022).

¹⁴Wilkinson, M. D., Dumontier, M., Aalbersberg, I. J., Appleton, G., Axton, M., Baak, A., Blomberg, u. a. (2016). The FAIR Guiding Principles for scientific data management and stewardship. Scientific Data, 3 (1), 160018. doi:10.1038/sdata.2016.18.

¹⁵DataCite Metadata Schema. <https://schema.datacite.org/> (zugesgriffen: 18.10.2022).

¹⁶OpenAire Explorer. <https://explore.openaire.eu/> (zugesgriffen: 31.10.2022).

¹⁷Vgl. die „Zenodo principles“. <https://about.zenodo.org/principles/> (zugesgriffen: 31.10.2022).

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A Data Steward's journey with DMPs

Profile

In-depth knowledge of its discipline and of research data management in their discipline. DS advise and train researchers in the handling of their research data.



Current task

Handling growing need from the consortium community to create or improve data management plans. DMPs are, at the end, a funder requirement.



A Data Steward's journey with DMPs

Which template to use or recommend?

The screenshot shows the Zenodo search results for 'Data Management Plan'. A red box highlights the search results count: '11,746 result(s) found'. The left sidebar contains filters for Versions, Access status, and Resource types. The main content area displays search results, including 'Open Data Management Plan' by Soriano, Carlos, and 'D4.4 Data management plan' by Sciensano; SVA.

Filter Category	Filter Option	Count
Versions	June 30, 2024 (v1)	Project deliverable
	Open	
Access status	Open	814,659
	Restricted	48,044
	Embargoed	2,267
Resource types	Clear	
	Publication	518,442
	Dataset	202,871
	Image	54,234

Open Data Management Plan
Soriano, Carlos
As part of the Task 1.3 – Data and knowledge management, this deliverable aim data management life cycle for the data to be collected, processed and/or gener
Part of EU Open Research Repository . Extremely High-Speed Laser Processes For Sustainable
Uploaded on February 12, 2025

D4.4 Data management plan
Sciensano; SVA
One Health EJP Data Management Plan
Part of EU Open Research Repository . One Health EJP
Uploaded on July 11, 2023

July 8, 2018 (v1) Project deliverable Open



A Data Steward's journey with DMPs

Which template to use or recommend?

zenodo Data Management

Versions

☐ View all versions

Access status

☐ Open 814,659

☐ Restricted 48,044

☐ Embargoed 2,267

Resource types

☒ Publication 518,442

☐ Dataset 202,871

☐ Image 54,234

Content curated by the RDMO team

Subject/Coverage	Catalog	View	Last update
All questions (long)	catalog		2024-09
All questions (short)	catalog		2020-08
DCC checklist	catalog		2018-10
DFG checklist	catalog	view	2023-11
Horizon Europe	catalog		
Software Management Plan	catalog		
Swiss National Fund	catalog		
Bielefeld			
CITEC			
Costs			
DMPonline			
DMPtool			
Horizon 2020			
All variables			

Quality Assurance Tool for data	catalog	2025-01
Quality Assurance Tool for software	catalog	2025-01
Research data policy generator	catalog	2024-03
VW Foundation - Science Europe	catalog	2021-04

Total: 27 catalogs, 15 views

Other content provided by the user community

Subject/Coverage	Catalog	View	Last update
All questions (RDMO+DFG)	catalog		2022-03

A Data Steward's journey with DMPs

Other challenges

“the consortium does not have the resources to host its own DMP Tool”

“Too many templates, leading to inconsistencies & difficulties in reuse”



“How to achieve DMP collaborations between different institutions?”

“.....”

“RDMO's user interface can be intimidating to inexperienced users”

“Researchers express uncertainty regarding how to respond to DMP questions”

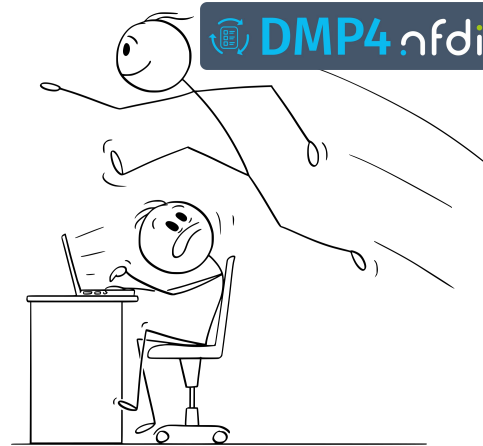
A Data Steward's journey with DMPs

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“RDMO's user interface can be intimidating to inexperienced users”



“How to achieve DMP collaborations between different institutions?”

“.....”

“Researchers express uncertainty regarding how to respond to DMP questions”

How can DMP4NFDI help you?

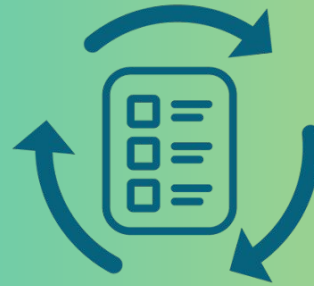
Our Services



Hosting

&

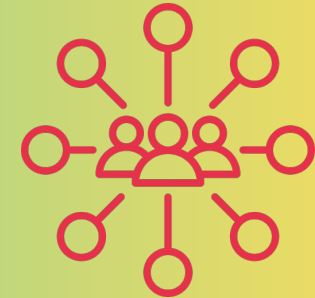
Integration with other services



Template standardisation

&

Support for development



Training

&

Support for outreach

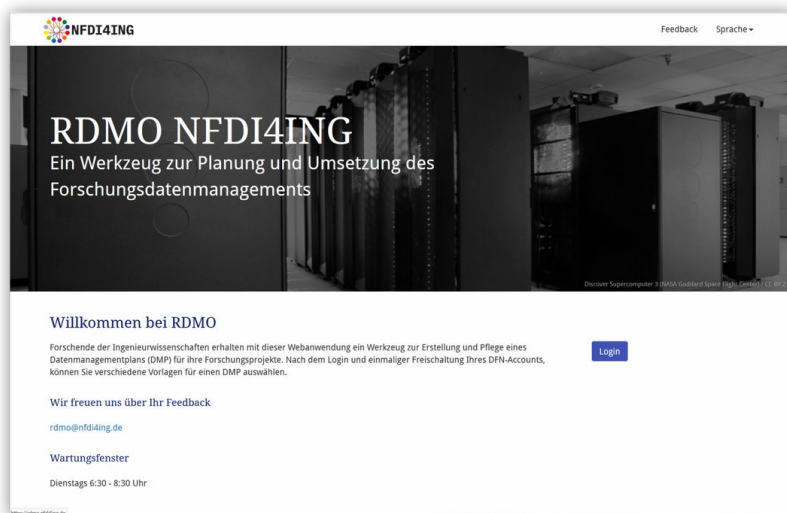


Customisable RDMO clients
for each consortium

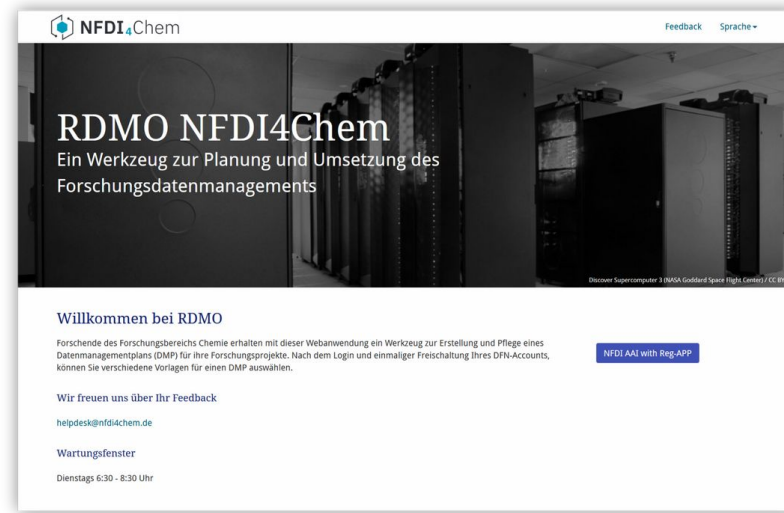


Separate test and
production environments

RDMO Hosting




The screenshot shows the homepage of the RDMO NFDI4ING website. At the top left is the NFDI4ING logo, and at the top right are links for 'Feedback' and 'Sprache'. The main header features a large image of server racks with the text 'RDMO NFDI4ING' and 'Ein Werkzeug zur Planung und Umsetzung des Forschungsdatenmanagements'. Below this, a 'Willkommen bei RDMO' section explains that researchers in engineering sciences can use the tool to create and maintain data management plans (DMP) for their projects. A 'Login' button is visible. Further down, there is a contact section with the email 'rdmo@nfdi4ing.de' and a maintenance window ('Wartungsfenster') from Tuesday 6:30 to 8:30 Uhr.



The screenshot shows the homepage of the RDMO NFDI4Chem website. At the top left is the NFDI4Chem logo, and at the top right are links for 'Feedback' and 'Sprache'. The main header features a large image of server racks with the text 'RDMO NFDI4Chem' and 'Ein Werkzeug zur Planung und Umsetzung des Forschungsdatenmanagements'. Below this, a 'Willkommen bei RDMO' section explains that researchers in the field of chemistry can use the tool to create and maintain data management plans (DMP) for their projects. A button labeled 'NFDI AAI with Reg-APP' is visible. Further down, there is a contact section with the email 'helpdesk@nfdi4chem.de' and a maintenance window ('Wartungsfenster') from Tuesday 6:30 to 8:30 Uhr.

Current RDMO clients




Feedback Language

Create new project

Title
The title for this project.

Description
A description for this project (optional).


Catalog
The catalog which will be used for this project.

☒ **NFDI4ING DMP Template (Version 2)**
 Catalog according to the DFG checklist supplemented by engineering content.

☐ **Software Management Plan**
 This catalogue is for the management of scientific software projects. It supports scientists in the development and project organisation of software developments through fifty questions in different topic blocks. This is version 3.0 of the catalogue.

Parent project
The parent project of this project.

Create project
Cancel


Feedback Language

Create new project

Title
The title for this project.

Description
A description for this project (optional).

Catalog
The catalog which will be used for this project.

☒ **Questionnaire for the creation of a research data policy for research projects**

☐ **Horizon Europe**

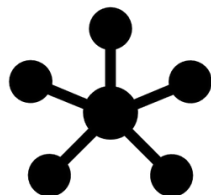
☐ **NFDI4Chem_Template**
 The present questionnaire is a checklist issued by the German Research Foundation (DFG), enriched with chemistry-specific content and supplemented with necessary questions for better understanding and completeness.

☐ **Software Management Plan**
 This catalogue is for the management of scientific software projects. It supports scientists in the development and project organisation of software developments through fifty questions in different topic blocks. This is version 3.0 of the catalogue.

Parent project
The parent project of this project.

Create project
Cancel





Integration with other
services via plugins



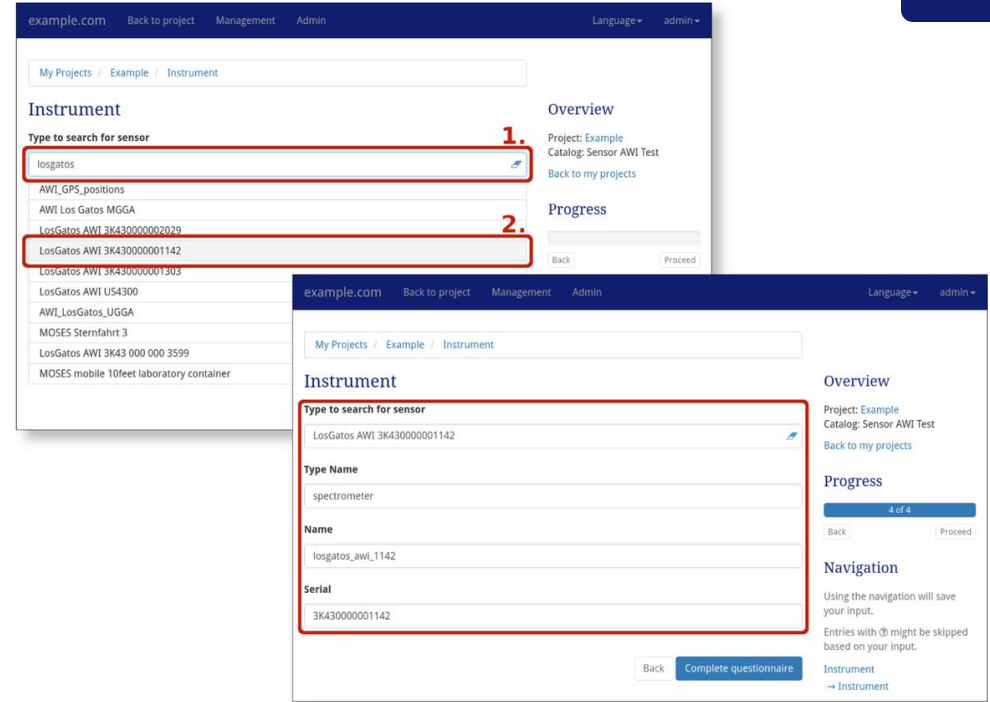
One database for shared
use of templates

RDMO

Integration with other services via plugins



- Dynamically generated option sets
 - display repositories from re3data.org
 - search through instrument database
 - terminology services
- Integrations with project management tools, e.g. OpenProject
- Export to knowledge graphs (MaRDMO)
- DMP publication via Zenodo
- ...



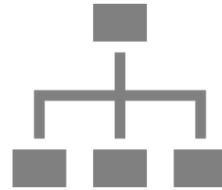
The image displays two overlapping screenshots of the RDMO web application interface, specifically the 'Instrument' form. The top-left screenshot shows the 'Type to search for sensor' dropdown menu with 'logatos' selected (1) and 'LosGatos AWI 3K430000001142' selected (2). The bottom-right screenshot shows the 'Type Name' field with 'spectrometer' entered, the 'Name' field with 'logatos_awi_1142' entered, and the 'Serial' field with '3K430000001142' entered. The interface includes navigation links like 'Back to project', 'Management', 'Admin', and 'Language', as well as a 'Complete questionnaire' button.

Windeck, J., Schröder, M., Frenzel, J., Kusmierz, S., Fuchs, H., & Klar, J. (2024).
<https://doi.org/10.17192/bfdm.2024.2.8629>

Template standardisation



Support for DMP/SMP
template development



Centralised vocabulary to
ensure interoperability



DMP4NFDI template
framework



Template standardisation

Support for DMP/SMP template development

The screenshot shows the NFDI4Earth web interface. The top navigation bar includes 'Back to project', 'Management', and 'Test Instance' (highlighted in orange). The user is logged in as 'Sabine Schöna' and the language is set to 'Language'. The breadcrumb trail reads: 'My Projects / Test Kooperation Sabine / Welcome to the MOSES-DMP - Introduction'.

Introduction

Dear Users,

Welcome to the MOSES Data Management Plan Catalog!

The aim of the MOSES RDMO catalog is to assist scientists in structured planning, implementation and administration of the data obtained in MOSES and also other measurement campaigns.

In addition, this RDMO catalog was developed as a data management plan tool that provides a way to capture all relevant metadata about a campaign, the instruments and devices used, and the resulting datasets. You will be guided through these three main parts of the questionnaire. It starts with general information about the campaign itself. In the next step, you can provide detailed information about the instruments, or the information is filled in automatically if the sensor is listed in a sensor management system such as SMS, O2A REGISTRY, or GIPP. The last part deals with the resulting data collections. Here you can provide details about the measured data (format, size, etc.) as well as accessibility information.

Technical advices for filling the DMP:

Please switch to **english language** in the top panel to ensure correct entries and compatibility with exchange portals.

- (1) Questions in black font are mandatory.
- (2) Questions in gray font are optional questions.
- (3) Information is saved by using the **"Proceed"** button.

Overview

Project: Test Kooperation Sabine
Catalog: MOSES

[Reload page](#)
[Back to my projects](#)

Progress

0 of 37

[Back](#) [Proceed](#)

Navigation

Using the navigation will save your input.
Grey entries will be conditionally skipped based on your input.

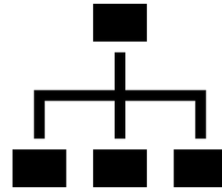
[Welcome to the MOSES-DMP - Introduc...](#)

- General work with RDMO
- Help implementing own ideas using the template
- Finding the right attributes*
- If no existing attribute fits – support in creating a new one

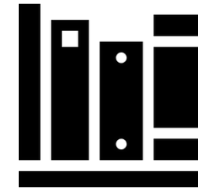
Template standardisation



Support for DMP/SMP
template development



Centralised vocabulary to
ensure interoperability

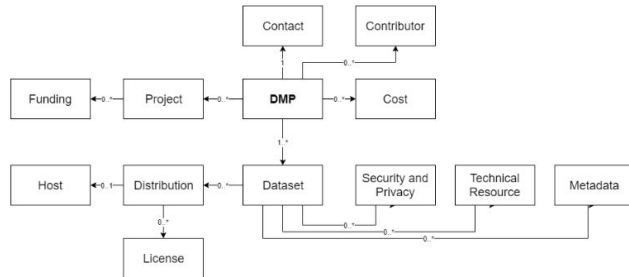


DMP4NFDI template
framework

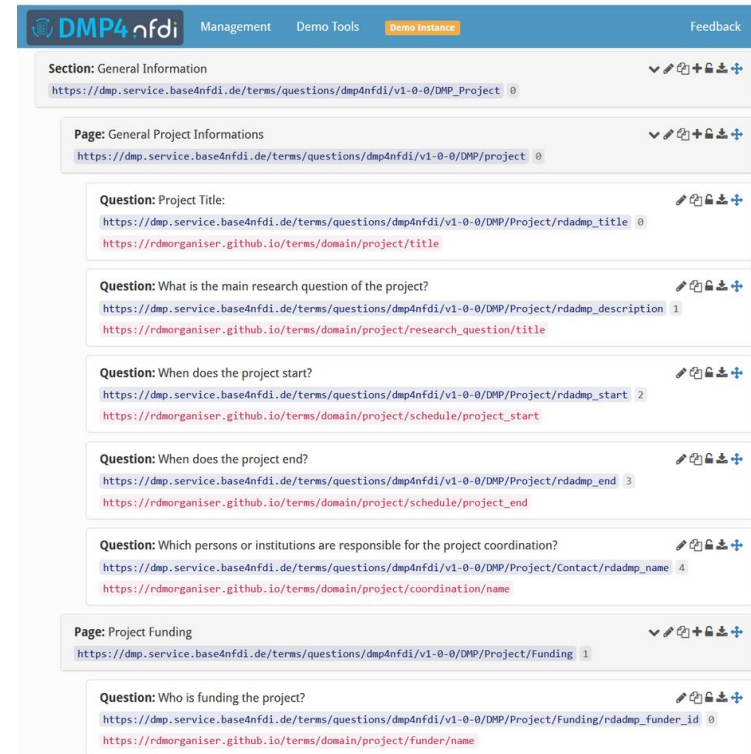
Template standardisation

NFDI Template Framework

Compatible to international maDMP standard



Miksa, T., Walk, P., & Neish, P. (2020). <https://doi.org/10.15497/rda00039>



DMP4.nfdi Management Demo Tools Demo Instance Feedback

Section: General Information
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP_Project 0

Page: General Project Informations
<https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/project> 0

Question: Project Title:
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/rdadmp_title 0
<https://rdmorganiser.github.io/terms/domain/project/title>

Question: What is the main research question of the project?
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/rdadmp_description 1
https://rdmorganiser.github.io/terms/domain/project/research_question/title

Question: When does the project start?
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/rdadmp_start 2
https://rdmorganiser.github.io/terms/domain/project/schedule/project_start

Question: When does the project end?
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/rdadmp_end 3
https://rdmorganiser.github.io/terms/domain/project/schedule/project_end

Question: Which persons or institutions are responsible for the project coordination?
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/Contact/rdadmp_name 4
<https://rdmorganiser.github.io/terms/domain/project/coordination/name>

Page: Project Funding
<https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/Funding> 1

Question: Who is funding the project?
https://dmp.service.base4nfdi.de/terms/questions/dmp4nfdi/v1-0-0/DMP/Project/Funding/rdadmp_funder_id 0
<https://rdmorganiser.github.io/terms/domain/project/funder/name>

Common and standardised framework to support template creation and customisation via modules

Training and support for outreach



Train-the-Trainer
approach



Support for community
outreach



Training concept

Train-the-Trainer Concept on Data Management Plans and
RDMO (coming soon)

Documentation

Management

Management user interface

Data model

Views and their template syntax

Export and Import

User role concept in projects

Guide to develop a catalog in RDMO

Introduction

Explanation of the general relationships

Getting started

Step-by-Step guide to a first Catalog

Creating a new Catalog

Creating a first project with the new catalog

Basics

Future work

Development

Upgrade

Advanced topics

Frequently asked questions

Home / Management / Guide to develop a catalog in RDMO [View page source](#)

Guide to develop a catalog in RDMO

Introduction

This document is a guide to creating catalogues. It contains step-by-step instructions for creating a simple Catalog. If you have never created a Data Management Plan (DMP) catalogue in RDMO, it is recommended that you work through these steps on your own instance of RDMO.

You will be introduced to important RDMO concepts, terminology, structure, hierarchies and dependencies, and can then apply this knowledge to create your own catalogue.

RDMO is a tool for creating DMPs. A DMP is a documentation of the RDM practices of your research project over the entire data lifecycle. RDMO offers several DMP catalogues, whether for a specific funder or discipline, or just generic templates for any research project. A Catalog is a set of questions about data management practices throughout the data lifecycle, so it's a comprehensive set of questions to think about and document all the data and data management practices for your research project.

Specialist users of RDMO with administrative rights (or have the role of editor) can customise the Catalog or create new Catalogs.

Before deciding to create a new Catalog, you should check whether you have the rights to do so and whether there is already a catalogue that meets your needs.

Support for community outreach



Events

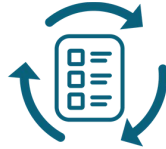
Low-barrier introductory events to demonstrate DMP and SMP value supported by RDMO, e.g.

- presentations
- live demos & quick-start guides

A Data Steward's journey with DMPs

DMP4NFDI supports you along the way

“the consortium does not have the resources to host its own DMP Tool”

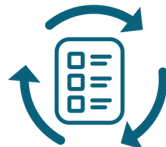


“How to achieve DMP collaborations between different institutions?”



“Too many templates, leading to inconsistencies & difficulties in reuse”

“RDMO's user interface can be intimidating to inexperienced users”



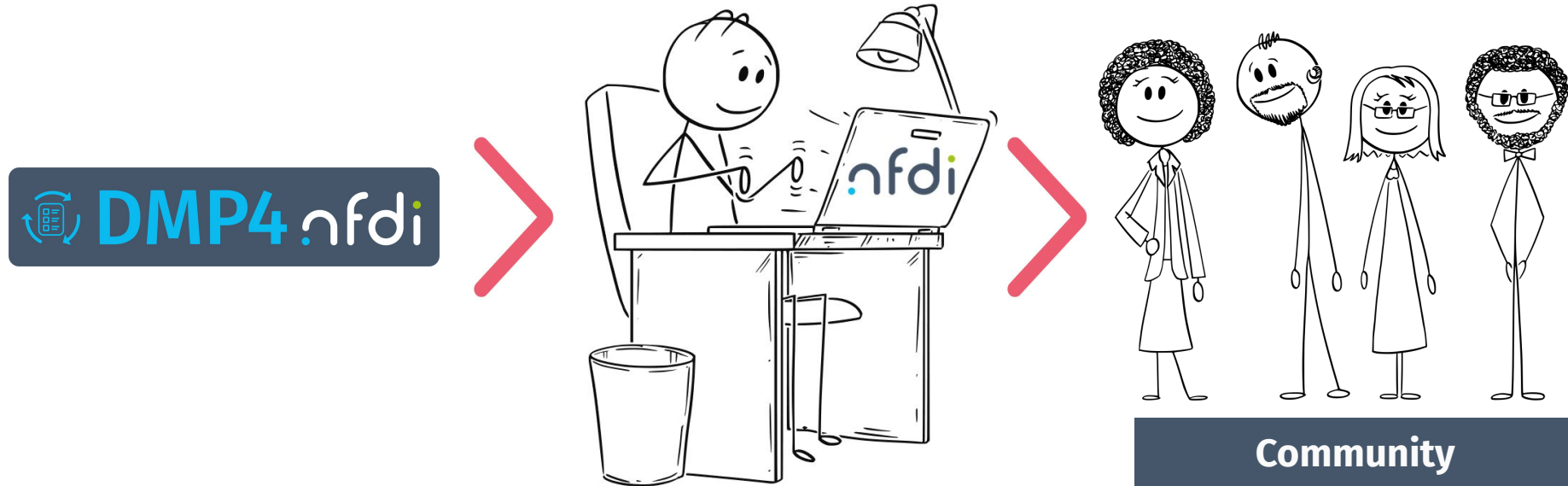
“.....”



“Researchers express uncertainty regarding how to respond to DMP questions”

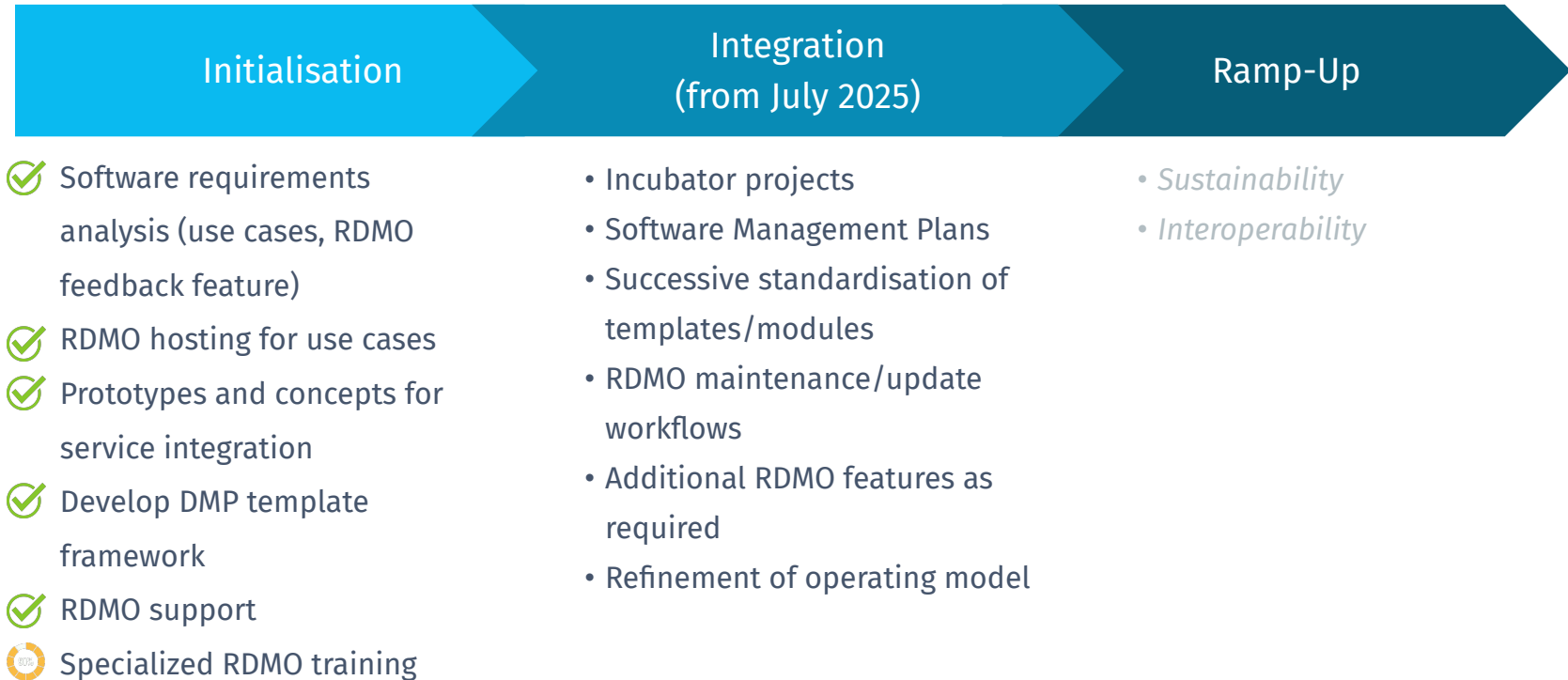
A Data Steward's journey with DMPs

DMP4NFDI supports you along the way



Service Cooperation Model: [10.5281/zenodo.15004954](https://zenodo.org/record/15004954)
 outlines the collaboration between DMP4NFDI and the NFDI consortia

What are the plans for the Initialisation phase and outlook?

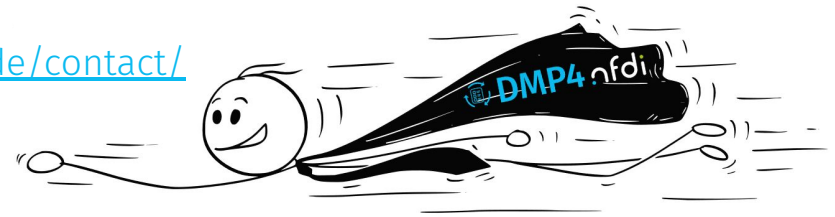


Interested? Get in touch with us!

Do you have questions or suggestions? Is your consortium planning to provide a DMP or SMP service? - Leave us a message!

Contact form: <https://dmp.services.base4nfdi.de/contact/>

E-Mail: dmp4nfdi@lists.nfdi.de



To keep reading:

Incubator projects: <https://dmp.services.base4nfdi.de/incubator/#next-call-for-incubators>

Consortia on board: <https://dmp.services.base4nfdi.de/docs/hosting/>




Which one is NOT a service offered by DMP4NFDI?

- G) Hosting RDMO
- H) Answering DMPs
- I) Offering trainings



Thank you!
Questions?



-  [**dmp4nfdi@lists.nfdi.de**](mailto:dmp4nfdi@lists.nfdi.de)
-  base4nfdi-servicestewards@lists.nfdi.de for general inquiries
-  [**base4nfdi.de/projects/dmp4nfdi**](https://base4nfdi.de/projects/dmp4nfdi)