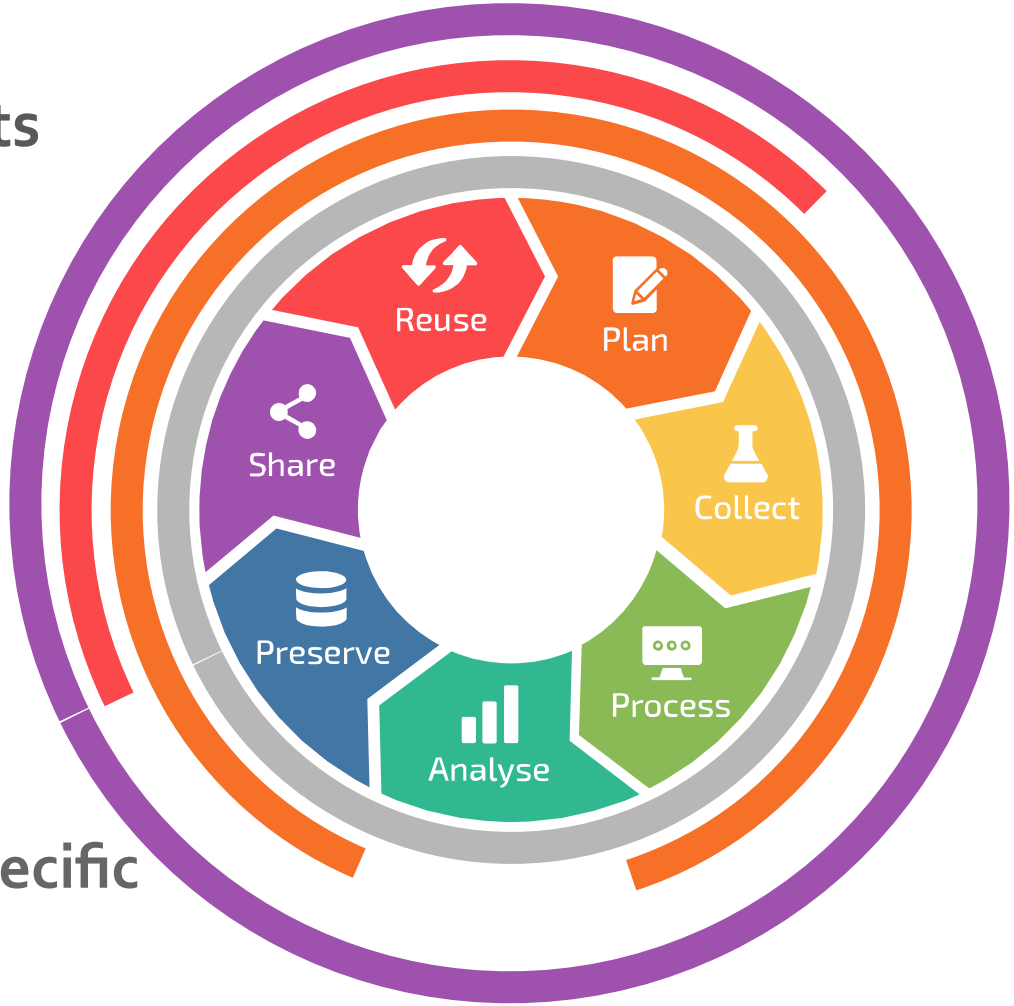
# Data Management Requirements

Korbinian Bösl
Data management coordinator
ELIXIR Norway/Digital Life Norway

# Life cycle

Requirements

Funder



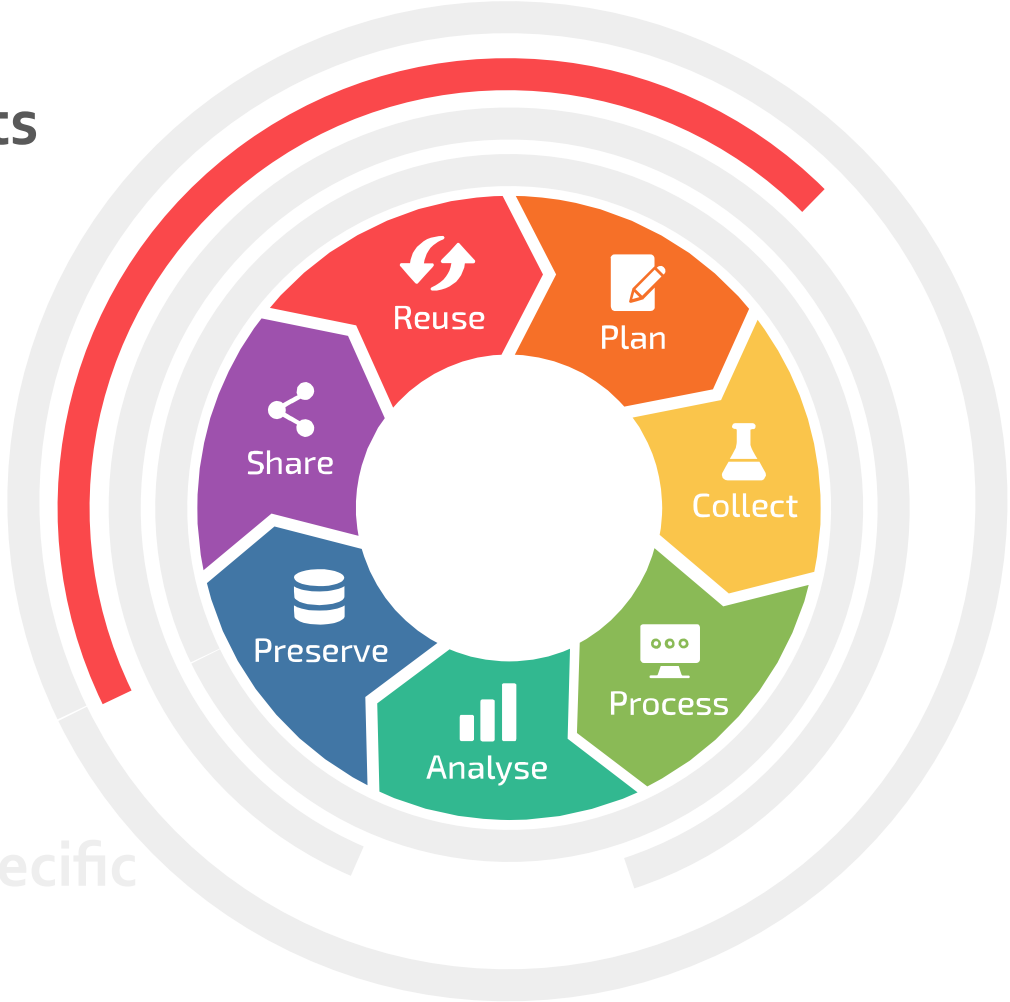

Ethical & Legal

Project
& Domain specific

Institutional

# Requirements

## Funder




Ethical & Legal

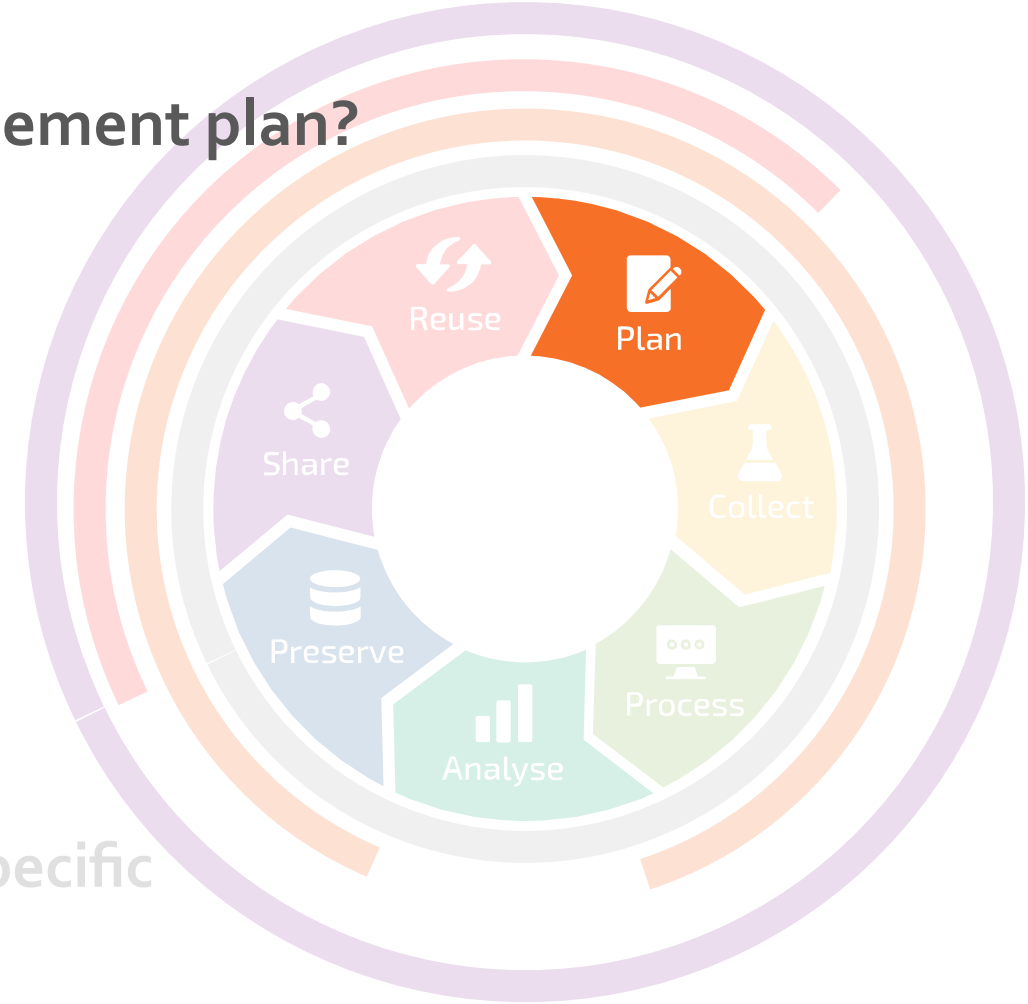
Project
& Domain specific

Institutional

# Data Management plan?

Funder

Ethical & Legal

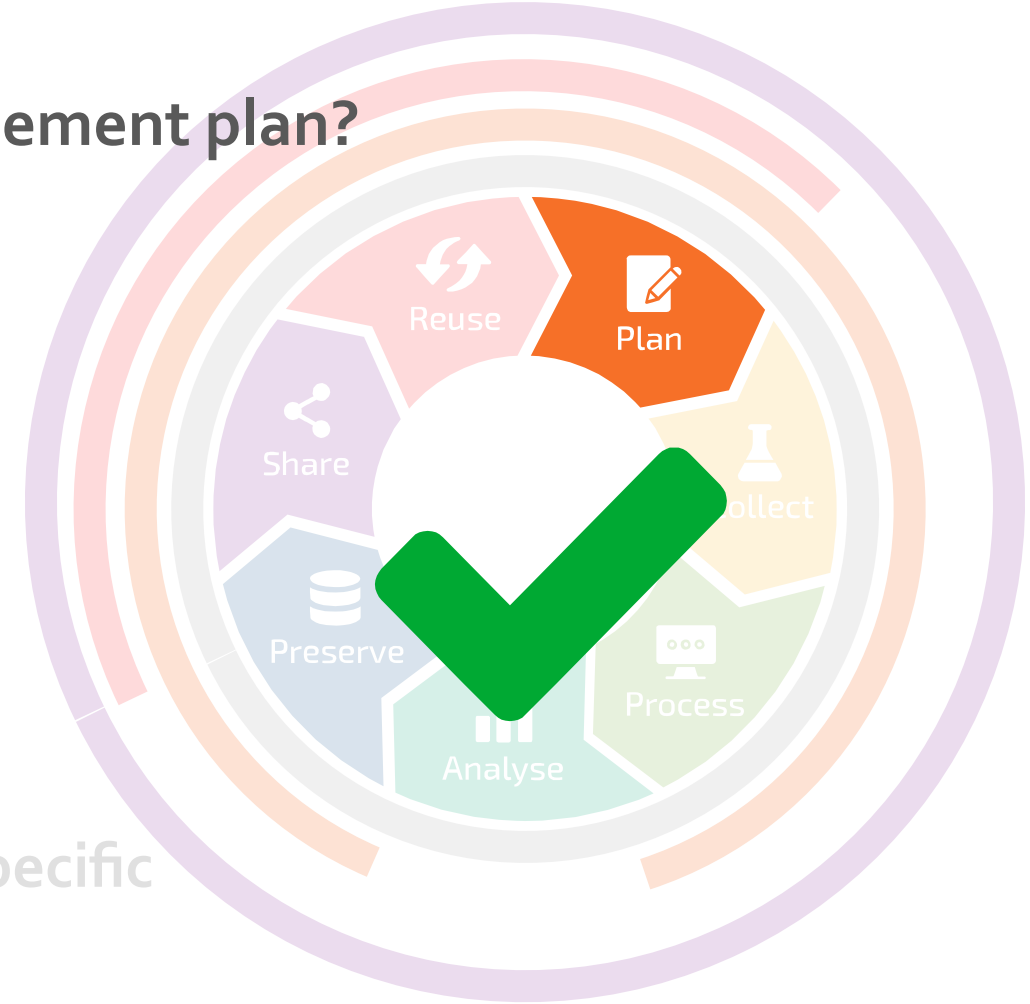



Project
& Domain specific

Institutional

# Data Management plan?

Funder



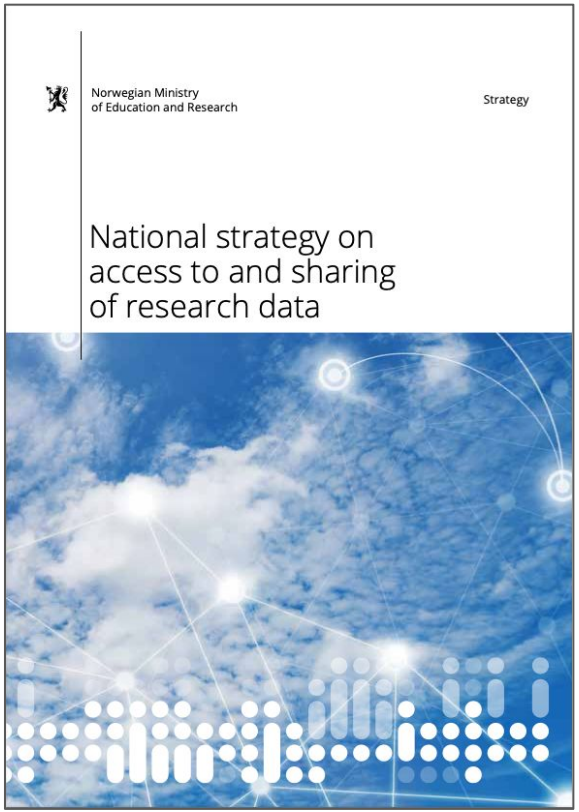

Ethical & Legal

Project
& Domain specific

Institutional

# "National Strategy on access to and sharing of research data"

2017




*Publicly funded research data* refers to:
(i) **data collected or generated** for use for or as a result of publicly funded research, and

(ii) **data underpinning publications** that are the result of publicly funded research, regardless of the source of the data.

Basic principles:

1. Research data must be as open as possible, as closed as necessary.
2. Research data should be managed and curated to take full advantage of their potential.
3. Decisions concerning archiving and management of research data must be taken within the research community.

https://www.regjeringen.no/en/dokumenter/national-strategy-on-access-to-and-sharing-of-research-data/id2582412/

# The Research Council of Norway's Policy for Open Access to Research Data

Original 2014, updated 2017


"… requiring that R&D-performing institutions or companies should assess whether projects receiving funding from the Research Council must develop a **data management plan**."

"The **FAIR Guiding Principles** for scientific data management and stewardship are included as a main principle in the Research Council's policy"

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf

# Research data…


… must be stored/archived in a safe and secure manner.


… must be made accessible for reuse.


… should be made accessible at an early stage [latest at publication]

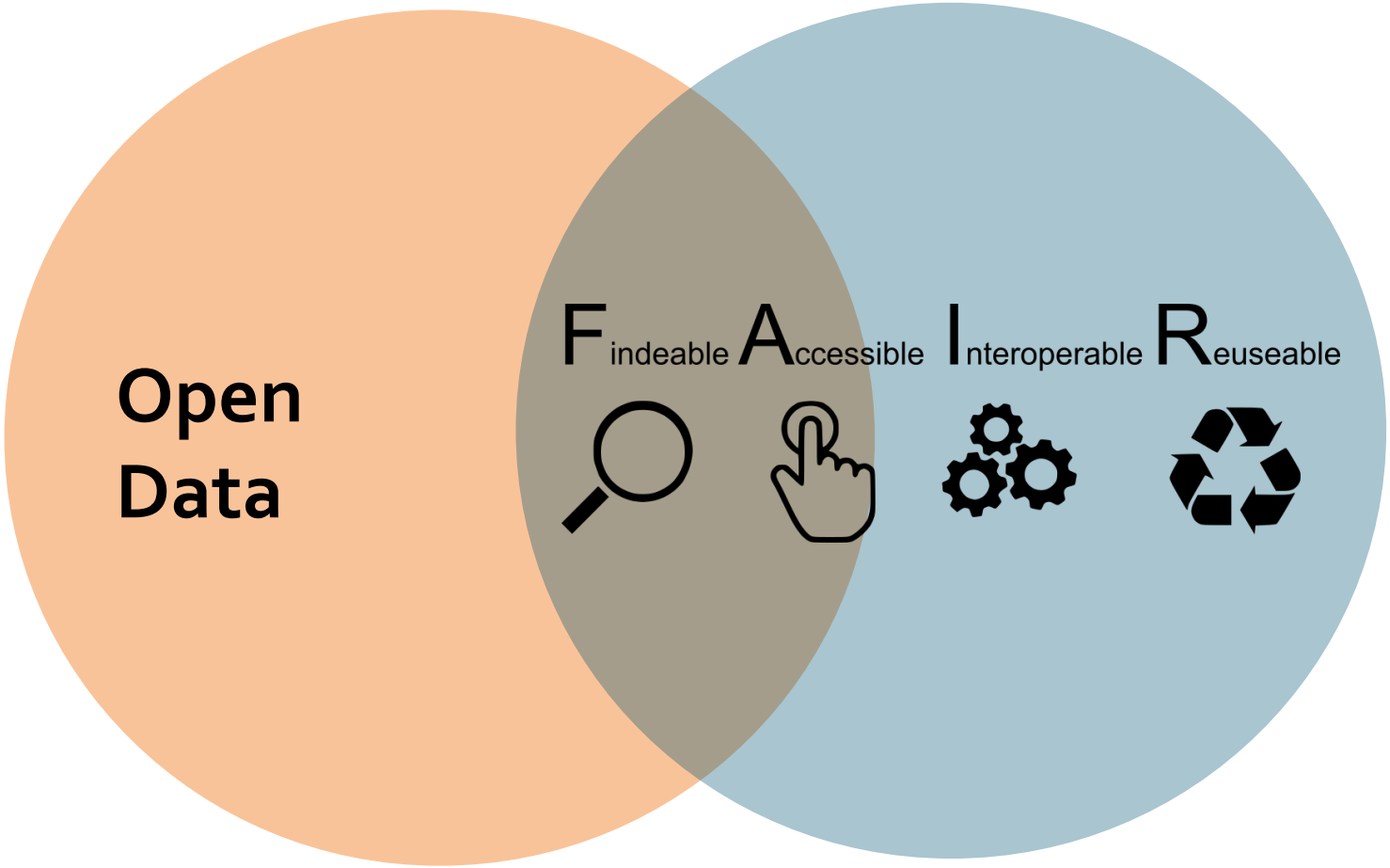

… must be accompanied by standardised metadata.


… must be provided with a license for access, reuse and redistribution.


… should preferably be made accessible at no charge.

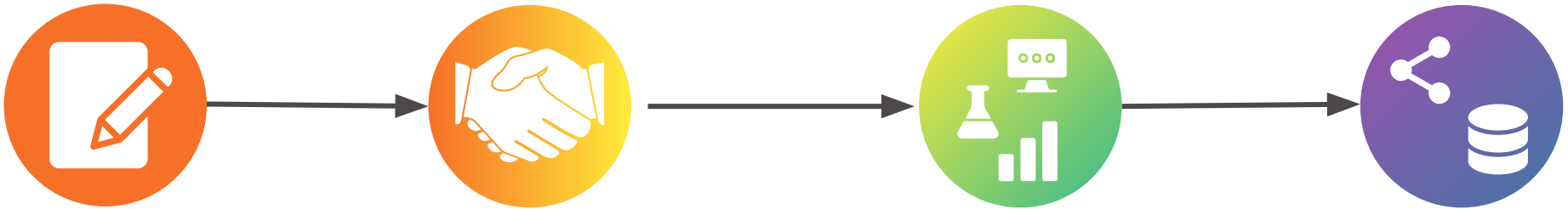

… must be described in a data management plan

https://www.forskningsradet.no/contentassets/e4cd6d2c23cf49d4989bb10c5eea087a/the-research-council-of-norways-policy-for-open-access-to-research-data.pdf




"As open as possible - as closed as necessary"

# The Research Council of Norway



2023

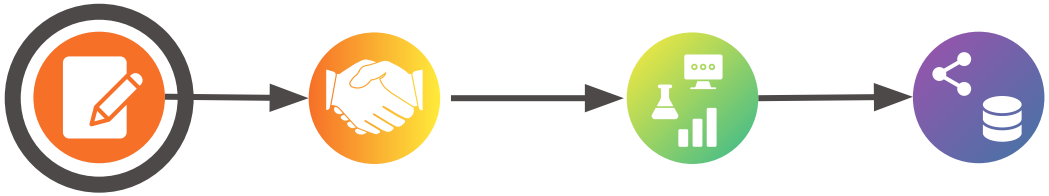
## Potential impact of the proposed research

The extent to which the planned outputs are openly accessible to ensure reusability of the research outputs and enhance reproducibility

FAIR, available and reusable data [software, algorithms, protocols, models, workflows, electronic notebooks, and other tools]

Early sharing through pre-registration and preprints, open access to software, workflows, tools, etc

https://www.forskningsradet.no/en/processing-grant-applications/processing-applications/assessment-open-science/



2023

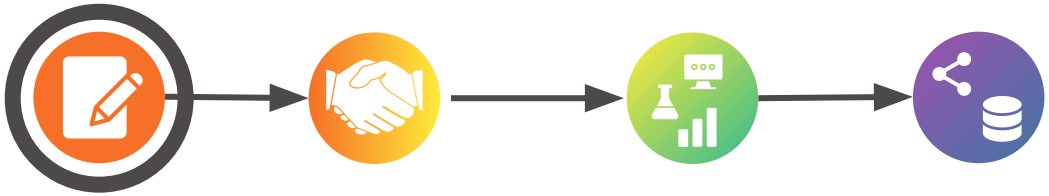
## Communication and exploitation

The extent to which the appropriate open science practices are implemented as an integral part of the proposed project to ensure open sharing and wide distribution of research outputs.

Early and open sharing (preprints or pre-registration and/or registration reports)

Full and immediate open access publication

https://www.forskningsradet.no/en/processing-grant-applications/processing-applications/assessment-open-science/



## No full DMP required (- but helpful)

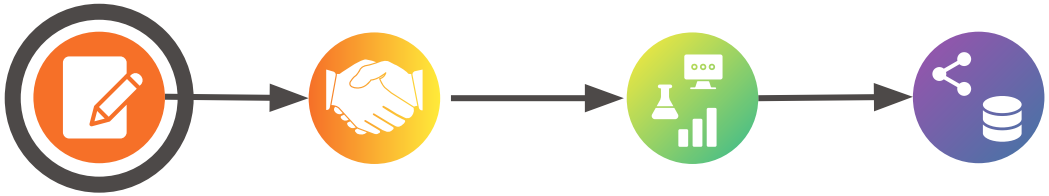
You should consider:

§§ Ethical and Legal issues

Storage and computing (budgeting?)

Budgeting for RDM-personnel & time effort

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/



# §§Ethical and Legal issues

REK approval necessary (for sharing of data?)

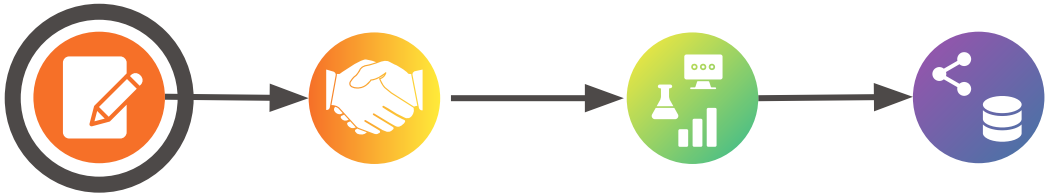
GDPR considerations

IPR aspects

Which Research Ethical Guidelines apply for this project?

RRI

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/



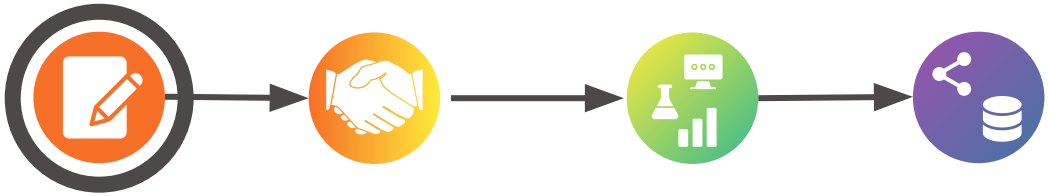
# Storage and Computing

Is access to computing/storage secured?

Will we have to pay for data storage (of sensitive data?)

How will data be accessed & transferred?

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/

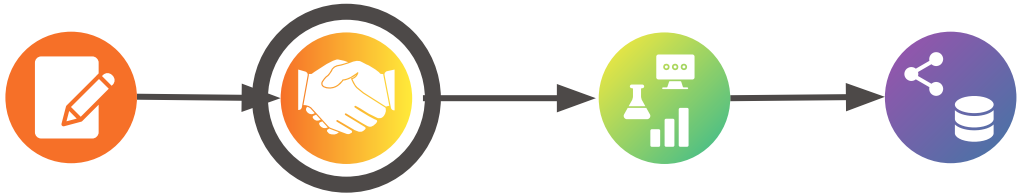


# Budgeting for RDM-personnel & time effort

Will we need help from a Data Steward (and budget for this)?

Will we need with data analysis, data warehousing or deposition?

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/



2018

When awarded funding

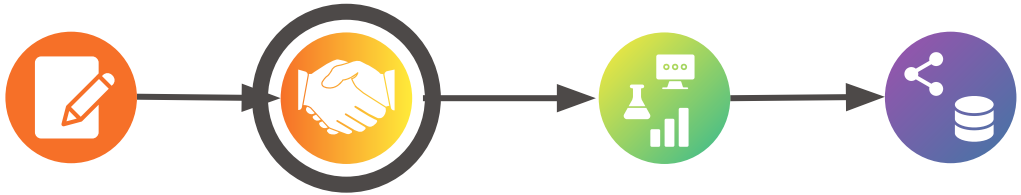
# Full DMP required

If you decide that a data management plan is not needed, you must provide an explanation.

I don't know of any - do you?

Even if you only reuse others data, you should describe where and how it is accessible & how your processed data can be accessed or reproduced?

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/



When awarded funding

# Full DMP required

Documentation, formats, volume

Quality assurance including Metadata standards

Backup during project

Sharing & Preservation

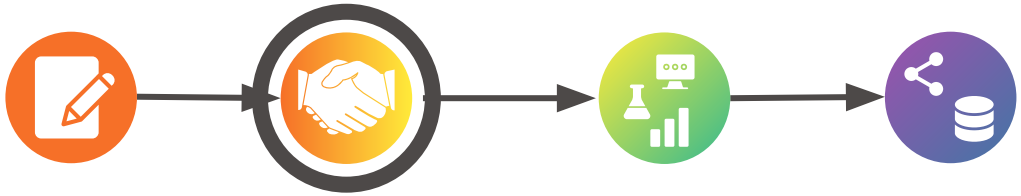
Ethical and Legal aspects - including IPR

Who is responsible in the project?

To which trustworthy repository will the data be submitted?


https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/

https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/

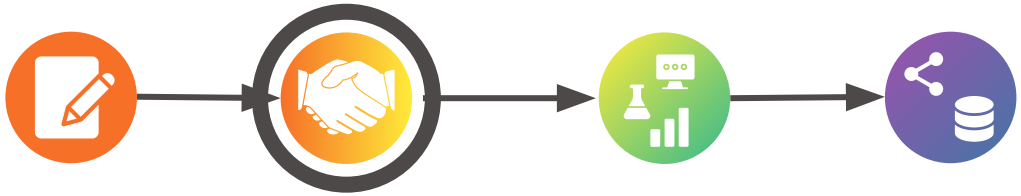


When awarded funding

# Full DMP required

The Research Council of Norway does not assess the content of submitted plans. It is the responsibility of the Project Owner to approve that the plan is in line with the institution's requirements and guidelines before it is submitted.

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/
https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/



# Full DMP required

Data management plans are to be made public and openly accessible.

Different possibilities:

zenodo

RiO

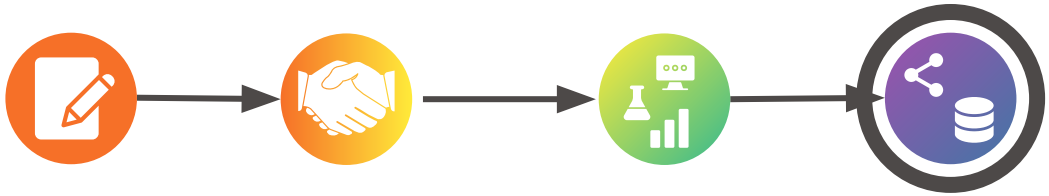
https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/
https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/

# DMP is constantly updated

Changes do not have to reported to RCN

Early deposition & sharing

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/
https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/



# Final version of the data management plan in connection with the final report of the project.

Data is deposited to trustworthy repository

https://www.forskningsradet.no/en/research-policy-strategy/open-science/research-data/
https://www.scienceeurope.org/our-resources/practical-guide-to-the-international-alignment-of-research-data-management/

# Please contact us!


## Horizon Europe

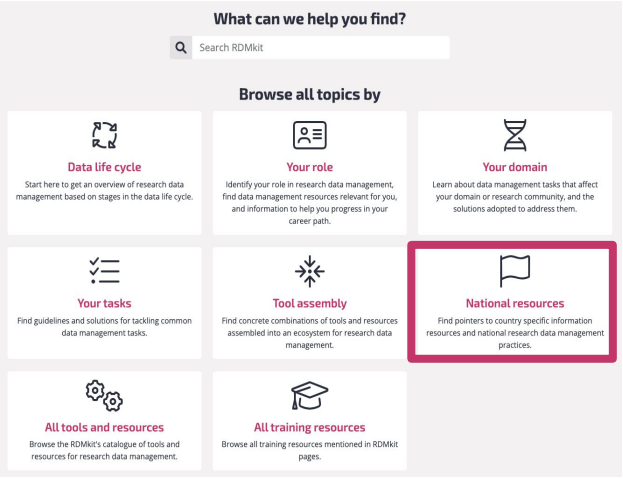
**Open Science** (OA, RDM, citizens engagement etc.) **embedded throughout** HE

14. Dissemination and exploitation of research results &
16. Open science

- "***Open science practices are addressed and evaluated under 'excellence'*** *as they are considered a part of the methodology.*"
- "***Data management plans are mandatory for all projects*** *generating or reusing data and should be aligned with the D&E plan.*"

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf
https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/agr-contr/general-mga_horizon-euratom_en.pdf

RDMkit








# Norway

## Introduction

This page provides an overview of the data management resources in Norway. The target audience is the Norwegian scientific community in the life sciences and collaborators. plan.research-data.no is a national knowledge base on research data management. The Data Stewardship Wizard instance from ELIXIR Norway provides an interactive way to navigate these recommendations and resources. You can also find condensed information in the interlinked RDM LookUp from ELIXIR Norway.

The Norwegian Ministry of Education and Research's "National strategy on access to and sharing of research data" from 2018 is an initiative aimed at fostering open, equitable, and efficient sharing of research data in Norway. For researchers in Norway and their international partners, this strategy lays the groundwork for creating a robust, collaborative research environment where data is shared freely but responsibly. The national strategy underscores Norway's commitment to scientific advancement and maintaining ethical and legal standards in a data-driven era.

## Funder policies on research data

Norges Forskningsråd (Research Council of Norway) is the primary funding body in Norway for research. The research data management policy of RCN requires a Data Management Plan (DMP), preferably also available in the DMP Common Standard as supported by for example by Data Stewardship Wizard after a positive funding decision for each project. A DMP has to be submitted as part of a final report. RCN recommends following the 'Practical Guide to the International Alignment of Research Data Management' by Science Europe, the organisation of research funders and performers. In addition to advising policies for open science and open access, RCN provides recommendations on how to make research data available. From 2023 and onwards, a project grant application submitted to RCN is assessed for open science best practices.

## Institutional policies on research data

We provide here a non-exhaustive list of research institutions with Data Management Policies in Norway:

- Norwegian University of Life Sciences (NMBU)
- Norwegian University of Science and Technology (NTNU)
- University of Bergen (UiB)
- University of Oslo (UiO)
- The Arctic University of Norway (UiT)
- Oslo University Hospital (OUS)
- University of Stavanger (UiS)
- University of Agder (UiA)
- Nord University
- Inland Norway University of Applied Sciences
- VID Specialized University
- Svalbard Integrated Arctic Earth Observing System, SIOS

https://rdmkit.elixir-europe.org/national_resources

# DSW

DATA STEWARDSHIP WIZARD

## Filled questionnaire → Template → DMP in various formats

once — per funding body — .docx, .tex, .html, .json, incl. **maDMP**

**Adapted for users in Norway**

Login

Feide

LS LOGIN

**Full compliance:**

SCIENCE EUROPE

HORIZON EUROPE

**Recommended by**

https://ds-wizard.org
https://github.com/ds-wizard

# Introduction

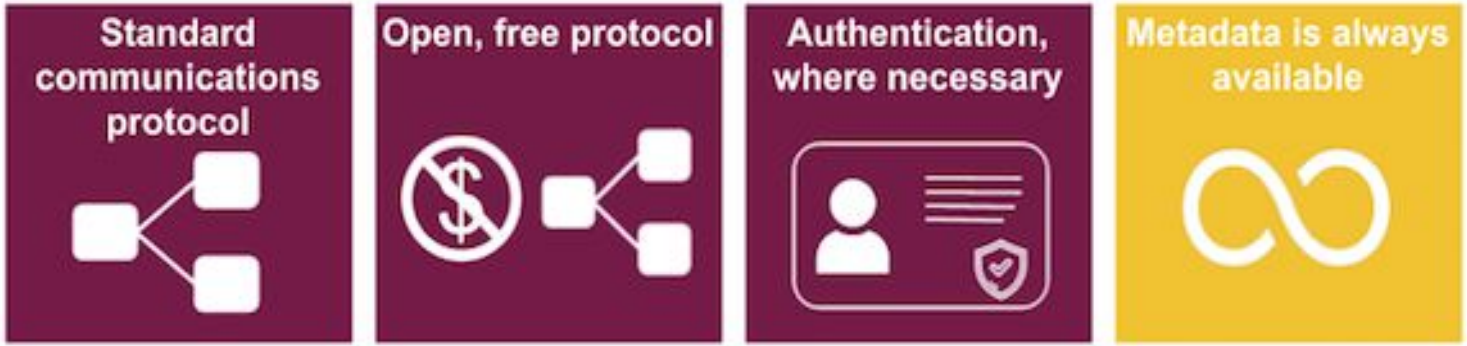
The FAIR data principles

# **F**AIR: **Findable** Data


Metadata are crucial: the data are found through the metadata.

Deposition on a repository is one of the FAIR principles, such an (external) service has to be in place.

# F**A**IR: **Accessible** Data




Technical implementations for accessing data, authentication and authorisation (FAIR not OPEN).

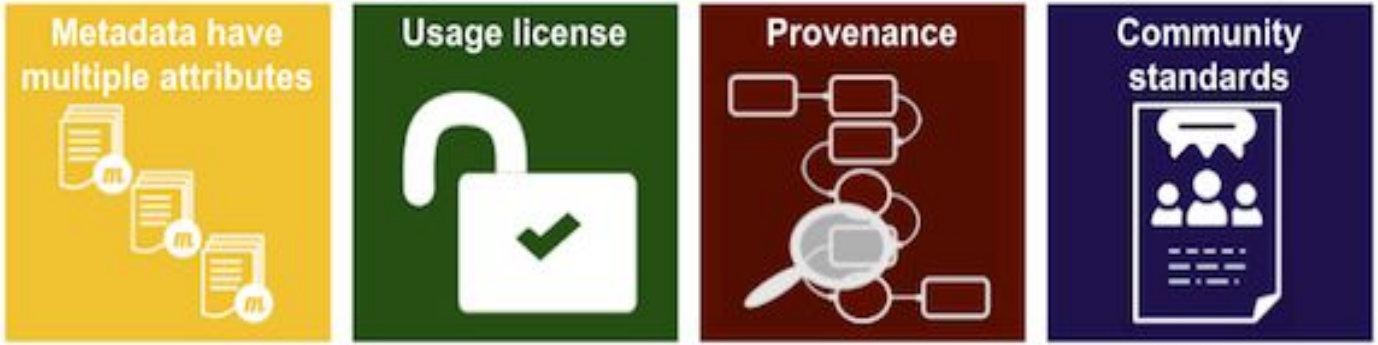
Metadata always available, also when the dataset no longer exist.

# FAIR: **Interoperable** Data


Adoption of community-defined standards and definitions.

Consistent metadata annotation allows linking across datasets.

# FAI**R**: **Reusable** Data




To ensure successful reusability, you need:

- Rich metadata
- License
- Data “history” (experimental technique, author, publication)
- Community standards (e.g. from domain repository of choice)