

**NEUES ENTDECKEN**

**TALENTE FÖRDERN**

**IDEEN UMSETZEN**

**WIR. FÖRDERN. ZUKUNFT.**

# **FWF Research Data Management and Open-Access-Policy for Research Data**

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Wien, 25.04.2019

# New Policy from 01.01.2019

## 1. **Mandatory Research Data Management Plan for all FWF projects**

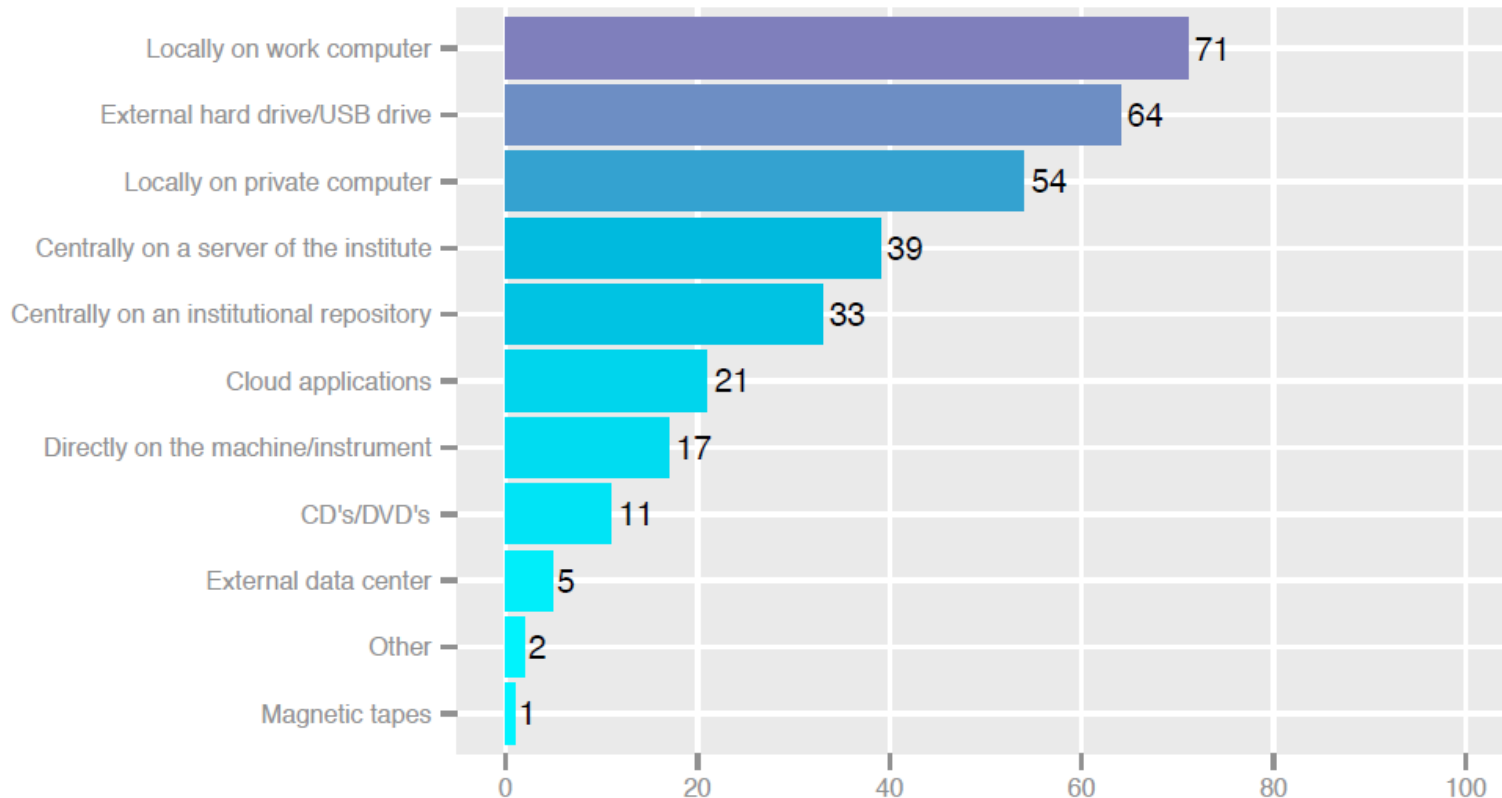
(<https://www.fwf.ac.at/de/forschungsfoerderung/open-access-policy/forschungsdatenmanagement/>)

## 2. **Mandatory Open Access policy for research data**

(<https://www.fwf.ac.at/de/forschungsfoerderung/open-access-policy/open-access-fuer-forschungsdaten/>)

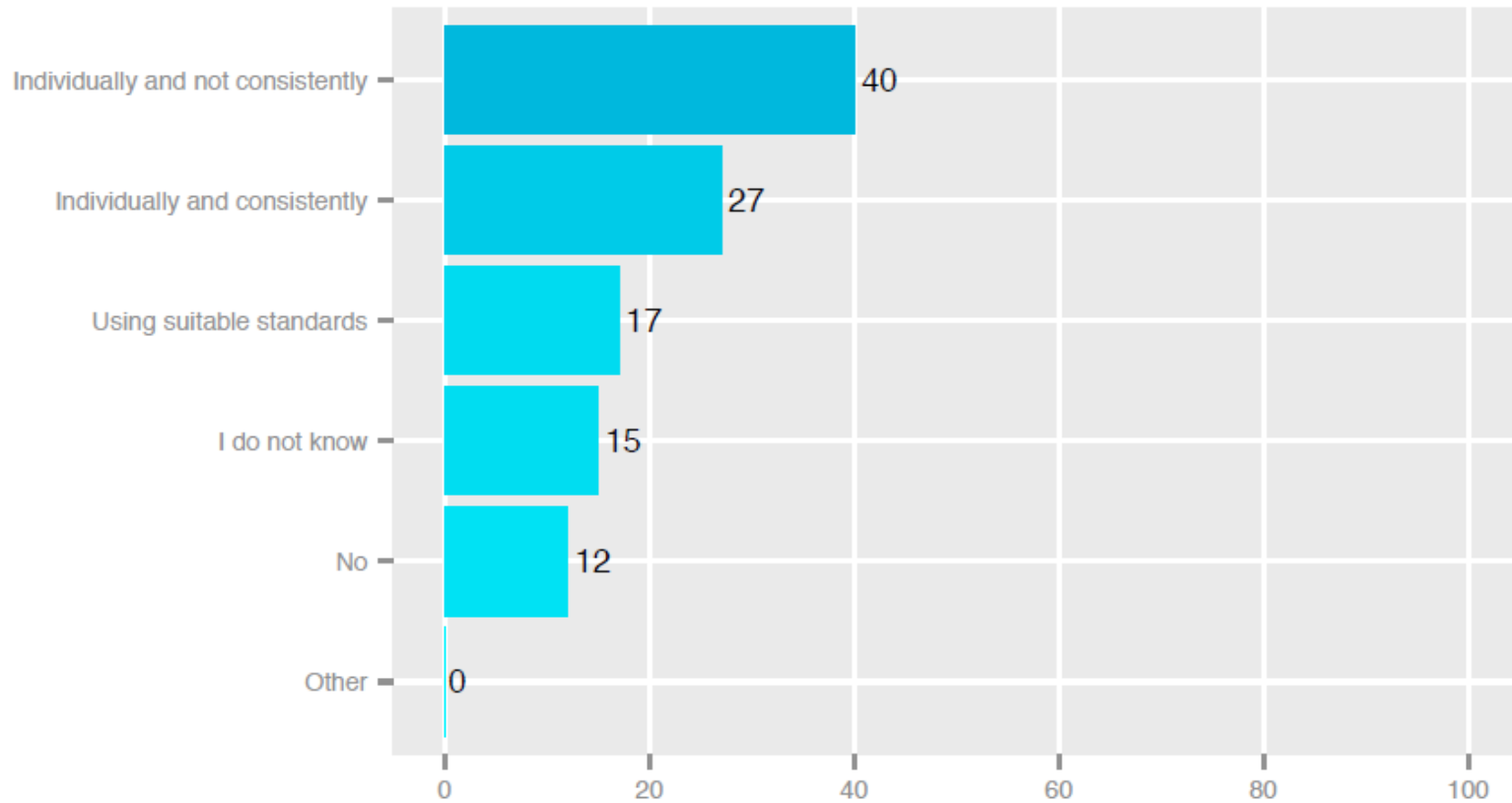
# **FWF- Research Data Management**

## Where do you usually store your research data?



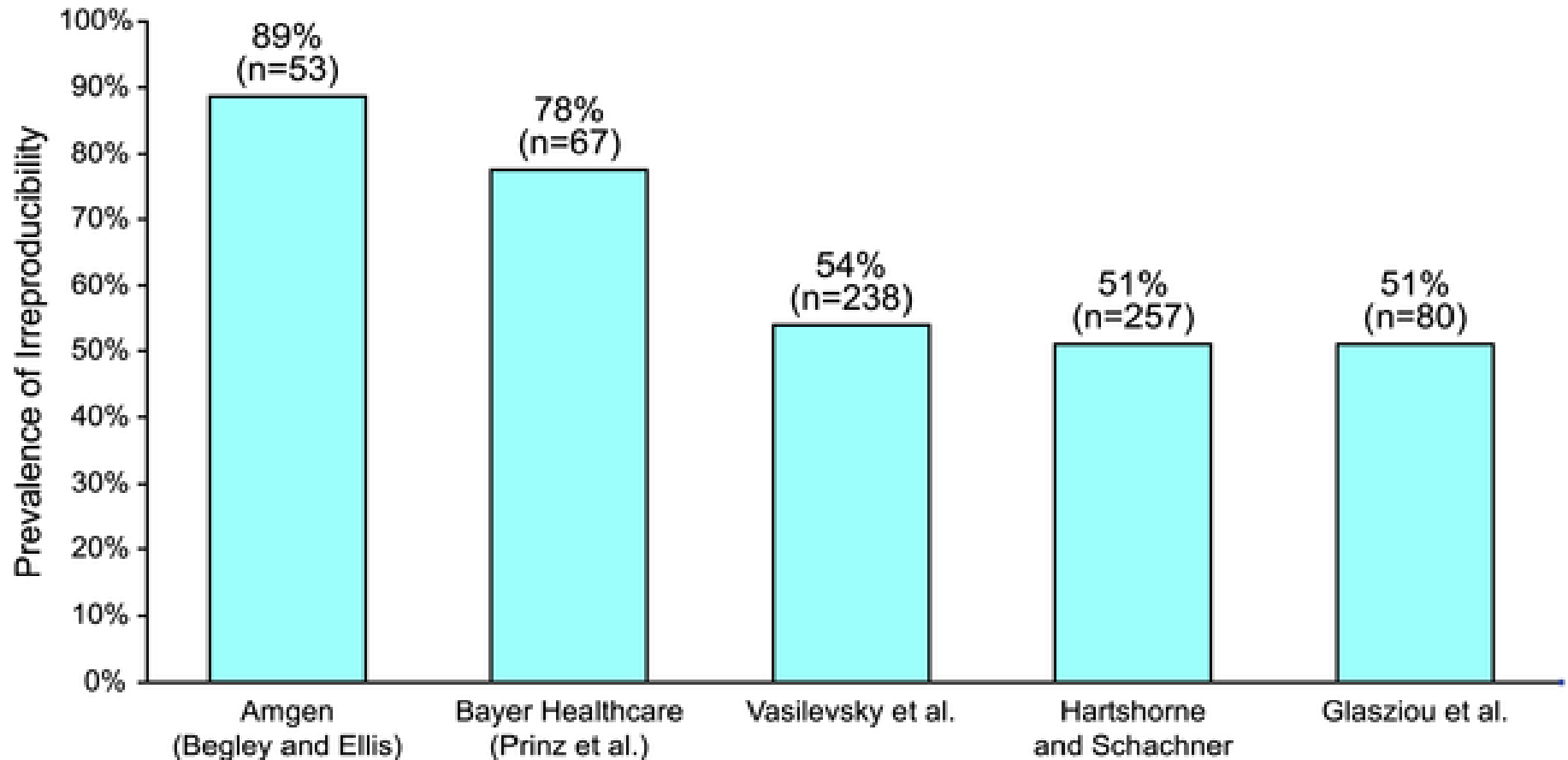
Relative response rate (%)

## Do you normally document your research data?

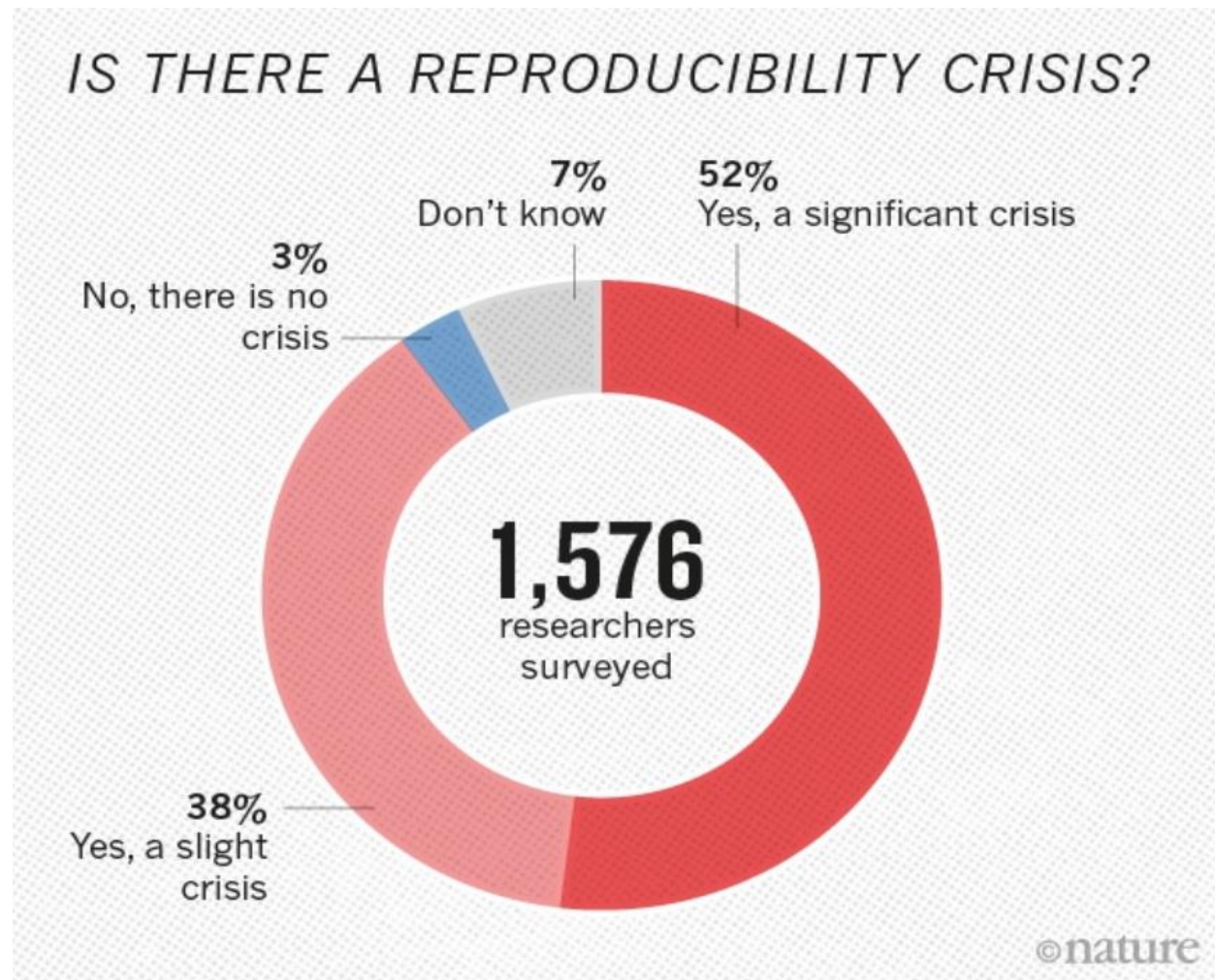


Relative response rate (%)

# Studies reporting the prevalence of irreproducibility



Freedman LP, Cockburn IM, Simcoe TS (2015) The Economics of Reproducibility in Preclinical Research. PLOS Biology 13(6): e1002165. <https://doi.org/10.1371/journal.pbio.1002165>  
<https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1002165>



Quelle: <https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970>



## Why research data management?

- Reproducibility of data-based research results
- Acceleration of the research process
- New insights through the consolidation of data
- Creation of higher-value data products (e.g. indices, databases) by merging data
- Better cost efficiency through jointly built and used data collections
- Support of public and economic re-use of data
- Increased citation rates for text publications for which data is made available
- Prevention of scientific misconduct

# International Data Management Policies and Plans

- [NIH Data Sharing Policy and Plan](#)



- [Welcome Trust Policy on data, software and materials management and sharing](#)



- [SNF Data Management Plan](#)



- [Horizon 2020 Data Management Template](#)



- [NWO Data Management Protocol](#)



- [ERC Data Management Template](#)



# Close Cooperation with national and international Initiatives



Practical Guide to the international alignment of research data management

[https://www.scienceeurope.org/wp-content/uploads/2018/12/SE\\_RDM\\_Practical\\_Guide\\_Final.pdf](https://www.scienceeurope.org/wp-content/uploads/2018/12/SE_RDM_Practical_Guide_Final.pdf)



Working Group on „Data Management Plans“

## Already before 2019:

- **Application:**

When planning your budget, please note the FWF's Open Access Policy, including point VI "Open Research Data". This means that, depending on the research topic, [...] funds should be budgeted to ensure the preparation, archiving, open access and subsequent use of research data in repositories.

- **Program Stand-Alone Publications:**

For new publication formats such as apps, wikis, software, databases, videos, etc., the FWF grants a lump sum up to a maximum of 50,000.00 EUR.

## Open Research Data Pilot (2016)

- 41 applications; **12 projects funded** in 2017
- **Aim:** The pilot aims to create role models and to gain experiences with open access to research data so that in line with the concept of [Open Science](#) open research data becomes the norm for all FWF projects in the future
- [Austrian Science Fund \(FWF\) Open Research Data \(ORD\) Pilot Report](#)

# Research Data Management

From 1 January 2019, the FWF requires a data management plan (DMP) supplemental to all approved grant proposals. A DMP outlines how the data for a specific project will be collected, organised, stored, backed-up, preserved, shared, archived and disposed.

The FWF has defined a **minimum set of questions that comprise the DMP** and that are to be addressed in the DMP template. The FWF DMP is in line with Science Europe's "[Core Requirements for Data Management Plans](#)".

## **Exceptions**

The FWF recognises that some projects will not generate or analyse research data <sup>1</sup> and similar materials. In these cases, a short explanation is required (see [DMP template\(pdf, 817KB\)](#) / [DMP template\(docx, 35KB\)](#)).

## Workflow

- The DMP must be submitted together with the public relations (PR) abstracts and the FWF Funding Agreement **once the FWF Board has approved a grant contribution.**
- The DMP is a **prerequisite for the start of the project** and will be **checked for completeness** by the FWF.
- It must be written in the **same language** as the grant proposal.
- The DMP should **only contain the most important information** and must not exceed a length of 10,000 characters (including spaces).
- If further information is necessary, it can be provided by **links** to external sources.

## Financing

Within grant proposals, **costs for the preparation, archiving, open access and later use of research data in repositories** can be requested. For further information, see the application guidelines for grant proposals.



# Template – Elements

Data Officer	
<b>I</b>	<b>Data Characteristics</b>
I.1	Description of the data
<b>II</b>	<b>Documentation and Metadata</b>
II.1	Metadata standards
II.2	Documentation of data
II.3	Data quality control
<b>III</b>	<b>Data Availability and Storage</b>
III.1	Data sharing strategy
III.2	Data storage strategy

IV Legal and Ethical Aspects	
IV.1	Legal aspects
IV.2	Ethical aspects

No data will be generated or analysed

*II.2 What information is needed for the data to be findable, accessible, interoperable and re-usable (FAIR) in the future?*

Source: <https://www.fwf.ac.at/de/forschungsfoerderung/open-access-policy/forschungsdatenmanagement/>

# SE - Compatibility with the FAIR Data Principles

## THE FAIR DATA PRINCIPLES

Core Requirements  
for DMPs (CR)  
Criteria for the  
Selection of  
Trustworthy  
Repositories

To be Findable			
<b>F1</b>	(meta)data are assigned a globally unique and eternally persistent identifier	CR 5d	Criterion 1
<b>F2</b>	data are described with rich metadata	CR 2a	Criterion 2
<b>F3</b>	metadata clearly and explicitly include the identifier of the data they describe	CR 5d	Criterion 1, Criterion 2
<b>F4</b>	(meta)data are registered or indexed in a searchable resource		Criterion 2
To be Accessible			
<b>A1</b>	(meta)data are retrievable by their identifier using a standardised communications protocol	CR 5c	Criterion 1, Criterion 2
A1.1	the protocol is open, free, and universally implementable	CR 5c	Criterion 2
A1.2	the protocol allows for an authentication and authorisation procedure, where necessary	CR 4b, CR 5a, CR 5c	Criterion 3
<b>A2</b>	metadata are accessible, even when the data are no longer available	CR 4c, CR 5a, CR 5d	Criterion 2c

## THE FAIR DATA PRINCIPLES

Core Requirements  
for DMPs (CR)  
Criteria for the  
Selection of  
Trustworthy  
Repositories

To be Interoperable			
<b>I1</b>	(meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation	CR 1b, CR 2a	Criterion 2d
<b>I2</b>	(meta)data use vocabularies that follow FAIR principles	CR 2a, CR 2b	Criterion 2
<b>I3</b>	(meta)data include qualified references to other (meta)data	CR 2a, CR 5a, CR 5c	Criterion 2b
To be Re-usable			
<b>R1</b>	meta(data) are richly described with a plurality of accurate and relevant attributes	CR 2a, CR 2b	Criterion 2
R1.1	(meta)data are released with a clear and accessible data usage license	CR 4b, CR 5a	Criterion 3d
R1.2	(meta)data are associated with detailed provenance	CR 1a, CR 1b, CR 2b	Criterion 1c, Criterion 2, Criterion 3b, Criterion 4a
R1.3	(meta)data meet domain-relevant community standards	CR 1b, CR 2a	Criterion 2d

Source: [https://www.scienceurope.org/wp-content/uploads/2018/12/SE\\_RDM\\_Practical\\_Guide\\_Final.pdf](https://www.scienceurope.org/wp-content/uploads/2018/12/SE_RDM_Practical_Guide_Final.pdf)

# FWF - Compatibility with the FAIR Data Principles

Core Requirements for DMPs (CR)



## THE FAIR DATA PRINCIPLES

To be Findable			
F1	(meta)data are assigned a globally unique and eternally persistent identifier	CR 5d	II, III
F2	data are described with rich metadata	CR 2a	II
F3	metadata clearly and explicitly include the identifier of the data they describe	CR 5d	II, III
F4	(meta)data are registered or indexed in a searchable resource		
To be Accessible			
A1	(meta)data are retrievable by their identifier using a standardised communications protocol	CR 5c	II, III
A1.1	the protocol is open, free, and universally implementable	CR 5c	II
A1.2	the protocol allows for an authentication and authorisation procedure, where necessary	CR 4b, CR 5a, CR 5c	II, III, IV
A2	metadata are accessible, even when the data are no longer available	CR 4c, CR 5a, CR 5d	II, III

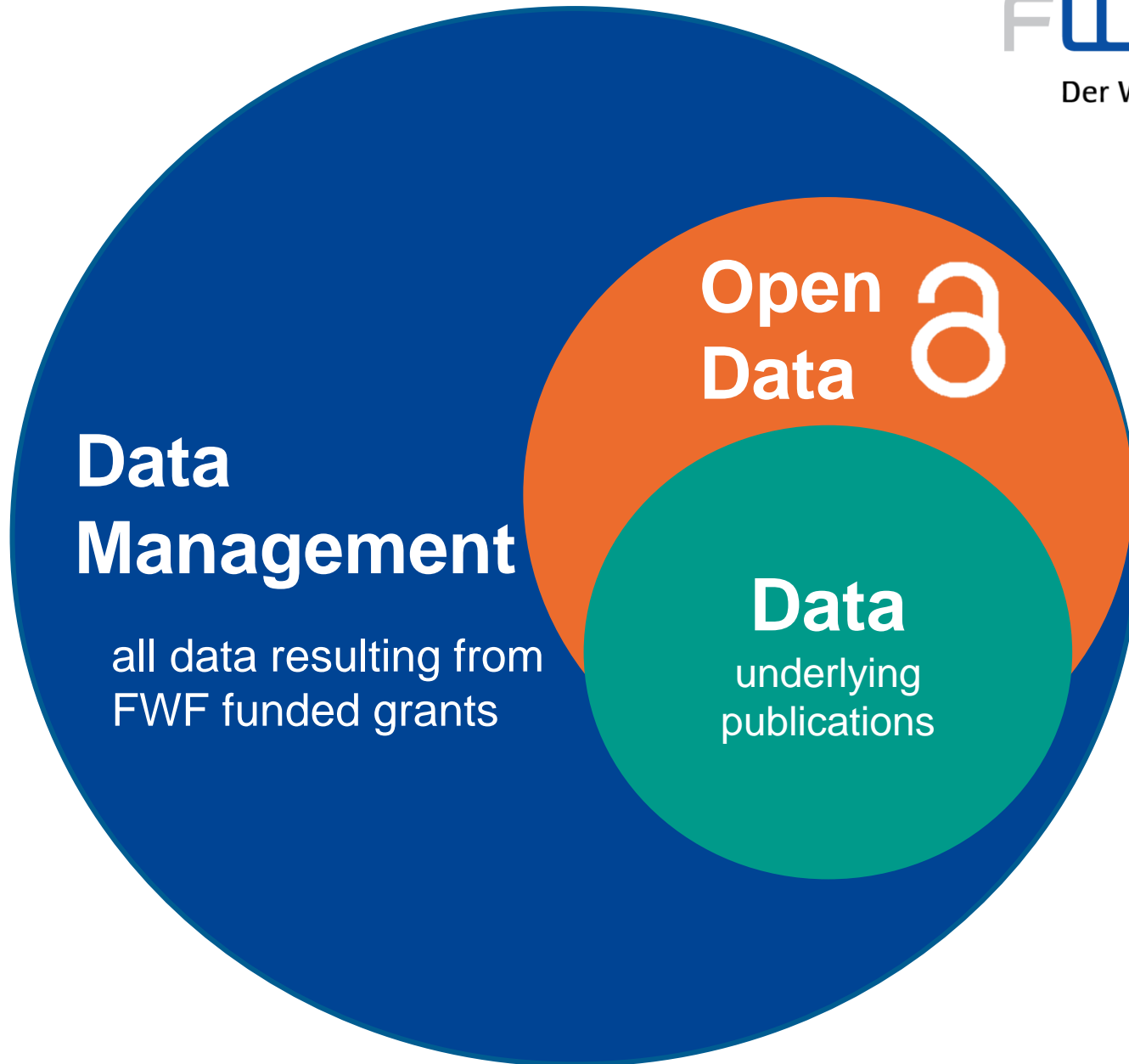
Core Requirements for DMPs (CR)



## THE FAIR DATA PRINCIPLES

To be Interoperable			
I1	(meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation	CR 1b, CR 2a	I, II
I2	(meta)data use vocabularies that follow FAIR principles	CR 2a, CR 2b	I, II
I3	(meta)data include qualified references to other (meta)data	CR 2a, CR 5a, CR 5c	I, II
To be Re-usable			
R1	meta(data) are richly described with a plurality of accurate and relevant attributes	CR 2a, CR 2b	I, II
R1.1	(meta)data are released with a clear and accessible data usage license	CR 4b, CR 5a	II, IV
R1.2	(meta)data are associated with detailed provenance	CR 1a, CR 1b, CR 2b	I, II
R1.3	(meta)data meet domain-relevant community standards	CR 1b, CR 2a	II

Source: [https://www.scienceurope.org/wp-content/uploads/2018/12/SE\\_RDM\\_Practical\\_Guide\\_Final.pdf](https://www.scienceurope.org/wp-content/uploads/2018/12/SE_RDM_Practical_Guide_Final.pdf)



# Open Access to Research Data

## Demand for Open Research Data

*“Open scientific research data should be easily discoverable, accessible, assessable, intelligible, useable, and wherever possible interoperable to specific quality standards.”* [G8 Science Ministers Statement](#) (2013)

*“The benefits from opening up research data for scrutiny and reuse are potentially very significant; including economic growth, increased resource efficiency, securing public support for research funding and increasing public trust in research.”*

[Concordat on Open Research Data UK](#) (2016)



[OECD Principles and Guidelines for Access to Research Data from Public Funding](#) (2007)

- A. Openness
- B. Flexibility
- C. Transparency
- D. Legal conformity
- E. Protection of IP
- F. Formal responsibility
- G. Professionalism
- H. Interoperability
- I. Quality
- J. Security
- K. Efficiency
- L. Accountability
- M. Sustainability

# Open Access Policy to Research Data

The Austrian Science Fund (FWF) **expects open access to research data** collected and/or analysed using FWF funds for projects approved **from 1 January 2019** under the new guidelines.

Open access is mandatory for **research data on which the research publications of the project are based**. Research data are all data necessary to **reproduce and to verify the results of the publications**, including the associated metadata. These data should be **published as soon as possible**, but at the latest together with the corresponding research publication. If, for **legal, ethical or other reasons**, open access to these data is not or only partially possible, this must be explained in the Data Management Plan (DMP), (see [Research Data Management](#)).

# Open Access Policy to Research Data

Open access to **all other research data** from a project is at the discretion of the principal investigator. This includes curated data that cannot be directly assigned to a publication or raw data, including the associated metadata. In any case, such data must also be described in the Data Management Plan (DMP), (see [Research Data Management](#)).



# Open Access Policy to Research Data

## Criteria for Open Research Data

All research data and their metadata should be findable, accessible, interoperable and reusable (fulfil the [FAIR](#) Principles) and the following criteria must apply:

- Institutional, discipline-specific or interdisciplinary repositories (such as [Zenodo](#), [Dryad](#) or [Open Science Framework](#)) can be used for archiving. The selected repositories must be listed in [re3data](#). In addition, certified repositories (e.g., [CoreTrustSeal](#)) and those that meet the “[Criteria for the Selection of Trustworthy Repositories](#)” of Science Europe are explicitly recommended.
- Data should be deposited in such a way that it can be re-used without restrictions (e.g., CC BY or a similar open licence). For further information on open licences, see “[How to License Research Data](#)”.
- Deposited datasets must be citable by means of a persistent identifier (e.g., DOI). For further information on the citation of data, see “[The Joint Declaration of Data Citation Principles](#)”.

## Outlook

- **Communication** → Exchange with researchers (workshops etc.)
- **Exchange and collaboration** → Continuous exchange with national and international organisations and initiatives (SE, e-infrastructures+)
- **Monitoring** → Monitoring of research data policy

# Thank you!

- [FWF Open-Access-Policy](#)
- Follow us on Twitter [@FWFOpenAccess](#)



Der Wissenschaftsfonds.

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