

Research data management at the Flemish universities: state-of-affairs

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on behalf of

VLIR WG Research Data Management & Open Science



Research data management, an essential step towards Open Data

and ultimately Open Science



Research data management, an essential step towards Open Data

RDM Survey:

State of affairs in Flanders,
depict RDM needs &
requirements

*Onderzoeksmanagement aan
de Vlaamse Universiteiten,
TH&MA (3), 47-51, 2017*

Collaboration on practical
issues:

DMPonline.be

DMP templates

Joint Policy statements:

*Research data management en
de Vlaamse Universiteiten:
White paper, VLIR-WG RDM &
Open Science*



RMD @ the Flemish universities: State of affairs

Survey set-up

Questions

Consistent with foreign surveys so that benchmarking is possible

Two tier system:

Survey to principal investigators (n=224)

Survey to researchers (n=425)

5 dimensions:

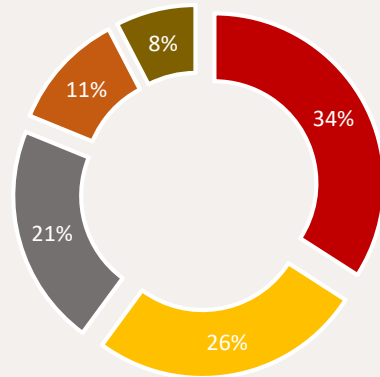
- Data formats
- Archiving, storage
- Ethical & Legal
- Infrastructure & Services
- Collaboration and Reuse



Policies

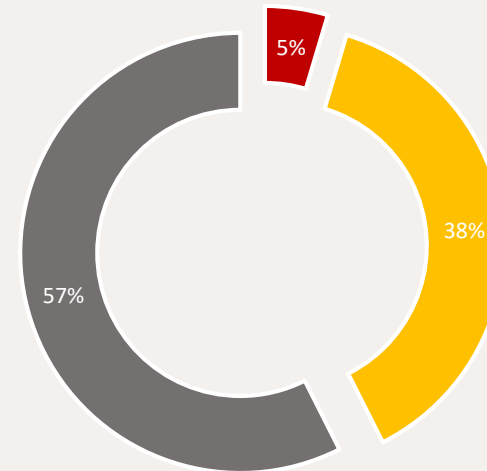
AD HOC RATHER THAN ORGANISED

DO YOU MAKE A DATA MANAGEMENT PLAN BEFORE THE START OF A PROJECT?



■ Never ■ Hardly ever ■ Mostly ■ Yes, always ■ Yes, when requested

DATA MANAGEMENT POLICY



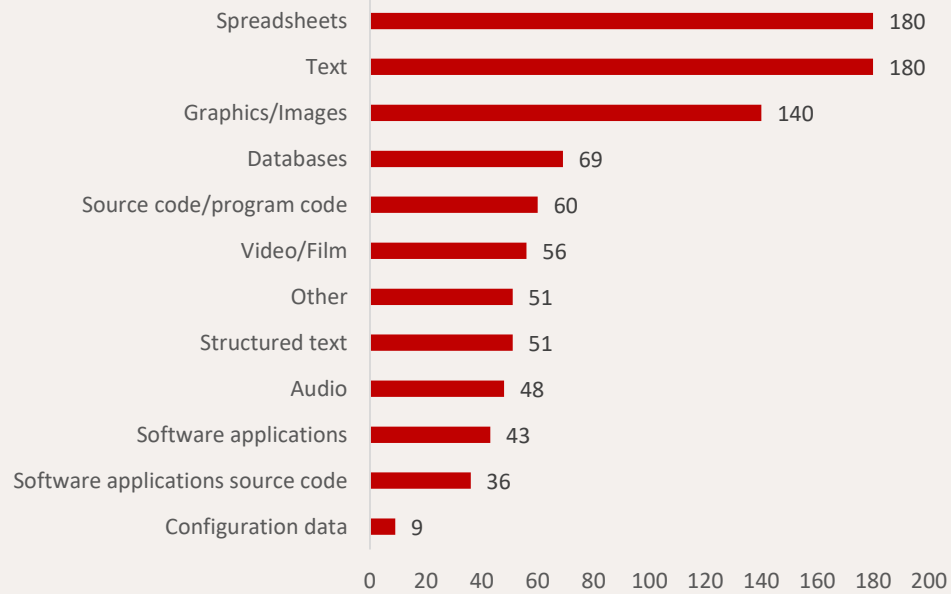
■ Formal ■ Informal ■ Non



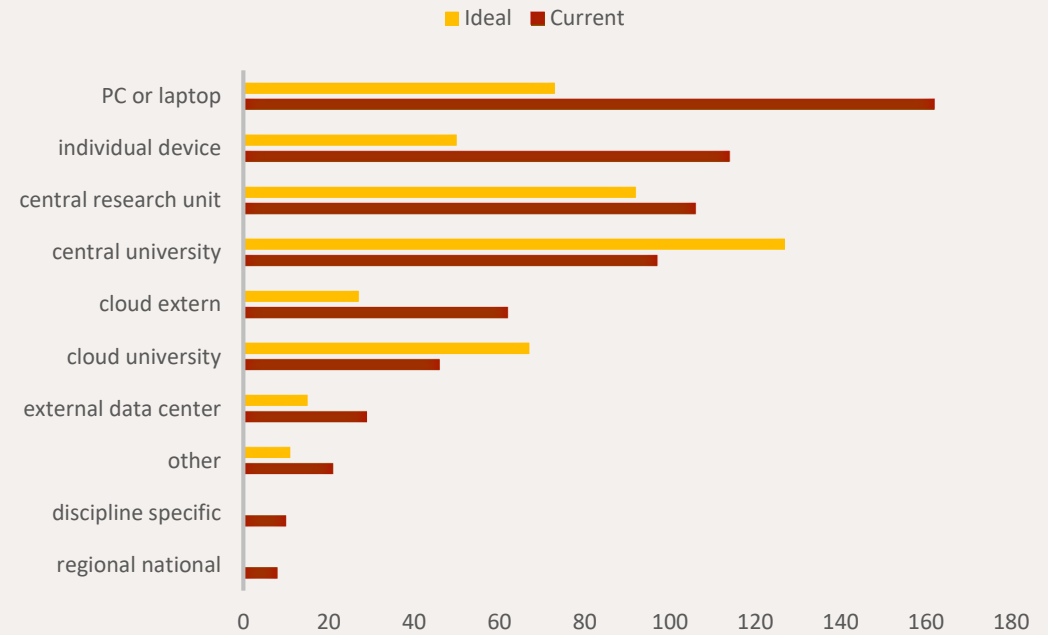
FORMATS

DIVERSITY IN DATA TYPES AND STORAGE DEVICES

FORMATS



STORAGE DEVICE



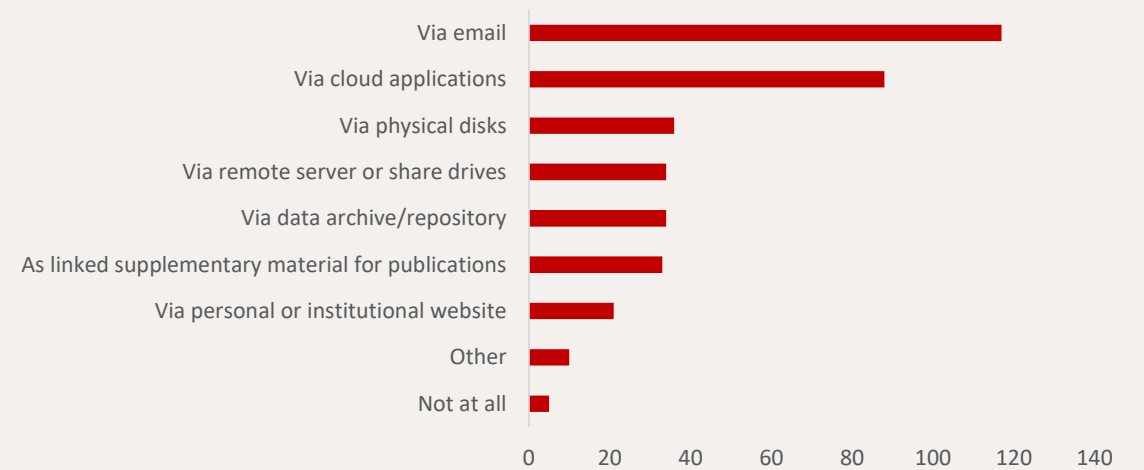
Access

MORE BASED ON "NEED TO" THAN ON "WANT TO"

DATA ACCESSIBILITY: TO WHOM



DATA ACCESSIBILITY: MEDIUM

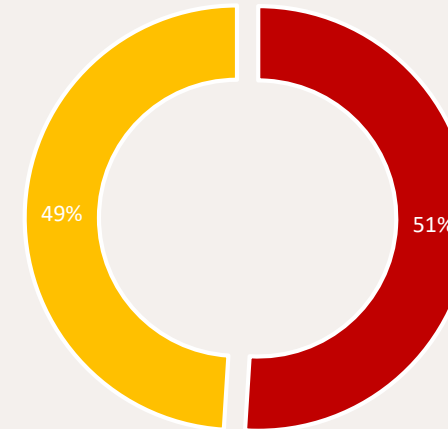


Opinions concerning openness

DIVIDED BUT HOPEFUL

- **What is your opinion on storing (a selection of) the research data of your unit in an open access data repository so that they can be reused by other researchers?**

OPEN ACCESS DATA



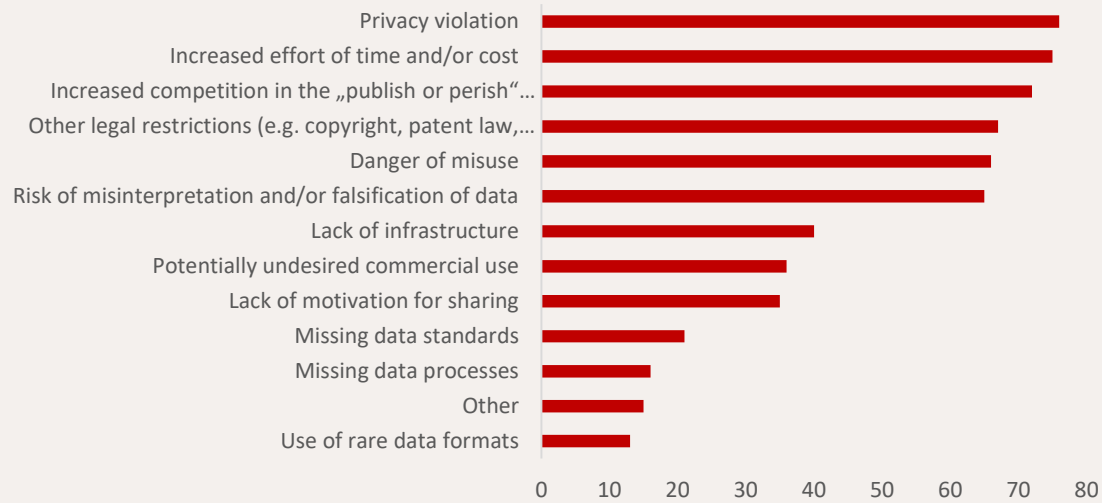
■ Preferred ■ Not preferred



Sharing

ADVANTAGES ARE RECOGNISED BUT LEGAL ISSUES AND LACK OF TIME

WHAT KEEPS YOU FROM SHARING DATA?



OPEN DATA SHARING INCENTIVES



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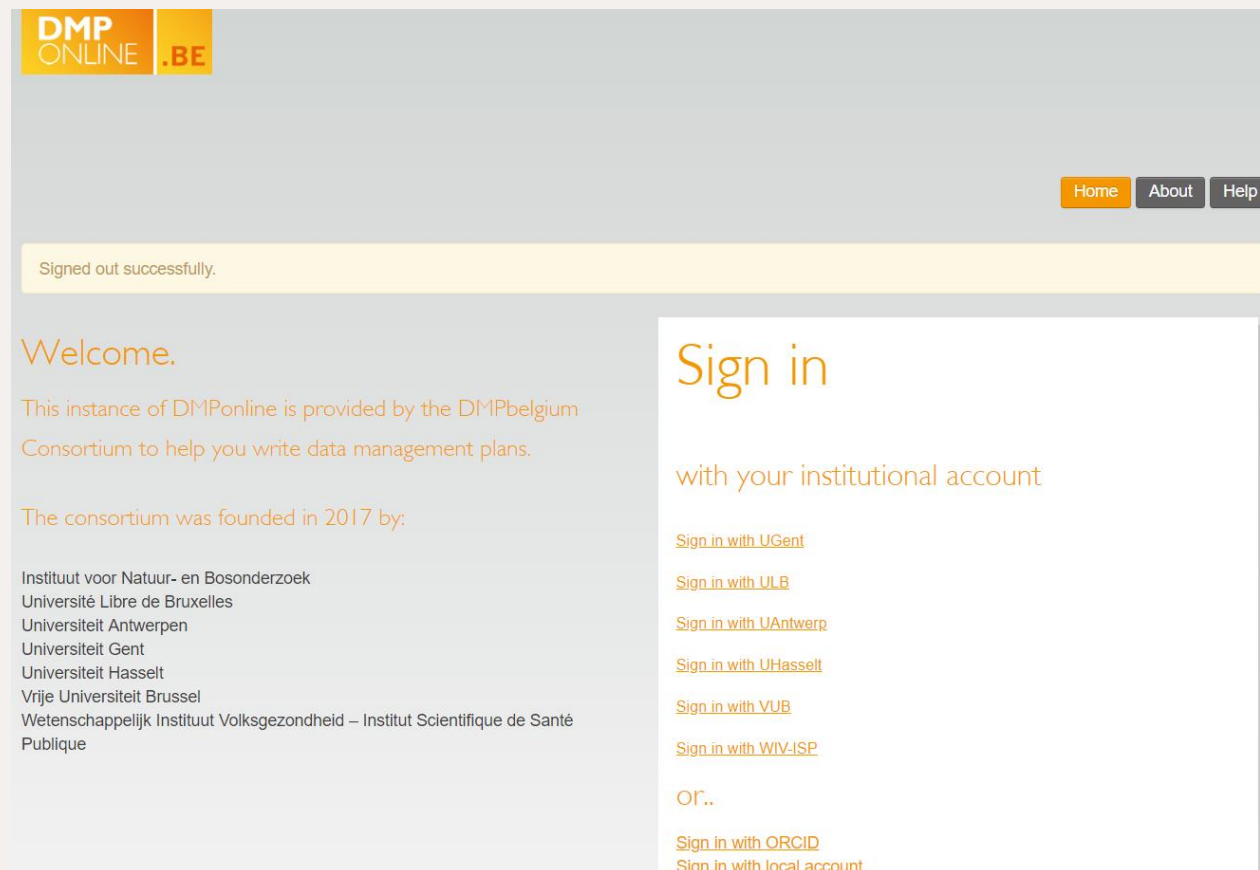
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Data management plan

DMPONLINE.BE

- Software initially developed by Digital Curation Centre (DCC)
- Shared tool for DMP Belgium Institutions, coordinated by UGent
 - 7 founding members, 5 new members in 2018
 - Hosted on BELNET servers



DMP ONLINE .BE

Home About Help

Signed out successfully.

Welcome.

This instance of DMPonline is provided by the DMPbelgium Consortium to help you write data management plans.

The consortium was founded in 2017 by:

Instituut voor Natuur- en Bosonderzoek
Université Libre de Bruxelles
Universiteit Antwerpen
Universiteit Gent
Universiteit Hasselt
Vrije Universiteit Brussel
Wetenschappelijk Instituut Volksgezondheid – Institut Scientifique de Santé Publique

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Data management plan

FWO DMP View all templates

Template details | Application DMP | **Full DMP**

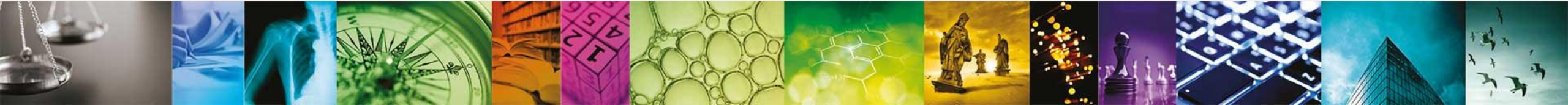
Phase details

Title	Full DMP
Order of display	2
Description	<p>Supervisors of fundamental and strategic basic research projects (from the application round 2018) and PhD/postdoctoral fellows (from the application round 2020) are expected to:</p> <ul style="list-style-type: none">• submit a full DMP no later than 6 months after the start of the research project or the PhD/postdoctoral fellowship• append a final DMP, which may have been updated since the first version of the full DMP, to the final report on the completed research <p>Researchers writing a full DMP for the FWO (both the 6-month and the final DMP) can use this "Full DMP" template.</p> <p>For more information, see the FWO DMP webpage.</p>

Version details

Title	Full DMP version 1
Published	true
Created at	05-03-2018
Last updated	05-03-2018

- 1. General Information +
- 2. Data description +
- 3. Ethical and legal issues +
- 4. Documentation and metadata +



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Massive change of the way research works

Is it Utopia or can RDM be facilitated?



Research Data Management

RECOMMENDATIONS

1. INVEST IN INFRASTRUCTURE

1. Data = intellectual capital
2. EOSC is great, if your data repository is interoperable with this service
3. Data services: 1.000.000 £ set up, 500.000 £ recurrent cost

Q: What data repositories?

Q: Joint supported initiative (DANS) or multiply costs for all research institutions (i.e. 5X Flem. universities,...)

2. INVEST IN EDUCATION

1. RDM skills are lacking: 100.000 data stewards, researchers, ...

Q: If nobody has the skills, how can we make RDM work in a qualitative manner?



Research Data Management

RECOMMENDATIONS

3. PROVIDE CLEAR & UNIFORM LEGISLATION

1. GDPR → Belgian law
2. EU Copyright & TDM reforms

Q: Don't make it complicated for researchers to do research

Q: Provide support

4. PROVIDE INCENTIVES FOR OPEN SCIENCE

1. There's more to (academic) life than publications, IF-factors,... Data = intellectual capital
2. Open data is better than sharing data, sharing data is better than dead data

Q: Provide incentives, re-think evaluation models for research(ers)



RESEARCH DATA MANAGEMENT

INFRASTRUCTURE – EDUCATION – LEGISLATION - INCENTIVES

Flemish level

- Infrastructure
- Cost models
- Code of conduct for scientific research

Institutional level

Comparative review of data repositories

Categories	Software Features	Analyze Boston (CCKAN)	Dryad	figshare	Harvard Dataverse	Mendeley Data	Zenodo
Publishing & Versions	Ability to access older versions of files	Yes	Yes - on data package page	Yes	Yes	Yes	Yes <small>No (though "Communities" are sometimes used to partially fill this function)</small>
Customization	Ability to create a "Dataverse" or Repository bringing together multiple datasets	No	No	Yes	Yes	Planned Q2 18	No
Customization	Ability to customize the look of your "Dataverse" or collection	Yes	No	Yes	Yes	No	No
Customization	Ability to customize the metadata	Yes	No	Yes	Programmable	Yes	No
File Upload & Handling	Ability to embargo files	Yes	Yes	Yes	No	Yes	Yes
Account & User Info	Ability to list your ORCID in your profile (separate from login/auth)	Yes	No	Yes	No	Yes	No
File Upload & Handling	Analyzing tabular data (aside from geospatial mapping)	Yes, basic but linkable	No	Yes	Yes	Yes	No
Interoperability	Are there APIs?	Yes	Yes	Yes	Yes	Yes	Yes
Notifications	Are users emailed about changes to their uploads?	Yes	Yes	Yes	Yes	No	No
Metadata	Automated metadata generation from files	Yes, for descriptive metadata only	Yes, using HIVE, for curators only	Customizable or via API	Yes	Planned Q2 18	No
Account & User Info	Creator webpages	Yes	No	Yes	No	Yes	No
Data storage	Database backend in cloud possible?	Yes (PostgreSQL)	hosted software	hosted software, or cloud (PostgreSQL)	Yes (PostgreSQL)	hosted software	No PostgreSQL + Elasticsearch <small>Database in cloud, Elasticsearch on Amazon S3</small>
Server Infrastructure	Hosted in vendor cloud?	Yes	Yes	Yes, front-end local, database in cloud	Yes, front-end local, database in cloud	Yes (Amazon S3)	Yes <small>Amazon S3</small>



The collaborating members

KULeuven (Hannelore Vanhaverbeke; Joke Claeys)

UAntwerpen (Jord Hanus; Marianne De Voecht)

UGent (Inge Van Nieuwerburgh; Myriam Mertens)

UHasselt (Sadia Vancauwenbergh; Hanne Elsen)

VUB (Lucy Amez; Kyle Van Gaeveren)

With the kind support of

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- nele.robberechts@vlir.be

