



Research Data Management @ UGent

U4 Meeting: Research Data Lifecycle

Dries Moreels & Myriam Mertens, Ghent University Library
3 February, 2016

Overview

1. The beginnings
2. Where are we now?
3. Future plans
4. Challenges

The beginnings

Research Integrity as a starting point

Research Integrity

Working Group (2013-2015)

to prevent scientific misconduct & promote good research practices

Research Integrity Policy Plan (March 2015)

- identifies RDM as a way of enhancing the quality and credibility of research
- university committed to support faculties and researchers via training, tools, infrastructure
- faculties and researchers can develop own initiatives

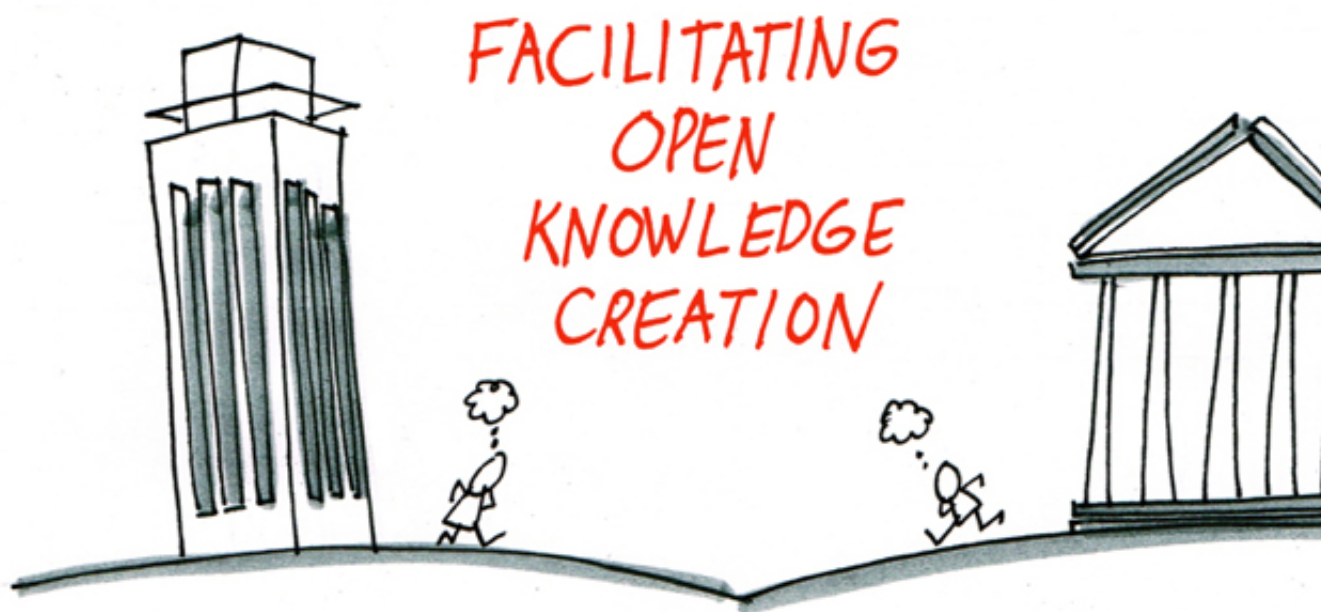
Resulted in many RDM actions

- [pilot](#) project & faculty guidelines in Psychology & Educational Sciences
- mapping/awareness project in Arts & Humanities
- setup RDM Working Group (coordination)
- preparing university-wide RDM policy
- publish [informational webpages](#) (basic information, guidelines)
- raise awareness of good data collection & processing practices in libraries
- advertise support for data preservation & sharing by the library
- exploration of useful tools, e.g. for RDM planning
- encourage uploading of data alongside publications in [institutional repository](#)

Where are we now?

RDM Working Group (since end 2014)

- develop policy & strategy
- oversee implementations & pilots
- UGent Research Director invites:
 - ICT department
 - information security & data protection officer
 - research coordination office
 - technology transfer office
 - university library
 - faculty representatives



[Ghent University Libraries](#)

New role for University Libraries?

- it's in our [mission](#):

facilitating open knowledge creation

- tasked to preserve & unlock UGent scientific output, including research data
- operating the UGent Academic Repository
- commitment to open access & open science

Immediate Deposit/OA Optional Mandate
(since 2003)

- new: research data officer since June 2015

[Education](#)[Research](#)[Faculty offices](#)[About the faculty](#)[Contact](#)

Information for

[>> Students \(Dutch only\)](#)[>> Exchange students](#)

Research Data Management (RDM)

Proper handling of research data is an essential part of the research process, not only from the viewpoint of organisation and collaboration, but also from the viewpoint of scientific integrity (reliability, verifiability and reuse). Background information about the why of data management.

What is research data management?

All actions that result in research data that are safe, findable, accessible and interoperable (FAIR) should relate to the planning, collecting, organising, documenting, storing, processing and sharing of research data.

Data management tools

Since January, 1st of 2015 the faculty supports its researchers with regard to research data management plan and second, there is support for documenting the research data. More information follow the links below

- [Data Management Plan](#)
- [Data Storage Fact Sheets](#)

Questions?

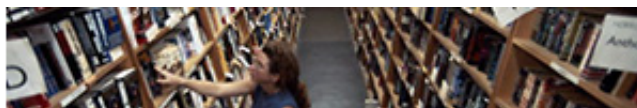
For all your questions with regard to research data management please contact the research data management team.

More information can also be found in the slides presented during the information session on research data management:

- [Slides infosession FPPW pilot](#)
- [Slides workshop Research Data Management 2015](#)

Pilot by Faculty of Psychology & Educational Sciences

- Working Group Data Deposit (2013)
- Note to Faculty Council (2014)
 - collected research data should in principle be accessible for consultation by others (cf. APA guidelines)
 - research data should be preserved in a way that allows reproducing reported results & reuse
- DMP requirement for doctoral students since January 2015
- RDM practices included in evaluation criteria of (tenured) academic staff
- Faculty RDM coordinator provides researcher support



Services

Arts & Humanities Research Data Project

Library Lab

About the library

Contact

u bent hier: [home](#) > [library](#) > [arts & humanities research data project](#)

Arts & Humanities Research Data Project

[in het Nederlands](#)



Digitisation and the internet have created a new dynamic within humanities & concerns about reliability, scalability and reusability of digital data. Research plans in which they outline how their data will be stored, focusing on durability. Philosophy have enough tools to support these developments?

Ghent University is currently looking into these issues on several levels. This humanities scholars within the faculty.

Arts & Humanities Research Data Project (2014-2015)

A presentation on the importance of research data management and the role of the Scientific Research Commission on April 24, 2014, was the start of this project. The faculty library & Humanities Research Data project. In this project, an overview of all available research data is made. More information on the state of (digital) humanities research projects.

The project started in **September 2014** and ends in **April 2015**, with financial support from the University of Ghent.

A survey will try to map out both the types of data that currently exist at the faculty and the past digital project management. The survey was set up using international standards for the Humanities project, and the Dutch DANS-project, which specialises in data archiving.

The survey outcomes and the resulting report will form the basis for further research in collaboration with the University Research department, other faculties, the Scientific Research Commission and the Faculty of Letters and Philosophy.

Project results will be presented to the Scientific Research Commission at the end of the project.

Survey

■ **Print**

Faculty of Arts & Humanities Research Data Project (2014- 2015)

- faculty library initiative (digital humanities research support)
- chart digital data assets & current RDM practices
- via survey & in-depth interviews
- report to guide development of faculty policy

biblio.ugent.be

- academic bibliography & institutional repository of Ghent University
 - metadata of all publications (academic CV)
 - upload of fulltext (mandatory since 2007)
- new: data uploads to complement fulltext
 - max. 200MB per upload
 - open access or limited access (typically "UGent only")
 - embargo possible
 - no other requirements, deposit procedures

Upload document

File*

☒ Upload file:

Bladeren...

Geen bestand geselecteerd.

☐ Upload from internet location:

Filename for new file:

Kind of file*

dataset

Access Level*



check publisher self-archiving policy with Romeo

☒ Open access (the file is freely available, effective immediately)

☐ Only in UGent Network

☐ Only Author/Reviewer/Administrator

☐ Switch automatically to open access on this day (YYYY-MM-DD):

Submit

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Determinants of acceptance and subsequent uptake of the HPV vaccine in a cohort in Eldoret, Kenya

Heleen Vermandere [UGent](#), Violet Naanyu, Hillary Mabeya, Davy Vanden Broeck [UGent](#), Kristien Michielsens [UGent](#) and Olivier Degomme [UGent](#) (2014) *PLOS ONE*. 9(10).

[Mark](#)

abstract

The development of Human Papillomavirus (HPV) vaccines provides new opportunities in the fight against cervical cancer. Many acceptability studies have revealed a high interest in these vaccines, but acceptance is only a precursor of behavior, and many factors, at the personal, community and provider level, may inhibit the translation of willingness to vaccinate into actual uptake. Through a longitudinal study in Eldoret, Kenya, HPV vaccine acceptability was measured before the implementation of a vaccination program (n=287) and the actual vaccine uptake, as reported by mothers, once the program was finished (n=256). In between baseline and follow-up, a pilot HPV vaccination program was rolled out via the GARDASIL Access Program, in which parents could have their daughter vaccinated free of cost at the referral hospital. The program was promoted at local schools: health staff informed teachers who were then asked to inform students and parents regarding cervical cancer prevention and the vaccination program. Even though baseline acceptance was very high (88.1%), only 31.1% of the women reported at follow-up that their daughter had been vaccinated. The vaccine was declined by 17.7%, while another 51.2% had wanted the vaccination but were obstructed by practical barriers such as a lack of information or time constraints. Being

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[download dataset](#)

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59.09 KB

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example article with dataset in Biblio

DMPonline.be

- [online](#) RDM planning tool
- based on open source software by DCC
- available for Ghent University users since November 2015
- pilot for a fully localised version for Belgian research institutions

My plan (Horizon 2020 DMP)

0/5 questions answered

approx. 20% of available space used





[Plan details](#)[6-month DMP](#)[Later-stage DMP](#)[Share](#)[Export](#)

Data set reference and name (1 question, 0 answered)

Data set description (1 question, 0 answered)

Standards and metadata (1 question, 0 answered)

What standards will be used?

B *I*    

Save

Not answered yet

Guidance [Add comment](#)

Guidance

[UGent guidance on Data Format](#)

[UGent guidance on Data Capture Methods](#)

[UGent guidance on Documentation](#)

[UGent guidance on Metadata](#)

Data sharing (1 question, 0 answered)

Archiving and preservation (including storage and backup) (1 question, 0 answered)

RDM training

- DMPonline.be training sessions
 - in pilot faculties (December 2015)
 - others following: Economics, Bio engineering
- start of general training for PhD students via Doctoral Schools (February & March 2016)
- doubles as requirements gathering for further RDM infrastructure
 - 1 on 1 data interviews
 - based on DAF methodological framework

UGent RDM policy development

- started in 2013 within framework of Research Integrity
- various initiatives at central & faculty level
- growing involvement of university libraries

growing awareness that RDM is more than integrity issue:

- also focus on benefits of data reuse and open science
- integrate issues of digital preservation
- consequences for ICT infrastructure

Key principles of UGent RDM policy

- RDM is an essential component of responsible research conduct
- research data are a valuable form of scientific output that should be made openly available
- (temporarily) restricting access may be necessary under certain circumstances

RDM is a shared responsibility

- university-wide services & infrastructure
e.g. mechanisms for storing, archiving, sharing data, general support & training
- faculties: domain-specific guidelines, procedures & support
- individual researchers: adopt RDM standards



Figure from [S. Jones, G. Pryor & A. Whyte \(2013\), "How to Develop Research Data Management Services - a guide for HEIs". DCC How-to Guides. Edinburgh: Digital Curation Centre, p. 5.](#)

Future Plans

Detailed institutional roadmap

- consolidate existing expertise
- complete requirements analysis
- establish systematic RDM policy framework
- coordinate actions accordingly
 - incremental but coherent approach
 - clarifying roles
 - planning for staff and material cost

Development of services

- roll out & further develop [DMPonline.be](https://dmponline.be)
- expand [RDM webpages](#) & general training
- stimulate sound management of active data with [online platforms](#) for storage, processing, sharing of dynamic data, with version control & access rights management
(e.g. cloud storage, github...)



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Access **project data** ranging from visits over time to
top referring websites.

Registration

Preserve the state of a project at
its lifecycle such as the onset of



FAIR Data Principles

Preamble

One of the grand challenges of data-intensive science is to facilitate knowledge by assisting humans and machines in their discovery of, access to, integration of, and task-appropriate scientific data and their associated algorithms and workflows. We describe **FAIR** - a set of guiding principles to make data **Findable, Accessible, Interoperable, and Re-usable**.

To be Findable:

- F1. (meta)data are assigned a globally unique and eternally persistent identifier.
- F2. data are described with rich metadata.
- F3. (meta)data are registered or indexed in a searchable resource.
- F4. metadata specify the data identifier.

To be Accessible:

- A1 (meta)data are retrievable by their identifier using a standardized communication protocol.
 - A1.1 the protocol is open, free, and universally implementable.
 - A1.2 the protocol allows for an authentication and authorization process when necessary.
- A2 metadata are accessible, even when the data are no longer available.

[FORCE11: fair data principles](#)

Adapting Biblio: more data-centric approach

- searchable register of institutional research data production (metadata)
- ensure access to the "long tail" of datasets & accompanying documentation
- link to related publications persistent identifiers for datasets

evolve into a full research data catalogue & repository

LibreCat

Open Tools for Library and Research Services



Introducing LibreCat

Our goal is to provide the open source set of programming components to build up digital libraries and research services that meet your local needs.



Unlock Research

As science evolves towards the principles of openness so digital library and research services will. LibreCat provides powerful tools to collect, distribute and present scientific output that matters.



Agile Development

Let's put agility on the menu and meet demands on time. We work to unify library workflows in accordance with research and administrative requirements. For this aim, we build on strong solutions.



Interoperability

We avoid multiple input formats and respects digital library standards with the fast growing large research services to make research services to make

librecat.org

Challenges

1. Specific national context

- no funder requirements (yet)
- no obvious centre of expertise

2. Specific institutional context

- decentralised organisation model
- new partnerships required for service delivery
- challenging budgetary climate

3. Complexity of research data

- legal status not straightforward
- what about analogue data?
- what about data requiring restricted access regimes?

4. Great variety of research cultures

- long tradition of data sharing in some fields; hostility in other fields
- balancing domain-independent and domain-specific support

5. "Forever Cost" of Digital Preservation

- acceptable file formats?
- different versions of datasets?
- access regimes & data licensing?
- appropriate metadata?
- deposit procedures (e.g. copyright statements)?
- submission reviews (e.g. metadata accuracy, formats)?
- data validity?
- interoperability with research equipment such as GitHub, Taverna... ?

6. Evolving role of the university libraries

- RDM as a "natural" extension of existing interests & activities

e.g. preserving & sharing scientific output, open access movement

- library involvement in RDM also has "natural" limits

e.g. good RDM practices change the research internal processes

- RDM presents opportunities & challenges to library staff
- new partnerships with researchers