Belgian Case Study on Open Access to Data

4.1. Overview of the initiative

**Name of initiative:**
DMPbelgium Consortium

**Objective**
Support of researchers in Belgium in meeting funder or institutional requirements regarding research data, in particular, the use of DMP's as required by the H2020 Research Data Pilot, ERC, the Flemish funder FWO and others. The initiative also intends to stimulate researchers to better manage and open up their research data. The main initiative vehicle is a Website featuring collected DMP's (https://dmponline.be/).

**Type (strategy, policy, bill of law,...)**
Strategy

**Responsible policy making bodies**
Bottom-up institutional library led initiative

**Leading Ministry / Agency:**
Ghent University

**Relevant Ministries/ Agencies:**
Belgian Science Policy Office (BELSPO) as an observing member of the General Assembly.

**Responsible implementing bodies:**
- Instituut voor Natuur- en Bosonderzoek
- Université Catholique de Louvain
- Université de Liège
- Université de Mons
- Université de Namur
- Université Libre de Bruxelles
- Universiteit Antwerpen
- Universiteit Gent
- Universiteit Hasselt
- Vlaamse Instelling voor Technologisch Onderzoek
- Vrije Universiteit Brussel
- Wetenschappelijk Instituut Volksgezondheid – Institut Scientifique de Santé Publique

All Belgian universities are members except Katholieke Universiteit Leuven (KUL) which boasts its own DMponline section.

**International reference framework:**
DMPbelgium hosts a local section of the DMponline application which was developed by the UK's Digital Curation Centre.

**Target audience (multiple institutions and stakeholders):**
Researchers of all mentioned RPO's
**Total duration of initiative:**
Unlimited

**Total budget of initiative:**

The project is based on partner subscription.

The total expenses for 2017 amounted to € 28.000.
The expenses in the current version of the 2018 budget amount to € 31.000.
For 2019, total expenses will be significantly higher at € 56.000. This mainly reflects a substantial
increase for work to be done for a tentative software update which seems desirable in light of
international developments in the field of DMPs and DMP tools. This may be paid for if the
consortium attracts new partners and/or if we obtain external funding. If not, the existing partner's
variable cost contributions will increase.

- Annual membership contribution
  - € 2000/year (1 Jan-31 Dec)

- Remaining project costs (variable costs)
  - split between members with > 250 FTE researchers
  - payable amount proportional to FTE researcher counts (based on VLIR/CREF personnel
    statistics or ad hoc counts)

- Other funding sources
  - consortium may seek external funding to finance tasks
  - consortium may accept offers for sponsored development of tasks

- Mandatory overhead costs
  - 17% (UGent coordinates budget & invoices members)

- VAT
  - 21%

Only the larger institutions (i.e. those with > 250 FTE researchers) contribute to the variable costs
as they can create value for more researchers and generate more traffic to the servers. The
payable amount is proportional to their researcher counts in FTE (based on VLIR/CREF personnel
statistics or ad hoc counts). The consortium may also seek external funding or accept offers for
sponsored development of tasks, but so far, they have not had access to such extra funding sources
and have been paying for everything themselves.

**Sectoral focus (if relevant):**
Public Sector

**Type of data concerned:**
Research data

**Target audience (scientific community, business, civil society, general public):**
All of the above + government
Expected results:
Growth of the user base
Development of additional DMP templates
Attaining Open Access through good data management

4.2. Rationale, motives and key drivers

The origins of DMPbelgium can be traced back to 2015, when Ghent University installed a local instance of the open source DMPonline software (developed by the Digital Curation Centre in the UK) to meet the local demand for data management planning tools, and as a pilot for a common DMP-writing platform in Belgium. In October 2017, DMPonline.be was indeed launched by the founding members INBO, UAntwerpen, UGent, UHasselt, ULB, VUB and WIV-ISP as a shared tool for institutions within the DMPbelgium consortium.

The aim of the consortium project is to develop the website DMPonline.be into a shared tool for all participating institutions’ researchers to share, and to support them with the drafting of effective data management plans (DMPs).

Properly managing research data starts with good planning. A DMP is a document specifying how data will be handled both during and after a research project. It identifies key actions and strategies to ensure that research data are reliable, safe, sustainable and – where possible – accessible and reusable. Within the international research community, DMPs are increasingly recognized as best practice for any research project generating data. Moreover, a growing number of funding bodies now require researchers to produce a DMP as part of the grant proposal process, or after funding has been approved.

DMPonline.be takes users step-by-step through a number of data management questions based on a relevant DMP template, and also provides guidance to help them interpret and answer those questions. Templates and guidance can be added for the institution as a whole, or can be associated with a specific faculty (or other subgroup) within the institution, or an external research funder (e.g. the European Commission’s Horizon 2020 DMP template). From the landing page, users can easily create, edit, share, export and delete their plans.

All universities and scientific institutes wish to provide their researchers with data management planning support, but they do not all require private software tools for that. Both in the USA and the UK, universities have successfully started to self-organize and create joint service providers for DMP support. Moreover, a similar trend towards ‘national’ DMPonline platforms can be observed in other countries as well (including France, Denmark, Finland, Germany, Canada...).

DMPbelgium is not geared towards policy making but is definitely contributing to both crystallizing RDM strategy and nation-wide consulting about ORD matters in a broader sense than just DMP’s. The underlying purpose of Open Access is inherent to the initiative. DMPbelgium acts as a sounding board to policy making regional and federal authorities.

DMPbelgium is a consortium to leverage the existing open source software products for DMPs and to manage a shared DMP service, hosted on Belnet servers. Belnet is the Belgian national research network that provides high-bandwidth internet connection and services to Belgian universities, colleges, schools, research centers, and government departments.
This platform offers all researchers from participating institutions common funder DMP templates relevant for the Belgian research context (ERC, H2020, FWO,...) alongside institutional templates and guidance. Through a collaborative approach, a duplication of efforts can be avoided, costs can be saved and expertise can be shared for the maintenance and further development of the tool (e.g. processing of new releases, development of new features...).

Has any link been planned between DMPbelgium initiatives and setting up a data repository infrastructure? The consortium has so far focused on providing a tool for data management planning, not so much out of principle, but because data repositories take us into a much more complex and expensive domain. The Flemish government is actually looking into data repository infrastructure at the moment (EWI has tendered for a study). Although DMPbelgium could in theory move into this area as well, realising something on a national level will probably require working from the ground up rather than going via the administrative route.

The draft consortium agreement stipulates that a meeting will be held at least once every 6 months. General Assemblies can be in-person or virtual meetings.

### 4.3. Governance

As far as the organisation of work in the consortium is concerned, tasks are shared between partners, with backups for some tasks to avoid that any one institution bears sole responsibility. The General Assembly, in which each partner is represented, is in charge of managing the project and consortium, with UGent acting as coordinator. One policy maker, the Federal Science Policy Office is observing member although close ties are maintained with the Flemish and French university rector’s Councils VLIR and CRef. Application management is taken care of by organisation admins (at least 1 person per partner), who provide institutional customisations and support local end users, as well as by superadmins, who provide support to the organisation admins and look after application-wide aspects (e.g. shared funder templates). UGent provides one superadmin, with ULB as a backup. UGent is also tasked with software development, with UAntwerpen as a backup.

Some of the key points in the draft agreement are that DMPonline.be is a joint service for which all partners share responsibility (i.e. it is not a software product or service being sold), but on a best-effort basis rather than with a service-level guarantee; that the General Assembly is the consortium’s main decision-making body, which can take valid decisions with a 2/3 quorum and 2/3 majority of votes cast, although some decisions require unanimous votes or a positive vote from the coordinator (e.g. as UGent has not charged for the initial investment made during the pilot phase, it follows that the consortium cannot be run without UGent unless it agrees); that decisions to be taken by the General Assembly include the annual work plan & budget and the entry/withdrawal of consortium partners; and that the coordinator acts as an intermediary between consortium partners as well as between the consortium and third parties, and performs additional tasks such as chairing the General Assembly meetings and producing minutes, drafting the annual budget, sending invoices and collecting membership fees & variable costs from partners, and concluding and executing contracts with suppliers/subcontractors on the consortium’s behalf.
4.4. Process

2015-2016: Pilot stage

As mentioned above, Ghent University Library installed a local instance of the open source DMPonline software (version 4.1), an application for data management planning originally developed by the UK’s Digital Curation Centre. This local version was launched as DMPonline.be in November 2015 to assist Ghent University researchers with drafting DMPs (anyone with a valid UGent username and password can sign in and use it).

From its inception, DMPonline.be was also set up as a pilot for a fully localised, collective version of the tool for research institutions in Belgium. To enable that, possibilities for collaboration were discussed in a number of settings, e.g. at the regional Flemish Interuniversity Council (VLIR) working group on research data management, at open access networking events and at a number of university libraries’ meetings.

2017: Move to Belnet

The software was moved to Belnet servers. Sysadmin and software development involved staff from 2 consortium members, to ensure knowledge sharing in the consortium.

Software was enriched with a number of features:
- Set up organization admin for each consortium member
- Enable shibboleth login within the Belnet Identity Federation
- Enable login with local accounts and ORCID
- Enable sharing of DMPs with ORCID-identified researchers
- Set up announcement lists for users per consortium member

The consortium was formalized by the drawing up and signing of a consortium agreement, with UGent as consortium coordinator. This agreement also outlined how new partners are to enter the consortium. A Code of Conduct for people involved in the administration of the software was set by the consortium.

2018: Growth of the consortium

As more institutions recognize the need for DMPs and show an interest in DMPonline.be, more institutions are and will be included in the platform. As of July 1, 2018, 4 French language universities 5 new consortium partners: (UCLouvain, ULiège, UMons, UNamur) and one RPO, the Flemish Institute for Technological Research (VITO) will be activated as new consortium partners, but more could follow, among which possibly federal Scientific Institutions.

Future: Upgrade to DMProadmap

A fundamentally new version of the open source software used by the consortium is currently in development by the Digital Curation Centre and the California Digital Library. It will contain enhancements for users, more admin features and an API. Also, core components of the IT framework will be updated.

Moving DMPonline.be to the new codebase will entail some IT effort. This can be planned for 2019 at the earliest.
Delays and setbacks

Generally speaking a lack of mobilisation capacity at the national level, due to the fragmentation of competences inherent to the Belgian institutional construct contrives bottom-up initiatives like DMPbelgium to substitute for non-existing national authorities. Considering the advances in digital and ‘Open’ initiatives in neighboring countries, one may assume this situation to have caused delays in Belgium.

Furthermore, French language universities, except for ULB, have not been as prompt in joining as Flemish language universities have.

4.5. Adoption and implementation of the initiative

Final design of the initiative: main policies, regulations...

DMPbelgium still has a draft agreement and no final signed contract between the consortium founding members. The draft is based on the DESCA Horizon 2020 Model Consortium Agreement, which was adapted to suit DMPbelgium’s purpose, i.e. providing a service as a consortium (rather than producing a particular research result). The UGent legal team has made some changes, but some issues remain to be finalised. What this means in practice is that the consortium is operational while the contract is still being negotiated. The coordinator is currently sharing a clean draft of the text as it stands with all consortium partners, so they can have a look at it and provide comments if they wish. To be compliant with the GDPR and the Code of Conduct for the Géant network (in which DMPbelgium is a service provider), a Privacy Notice will be made available on the DMPonline.be website shortly.

In terms of application management, the new organisation admins already have access to the preview environment of DMPonline.be, where they can experiment with the tool. Moreover, 2 training sessions were organised in the past couple of weeks to introduce the admins to the application and explain how they can customise the tool for their institutions using the admin GitHub.

DMPonline.be has an ORCID integration to enable the sharing of DMPs with researchers who don’t belong to one of the consortium's institutions, as well as to allow sign-in with ORCID credentials (in addition to shibboleth single sign-on). We have now switched from the ORCID public API to the member API, which uses a more trustworthy protocol and allows us to read email addresses from people who prefer not to make their email address public in their ORCID record.

Performance indicators

The obvious performance indicator would be the number and the increase of DMP’s uploaded but maybe also the speed at which users will be able to register, create a plan, share, download, adapt, etc. The usability of the tool could furthermore be rated.

Delays and setbacks

A major incident occurred in December 2017 due to a power outage and subsequent damage to the Belnet cloud system. This caused significant downtime for DMPonline.be in late 2017/early
2018, as moving forward from the temporary solution that was initially put in place proved an arduous process. This incident in any case alerted us to the issue of High Availability (i.e. having the service available even if the server is down), and the coordinator is currently discussing options with Belnet to avoid such an outage in the future. The advantage of looking at Belnet for a solution is that DMPbelgium wouldn’t have to use a commercial data center and move data outside of the Belnet firewall. This option would in other words amount to running more instances within Belnet, so that no incident in one Belnet data center could take the tool down - although a major incident in the Belnet network or in multiple Belnet data centers could still cause problems. If DMPbelgium wants to rule out the latter scenario, it would need to turn to an independent data center outside Belnet, which would be more expensive (e.g. this would include a secure line to that data center).

4.6. International aspects

As mentioned above, DMPbelgium depends on a UK produced software. The Digital Curation Center is very much geared towards international collaboration and dissemination and provides tailored solutions for both developers and users abroad. Moreover, they lately joined up with the DMP Tool Consortium in the USA. They are developing a single code basis from which to further operate their services. Because it is an open source project, the DCC was able to build on the contributions of others such as the Portage Group in Canada and Inist-CNRS in France.

There has been some discussion about DMPbelgium's potential relation with the European Open Science Cloud (EOSC). Could it be a stakeholder, or should seek to join a larger consortium in response to EOSC calls that require cooperation on a bigger scale? DMPbelgium is currently not directly involved in EOSC. However, ELIXIR Belgium (the national node in the European ELIXIR network for life sciences infrastructure that unites many of the same institutions as the DMPbelgium consortium) has asked DMPbelgium to write a letter of support for a grant application as they wish to collaborate with DMPbelgium on RDM and DMPs. ELIXIR participates in the EOSC pilot project.

The main incentive to engage into DMP related initiatives derives from funder requirements, starting with the H2020 framework program.

4.7. Monitoring and evaluation

Possible issues to explore

- The monitoring and evaluation framework for the initiative, including responsible organisation, methodology, transparency and fund allocation
- The criteria and key indicators for evaluating the initiative (including key performance indicators and targets).
- The role of the evaluation in improving the design of the initiative, i.e. how can the result of evaluation lead to revisions in the policy design?
- Impact assessment on end users (if available): how does the initiative improve the access to data and re-use thereof?
- The limitations of and challenges for monitoring and evaluation, due to its complex, dynamic and long-term nature.
- Please quote any monitoring or impact assessment documents available, and the main outcomes achieved.
4.8. Lessons and Challenges ahead

Possible issues to explore
- The degree of attainment of the objectives
- Main achievements of the initiative in terms of process and end results
- Transferability: how relevant is this case study for implementation in other OECD member and partner countries?

Demand for the DMPonline software has proven to be high throughout Europe and also outside Europe, setting a basis for transferability.