A Data Management Plan created using DMPonline.be

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Template: VLAIO cSBO DMP (Flemish Standard DMP)

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Project abstract:

This follow-up cSBO will lay the first scientific fundaments to assess the potential of solvent-stable polymeric and functionalized ceramic nano- and ultrafiltration membranes to separate and clean polymers in solvent environments towards high-end recycling.

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VLAIO DMP (Flemish Standard DMP)

1. Research Data Summary

List and describe all datasets or research materials that you plan to generate/collect or reuse during your research project. For each dataset or data type (observational, experimental etc.), provide a short name & description (sufficient for yourself to know what data it is about), indicate whether the data are newly generated/collected or reused, digital or physical, also indicate the type of the data (the kind of content), its technical format (file extension), and an estimate of the upper limit of the volume of the data.

Dataset name/ ID	Description	New or reuse	Digital or Physical data	Data Type		Data volume	Physical volume
Lab notes	Description of the practical execution of experiments	New	Digital and if Physical they will be digitalized as materials and methods sections	Observational and Experimental	.docx	<100 GB	5-10 note books
Filtration results	Uv-vis spectral data, pemeance gravimetrical data, GPC chromatograms	New	Digital	Experimental	.xlsx	<100 GB	
Membrane characterization	FTIR, PALS, ERD, porometry, microscopy	New	Digital	Experimental	.xlsx, .jpg, .tiff	<1TB	
Polymer property database	Mechanical and chemical analysis, creation of a material data sheet	New	Digital	Experimental	.docx, .xlsx	<100 GB	
Permeate and recovered polymer characterization	TGA, turbidity, volume rate, DSC, NMR, FTIR, Pyro-GC	New	Digital	Experimental	.xls, .jpg	<100 GB	

If you reuse existing data, please specify the source, preferably by using a persistent identifier (e.g. DOI, Handle, URL etc.) per dataset or data type:

n.a.

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? Describe these issues in the comment section. Please refer to specific datasets or data types when appropriate.

• No

Will you process personal data? If so, briefly describe the kind of personal data you will use in the comment section. Please refer to specific datasets or data types when appropriate.

No

Does your work have potential for commercial valorization (e.g. tech transfer, for example spin-offs, commercial exploitation, ...)? If so, please comment per dataset or data type where appropriate.

• Yes

Some data generated during the project might have potential for tech transfer and valorization. All partners have a legal unit which can provide

advise on how to protect the data in the best possible way without compromising scientific communication. Each partner will retain ownership of its own intellectual properties.

Do existing 3rd party agreements restrict exploitation or dissemination of the data you (re)use (e.g. Material/Data transfer agreements/ research collaboration agreements)? If so, please explain in the comment section to what data they relate and what restrictions are in place.

No

Are there any other legal issues, such as intellectual property rights and ownership, to be managed related to the data you (re)use? If so, please explain in the comment section to what data they relate and which restrictions will be asserted.

• No

2. Documentation and Metadata

Clearly describe what approach will be followed to capture the accompanying information necessary to keep data understandable and usable, for yourself and others, now and in the future (e.g., in terms of documentation levels and types required, procedures used, Electronic Lab Notebooks, README.txt files, Codebook.tsv etc. where this information is recorded).

KU Leuven: The data files will be named using a standardized naming system, including date of the experiment, name of the researcher, sample code,... The used codes will correspond to the codes used in the lab notebooks. An index or table of content file will be provided with the explanation of each code and a short description of each related project. In this index, also a link will be embedded to the data file location.

VITO: The data will be documented according to existing community standards. In addition to the raw data, experimental and procedural descriptions of the data collection are added in the form of pdf files and a physical or electronic laboratory notebook. These descriptions will be supplemented with metadata information such as the date and name of the electronic files containing the raw data. Promising results will be published in international peer reviewed journals, except for patented and confidential information.

Centexbel: The data files will be named using a standardized naming system, including date of the experiment, name of the project and processing method, sample code,... The used codes will correspond to the codes used in the lab notebooks. An index or table of content file will be provided.

UGENT: The data will be named using an internal naming system, including date of the experiment and sample code. An index will provide the information of the test for each code name.

Will a metadata standard be used to make it easier to find and reuse the data? If so, please specify (where appropriate per dataset or data type) which metadata standard will be used. If not, please specify (where appropriate per dataset or data type) which metadata will be created to make the data easier to find and reuse.

No

3. Data storage & back-up during the research project

Where will the data be stored?

KU Leuven: OneDrive

VITO: dedicated SharePoint and servers.

Centexbel: OneDrive UGENT: OneDrive

How will the data be backed up?

KU Leuven: Via OneDrive. Additional backup on KU Leuven servers every 4 months.

VITO: All data will be saved on the VITO file server and a dedicated Sharepoint and handles in accordance with VITO information security guidelines. Security updates will be regularly performed, back-ups will be made on a daily base and preserved for two months. Every two months, a complete back-up will be performed. All data will be retained until deletion (infinite period) with a minimum preservation term of 5 years.

Centexbel: OneDrive

UGENT: OneDrive (automatic saving) and in the LCPE sharepoint (every 6 months).

Is there currently sufficient storage & backup capacity during the project? If yes, specify concisely. If no or insufficient storage or backup capacities are available, then explain how this will be taken care of.

• Yes

Storage capacity can be extended upon request. The ICT departments of the institutes arrange regular automatic back-ups of several types.

How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

KU Leuven: Data will only be stored on OneDrive and the internal KU Leuven drives. Both are only accessible through a 2-step authentication protocol (password and KU Leuven authenticator)

VITO: The data will be kept secure by the regulations and recommendations of the organisation's IT services, including anti-malware software, cloud storage and redundancy, tow-factor authentication, network updates, etc.

Centexbel: Data will only be stored on OneDrive and the internal Centexbel drives. Both are only accessable through a 2-step autentication protocol (password and Centexbel authenticator)

UGENT: Data will only be stored on OneDrive and the internal LCPE sharepoint. Both are only accessible through a 2-steps authentication protocol (UGent password and authenticator app)

What are the expected costs for data storage and backup during the research project? How will these costs be covered?

OneDrive is free of charge.

VITO: Costs will be covered by overhead kept by central administration of respective organisations.

UGENT: no costs are associated to OneDrive or LCPE sharepoint.

4. Data preservation after the end of the research project

Which data will be retained for at least five years (or longer, in agreement with other retention policies that are applicable) after the end of the project? In case some data cannot be preserved, clearly state the reasons for this (e.g. legal or contractual restrictions, storage/budget issues, institutional policies...).

KU Leuven: All data will be preserved for 10 years according to KU Leuven RDM policy

VITO: All data mentioned before will be kept.

Centexbel: All data will be preserved and archived after the project.

UGENT: All data will be archived.

Where will these data be archived (stored and curated for the long-term)?

KU Leuven: On internal KU Leuven servers for large volume data storage

VITO: On the same dedicated Sharepoint and server systems as mentioned before.

Centexbel: On internal Centexbel servers for large volume data storage

UGENT: n the LCPE sharepoint

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?

KU Leuven: The costs for long term data storage are 50 euro per TB per year.

VITO: Costs will be covered by the overhead taken by the central administration of the institutes.

Centexbel: server costs are foreseen in the annual budget and taken into account.

UGENT: there are no costs associated with the sharepoint.

5. Data sharing and reuse

Will the data (or part of the data) be made available for reuse after/during the project? In the comment section please explain per dataset or data type which data will be made available.

• Yes, in a restricted access repository (after approval, institutional access only, ...)

VITO: Yes, data relevant for communication and publication.

If access is restricted, please specify who will be able to access the data and under what conditions.

All researchers and PI will have access at all time to the data. Externals can get access to the data upon approval of the PI. All Centexbel coworkers will have access at all time to the data. Externals can get access to the data upon approval.

Are there any factors that restrict or prevent the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)? Please explain in the comment section per dataset or data type where appropriate.

• Yes, Intellectual Property Rights

Only data with potential IP protection will be restricted to the consortium members and will not be published before filing a patent.

Where will the data be made available? If already known, please provide a repository per dataset or data type.

KU Leuven: RDR (Research Data Repository)

VITO: Scientific publications (open access if possible) or patents, dedicated repositories, non-published data will remain only accessible by dedicated staff from respective institutes.

UGENT: Scientific publications and/or patents. Non-published data will be accessible by staff involved in the project, or upon request and approval, by staff within LCPE.

When will the data be made available?

Upon publication of research results

Which data usage licenses are you going to provide? If none, please explain why.

CC-BY 4.0 (data)

Data Transfer Agreement (restricted data)

Do you intend to add a PID/DOI/accession number to your dataset(s)? If already available, you have the option to provide it in the comment section.

• No

What are the expected costs for data sharing? How will these costs be covered?

KU Leuven: RDR free for 50 GB

VITO: paid by overhead on organisational level.

UGENT: there are no costs associated with the sharepoint

6. Responsibilities

Who will manage data documentation and metadata during the research project?

Sareh Rezaei Hosseinabadi, Sutapa Roy Swarna, Zahra Bozorgmehr, Elisabetta Carrieri, Ruben Denolf, Shreyas Gujar, Thien Nguyen Luu Minh, Efecan Pakkaner, Stijn Corneillie, Rim Bitar, Isabel De Schrijver

Who will manage data storage and backup during the research project?

Laurens Rutgeerts, IT Centexbel, Elisabetta Carrieri

Who will manage data preservation and sharing?

Laurens Rutgeerts, Isabel De Schrijver, Elisabetta Carrieri

Who will update and implement this DMP?

Laurens Rutgeerts, Isabel De Schrijver, Elisabetta Carrieri

GDPR

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Have you registered personal data processing activities for this project?

• No

DPIA

DPIA

Have you performed a DPIA for the personal data processing activities for this project?

• No