FWO DMP Template

Project supervisors (from application round 2018 onwards) and fellows (from application round 2020 onwards) will, upon being awarded their project or fellowship, be invited to develop their answers to the data management related questions into a DMP. The FWO expects a **completed DMP no later than 6 months after the official start date** of the project or fellowship. The DMP should not be submitted to FWO but to the research co-ordination office of the host institute; FWO may request the DMP in a random check.

At the end of the project, the **final version of the DMP** has to be added to the final report of the project; this should be submitted to FWO by the supervisor-spokesperson through FWO's e-portal. This DMP may of course have been updated since its first version. The DMP is an element in the final evaluation of the project by the relevant expert panel. Both the DMP submitted within the first 6 months after the start date and the final DMP may use this template.

1. General Information	
Name applicant	**Jannick Vercammen**
FWO Project Number & Title	1263522N - Dehydrogenative, electrochemical coupling reactions of aromatics with transition metal containing zeolites as catalysts.
Affiliation	☒ KU Leuven ☐ Universiteit Antwerpen ☐ Universiteit Gent ☐ Universiteit Hasselt ☐ Vrije Universiteit Brussel ☐ Other:
2. Data description	
Will you generate/collect new data and/or make use of existing data?	☒ Generate new data ☐ Reuse existing data

Describe the origin, type and format of the data (per dataset) and its (estimated) volume *If you **reuse** existing data, specify the **source** of these data.* *Distinguish data **types** (the kind of content) from data **formats** (the technical format).*	Procedures for performing reactions, for synthesizing catalysts and initial observations of these experiments will be gathered. The results of such reactions will result in raw data files containing chromatographic data (GC-FID, GC-MS, NMR) and materials characterization data (XRD, physi- and chemisorption data or spectroscopic analysis via NMR, EPR etc). These will be processed in excel files, summaries and presentations, finally culminating in manuscripts and/or patents. The combined virtual volume of these datasets will be limited (<10 GB), and will consist mostly of data files containing GC chromatograms (up to 5 GB).

3. Ethical and legal issues	
Will you use personal data? If so, shortly describe the kind of personal data you will use AND add the reference to your file in your host institution's privacy register. *In case your host institution does not (yet) have a privacy register, a reference is not yet required of course; please add the reference once the privacy register is in place in your host institution.*	☐ Yes ☒ No If yes: - Privacy Registry Reference: - Short description of the kind of personal data that will be used:
Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? If so, add the reference to the formal approval by the relevant ethical review committee(s).	☐ Yes ☒ No If yes: - Reference to ethical committee approval:

Does your work possibly result in research data with potential for tech transfer and valorisation? Will IP restrictions be claimed for the data you created? If so, for what data and which restrictions will be asserted?	☒ Yes ☐ No If yes, please comment: The methods and reactor configurations developed in this project have potential for valorization, which will be subjected for discussion during the project. Patents will be submitted, transferred and valorized with the assistance of the intellectual property unit of KU Leuven Research & Development (LRD).
Do existing 3rd party agreements restrict dissemination or exploitation of the data you (re)use? If so, to what data do they relate and what restrictions are in place?	☐ Yes ☒ No If yes, please comment:

4. Documentation and metadata	
What documentation will be provided to enable understanding and reuse of the data collected/generated in this project?	Details to reproduce reaction procedures are described in a personal lab booklet. Upon presentation or publication of data, procedures are described in sufficient detail to enable a reproduction of the generated results for an experienced user. ReadMe-files or recording methods for advanced characterization are stored in parallel with generated data.
Will a metadata standard be used? If so, describe in detail which standard will be used. If not, state in detail which metadata will be created to make the data easy/easier to find and reuse.	☐ Yes ☒ No Please specify: Although no metadata standard is available for the advanced characterization in this project, most techniques store a non-standardized ReadMe-file containing recording parameters and file information in parallel with recorded datasets. Alternatively, some datasets contain metadata headers on recording parameters (e.g. XRD diffractograms). The data will be stored and named in a consistent manner with unambiguous identifiers. Descriptions of experiments and materials are kept in physical lab notes for each identifier. The data will be processed and summarized in a comprehensive excel worksheet with references to the identifiers. The resulting summaries will culminate in presentations, and finally in manuscripts and/or patents.

5. Data storage & backup during the FWO project	
Where will the data be stored?	Physical hand-notes of procedures and initial observations are kept in lab books. Digital data, with unambiguous identifiers for reactions and materials, are kept in cloud storage from 'Box'. KU Leuven offers an Enterprise Box account 3, which offers an easy and secure storage space of up to 100 GB for each user.
How will the data be backed up?	By using the cloud storage of 'Box', digital data will be stored in parallel on the cloud and on the personal computer of the applicant, guaranteeing back-up for this data. Most raw data is also stored and frequently backed up off-line on external hard drives.
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: The cloud storage provides a storage space up to 100 Gb for each user, while the project is expected to generate less than 10 GB. ☐ No If no, please specify:
What are the expected costs for data storage and backup during the project? How will these costs be covered? *Although FWO has no earmarked budget at its disposal to support correct research data management, FWO allows for part of* ***the allocated project budget*** *to be used to cover the cost incurred.*	Data storage costs on Box are included in an internal service contract with the KU Leuven IT support service (SET-IT). No additional costs are expected for the storage of data. In case additional costs do arise, they will be covered by the project budget or reserve funds.
Data security: how will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?	The data will be stored in the university's secure environment for private data. An Enterprise Box account 3 for cloud storage ensures a secure environment.

6. Data preservation after the end of the FWO project
FWO expects that data generated during the project are retained for a period of minimally 5 years after the end of the project, in as far as legal and contractual agreements allow.

Which data will be retained for the expected 5 year period after the end of the project? In case only a selection of the data can/will be preserved, clearly state the reasons for this (legal or contractual restrictions, physical preservation issues, ...).	All data will be retained for the expected 5 year period after the end of the project.
Where will these data be archived (= stored for the long term)?	Upon termination of the contract, the data will be transferred and stored on an external hard drive (Samsung Portable SSD T5 1 TB), managed by Annelies Van Vlasselaer.
What are the expected costs for data preservation during these 5 years? How will the costs be covered? *Although FWO has no earmarked budget at its disposal to support correct research data management, FWO allows for part of* ***the allocated project budget*** *to be used to cover the cost incurred.*	The high capacity of the available external hard drive (1 TB) enables the preservation of data from multiple terminated or finished projects. Currently, an average of 15 GB is used for the finished projects of each user, which allows to divide its cost over approximately 60 users. Given the cost of the available hard drive of 120 EUR, the expected costs are negligible. The involved IT-expenses are included in the project's consumable expenses or covered by reserve funds.

7. Data sharing and reuse	
Are there any factors restricting or preventing the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)?	☐ Yes ☒ No If yes, please specify:
Which data will be made available after the end of the project?	Upon publication of the research results, the full datasets will be made available upon reasonable request.

Where/how will the data be made available for reuse?	☐ In an Open Access repository ☐ In a restricted access repository ☒ Upon request by mail ☐ Other (specify):
When will the data be made available?	Upon publication of the research results
Who will be able to access the data and under what conditions?	Only uses for research purposes will be allowed and commercial reuse will be excluded.
What are the expected costs for data sharing? How will these costs be covered? *Although FWO has no earmarked budget at its disposal to support correct research data management, FWO allows for part of* ***the allocated project budget*** *to be used to cover the cost incurred.*	No additional costs are expected as the data can be shared via online platforms (e.g. WeTransfer) or the already budgeted storage cloud from Box. If additional costs would occur they will be covered from reserve funds.

8. Responsibilities	
Who will be responsible for the data documentation & metadata?	The applicant (Jannick Vercammen).
Who will be responsible for data storage & back up during the project?	The applicant (Jannick Vercammen), his supervisor (Dirk De Vos) and Annelies Van Vlasselaer.
Who will be responsible for ensuring data preservation and sharing?	The supervisor (Dirk De Vos) and Annelies Van Vlasselaer.

Who bears the end responsibility for updating & implementing this DMP? *Default response: The PI bears the overall responsibility for updating & implementing this DMP*	The applicant and his supervisor bear the end responsibility of updating & implementing this DMP.