

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	Andreas Nuyts
FWO Project Number & Title	Reasoning Principles beyond Elementary Logic based on Multimode and Presheaf Type Theory (3E210998)
Affiliation	<input type="checkbox"/> KU Leuven
2. Data description	
Will you generate/collect new data and/or make use of existing data?	<input type="checkbox"/> Generate new data: Not really, see below <input type="checkbox"/> Reuse existing data: No
Describe the origin, type and format of the data (per dataset) and its (estimated) volume <i>If you reuse existing data, specify the source of these data. Distinguish data types (the kind of content) from data formats (the technical format).</i>	We will generate: - Mathematical proofs, - Software code, - Proof code.

3. Ethical and legal issues

<p>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.</p> <p><i>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.</i></p>	<p><input type="checkbox"/> No</p> <p>If yes:</p> <ul style="list-style-type: none"> - Privacy Registry Reference: - Short description of the kind of personal data that will be used:
<p>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).</p>	<p><input type="checkbox"/> No</p> <p>If yes:</p> <ul style="list-style-type: none"> - Reference to ethical committee approval:
<p>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?</p>	<p><input type="checkbox"/> No</p> <p>If yes, please comment:</p>
<p>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?</p>	<p><input type="checkbox"/> No</p> <p>If yes, please comment:</p>

4. Documentation and metadata

What documentation will be provided to enable understanding and reuse of the data collected/generated in this project?	<ul style="list-style-type: none"> - The mathematical proofs should be readable by themselves to experts - Software and proof code should be documented as is standard practice for such materials, and will typically be associated to a publication which further explains the purpose and design.
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.	<input type="checkbox"/> N/A If yes, please specify:

5. Data storage & backup during the FWO project

Where will the data be stored?	Software and proof code and mathematical proofs, as well as scientific writing: written on my work laptop and several times daily pushed to a git repository; typically github.com, butbucket.com or dnetcode.cs.kuleuven.be (“DistriNet Code is the software project management tool of DistriNet.”). We could also move to gitlab.kuleuven.be.
How will the data be backed up?	Creating back-ups of source code and manuscripts is an integral part of the use of online code repositories and hence entirely implicit.
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.	<input type="checkbox"/> Yes: the source files are plain text files which add up to an order of MBs or GBs at worst. If no, please specify:
What are the expected costs for data storage and backup during the project? How will these costs be covered? <i>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.</i>	Given the small total size of the data, this cost is negligible.

Data security: how will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?	<ul style="list-style-type: none"> - The researcher's personal devices are password-protected, - Access to code repositories is protected by password or ssh-key, - Data is not particularly sensitive as the project does not involve personal data, - We are in favour of open access and even creative commons publications and the field has a sufficiently cooperative spirit that even publicly accessible WIP is feasible, so <i>access</i> by unauthorized persons is not really an issue to begin with.
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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, ...).	<p>Software and proof code will be stored on a git repository (such as github.com).</p> <p>Mathematical proofs will be stored on a permanent archive such as ArXiv and/or become an integral part of scientific publications; either way they will be deposited in Lirias.</p>
Where will these data be archived (= stored for the long term)?	Same as for the first 5 years.
<p>What are the expected costs for data preservation during these 5 years? How will the costs be covered?</p> <p><i>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.</i></p>	<p>Services as github.com and the ArXiv are currently free, whereas Lirias and gitlab.kuleuven.be are offered by KU Leuven. Given the small total size of the data, the worst case costs will still be very low.</p>

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 3 rd party, legal restrictions)?	<input type="checkbox"/> No If yes, please specify:
Which data will be made available after the end of the project?	See above.
Where/how will the data be made available for reuse?	<input type="checkbox"/> In an Open Access repository <input type="checkbox"/> Other (specify): See above
When will the data be made available?	At publication time at the latest.
Who will be able to access the data and under what conditions?	There are no reasons to restrict these data, which are not sensitive. They will be publicly available.
What are the expected costs for data sharing? How will these costs be covered? <i>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.</i>	See above.

8. Responsibilities	
Who will be responsible for the data documentation & metadata?	Andreas Nuyts
Who will be responsible for data storage & back up during the project?	Andreas Nuyts
Who will be responsible for ensuring data preservation and sharing?	Andreas Nuyts

<p>Who bears the end responsibility for updating & implementing this DMP?</p> <p><i>Default response: The PI bears the overall responsibility for updating & implementing this DMP</i></p>	<p>Andreas Nuyts</p>
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