1. General Project Information	
Name Grant Holder & ORCID	Simen Hagen http://orcid.org/0000-0002-8293-9518
Contributor name(s) (+ ORCID) & roles	Hans Op de Beeck http://orcid.org/0000-0002-2250-212X Supervisor
Project number [1] & title	Unraveling the causes of consistent visual domain selectivity in the human brain
Funder(s) GrantID [2]	12A4R24N
Affiliation(s)	☒ KU Leuven ☐ Universiteit Antwerpen ☐ Universiteit Gent ☐ Universiteit Hasselt ☐ Vrije Universiteit Brussel ☐ Other: ROR identifier KU Leuven: 05f950310
Please provide a short project description	This project examines why functional brain regions that respond strongly to visual objects in the association cortex close to the visual system have a consistent organization across people. Specifically, we test competing theories that postulate that these object regions reflect differences in visual experience (eccentricity, shape) versus differences in their relevance to important human behaviors (e.g., navigation versus reading). We use an original approach, where participants learn novel objects during a computer game play. Before and after game play, we use neuroimaging methods to trace how different principles guide the development of object responses in association cortex.

[1] "Project number" refers to the institutional project number. This question is optional. Applicants can only provide one project number.

[2] Funder(s) GrantID refers to the number of the DMP at the funder(s), here one can specify multiple GrantIDs if multiple funding sources were used.

2. 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 [3].

				ONLY FOR DIGITAL DATA	*ONLY FOR DIGITAL DATA*	*ONLY FOR DIGITAL DATA*	*ONLY FOR PHYSICAL DATA*
Dataset Name	Description	New or Reused	Digital or Physical	Digital Data Type	Digital Data Format	Digital Data Volume (MB, GB, TB)	Physical Volume
Behavioral data	Behavioural responses of participants to visual or cognitive tasks on university computers (on or off campus), or using online platforms (e.g., Pavlovia, Prolific). Created from output of experimental scripts written in e.g. Matlab (PsychToolbox), Python (PsychoPy).	☒ Generate new data ☐ Reuse existing data	☒ Digital ☐ Physical	☐ Audiovisual ☐ Images ☐ Sound ☒ Numerical ☐ Textual ☐ Model ☐ Software ☐ Other:	Matlab (.mat) and text (.csv)	☒ < 1 GB ☐ < 100 GB ☐ < 1 TB ☐ < 5 TB ☐ > 5 TB ☐ NA	NA
fMRI data	Magnetic Resonance Images (MRI) of the brain, Structural & Functional. Created at MRI research scanner at UZ Leuven	☒ Generate new data ☐ Reuse existing data	☒ Digital ☐ Physical	☐ Audiovisual ☐ Images ☐ Sound ☒ Numerical ☐ Textual ☐ Model	Mostly NIfTI or DICOM	☐ < 1 GB ☐ < 100 GB ☐ < 1 TB ☐ < 5 TB ☒ > 5 TB ☐ NA	NA

[3] Add rows for each dataset you want to describe.

				☐ Software ☐ Other:			
EEG data	Electroencephalography (EEG) recordings. Created at BioSemi EEG recording devices at KU Leuven University.	☒ Generate new data ☐ Reuse existing data	☒ Digital ☐ Physical	☐ Audiovisual ☐ Images ☐ Sound ☒ Numerical ☐ Textual ☐ Model ☐ Software ☐ Other:	Biosemi (.bdf)	☐ < 1 GB ☐ < 100 GB ☒ < 1 TB ☐ < 5 TB ☐ > 5 TB ☐ NA	NA
Eye-tracking data	Eye-tracking data created from eye tracking device & analysis software (Eyelink or Tobii)	☒ Generate new data ☐ Reuse existing data	☒ Digital ☐ Physical	☐ Audiovisual ☐ Images ☐ Sound ☒ Numerical ☐ Textual ☐ Model ☐ Software ☐ Other:	Depending on the eye-tracking device.	☒ < 1 GB ☐ < 100 GB ☐ < 1 TB ☐ < 5 TB ☐ > 5 TB ☐ NA	NA
Computer simulation	Computer simulation data	☒ Generate new data ☐ Reuse existing data	☒ Digital ☐ Physical	☐ Audiovisual ☐ Images ☐ Sound ☒ Numerical ☐ Textual ☐ Model ☐ Software ☐ Other:	Depending on software, often .py and .mat	☐ < 1 GB ☐ < 100 GB ☒ < 1 TB ☐ < 5 TB ☐ > 5 TB ☐ NA	NA
Demographic data	Questionnaires to collect demographic data	☒ Generate new data ☐ Reuse existing data	☒ Digital ☒ Physical	☐ Audiovisual ☐ Images ☐ Sound ☒ Numerical ☒ Textual	Matlab (.mat), text (.csv), and paper.	☒ < 1 GB ☐ < 100 GB ☐ < 1 TB	Locked cabinet space, separate from other coded data.

				☐ Model ☐ Software ☐ Other:		☐ < 5 TB ☐ > 5 TB ☐ NA	

GUIDANCE:
The data description forms the basis of your entire DMP, so make sure it is detailed and complete. It includes digital and physical data and encompasses the whole spectrum ranging from raw data to processed and analysed data including analysis scripts and code. Physical data are all materials that need proper management because they are valuable, difficult to replace and/or ethical issues are associated. Materials that are not considered data in an RDM context include your own manuscripts, theses and presentations; documentation is an integral part of your datasets and should described under documentation/metadata.
RDM Guidance on data

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.	NA
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, refer to specific datasets or data types when appropriate and provide the relevant ethical approval number.	☒ Yes, human subject data; provide SMEC or EC approval number: ☐ Yes, animal data; provide ECD reference number: ☐ Yes, dual use; provide approval number: ☐ No Additional information: Yes, there are ethical considerations for all datatypes mentioned above, which are covered by our ethical approval (SMEC: G-2020-1902; EC: S62131). We have existing ethical approvals for all data types mentioned above for healthy participants and in clinical populations. We will require further approval when necessary.

Will you process personal data[4]? If so, please refer to specific datasets or data types when appropriate and provide the KU Leuven or UZ Leuven privacy register number (G or S number).	☒ Yes (provide PRET G-number or EC S-number below) ☐ No Additional information: Personal data is registered through our ethical approvals with the EC Research UZ / KU Leuven (EC: S62131) and the SMEC (SMEC: G-2020-1902), see our registration in CMT. For studies with paid participants, we obtain the names, email address, personal address, and bank account information (of their legal guardians, where relevant). This information is needed to pay participants. This identifiable information is kept separate from the actual research data (see types 1-6 under Section 2). The research data are coded.
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 ☒ No If yes, please comment:
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 to what data they relate and what restrictions are in place.	☐ Yes ☒ No If yes, please explain:
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 to what data they relate and which restrictions will be asserted.	☐ Yes ☒ No If yes, please explain:

[4] See Glossary Flemish Standard Data Management Plan

3. 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). *RDM guidance on documentation and metadata*.	The raw data files for all six types are automatically stored with relevant meta-data. For each experiment, a detailed Methods section is written that allows to replicate the experiment and re-analyse the obtained data. It is impossible to detail these methods before the start of the project, given that many design and implementation choices will be made together with the to-be-hired junior or senior researchers.
Will a metadata standard be used to make it easier to **find and reuse the data**? If so, please specify which metadata standard will be used. If not, please specify which metadata will be created to make the data easier to find and reuse. *REPOSITORIES COULD ASK TO DELIVER METADATA IN A CERTAIN FORMAT, WITH SPECIFIED ONTOLOGIES AND VOCABULARIES, I.E. STANDARD LISTS WITH UNIQUE IDENTIFIERS.*	☐ Yes ☒ No If yes, please specify (where appropriate per dataset or data type) which metadata standard will be used: If no, please specify (where appropriate per dataset or data type) which metadata will be created: Where applicable we use data acquisition and analysis software that is internationally used (e.g., for data type 3: fMRIPREP, SPM, cosmoMVPA toolbox), and the relevant standard data formats such as BIDS for data types 3 and 4 (which also standardizes directory structure & experimental information).

4. Data Storage & Back-up during the Research Project

Where will the data be stored? *Consult the interactive KU Leuven storage guide to find the most suitable storage solution for your data.*	☐ Shared network drive (J-drive) ☐ Personal network drive (I-drive) ☒ OneDrive (KU Leuven) ☐ Sharepoint online ☐ Sharepoint on-premis ☐ Large Volume Storage ☐ Digital Vault ☐ Other: Copies can be made and kept on personal professional devices that fall under the university' secure environment. All people with access to these data use multi-factor authentication.
How will the data be backed up? *WHAT STORAGE AND BACKUP PROCEDURES WILL BE IN PLACE TO PREVENT DATA LOSS?*	☒ Standard back-up provided by KU Leuven ICTS for my storage solution ☒ Personal back-ups I make (specify) ☐ Other (specify) The Onedrive assures a storage using online cloud services. In addition, the coded research data might be backed-up on local external hard drives that are encrypted and password-protected. These hard drives do not contain personal data that are easily identifiable (e.g. no participant names etc.).
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 ☐ No If no, please specify:
How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons? *CLEARLY DESCRIBE THE MEASURES (IN TERMS OF PHYSICAL SECURITY, NETWORK SECURITY, AND SECURITY OF COMPUTER SYSTEMS AND FILES) THAT WILL BE TAKEN TO ENSURE THAT STORED AND TRANSFERRED DATA ARE SAFE.* *Guidance on security for research data*	Password protection and multi-factor authentication.

What are the expected costs for data storage and backup during the research project? How will these costs be covered?	No substantial costs expected, except the purchase of a few external hard drives.

5. 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...). *Guidance on data preservation*	☒ All data will be preserved for 10 years according to KU Leuven RDM policy ☐ All data will be preserved for 25 years according to CTC recommendations for clinical trials with medicinal products for human use and for clinical experiments on humans ☐ Certain data cannot be kept for 10 years (explain)
Where will these data be archived (stored and curated for the long-term)? *Dedicated data repositories are often the best place to preserve your data. Data not suitable for preservation in a repository can be stored using a KU Leuven storage solution, consult the interactive KU Leuven storage guide.*	☐ KU Leuven RDR ☐ Large Volume Storage (longterm for large volumes) ☐ Shared network drive (J-drive) ☒ Other (specifiy): Currently we archive coded research data in full on encrypted & password-protected external hard drives stored in two different rooms, with partial archiving in openly accessible platforms. We expect this to change in the first part of the project duration, once a more specific plan can be developed with the dedicated support staff.

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?	With current policies, we expect a total cost of around 1000 euro, and probably a higher cost with future policies. This can be covered from the project budget.

6. Data Sharing and Reuse	
Will the data (or part of the data) be made available for reuse after/during the project? Please explain per dataset or data type which data will be made available. *NOTE THAT 'AVAILABLE' DOES NOT NECESSARILY MEAN THAT THE DATA SET BECOMES OPENLY AVAILABLE, CONDITIONS FOR ACCESS AND USE MAY APPLY. AVAILABILITY IN THIS QUESTION THUS ENTAILS BOTH OPEN & RESTRICTED ACCESS. FOR MORE INFORMATION: HTTPS://WIKI.SURFNET.NL/DISPLAY/STANDARDS/INFO-EU-REPO/#INFOEUREPO-ACCESSRIGHTS*	☒ Yes, as open data ☐ Yes, as embargoed data (temporary restriction) ☐ Yes, as restricted data (upon approval, or institutional access only) ☐ No (closed access) ☒ Other, please specify: Upon request by email.
If access is restricted, please specify who will be able to access the data and under what conditions.	Fully open access as much as possible (if allowed by ethical committee)

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 per dataset or data type where appropriate.	☒ Yes, privacy aspects ☐ Yes, intellectual property rights ☐ Yes, ethical aspects ☐ Yes, aspects of dual use ☐ Yes, other ☐ No If yes, please specify: The research data can be shared (anonymously) with other researchers, also on online databases. This is explicitly mentioned in the informed consent forms signed by the participants.
Where will the data be made available? If already known, please provide a repository per dataset or data type.	☐ KU Leuven RDR ☒ Other data repository (specify) ☒ Other (specify) Upon request by email. We typically share the final analyses files and further experimental material (stimuli etc.) using the OSF platform, which is an international standard frequently used in the domain of psychology (e.g., https://osf.io/). Other options will be explored.
When will the data be made available?	☒ Upon publication of research results ☐ Specific date (specify) ☐ Other (specify)

Which data usage licenses are you going to provide? If none, please explain why. *A DATA USAGE LICENSE INDICATES WHETHER THE DATA CAN BE REUSED OR NOT AND UNDER WHAT CONDITIONS. IF NO LICENCE IS GRANTED, THE DATA ARE IN A GREY ZONE AND CANNOT BE LEGALLY REUSED. DO NOTE THAT YOU MAY ONLY RELEASE DATA UNDER A LICENCE CHOSEN BY YOURSELF IF IT DOES NOT ALREADY FALL UNDER ANOTHER LICENCE THAT MIGHT PROHIBIT THAT.* *Check the RDR guidance on licences for data and software sources code or consult the License selector tool to help you choose.*	☒ CC-BY 4.0 (data) ☐ Data Transfer Agreement (restricted data) ☐ MIT licence (code) ☐ GNU GPL-3.0 (code) ☐ Other (specify)
Do you intend to add a PID/DOI/accession number to your dataset(s)? If already available, please provide it here. *INDICATE WHETHER YOU INTEND TO ADD A PERSISTENT AND UNIQUE IDENTIFIER IN ORDER TO IDENTIFY AND RETRIEVE THE DATA.*	☒ Yes, a PID will be added upon deposit in a data repository ☐ My dataset already has a PID ☐ No
What are the expected costs for data sharing? How will these costs be covered?	The solutions that we currently use (OSF, g-node) have no costs (at the moment).

7. Responsibilities	
Who will manage data documentation and metadata during the research project?	The FWO postdoctoral fellow and the supervisor/promotor (the former is the first contact point).
Who will manage data storage and backup during the research project?	The FWO postdoctoral fellow and the supervisor/promotor (the former is the first contact point).
Who will manage data preservation and sharing?	The FWO postdoctoral fellow and the supervisor/promotor (the former is the first contact point).

Who will update and implement this DMP?	The FWO postdoctoral fellow.