TRANSMIXR

IGNITE THE IMMERSIVE MEDIA SECTOR BY ENABLING NEW NARRATIVE VISIONS

D7.3: DMP, ETHICS AND PRIVACY REPORT

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Work package	WP 7
Task	T7.3
Due date	M3
Submission date	20/12/22
Deliverable lead	VUB
Version	v0.6
Authors	Arno Verhofstadt (VUB), Natasja Van Buggenhout (VUB), Wendy Van den Broeck (VUB), Iris Jennes (VUB)
Reviewers	Irene Viola (CWI), Vasileios Mezaris (CERTH)
Keywords	Data management plan, ethics, privacy, FAIR-principles, GDPR, informed consent

Document Revision History

Version	Date	Description of change	Contributor(s)
0.1 Initial version	22/11/2022	DMP outline and structure, draft questionnaire for consortium partners to request input for DMP, ethics and privacy report	Natasja Van Buggenhout (VUB), Arno Verhofstadt (VUB)
0.2 Request input consortium partners for DMP, Ethics and Privacy report	28/11/2022	Review, refine and finish the questionnaire for partner input; writing to partners and distributing the questionnaire (also: sending reminders to partners to complete the questionnaire).	Natasja Van Buggenhout (VUB), Arno Verhofstadt (VUB), Wendy Van den Broeck (VUB), Iris Jennes (VUB)
0.3 Process	5-6/12/2022	DMP update based on	Natasja Van

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

input partners for the DMP, Ethics and Privacy report		input of the consortium partners. Outline and draft of the ethics and privacy section.	Buggenhout (VUB), Arno Verhofstadt (VUB)
0.4 Alignment, refinement and finishing the DMP, Ethics and Privacy report	12-13/12/2022	Alignment and refinement DMP, ethics and privacy report, determine what are missing elements and address partners individually for further input, process input partners in the deliverable and prepare for internal review.	Natasja Van Buggenhout (VUB), Arno Verhofstadt (VUB), Wendy Van den Broeck (VUB)
0.5 Version submitted for internal review	14/12/2022	Final edit + Submit DMP, Ethics and Privacy report for internal review.	Arno Verhofstadt (VUB)
0.6 Version for submission	20/12/2022	Final edit based on internal review + Submit DMP, Ethics and Privacy report	Natasja Van Buggenhout (VUB), Arno Verhofstadt (VUB)

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Disclaimer

This project has received funding from The European Union as part of the Horizon Europe Framework Program (HORIZON) under grant agreement No. 101070109.

Project co-funded by European Commission in the H2020 Programme	
Nature of the deliverable	R
Dissemination Level	
PU	Public, fully open e.g., web
~~**CL**~~	~~Classified, information as referred to in Commission Decision 2001/844/EC~~
~~**CO**~~	~~Confidential to TRANSMIXR project and Commission Services~~

Executive Summary

As defined and described in the TRANSMIXR project proposal (pp. 17-18), the Data Management Plan (**DMP**), Ethics and Privacy report addresses all issues regarding 1/ data use within the consortium including public release, posting, curation, and preservation of data during and after the project's lifetime and 2/ ethical aspects of the research and 3/ privacy issues and application of the GDPR regulations.

The DMP follows the **FAIR** principles (findable, accessible, interoperable, reusable). For clarification, the DMP is inspired by FAIR as a general concept, rather than a strict technical implementation of the FAIR principles. The DMP will be updated to ensure appropriate data management, a high level of data quality, and accessibility. We adhere to the principle "as open as possible, as closed as necessary" (European Commission, s.d.). In practice, this means we do not open up all the research data. We put sound data management first, as that is key to research best practice. Project partners provide input on the collected and stored data types, protective measures taken, and adhere to the stipulated principles and guidelines of the DMP. The TRANSMIXR DMP is based on the Horizon 2020 DMP template[1] provided by the European Commission.

We give specific attention to systematic user data collection, profiling and monitoring techniques (i.e., in T3.5, T4.3, and WP5), to ensure these comply with strict legal and ethical guidelines outlined in the DMP, and users are transparently informed and fully consent to these methods. We will also look into potential health risks related to the technologies used in the project, to ensure a safe environment for user testing and experimentation within the TRANSMIXR project. In terms of data storage, we distinguish three categories: data shared within the consortium of TRANSMIXR, data shared with external partners and data shared in a public repository.

This report consists of three chapters: 1/ Data Management Plan (DMP); 2/ Ethics and Privacy; 3/ Other. We briefly describe the main contributions and insights of each chapter below.

Chapter 1: DMP

The DMP is presented as section 1 of the DMP, Ethics and Privacy deliverable (D7.3).

The DMP is a living document. We emphasise it is not required to provide detailed answers to all the questions (how we apply and guarantee FAIR data management) in the first version of the DMP. We try to provide insight into the information that we

[1] https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management_en.htm

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

already know in the first three months / can estimate to a large extent for the upcoming months of the project (the DMP will be updated in month six at the latest based on the progress with ongoing user research activities such as workshops). This version reflects the status based on information currently available in the project (with a level of detail appropriate to the project). Updated versions in which we provide information on a finer level of granularity will be created as the project progresses (i.e., updated in the context of the periodic project evaluation or in time for the final review at the latest) and when significant changes occur (such as but not limited to new data, changes in consortium policies, consortium composition, and external factors).

Project partners follow the ethical guidelines as defined in WP7 (set out in the European Code of Conduct for Research Integrity and the Ethics Guidelines for trustworthy AI of the HLEG), to ensure privacy and security of activities involving the participation of end-users or professionals, and guarantee ethical development of the AI systems within the project. Furthermore, the guidelines provide a transparent, fair, proportionate and unbiased way for users to interact with the systems. We develop procedures and templates (i.e., informed consents, information sheets) for personal data processing (collection, storage, use, transfer, deletion). The data will be acquired through focus groups, surveys, user evaluations, and interviews.

UC4 involves minors (12+) as this use case focuses on youngsters. Parental consent (or consent from legal guardians) is required for the research activities, as well as assent of the minor. There is no risk or burden for the involved minors. They will benefit from new value-driven experiences tailored to them (i.e., interactive museum experiences). Regarding activities that require ethical approval, we will apply to the ethical committee at the beginning of the project, and before each user research activity, to ensure ethical approval is in place before data collection. We will apply for ethical approval to the ethical committee for social sciences (ECHW) at the Vrije Universiteit Brussel (VUB). The DPO of VUB can provide advice on specific ethical and privacy related questions.

Chapter 2: Ethics and Privacy

The guidelines of Ethics and Privacy will ensure privacy and security in all activities that involve participation of end users or professional users, as well as ensure an ethical development of the AI systems within the project and a transparent, fair, proportionate and unbiased way for the users to interact with these systems. We will develop procedures and templates (e.g. informed consents, decision tree) for the collection, use and storage of personal data that will be acquired through focus groups, surveys, user evaluations and interviews

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Chapter 3: Other

Efforts are underway to implement data management principles throughout all partners.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Table of Contents

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Abbreviations

AFP	Agence France Presse
AI	Artificial Intelligence
CCS	Creative and Culture Sector
CERTH	Ethniko Kentro Erevnas Kai Technologikis Anaptyxis
CWI	Stichting Nederlandse Wetenschappelijk Onderzoek Instituten
DMP	Data Management Plan
DPO	Data Protection Officer
DOI	Document Object Identifiers
DoW	Description of Work
EBU	European Broadcasting Union
ELSA	Ethical, legal and societal aspects of AI
FAIR	Findable, Accessible, Interoperable, Reusable
ICF	Informed Consent Form
KPI	Key Performance Indicators
MOD	Modul Technology GMBH
NISV	Stichting Nederlands Instituut voor Beeld en Geluid
UC	Use case
RTV	Radiotelevizija Slovenija Javni Zavod Ljubljana
TCD	The Provost, Fellow, Foundation Scholars & the Other Members of Board, of the College of the Holy & Undivided Trinity of Queen Elizabeth Near Dublin
TUS	Technological University of the Shannon - Midlands Midwest
UC	Use case

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

VR	Virtual reality
VUB	Vrije Universiteit Brussel
WLT	Weblyzard Technology GMBH
WP	Work package
XR	Extended reality

List of Figures

List of Tables

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Section 1: Data Management Plan (DMP)

The structure of the Data Management Plan (DMP) starts with showing a data summary, followed by Fair Data. In Fair data, we distinguish the following parts: data findability (including provisions for metadata), data accessibility, data interoperability, data reusability (through clarifying lenses), resource allocation and data security.

The text in each section of the DMP is based on the input of the TRANSMIXR's partners. Finally, we briefly set up the main takeaways of the Data Management Plan.

1.1 Data summary

Provide a summary of the data addressing the following issues:

1) State the purpose of data collection/generation.

As described in TRANSMIXR's mission statement (proposal, p. 2), future media experiences focus on cross-border collaboration between media organisations and citizens as content creators (beyond passive consumption of one-size-fits-all media content), mediated through social XR experiences that guarantee diverse and inclusive participation. The unique combination of AI and XR core technologies advance the state of the art in media production, delivery, and consumption.

TRANSMIXR aims to introduce leading-edge technologies and experiences built around public values (inform, entertain, connect, inspire, educate, empower). The project ambition is to strengthen the democratic mission and competitiveness of the European Cultural and Creative Sector with intelligent AI and XR technologies that are user-centric, transparent, trustworthy, inclusive, and accountable. The collected data are essential for the identification of user and technical requirements through the TRANSMIXR project.

The project identified three domains within CCS that act as early adopters and amplifiers of TRANSMIXR solutions:

1) News media and broadcasting
2) Performing arts
3) Cultural heritage

Data collection within TRANSMIXR will contribute to the specific project objectives as stated in the next section. All data that is collected within the project, will directly contribute to the achievement of these objectives. There will be no unnecessary data collected.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

2) Explain the relation to the project objectives

In the DoW, we identified six core objectives (Table 1). All data processing will contribute to these objectives.

Table 1: TRANSMIXR Project Objectives

O1	**Reimagine**	Introduce holistic workflows, formats, and practices enabling the creation, delivery, and consumption of diverse immersive storytelling experiences.
O2	**Comprehend**	Deep understanding of multimodal media content that can be used to facilitate the creation of complex narratives.
O3	**Create**	Design and develop a distributed eXtended Reality (XR) environment allowing for distributed content for immersive and interactive experiences.
O4	**Deliver**	Design and deliver immersive experiences conveying complex narratives, fostering cultural participation and collaboration, and facilitating active engagement.
O5	**Market**	Bring the TRANSMIXR vision to the market and ensure that media organisations, creative companies and heritage organisations have the capacity to implement it and deliver significant impact to their target audiences.
O6	**Scale-up**	Forge trans-sectoral synergies and demonstrate how immersive media experiences could be transferred to new domains to contribute to societal, economic, and environmental well-being.

3) Explain the different data types to the project objective

To realise this vision for the TRANSMIXR project, we foresee the following data types (known so far): personal data, interaction metrics, physiological data (i.e., eye-tracking data), social media & web data, audio data, video data (volumetric video data, traditional 2D and 360° video data). We specify each data type below that will be used during the project:

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

a. Personal data

Partners involved[2]*:* VUB, TCD, IMMERSION, Satore studio, NISV, EBU, AFP, RTV Slovenija, Sparknews

- Demographic information of respondents: gender, age, socio-economic status, education level, professional background,...
- Respondent contact information (i.e., name, e-mail address,...)
- frequency of leisure activities (eg. attendance theatrical shows)
- mailing lists of newsletters TRANSMIXR, registrants to TRANSMIXR events and webinars

b. interaction metrics (user)

Partners involved: VUB, WLT, TUS, EBU

- Clicks, views,...
- User metrics
- KPI visitors social media and website
- Conceptualise and implement algorithms for computing content metrics

c. Physiological data

Partners involved: VUB, NISV, Intel, TUS

- Self-reporting physiological data
- Eye-tracking data
    - To develop algorithms to actively steer data flow in the overall content-delivery-experience architecture.
- Other relevant physiological data (to be determined later)

d. Social media & Web data

Partners involved: MOD & WLT

- Annotate Social media & Web data and provide it (via the WLT repository API) to the other partners (logging and data scraping activities)

e. Video Data (volumetric, RGB-Depth sensor, 2D, 360° video)

Partners involved: TCD, CERTH, IMMERSION, Intel, CWI

[2] We note that only consortium partners have access to (parts of) the personal data if this is relevant, for example, to report research results (in publications such as deliverables, journal articles).

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

- Volumetric video data
  - Will be derived from various volumetric capture systems, stored in the form of geometry and texture representations of animated subjects.
  - Volumetric Video Metadata: in the form of textual and numerical data about the information contained in associated Volumetric Video data sets, to allow usage and integration of such content into XR experiences and other applications.
- RGB-Depth sensor data: Sequences of synchronised, multi-view color and depth images of human performances
- Traditional 2D and 360° video data.

f. Audio data

Partners involved: CERTH, IMMERSION, Intel

- Audio: for realising, creating and testing real-time and offline volumetric video reconstruction algorithms.

4) Specify if existing data is being reused (if any).

Consortium partners process previously collected data in the context of the predetermined research activities (including use of pre-existing datasets or sources, merging existing datasets).

5) Specify the origin of the data.

The tools and components that will be developed will be data-driven, based on existing datasets (e.g. CWI Point Cloud Social XR Dataset and Volograms & V-SENSE Volumetric Video Dataset (CWI)) or new ones acquired during the project. In this data-driven way, it will provide the opportunity for collaboration with the emerging European Data Spaces.

6) State the expected size of the data (if known).

At this point in the project, it is not possible to quantify the size of the datasets.

7) State where the data is stored.

Eg. public repository (Zenodo or GIT). Partners will also work in a shared Google workspace drive of TRANSMIXR (only accessible for TRANSMIXR partners)

Regarding data storage, the following formats will be used to store the aforementioned (technical) data types:

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

- **Color Sequences:** Well-known and commonly used formats will be used such as uncompressed/compressed PNG, as well as JPEG.
- **Depth Sequences:** As the nature of depth image data is different from color information, a well-known format used for storing grey-scale images, PGM, will be utilised as the default format for depth data. Additionally, 16-bit PNG will be considered.
- **Audio Sequences:** The complementing audio sequences of the captured performances will be stored in uncompressed WAV files, as is the standard used for storing uncompressed LPCM (Linear Pulse Code Modulation) encoded audio bitstreams.
- **Volumetric Video:** As volumetric video productions are at an infant state, only very recently introduced to a wider field of creators, volumetric video formats are not yet standardised. Yet the most common format used by current producers comes in the form of different mesh files for each frame of a sequence, along with a separate set of mesh textures. These are stored in well-known 3D and image formats, such as OBJ, PLY, and PNG. However, more recently released formats such as GLTF, or USD are slowly adapted by the industry. As a result, volumetric video will be stored in both the currently used formats (sequences of OBJ and PNG files), as well as, the recently adapted ones (GLTF) (and depending on the scene format that will be used for producing TRANSMIXR experiences - USD)

8) Outline the data utility (to whom it will be useful).

The data will be useful for consortium partners & future research purposes.

1.2 Fair Data

1.2.1 Data findability, including provisions for metadata

1) Outline the discoverability of data (metadata provision).

As predetermined in the project proposal (pp. 17-18), results will be published via (i) the project website, (ii) the TRANSMIXR platform, and (iii) open access platforms like Open Research Europe (ORE) and OpenAIRE.

Contribution to data repositories will include persistent and unique identifiers, and metadata.

The metadata will be published on an open archive portal, for example, Zenodo or GIT. Furthermore, all the datasets will be available and searchable.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Common file formats and standards will be used whenever possible to ensure machine-readability and interoperability. We will make sure to gain appropriate consent from content owners in line with the national implementations of the new Directive on Copyright in the Digital Single Market, and fully compliant with the General Data Protection Regulation (GDPR).

Unprocessed research data containing personal data obtained via experimental, qualitative or quantitative research will be stored in a verified and licensed research environment at VUB, approved for secure storage of personal data. When publishing data from the user research, we will de-identify any personal data.

Regarding the use of open data and methodologies, the consortium will not limit itself to publishing the results of its validation activities, but will also elaborate on the genesis, components, and functionality of its test and experimentation frameworks so these can be scrutinised and replicated. Test samples will be made available on a permanent repository. For actual empirical data related to the Living Lab research, this is less straightforward as records of the research (e.g. video recordings of interviews, focus groups and hands-on tests) can and will only be made available to the extent that no legitimate interests or legal obligations are harmed.

2) Outline the identifiability of data and refer to standard identification mechanisms. Do you make use of persistent and unique identifiers such as Digital Object Identifiers (DOI)?

We will make use of appropriate standard identification mechanisms such as DOIs for documents and other data.

a. Use of a RESTful API:

Providing documentation for data APIs including information about the used data formats and meaning of properties and values. API keys can be acquired by users to access the data via queries using a RESTful API.

Entities in the Knowledge Graph are represented in RDF and follow standard Linked Data principles (w3.org/wiki/LinkedData).

b. Document annotation:

We will create a data ingestion pipeline that includes relevant document metadata such as owner, publication date, source location and so on. This metadata is created automatically from the underlying HTML of the Web page or API response of the social network.

3) Outline naming conventions used.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

TRANSMIXR will use naming conventions with the following information (first proposal - not binding and subject to change):

- Project name/acronym (TRANSMIXR)
- Dataset name
- Source provider
- Date of file creation (in YYYY-MM-DD format)
- Version number

For example: *TRANSMIXR_userdata_VUB_2022-11-22_v1.0*

We subscribe to the idea that "naming conventions, once adopted, help people converge on a shared vocabulary and then make it easier to use the terms in that vocabulary" (W3C, 2005).

4) Outline the approach towards search keywords (to optimise possibilities for re-use).

We will provide a set with relevant keywords for each type of dataset to facilitate the searching process for other third parties. Keywords will be added to all documents, to allow for keywords search.

5) Outline the approach for clear versioning (i.e., do we provide clear version numbers).

TRANSMIXR will use naming conventions and clear versioning for all shared documents.

6) Specify standards for metadata creation (if any). If there are no standards in your discipline, describe what metadata (types) will be created and how.

Entity metadata includes provenance (original source of the entity information, how it was extracted)

- Volumetric Video Metadata: in the form of textual and numerical data about the information contained in associated Volumetric Video data sets, to allow usage and integration of such content into XR experiences and other applications.

1.2.2 Data accessibility

1) Specify which data will be made openly available (by default)? If some data is kept closed (cannot be shared or need to be shared under restrictions), provide rationale for doing so (why and clearly separating legal and contractual reasons from voluntary restrictions).

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Note: *In multi-beneficiary projects it is also possible for specific beneficiaries to keep their data closed if relevant provisions are made in the consortium agreement and are in line with the reasons for opting out.*

All deliverables that are indicated as public in the DoW will also be made publicly available.

It is currently unclear which other data will be made openly available (by default), and whether some data will be kept closed due to legal and contractual reasons. This will be discussed with the project partners.

2) Specify how the data will be made available (e.g., by deposition in a repository).

As already mentioned before, we adhere to the principle "as open as possible, as closed as necessary" (European Commission, s.d.).

If possible, data will be made publicly available. This means that open datasets and other information will be made public to a certain extent - on the condition that these data are anonymized, so there will be no recognizable patterns or (personal) information that could identify data subjects. Reports, deliverables, and other information for public distribution will be available on Zenodo, GIT or other TRANSMIXR communication channels.

Subsequently, reporting of qualitative and quantitative findings (co-creation workshops, pilots) will be published on the project website in anonymous format, without any personal identifiable data. When possible, datasets and other data will be uploaded to a repository like Zenodo, GIT,...

Raw data nor non-anonymized data (recordings, notes, user data, etc.) will not be available for third parties.

3) Specify what methods or software are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g., in open-source code)?

If data sets are openly accessible, they may be made available in the format of, for example, an excel or spss file (so a computer or laptop and adapted software such as a spreadsheet, word processor are required to access the data). Entity-related data and analytics based on the entities of the knowledge graph are exposed to external users via webLyzard platform APIs. A number of APIs provide direct access to the knowledge in the Knowledge Graph, and can be built and provided on demand to

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

stakeholders e.g., for the needs of a research project (Events API can be developed based on event entity knowledge in the Semantic Knowledge Base).

For volumetric video data, research-oriented licences will be used (limiting commercial use) for easing access by the research community.

4) Specify where the data and associate metadata, documentation, and code are deposited. Preference should be given to certified repositories which support open access where possible.

The datasets will be available on a publicly accessible repository e.g., Zenodo, as soon as we have explored and made the appropriate arrangements with the identified repositories.

5) Specify how access will be provided in case there are any restrictions.

Whenever possible, the datasets will be made available under an open licence.

6) Is there a need for a data access committee?

Currently a data access committee is neither necessary nor applicable. A DPO will soon be appointed in the project (responding to requests for data access will then be part of their duties), until then we can contact the DPO at the VUB for questions and advice.

7) Are there well described conditions for access (i.e., a machine-readable licence)?

There are currently no terms or conditions set for access to the data in the form of i.e., machine readable licence. This belongs to the duties and role of the DPO of TRANSMIXR who will be appointed soon. Regardless, we declare that only individuals or consortium partners are granted access to data when they can demonstrate this is relevant for carrying out research activities or reporting.

8) How will the identity of the person accessing the data be ascertained?

We are currently working on the procedure and criteria to verify the identity of persons who want to access or use the data. This will also be part of the duties and role of the DPO of TRANSMIXR (appointment coming soon).

1.2.3 Data interoperability

The whole TRANSMIXR consortium will gather different data types and formats. Personal data will never be shared with third parties and must be anonymized when used for publications. The most common data formats are: .docx, .pdf, .mp4, .mp3, .jpg, .csv, .xlsx; collected through interviews, focus groups, surveys, living lab

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

experiments, etc. All data must be stored properly - the data and documents used by consortium partners will be accessible on Google Drive, only accessible for TRANSMIXR partners (to ensure and simplify internal operations). Data and documents that we want to make publicly available (communication and dissemination aimed at a wider and general audience) are published on open data repositories e.g., Zenodo.

List of data formats known so far:

- Text (PDF, MS Word), audio (mp3, mp4), video (mp4/.mov), Excel, SPSS, Nvivo/MaxQDA, potentially also images (jpeg, gif)
- Using well-known and open-source media data formats for Volumetric Video, including OBJ and PLY for mesh data; and standard image formats such as JPEG, PNG for texture information.
- To rely on commonly used storage formats to be utilised by most 3D engine software (such as Unity, Unreal, Blender, OpenXR, and WebXR).

1) Are the data produced in the project interoperable, allowing data exchange and re-use between researchers, institutions, organisations, countries, etc. (i.e., adhering to standards for formats as much as possible compliant with available open software applications, and in particular facilitating re-combinations with different datasets from different origins)?

It is currently unclear to what extent data, metadata vocabularies, and methodologies are applicable to data sets collected by TRANSMIXR.

2) Assess the interoperability of your data. Specify what data and metadata vocabularies, standards, or methodologies you will follow to facilitate interoperability.

See above.

3) Specify whether you will be using standard vocabulary for all data types present in your data set, to allow inter-disciplinary interoperability? If not, will you provide mapping to more commonly used ontologies?

It is currently unclear to what extent data and metadata vocabularies, standards, and methodologies are applicable to data sets collected by TRANSMIXR. Later research phases of the project should clarify which vocabularies, standards, and methodologies will be used.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

4) In case it is unavoidable that we use uncommon or generate project specific ontologies or vocabularies, will we provide mappings to more commonly used ontologies?

To be determined.

1.2.4 Data reusability (through clarifying lenses)

1) Specify how the data will be licensed to permit the widest reuse possible.

Data is stored internally, but is also used by the researchers for dissemination purposes i.e., reporting (project deliverables) made available through the project website, scientific reporting i.e., journal articles; present in conferences (contribute to conference proceedings). Relevant data (excluding personal and proprietary information) will also be published in repositories such as Zenodo or GIT, to make it accessible for other researchers. Regarding licensing, research-oriented datasets will be released under commonly used licences (which limit commercial usage) such as the non-commercial variants of the Creative Commons licence family (CC-BY-NC, CC-NC-SA, CC-NC-ND).

Finally, we will strive towards a strict application of the GDPR when constructing and transforming the open datasets. Once the GDPR is fulfilled, we will allow access to the data to the widest audience possible. Afterwards; public reports, deliverables, non-sensitive- and anonymized data will be available for the public and third parties. During the research activities, VUB may apply an embargo (eg. publishing in journals) until the results are officially published.

2) Specify when the data will be made available for reuse. If applicable, specify why and for what period a data embargo is needed (i.e., to publish or seek patents), bearing in mind research data should be made available as soon as possible?

Research data will be made available for reuse and published as soon as possible (i.e., after review and publication of a deliverable. We cannot yet determine with certainty whether an embargo is necessary (and for what period). This is under constant consideration and open to review by the consortium partners.

3) Are data produced and/or used in the project usable by third parties, in particular after the end of the project? If the reuse of some of the data is restricted, explain why.

Relevant research data will be made available for potential reuse by third parties.

4) Describe data quality assurance processes.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

We have not yet established a procedure and criteria within TRANSMIXR to verify and guarantee data quality. This falls within the duties and role of the DPO of TRANSMIXR (appointment will follow soon). In the meantime, consortium partners can at least turn to the DPO, information and data compliance officer(s) of their own organisation with questions and for advice. Consortium partners can also adhere to (if present and applicable) data management and privacy policies that apply in their own institution.

5) Specify the length of time (duration) for which data will remain reusable.

The data will remain reuseable for at least the duration of the project. We keep a five years retention policy on the data (starting after the completion of the TRANSMIXR project). Data preservation ensures the research can be verified and reproduced, and maintains the data for future reuse e.g., further research or teaching.

1.3 Resource allocation

Explain the allocation of resources, addressing the following issues:

1) Estimate the costs for making your data FAIR. Describe how you intend to cover these costs.

We cannot estimate the total costs at this moment. We did foresee a budget for open access publications in the project budget.

2) How will these be covered?

We currently cannot determine how these costs will be covered. We note however that costs related to open access data are eligible as part of the Horizon framework (if compliant with Grant Agreement conditions).

3) Clearly identify responsibilities for data management in your project.

All partners will be jointly responsible for the Data Management within the project. VUB as responsible partner for the DMP and ethics deliverable, will keep track of necessary updates to the Data Management Plan.

4) Describe costs and potential value of long term preservation. Also, clarify who decides and how what data will be kept, and for how long.

To be determined.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

1.4 Data security

In general, all the gathered data in the project will be handled discreetly and stored safely; hereby each partner guarantees the privacy and safety of their participants' data. Personal data will be processed under the strictest confidentiality, with the application of the respective technical and organisational security measures in accordance with current legislation

- Pseudonymisation (any data collected from user studies will be anonymised and stored in secure)
- The knowledge graph will be hosted on MOD's RDF Triple Store infrastructure
- Password protected repositories in accordance with TCD's institutional Data Data protection guidelines: Consortium partners adhere to the guidelines and regulations as stated in the GDPR. Some partners also comply with national data protection guidelines, for example, TCD.
- Repositories such as Zenodo, GIT, etc.
- A DPO will be appointed soon in the project by the project lead.

1) Address data recovery as well as secure storage and transfer of sensitive data (describe what provisions are in place for data security).

See above.

2) Is data safely stored in certified repositories for long term preservation and curation?

See above.

1.5 Other issues

1) Refer to other national/funder/sectorial/departmental procedures for data management that you are using (if any)

All consortium members commit to comply with the data processing principles, provisions and requirements as stated in the General Data Protection Regulation (GDPR).

In addition, some consortium members follow an institutional data protection policy, for example, Trinity College Dublin Data Protection Policy. TCD is regulated by Irish and European data protection legislation (Irish Data Protection Acts 1988-2018; GDPR, 2016/679).

Efforts are underway to implement data management principles throughout all partners.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

2) Intellectual property rights issues?

To the best of our knowledge and understanding we currently have no IPR issues.

3) Anonymization or transformation of confidential or sensitive data?

- Anonymization: cases are stripped of revealing identifiers such as name and address. Pseudo anonymization is a common technique for protecting identities in qualitative data.

We apply anonymization and pseudonymisation to personal data and research data. Names of professionals and their company affiliation may be disclosed (with permission) only if necessary and relevant to the project objectives.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Section 2: Ethics and Privacy

2.1 Ethics within FAIR data management

This chapter focuses mainly on privacy principles and procedures, considering these are the most relevant for the TRANSMIXR project. For other ethical principles, the consortium partners rely on European guidelines such as the of European Code of Conduct for Research Integrity (ALLEA)[3], or European and national anti-discrimination laws[4].

As we want to be inclusive, different media user profiles will be able to participate in the requirements analysis and in the pilot evaluation activities. Participating in research activities includes participating in interviews, focus groups, testing and interacting with developed prototypes, providing feedback (oral or via survey), observations and monitoring during the experience. Participants will be clearly informed about the project objectives and what is expected of the research participants', use of their data and other potential privacy and ethical issues (informed consent). For tests involving the use of headsets, like Head-Mounted Displays, a specific health notification will be provided.

VUB is responsible for the development of the ethical guidelines and procedures that must be followed during research activities to ensure that data subjects and data owners remain in control of their personal data and subsequent use, and that data is processed within the TRANSMIXR project in compliance of GDPR - General Data Protection Regulation (EU, 2016/679). The DPO of the Vrije Universiteit Brussel (VUB) can be consulted for advice on specific matters and for research activities that require ethical approval, the VUB ethical board will be asked for approval (still to be determined).

All consortium partners will ensure that all research activities during TRANSMIXR will take into account ethical principles, such as the non- discrimination principle, voluntary participation principle, ensuring the integrity of the research by applying good research practices and privacy principles.

1) Are there any ethical or legal issues that can impact data sharing?

[3] https://allea.org/code-of-conduct/

[4] https://fra.europa.eu/en/eu-charter/article/21-non-discrimination

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

To the best of our knowledge, there are currently no ethical or legal issues that can impact data sharing. During the lifespan of the TRANSMIXR project, the DMP, Privacy and Ethics report can be updated, if e.g. it becomes clear that certain research activities are subject to other specific ethical requirements or legislation.

2) Is informed consent for data sharing and long term preservation included in questionnaires dealing with personal data?

All participation in research activities requires voluntary participation and informed consent (between the researcher and respondent). Templates will be foreseen that can be used for all research activities involving human participants. For interviews, focus groups, workshops, an informed consent form will be presented and signed at the start of the activity. For online surveys or experiments, informed consent will be stated at the start of the questionnaire and participants need to agree with the information.

See below section 2.3.2.3 'Informed consent' for the information that should at the least be included in the informed consent form (we also included the preliminary ICF template in Annex 1 of this deliverable).

A specific case is the involvement of minors in research activities. For UC4, minors (12+) will be involved as this use case is also aimed towards youngsters who are participating in museum activities. For this use case, NISV will cooperate with ACMI, the museum of screen culture in Australia. Personal data will not be shared between EU- based partners and ACMI. Only aggregated and de-identified data will be shared. For these activities, consent of parents or legal guardians will be required as well as assent of the minor (informed consent forms will also be developed and used for research activities with ACMI visitors). There will be no risk or burden for the involved minors and they will benefit specifically from new value-driven experiences tailored at them. It is important to guide the parent(s) or legal guardian through informed consent. Both the parent(s), legal guardian or the minor can stop the research activity without reason or any given moment; and demand to delete their personal data and acquired research data.

We identified three main clusters of groups during the kick-off workshop. These are summarised below. Also in other use cases, minors were identified as potential relevant target groups, but they will be excluded from the user research for the time being.

- UC1-2: media & content creators
- UC3: performing arts
- UC4: cultural heritage

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Young audiences (incl.students)

Teachers & educators

(Content) creators

Table 2: Stakeholder mapping end-users

(Based on results workshop kick-off meeting Athlone, 26/10/2022)

End-user (UC 1 – 2)	End-user (UC3)	End-user (UC4)
high school kids primary school kids young adults AFP subscribers Esport fans	low income elderly young audiences existing performance arts audiences	students new museum audiences (young creatives)

Table 3: Stakeholder mapping professional users

(Based on results workshop kick-off meeting Athlone, 26/10/2022)

Professional user (UC 1 – 2)	Professional user (UC3)	Professional user (UC4)
storytellers/prosumers any journalist (eg. digital journalists) media producers digital editors **trainers (schools & companies)**	creators (eg. creative technologists choreographer content creators, producers & tech artist	**teachers (schools)** **Educators (museums)** **Education centres** Curators Cultural heritage professionals cultural associations

2.2 Research set-up

2.2.1 Consortium contributions

Table 4 summarises the research activities (finished to date or planned/upcoming) involving human participation per consortium partner in different work packages (eg.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

pilots). The table will be updated as the project progresses over time (living document). Each consortium partner will update the list after performing a particular research activity (involving human participation).

Table 4: Overview of the research activities per consortium partner

(Living document - Diary)

Partner	**Research activity (description)**
VUB	Living lab methodology: Applying qualitative and quantitative research methods and tools such as brainstorming, interviews, focus groups, co-creation workshops, surveys, monitoring, observation, …
AFP	Gathering (user) requirements via co-creation and workshops with professional and end-users. In addition, doing interviews with relevant professionals in the work field to come up with new insights.
SATORE	Gathering (user) requirements via co-creation and workshops with professional and end-users.

2.2.2 Research 'Toolkit'

2.2.2.1 Living labs

TRANSMIXR applies the living labs methodology to ensure an iterative and human-centred participatory design approach. for more detail see the methodology deliverable 'D1.1 UCD methodology and planning'.

Figure 1 provides an overview of the TRANSMIXR 'toolkit': A set of qualitative and quantitative research methods and tools (applied as a standalone technique or combined - 'mixed methods').

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

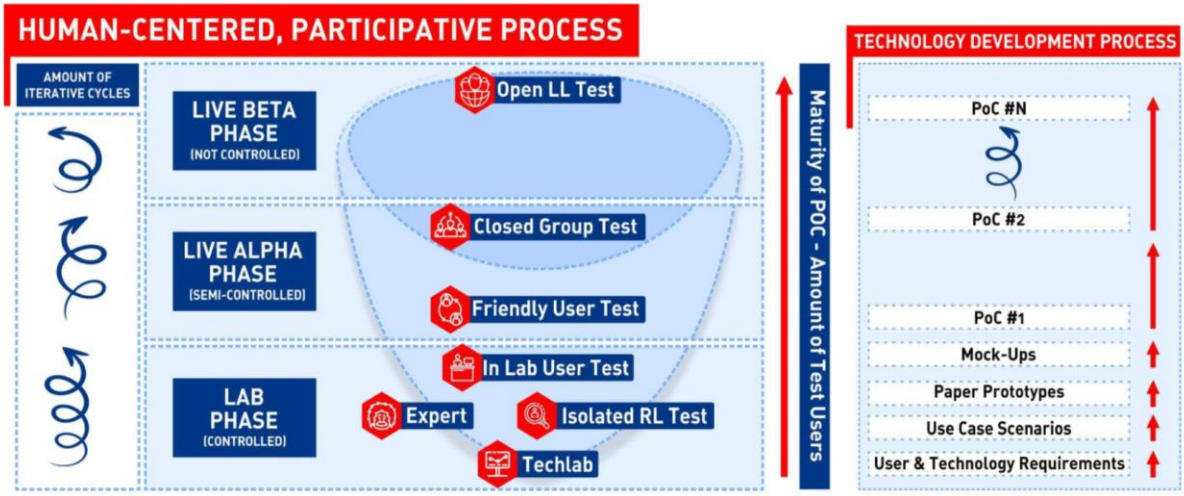


Figure 1: Living lab piloting framework imec-SMIT-VUB

(Proposal, p. 13)

The four use cases within TRANSMIXR will be iteratively developed and tested following the living labs methodology (co-creation, exploration, experimentation, evaluation; see Figure 2 below). We consider ethical, legal and societal aspects of AI (ELSA) in all activities related to design and evaluation of the XR environment. This DMP, Ethics and Privacy report provides templates and privacy checks to ensure that evaluation activities comply with ethical, legal and societal requirements.

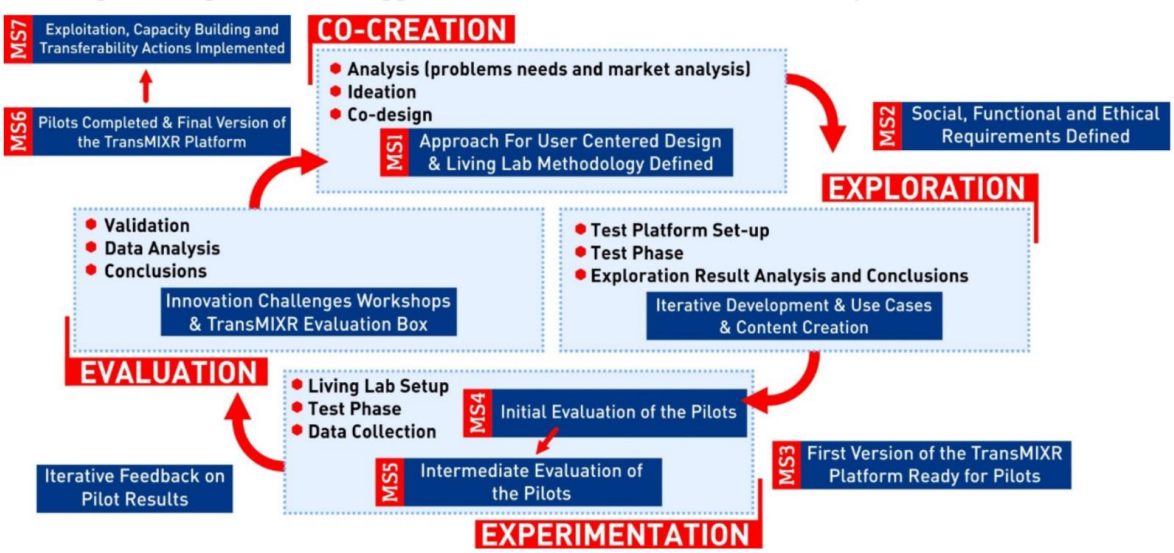


Figure 2: TRANSMIXR living lab pilot phases and milestones

(Proposal, p. 13)

We select research methods depending on the research questions and objectives in the TRANSMIXR use cases. Below we describe methods that we often use (and

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

therefore have experience in) or techniques that are suitable for use in the project (non-exhaustive list).

2.2.2.2 Interviews / Focus groups

For individual- or group interviews organised by any consortium partner, a guide is available together with example text and informed consent templates. The informed consent is mandatory and needs to be signed on paper or via a digital signature (or verbally accepted if online and recorded) before the interview can officially start. It's important that the participant understands the necessity of the interview and knows that he/she can stop the interview at any given moment. Also, the informed consent will explain why their personal data is required, for which purposes their data will be used (e.g. age comparison, demographic analysis, etc.), who will handle and store their data and that their data will be anonymized or destroyed when it is no longer required for further research.

2.2.2.3 Brainstorming / Co-Creation

User & technical requirements will be defined, together with the definition and design of the use cases. For each use case, we will foresee dedicated co-creation sessions (with 8-10 participants (gender balanced)) in which the identified user profiles will be involved. In these sessions specific needs of the user groups will be derived and translated into a set of social, functional and ethical requirements as input for the specification of the use case scenarios and for the technology development. The user and technical requirements will therefore be further discussed and refined in a workshop with all project partners. Further, during pilot phases, observations will take place during the different use cases. Participants will be aware that they are being closely monitored and will give their permission via an informed consent form. Lastly, it is important to clarify that participants have the right to stop the survey at any given moment; this should be part of the description.

2.2.2.4 Surveys / Logging data analysis

When a survey is set-up, it will include a brief description of the project, the goal of the research activity, and a privacy statement, including the researcher(s)' contact information. Participating in the survey shall only be possible when participants have consented with the privacy statement and the processing activities. Yet, it is important to clarify that participants have the right to stop the survey at any given moment; this should be part of the description. Lastly, the privacy statement will be a brief explanation of why the personal data of the participant is required, for which purposes the data will be used (e.g. age comparison, demographic analysis, etc.) and that the

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

data will be anonymized or destroyed when it's no longer required for further research, will be added.

2.2.3 Ethics Decision Tree

1) What do we need to consider in terms of ethics before the research starts, and during the research? Do we need to submit the research to an ethics committee?

We used the ethics decision tree and guiding questions (interactive guide for researchers, also see Annex 2) provided by the Vrije Universiteit Brussel as a guideline to decide whether to submit our study to an ethics committee.

Figure 3 visualises the ethical considerations and decisions that the TRANSMIXR consortium partners put forward before and during the research activities.

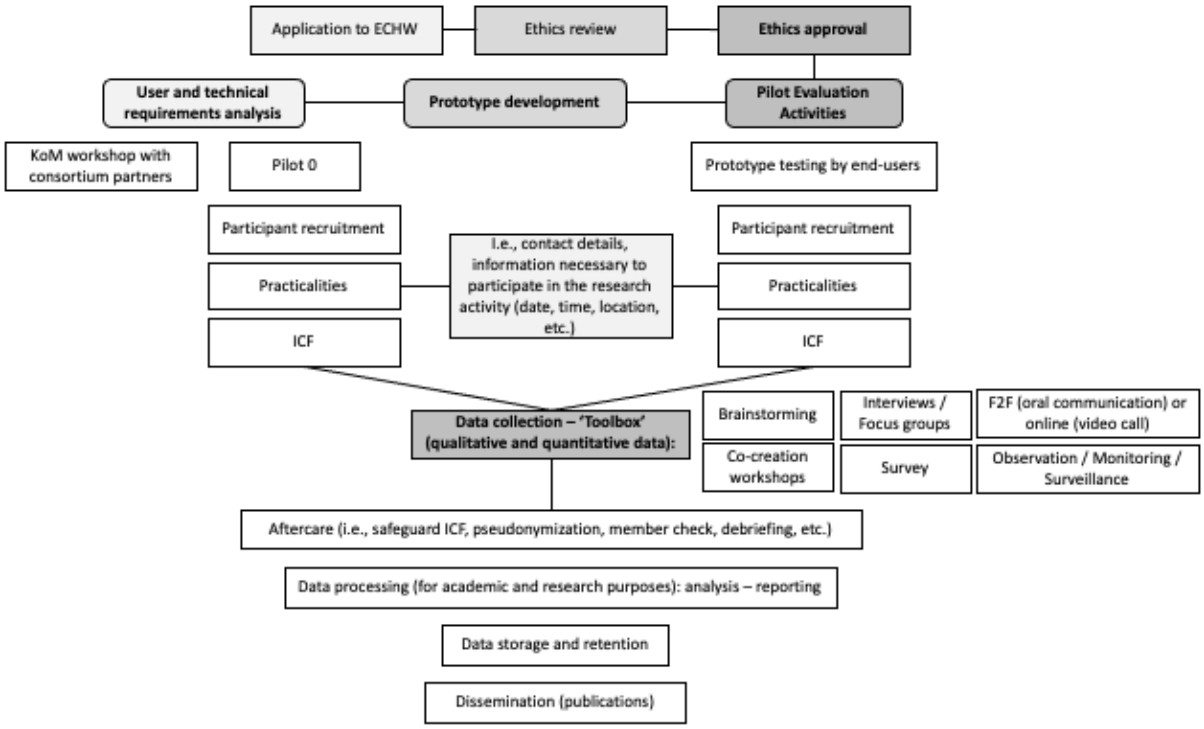


Figure 3: TRANSMIXR ethics procedures ('decision tree')

2) Will we do research with people (human participants)?

a. In this case, the research is covered by one of two ethics committees at the VUB (Committee for Medical Ethics and the Ethics Committee for Human Sciences).

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

b. We determined (considering research population, researchers involved, location, type and purpose of the research) whether and when we need to request ethics approval.

The research involves people. Informed consent forms will be used for each research activity involving human participants. They are volunteers for non-medical studies (e.g., social or human sciences research). The research activities do not involve interventions (physical also including technology, behavioural treatments, etc.) on the study participants.

Considering the research population, we do not work with patients, patients' data, or healthy volunteers (clinical trials). The research is not carried out at a healthcare institution. The research does not aim to develop knowledge specific to the practice of medical care professions.

We therefore determined ethical approval from the Committee for Medical Ethics is in our case not legally mandatory before the start of the research[5].

We then determined whether to submit the study to the Ethics Committee for Human Sciences (ECHW) based on the following statements:

3) Do we need ethics approval to publish?

Ethics approval might also be necessary to publish (we cannot state this with certainty at the moment). The VUB still recommends submitting an application for ethical review because retrospective approval from the ECHW is not possible. All research that needs ethics approval must be submitted before the research starts.

4) Do we receive funding via the EU / Flanders (FWO) / OZR / Another funder requiring ethics approval?

TRANSMIXR is financed by the EU. This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

5) Do we work with a vulnerable group or people who cannot give informed consent, or children/minors?

a. Whether a person belongs to a vulnerable group depends on the context of the research. Examples include: pregnant women, ethnic minorities, elderly people, people in poverty.

[5] https://www.vub.be/en/our-research/policy-and-structure/ethics-committees-data-protection-office

We work with **children/minors (12+)** for UC4 (the other use cases do not involve minors). We do not work with vulnerable groups, people who cannot give informed consent.

As at least one of the three statements above applies to TRANSMIXR research activities, we will apply to the ECHW at the VUB (submit application in February 2023).

We also subjected the research activities to further ethical reflection (summarised below in Table 5).

Table 5: Ethical reflection and statements on the TRANSMIXR research activities

TRANSMIXR research activities involve…	**TRANSMIXR research activities do not involve…**
Personal data processing, and the processing of **special categories of personal data** (e.g., sexual lifestyle, ethnicity, political opinion, religious or philosophical beliefs).	Processing of genetic, biometric or health data, personal data related to criminal convictions or offences.
Profiling, systematic monitoring of individuals, or processing of large scale special categories of data or intrusive methods of data processing (such as surveillance, geolocation tracking, etc.).	Further processing of previously collected personal data (including use of preexisting data sets or sources, merging existing data sets). We do not plan to export personal data from the EU to non-EU countries. We do not plan to import personal data from non-EU countries into the EU or from a non-EU country to another non-EU country.
Each consortium partner is based in the EU. **Collaborations** may arise later with organisations outside the EU (e.g. collaboration/exchange with students in Australia).	We do not work with consortium partners outside the EU, and in other countries.
Some of the research activities will be carried out **outside of the EU**	The activities undertaken in this country do not raise potential ethical issues. We do not plan to use local resources (e.g.,

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

(cooperation with ACMI, museum of screen culture in Melbourne, Australia).	animal and/or human tissue samples, genetic material, etc.). We do not plan to import any material (other than data) from non-EU countries into the EU or from a non-EU country to another non-EU country. We do not plan to export any material (other than data) from the EU to non-EU countries. The research activities do non involve low and/or lower middle income countries. The situation in the country cannot put the individuals taking part in the activity at risk.
Development, deployment and/or use of **Artificial Intelligence (AI)**. We determined through self-assessment this will not raise ethical concerns related to human rights.	No use of substances or processes that may cause harm to the environment, animals or plants (during the implementation of the activity or further to the use of the results, as a possible impact). No dealing with endangered fauna and/or flora, nor protected areas. No use of substances or processes that may cause harm to humans, including those performing the activities (during the implementation of the activity or further to the use of the results, as a possible impact).
	We additionally declare that we do not work with human cells or tissue, animals, or non-human genetic material. We assume to the best of our knowledge that the research cannot be used for military purposes, nor misused.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

2.3 Ethical procedures, privacy, and data protection

2.3.1 Participant management

2.3.1.1 General guidelines

Consortium partners ensure security of participants' personal data by adhering to the European General Data Protection Regulation (GDPR). Personal data will not be shared with third parties or consortium members that do not need personal data for deliverables. Personal data will be anonymized when personal data is no longer necessary for the purposes for which it was originally collected. Statements or quotes may only be used in a pseudonymized way and given permission of the participants (informed consent).

In general, the consortium partners should consider which data they collect, for what purposes (why), and for how long (when).

Second, **transparency** is key. Participants should be informed about:

- Research participation must be voluntary. Participants have the right to stop their participation in the research activity at any time, withdraw consent, and request to delete their personal data and the collected research data.
- Personal data processing purposes: What personal data will be collected and why.
- How personal data is processed (used, stored, transferred, deleted) during and after the research project.
- Who can access the data.
- Data subject rights (GDPR Chapter 3)[6].
- Data retention: personal data will not be stored longer than required for the purposes for which personal data was initially collected.
- The nature of participants' input (what is being expected from them), timing and location of the research activity.
- Potential health hazards.

Data minimization and purpose limitation

The consortium partners must have a specific, legitimate and explicit purpose for personal data processing, and guarantee they only process relevant information for this purpose.

[6] https://gdpr-info.eu/chapter-3/

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Data retention and security

The consortium partners process personal data for as long as necessary for the purposes for which personal data are collected initially. After this period (maximum five years for scientific research purposes), all personal data will be anonymized or deleted. Consortium partners ensure personal data security by implementing technical and organisational measures securing the personal data.

Some participants may like to be informed about the project progress. TRANSMIXR will be present online and on various social media (e.g., LinkedIn, Instagram), the project website, and newsletter. These channels will be highlighted in the informed consent. Participants can indicate they are interested in participating in subsequent research activities. Their contact information will be stored in a separate file and can only be accessed through consortium partners that manage the TRANSMIXR communication channels.

2.3.1.2 Dealing with children/minors (+12)

Like we mentioned before, for UC4, minors (12+) will be involved as this use case is also aimed towards youngsters who are participating in museum activities.

Only aggregated and de-identified data will be shared. For these activities, consent of parents or legal guardians will be required as well as assent of the minor. There will be no risk or burden for the involved minors and they will benefit specifically from new value-driven experiences tailored at them. It is important to guide the parent(s) or legal guardian through informed consent.

Both the parent(s), legal guardian or the minor can stop the research activity without reason or any given moment; and demand to delete their personal data and acquired research data.

2.3.2 Research activities (set-up and execution)

2.3.2.1 Recruitment and sampling (inclusion/exclusion criteria)

Within TRANSMIXR we are convinced that participant recruitment is a crucial and not to be underestimated part of the research. We aim for a good and healthy relationship of trust with the participants. This will benefit the research, technology development, innovation impact, and exploitation. We aim for a streamlined and uniform recruitment process (recognisability) that is/can be adapted to the context and specific needs of the target groups.

Consortium partners will therefore follow some important guidelines and steps during participant recruitment.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

We contact participants only for a specific research activity. The participants will not receive newsletters and they are not contacted for further research activities (without separate and explicit permission to do so).

Communication about the project, objectives and research activities towards participants should be open, honest, unambiguous and clear (transparency).

We recommend at least including the following information in a call for participation in the study:

- What is TRANSMIXR? What do we do, why, and what do we want to achieve (objectives)?
- What is the purpose of the research activities? What is expected of the participants?
- How will we collect data? What types and formats of data will be collected?
- Information on data subject rights and privacy.
- Who will use the data, for what purposes? Who can access the data?
- Information about data storage and retention.
- Participant rights (e.g., stopping participation and withdrawing consent).
- Where to find more information about TRANSMIXR i.e., website, blog posts, social media, publications (deliverables, journal articles, etc.).

2.3.2.2 Practicalities

For participant recruitment (i.e., preparation and management of a call for participation), project partners contact participants individually, and provide the information necessary to participate in the research activity such as:

- Personal data of the participant (name, contact details like email or phone number).
- Date, time and location.
- Nature of the activity.
- Structure and course of the activity.
- Topic.
- Research objectives.
- Contact details of the researchers (and the research participant).

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

2.3.2.3 Informed consent form (ICF)

An informed consent form must be signed physically or digitally in two-fold (proof for the researcher and a duplicate for the participant) prior to any research activity involving human participants.

The ICF should be in a language in which the research activity will be carried out (most likely in English) and must state at the least:

- Brief overview of the project and objectives.
- Information about the set-up of the research activity and whether the research will be recorded (audio, video, notes).
- Information about the date, time and place of the research activity, and what is expected from the participants.
- Information about data subject rights (GDPR Art. 12-23), and the right to stop participating in the research activity without reason at any given moment (withdraw consent).
- Information about data processing (what personal data is collected and used for what purposes, by whom, and for how long), privacy and confidentiality (anonymization/pseudonymization).
- If applicable or necessary (for dissemination and publications), permission of participants can be requested for other forms of data collection (i.e., photographs).

VUB will provide a template of the ICF in English (UK) on the TRANSMIXR Google drive folder. Consortium partners are encouraged to translate (specific parts of) the ICF into the native language of participants to establish and guarantee informed consent (comply with transparency requirements as stated in GDPR Art. 13 & 14).

2.3.2.4 Aftercare

It is important to properly store, manage and protect the personal data of participants, research data (i.e., protecting the participants' identity and privacy through pseudonymization), and documents related to permission to process personal data and research data (ICF) after carrying out the research activities (data collection), preferably before starting the data analysis. The data and documents must be uploaded and stored on a centralised cloud service (online) or a central repository (offline). ICF and personal data are under no circumstances shared or stored in personal storage systems (e.g., personal laptop of the researcher). Personal data are not shared with third parties.

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Contact details of the participants can be used after research activities such as interviews or surveys for member checking and debriefing (only after the participant agrees to be contacted by the researchers, informed consent, opt-in to receive information about progress and research results, or to be invited for participation in later pilot phases).

2.3.2.5 Data processing, storage, and retention

Research data and accompanying information will be stored and processed securely during the research project to prevent data loss, ensure confidentiality, and avoid unauthorised changes.

Data is only stored on a highly secured platform (to be determined and approved by the DPO of TRANSMIXR), with strict access conditions and a high degree of protection. Data will never be stored on the researchers' PC or a USB stick (unless the data is encrypted), and it will never be emailed.

TRANSMIXR retains and preserves relevant research data and accompanying documentation for 5 years after completion of the TRANSMIXR project or the project funding, or after the latest publication date of the conclusions based on the data; unless provided otherwise by legal, contractual, ethical or other specific obligations or requirements of external research funders (if any).

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Section 3: Conclusion

Based on the information that we already gathered form consortium partners, this document came about. This deliverable was divided into two parts: the Data Management Plan & Ethics and Privacy and operates as a living document, which means that regularly updates and additions to the deliverable are possible.

Partners follow the principles and guidelines set out in the DMP. In case of further questions, the partners can contact the DPO of the VUB[7] (a DPO for TRANSMIXR will also be appointed soon).

Finally, we emphasise once again this is a living document. The document will be revised and updated during the course of the project. The necessary documents for conducting research activities (i.e., informed consent form) are drawn up by imec-SMIT-VUB, translated into different languages (the standard template is in English), and provided to the consortium partners.

[7] https://www.vub.be/en/our-research/policy-and-structure/ethics-committees-data-protection-office

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Section 4: Annex

Annex 1

Preliminary template of the informed consent form in English (UK).

Informed Consent Form

Dear participant,

We invite you to participate in TRANSMIXR, a European research project that aims to ignite the immersive media sector by enabling new narrative visions. TRANSMIXR introduces leading-edge technologies and experiences built around public values: inform, entertain, connect, inspire, educate, empower.

The ambition of TRANSMIXR is to strengthen the democratic mission and competitiveness of the European Cultural and Creative Sector with intelligent Artificial Intelligence (AI) and Extended Reality (XR) user-centric technologies that are accountable, inclusive, transparent, and trustworthy.

Participation is **voluntary**: you are not obliged to participate and if you refuse, this will not affect you. If you are unsure, you can ask questions to the researchers. You can stop participating at any time (i.e., by leaving the online survey) and do not have to give a reason.

Below you will find **more information** about the study and how it works in practice.

Contact details:

(*insert below contact details researcher 1; recommendation: provide a single point of contact*) Name and surname (title e.g. PhD researcher) Affiliation(s) abbreviation (i.e.g, imec-SMIT-VUB) Organisation (full name) i.e., Vrije Universiteit Brussel E-mail	(*if applicable, insert below contact details researcher 2*) Name and surname (title e.g. PhD researcher) Affiliation(s) abbreviation (i.e.g, imec-SMIT-VUB) Organisation (full name) i.e., Vrije Universiteit Brussel E-mail

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Study description

1. **Aim of the research**

I/We organise this [insert research activity i.e., interview, focus group, online survey, etc.] in the framework of the TRANSMIXR project, focusing on [describe focus i.e., to define user needs and requirements].

2. **Who can participate?**

[describe inclusion/exclusion criteria for participant recruitment below, if any]

Example: You can participate in the study if you are 18 years or older, speak Dutch and currently live in Belgium.

3. **Practicalities (what does your participation entail)**

[briefly describe the set-up and course of the research activity and explain what is being expected from the research participant]

Example (fill-in and adjust where necessary): You will be asked to complete an online survey. The duration of the survey is approximately [insert duration in minutes]. At the end of the survey you can enter a competition [describe incentives if applicable]. We reward [insert number of participants] with a [describe incentives e.g., voucher] worth [describe monetary value in euros]. Conditions: You answer all survey questions truthfully, answer the tiebreaker questions and submit the questionnaire.

4. **Privacy and confidentiality**

As the researcher(s), I/we have a duty of **confidentiality** with regard to the data collected. I/We commit to never disclose your name or other information that can identify you, for example, in a publication or conference. Individual results are never published. Personal data about/from you will be collected during this research. Data collection and processing is possible because I/we conduct scientific research and receive your explicit **consent** for this. Personal data processing is done in accordance with the legal principles imposed by the European General Data Protection Regulation (GDPR).

I/We, [insert name and surname of the researcher(s)], supervise the correct processing of your personal data and the information obligation this entails.

This mean I/we must inform you about:

a) What **personal data** I/we collect about/from you, in particular [describe here the personal data types that you collect - for example]: name, surname, age, gender, e-mail, address (location: country and postal code), telephone number, education, work, marital status, family composition and income, interaction

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

metrics (such as clicks, website visits and page views, interaction with TRANSMIXR social media channels), logging data (e.g., Mobile DNA), audio (e.g. interview recording in the format of .mp4), volumetric video data, psychological data (e.g., …), user behaviour, interests and habits (i.e., leisure activities, media use and preferences). In addition, '**special categories**' of personal data are also collected (GDPR Art. 9 & 10), in particular [describe here the special categories of personal data types that you collect - for example]: sexual orientation, religion, political preference, race and ethnic background. Note: You are not required to answer. It is possible to skip (survey) questions.

b) [insert name and surname of the consortium partner i.e., VUB (Vrije Universiteit Brussel, Pleinlaan 2, 1050 Brussels, KBO 449.012.406)] acts as controller.

c) Data is processed in the context of the aforementioned research purpose. In accordance with the relevant legislation, the collected data is kept for a period of five years. After five years, your personal data will be deleted or anonymized so that it can no longer be traced back to you.

d) I/We may only use your personal data for scientific purposes.

e) Your **data subject rights**: You have the right to inspect and correct your data. You have the right to delete your data, to limit the processing (or to object to this), and to object to data transfer to third parties. If you have any questions, please contact the researchers.

f) You have the right to withdraw your consent to data processing at any time. The withdrawal of consent does not affect the lawfulness of the processing of data obtained before the withdrawal of consent.

g) Your data will only be viewed by the aforementioned researchers and will not be shared with other institutions.

h) Your data is stored and secured in accordance with the guidelines as stated in 'D7.3: DMP, Ethics and Privacy report'.

i) If you want to exercise your rights or have any questions about your rights and data processing, you can contact the TRANSMIXR data protection officer: dpo@transmixr.eu. You can also consult the privacy conditions and terms on the project website: https://transmixr.eu/

j) The following protection measures have been taken to guarantee your privacy:

   i) Data collection is not anonymous in the first phase and is therefore converted into codes as quickly as possible (pseudonymization). We create a second dataset where it is impossible to identify you directly. A

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

"translation key" is created that can convert the codes back to their original meaning. Only the researcher(s) ([insert name and surname of the researcher(s)]) have access to this key and to the non-anonymous data. Only the researcher(s) can link the data to you as a person. The encryption key is stored / deleted separately and securely.

ii) Data is only stored on a highly secured platform, approved by the **DPO of TRANSMIXR** and consortium partners, with strict access conditions and a high degree of protection. Your data will never be stored on the researchers' PC or a USB stick (unless the data is encrypted), and it will never be emailed.

iii) The researchers of the TRANSMIXR project have **access** to the necessary personal data for carrying out the planned research activities. Your personal data can be shared in a pseudonymized form with employees of the organisations of consortium partners in the context of TRANSMIXR for project implementation and support. [Include limit list]. If a party is involved that is located outside the European Economic Area (EEA), TRANSMIXR ensures your data is always adequately protected by only collaborating with organisations, in sectors or countries that guarantee equivalent protection.

k) You have the right to submit a **complaint** about how your data is handled. You can do this with the supervisory authority responsible for enforcing data protection law:

[insert national supervisory authority for data protection law below - for example:]

Data Protection Authority (GBA) in Belgium
Drukpersstraat 35,
1000 Brussels
Phone: +32 2274 48 00
Email: contact@apd-gba.be
Website: www.dataprotectionauthority.be

5. Statement of the researcher(s)

I/We, the undersigned [insert name and surname of the researcher] (insert title i.e., PhD researcher), declare that I/we have provided the necessary information about this research. There is no pressure on the respondent to agree to participate in the study. I am/We are willing to answer additional questions. I/We subscribe to the ethical principles as stated in 'D7.3 DMP, Privacy and Ethics report' and ethical principles

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

within my specific research discipline. I/We comply with the legal obligations with regard to correct personal data processing as stated in the GDPR.

I/We declare furthermore that [insert consortium partner] has taken appropriate technical and organisational measures for data management and privacy, incorporated in internal information security documents, to protect your personal data.

[insert name and surname of the researcher(s)], insert title, date (Day Month Year), location (i.e., Brussels).

6. **Consent (click or tick answer)**

- **Yes, I agree to participate in this study**. I have read the informed consent form and agree with how the data is processed.
- No (I do not wish to participate in the study).

Name and surname of the participant:

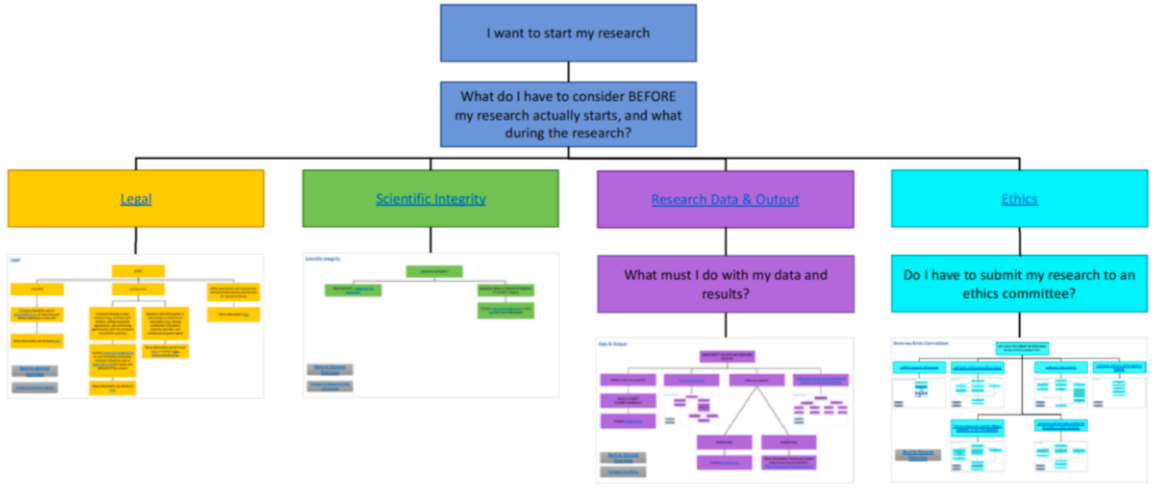
Date:

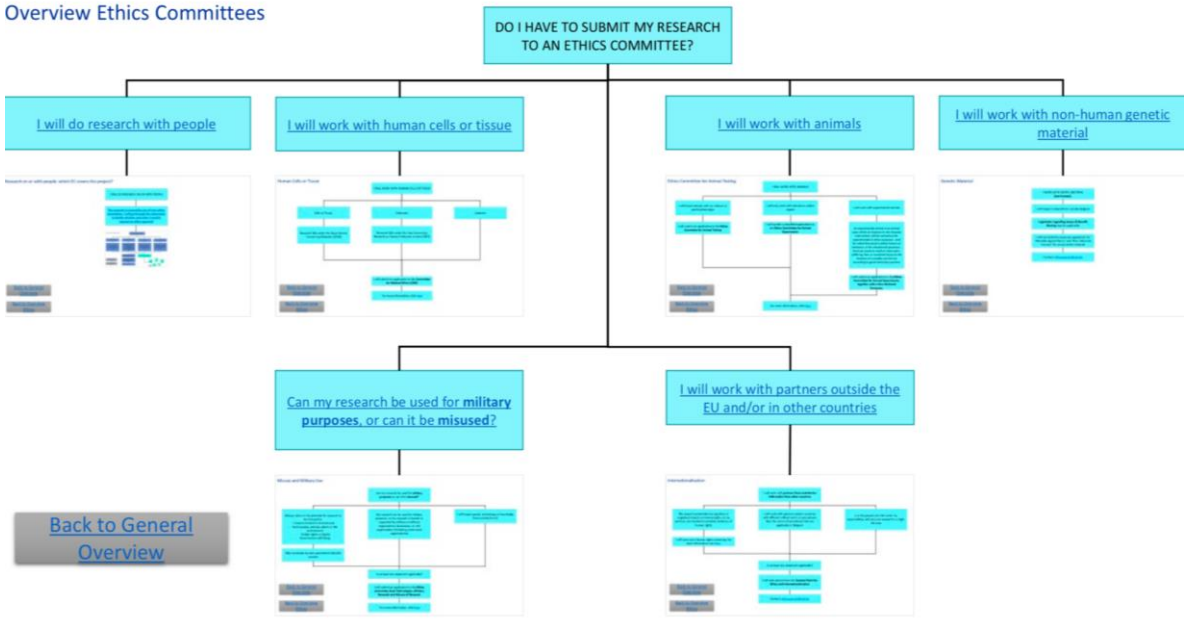
Signature:

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Annex 2

Screenshots of the ethics decision tree and guiding questions provided by the VUB.





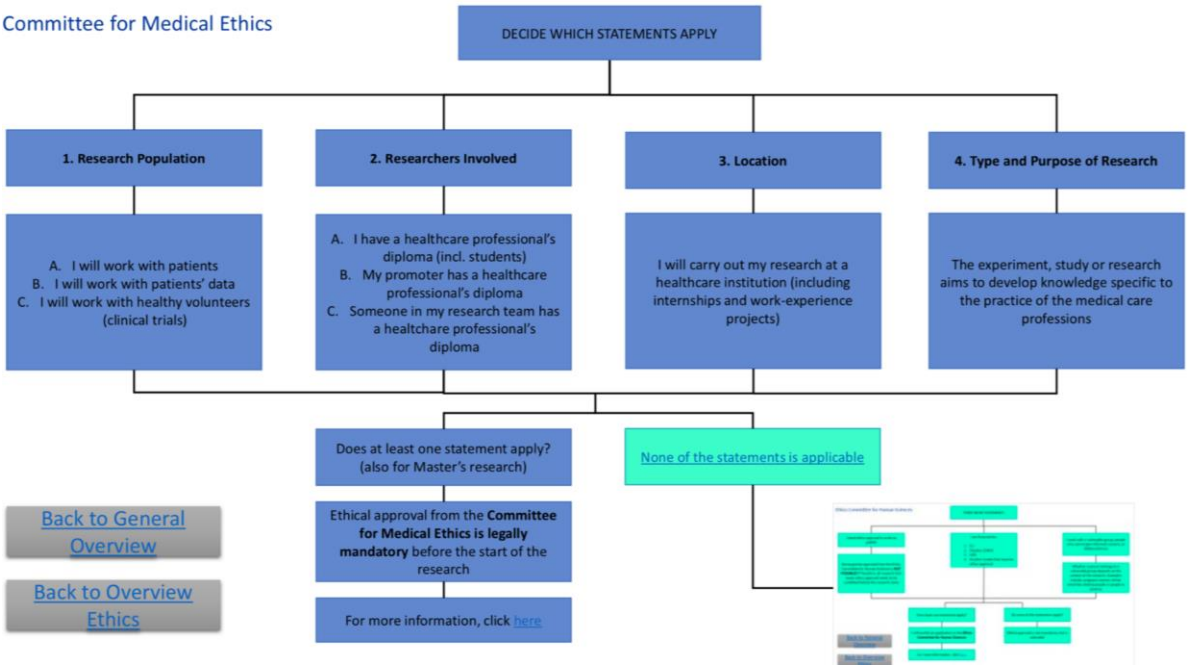
This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.

Research on or with people: which EC covers the project?

Back to General Overview

Back to Overview Ethics

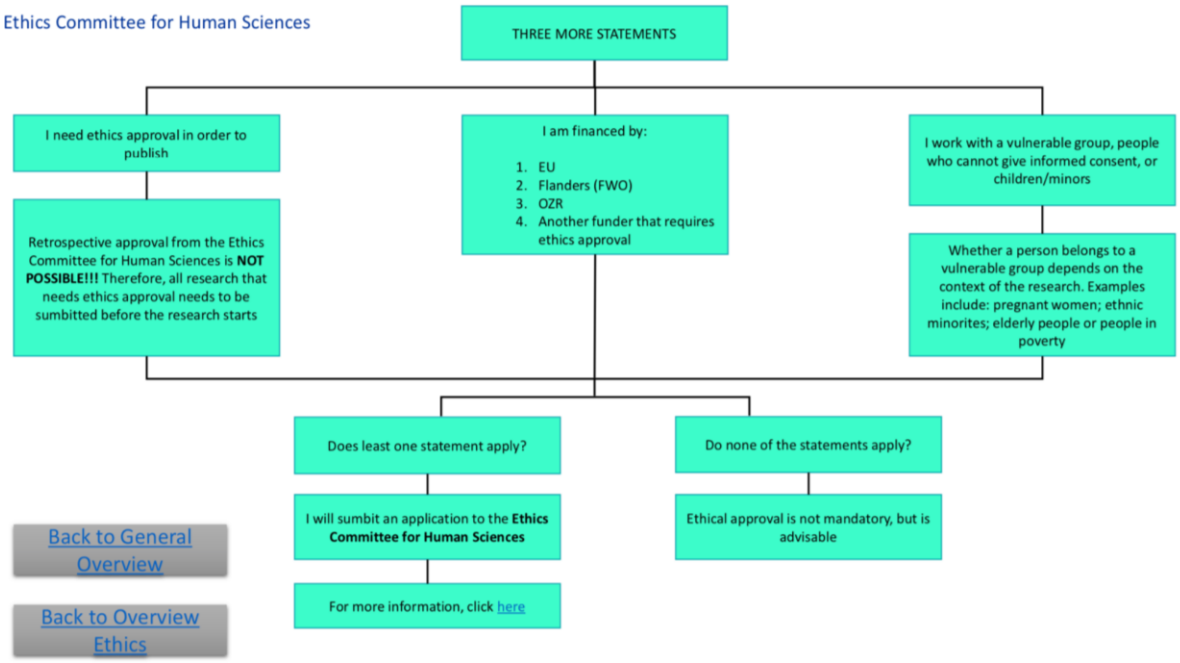
Committee for Medical Ethics



Back to General Overview

Back to Overview Ethics

This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.



This project has been funded by the European Union as part of the Horizon Europe Framework Program (HORIZON), under the grant agreement 101070109.