

# TRANSEATION

BLUE IS THE NEW GREY · NATURE-BASED SOLUTIONS

**Advancing Ecosystem-Based Management through Hybrid Blue-Grey Infrastructures in Marine and Coastal Areas**

## D1.2 DATA MANAGEMENT PLAN

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# ABBREVIATIONS

Acronym	Meaning
CSV	Comma-Separated values
CTN	Centro Tecnológico Naval y del Mar
DMP	Data Management Plan
DOI	Digital Object Identifier
DPO	Data Protection Officer
EOSC	European Open Science Cloud
FAIR Data	Findable, Accessible, Interoperable, Reusable Data
GDPR	General Data Protection Regulation
ORDP	Open Research Data Pilot
WP	Work Packages

## 1. SCOPE

The TRANSEATION project aims to validate hybrid blue-grey marine and coastal infrastructures for ecosystem-based management. It integrates nature-based solutions, social involvement, and digitalization to preserve and restore marine ecosystem health. Specific objectives include analyzing benefits and trade-offs and developing digital monitoring solutions. The project also seeks to identify limitations in existing initiatives like LEED and establish links with previous projects. Overall, it strives to advance marine conservation through Nature-based innovative Solutions and sustainable approaches.

The TRANSEATION main objective is to demonstrate the effectiveness of marine and coastal hybrid blue-grey infrastructures and validate a new level of ecosystem-based management combining nature-based solutions, social implication digitalization to the protection and restoration of marine ecosystem health and services.

Marine Technology Centre (CTN) will be the responsible for the general data management of the data as coordinator of this project. Within their responsibilities, in this document CTN will have to:

- Give access to the data to the partners consortium.
- Carry out each item in this DMP.
- Review and modify the DMP versions.
- Control the data after project has ended.

Besides, CTN has carefully evaluated the possibility of reusing existing data, and we have concluded that data reusability is a critical strategy in achieving our objectives. The primary reason for reusing existing data is to leverage the established scientific knowledge base in the field of ecosystem management. This previously collected and validated information provides us with a solid foundation for developing our comprehensive scientific knowledge base and practical guidance.

This document provides the draft version of the Data Management Plan (DMP) for the TRANSEATION project according to the Open Research Data Pilot (ORDP) under Horizon Europe. The purpose of this DMP is to support the data management life cycle of all data that will be collected, processed or generated by the project.

As a project participating in the ORDP in Horizon 2020, this document structure's and contents' are based on the Guidelines on FAIR Data Management in Horizon 2020 (Version 3.0, 26 July 2016) and Guidelines on Implementation of Open Access to Scientific Publications and Research Data in projects supported by the European Research Council under Horizon 2020 (Version 1.1, 21 April 2017).

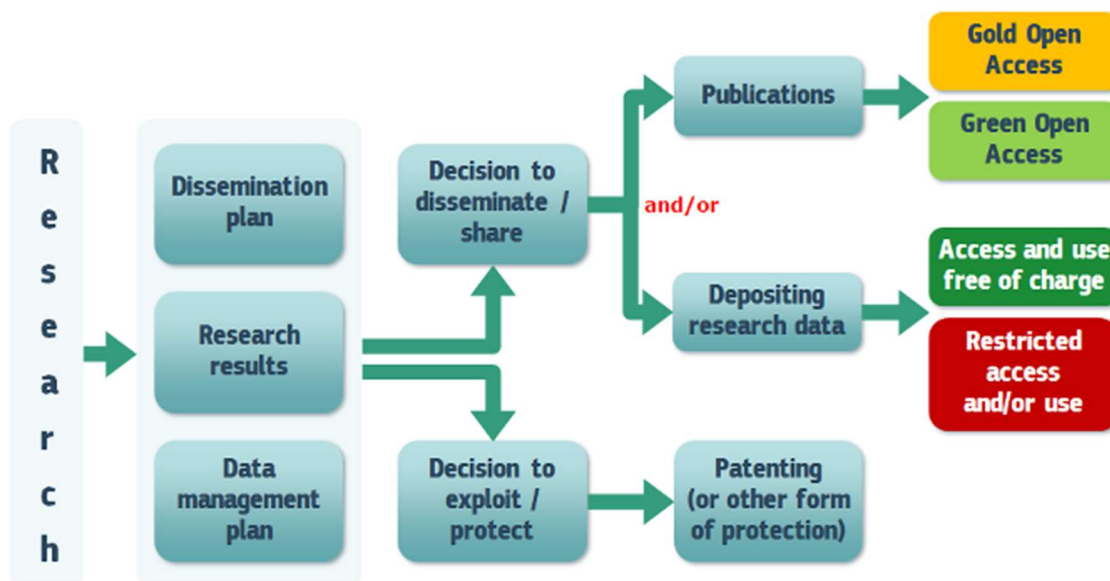


Figure 1: Open access to scientific publication and research data decision diagram in the context of dissemination and exploitation. Research Data Life Cycle (RDLC)

The following sections outline the types of collected and generated data, how these data will be exploited and made accessible for verification and re-use, and how data will be curated and preserved upon closure of the project. This DMP is a living document and will be updated over the course of the project whenever significant changes arise, such as (but not limited to):

- New data.
- Changes in consortium policies (e.g., new innovation potential, decision to file for a patent).
- Changes in consortium composition and external factors (e.g., new consortium members joining or old members leaving).
- Changes in ORDIP under Horizon Europe.

All changes made to this document will be communicated to the project partners. Common standards, folder structure, and identifiers will be agreed upon with the project consortium. This DMP has been shared and agreed between the project partners.

## 2. DATA SUMMARY

### 2.1. DATA RELATED TO THE PROJECT AND DATA ORIGIN

The purpose of the data in the TRANSEATION project is to provide a robust foundation for validating the effectiveness of hybrid blue-grey infrastructures in marine and coastal ecosystem-based management. This data will enable the analysis of benefits and trade-offs associated with nature-based solutions and facilitate the development of digital monitoring tools. Additionally, the collected data will help identify the limitations of existing initiatives like LEED and establish connections with previous projects, thereby advancing marine conservation through sustainable and innovative approaches. Ultimately, the data will serve to evaluate and demonstrate how the integration of nature-based solutions, social involvement, and digitalization can enhance the health and services of marine ecosystems.

In this sense, reusing existing data - where possible - allows us to optimize our resources and expedite the process of knowledge base development. Furthermore, by harnessing historical data, we can ensure that we remain consistent with best scientific practices and align our initiative with international data quality standards. This guarantees the reliability and relevance of the information we will provide in the context of ecosystem-based management for the blue natural capital in the European Union.

The data in the TRANSEATION project will be collected through a series of interrelated work packages (WPs), each focusing on different aspects of monitoring and managing hybrid blue-grey infrastructures. WP8 is dedicated to the comprehensive monitoring of the demonstrator infrastructures, including coastal protection, offshore wind farms, and low-trophic aquaculture. This involves continuous measurement of wave parameters, erosion rates, and biological communities using advanced techniques such as underwater transect protocols and multi-parametric sensors. Data from these monitoring activities will be systematically gathered to provide insights into the effectiveness and environmental impact of the hybrid infrastructures.

In WP9, a toolkit for Citizen Science is expected. The toolkit consists of mobile applications for Android and IOS (iPhone/iPad), an interactive web-application for contributing to the project in the browser on desktops and laptops, and a data administration interface, allowing the project team to access and manage the data, download data exports and work with the user community. All parts have been launched on the 31st of May publicly via the App Stores as the project's App "COSEA", including the launch of the web-application and the data administration interface setup for data access and management. The toolkit is already launched, and it is called COSEA App.

In parallel, WP10 will develop a robust Data Sharing Platform (DSP) designed to integrate and standardize all collected data. This platform will ensure data traceability and security through blockchain technology, while also providing a unified format for data from various sources, including public repositories and citizen science applications. The DSP will enable seamless access to high-quality, reliable data, facilitating data sharing among project partners and the broader European observation community.

Building on the data collected and managed in WP8, WP9, WP10 and WP11 aims to create a 3D digital twin of the hybrid infrastructures. This digital twin will serve as an advanced management tool, incorporating predictive models to assess the effectiveness of nature-based solutions (Nbs) and support decision-making. The digital twin will use descriptive and AI models to visualize and predict ecosystem developments, integrating data from monitoring activities, the DSP, and other relevant sources.

By cohesively integrating the efforts of WP8, WP9, WP10, and WP11, the TRANSEATION project ensures a comprehensive approach to data collection, management, and utilization. This integration not only enhances the reliability and accessibility of data but also supports innovative modelling and visualization techniques to advance marine conservation through sustainable and effective NbS.

## 2.2. TYPES AND FORMATS OF DATA

Following previous chapter, it is expected that several types of data in different formats from data acquisition, documents, images, software codes, and external sources will be generated and stored.

- Model output, Data and metadata will be requested, stored, and transferred in either comma-separated values (ASCII, .csv) as well as NetCDF format.
- To facilitate the data exchange, MS Excel compatible files including comma-separated and .xls(x) format will be also accepted.
- Cartographic formats .shp, .JSON, .kml, and other formats facilitating such as GEOTIFF.
- For analytical purposes, other formats include .py (python).
- Where applicable, data formats may be migrated when new technologies become available and are proven robust enough to ensure digital continuity and continued availability of data.
- Personal data, such as names, IP address, residence of participants, etc, must be irreversibly anonymised before being made public. If such data cannot be irreversibly anonymised, it will remain confidential and only managed by designated Data Controllers in the project (CTN).

The next table shows the types, formats, and volume of data that TRANSEATION project will manage. CTN will be responsible for data management, standardization, harmonization and quality assurance.

Data origin	WP Leader	Task	Types	Formats	Volume
WP1	CTN	Task 1.3. Coordination	Personal metadata	.csv, .xls(x)	In the order of MB's
WP2	CTN	Task 2.3. Coordination	Personal metadata	.csv, .xls(x)	In the order of MB's
WP3	IOW	Task 3.3. Baselines and monitoring standardization	Scientific reports and publications	.csv, .xls(x), .pdf	In the order of MB's
WP4	Ecoocean	Task 4.3. Modelling (CFD + FEA)	Hydrodynamics variables: Different waves directions, heights, periods, wave transmission and refraction coefficients	.csv, .xls(x), .pdf	In the order of GB's
WP5	GEOCORAIL	Task 5.1. Site identification and planning	Ecological features: Habitataffection, target species, occurrence of hars substrates and sea grass meadows	.csv, .xls(x)	In the order of GB's
WP6	SAITEC	Task 6.1. Site identification	Environmental, structural and hydrodynamics data	.csv, .xls(x), .pdf	In the oder of GB's



<b>WP7</b>	AZTI	Task 7.3. Deployment and implementation	Hydrodynamics variables	.csv, .xls(x)	In the order of MB's
<b>WP8</b>	OE	Task 8.1., 8.2., 8.3. and 8.4 Demonstrators monitoring	Aquatic parameters: salinity [psu]; temperature[°]; dissolve oxygen [mg/L]; chlorophyll [mg/L] and [µmol/m <sup>2</sup> ]; depth [m]; pH; water quality [µmol/L]; Solar radiation [µmol/m <sup>2</sup> ·S <sup>2</sup> ], [W/m <sup>2</sup> ] and [lux]; turbidity [NTUs]; current [cm/s]; O <sub>2</sub> saturation [%].	.csv, .xls(x)	In the order of GB's
<b>WP9</b>	SPOTTERON	Task 9.2. Extension of the Citizen Science App Toolkit	Citizen science metadata	.json, .shp, .kml, .csv, .xls(x), .HTML	In the order of GB's
<b>WP10</b>	CTN	Tasks 10.2. and 10.3. Data Sharing Platform	Relational databases	PostgreS QL	In the order of GB's
<b>WP11</b>	CTN	Tasks 11.2. and 11.3. Digital Twin and models	Same types than WP8 used as inputs of the modelling	ODV, NetCDF, ASCII	In the order of GB's
<b>WP12</b>	SO	Task 12.1. and 12.2. Stakeholder's engagement	Interview data related to WP, scientific reports publications, contact information for various stakeholders	.pdf, .docx	In the order of MB's
<b>WP13</b>	SO	Task 13.1. and 13.2. Stakeholder's engagement	Interview data related to WP, scientific reports publications, contact information for various stakeholders	.pdf, .docx	In the order of MB's
<b>WP14</b>	CMCC	Tasks 14.1., 14.2., 14.3. Technical, socio-economic, socio-ecological assesment	Same types than WP8 used for the monitoring, and socio-economic data	.csv, .xls(x)	In the order of GB's
<b>WP15</b>	GLP	None	None	None	None
<b>WP16</b>	CTN	Task 16.2. Material for dissemination	Articles, proceedings, workshops, conferences, seminars, policy briefs	.pdf	In the order of MB's

<b>WP17</b>	CTN	Task 17.1. Dissemination and communication	Infographics, posters, roll ups, brochures, leaflets.	.jpg, .jpeg, .ppt	In the order of GB's
<b>WP18</b>	CTN	None	None	None	None

*Table 1. Type and formats of the data collected.*

New data will be collected from various European sources, including sensors, citizen science initiatives, etc. Personal data related to stakeholders' engagement and data from established repositories like Copernicus/EMODnet, including cartographic data, will also be incorporated into the data management plan. It is important to note that for all used data from external resources, the TRANSEATION team will follow the provided data policy.

### 2.3. DATA UTILITY

The data we generate and reuse in our project may have a wider data utility beyond the project itself. Potential beneficiaries of these data outside our project may include:

- The scientific community: Researchers, scientists and institutions working in the field of ecosystem management and environmental conservation can find value in the data. It can contribute to wider scientific knowledge and research in the EU region.
- Environmental organizations: Environmental organizations and non-governmental organizations (NGOs) focused on conservation and sustainability can use our data to inform their advocacy efforts and conservation projects in the EU region.
- Government and policymakers: Policymakers at various levels, including local, regional and national governments, can use our data to make informed decisions on the management and protection of the blue natural capital.
- Business and industry: Businesses operating in or dependent on the marine ecosystem, such as fisheries, tourism and shipping, can find our data valuable for sustainable business practices and compliance with environmental regulations.
- Educational institutions: Universities and educational institutions can use the data for teaching and research purposes, fostering a new generation of environmentally aware professionals.
- The general public: The data will be disseminated to the general public through educational programs, awareness campaigns and citizen science initiatives, allowing individuals to better understand and engage with environmental issues and restoration actions.

The data utility goes beyond the immediate objectives of our project and serves as a valuable resource for a wide range of stakeholders with an interest in the conservation and sustainable management of the EU's Blue Natural Capital.

### 3. FAIR DATA

TRANSEATION underwrites the importance of open access to scientific publications; thus, results will preferably be made available through Open Access. To determine how, it is important to differentiate between output types, and between input and output data.

First of all, the project will produce documents such as research publications and deliverables within this project. These (unless otherwise specifically mentioned in the consortium agreement) will be made publicly available through Zenodo, an open-access repository that assigns a Digital Object Identifier (DOI) to each uploaded document.

Secondly, there is data: observation data and model output datasets. For the input data TRANSEATION will follow the data policy of the data providers, refer to the original sources as much as possible, and only reshare when needed.

For the new data acquisition as done as part of the project we will follow the FAIR principles<sup>1</sup>. This data will be shared under CC-BY licensed data to the outside community, and to publish FAIR data the data will be made available for uptake in EU data aggregators with as complete metadata as possible. Depending on the type of marine data it will be published towards EMODnet and its underlying data infrastructures. The optimum solution would be to publish the datasets via the national data centers already connected to the EU aggregators. In order to streamline the process TRANSEATION partners should already formulate their metadata and datasets following the EU data exchange standards, which will automatically mean that the data will be as FAIR as possible. If the route to a national data center turns out to be too complex or time-consuming, the alternative is to publish the TRANSEATION project datasets via EMODNet Data Ingestion<sup>2</sup>. More details about the approach and how it supports FAIR data in the rest of this section.

Sensitive data will be anonymized before being made public, and data that cannot be made public will be archived in a suitable closed repository in agreement with the data owner. All data will be gathered and stored in accordance with the General Data Protection Regulation (GDPR) requirements. To enhance preservation and make available results and research data, the open-access repository Zenodo and the European Open Science Cloud (EOSC) will be used. Consequently, all data and metadata involved in the project will comply with FAIR data principles.

Thirdly, software: All project software deliverables will be licensed under open-source principles, unless otherwise specifically mentioned in the consortium agreement or decided by the general assembly. The project will follow as much as possible the FAIR principles for software publishing<sup>3</sup>.

Finally, and in line with the communication and dissemination plan, additional platforms, such as the TRANSEATION website will publish and disseminate posters, presentations, publications, and other data.

#### 3.1. MAKING DATA FINDABLE

All observation data will have an associated metadata document (stored as a .txt file) which describes key aspects of the data. All (Meta)data will be assigned a globally unique and persistent identifier, and in metadata there will be a reference to the datafile

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<sup>1</sup> <https://www.go-fair.org/fair-principles/>

<sup>2</sup> <https://www.emodnet-ingestion.eu/data-submission>

<sup>3</sup> <https://www.nature.com/articles/s41597-022-01710-x>

it described. In order to achieve findability, the (Meta)data will be registered in a searchable resource such as EMODnet data ingestion, or ideally in one of the EU aggregators.

All final versions of the deliverables will be hosted on Zenodo and will be adjusted to the following nomenclature:

**TRANSEATION-[number of Deliverable]-[xxx\_xxx]**

Where xxx\_xxx is a meaningful short description of the document or file, where words are separated by “\_”, e.g.: TRANSEATION-D1.2-Data\_Management\_Plan.

All files made publicly available reference TRANSEATION in their name, with the recommended convention “TRANSEATION\_xxxxxx”.

Photographs and audio/visual recordings are expected to be named as follows:

**TRANSEATION-[event]\_[date of event]\_[description of the event]**

E.g., TRANSEATION\_workshop\_kick-off\_meeting].

**3.2. MAKING DATA OPENLY ACCESSIBLE**

To maximize the impact of TRANSEATION research data, the results will be shared within and beyond the consortium. Selected data and results will be shared with the scientific community and additional stakeholders through publications in scientific journals and presentations at conferences, as well as open access repositories.

All observation data will be openly available and accessible, except for personally identifiable information and data underlines deliverables that are covered by confidentiality. The personal data processed in TRANSEATION will not be made publicly accessible but kept closed and inaccessible to third parties. By publishing the data as much as possible also via the EU data aggregators, the data will also be accessible once the project is no longer active.

All personal data, as defined in Article 4 of the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (GDPR) will be treated following the principles stated in Article 5 of the Regulation.

Data, such as documents, templates and deliverables will be available to all consortium partners via SharePoint Site. The access to SharePoint repository will be restricted to the Consortium. Should other individuals wish to access the data for research purposes during the project, it will be openly shared on request. Every meeting will be recorded and will be stored in a private YouTube’s channel called TRANSEATION.

Data will be published using standard file formats (.txt, .pdf, .csv, etc...). All data will be accessed using standard tools. Software relevant to accessing the data would be made available, but it is not seen as being a requirement. If required, we will provide the necessary open source to access and analyse the data.

For the duration of the project, personal data will be stored on the local secured server of the partner responsible for taking care of it.

**3.3. MAKING DATA INTEROPERABLE**

Partners will go through OpenAIRE guidelines for online interoperability, including OpenAIRE Guidelines for Literature Repositories, OpenAIRE Guidelines for Data Archives,

OpenAIRE Guidelines for CRIS Managers based on CERIF-XML 4. Partners will also ensure that BLAZE data observes FAIR data principles under H2020 open-access policy.

To ensure interoperability for new observation data as well as model output, the key will be to share via the EU data aggregators and follow their metadata and data standards as much as possible. In that way all datasets will use the community format standards for data and metadata capture/creation, and they will be described with community vocabularies. This will automatically achieve optimised interoperability of the published data and will prepare the data for sharing via the EMODnet data ingestion route.

As the project progresses and data is identified and collected, further information on making data interoperable will be outlined in subsequent versions of the DMP. Specifically, information on data and metadata vocabularies, standards or methodologies to be followed to facilitate interoperability, and whether the project uses standard vocabularies for all data types present to enable cross-disciplinary interoperability.

In order to achieve optimised FAIRness and re-use of these data, a metadata plan will be developed during the project. This plan includes to adopt metadata standards to ensure quality and interoperability

The new data will be published as much as possible following EU aggregators such as EMODnet, following their standards, in order to achieve optimised FAIRness and re-use.

After the project, data will be available in the Data Sharing Platform and EMODnet following data FAIR principles for at least 2 years.

### **3.4. DATA RE-USE**

CC Licenses will be used for all data to be preserved.

Again, for new observation data as well as model output, the key will be to share via the EU data aggregators and follow their metadata and data standards as much as possible. In that way all datasets will use the community format standards for data and metadata capture/creation, and they will be described community for quality, data usage, which are all elements for Reusability of the observation data.

Metadata will be well documented ensuring the re-use of the data. A plan will be conducted with different templates, using standards from EU aggregators, to upload data to DSP according to FAIR principles. CTN will be the responsible of this matter.

All Personal Identifiable Information will be restricted to internal usage and not going to be shared with third parties. For shared information, standard format, open-source software, and proper documentation will guarantee re-usability by third parties.

For publications deposited on a public data repository (Zenodo) access is unlimited.

An internal peer review is performed for the main project deliverables to guarantee the deliverable is developed with a high level of quality. Each WP leader must submit all the produced documents to another partner assigned as internal reviewer to check for the quality of the documents produced.

The project publications will remain re-usable for at least 2 years.

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<sup>4</sup> <https://guidelines.openaire.eu/en/latest/>

## 4. ALLOCATION OF RESOURCES

Costs related to open access to research data in Horizon Europe are eligible for reimbursement under the conditions defined in the H2020 Grant Agreement, in particular Article 6, but also other articles relevant for the cost category chosen. Project beneficiaries will be responsible for applying for reimbursement for costs related to making data accessible to others beyond the consortium.

The costs for making data FAIR includes:

- Fees associated with the publication of scientific articles containing project's research data in "Gold" Open access journals. The cost sharing, in the case of multiple authors, shall be decided among the authors on a case-by-case basis.
- Project Website operation: to be determined.
- Data archiving at Zenodo and on other online data repositories like via EMODnet Data Ingestion: free of charge.
- Copyright licensing with Creative Commons: free of charge.

The project members of the General Assembly are also responsible for the Data Management of TRANSEATION dataset and research data in accordance with each organization's internal Data Protection Officer (DPO).

Each partner is responsible for the data they produce. Any fee incurred for Open Access through scientific publication of the data will be the responsibility of the data owner (authors) partner(s).

## 5. DATA SECURITY

As an initial step, only the Consortium Partners will have access to the Data Sharing Platform developed in WP10 where datasets and metadata are filed. Following, scientific publications and articles, the dataset deliverables and the final demonstrator research results will be shared through Zenodo to promote the data making FAIR.

Data Security Simple, sensible steps must be taken to ensure data security during the TRANSEATION project implementation. In order to prevent unauthorized access, modification, replication or destruction of the project data, several measures have been put in place.

These measures include the following guidelines to ensure the security of the data:

- Identification security: Data are stored in online repositories which are password protected and/or grant access only upon correct identification. Different layers of security are to be implemented in order to protect data of higher sensitivity (users' personal data, etc.) Furthermore, to ensure code continuity in case of unexpected events, weekly backups of the corresponding repositories will be stored in a backup medium by the technical coordinator. Moreover, the technical coordinator will keep monthly backups of the code in two different mediums.
- Workplace security: Access to the partner's locations, where all TRANSEATION's data files, mostly confidential information are located, is protected by its own security system. Similarly, professionals working on the project are strongly recommended to remain protected against a possible data breach by using a password. They are encouraged to use updated antivirus software. Highly confidential data should be stored in encrypted form, and it is not advisable to share information via personal mail. The stored data should at least in two separate locations to avoid loss of data. There will be a back-up of the processed data every week and version control of the data will be handled by CTN every week. The back-ups will be storage in the Amazon Web Services (AWS) platform to avoid loss of data. The data flow from the provider to the repository will be develop while the DSP is developing.

- Data will be encrypted if deemed necessary by the participating researchers to protect confidentiality and integrity. Sensitive data will be identified and encrypted using industry-standard algorithms. Encryption will be applied both at rest and in transit, with secure key management practices in place. Regular audits will ensure compliance and address vulnerabilities. All personnel will be trained in encryption best practices and key management.
- The use of USB flash drives will be limited to minimize security risks and data breaches. When necessary, only encrypted USB drives will be used. Regular scans for malware and strict access controls will be implemented. Alternatives such as secure cloud storage and network drives will be prioritized. Training will be provided to ensure compliance with these protocols.
- Files will be labeled in a systematically structured manner to ensure coherence in the final dataset. A standardized naming convention will be established and adhered to by all team members. Metadata will be included for easy identification and retrieval. This approach will enhance data organization and integrity. Regular checks will ensure consistency and adherence to the labeling system.

## 6. ETHICAL ASPECTS

As stated in Annex 5 of the Grant Agreement, the actions carried out in this project comply with:

1. Ethical principles (including the highest standards of research integrity).
  - Researchers and research must contribute to the well-being of society.
  - Researchers should have the well-fare of the research participant in mind as a goal and strive for the benefits of the research to outweigh the risks.
  - Researchers should minimize financial and other influences on their research and on research participants that could bias the research results.
  - All research participants must voluntarily agree to participate in research, without pressure from financial pain or other coercion, and their agreement must include an understanding of the research and its risks.
  - Researchers should demonstrate honesty and truthfulness. They should not fabricate data, falsify results or omit relevant data. They should report findings fully, minimize or eliminate bias in their methods and disclose underlying assumptions.
  - Researchers should minimize attempts to reduce the benefits of research on specific groups and to deny benefits from other groups.
  - Researchers should not exploit or take unfair advantage of research participants
  - Research participants should have the right to control access to their personal information and to their bodies in the collection of biological specimens. Researchers will protect the private information provided by participants from release.
  - Researchers should only engage in work that they are qualified to perform, while also participating in training and betterment programs with the intent of improving their skills set.
  - Researchers should engage in ethical research and help other researchers engage in ethical research by promulgating ethical behaviors through practice, publishing and communicating, mentoring and teaching, and other activities.
2. Applicable EU, international and national law, including the EU Charter of Fundamental Rights and the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Supplementary Protocols.

Particular attention is paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of persons, the right to non-discrimination, the need to ensure the protection of the environment and high levels of human health protection.

In addition, the project partners agree to comply with the fundamental principle of research integrity as set out in the European Code of Conduct for Research Integrity. This implies compliance with:

- Reliability in ensuring the quality of research reflected in the design, the methodology, the analysis and the use of resources.
- Honesty in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair and unbiased way.
- Respect for colleagues, research participants, society, ecosystems, cultural heritage and the environment.

### 3. Anonymity and Confidentiality Requirements

In this respect, one of the most important aspects is to guarantee the anonymity of the participants providing information to the project. Participants are informed that they will be protected by the partners during the different phases of data collection. All records, minutes, data captured online and recordings will be treated in the strictest confidence. Names will be changed in verbal transcripts of interviews, field notes and details that may make the subject personally identifiable and sensitive information will be changed so that it is not identifiable.

All data collected as part of the research activities of the TRANSEATION project will be anonymised or pseudonymised to the extent possible in order to mitigate the ethical concerns arising from the use of personal data, so that, ideally, the data can no longer be traced to identifiable persons. All partners within TRANSEATION will remove all personally identifiable information where appropriate and where possible assign participants with a participant number or a pseudonym.

Partners will only collect and process data that is strictly necessary for running the research, for internal processing, administrative purposes and for correspondence with research participants.

Informed consent procedures will be utilised during the TRANSEATION project in the following tasks:

- Task 12.1. Definition of stakeholder engagement methodology.
- Task 12.2. Establishment of the working groups engagement with local stakeholders.
- Task 13.1. Continue the stakeholder engagement activities on the demonstrators.
- Task 13.2. Integration of stakeholder contributions into other tasks.
- Task 16.2 Design of informational and educational material for dissemination, citizen engagement, workshops and for online distribution.
- Task 17.1. Dissemination and communication.

Participants in these tasks will be fully informed in advance about the nature of the research and will be asked to sign an informed consent form or to provide verbal consent. These tasks are thus bound by the GDPR. Accordingly, the GDPR will serve as the basis for guidelines regarding the minimum information which must be communicated in order to consent to be considered 'informed'. The information given to the participant, or the representative will be in a language understandable to the participant or the representative. No informed consent, whether verbal or written, will include any exculpatory language through which the participant or the representative is made to waive or appear to waive any of the participant's legal rights, or releases or appears to release the investigator, the sponsor, the institution or its agents from liability for negligence.

#### **Collecting personal data**

Data collection activities (interviews, surveys, etc.) will be designed to maintain privacy. As we explain before, personal data will not be requested unless this is necessary.



Vulnerable groups like minors and individuals unable to freely provide an informed consent will be excluded. Participation is voluntary. Participants will be given the possibility to decline and withdraw their participation at any time.

Under no circumstance, the deliverables or processes will compromise the individual right to privacy and satisfactory handling of personal data. All personal data will be stored on secure servers with access control managed by the Data Controllers. Personal data will be handled by authorised personnel, and no one will have access to the data unless this is necessary to carry out the project work.

At the end of the project, all personal data will be deleted, and the deidentified data will be completely anonymised. No personal data will be stored after the end of the project, unless explicit consent to do this is given by the provider/owner of the data. If such permission is given, non-anonymous data will be stored for a maximum of 4 months after the contractual end of the project (to allow for finalization of scientific publications).

For other non-anonymous data, for instance such as pictures and videos used for Project communication activities, these will be kept for up to 4 years after the end of the Project. Such data will be shared, upon explicit consent only, through the project website, newsletters, and social media. If a party withdraws the consent to use this material (pictures, videos), it will be deleted without delay. More details will be given in following deliverables.