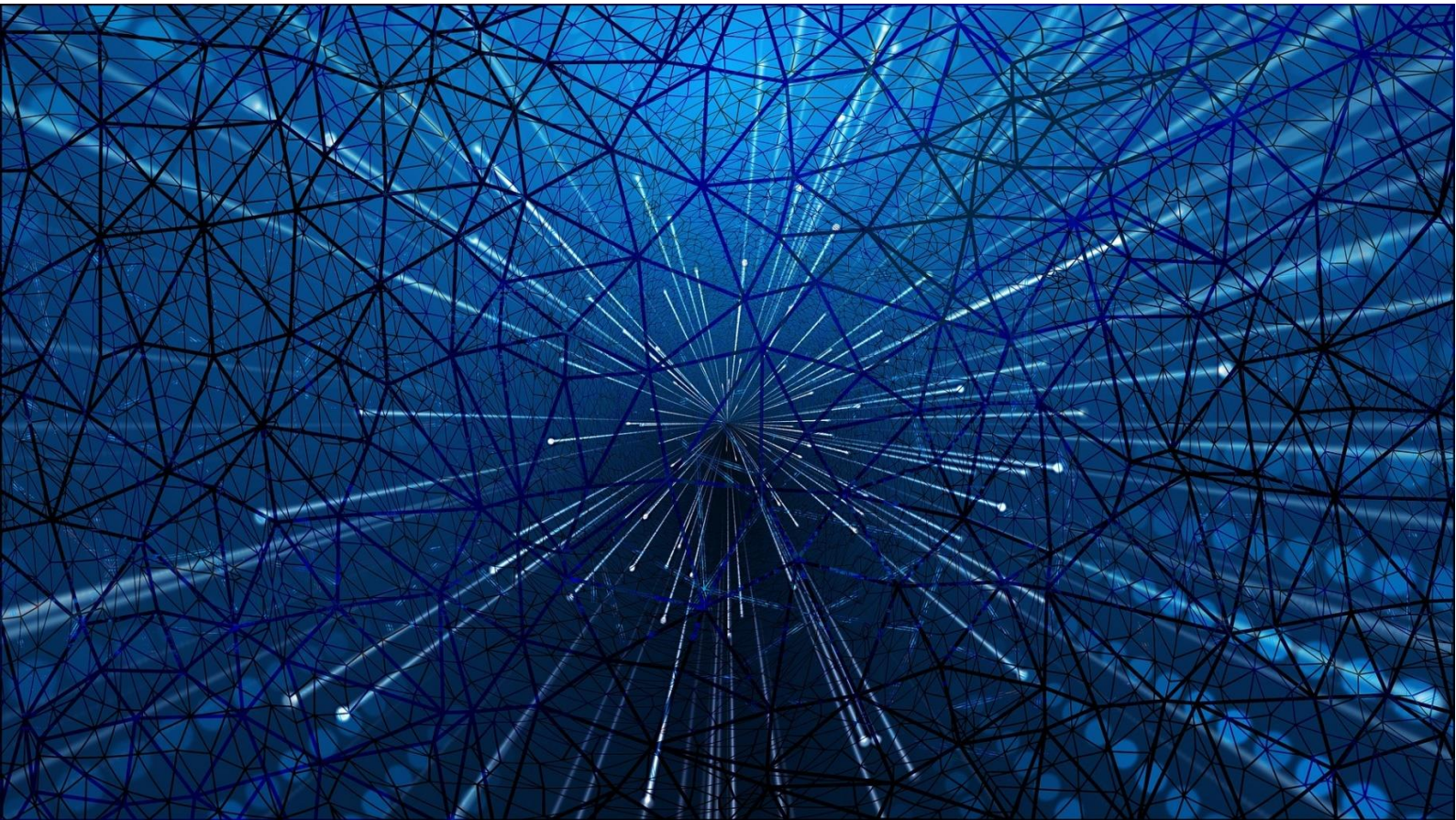


# D1.7: Ethic Requirements



WP1 - Project Management, Coordination and Administration

Report No. D1.7 / Date: 31/03/2021



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# ENCHANT Report

D1.7: Ethic Requirements

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## ABSTRACT

This document establishes the ethical foundation in guiding the project approach to research practices that conform to the European Commission's key ethical principles and codes of conduct in research. The Ethics Requirements document contains the requirements for procedures and criteria that will be used to identify/recruit research participants, procedures and criteria that will be used for collection, storage, and protection of personal data, and procedures and criteria for data transfer between the EU Member States and Non-EU countries.

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## Executive summary

This document establishes the ethical foundation guiding the project's approach to research practices that conform to the European Commission's key ethical principles and codes of conduct in research. The ethical requirements for the management and implementation of activities concerning ENCHANT will be specified in this document. The requirements include ethical principles and research guidelines to involving human participation, procedures and criteria for participant selection, the steps in obtaining informed consent, and the necessary ethics review and approval by competent authorities and the ethics committees.

The document contains the Ethics Requirements regarding:

- Procedures and criteria that will be used to identify/recruit research participants
- Procedures and criteria that will be used for collection, storage, and protection of personal data
- Procedures and criteria for data transfer

The document is structured as follows: Section 1 provides an overview of the ENCHANT project's methods and the fundamental ethical principles and research conduct for the project. Section 2 contains the procedures and criteria that will be used to identify/recruit research participants. More specifically, Section 2 focuses on human participation, informed consent, and protection of vulnerable individuals/groups and the measures to protect and minimise the risk of stigmatisation. Section 3 provides the details on the collection, storage, and protection of personal data. Section 4 provides the requirements for data transfer and the participation/involvement of non-EU countries (Norway, and Turkey). The Annexes contain Documentation of consent forms and Data documentation templates for qualitative and quantitative data for the project ENCHANT.

This document is in many sections built on the ENCHANT Data Management Plan (DMP – D1.4), which is the project's main working document concerning ethical and data handling issues. Thus, all elaborations in this document going beyond the DMP will be integrated into the DMP with its next update.



# 1. Introduction

This document presents all principles the ENCHANT project will implement. Procedures outlined in this document relate to the research components of the project, and all project activities will be conducted according to the ethical principles stated in the document. Furthermore, it will document the statements of data protection authorities and ethical committees regarding procedures in ENCHANT.

The compliance with national and European regulations is embedded in the concept and activities of ENCHANT. Ethical and societal dimensions as well as national and international regulations will be considered at all stages of the ENCHANT project. All proposed ENCHANT tasks are permissible under the applicable laws and regulations, given proper observance of requirements. All project beneficiaries have existing and operational policies regarding potential ethics issues. The necessary actions will be taken by the project management and all beneficiaries to ensure compliance with applicable European and national regulations and professional codes of conduct relating to personal data protection. This will include, in particular, Directive 95/46/EC regarding data collection and processing, the General Data Protection Regulation (GDPR, 2016/679) that entered into effect in May 2018, and respective national requirements, ensuring legal and regulatory compliance.

## 1.1 Project methods

ENCHANT is a multimethod project where established science-based behavioural intervention techniques are implemented to increase energy efficiency behaviour among millions of European citizens through a contextual and multi-disciplinary approach. Its key methodological strength comes from combining both qualitative and quantitative methodologies with multi-disciplinary perspectives. This allows not only successful design and implementation of the large-scale interventions, but also answering the question of which (the combination of) intervention tools are most effective implemented by which societal actor in which cultural context.

ENCHANT will employ a wide variety of data collection methods to capture the resulting behavioural change in terms of energy consumption, energy savings, and energy conservation behaviour. Energy efficiency behaviour of citizens can be measured either directly: by digital data tracking or by collecting consumption data obtained from utility companies; or indirectly: from the consumers self-reporting through mobile or web-based apps, from focus groups, from surveys conducted by external companies, or through netnography based on consumer social media use. Table 1 presents an overview of the various data collection methods (see the first column) used in the different WPs of ENCHANT (see the first column) and indicates which WP(s) participate in each data collection or data handling.

A fundamental purpose of the project is to observe the behavioural change of a large number of people as correctly as possible with the effects of the interventions applied. In order to ensure representativeness, the project will employ a diverse large sample. There are multiple challenges in reaching a high number of people, including challenges regarding collecting



data, implementing pre-and post-test experiment design on the same groups of people in different countries, and measuring the impact of the interventions. Moreover, for the post-test design, reaching the same target group contacted in pre-testing constitutes a barrier for the data gathering process which also requires implementing careful tracking systems in line with GDPR.

**Table 1** Data collection methods used in different WPs

Method / WP	WP1	WP2	WP3	WP4	WP5	WP6	WP7
Literature search		✓	✓		✓		
Document study		✓	✓		✓		
Meta-analysis		✓	✓				
Re-analysis of existing data			✓			✓	
Surveys					✓	✓	
Quantitative experiments				✓		✓	
Online data tracking					✓		
Energy use data					✓		
Interviews					✓		
Focus group					✓		
Netnography			✓				
Workshop		✓		✓	✓		
Decision-making architecture						✓	

Through a systematic evaluation of data gathered from implementing these interventions, in combination with re-analysing already existing data, ENCHANT will test the effects of the intervention tools in real-life settings with the objective to unlock an energy efficiency potential among the general public through behavioural change. The dependence on already existing (secondary) data provided by the case cluster cities partners and other sources implies that it is also necessary to define procedures for how data access rights for secondary data are achieved and how that data is used and matched with primary data. Consequently, ENCHANT will design an empirically informed, web-based decision tool for impactful campaign design targeting energy-efficiency, relevant for a number of public and private actors (e.g., policymakers).

### 1.2 Key ethical principles

The following paragraphs outline the general ethical principles ENCHANT has defined for itself, based on international recommendations.

ENCHANT will involve the voluntary participation of adult participants within its activities. There are three sub-points related to the involvement of human participants to be managed:



- Details on the procedures and criteria that will be used to identify/recruit research participants must be provided.
- Detailed information must be provided on the informed consent procedures that will be implemented for the participation of humans.
- Templates of the informed consent forms and information sheet must be submitted on request.

Besides, due to the involvement of non-EU countries both as hosts for research institutions and as data providers (cases), the issue of compliance of data collection and protection procedures in these countries and the import and export of data to and from the EU is important to address.

Data collection must comply with the data protection legislation defined in the EU General Data Protection Regulation (GDPR, 2016). Therefore, prior to initiating data collection for each method, the participants need to provide informed consent. Through informed consent, the participant accepts that the data they provided will be analysed by the project (1) to provide information on the effects of the intervention tools in real-life settings (2) and to develop a web-based decision tool for impactful campaign design targeting energy-efficiency. They also consent that their data will be published in anonymised form through the participation of ENCHANT in the Open Research Data Pilot.

The ENCHANT consortium declares that it will comply with all relevant national, European and international ethical regulations and professional codes of conduct. All partners will also conform to Horizon 2020 ethical guidelines, including the Data Protection Regulation (GDPR), "Data protection and privacy ethics guidelines", the "Guidance for Applicants on Informed Consent", and national regulations. The research is guided by the principle of 'do no harm', which orientates the decisions made by researchers according to ethical considerations of whether or not the consequences of their decisions may harm respondents. The lead researchers, including the overall project leader and work package (WP) leaders, conduct their work in compliance with the scientific ethical standards applicable in their home country and the EU, including research abroad. The project will also participate in the Open Research Data Pilot. It has implemented the first version of a Data Management Plan in Month 6 of the project using the "Guidelines on Data Management" which will encompass the ethical requirements stated in this document. This will allow for a systematized way of updating the Data Management Plan and at the same time follow the ethical principles for the project. All anonymised data that can be shared publicly will be made available through an open data repository for future use at the end of the project.

The Consortium postulates that although members have substantial experience with participatory research, the nature of its interdisciplinary composition requires a commitment to a unified set of ethos to maintain concordance, fairness, and respect in the involvement among the Consortium Partners and participants of the project. ENCHANT's ethical approach to research and innovation conduct is in line with the European Code of Conduct for Research Integrity and follows the general principle of "maximise benefits and minimise risks/harm) as





stated in the H2020 Programme guidance on ethics self-assessment<sup>1</sup>. All activities in the ENCHANT project are based on the same guiding principles:

- *Proportionality* – to ensure proportionality between the methods applied and the objectives of the project. Data acquisition and activities should be appropriate and relevant as well as limited only to what is necessary.
- *Informed consent* – to guarantee that voluntary participation consented based on adequate information and competence in understanding the information provided, and full awareness of the consequences of their consent.
- *Right to privacy and protection of personal data* – to ensure participant control over personal information and maintain confidentiality, to safeguard and process personal data in a fair and legitimate manner while providing an open pathway to participant management of personal data (correct, change or withdraw) and to protect personal data from unforeseen, unintended, and malevolent use of data.
- *Reliability* – to ensure high-quality research<sup>2</sup> – in our research design, the methods we use, and the way we conduct our analysis, and in using resources based on sound judgment.
- *Honesty* – in the way we develop, conduct, analyse, report, and communicate our research.
- *Respect* – reflected in the way we think, perform, communicate, relate, and interact with project members, subcontractors, partners, participants, the environment and society.
- *Accountability* – for our research, in our actions throughout the project period and beyond.

### 1.3 Open Research Data Pilot

Wherever possible, ENCHANT thoroughly complies with the Open Research Data Pilot of the European Commission regarding research data generated by Horizon 2020 projects (see <https://www.openaire.eu/what-is-the-open-research-data-pilot>). ENCHANT beneficiaries will also check that the metadata of the publications is adequate for interoperability/reusability. The underlying (aggregated) data, where publication of the data does not collide with copyrights of the initial data providers, will be made available as supplemental information, in a thematic repository or on the Zenodo platform, and mentioned in the main text of the publication using ENCHANT data. ENCHANT provides access to all quantitative primary data (after anonymisation) collected (qualitative data will not be made available open access for GDPR reasons). Data will be made available as soon as ENCHANT primary research and publication interests are fulfilled. No embargo period is implemented once the ENCHANT

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<sup>1</sup> European Commission (2018). Horizon 2020 Programme Guidance. How to complete your ethics self-assessment.

<sup>2</sup> European Science Foundation, ALLEA. A European code of conduct for research integrity. 2010. [www.allea.org/Content/ALLEA/Scientific%20Integrity/A%20European%20Code%20of%20Conduct%20for%20Research%20Integrity\\_final.10.10.pdf](http://www.allea.org/Content/ALLEA/Scientific%20Integrity/A%20European%20Code%20of%20Conduct%20for%20Research%20Integrity_final.10.10.pdf).



publications are finished and no restrictions are foreseen to be put on the re-use of the data at this point.

Data management within the project will be in accordance with the Model Grant Agreement and follow the FAIR data principle<sup>3</sup>.

- *Findable* – including discoverability and creation of metadata such as applying a standard identification mechanism and using persistent and unique identifiers such as Digital Object Identifiers (details in the DMP), naming conventions, outlining an approach to search keywords and keeping a clear document version system
- *Accessible* – clear specifications on which data is openly available and explain why some data are kept close (e.g. personal data protection), specify the software or platform to use (e.g. internal: SharePoint, external: Zenodo, sensitive information: University of Oslo (UiO) and their Services for sensitive data (TSD) or NTNU's own solution NICE-1)
- *Interoperable* – to facilitate interoperability, the data and metadata vocabularies, methodologies and standards must be specified and followed by the Partners, provision of commonly used ontologies for interdisciplinary interoperability
- *Reusable* – specify why and the period of data embargo or data restrictions, describe the data quality assurance process in the DMP and indicate and clarify licenses and license validity period (for reuse of data to be exploited fully)

The project website ([www.enchant-project.eu](http://www.enchant-project.eu)) is the main publishing channel of the project. Results and updates on the ENCHANT project will be available for at least five years after the project ends.

## 1.4 Definition of terms

*Personal data* include all “information relating to an identified or identifiable natural person” (GDPR, 2016).

*An identifiable natural person* is someone “who can be identified directly or indirectly, in particular by reference to an identifier such as a name, identification number, location data, online identifier or two or more factors specific to the physical, psychological, genetic, mental, economic, cultural or social identity of that natural person” (GDPR, 2016).

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<sup>3</sup> H2020 Programme Guidelines on FAIR Data Management in Horizon 2020.



## 2. Identification and Recruitment of Participants

ENCHANT will involve the voluntary participation of adult participants and collection/processing of (non-sensitive) personal data, which raise ethical issues, within its activities. To follow ENCHANT's ethical principles, the participants' right to privacy and personal data protection are of utmost priority. Following the rule of proportionality, the questions and personal information should be limited to only what is necessary to achieve the objectives of the project. Moreover, informed consent is emphasized as it is important for the Consortium that each and every participant is aware of the aim of ENCHANT's research so that they are able to participate voluntarily and fully informed and assured that the research will be conducted in a respectful, honest, and transparent manner, and according to all relevant legislation, standards and codes of conduct.

### 2.1. Participant details

ENCHANT will involve the voluntary participation of adult participants in the following activities:

- Questionnaire surveys – through professional survey companies' existing panel, the questionnaire will be received by about 8 million European households in six countries.
- Quantitative experiments – 7 types of interventions using a Randomised Control Trial (RCT) approach will be distributed among 8 million European households.
- Online data tracking – digital information through smartphones and relevant APPs will be collected from approximately 4 million European households.
- Energy use data – energy use estimates of 4 million European households will be collected through energy providers.
- Individual in-depth interviews – pre and post-intervention responses of strategically selected approximately 100 European informants/citizens who are involved in interventions will be collected.
- Focus Group Interviews – pre and post-intervention responses of strategically selected approximately 150 European informants/citizens who are involved in interventions will be collected through approximately 15 focus groups.
- Netnography – digital traces of approximately 500 European citizens, which they leave when participating in social activities on the net, will be analysed.
- Workshops – views of approximately 50 relevant experts, user-partners and stakeholders – academic and non-academic – during approximately 10 workshops with partners will be feed into the design of the intervention package.

Children and/or adults who are unable to give informed consent will not be involved in the project activities of ENCHANT.



## 2.2. Selection of participants

Participants to the primary quantitative data surveys will be recruited from already registered members/customers/citizens of the user partners, members of national or local web-panels, or they will be specifically recruited by the subcontracted survey companies or the user partners. Only survey companies complying with the regulations formulated in the DMP will be subcontracted. The participants will be sampled to be representative for each user case where possible. Participants should be 18 years or older and must be able to give informed consent (see 2.4 below for informed consent procedure). Recruitment outside existing survey panels and for personal interviews and digital information will be conducted using information from mailing lists, newspaper advertisements, snowball systems (recommendations from other participants/key actors in the cases), posters, and similar sources. Expenses incurred by individuals due to participation in ENCHANT will be reimbursed. No physical intervention regarding the participants will be conducted in the study and participation shall be voluntary.

## 2.3. Vulnerable groups/individuals

ENCHANT's research activities deal partly with the issue of energy poverty, which also raises ethical issues. The question arises when potentially vulnerable groups or individuals, such as low income and/or lower-medium income groups/individuals, are included as respondents in interventions. This particularly requires management for preventing pressure on them or stigmatization. The following ethical considerations<sup>4</sup> must apply to ENCHANT's activities and research in this regard.

- For research carried out in vulnerable communities/groups, ENCHANT's research must be responsive to the groups' needs by providing research that adds value to the health and welfare of the participants, community, and/or their region.
- Research must be scientifically sound and abide by relevant EU/national legislation as well as by the relevant international regulations.
- Applies the principles set by the Global code of conduct for Research in a resource-poor setting, i.e., fairness, respect, care, and honesty.
- Benefit-sharing – the impact of the research, benefits for research participants and their community, benefits for local researchers and respondents – need to be realized.
- Ensure that participants from vulnerable populations must be able to give genuine informed consent (adequate information on the project, purpose, benefits and risks)
- Ensure the confidentiality, data protection and privacy of the participant.
- If reward/compensation is provided, it should not threaten or challenge the participant from providing genuine informed consent.

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<sup>4</sup> FP7 guidance on developing countries

[http://ec.europa.eu/research/participants/data/ref/fp7/89817/international-cooperation\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/fp7/89817/international-cooperation_en.pdf)



Documents for further reading and reference on third-country involvement:

- [Global Code of Conduct for Research in resource poor settings \(2018\)](http://www.globalcodeofconduct.org)  
<http://www.globalcodeofconduct.org>
- [FP7 guidance on developing countries](#)

More specifically for ENCHANT, these principles will be realized in the following way:

- Representatives from vulnerable groups will be included in planning all data collection within these communities to avoid stigmatization in the design of data collection, information, or data analyses procedures.
- Project information and informed consent will be presented in a form deemed adequate by the representatives from these groups. This might include giving information verbally instead of written, in languages different from the majority in the region, etc.
- Respondents from energy-poor households will under no circumstances be identified in the reports from ENCHANT, geographic information will be aggregated to a level that does not allow identification of households.
- Incentives or reimbursement for participation will be designed in a way not putting pressure on respondents (e.g., through avoiding giving larger amounts of money as incentives) to participate which would undermine the principles of voluntary participation.
- Personal data about the respondents will not be shared with authorities responsible for providing services to the participants, which could expose them to the negative effects of participating in the study.
- Conclusions drawn based on the data collected from these groups will be validated with representatives from the groups before publishing them to avoid misleading interpretations or stigmatisation.

## 2.4. Informed consent procedures

The consortium will ensure that all necessary procedures are followed, particularly with regard to the signing and collation of all necessary Informed Consent Forms prior to the collection of any data and storing the forms after the data collection. These Informed Consent Forms will apply also for anonymous/online data collection, e.g., questionnaires where consent is given by clicking "start" in the online survey. All involved stakeholders and users will be informed in detail about measures and the consortium will obtain free and fully informed consent. Details of recruitment, inclusion, and exclusion criteria, and informed consent procedures will be prepared ahead of the start of any proposed measures.

Participants will be informed about the aim of the study, the collected data, if relevant the aim of connecting the survey data with secondary datasets (such for example energy consumption data) via a pseudonymised key table. The participants will also be informed about data handling, storage and pseudonymisation and anonymisation procedures as well as the



publication of the anonymised data and its inclusion in the Open Data Pilot. This will be done, in accordance with GDPR, in simple language, easy to understand for the participants. In cases the data collection will be conducted online, by following the link to participate, they explicitly give their consent to participate. If participants are recruited from existing survey panels, they will likely earn points in the point system of their panel operator as a reward for their participation. If they are recruited specifically for this study, they may participate in a lottery of rewards for their participation. Participants are also informed that they can withdraw their consent until the data is anonymised, without any disadvantages and without having to give a reason. A contact (telephone and e-mail) will be provided where they can request to be informed about all data that is stored about them in the project. From the point of anonymising the data is no longer personal information.

For the other empirical studies, such as in-depth personal interviews, focus groups and workshops, information is presented in written form when participants are recruited. It will be repeated immediately before the data collections are started and the consent form is signed by the participant before the interview, focus group, or workshop. Participants are also informed that they can withdraw their consent until the data is anonymised without any disadvantages and without having to give a reason. A contact (telephone and e-mail) will be provided where they can request to be informed about all data that is stored about them in the project. From the point of anonymisation, the data is no longer personal information. Participants of this part of the empirical work will be recruited locally from the general population of customers/citizens/members of the user partners, who are older than 18 years and able to give informed consent. Participants will be recruited through personal contact by the user case representatives, mailing lists, newspaper advertisement, snowball systems, posters, or the like. Expenses that they have for participating will be reimbursed. For the netnography, content in public fora is considered public information that can be analysed in an anonymised form.

## 2.5. Participant Information Sheet template

The Information Sheet and Consent Form will be based on the standard form provided by the Norwegian Centre for Research Data (NSD) (see Annex I), which is the Norwegian organization acting as Data Protection Officer in regard to GDPR for social science research organizations, and will be in line with national regulations. The Information Sheet and Consent Form are under development, and copies of them from the partners will be included as part of the respective Annex in the updated DMP.

The Information Sheet should contain:

- Information that is clear and concise to prevent any ambiguity or misunderstanding
- Information on the purpose of the project, project objectives/research questions
- Information on how the data collected will be used, including other purposes and the Open Data Pilot



- Identify who is responsible for the project – the name of the coordinating institution, name of the Project Coordinator, name of the institution/organization the Consortium members belong to.
- An explanation of why participation in the project is being requested, selection criteria, number of participants, and how the participant's contact detail was obtained (from a website, mailing list, etc.)
- A description of the method used, the scope, type of information to be collected, how it will be recorded (voice recorder, video recorder, field notes, on paper, online survey, etc.), and how participants will be involved
- Indicate other sources of information that will be collected involving the participant (organization chart, public records, registers, other participants, energy use data, etc.)
- (for methods with many groups of participants) a clear explanation of what participation for each group/cluster/sub-cluster will involve and provide the needed information stated above
- Information that participation is voluntary
- Information that participants can withdraw from the research at any time before data is anonymised without providing any reason for the withdrawal
- Inform participants that their data will be treated with full confidentiality and will not be identifiable as coming from the participant if published. In case full anonymity in the data cannot be guaranteed (e.g., because interview data comes from a person with a distinct position for the case) no publication without explicit written consent will be allowed
- Information that there will be no negative consequences if participants choose not to participate or later withdraw from the study
- Information on their personal privacy and how data is stored and used
- A statement guaranteeing that the processing of their data will be fully confidential and under data protection legislation
- Identification of responsible organisations for collecting data, data storage, and who will have access to the data, who will process the data
- A description of the security measures to ensure that personal data is safeguarded from unforeseen, unintended, and malevolent use
- A description of what will happen to personal data at the end of the project, the scheduled date for ending the project, and what will be available Open Access and in what form (anonymised, pseudonymised, etc.)
- Information that as long as the data can identify them as the source, they have the right to access their own personal data, the right to request that their personal data be deleted, corrected/rectified, the right to receive a copy of their personal data, and the right to send a complaint to the Data Protection Officer or Data Protection Authority in the respective country regarding the processing of their personal data
- A statement that the institution has the right to process personal data based on the participant's consent
- The contact information of the Data Protection Officer (name of the person at the institution responsible for the project) and contact information for addressing/requesting questions/clarifications/withdrawal from the study



- If existing, the contact information of the national authority for data protection with email and telephone
- The sheet will be signed by the Project Leader and the local case responsible

The consent form in the NSD template (see Annex I) shows its form for written consent on paper. Electronically collected consent must follow a procedure that demonstrates the participant has given explicit consent in a similar way.





### 3. Data collection, processing and protection

This section provides a description of ENCHANT's data collection methods, and sharing, storage, and long-term conservation procedures. Future updates of the DMP will include the requirements specified here to create a DMP, which is comprehensive, updated, and actively used by the entire project.

#### 3.1 personal data and approval of data collection

We define data as all research data obtained from respondents directly or indirectly, through various research methods, for the project research purposes. Personal data is information that can identify a person either directly or indirectly. Individuals are no longer considered as "identifiable" when the process of identification will require excessive effort. Data that has been fully anonymised does not qualify as personal data. The following data are examples of personal data (some of them will not be relevant in the context of ENCHANT): name, address, identification, pseudonym, occupation, e-mail, CV, location data, IP address, cookie ID, phone number, or data from smart meters. We distinguish data, as defined, from personal information used for external communication and dissemination purposes in WP7 (for example quotes from experts or interviewees for project videos, blogs, etc. meant for communication). Such personal information will be published only after the informed (written) consent, which is to be developed based on the NSD template, of the involved individuals have been received. In this latter instance, personal information used for communication will not be anonymised, encrypted or pseudonymised.

All proposed ENCHANT tasks are permissible under the applicable laws and regulations, given proper observance of requirements. All project beneficiaries have existing and operational policies regarding potential ethics issues. Every data collection activity or inquiry for secondary data will have a designated data protection officer or national agency (see Table 2) responsible for the approval of data and guidance on handling the different data types in the project. Their opinion will be guiding for how ENCHANT handles the different types of data.

#### 3.2 Data collection methods and procedures

The selected methods for successfully meeting the objectives set out for ENCHANT vary in terms of the number of participants and methods involved. The data collection procedures for each research method will be developed prior to the collection of the respective data and will be documented in an updated DMP.

The data to be collected and analysed in ENCHANT is either measured directly (e.g., by digital data tracking or by collecting consumption data obtained from utility companies) or indirectly (e.g., from the consumers self-reporting through mobile or web-based apps, from focus groups, from surveys conducted by external companies, or through netnography based on public consumer social media postings). Therefore, ENCHANT project prioritises data gathering methods such as directly or indirectly measuring energy consumption data and digital data



tracking but supplements these techniques with additional methods to validate and extend the findings. Data tracking is mostly associated with digital information that characterizes consumer behaviour. In this sense, how many times a link has been clicked, or how many times a digital pamphlet has been read, provides insight into the interaction between energy information and behavioural change. An important obstacle with consumption data and data tracking is that energy consumption data on resolution of hours, weeks or even months only provides information about a concrete consumption level without any insight into the consumers' level of awareness. Digital real-time tracking provides information through smartphones and relevant applications. In this sense, the individuals who do not have any access to smart systems and applications will be unable to provide sufficient data through this channel. ENCHANT will through method triangulation focus on assessing the bias effects each data collection method has.

**Table 2** Data protection officer or national agency per partner

Name of partners	Short name	Data protection officer / National agency (responsible for the approval of data collection/use/inquiry)
Norges teknisk-naturvitenskapelige universitet	NTNU	Norwegian Centre for Research Data (NSD)
Universita degli studi Roma Tre	ROMA3	Ing. Alessandro Masci
Izmir Ekonomi Universitesi	IUE	Prof. Dr. Murat Aşkar (Rector)
Universitatea Babes Bolyai	UBB	Dr. Raul-Ciprian Dăncuță
Energieinstitut an der Johannes Kepler Universitat Linz Verein	EI-JKU	Marie Holzleitner
Smart Innovation Norway AS	SIN	Norwegian Centre for Research Data (NSD)
NTNU Samfunnsforskning AS	NSR	Ragnhild B. Overland
Izmir Buyuksehir Belediyesi	IBB	Güler Sağıt (Head of the Department of Information Technologies in IBB)
Gediz Elektrik Perakende Satis AS	GDZ	Gülin Sontuna
Energie Kompass GmbH	EKG	Michael Niederkofler
Norges Naturvernforbund	NNF	Sahar Arazi
Viken fylkeskommune	Viken	Guro Hegna Svendsen
Fondazione Roffredo Caetani onlus	FONDA	To be identified
Energia Positiva Società Cooperativa	ENPOS	To be identified
Electrica Furnizare SA	EFSA	Ionut Claudiu Anghel
Municipul Cluj-Napoca	MCN	Alina Nițulescu (Law department – Cluj Napoca City Hall)
Asociatia Centrul pentru Studiul Democratiei	ACSD	Melania Lese
Badenova AG & CO KG	BDNV	Stefan Beyer



As stated above, energy consumption data provides a single-dimensional data flow, which means other factors such as the level of awareness and underlying reasons behind such a consumption habit are ignored. ENCHANT's strategy of combining energy consumption data with surveys will therefore obtain more insightful results. In a research experiment design, it is crucial to reach as many and as diverse respondents and participants as possible to ensure and increase representativeness, reliability, and validity. Since reaching such a large number of people requires established reliable data collection structures, an intermediary actor in the form of a survey company will function as a facilitator to overcome this problem. A survey company can also easily overcome challenges associated with pre-test and post-test experiments by re-contacting their fixed sample of respondents. The ENCHANT project will use survey companies so that a larger number of individuals can participate in the data collection process.

ENCHANT will also use self-reporting as a method to get responses from consumers, through mobile or web-based apps. The major challenge of this method is the bias in the responses, i.e., the individuals' tendency to provide self-assessed measures of issue. The bias challenge will be overcome by relying on a wide range of data collection methods, including focus group interviews, which allows triangulating results. Focus groups have a number of qualities, providing elaboration into complex situations and behaviours. ENCHANT aims to use this method during the pre-testing period when testing and controlling the validity and reliability of the intervention pilots, interviewing one group in the pre-test and then again post-test to look for changes in the consumers' energy behaviour. Further, ENCHANT uses netnography, which is an online ethnographic method focusing on social interaction and internet behaviour to collect relevant data. The method analyses publically accessible digital traces people leave when participating in social activities on the net, such as contributions to discussion forums, Facebook or Instagram entries, or tweets. Netnography will study how some of the interventions make use of ENCHANT's user partners existing social media channels to reach their targeted audiences (customers/citizens/members), and how energy attitudes and behaviours might be affected.

Three significant steps must be followed related to data collection and processing:

- Copies of opinion or confirmation by the competent Institutional Data Protection Officer and/or authorization or notification by the National Data Protection Authority (whichever applies according to the GDPR and the national law) must be submitted from the partner collecting the data to the coordinator for archiving.
- If the position of a Data Protection Officer is established, their opinion/confirmation that all data collection and processing will be carried according to EU and national legislation should be submitted from the partner collecting the data to the coordinator for archiving.
- Detailed information must be provided from the partner collecting the data to the coordinator for archiving on the procedures that will be implemented for data collection, storage, protection, retention, and destruction, and confirmation that they comply with national and EU legislation.



However, after intensive discussion with the respective authorities in the preparation of this document, it became very clear, that we will not be able to receive clearance from ethical committees and data protection authorities before the data collection methods have been defined in detail (e.g., survey questionnaires, interview guides, detailed recruitment plans, etc.). This will happen at a later point in time in the project since many of the decisions need to be taken based on the intervention matrix developed with the user partners. As soon as the ethical clearances are in place, they will be added to the updated DMP. No collection of primary data will happen without the necessary clearance by ethical research committees and data protection authorities.

Table 3 presents the key characteristics of each data collection in ENCHANT. The first column indicates the type of data collection, the second column indicates where the data come from for each data collection method, the third column indicates how the data are collected, the fourth column indicates whether data, from a given data collection type, will be published in an open access mode at the end of the project, the next column lists the tasks and/or WPs that contribute to a given data collection type, and finally the last column names all partners involved in a given data collection type. Note that the same data collection type may be used in several independent data collections in different WPs.

The templates for data documentation for qualitative and quantitative data in ENCHANT are found in Annex II.

### 3.3 Protection and securing of personal data

The following list outlines the measures applied in ENCHANT for securing the protection of personal data.

- Any background, results, confidential information and/or all data and/or information that is provided, disclosed or otherwise made available between the beneficiaries during the implementation of the action and/or for any exploitation activities shall not include personal data.
- All collection and handling of personal data through digital data-tracking and observations will be done following Directive 95/46/EC regarding data collection and processing, the General Data Protection Regulation (GDPR, 2016/679), and respective national requirements.
- The non-anonymised raw-data and the key tables for anonymised data will be stored on secure server solutions (e.g., Services for Sensitive Data (TSD) at the University of Oslo (UiO) or NTNU's NICE-1).



**Table 3** Details of data collection

Type of data collection	Source of data	How data is collected	Open access	WP/task	Partners (lead partners underlined)
Literature search	Published studies, reviews, meta-analyses from both user-partners and previous projects	Relevant bodies of literature are identified by conducting a comprehensive review of existing behavioural interventions through published studies, reviews, and meta-analytical syntheses. Search engines (e.g., Google Scholar) and databases (e.g., the European Commission’s document database, Web of Science, Scopus) will be used to identify the relevant literature. Furthermore, user partners are asked for available internal reports.	Y [if no restrictions by the owners of the document/data are made]	WP2 / T2.1 WP3 / T3.1 WP5 / T5.1	<u>ROMA3</u> , <u>UBB</u> , <u>EI-JKU</u> , NTNU, IUE, SIN, NSR
Document study	Documents published by relevant stakeholders, such as policymakers and regulators, NGOs, and professional organizations	Relevant bodies of documents and data from previous studies and research projects about interventions, intervention evaluations/ assessments, plans of action and periodical reports implemented in interventions, and other relevant documents in previous interventions are located through direct contact with the user partners and search engines (e.g., Google Scholar) and databases (e.g., European Commission’s document database, Web of Science, Scopus).	Y [if no restrictions by the owners of the document/data are made]	WP2 WP3 WP5	<u>ROMA3</u> , <u>UBB</u> , <u>EI-JKU</u> , NTNU, IUE, SIN, NSR



Meta-analysis	Published studies, reviews, and meta-analytical syntheses on existing behavioural interventions. Data from both user-partners and previous projects on energy efficiency and consumer behaviour	<p>The relevant body of literature on existing behavioural interventions are identified through a literature search.</p> <p>Data on the topic of energy efficiency and consumer behaviour from user-partners and previous projects are collected through a chain referral method, based on enquiries of experts at the national and European level.</p> <p>Input to the meta-analyses will be extracted from the identified documents or if the documentation there is incomplete by an inquiry from the authors of the documents.</p>	Y [if no restrictions by the owners of the document/data are made; ENCHANT accepts restrictions by the owners]	WP2 / T2.1 WP3 / T3.3	<u>ROMA3</u> , <u>UBB</u> , NTNU, IUE, EI- JKU, SIN, NSR
Re-analysis of existing data	Existing data sets, and studies on the topic of energy efficiency and consumer behaviour The consolidated data set of previous projects, open-access datasets	An inventory of all relevant data sets is made, and a data review is conducted to integrate and process the disparate empirical sources	Y [if no restrictions by the owners of the document/data are made]	WP3 / T3.1, T3.3, T3.4 WP6 / T6.1	<u>UBB</u> , <u>SIN</u> , NTNU, ROMA3, IUE, EI-JKU, NSR
Surveys	Responses of participants in the pre-post surveys	In order to reach as many and as diverse respondents and participants as possible to ensure and increase representativeness, reliability and validity of responses, an intermediary actor in the form of a survey company will be used to overcome challenges associated with pre-test and post-test experiments by re-contacting their fixed sample of respondents.	Y [after anonymisation; respondents will be informed prior to data collection]	WP5 / T5.2 WP6 / T6.4	<u>EI-JKU</u> , <u>SIN</u> , NTNU, ROMA3, IUE, UBB, NSR



Quantitative experiments	Responses of experimental participants	ENCHANT tests and experiments 7 types of interventions using a Randomised Control Trial (RCT) approach and collects detailed information on the hypothesized personal and contextual moderators in a pre-experimental survey.	Y [after anonymisation; respondents will be informed prior to data collection]	WP4 / T4.2 WP6 / T6.4	<u>IUE, SIN</u> , NTNU, ROMA3, UBB, SIN, NSR
Online data tracking	Digital information through smartphones and relevant applications, which shape consumer behaviour.	ENCHANT will apply automated digital data-tracking, where the technical channels used to allow for it, as a means of verification intervention impact.  This might be in the form of keeping track of the overall number of clicks or visualizations on a specific web link, or responses in apps, social media, homepages or similar.  This will be done only when express consent is given by the user and the owner of the digital platform.	Y [after anonymisation; only when express consent is given by the user and the owner of the digital platform]	WP5 / T5.2	<u>EI-JKU</u> , NTNU, ROMA3, IUE, UBB, SIN, NSR
Energy use data	Energy use estimates from energy providers	Before and after the interventions, energy use estimates will be obtained with consent by the participants from collaborating energy providers wherever possible and adjusted for seasonal variation.	Y [after anonymisation; only when consent is given by the user and the owner of the energy providers]	WP5 / T5.2	<u>EI-JKU</u> , NTNU, ROMA3, IUE, UBB, SIN, NSR



Interviews	Responses of key informants/ citizens in individual interviews	In-depth interviews with the strategically selected informants/ citizens, who are involved in interventions, will be conducted pre and post-intervention as part of WP5.  Interviewees will be selected by taking into account the features of each intervention. Express consent will be obtained before.	N [interview raw data cannot be published in line with GDPR. However, anonymised summaries of the data are included in the project deliverables]	WP5 / T5.2	EI-JKU, NTNU, ROMA3, IUE, UBB, SIN, NSR
Focus group	Responses of key informants/ citizens in focus group discussions	Focus group interviews with the strategically selected informants/ citizens, who are involved in interventions, will be conducted pre and post-intervention as part of WP5.  Individuals belonging to each group will be selected by taking into account the features of each case intervention.	N [interview raw data cannot be published in line with GDPR. However, summaries of the data are included in the project deliverables]	WP5 / T5.2	EI-JKU, NTNU, ROMA3, IUE, UBB, SIN, NSR
Netnography	Consumer social media use and the social dynamics triggered by the intervention campaigns	By focusing on social interaction and internet behaviour, ENCHANT analyses the digital traces people leave when participating in social activities on the net (e.g., contributions to discussion forums, Facebook or Instagram entries, or tweets). The analyses reveal how some of the interventions make use of	Y [after anonymisation; only data publicly accessible is used]	WP3 / T3.1 & T3.4	UBB, NTNU, ROMA3, IUE, EI-JKU, SIN, NSR





		ENCHANT's user partners existing social media channels to reach the targeted audiences (costumers/citizens/members) and how energy attitudes and behaviours might be affected.			
Workshop	Responses of workshop participants	Views of relevant experts, user-partners and stakeholders during workshops with academic and non-academic partners will be feed into the design of the intervention package.	Y [in the form of brief reports]	WP2 / T2.3 WP4 / T4.1 WP5 / T5.4	<u>NTNU</u> , <u>IUE</u> , <u>EI-JKU</u> , <u>NSR</u> , <u>ROMA3</u> , <u>UBB</u> , <u>SIN</u> ,
Decision making architecture	Historical and primary data sources, i.e., data from the pilots provided by ENCHANT's WP5 and data from secondary sources provided by ENCHANT's WP3, and other relevant data from ENCHANT's WP2 and WP4	Relevant data sources from ENCHANT's WP2, WP3, WP4, and WP5 are transformed to be suitable for designing the high-level architecture of the decision-making tool. This includes a normalization process and checking data quality to be able to better utilise, exploit the data for the resulting AI algorithm, and identifying the relationships among the interventions and users.	Y	WP6 / T6.2	<u>SIN</u> , <u>NTNU</u> , <u>ROMA3</u> , <u>IUE</u> , <u>EI-JKU</u> , <u>UBB</u> , <u>NSR</u>



- All data transferred between project partners (within or outside the EU) will be restricted to pseudonymised or anonymised data. All data files will be transferred via secure connections and in an encrypted and password-protected form. Passwords will not be exchanged via e-mail but in personal communication between the partners.
- Where necessary, the data will be anonymised at the earliest possible point in time. The mapping of the anonymised ID and the person will be safeguarded and will not be available to persons other than the ones working with the data. At the end of the project, all data will be anonymised, and the key tables for the mapping of the anonymised ID and the person will be deleted. Anonymised data will be stored at the ENCHANT's SharePoint solution in an encrypted and password-protected form.
- All collected data are relevant to the ENCHANT project and will be exclusively limited to the purposes of the successful implementation of the action following the 'data minimisation principle'.
- All secondary data sources shall contain already anonymised datasets or will be anonymised by the user partners before analysis. For example, where past energy use data will be accessed on a personal/ households level, the data will be pseudonymised for matching with primary data recorded in the project. Licenses and contracts for use of secondary data will be made, specifying their use in relation to the GDPR.
- All participants will receive a Participant Information Sheet and an Informed Consent Form (in a language the participant understands best). Informed consent should be provided by the individual providing data for ENCHANT data collection. Consent is sought before storing collected material in electronic form. All informed consent received, either on paper, audio or by other means will be documented. The consent forms will be kept on file on NTNUs secure server.
- Any text produced based on research results will respect the principle of privacy and anonymity, not identifying any informants directly or indirectly without their explicit consent.
- Activities carried out outside the EU will be executed in compliance with the legal obligations in the country where they are carried out. The activities must also be allowed in at least one EU Member State.

To ensure the protection of personal data, ENCHANT has applied the ethics issues checklist from the Horizon 2020 Guidance on completion of ethics self-assessment (see Table 4).

**Table 4** Checklist from the ethics self-assessment

Protection of Personal Data	Yes	No	Description and measure
Does your research involve human participants?	X		ENCHANT will involve the voluntary participation of adult participants.  Children and/or adults who are unable to give informed consent will NOT be involved in the project activities of ENCHANT.



		<p>Vulnerable groups/individuals representing energy poverty will be anonymised and representatives from these groups included in study design and analyses. Any publication of statements quoted or paraphrased will be anonymised and only if informed consent for such quotations is given.</p> <p>No physical interventions on the project participants will be involved.</p> <ul style="list-style-type: none"> <li>- Participants to the primary quantitative data surveys will be recruited from already registered members/customers/citizens of the user partners, members of national or local web-panels, or they will be specifically recruited by the subcontracted survey companies or the user partners.</li> <li>- Participants of the part of the empirical work (e.g., in-depth personal interviews, focus groups and workshops) will be recruited locally from the general population of customers/citizens/members of the user partners through personal contact by the user case representatives, mailing lists, newspaper advertisement, snowball systems, posters, or the like.</li> </ul>
Does your research involve personal data collection and/or processing?	X	<p>Personal data such as name, age, gender, address, identification, pseudonym, occupation, e-mail, CV, location data, energy consumption data, IP address, cookie ID, phone number, data from smart meters, digital information through smartphones and relevant applications will be collected.</p> <p>No sensitive personal data will be collected/processed.</p> <p>Automized digital data-tracking (e.g., in the form of keeping track of the overall number of clicks or visualizations on a specific web link, or responses in apps, social media, homepages or similar) will be applied as means of verifying intervention impact.</p> <ul style="list-style-type: none"> <li>- All participants will receive a Participant Information Sheet and an Informed Consent Form (in a language the participant understands best), which are based on the template from NSD. All informed consent</li> </ul>



			<p>received, either on paper, audio or by other means will be documented. The consent forms will be kept on file on NTNUs secure server.</p> <ul style="list-style-type: none"> <li>- The principle of minimisation will be followed (i.e., only relevant data should be collected).</li> <li>- Data will be anonymised at the earliest possible point.</li> <li>- Data pseudonymisation in cases where two or more datasets are linked together.</li> <li>- Key tables are stored at a separate location from the pseudonymised data; stored locally, only the research partner responsible for the respective data collection will have access to the particular key table through individual login and password.</li> <li>- All data transferred between project partners (within or outside the EU) will be restricted to pseudonymised or anonymised data and transfer will only be made in encrypted form via secured channels.</li> </ul>
Does your research involve further processing of previously collected personal data (secondary use)?	X		<p>Already existing (secondary) data provided by the case cluster cities partners and other sources (e.g., energy consumption data, observational data etc.) will be analysed. All these secondary data sources contain already anonymised datasets or will be anonymised by the user partners before analysis. All data access rights for secondary data will be taken care of.</p> <p>Energy consumption data from secondary data sets will be connected to survey data through a pseudonymised key table. Keys to pseudonyms stored in a separate location from the data. In cases where past energy use data will be accessed on a personal level, the respective households need to give consent to that. Data will then be pseudonymised for matching with primary data recorded in the project. Each partner in the Consortium is responsible for declaring that all their actions are according to national and EU legislation. Only the researcher responsible for the specific ENCHANT dataset to be linked to other previous/existing dataset will have access to the key table.</p>



		<p>Research also involves observation and data processing methods such as audio, video, photos, and field notes but only after informed consent is provided by the participant. Prior to conducting methods that include such data, the Data Protection Officer for the task will be responsible for assessing the data protection impact according to Article 35 of the GDPR.</p> <p>The informed consent form must be received specifically agreeing to data processing. In cases where data is from a database, permission from the owner of the data set should be provided prior to data processing.</p> <p>In the case of publicly available data, written permission by the owner of the data set will be obtained where necessary.</p>
<p>In case non-EU countries are involved, do the research-related activities undertaken in these countries raise potential ethics issues?</p>	<p>X</p>	<p>ENCHANT has the coordinator not situated in the European Union but Norway. There are also partners from Turkey involved. Due to the ENCHANT project's nature and its activities, the personal data might be transferred from a non-EU country to the EU and vice versa. With regards to this, the consortium confirms that such transfers comply with the laws of the country in which the data was collected, and such transfers are in accordance with Chapter V of the General Data Protection Regulation 2016/679. All data transferred between project partners (within or outside the EU) will be restricted to pseudonymised or anonymised data and transfer will only be made in encrypted form via secured channels. The materials will be kept on file.</p> <p>The consortium will apply the Global Code of Conduct for research in resource-poor countries settings and respect the principles of fairness, respect, care and honesty to support long-term equitable research relations between the European and lower-income countries. The detailed information demonstrating fair benefit-sharing arrangements with stakeholders will be prepared during the course of the project.</p>

Data protection in ENCHANT will apply general requirements according to Horizon2020 Guidance<sup>5</sup>.

### ENCHANT's General requirements for data protection

- Data processing should be safeguarded through implementing the actions in the table above, and the documentation listed therein.
- Data exchanged between partners are either anonymised or pseudonymised, depending on the need to link two or more datasets.
- Proportionality in dealing with data transfer, sharing and processing. Where personal information is not absolutely necessary, anonymised or pseudonymised data will be used for the purposes of the research.
- Informed consent should be provided by the individual providing data for ENCHANT data collection.
- Providing information sheets containing information on personal data, informed consent, and information for contacting their designated ENCHANT contact point in the country.
- All participants in all types of activities conducted for all types of ENCHANT data collection should be aware of such data collection, their rights as a participant and any risk participation and providing data may incur.
- Data collection shall abide by the "data minimisation principle"
- The DPOs assigned to the different tasks must be qualified for the role and responsibilities regarding data protection.
- Data security must be appropriate to the potential risks involving participants and their personal data.
- Each partner/contractor/service provider involved in the project must act responsibly and ethically and abide by the ethical requirements of the project.
- The research partner responsible for the data collection will have sole access to the key table for that particular data collected.
- Open Access to research data must abide by the Model Grant Agreement: Ethics (Article 34), and articles on protecting the results (Article 27), confidentiality (Article 36), security (Article 37, and personal data protection (Article 39).

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<sup>5</sup> European Commission (2018). Horizon 2020 Programme Guidance – How to complete your ethics self assessment. Version 6.0, July 2018. pp. 18-21.



## 4. ENCHANT's Consortium Partners and collaboration with non-EU countries

The ENCHANT consortium consists of 18 partners, seven academic research partners and 11 user partners (see Table 5). The partners are from within and outside the European Union (EU). This section describes Consortium Partners and countries involved in the ENCHANT' project activities, and the requirements for data transfer and the participation/involvement of non-EU countries (Norway, and Turkey) in detail.

**Table 5** ENCHANT consortium partners

Participant No.	Short name	Participant organisation name	Country
1 (Coordinator)	NTNU	Norges teknisk-naturvitenskapelige universitet	Norway
2	ROMA3	Universita degli studi Roma Tre	Italy
3	IUE	Izmir Ekonomi Universitesi	Turkey
4	UBB	Universitatea Babes Bolyai	Romania
5	EI-JKU	Energieinstitut an der Johannes Kepler Universitat Linz Verein	Austria
6	SIN	Smart Innovation Norway AS	Norway
7	NSR	NTNU Samfunnsforskning AS	Norway
8	IBB	Izmir Buyuksehir Belediyesi	Turkey
9	GDZ	Gediz Elektrik Perakende Satis AS	Turkey
10	EKG	Energie Kompass GmbH	Austria
11	NNF	Norges Naturvernforbund	Norway
12	VIKEN	Viken fylkeskommune	Norway
13	FONDA	Fondazione Roffredo Caetani onlus	Italy
14	ENPOS	Energia Positiva Società Cooperativa	Italy
15	EFSA	Electrica Furnizare SA	Romania
16	MCN	Municipul Cluj-Napoca	Romania
17	ACSD	Asociatia Centrul pentru Studiul Democratiei	Romania
18	BDNV	Badenova AG & CO KG	Germany

### 4.1 ENCHANT' Consortium Partners and non-EU countries involved in the project activities

The Horizon 2020 online manual states that although participation in Horizon 2020 projects is open to all countries, not everyone is eligible for funding. The project is led by an institution from a Non-EU country, Norway, which raises additional ethical issues with respect to data



import/export to the EU. However, Norway is identified as an associated country, and is therefore automatically eligible for funding and can participate in the programme under the same conditions as the Member States.

NTNU (Norway) has been selected as the project coordinator as it is an experienced project coordinator with a long history of EU funded projects and it has excellent project management capacity, financial and legal administration support. The project management is based on the experience from the leadership of earlier performed R&D programmes at NTNU or the consortium partners (including EU FP6, FP7, and H2020), where similar management structures have been adopted successfully. The NTNU also has a highly competent team of social scientists with experience in social innovation research, behavioural science, environmental psychology, and outstanding expertise in complex quantitative analyses, which will contribute to the success of the project activities.

Also, there are four more project partners, both scientific and user partners, from Norway. Moreover, there are also three partners from another Non-EU Country, Turkey, involved. The ENCHANT' non-EU partners have confirmed that the ethical standards and guidelines of Horizon2020 will be rigorously applied, regardless of the country in which the research is carried out. Activities carried out outside the EU will be executed in compliance with the legal obligations in the country where they are carried out, with an extra condition that the activities must also be allowed in at least one EU Member State. To ensure this, the project has assessed the ethics issues checklist adapted from the Commission (see Table 6).

**Table 6** ENCHANT checklist for non-EU countries partners

Protection of Personal Data	Yes	No	Description and measure
In case non-EU countries are involved, do the research related activities undertaken in these countries raise potential ethics issues?	X		<p>All data collection types for ENCHANT involve partners from Norway and Turkey. All data collected must be according to the procedure stated in the Data Management Plan (D1.4) and the specific procedures for each type of data collection (Table 3). Detailed information on the activities in the non-EU countries is described in 4.2 and 4.3.</p> <p>Partners must provide copies of ethics approvals.</p> <ul style="list-style-type: none"> <li>- For partners in Norway, it can be obtained from NSD.</li> <li>- Inquire with the DPO from other countries involved in the project.</li> <li>- Confirm that activity is legal in at least one EU Member State.</li> </ul>
Do you plan to import any material - including	X		Data will be exchanged between Norway, Turkey and the EU.





<p>personal data - from non-EU countries into the EU?</p>			<p>All data transferred between project partners (within or outside the EU) will be restricted to pseudonymised or anonymised data and transfer will only be made in encrypted form via secured channels.</p> <p>DPO ensures that key tables are kept separate from the data exported and stored in a secure local server. Key tables (only available to the responsible ENCHANT research partner) are to be stored separately from pseudonymised datasets.</p> <p>Measures to safeguard participants: secure server with encryption and individually provided user login and password.</p> <p>Declaration confirming compliance with the laws of the country in which the data was collected.</p>
<p>Do you plan to export any material - including personal data - from the EU to non-EU countries?</p>	<p>X</p>		<p>Data will be exchanged between Norway, Turkey and the EU.</p> <p>All data transferred between project partners (within or outside the EU) will be restricted to pseudonymised or anonymised data and transfer will only be made in encrypted form via secured channels.</p> <p>DPO ensures that key tables are kept separate from the data exported and stored in a secure local server. Key tables (only available to the responsible ENCHANT research partner) are to be stored separately from pseudonymised datasets.</p> <p>Measures to safeguard participants: secure server with encryption and individually provided user login and password.</p> <p>Declaration confirming compliance with the laws of the country in which the data was collected.</p>
<p>In case your research involves <u>low and/or lower middle income countries</u>, are any</p>		<p>X</p>	<p>See Section 2.3 for ethical requirements involving vulnerable groups/individuals.</p>



benefits-sharing actions planned?			
Could the situation in the country put the individuals taking part in the research at risk?		X	

In ENCHANT research, data will be transferred between the named non-EU countries (Norway and Turkey) and countries in the European Union to allow for joined analyses and storage of all data in the common database. This implies that the data might be transferred from a non-EU country to the EU and vice versa for analyses. With regards to this, the ENCHANT consortium confirms that such transfers comply with the laws of the country in which the data was collected, and such transfers are in accordance with Chapter V of the General Data Protection Regulation 2016/679. All data transferred between project partners (within or outside the EU) will be restricted to pseudonymised or anonymised data and transfer will only be made in encrypted form via secured channels.

## 4.2 The extent of research and participation of partners in Norway

### 4.2.1 NTNU

In the project ENCHANT, NTNU will act as a coordinator and will also be the Lead for WP1.: Project Management, Coordination and Administration.

NTNU is the task leader for the following tasks:

- Task 1.1: Administrative, legal and financial management
- Task 1.2: Management of project execution (M1-M30)
- Task 1.3: Data management (M1-M24)
- Task 1.4: Ethics requirement (M1-M24)
- Task 1.5: Contribute to EASME activities
- Task 2.3: Select and define the ENCHANT intervention matrix
- Task 3.2: Ethical and licensing aspects of existing datasets

For these tasks, the national agency, Norwegian Centre for Research Data (NSD), will be responsible for the approval of data collection/use/inquiry.

### 4.2.2 SIN

SIN takes the Lead for WP6 and is responsible for designing a decision-making tool for policymakers, energy providers, NGOs, and municipalities and implementing this tool as a web-based, easy-access interface.

SIN is the task leader for the following tasks:



- Task 6.1: Data structure normalisation
- Task 6.2: ENCHANT decision-making architecture
- Task 6.3: Developing, integrating, and testing, of decision-making tool
- Task 6.4 Tool pilot implementation

For these tasks, the national agency, Norwegian Centre for Research Data (NSD), will be responsible for the approval of data collection/use/inquiry.

#### 4.2.3 NSR

To facilitate rapid, efficient and widespread uptake of ENCHANT's results, as well as facilitate for the stakeholders' involvement in knowledge production and dissemination, NSR takes the Lead for WP7.: User engagement, dissemination, and exploitation.

NSR is the task leader for the following tasks:

- Task 7.1: Exploitation strategy
- Task 7.2: Dissemination strategy and activities

For these tasks, Ragnhild B. Overland, NSR, will be responsible for the approval of data collection/use/inquiry.

Besides, Viken and NNF are also involved in the project activities of ENCHANT as user partners providing access to relevant stakeholders and citizens. Viken is also responsible for Task 7.3: Communication strategy and activities. Sahar Arazi at NNF and Guro Hegna Svendsen at Viken will be responsible for the approval of data collection/use/inquiry.

### 4.3 The extent of research and participation of partners in Turkey

There are three partners, one scientific and two user partners, from Turkey involved in ENCHANT.

The scientific partner, i.e., IUE, takes the Lead for WP4.: Implementation and monitoring of all intervention pilots, and is the task leader for the following tasks:

- Task 4.1: Developing an operational implementation plan for intervention pilots
- Task 4.2: Implementation of the pilots
- Task 5.3: Guidance for best practice transfer

For these tasks, Murat Aşkar, Rector of IUE, will be responsible for the approval of data collection/use/inquiry.

IBB and GDZ are Turkish user partners, who will provide ENCHANT access to citizens in the municipality of Izmir and energy use customers respectively. Güler Sağıt at IBB and Gülin Sontuna at GDZ will be responsible for the approval of data collection/use/inquiry.



## 4.4 Cross-border data flows and protection of personal data

ENCHANT and all the Consortium members are committed to ensuring that cross-border data flows<sup>6,7</sup> are facilitated and no partner shall impose restrictions between the parties except for activities related to personal data protection. The Consortium partners are not required to use a certain service or network within a specific territory for data processing. All Consortium Partners are free to access anonymised or pseudonymised data for data processing. The Lead Partner responsible for the data collection for the participants coming from their country are not required to use a specific subcontracted professional survey company and there are no restrictions as to which server and location their data will be for the data collection other than following requirements below to ensure the quality of service provided by the contracting entity:

1. That there are no conflicts of interests.
2. Background / professional services can be documented and that they comply with requirements for the protection of privacy and personal data according to GDPR.
3. Reasonably priced for maximum benefits from the use of resources, following H2020 and local acquisition rules.

Each party is free to adopt and maintain its own safeguards if deemed as appropriate to ensure the protection of privacy and personal data by the DPO. When using a common server/platform for the project, the partners are free to assess/review the quality and security of the services provided. Moreover, the Partners may review/assess the subcontracted entities (e.g. the contracted professional survey company).

ENCHANT considers the protection of personal data and privacy as a priority and will fully safeguard the rights of our participants and data owners. The Consortium Partners shall adopt and maintain measures to protect the personal data and privacy of the participants and that Partners have the obligation to ensure that their actions and research activities are handled in a transparent manner.

The following legislation and guidance should be referred to in the processing of personal data for the project to ensure personal data protection:

- [Regulation \(EU\) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data](#)
- [Directive \(EU\) 2016/680 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data by](#)

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<sup>6</sup> EU proposal on Cross-border data flows and protecting personal data

[http://trade.ec.europa.eu/doclib/docs/2018/july/tradoc\\_157130.pdf](http://trade.ec.europa.eu/doclib/docs/2018/july/tradoc_157130.pdf)

<sup>7</sup> Factsheet- EU provisions on Cross-border data flows and protection of personal data and privacy in the Digital Trade Title of EU trade agreements. Link:

[http://trade.ec.europa.eu/doclib/docs/2018/july/tradoc\\_157129.pdf](http://trade.ec.europa.eu/doclib/docs/2018/july/tradoc_157129.pdf)



competent authorities for the purposes of the prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties, and on the free movement of such data, and repealing Council Framework Decision 2008/977/JHA (OJ L 119, 4.5.2016, p. 89)

- Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC Text with EEA relevance
- Guidelines on Consent under Regulation 2016/679, Article 29 Working Party
- Charter of Fundamental Rights of the European Union
- European Convention on Human Rights
- Norwegian Act on Personal Data Filing Systems (translated)
- Article 8 European Convention for the Protection of Human Rights and Fundamental Freedoms (ECHR)
- Council of Europe Convention for the protection of individuals with regard to automatic processing of personal data adopted on 1 January 1981 (ETS No. 108)



# ANNEXES



## Annex I: Documentation of consent forms

This Annex collects all Consent Forms and Information Sheets used in ENCHANT.

The first included document is the template for ENCHANT information sheets based on the general template provided by the Norwegian Centre for Research Data (NSD).

Copies of information sheets and declaration of consent forms from the partners will be included in the updated DMP.



# NSD Template

*This is a template for informed consent when processing personal data in research projects.  
It can be used for surveys, observation, interviews, sound recordings, etc.*

*Please delete the text in italics and insert your own text*

*NB! The information must be concise and easily understandable for the reader.  
Use clear and simple language, headings, and bullet points, active (not passive) language, avoid  
foreign words.*

## **Are you interested in taking part in the research project “(insert title of the project)”?**

This is an inquiry about participation in a research project where the main purpose is to  
*[Insert a brief description of the project purpose]*. In this letter, we will give you information  
about the purpose of the project and what your participation will involve.

### **Purpose of the project**

*Describe the purpose of the project in more detail and indicate the scope of the project.*

*Briefly outline the project’s objectives/research questions*

*Indicate whether it is a research project, a doctoral thesis, a bachelor’s/master’s thesis, other  
student projects etc.*

*If you or others will use the collected personal data for other purposes (e.g., teaching or other  
research projects), describe these other purposes.*

### **Who is responsible for the research project?**

*[Insert name of the institution(s)] is the institution responsible for the project.*

*If applicable, provide names and describe the cooperation with other institutions, external  
entities etc.*

### **Why are you being asked to participate?**

*Describe how the sample has been selected (population, selection criteria and how many people  
have been asked to participate) so that it is clear why the person is receiving this inquiry*

*If applicable, indicate whether you have received the person’s contact details from another (and  
indicate any approval/permission obtained in order to do this), or whether another has sent out  
this information letter on your behalf.*

### **What does participation involve for you?**





*Describe the methods (online/paper-based survey, interview, observation, etc.), the scope, what type of information will be collected and how the information will be recorded (electronically, on paper, sound/video recording), e.g.,*

- *« If you chose to take part in the project, this will involve that you fill in an online survey. It will take approx. 45 minutes. The survey includes questions about (describe the most important questions/topics). Your answers will be recorded electronically»*

*If applicable, indicate that you also will collect information about the participant from other sources – such as registers, records/journals, educational records, other project participants, etc., e.g.:*

- *«I will also ask your teacher to provide information about you in an interview. It will be information about (describe the most important questions/topics). I will record the interview and will take notes»*

*If children will participate, provide information that parents/guardians may on request see the survey/interview guide etc. in advance.*

*If there are multiple groups of participants, be clear about what participation will involve for each group or give a separate information letter to each group.*

### **Participation is voluntary**

Participation in the project is voluntary. If you chose to participate, you can withdraw your consent at any time without giving a reason. All information about you will then be made anonymous. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

*Expand on this if the person being asked to participate is in a situation where they are dependent on the person asking. E.g., «It will not affect your treatment at the hospital / your relationship with your school/teacher, place of work/employer etc.(..)»*

### **Your personal privacy – how we will store and use your personal data**

We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).

- *Describe who, in connection with the institution responsible for the project, will have access to the personal data (e.g., the project group, student and supervisor, etc.)*
- *Describe which measures you will take to ensure that no unauthorized persons are able to access the personal data, e.g., «I will replace your name and contact details with a code. The list of names, contact details and respective codes will be stored separately from the rest of the collected data», you will store the data on a research server, locked away/encrypted, etc.*

*If applicable, indicate:*

- *the name of the data processor that will collect/work with/store data, e.g., online survey provider or transcription service*



- *that persons from other institutions will be given access to the personal data, name the institutions, indicate the number of people and what type of information they will have access to (e.g., whether they will have access to data that can be directly linked to individual participants, or to collect data that has been de-identified)*
- *that personal data will be processed outside the EU (e.g., fieldwork, analysis, cloud computing, conferences), name the institution and country, describe security measures.*

*Describe whether participants will be recognizable in publications or not, and to what extent. If applicable, indicate what type of personal information will be published (e.g., name, age, occupation etc.).*

### **What will happen to your personal data at the end of the research project?**

The project is scheduled to end *[insert date]*. Describe what will happen to the personal data, including any digital recordings, at the end of the project.

*If the collected data will not be anonymised at the end of the project: indicate the purpose of further storage/use of personal data (e.g., verification, follow-up studies, archiving for future research), indicate where the personal data will be stored, who will have access to it, and the date for anonymisation (or, if applicable, specify that the personal data will be stored indefinitely and give a reason for this).*

### **Your rights**

So long as you can be identified in the collected data, you have the right to:

- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data

### **What gives us the right to process your personal data?**

We will process your personal data based on your consent.

Based on an agreement with *[insert name of the institution responsible for the project]*, NSD – The Norwegian Centre for Research Data AS has assessed that the processing of personal data in this project is in accordance with data protection legislation.

### **Where can I find out more?**

If you have questions about the project or want to exercise your rights, contact:

- *[Insert name of the institution responsible for the project] via [insert name of the project leader]. For student projects, you must include contact details for the supervisor/the person responsible for the project, not just the student.*
- Our Data Protection Officer: *[insert name of the data protection officer at the institution responsible for the project]*



- NSD – The Norwegian Centre for Research Data AS, by email: ([personverntjenester@nsd.no](mailto:personverntjenester@nsd.no)) or by telephone: +47 55 58 21 17.

Yours sincerely,

Project Leader  
(Researcher/supervisor)

Student (if applicable)

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## Consent form

*Consent can be given in writing (including electronically) or orally. NB! You must be able to document/demonstrate that you have given information and gained consent from project participants i.e., from the people whose personal data you will be processing (data subjects). As a rule, we recommend written information and written consent.*

- *For written consent on paper, you can use this template*
- *For written consent, which is collected electronically, you must choose a procedure that will allow you to demonstrate that you have gained explicit consent (read more on our website)*
- *If the context dictates that you should give oral information and gain oral consent (e.g., for research in oral cultures or with people who are illiterate) we recommend that you make a sound recording of the information and consent.*

*If a parent/guardian will give consent on behalf of their child or someone without the capacity to consent, you must adjust this information accordingly. Remember that the name of the participant must be included.*

*Adjust the checkboxes in accordance with participation in your project. It is possible to use bullet points instead of checkboxes. However, if you intend to process special categories of personal data (sensitive personal data) and/or one of the last four points in the list below is applicable to your project, we recommend that you use checkboxes. This because of the requirement of explicit consent.*

I have received and understood information about the project [*insert project title*] and have been given the opportunity to ask questions. I give consent:

- to participate in (*insert method, e.g., an interview*)
- to participate in (*insert other methods, e.g., an online survey*) – if applicable
- for my/my child's teacher to give information about me/my child to this project (*include the type of information*)– if applicable
- for my personal data to be processed outside the EU – if applicable



- for information about me/myself to be published in a way that I can be recognised (describe in more detail)– if applicable*
- for my personal data to be stored after the end of the project for (insert purpose of storage e.g., follow-up studies) – if applicable*

I give consent for my personal data to be processed until the end date of the project, approx. *[insert date]*

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(Signed by participant, date)



## Annex II: Data documentation templates

The following two templates shall be used to document the necessary background of the data files for internal and external use in ENCHANT.

- 1) Data documentation template for qualitative data in ENCHANT
- 2) Data documentation template for quantitative data in ENCHANT



1) Data documentation template for qualitative data in ENCHANT

Name of the data set: \_\_\_\_\_ Date the data set was finalized: \_\_\_\_\_

Date/time period the data was collected: \_\_\_\_\_ to \_\_\_\_\_.

Responsible partner for the collection of the data:

\_\_\_\_\_ (name) \_\_\_\_\_ (institution)

Data produced in WP: \_\_\_\_\_ Task: \_\_\_\_\_

Data anonymised on (date): \_\_\_\_\_ by \_\_\_\_\_

Information about the participants:

Number: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Participants' background: \_\_\_\_\_

Recruitment procedure: \_\_\_\_\_

Original language of the material: \_\_\_\_\_

Data collected by (interviewer): \_\_\_\_\_

Transcribed by: \_\_\_\_\_

Transcription rules: \_\_\_\_\_

Translated to English by: \_\_\_\_\_

Ethically cleared by: \_\_\_\_\_ on (date): \_\_\_\_\_

Interview guidelines (or the like): \_\_\_\_\_

Size of the data (e.g., number of words): \_\_\_\_\_

Short summary: \_\_\_\_\_



## 2) Data documentation template for quantitative data in ENCHANT

Name of the data set: \_\_\_\_\_ Date the data set was finalized: \_\_\_\_\_

Date/time period the data was collected: \_\_\_\_\_ to \_\_\_\_\_.

Responsible partner for the collection of the data:

\_\_\_\_\_ (name) \_\_\_\_\_ (institution)

Data produced in WP: \_\_\_\_\_ Task: \_\_\_\_\_

Data anonymised on (date): \_\_\_\_\_ by \_\_\_\_\_

### Information about the participants:

Number: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Participants' representative for which population: \_\_\_\_\_

Recruitment procedure: \_\_\_\_\_

Response rate: \_\_\_\_\_

Original language of the material: \_\_\_\_\_

Translated to English by: \_\_\_\_\_

Ethically cleared by: \_\_\_\_\_ on (date): \_\_\_\_\_

Variables in the dataset:

<b>Variable name</b>	<b>Variable type</b>	<b>Variable label</b>	<b>Answering format/value labels</b>	<b>Comments</b>

### Variable types:

- T = text
- D = date / time
- B = binary / dichotomous
- C = categorical
- O = ordered categorical / ordinal
- I = interval / ratio / Likert scales with 5 or more categories

Short summary: \_\_\_\_\_

