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D1.2: Ethics Plan

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v1.1	29/05/2023	Jenni Pippuri-Mäkeläinen (VTT)	Small corrections of the first pages and acknowledgement of VTT Ethics deliverable template as a response to



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Abstract

This Ethics Plan provides a jointly agreed framework for VOLTCAR ethics management. The deliverable outlines the ethical issues and procedures related to the research activities to be performed in VOLTCAR. In particular, the Plan details the forthcoming actions and responsibilities of the consortium members to ensure that ethics requirements are carefully fulfilled.

The document is a core part of Task 1.3 (T1.3) Ethics management which aims to ensure that the ethics regulations and rules are respected. The task is led by VTT who is also responsible for this deliverable. As task leader, VTT acts as Ethics Mentor, monitoring the ethics issues involved in the project and how they are handled. While VTT coordinates T1.3, all consortium members are responsible for behaving and working according to the highest ethical principles and in good faith.

Publishable Summary

This Ethics Plan provides a jointly agreed framework for VOLTCAR ethics management. The deliverable outlines the ethical issues and procedures related to the research activities to be performed in VOLTCAR. In particular, the Plan details the forthcoming actions and responsibilities of the consortium members to ensure that ethics requirements are carefully fulfilled.

The VOLTCAR project is carried out according to the highest ethical standards and the applicable EU, international, and national law on ethical and research integrity principles. Moreover, the beneficiaries are devoted to ensuring the respect of fundamental EU values, such as respect for human dignity, freedom, democracy, equality, and the rule of law and human rights, including the rights of minorities.

In addition to the general ethical principles and relevant legislation, the consortium commits to following the practices jointly agreed upon in this document. This includes, for example, that all consortium members are responsible for immediately informing the Coordinator if they notice an unexpected or new ethical issue. "Ethics" will be included as a fixed agenda point for each VOLTCAR General Assembly meeting to ensure that any ethics-related questions and issues raised during the project can be addressed in a timely manner collaboratively by consortium members.



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Introduction

This Ethics Plan outlines the ethical aspects and procedures related to the research activities to be performed in VOLTCAR. It also acts as a plan for ethics management for the project. The plan has been prepared by VTT with the guidance of relevant sections from the European Commission's guide "How to complete your ethics self-assessment¹". VTT monitors the ethics processes throughout the project, and the whole consortium is proactively involved in ethics management.

The VOLTCAR project is carried out in line with the highest ethical standards and the applicable EU, international, and national law on ethical principles, and the provisions set out in the Grant Agreement. In parallel, the VOLTCAR Ethics Plan is based on the ethical principles and relevant Union, national, and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. In addition, it is expected that the work of the VOLTCAR consortium is carried out in good faith and goodwill.

The following sections of this deliverable address the core aspects of ethics monitoring and management in the VOLTCAR project. We begin by defining general research ethics and research integrity principles. This is followed by a statement of the consortium's compliance with the general principles and regulations. Then, the relevant ethical dimensions identified in the proposal phase of VOLTCAR are addressed. This section is followed by a presentation of the project's ethics monitoring process. Finally, conclusions are presented.

Please note that this deliverable has been prepared using a VTT coordination support provided Ethics deliverable template. Hence, this VOLTCAR deliverable may share similar content with Ethics deliverables of other VTT coordinated projects.

¹ How to complete your ethics self-assessment, Version 2.0, 13 July 2021.
https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/how-to-complete-your-ethics-self-assessment_en.pdf

Ethics, Research Integrity, and EC Ethics Principles

Ethics

The term ethics in research is a general concept that covers all the ethical viewpoints and evaluations that are related to science and research. In general, ethics are norms of conduct that distinguish between acceptable and unacceptable behaviour. As people can interpret ethical norms in different ways considering their own values and life experiences, it is necessary to establish common definitions and rules in the framework of the project.

In the VOLT CAR project, “ethics” is perceived as defined by the European Commission according to which, ethics

“include[e] questions of legal and regulatory compliance as well as a branch of philosophy. It is part of a process of ‘governance’. The consideration of ethical issues, starting at the conceptual stage of a proposal, enhances the quality of research, increases its likely social impact, promotes research integrity, promotes a better alignment of research with social needs and expectations, and finally, supports the societal uptake of the fruits of research because high ethical standards generally merit public trust. In this spirit, the Commission aims to build a relationship between the research process and ethics that is collaborative and constructive (rather than negative and inhibitive).”².

The VOLT CAR consortium acts in line with this notion and sees complying with research ethics as the core for conducting high-quality research. In particular, the ethical norms sustained in VOLT CAR are Impartiality, Reliability, Integrity, and Responsibility. These norms stress the importance of good and responsible practices and lay the foundations for sincere, reliable, and confidential cooperation among the consortium members and other stakeholders. The norms are closely tied with the notion of research integrity which is addressed next.

Furthermore, the VOLT CAR consortium follows the following aspects related to ethics and values, which are brought out by the EC in Article 14 of the GA:

ARTICLE 14 — ETHICS AND VALUES

14.1 Ethics

The action must be carried out in line with the highest ethical standards and the applicable EU, international and national law on ethical principles.

Specific ethics rules (if any) are set out in Annex 5.

14.2 Values

The beneficiaries must commit to and ensure the respect of basic EU values (such as respect for human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of minorities).

and in **Annex 5 Article 14 Ethics** GA defines in detail that:

² Roles and Functions of Ethics Advisors/Ethics Advisory Boards in EC-funded Projects.
https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/ethics-guide-advisors_en.pdf



The beneficiaries must carry out the action in compliance with:

- ethical principles (including the highest standards of research integrity)³
- and
- 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.
 - No funding can be granted, within or outside the EU, for activities that are prohibited in all Member States. No funding can be granted in a Member State for an activity which is forbidden in that Member State.
 - The beneficiaries must pay particular attention to the principle of proportionality (no harm approach), 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 protection of the environment and high levels of human health protection. The beneficiaries must ensure that the activities under the action have an exclusive focus on civil applications.

Research Integrity

In addition to research ethics, good research practices are based on fundamental principles of research integrity. Research integrity emphasises the honesty and integrity that all researchers are required to adopt in their research activities. The research integrity principles guide researchers in their work as well as in their engagement with the practical, ethical, and intellectual challenges inherent in research.

The beneficiaries are committed to respecting the fundamental principle of research integrity as set out in the “European Code of Conduct for Research Integrity³” document provided by ALLEA - All European Academies -group. The ALLEA document states: “good research practices are based on fundamental principles of research integrity. They guide researchers in their work as well as in their engagement with the practical, ethical, and intellectual challenges inherent in research”.

According to the European Code of Conduct for Research Integrity, the fundamental principles of research integrity are:

- 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;
- accountability for the research from idea to publication, for its management and organisation, for training, supervision, and mentoring, and for its wider impacts and means that beneficiaries must ensure that persons carrying out research tasks follow good research practices and refrain from the research integrity violations described in this Code.

³ European Code of Conduct for Research Integrity of ALLEA (All European Academies).
<https://www.allea.org/wp-content/uploads/2017/05/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf>



In addition to the European Code of Conduct for Research Integrity, the beneficiaries are committed to following other relevant international and national research integrity guidelines. For example, VTT and LUT have committed to complying with the guidance of The Finnish National Board on Research Integrity TENK's Responsible Conduct of Research, RCR⁴. VTT expects all beneficiaries to respect ethical principles and advice in ethical questions.

Contexts of Ethical Research Practices

Good research practices – which are based on the previously addressed research ethics and research integrity – apply to different contexts of the project's processes. These contexts are defined by ALLEA as follows:

- Research Environment
- Training, Supervision, and Mentoring
- Research Procedures
- Safeguards
- Data Practices and Management
- Collaborative Working
- Publication and Dissemination
- Reviewing, Evaluating, and Editing

Continuous supervision and guidance are done by the management of the project to ensure that good research practices are sustained in all these contexts. Notably, all participating organisations as well as individual researchers and management staff are responsible for following good research practices in all relevant contexts. This includes reporting any misconduct that might be detected (addressed in more detail in the "Research Misconduct and Other Unacceptable Practices" section).

Notes on Communication, Publication, and Dissemination Activities

VOLTCAR's general communication, publication, and dissemination principles are based by design on high ethical conduct. The basic principles of these activities are defined in the Deliverable 1.1 Project Quality Management Plan, which was completed and submitted in March 2023. The details of these principles are addressed in depth in the Deliverable 7.1 Plan for dissemination, communication, networking and exploitation activities, the first version of which will be submitted to the EC in July 2023. Therefore, in this section, we limit to mention a few fundamental aspects of ethics in the communication, publication, and dissemination activities of the project.

Regarding the content of research, the VOLTCAR researchers acknowledge that, unless otherwise specified, they are fully responsible for it from the beginning to publication. The authors should ensure that their work is made available to colleagues in a timely, open, transparent, and accurate manner unless otherwise agreed. When communicating with the public and the media, the VOLTCAR consortium members are fully committed to honesty and impartiality.

⁴ The official website of the Finnish National Board of Research Integrity TENK for the Responsible Conduct of Research (RCR)

<https://tenk.fi/en/research-misconduct/responsible-conduct-research-rcr>



Regarding authorship, the VOLTCAR researchers have committed to acknowledging that authorship itself is based on a significant contribution to the design of the research, relevant data collection, or the analysis or interpretation of the results. The consortium members must acknowledge the work and intellectual contributions of others, including collaborators, assistants, and funders.

In this line, all communication, publication, and dissemination activities must include (whenever possible) the following EC acknowledgement of funding including the following disclaimer:

“Funded by the European Union. Views and opinions however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.”

The acknowledgement and disclaimer texts should be translated into local languages, where appropriate.

In addition to acknowledging the received funding and the contribution of fellow researchers and sources of information, the VOLTCAR consortium members have committed to disclosing any conflicts of interest and financial or other types of support for the research or for the publication of its results.

Research Misconduct and Other Unacceptable Practices

The VOLTCAR consortium has a zero-tolerance policy for research misconduct, disregard for responsible conduct of research, and any other unacceptable practices in research.

Research misconduct can be, for example (the list is not exhaustive),

- fabrication, i.e., making up results and recording them as if they were real.
- falsification, i.e., manipulating research materials, equipment, or processes; or changing, omitting, or suppressing data or results without justification.
- plagiarism, i.e., using other people’s work and ideas without giving proper credit to the original source, thus violating the rights of the original author(s) to their intellectual outputs.
- misappropriation, i.e., unlawful presentation of another person’s result, idea, plan, observation, or data as one’s own research.

Sometimes, research violations are not as distinct, in which cases they can be seen as disregarding the responsible conduct of research. Examples of these can be (the list is not exhaustive):

- denigrating the role of other researchers in publications
- reporting results and methods in a careless manner, resulting in misleading claims
- inadequate record keeping and storage of results and data
- publishing the same results many times as novel results (self-plagiarism)
- misleading the research community in other ways.

In addition, there are other unacceptable research practices that are condemned. These can be, for instance,

- manipulating authorship
- exaggerating one’s own achievements (e.g., in CV)



- re-publishing substantive parts of one's own earlier publications without duly acknowledging it (self-plagiarism)
- citing selectively to enhance own findings or to please editors, reviewers, or colleagues
- withholding research results
- delaying the work of other researchers e.g., in the peer-review process
- allowing funders/sponsors to jeopardise independence in the research process or reporting of results
- accusing a researcher of misconduct or other violations in a malicious way
- exaggerating the importance and practical applicability of findings

To prevent any kind of misconduct, disregard, or other unacceptable practice to take place, the VOLTCAR consortium expects responsible behaviour and work from all its researchers and implements clear ethics monitoring processes. These are defined in the "Ethics Management in VOLTCAR" section.

Specific Ethical Dimension Relevant to VOLTCAR

In the evaluation phase, the VOLTCAR proposal was classified as “ethics ready” and was therefore approved for granting without further ethics clarification requests. However, in the project preparation phase, one specific ethical dimension relevant to VOLTCAR was identified, which is the involvement of a non-EU country. This ethical dimension is addressed in the following sub-section and all its relevant aspects will be taken into consideration during the lifetime of the project.

If other ethics dimensions are identified by any consortium member throughout the lifetime of the project, they are requested to contact the Coordinator immediately and take action as defined in the “Ethics Management in VOLTCAR” section.

Non-EU Countries

One of the VOLTCAR partners, KRNU, is from a non-EU country, Ukraine. Ukraine is also considered a lower middle-income country by the World Bank. KRNU will carry out research on thermal management, advanced materials, insulations, high-speed gears, and bearings.

The foreseen activities to be implemented in non-EU countries do not raise any Ethics concerns per se: no controversial research methods or technologies are involved, no risks of discrimination or stigmatisation for people involved in such activities, etc. These activities will be complementary to those of other partners.

Ukraine has successfully completed its association with Horizon Europe. The Ukrainian partner wants to guarantee standards for research participants and local staff similar or equal to those of the EU counterparts. The activities outside the EU will increase the relevance and impact of the projects and their results while they are not meant to take advantage of different legislation, standards, or local resources.

Despite being considered a lower middle-income country, the Ukrainian partner participates in the project in a status equal to the other partners, and in a manner similar to the European partners when it comes to ethical principles and relevant legislation.

If any ethical issues arise unexpectedly during the project, these will be handled according to the ethics monitoring processes defined at the end of this document.

Ethics Management in VOLTCAR

Ethics management is a horizontal theme that pierces all activities of the VOLTCAR project throughout its lifespan. Ethical compliance is monitored through Task 1.3 Ethics management which is led by VTT and supported by all project partners. The aim of all ethics activities in the project, including this Ethics Plan, is to ensure that the provisions of ethics regulations and rules are respected.

The central ethics monitoring tools and activities of VOLTCAR are as follows:

1. **Ethics Plan:** The document at hand serves as the main tool for all members of the consortium to (i) familiarise themselves with the ethical principles and regulations that the consortium is committed to as well as the ethical issues that need particular attention in the project, and (ii) refer to jointly agreed ethics monitoring activities and guidelines.
2. **Shared and personal responsibility:** While VTT leads the ethics management task, each VOLTCAR consortium member is responsible for complying with the set ethical principles and relevant legislation. Moreover, everyone is expected to report on any new ethical issues they might come across during the project. VTT acts as Ethics Mentor to the consortium members on a need basis.
3. **Regular meetings:** Ethics will be a fixed topic in each General Assembly meeting of the project. Moreover, ethical issues are going to be discussed in the more frequent Management Committee meetings whenever necessary.
4. **Project Quality Management Plan (PQMP):** The PQMP (D1.1) was developed to ensure (i) the management of project-related documentation, (ii) monitoring and quality control of project deliverables and milestones, and (iii) risk contingency management. Acting according to the agreed principles is crucial for ensuring that the VOLTCAR project is executed in a high-quality, timely, and ethical way.
5. **Data Management:** Data management (T1.4) is closely connected to the ethical conduct of research and therefore the Data Management Plan (DMP) acts as an important tool for ensuring good ethics practices as well. The DMP is updated regularly throughout the project. The Data Manager, appointed to the position by the VOLTCAR General Assembly, will monitor the project data management as a whole.
6. **Risk Management Plan:** Risk management is also tied closely to ethics management. The project risks are addressed as a fixed agenda point in the General Assembly meetings.
7. **Process for handling allegations of research misconduct:** As stated earlier in this document, the VOLTCAR consortium has a zero-tolerance policy for research misconduct, disregard for responsible conduct of research, and other unacceptable practices in research. Should any consortium member detect such activity, they must inform the Coordinator without delay. The Coordinator then investigates the matter and takes necessary actions to make sure that any potential risks, breaches of information, or harm are minimised. If necessary, the Coordinator informs the Project Officer.
8. **Record keeping:** the consortium maintains detailed records of all ethical decisions and actions taken during the project, including minutes of consortium body meetings, reports on any ethical breaches, and documentation of any modifications made to the ethics plan.



Overall, the monitoring and oversight of ethics is an ongoing and dynamic process that should be tailored to the specific ethical issues and risks associated with the research project. It is essential to maintain open communication within the consortium and with stakeholders and to respond promptly to any ethical concerns that may arise.

Conclusions

This document has addressed the main ethical aspects related to the VOLT CAR project, from the principles of Responsible Conduct of Research and the consortium's compliance with general ethical requirements and specific ethical dimensions relevant to the project to the ethics monitoring process.

All beneficiaries commit to complying with the set requirements, regulations, and processes. If any member of the consortium sees the need to update this document, they may contact the Coordinator who takes adequate actions.