

CUBIC

NOVEL BIOBASED MATERIALS TO IMPROVE CIRCULARITY

Improving the circularity
of complex plastic multi-material composites
using novel biobased materials
in B2B semi-finished products

Research and Innovation Action (RIA)
Grant Agreement 101111996

D6.5 “Ethics Report”

Work Package 6

Responsible Partner: Aitiip

D6.5: Ethics Report

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LEGAL NOTICE

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1. Introduction

This deliverable aims to address the ethics issues which may raise due to related activities within CUBIC project regarding the following aspects:

- Human (H). In case human participation is envisaged, the protocols and requirements that have to be followed are presented.
- Protection of Personal Data (POPD). Here, the treatment and process of personal data will be addressed. The technical and organizational measures that will be implemented to safeguard the rights and freedoms of these data will be presented.
- Environmental protection and safety (EPQ). This section will contain information about the possible harm to the environment caused by the research and the measures that will be taken to mitigate the risks conforming to relevant guidelines or legislation that must be followed.

2. H

Humans are not the object of study in CUBIC, as the research activities are addressed to the development and boosting of biobased high-tech complex products. However, the project will involve humans as part of some transversal activities, such as training, collaboration with other projects, communication or dissemination. In these cases, when human participation is envisaged, the beneficiary has to fulfil templates of the informed consent/assent forms and information sheets (in language and terms intelligible to the participants).

2.1 Documents

2.2.1. Informed consent letter for stakeholders

An informed consent letter as the following example will be signed by all stakeholders:

“The purpose of the research is related to the objectives of the project CUBIC – Improving the circularity of complex plastic multi-material composites using novel biobased materials in B2B semi-finished products.

This project has received funding from the European Union’s Horizon Europe research and innovation programme under grant agreement no 101111996.

Personal data will be treated in accordance with the General Data Protection Regulation 2016/679. Data exchange between the project partners is via project intranet or encrypted to ensure secure transfer. Data will be stored in the project intranet until 5 years after the project has finished. The personal data can only be accessed by the project consortium. The information will be used only for the project purposes (promotion and dissemination purposes as well as organising meetings if required). Should you wish to retract your consent you can contact info@cubicproject.eu.

With the signature I confirm that my participation is voluntary.

I have been informed about the treatment of my data by the project consortium and I authorize their use.

I hereby authorize the use of my personal image to contribute to the implementation of the Project activities”.

2.2.2. Written consent for external people

Table 1. Written consent for external people.

Name and surname	Company	Email	Signature	Consent

LEGAL NOTICE – *The collection of the data is necessary to the right relationship between [the partners collecting the data], CUBIC project and the attendee. Likewise, by signing this document, you authorize your data may be used under your consent to receive commercial communications and to contribute to the dissemination of photos and videos in the websites and social networks with the aim of promoting the actions and results of CUBIC project, its events, other services and/or activities or projects. Your data can be informed to control bodies and authorities*

of the Project. You have the right to withdraw your consent in any moment, as well as, to exercise your rights of access, rectification and elimination and other rights by emailing info@cubicproject.eu.

- You have been informed about the treatment of your data by CUBIC project and [the partners collecting the data] and you authorize their use according to the purposes indicated above.
- You accept the sending of electronic commercial communications about events, conferences, training, or dissemination activities, as well as information related to other services and/or activities undertaken or organized by CUBIC project.
- You authorize the use of your image to contribute to the dissemination of our services and / or activities.

2.2.3. CUBIC website

On the project's online platform, the user needs to accept the privacy policy that is described there and also a message to consent for cookies.

In addition, when any person asks to join our newsletter via mailing list or through the online platform, just their email address will be requested.

Finally, when any person uses the contact form at the CUBIC website, the following data will be requested:

- Name and surname (optional)
- Email
- Subject
- Message

3. PODP

3.1 General principles

All personal data will be collected, stored and destructed accordingly to the consent of the personal data holder.

The research will comply with:

- ethical principles
- applicable international, EU and national law (in particular, The General Data Protection Regulation 2016/679)

Interviewees/beneficiaries/recipients will receive information about how their personal data is processed through informed consent forms. These forms contain information about where their data is stored, how long their data is stored, who they should contact in case they retract their consent, and for what purposes their data is used.

The collection and processing of personal data in will be carried out in compliance with the data minimisation principle. Only necessary personal data (names, email addresses) will be collected for purposes of internal project communication, organisation of project meetings, training activities and workshops and dissemination (newsletter, website). Personal data such as images and videos can be used on the CUBIC website.

3.2 Compliances

1. Aitiip, as coordinator, assumes the role of Data Protection Officer (DPO) in order to guarantee the compliance of the GDPR (General Data Protection Regulation).
2. The coordinator of the project will ensure templates of the informed consent forms and information sheets will be kept on file in the language and terms intelligible to the participants.
3. The coordinator is ensuring the internal interoperability of data.
4. Data processing activities are being taken in special consideration in every step of the project following the General Data Protection Regulation.

3.3 Dissemination of results and information

Confidential data related with the industrial process and products will be kept restricted to the consortium partners and not published until it is protected by partners for exploitation by, for example, patents. Only non-sensitive publishable data will be eventually shared and made accessible to the research community for verification. Specific procedures for publication clearance have been included in the Consortium Agreement. Contractors will have to inform the consortium of their intention to publish their results that may be relevant intellectual property. Dissemination of intellectual property is granted only with the approval of the consortium, making sure that the period of the GA will also address these aspects, to guarantee that no conflicts arise between the partners on IPR. Publishable results proposed by partners must be accepted by the innovation board and the project coordinator. The CA will also address these aspects. CUBIC as RIA action will follow a proactive strategy for internal data and knowledge management.

A data repository will be managed by the Project Coordinator to store common data, results, reports, and deliverables. All partners will be responsible for publishing project results in local and international press and in

peer-reviewed scientific journals and conferences. Aitiip will intervene in case of results which have been classified as publishable do not receive the necessary dissemination. In addition, it will be ensured that all project related publications are openly accessible. Furthermore, these outputs will be provided with an open license to provide others with the right to copy, distribute, search, link, crawl, and mine increase the utility of the accessible publication.

3.4.1. Results dissemination agreement

The Consortium has agreed and signed the following disclosures (Section 8 of the Consortium Agreement):

1. Results are owned by the Party that generates them.
2. Joint ownership

Joint ownership is governed by Grant Agreement Article 16.4 and its Annex 5, Section Ownership of results, with the following additions:

Unless otherwise agreed:

- Each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research and teaching activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s).
- Each of the joint owners shall be entitled to otherwise Exploit the jointly owned Results and to grant non-exclusive licenses to third parties (without any right to sub-license), if the other joint owners are given: (a) at least 45 calendar days advance notice; and (b) fair and reasonable compensation.

The joint owners shall agree on all protection measures and the division of related cost in advance.

3. Transfer of Results

- a. Each Party may transfer ownership of its own Results, including its share in jointly owned Results, following the procedures of the Grant Agreement Article 16.4 and its Annex 5, Section Transfer and licensing of results, sub-section "Transfer of ownership".
- b. Each Party may identify specific third parties it intends to transfer the ownership of its Results to in Attachment (3) of this Consortium Agreement. The other Parties hereby waive their right to prior notice and their right to object to such a transfer to listed third parties according to the Grant Agreement Article 16.4 and its Annex 5, Section Transfer of licensing of results, sub-section "Transfer of ownership", 3rd paragraph.
- c. The transferring Party shall, however, at the time of the transfer, inform the other Parties of such transfer and shall ensure that the rights of the other Parties under the Consortium Agreement and the Grant Agreement will not be affected by such transfer. Any addition to Attachment (3) after signature of this Consortium Agreement requires a decision of the General Assembly.
- d. The Parties recognise that in the framework of a merger or an acquisition of an important part of its assets, it may be impossible under applicable EU and national laws on mergers and acquisitions for a Party to give at least 45 calendar days prior notice for the transfer as foreseen in the Grant Agreement.
- e. The obligations above apply only for as long as other Parties still have – or still may request – Access Rights to the Results.

4. Dissemination

- a. For the avoidance of doubt, the confidentiality obligations set out in Section 10 apply to all dissemination activities described in this Section 8.4 as far as Confidential Information is involved.
- b. Dissemination of own Results
 - i. During the project During the Project and for a period of 1 year after the end of the Project, the dissemination of own Results by one or several Parties including but not restricted to publications and presentations, shall be governed by the procedure of Article 17.4 of the Grant Agreement and its Annex 5, Section Dissemination, subject to the following provisions.

Prior notice of any planned publication shall be given to the other Parties at least 45 calendar days before the publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement by written notice to the Coordinator and to the Party or Parties proposing the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.
 - ii. An objection is justified if (a) the protection of the objecting Party's Results or Background would be adversely affected, (b) the objecting Party's legitimate interests in relation to its Results or Background would be significantly harmed, or (c) the proposed publication includes Confidential Information of the objecting Party. The objection has to include a precise request for necessary modifications.
 - iii. If an objection has been raised the involved Parties shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting Party shall not unreasonably continue the opposition if appropriate measures are taken following the discussion.
 - iv. The objecting Party can request a publication delay of not more than 45 calendar days from the time it raises such an objection. After 45 calendar days the publication is permitted, provided that the objections of the objecting Party have been addressed.
- c. Dissemination of another Party's unpublished Results or Background. A Party shall not include in any dissemination activity another Party's Results or Background without obtaining the owning Party's prior written approval, unless they are already published.
- d. Cooperation obligations. The Parties undertake to cooperate to allow the timely submission, examination, publication and defense of any dissertation or thesis for a degree that includes their Results or Background subject to the confidentiality and publication provisions agreed in this Consortium Agreement.
- e. Nothing in this Consortium Agreement shall be construed as conferring rights to use in advertising, publicity or otherwise the name of the Parties or any of their logos or trademarks without their prior written approval.

3.4.2. Non-disclosure of information agreement

The Consortium has agreed and signed the following disclosures (Section 10 of the Consortium Agreement):

1. All information in whatever form or mode of communication, which is disclosed by a Party (the “Disclosing Party”) to any other Party (the “Recipient”) in connection with the Project during its implementation and which has been explicitly marked as “confidential” at the time of disclosure and has been confirmed and designated in writing within 15 calendar days from oral disclosure at least as confidential information by the Disclosing Party, is “Confidential information”.
2. The Recipients hereby undertake in addition and without prejudice to any commitment on non-disclosure under the Grant Agreement, for a period of 5 years after the final payment of the Granting Authority:
 - a. Not to use Confidential Information otherwise than for the purpose for which it was disclosed
 - b. Not to disclose Confidential information without the prior written consent by the Disclosing Party
 - c. To ensure that internal distribution of Confidential Information by a Recipient shall take place on a strict need-to-know basis
 - d. To return to the Recipients including all copies thereof and to delete all information stored in a machine-readable form to the extent practically possible. The Recipient may keep a copy to the extent it is required to keep, archive or store such Confidential Information because of compliance with applicable laws and regulations or for the proof of on-going obligations provided that the Recipient complies with the confidentiality obligations herein contained with respect to such copy.
3. The Recipient shall be responsible for the fulfilment of the above obligations on the part of its employees or third parties involved in the Project and shall ensure that they remain so obliged, as far as legally possible, during and after the end of the Project and/or after the termination of the contractual relationship with the employee or third party.
4. The above shall not apply for disclosure or use of Confidential Information, if and in so far as the Recipient can show that:
 - i. The Confidential Information has become or becomes publicly available by means other than a breach of the Recipient’s confidentiality obligations
 - ii. The Disclosing Party subsequently informs the Recipient that the Confidential Information is no longer confidential
 - iii. The Confidential Information is communicated to the Recipient without any obligation of confidentiality by a third party who is to the best knowledge of the Recipient in lawful possession thereof and under no obligation of confidentiality to the Disclosing Party
 - iv. The disclosure or communication of the Confidential Information is foreseen by provisions of the Grant Agreement
 - v. The Confidential Information, at any time, was developed by the Recipient completely independently of any such disclosure by the Disclosing Party
 - vi. the Confidential Information was already known to the Recipient prior to disclosure, or
 - vii. the Recipient is required to disclose the Confidential Information in order to comply with applicable laws or regulations or with a court or administrative order, subject to the provision Section 10.7 hereunder.

5. The Recipient shall apply the same degree of care with regard to the Confidential Information disclosed within the scope of the Project as with its own confidential and/or proprietary information, but in no case less than reasonable care
6. Each Recipient shall promptly inform the relevant Disclosing Party by written notice of any unauthorised disclosure, misappropriation or misuse of Confidential Information after it becomes aware of such unauthorised disclosure, misappropriation or misuse.
7. If any Recipient becomes aware that it will be required, or is likely to be required, to disclose Confidential Information in order to comply with applicable laws or regulations or with a court or administrative order, it shall, to the extent it is lawfully able to do so, prior to any such disclosure
 - a. Notify the Disclosing Party
 - b. Comply with the Disclosing Party's reasonable instructions to protect the confidentiality of the information.

3.4 CUBIC's intranet data storage

The data repository is a Microsoft Teams group and will be managed by the Project Coordinator to store common data, results, reports and deliverables. The data stored is confidential and only accessed by the members of the Project. The data will remain online until up to five years after the termination of the project. Data is stored in a single place with role-based defined access rights. All partners have at least one set of credentials for securely accessing, navigating and editing the contents of the file manager.

Office 365 – Microsoft TEAMS aligns with industry standards such as Clause 14 of ISO/IEC27001-2013 and related standards, guidance and security principles. Aitiip hosts the CUBIC instance of the Teams group behind the company's firewall.

Aitiip, as the host of the data storage system, complies and follows all the guidelines regarding GDPR (General Data Protection Regulation). Users can access, have corrected or deleted their personal information via e-mail to AITIIP (lop@aitiip.com). If the information is related to the Project, special steps will have to be taken (defined in the Consortium Agreement).

4. EPQ

In order to avoid harm to the environment, all the people involved in CUBIC, who will be carrying out any activities that might harm the environment, will be trained following each entity’s procedures which follow European/National/Regional legislation.

The laboratory supervisor will enforce institutional policies that control safety and access to the laboratory. Before any work is initiated, all operators will receive adequate training and instructions. Laboratory personnel will receive appropriate training regarding their duties, potential hazards, manipulations of infectious agents, necessary precautions to minimize exposures, and hazard/exposure evaluation procedures (e.g., physical hazards, splashes, aerosolization).

The following table summarises all CUBIC activities that might entail a risk for the environment, it describes the risks and explains the mitigation measures in place.

Table 2. List of actions, risks and mitigation measures.

Action	Risk	Mitigation measure
Handling chemicals in solid or liquid form	Release of chemicals into the environment	All chemicals are handled following each entities’ guidelines in terms of work and waste handling (involving proper routines for work and waste management for the chemicals used). In addition, good laboratory practice is applied.
Handling of mixed epoxy resin systems	Exothermic reaction with thermal degradation and subsequent release of chemicals to the environment.	Temperature and time control during the enduring filament preparation process, including mixing, loading the resin, impregnating, pouring any excess resin, and cleaning. Ensure homogeneity and avoid hot points in the resin bath. Exothermicity studies to be run for each resin system, to determine maximum temperature and exposure time acc. to the resin quantity.

Use of commercial epoxy resins as benchmark

Some components of uncured or not-fully epoxy resins can leach chemicals that are harmful to aquatic organisms, interfering with the growth, reproduction, or survival of aquatic life. Improper disposal of epoxy resin waste or spills can lead to soil contamination, affecting soil quality and its ability to support plant life, and wildlife and the ecological balance of habitats. Some epoxy resin components may be persistent in the environment, taking a long time to degrade or break down naturally. During the manufacturing process or curing of epoxy resins, volatile organic compounds (VOCs) or other hazardous substances can be emitted into the air, contributing to air pollution and being potentially harmful to the environment.

Follow proper disposal guidelines outlined by local regulations or waste management authorities. Use proper containment and cleanup procedures in case of spills to prevent environmental contamination. Use environmentally friendly alternatives or eco-friendly formulations of epoxy resin whenever possible. Encourage and support research and development of eco-friendly resin alternatives that have reduced environmental impact.

<p>Use of commercial carbon fiber tows (bundles of continuous carbon fibers) as benchmark</p>	<p>Cutting, handling, or processing carbon fiber tows can generate fine airborne particles or dust containing carbon fibers, which might contribute to air pollution. The manufacturing process of carbon fibers involves high energy consumption, which contribute to environmental impacts associated with carbon emissions and energy usage. Improper handling or disposal of carbon fibers, scraps, offcuts, unusable fibers, might lead to contamination of water bodies or soil, affecting local ecosystems and potentially harming wildlife. Carbon fibers, being durable and resistant to degradation, can persist in landfills for extended periods, contributing to long-term waste management challenges and environmental impact.</p>	<p>Use cutting tools specifically designed for carbon fibers to minimize the generation of airborne particles. Invest in research and development to explore more sustainable and eco-friendly production methods for carbon fibers. Implement proper waste management and recycling programs to reduce waste from carbon fiber production processes. Follow practices for handling, disposal, and treatment of waste materials.</p>
<p>Use of toxic and environmentally unfriendly molecules</p>	<p>Release of chemicals into the environment, danger for human, fauna and flora.</p>	<p>Restrict to minimum number and quantities the use of hazardous and harmful chemicals, and substitute then when possible by safer alternatives.</p>
<p>Generate chemical wastes</p>	<p>End up of waste in environment, danger for human, fauna and flora.</p>	<p>Under no circumstances should chemicals be disposed of in the sink or in an unsuitable garbage can. A specialized company is in charge of the recovery and treatment of chemical waste, which must therefore be properly separated.</p>

Waste management	Spill or release of waste in the environment	All wastes originating from activities related to the Cubic project are collected and disposed of following each partners' internal procedures according to the current legislation.
Product management	Release of materials in the environment	All the final products in the form of pellets, powder, semi-finished, and finished items are managed to avoid the release in the environment. Disposal of such materials requires their classification as waste and their management according to the current legislation.
Gas emission	Unwanted or unavoidable emissions during polymerisation, characterization, and transformation.	No emission of hazardous gases is expected from the activities planned within the project. Systems already in place for gas emission treatment ensure compliance with the current legislation.

All partners involved in the activities mentioned in Table 2 will be aware of the risk evaluations for such activities. Those risk evaluations are performed by the owner of the facilities where the activity mentioned is taking place. These include mainly risk evaluation work with chemicals and risk evaluation of main labs. Besides specific regulations at each facility, CUBIC partners involved, will also follow European regulations (such as REACH) as well as specific national/regional legislation.