

Ethical guidelines

D8.2

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Deliverable Information Sheet

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¹ PU = Public

PP = Restricted to other programme participants (including the Commission Services)

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MarginUp! in a nutshell

The MarginUp! project proposes solutions to secure use and return profitability on marginal lands while enhancing biodiversity by cultivating climate-resilient and biodiversity-friendly non-food crops sustainable for industrial feedstock on marginal lands.

Working closely with land managers, farmers, and stakeholders from the growing bioeconomy industry, MarginUp! will create sustainable and circular value chains and increase the resilience of rural farming systems. To further improve biodiversity and environmental benefits, MarginUp! will focus on understanding which marginal lands are suitable with the lowest impact for low indirect land-use change (ILUC) biomass production.

MarginUp! will provide viable outcomes to ecosystems which are water-stressed as a result of climate change, including desertified areas of Mediterranean and Central European member states, as well as contributing to restoring and stimulating ecosystems in abandoned mine lands, and boosting land yield and health in low productivity marginal lands.

MarginUp! Is building on learning from seven use-cases: Five implementations across Europe – in Spain, Greece, Sweden, Germany, and Hungary – as well as use-cases in Argentina and South Africa, together increasing the replication potential of the project's results. MarginUp will identify best practices for sustainable biomass production and biobased products that safeguard biodiversity and local ecosystems. Each use-case considers the current use and properties of the area and proposes crops and crop rotation strategies that enhance biodiversity and increase soil productivity according to local requirements from Mediterranean soils in Spain to mining lands in Greece, boreal soils in Sweden, wetlands in Germany, desertified lands in Hungary, degraded pastures in Argentina, and areas with bush encroachment in South Africa. The proposed crops create a sustainable supply of resources to foster the development of the bioeconomy businesses at local and regional levels while providing ecosystem benefits and building resilience to climate change.

On that basis, the MarginUp! project will enhance European industrial sustainability, competitiveness, and resource independence, by reducing the environmental footprint, including on biodiversity, enabling climate neutrality and increasing resource efficiency (particularly through upcycling and cascading use of biomass) along 5 value chains, and developing innovative bio-based products and enhanced technologies that will lessen EU reliance on fossil-based products.

To stay up to date with MarginUp! project events and reports, follow us on Twitter ([@MarginUp_EU](https://twitter.com/MarginUp_EU)), LinkedIn ([MarginUp! EU](https://www.linkedin.com/company/marginup-eu)) or visit www.margin-up.eu

Executive Summary

The present document is a deliverable of work package WP 8. It provides the Ethical Guidelines that all MarginUp! consortium members agree to adhere to. This deliverable describes guidelines for monitoring compliance with human participation, protection of personal data (POPD), health and safety as well as possible environmental harm during the project.

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Not yet approved by the European Commission

List of Acronyms

CA	Consortium Agreement
DNSH	Do No Significant Harm
DPO	Data Protection Officer
EC	European Commission
EU	European Union
GA	Grant Agreement
GDPR	General Data Protection Regulation
HE	Horizon Europe
ILUC	Indirect Land Use Change
POPD	Protection of Personal Data
SA	Supervisory Authorities
TFEU	Treaty on the Functioning of the European Union

Keywords list

MarginUp! ethics

Ethical guidelines

POPD requirements

Human requirements

DNSH

1. Introduction

MarginUp! objectives are to promote circularity in supply chains through the use of marginal land biomass. The main objective of MarginUp! is to introduce climate-resilient and biodiversity-friendly non-food crops for sustainable industrial feedstock in marginalised and low-productivity land, resulting in robust and sustainable value chains that benefit both the local biodiversity and ecosystem services as well as its regional socio-economic positioning, by increasing the farming system resilience in rural areas.

However, during project activities, certain ethical issues may arise. As a research and innovation project, MarginUp! has a responsibility towards the people involved in the project activities including their rights, safety, well-being and interest, the communities that are engaged and involved in the research and implementation, and the society at large (European Commission, 2018). Therefore, ethics should be safeguarded throughout the whole life circle of the MarginUp! project.

To deal with these issues appropriately, ethical guidelines and procedures will be outlined in this document. The purpose of this deliverable is to serve as a practical tool that provides guidance concerning ethical issues for all partners of the MarginUp! project. All ethical standards and guidelines of Horizon Europe will be carefully applied. All MarginUp! partners are expected to adhere to these guidelines in all MarginUp! activities.

This deliverable sets out the “ethic requirements” that the project must comply with as well as compliance with the EU DNSH principles. This document is complemented by the deliverable of Data Management Plan in Work Package 8: Project management. In this deliverable, the most important ethical issues that the project will pay attention to, including human participation, the protection of personal data (POPD) and health and safety and possible environmental harm, are further elaborated on.

As it is in the interests of both the institution and all researchers that projects are reviewed and conducted ethically, the deliverable also provides a template consent form (Annex B). This is to be used by the project partners to declare their reviewing and complying to the project’s ethical terms.

2. MarginUp! Ethical Guidelines

2.1. Ethical issue management

2.1.1. Appointment of ethical advisor

To ensure ethical compliance throughout the entire MarginUp! project, MarginUp! is in the process of appointing an Ethical Advisor(s) from one (or several) partners' organization. The Ethical Advisor is responsible for:

- Ensuring the proper management of all ethics procedures;
- Reviewing all created MarginUp! materials and outputs for ethical compliance;
- Giving advice and assistance on ethics to all consortium partners

2.1.2. Procedure in case of scientific misconduct

Regardless of the country in which the research is carried out, MarginUp! consortium members are committed to follow the fundamental principles of research integrity, outlined in the revised version of the European Code of Conduct for Research Integrity (ALLEA, 2017), including:

Reliability in ensuring the quality of research, reflected in the design, methodology, use case implementations, analysis and use of resources;

Honesty in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair, full and unbiased way;

Respect for colleagues, research participants, society, ecosystems, cultural heritage and the environment; and

Accountability for the research from idea over pilot implementing activities to publication, for its management and organisation, for training, supervision and mentoring, exploitation, dissemination, and for its wider impacts.

MarginUp! partners are fully aware of the ethical issues they may encounter during their work and condemn all forms of scientific misconducts. Scientific misconducts can consist of fabrication of results,

falsification of data or records, plagiarism or piracy, failing to acknowledge authorship, misleading reporting of study results, sabotaging the work of other scientists, etc. Consortium partners are responsible for informing the Ethical Advisor and the coordinator if such misconducts have occurred and to update handling locally according to the use case/partner organizations' regulations, following the principle of subsidiarity.

2.1.3. Ethical clearance

Ethical clearance for involvement of human subjects should be sought prior to any research work being undertaken. MarginUp! will implement different methodological approaches: focus groups, workshops, interviews, surveys, experiments, field trials, etc. The consortium has chosen to adopt a uniform approach to the ethical procedures. The full protocol will be submitted and reviewed. The Social and Societal Ethics Committee of ATB/ZIC, who is also responsible for WP8 on Ethics, will be responsible for reviewing the full protocol for all MarginUp! activities.

2.2. Human requirements

Human requirements include procedures and criteria that will be used to identify/recruit project participants. Participation in MarginUp! activities will always be on a voluntary basis and participants will mainly be recruited from the end user partners represented in the MarginUp! consortium.

This Chapter also includes a template consent (Annex A) form to be used by the project partners when involving voluntary participants. The procedure and criteria for identifying and recruiting research participants define key ethical issues concerning project activities, as identified and established according to EU and national directives. These issues are examined from the MarginUp! Project point of view.

The procedures and criteria specified in this document shall be applied:

- by all partners,
- for all procedures of data acquisition involving subjects external to the Project Consortium in a non-anonymous form: each partner supervises and checks the work performed by its own staff in accordance with this document.

This document is interpreted with reference to:

- the Grant Agreement (GA);
- the Consortium Agreement (CA).

2.2.1. Compliance to EU and national ethical principles and legislation

MarginUp! will respect fundamental ethical principles, including those reflected in the Charter of Fundamental Rights of the European Union: dignity, freedom, equality, solidarity, citizens' rights and justice. Moreover, the project will act in accordance with the European Human Rights Convention, especially regarding privacy and autonomy.

European Legal Framework:

The partners involved in the consortium are well aware of the fact that management of personal data might raise various ethical questions. Issues to consider include the protection of the privacy of the individual. Personal data protection is a fundamental right in Europe, enshrined in Article 8 of the Charter of Fundamental Rights of the European Union, as well as in Article 16(1) of the Treaty on the Functioning of the European Union (TFEU) as well as in the European Human Rights Convention, especially with regard to privacy and autonomy. Thus, during the project, each partner will ensure the compliance of the respective EU, national and local legislation.

Stakeholder identification, mapping and involvement might involve the collection and processing of personal data from participating persons. The data collection will be processed pursuant to REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the protection of natural persons with regard to the processing of personal data and on the free movement of such data.

2.2.2. Procedure and Criteria

Throughout the project, different stakeholders/participants will be contacted by different project partners. This chapter aims to give an overview of the different procedures and criteria for identification and recruiting project participants.

The project partners, acting as separate data processors, will process all personal data within the project in accordance with General Data Protection Regulation (GDPR). So far, the processing has been made in accordance with legitimate interest.

In the given case that a processor assesses that legitimate interest is not appropriate, the processing will be done in accordance with another legal basis, e.g. consent. The Data Protection Officer (DPO) appointed at ATB will assist ATB regarding consent forms when necessary. A preliminary template is attached in Annex A. This template should be used when personal data is published outside the project consortium

or in case it needs to be shared within the consortium. If the template is used, the processor is responsible for ensuring that it is adjusted to fit the individual situation and that it complies with GDPR. Each project partner is responsible for ensuring that their processing of personal data within the project is lawful and appropriate, and that they have a legal basis to process the data. As a general practice, when project participants are contacted, they should be informed about:

- How the personal data from project participants is obtained (e.g. the contact details).
- How the project partners will process their personal data.
- Project participants' right to object to the processing of their personal data.

2.2.3. Tasks related to personal data collection.

2.2.3.1. Stakeholder identification and mapping

In task 5.1, MarginUp! partners will proceed to do a stakeholder mapping for each of the use cases with its input/output relate to successive and interrelated tasks 1.1, task 1.2 and task 6.1. The mapping will be prepared and guided by the task leader. Collected datasets will be created. Only use cases partners and the tasks leaders are able to edit and complete the datasets. Using desk-research, project partners at the use case site will identify stakeholders relevant to their use case in line with the mapping criteria developed by the task leader in consultation with project partners. In this task, only publicly available information needed for the project is collected in line with the General Data Protection Regulation. Stakeholders mapped are to be engaged in their quality of expert/business professionals rather than citizens, which implies that the principle of legitimate interest applies. Stakeholders will be contacted through their professional email address and phone number.

The personal data collected during the stakeholder mapping will be used only for the objectives and purposes of MarginUp! project and will be processed under the quality and safety conditions indicated in POPD Requirements. The data will be processed within the project consortium. In case that personal data is published (e.g. description of use cases) or needs to be shared with other partners in the consortium, the project partners should ask for a signed consent from the project participants (see Annex A).

2.2.3.2. Stakeholder recruiting for engagement in use cases and for replication

There will be an intense stakeholder engagement along the whole value chain and in all three phases of the project: planning, implementation, and assessment & support phases. This will be done through participation in the use cases activities, workshops, and trainings. The strategies for stakeholder engagement will be defined in Task 5.2 and followed by all tasks related to stakeholder engagement.

Personal data will be used to invite participants to different activities and give them feedback and relevant information about the project. In addition, all events will be announced on the project's website and communicated via social media. As part of the registration process, all stakeholders will be asked for their consent to process their private data (e.g. not publicly available contact information) and research outputs.

Stakeholder engagement is in particular planned in the following activities:

- Expert workshop with participants from across Europe and from SA and Argentina to determine all factors that are causing biophysical and socio-economic constraints for low ILUC biomass production (Task 1.1).
- Needs and requirements of stakeholders for implementation (Task 1.2)
- Identify stakeholders' perception on main drivers for marginality in their use cases, on the existing farmer networks and identify the stakeholders' own ideas and interests in novel value chains/cropping options (Task 1.4)
- Establishment of Boards of Actors and the Actors Advisory Board (Task 5.2)
- 2-3 workshops will be organised with partners to develop the roadmap for scaling up (Task 6.3)
- Dissemination activities & stakeholder engagement (Task 7.3)
- Replication Workshops (Subtask 7.4.3)
- An interactive technology roadmap workshop and a replication workshop (Task 5.3)

Engagement for replication:

- Replication of project results and knowledge exchange (Task 7.4)
- Replication and Exploitation Board consisting of members of the replicators networks as well as with experts coming from different fields (Task 8.5)
- International and cross-initiative co-operation including efforts to recruit internationally into the replication network (Task 7.5)

2.2.3.3. Other communication activities

According to deliverable 7.1 "Communication, Dissemination, Exploitation, Replication & Networking Plan CDER&N", interviews with entrepreneurs and other experts will be developed and disseminated via social media, the MarginUp! website and multiplier platforms like AlphaGalileo, Cordis or youris.com. E.g. interviews

2.3. POPD requirements

This chapter provides further information about the protection of personal data within MarginUp!. Personal data will be collected from human participants by means of personal interviews, surveys, group discussions and participatory workshops within WP1, WP2, WP4, WP5, WP6 and WP7. The chapter addresses the requirement related to Data Protection Officers (DPO) or Data Protection Policies of the involved partners. It includes a description of the technical and organisational measures that will be implemented to safeguard the rights and freedoms of the participants, a description of the security measures that will be implemented to prevent unauthorised access to personal data, and a description of the anonymisation/pseudonymisation techniques that will be used. Further details and confirmations with respect to the transfer of personal data between EU and non-EU countries and the use of secondary data are provided.

2.3.1. Data Protection Officers (DPO)

A data protection officer (DPO) is the person designated, where applicable, to facilitate compliance with the provisions of the General Data Protection Regulation (GDPR). The contact details of the Data Protection Officer (DPO) will be made available to all data subjects. The Data Protection Officer will be providing data protection obligations and how to meet them on a continuous basis within the Margin Up! project. DPOs also serve as the point of contact between the company and any Supervisory Authorities (SAs) that oversee activities related to data. Particularly, the GDPR Article 39 outlines the DPO's responsibilities include (but are not limited to): “

- Educating the company and employees on important compliance requirements.
- Training staff involved in data processing.
- Conducting audits to ensure compliance and address potential issues proactively
- Serving as the point of contact between the company and GDPR Supervisory Authorities.
- Monitoring performance and providing advice on the impact of data protection efforts.
- Maintaining comprehensive records of all data processing activities conducted by the company, including the purposes of all processing activities, which must be made public on request.
- Interfacing with data subjects to inform them about how their data is being used, their right to have their personal data erased, and what measures the company has put in place to protect their personal information.”

ATB as coordinator of the project appoints Andree Jacobs (ATB) as Data Protection Officer DPO at ATB.

Each of the partners involved in the MarginUp! activities and who has access to personal data, either through its collection, processing or storage, has either appointed a Data Protection Officer (DPO) or has adopted data protection regulations for the project.

2.3.2. Data minimisation principle

The data minimisation principle is an important principle in the European Union's GDPR. The data minimisation principle is expressed in Article 5(1)(c) of the GDPR and Article 4(1)(c) of Regulation (EU) 2018/1725, which provide that personal data must be "adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed". The principle of "data minimisation" within MarginUp! is fully aligned with the above-mentioned regulations and comprehends that a data controller should limit the collection of personal information to what is directly relevant and necessary to accomplish a specified purpose.

Relevant data collected in MarginUp!

MarginUp!'s objective is to promote circularity in supply chains through the use of marginal land biomass. The main data generated by the project are presented below:

(i) Data from use cases include:

- EU marginal lands regards, habitats, biodiversity, land use types and farming systems and best management practices. In addition, involvement of the engagement of number of actors/stakeholders in order to create sustainable and replicable business cases (risks, barriers, social acceptance...);
- Feedstock and biomass performance data (capacities, productivities, technical conditions...), estimated total cost of production and gross margin;
- Product data (product descriptions, compositional data, quality data, market price); A description of the use cases and the related value chain and its partners, including the number of the involved end-users;
- Business objectives: motivation and reasons for the use cases exploitation; limitations and risks of the use cases; scope and impact of the use cases for a region or other field of application; Customer and user needs, value proposition and market data; service or product characteristics, management team profile;
- Local stakeholder data and information at the use case sites: publicly available data necessary for mapping and workshop invitation, data collected in Stakeholder Boards (pending GDPR consent) on needs with regard to functionality and design or obstacles and

opportunities for implementation of novel technologies, workshop evaluation data and data obtained from surveys and personal interviews;

(ii) *The analysis/assessments output data from WPs/tasks;*

(iii) *Data collected/generated related to Communication, Dissemination & Replication Activities* (e.g. From the MarginUp! Network, MarginUp! website (e.g. cookies) ...);

(iv) *Periodic document/Reports/Publications* will be generated in MarginUp!;

(v) *Contact Data from MarginUp! partners:* names, titles, job levels, departments, LinkedIn profiles, email addresses, and phone numbers;

(vi) *The other data related to project management (WP8)* (e.g. Conferences and Workshops abstracts).

2.3.3. Rights and freedoms of the project participants

The project will fulfil all fundamental ethical principles exposed in the Charter of Fundamental Rights of the European Union (Official Journal of the European Union, C 303, 14th December 2007) which cover dignity, freedom, equality, solidarity, citizens' rights and justice. Moreover, the project will act in accordance with the European Human Rights Convention, especially regarding privacy and autonomy.

The partners involved in the consortium are aware of the fact that management of personal data might raise various ethical questions. Issues to consider include correct protection of the privacy of the individual. Personal data protection is a fundamental right in Europe, enshrined in Article 8 of the Charter of Fundamental Rights of the European Union, as well as in Article 16(1) of the Treaty on the Functioning of the European Union (TFEU) and in the European Human Rights Convention, especially with regard to privacy and autonomy. Thus, during the project, each partner will ensure the compliance of the respective EU, national and local legislation.

2.3.4. Security measures to prevent unauthorised access to data

In the MarginUp! project we do not perform activities, neither produce results, that raise any significant security issues. The project does not have potential for military applications and does not involve the use of elements that may cause any harm to humans, animals, plants or environment. However, the process of collecting, processing, storing data might hide some pitfalls. To reduce the risk of potential malevolent, criminal and/or terrorist abuse, which might be perpetrated also by malicious people authorized to access the information, the MarginUp! Consortium is examining the deployment of a threefold security protection strategy:

1. by ensuring that the employed security layers and privacy-preserving measures will work properly, keeping access logs and following best practices for system administration;
2. by employing techniques to prevent information leakage “on-the-fly”, i.e., through the adoption of the anonymization and pseudonymization approach of personal and sensitive information at collection, communication, and storage time (e.g. via an encryption scheme, hash functions, and/or tokenization). Such an approach will neutralise eavesdropping and/or similarly dangerous hack attempts in the unlikely event of successful retrieval, since it will secure data, making them completely meaningless to the possible attacker.
3. by employing good practices in case of the unlikely scenario of data breach, regarding notification to the compelled data protection authorities and proceeding according to the General Data Protection Regulation.

Taking into account appropriate technical and organisational measures to safeguard the rights and freedoms of the study and to protect the data, the activities have been defined as low-risk. According to the General Data Protection Regulation (GDPR) the implementation of both computerized authentication and procedures for managing authorization’s credentials is required. To assure the security of and the trust in the system, and to properly protect the rights and freedoms of natural persons, it is fundamental to provide technical solutions to ensure data security regarding the services offered by MarginUp!. For identity management and data protection mechanisms, the project will follow the standard practice in the security research community.

Any personal data and technical comment that will be collected in the course of the MarginUp! project will be stored electronically on the project’s shared own cloud folders. Each of these is accessible to the project’s consortium and linked third parties only. These data will not be shared and cannot be accessed and copied by any external party.

Due to internetworked services and in general to cloud technology, the need of a secure identities management has grown increasingly. Identity and access management (IAM) is the security and business discipline that “enables the right individuals to access the right resources at the right times and for the right reasons”. It addresses the need to ensure appropriate access to resources across increasingly heterogeneous technology environments and to meet increasingly rigorous compliance requirements. Technologies, services and terms related to identity management will be analysed by the consortium and applied, if applicable, also for the external services and platforms used during project implementation.

More specifically, following the “Privacy by default and by design” principles, included in the GDPR, the MarginUp! website will adopt an integrated and multilevel approach to protect the user information from the fraudulent access and consumption.

2.3.5. Focus on Data aggregation, anonymization and pseudonymization techniques

Personal and sensitive data will be made publicly available only after an informed consent (see Annex A) has been collected and suitable anonymization techniques have been applied wherever possible.

Before starting the project activities, a careful investigation on privacy and security issues has been and will be undertaken, covering in particular the privacy laws of application in the countries in where the main data controllers of the project are located: use case leaders (Spain, Hungary, Sweden, Greece, Germany, and associated partners (South Africa and Argentina).

As regards anonymization techniques, data confidentiality, integrity and privacy will be assured when collecting and processing data. The information for each person contained in the release cannot be distinguished from a given number of other individuals whose information also appear in the release. Moreover, the pseudonymization of data is another method of ensuring confidentiality, according to the Article 29 Working Party Opinion on Anonymization Techniques and in relation to the EU General Data Protection Regulation.

Where data are particularly sensitive (e.g. data using detailed personal narratives), exigencies for confidentiality increase. In this case, participants will be carefully informed of the nature of the possible risks. This does not preclude the responsibility of the applicant to ensure that maximal anonymization procedures are implemented. A detailed description of the measures that will be implemented to prevent improper use, improper data disclosure scenarios and ‘mission creep’ (i.e. unforeseen usage of data by any third party), within the above-mentioned security protection strategy, will be provided as update of this deliverable.

The optimal solution will be decided by using a combination of different techniques, while taking into account the practical recommendations developed in the above-mentioned Article 29 Working Party Opinion on Anonymization Techniques. It should be noticed that, although pseudonymization approaches reduces the link ability of a dataset with the original identity of a data subject and is accordingly a useful security measure, according to both the above mentioned Article 29 Working Party Opinion on Anonymization Techniques and the General Data Protection Regulation, pseudonymization does not qualify as an anonymization technique, as it enables to re-identify the data subject to which it refers.

Therefore, pseudonymized data is personal data and, therefore, its processing must comply with the GDPR in full.

These techniques have to adhere to certain requirements to comply with data protection and privacy-related legislation in the EU. The following set of requirements (among others) has been extracted from the GDPR and the Article 29 Working Party Opinion on Anonymization Techniques and will be the guideline for the drafting of the security protection strategy:

- User authentication: the system must provide adequate mechanisms for user authentication.
- Limited access: the system must ensure that data is only provided to authenticated and authorized persons. The list of authorized persons to each dataset and their user privileges shall be restricted to the minimum necessary.
- Protection against unauthorized and authorized access: the records of an individual must be protected against unauthorized access.
- Notice about use of data: the users should be informed about any access to their records.
- Access and copy users' own data: the system must provide mechanisms to access and copy the users' own data.
- Modification of the database: if an attacker breaks into the system, the system must detect modifications and inform the system administrator about this attack.
- Data protection by design and by default: privacy and data protection standards shall be taken into account from the outset of the project. Therefore, taking into account the state of the art, the cost of implementation and the nature, scope, context and purposes of processing as well as the risks of varying likelihood and severity for rights and freedoms of natural persons posed by the processing, the controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, implement appropriate technical and organizational measures which are designed to implement data-protection principles in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of the General Data Protection Regulation.

Additionally, the controller shall implement appropriate technical and organizational measures for ensuring that, by default, only personal data which are necessary for each specific purpose of the processing are processed.

2.3.6. Internal threats and human errors

Most organizations focus on data management risk from external threat, but most breaches occur from internal vulnerabilities. These can be thought of as part of the same risk continuum. This section looks at internal vulnerabilities and how to reduce them. There are two main types of internal threats:

Security may fall victim to human error. For example, an employee may copy information from an entire database table into an email for troubleshooting purposes and accidentally include external email addresses in the recipient list.

Internal Attacks. While internal accidents often compromise databases, wilful attackers on the inside commit a large portion of database breaches. Many are disgruntled employees who use their privileged access to damage.

Most of these attacks came using the numerous outlets for data on the modern PC, including USB and Firewire ports, CD and DVD recorders and even built-in storage media slots. Combined with the fact that storage space on portable devices has rapidly increased, business professionals can now use personal storage devices, such as USB memory sticks, iPods, digital cameras and smart phones, to remove or copy sensitive information either for malicious intent or personal gain.

Internal threat prevention

The implementation of a strong and flexible security policy is essential for MarginUp!. A security policy can provide rules and permissions that are understandable to both the employee of MarginUp! partner organizations and those implementing them so that personal data is prevented from leaving the office. MarginUp! policy is based on the security policies in the EU that are often sufficient if enforced to prevent such breaches, and are summarized in the following 5 points methodology:

Internal threats prevention methodology

1	Data protection policies	Using national or local legal guidelines for data protection and privacy policies (DP)
2	Internal data protection policies	Written policies and procedures for all staff to sign in and agree to
3	Clear staff role definition and responsibilities	Staff training, awareness and clear roles and staff responsibilities on data for access to data with checklists
4	Access control	Managing change in staff and have leave processes in place
5	Sanctions and audits	Disciplinary action for breach of DP and process guidelines by staff and threat of audits

MarginUp! management team is currently evaluating security policies based on its needs, restrictions and process requirements. After this evaluation an internal security policy will be adopted and will be attached to the updates of the Data Management Plan released after that date.

2.3.7. Ethics requirement for involvement of non-EU countries

Participants which are established in a non-EU country such as MarginUp! international partners from Argentina and South Africa undertake to comply with their obligations under the Agreement and to respect general principles (including fundamental rights, values and ethical principles, environmental and labour standards, rules on classified information, intellectual property rights, visibility of funding and protection of personal data) also for the submission of certificates under Article 24: to use qualified external auditors which are independent and comply with comparable standards as those set out in EU Directive 2006/43/EC¹⁴.

2.4. Safety and health of partners

The health and safety of all research participants, either as subjects, researchers or third parties is also of ethical consideration. Risks to researcher safety are according to the nature of the topic of investigation

and the research site. Failure to conform to health and safety procedures may lead to physical or psychological harm. During project years, additional attention is warranted for the safety and health of the participants during the field trials (WP3) and sites visits (WP8). Volunteers need to be explicitly and thoroughly informed about possible negative situations.

All partners of the consortium are making sure to ensure health and safety conditions within their facilities.

2.5. DNSH requirements

The Do No Significant Harm principle (DNSH) states that the actions outlined in National Recovery and Resilience Plans may not cause any significant harm to the environment.

The Commission Communication on the European Green Deal introduced green oath to 'do no harm'. The 'Do not Significant Harm' (DNSH) principle has been further specified in the EU Regulation on the establishment of a framework to facilitate sustainable investments, defined as the 'EU Taxonomy Regulation'. Six environmental objectives are listed in Article 9 of the EU Taxonomy.

A sustainable activity is expected to be significantly contributing to the environmental objectives and it should also not harm any of those 6 objectives including:

- Climate change mitigation
- Climate change adaptation
- Sustainable use & protection of water & marine resources
- Pollution prevention & control
- Transition to a circular economy
- Protection and restoration of biodiversity & ecosystems

MarginUp! project will adhere to above environmental EU objectives and contribute to enhance European industrial sustainability, competitiveness, and resource independence, by reducing the environmental footprint (analysis in WP5), including on biodiversity (analysis in WP2), enabling climate neutrality and increasing resource efficiency (particularly through upcycling and cascading use of biomass) along 5 value chains, and developing innovative bio-based products and enhanced technologies that will lessen EU reliance on fossil-based products.

2.6. Other issue

The cultivation of industrial non-food crops and the development of low-ILUC farming systems on marginal land that is still suitable for food production can raise ethical questions about prioritising non-food over food production. Therefore, MarginUp! will propose solutions for crops and cropping systems developed under MarginUp! that ensure that only marginal land not suitable for food production is used with them.

3. Bibliography

- 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, and repealing Directive 95/46/EC (General Data Protection Regulation).
- Article 29 Working Party, WP 216: Opinion 5/2014 on Anonymization Techniques
- European Commission. Grant Agreement number 10108208 – MarginUp!.
- MarginUp! Consortium Agreement.
- ALLEA (2017). The European Code of Conduct for Research Integrity, revised edition: https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/h2020-ethics_code-ofconduct_en.pdf
- <https://ncpflanders.be/infosheets/dnsh-principle-in-horizon-europe>
- https://ec.europa.eu/justice/article-29/documentation/opinion-recommendation/files/2014/wp216_en.pdf

Annex A: Template consent form 1

CONSENT to processing of personal data

ORGANISATION, as project partner of the project MarginUp! ("Project"), financed by the European Commission through the Horizon Europe Programme, would like to process your personal data for the purpose of (NEEDS TO BE ADJUSTED FROM TIME TO TIME/TO CHOOSE FROM LIST BELOW):

- ☐ publishing your name, picture and telephone number on the website of the Project
- ☐ saving your contact details (name, mail and telephone) in order to invite you to relevant events organised within the Project
- ☐ sending the "Project" results requested by you
- ☐ conducting interviews and compile the interview material with other material as a part of the Project
- ☐ analysing the information compiled through interviews and other material
- ☐ ...

ORGANISATION may transfer the personal data to third parties participating in the Project, for the purpose of FILL IN WHAT THE DATA WILL BE USED FOR. ORGANISATION will not transfer the personal data to any third party not participating in the Project. ORGANISATION will only use the personal data for the purpose of performing the Project. ORGANISATION will not process the personal data for any other purpose than above. The personal data to be processed to accomplish the purposes above are (NEEDS TO BE ADJUSTED FROM TIME TO TIME/TO CHOOSE FROM THE LIST BELOW):

- ☐ name,
- ☐ picture,
- ☐ telephone number
- ☐ e-mail address
- ☐ information from interviews and other materials compiled

You have the right to withdraw this consent, to request information about your processed data, or to ask for incorrect data to be corrected or deleted at any time (including during the study) without any consequences and without justification by contacting the Data Protection Officer at ORGANISATION (MAIL ADDRESS). Please note that documents already published (e.g., project reports prepared for the funding provider, scientific publications) or project results obtained using your data before you withdrew your consent cannot be altered. I hereby freely consent to ORGANISATION as a project partner processing my personal data in accordance with above.

.....

Place, Date

.....

Signature

.....

Printed Name

Annex B: Template consent form 2

Commitment to review and comply to MarginUp! Ethical guidelines, and conduct MarginUp! activities ethically.

I confirm that I have read and understood the Ethical Guidelines Document for the MarginUp! project, and I commit to comply with its contents throughout my involvement in the project.

I understand that adherence to these guidelines is a requirement for my continued participation in the project. I am committed to upholding the principles and practices outlined in the document and will ensure that my actions and contributions to the project align with these standards.

I declare that and that the information given in this consent is complete and correct.

I consent to the information collected on this form being collected and stored electronically and used to process in any case of violating ethical principles.

By giving my consent, I acknowledge that:

1. The information will be sent to the project coordinator
2. Each partner informs the coordinator and the consortium immediately about any ethical irregularity during the project.
3. I always check and follow updates the ethical clearance requirements of MarginUp!

.....

Place, Date

.....

Signature

.....

Printed Name