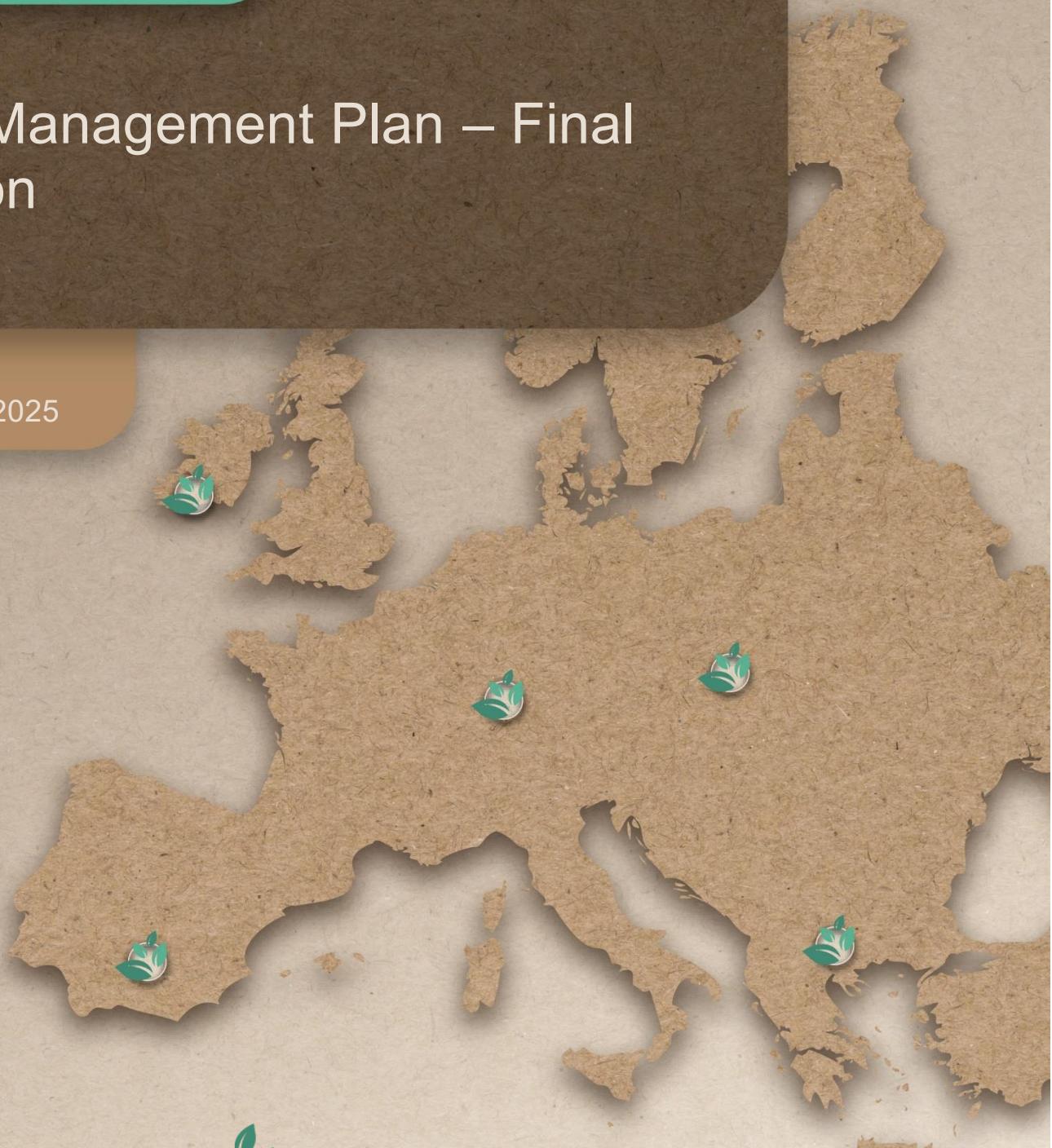


Deliverable 6.4

Data Management Plan – Final Version

QPL
August 2025



DEPLOYING CIRCULAR BIOECONOMIES AT
REGIONAL LEVEL WITH A TERRITORIAL APPROACH



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ABBREVIATIONS

AB	Advisory Board
CA	Consortium Agreement
CCRI	Circular Cities and Regions Initiative
CCRI-CSO	European Commission's Circular Cities and Regions Initiative's Coordination and Support Office
DCMI	Dublin Core Metadata Initiative
DMP	Data Management Plan
DOI	Digital Object Identifier
DPO	Data Protection Officer
EC or Commission	European Commission
EEA	European Economic Area
EPP	Environmental Protection Planning tool
ESG	Environmental, Socioeconomic and Governance
EU	European Union
FAIR	Findable, Accessible, Interoperable and Re-usable
GA	Grant Agreement
GDPR	General Data Protection Regulation
HTML	Hypertext Markup Language
MARC	Multi-Actor Regional Constellation
OAI	Open Archives Initiative
OAI-PMH	Open Archives Initiative Protocol for Metadata Harvesting
PC	Project Coordinator
PID	Persistent Identifier
PMS	Policy Monitoring System
QA	Quality Assurance
QC	Quality Control
SME	Small and Mid-size Enterprise
TL	Task Leader
URL	Uniform Resource Locator
WP	Work Package
WTL	Work Task Leader
WPL	Work Package Leader

Executive Summary

This document constitutes the final version of the **Data Management Plan (DMP)** and has been elaborated as a deliverable (D6.4) in the framework of the ROBIN project. ROBIN aimed to empower Europe's regional authorities to fulfil their role as agents of just, inclusive and resilient economic development for their territories. The project provided support to co-shape their governance structures and models in ways that accelerate the deployment of their **circular bioeconomy targets**, while also promoting social innovation and accounting for different territorial contexts.

In this context, the final version of the project's DMP set out the overall methodological principles pertaining to the management of the data that was collected, generated and / or re-used in the framework of ROBIN, safeguarding sound and ethical data management along the entire duration of the project. Moreover, it provides the final description of ROBIN's data, along with information on the methodology pertained to their management as well as to making them Findable, Accessible, Interoperable and Re-usable (FAIR).

The final version of the DMP is the third of the three versions of ROBIN's DMP that was produced in the course of the project and has served as a living document (D6.2 Data Management Plan – Initial Version was delivered on M6 and was updated on M18 in D6.3 Data Management Plan –Interim Version). This final deliverable builds on and enhances the previous versions, presenting an accurate, and comprehensive strategy for managing all data collected, generated, or reused throughout the project's lifecycle, including data expected to be gathered after the conclusion of ROBIN.

1. Introduction

The current document represents the final version of ROBIN's Data Management Plan (DMP), which has received funding from the European Union's Framework Programme for Research and Innovation Horizon Europe under Grant Agreement No 101060504.

ROBIN aimed to **empower Europe's Regions to adapt their governance models and structures to accelerate the achievement of their circular bioeconomy targets** while promoting social innovation and accounting for different territorial contexts. Europe's regional authorities have a crucial role to play as agents of just, inclusive and resilient economic development for their territories. To this end, ROBIN established and demonstrated the potential of innovative circular bioeconomy governance structures and models in 5 European Regions within **Ireland, Germany, Spain, Slovakia and Greece**. ROBIN provided them with all the necessary support for networking and mutual learning, as well as a practical **digital Toolbox** to drive the operation of successful governance models. We monitored closely and evaluated the project's performance, providing evidence of its economic, societal, and environmental impacts.

To this end, the **consortium** of ROBIN brought together a complementary and interdisciplinary group of **11 partners and 1 affiliated entity across 6 different countries** within the EU, as presented in the Table 1.

Table 1: ROBIN partners

Partner Role*	Partner No	Partner Name	Partner Short name	Country
CO	1	Q-PLAN INTERNATIONAL ADVISORS PC	QPL	Greece
BEN	2	FUNDACION CORPORACION TECNOLOGICA DE ANDALUCIA	CTA	Spain
BEN	3	WHITE RESEARCH SPRL	WR	Belgium
BEN	4	PEDAL CONSULTING SRO	PED	Slovakia
BEN	5	STEINBEIS 2I GMBH	S2I	Germany
BEN	6	ROZVOJOVA AGENTURA ZILINSKEHO SAMOSPRAVNEHO KRAJA NO	ZSK	Slovakia
BEN	7	MUNSTER TECHNOLOGICAL UNIVERSITY	MTU	Ireland
BEN	8	ARISTOTELIO PANEPISTIMIO THESSALONIKIS	AUTh	Greece
BEN	9	REGION OF CENTRAL MACEDONIA	RCM	Greece
BEN	10	CONSEJERÍA DE AGRICULTURA, PESCA, AGUA Y DESARROLLO RURAL	CAP	Spain
AE	10.1	INSTITUTO ANDALUZ DE INVESTIGACIÓN Y FORMACIÓN AGRARIA, PESQUERA, ALIMENTARIA Y DE LA PRODUCCIÓN ECOLÓGICA	IFA	Spain
BEN	11	SOUTHERN REGIONAL ASSEMBLY	SRA	Ireland

* CO = Coordinator, BEN= Beneficiaries, AE = Affiliated Entities

All partners of ROBIN's consortium adhered to sound data management principles in order to ensure that the meaningful data was collected, generated and / or re-used throughout the duration of the project was well-managed, archived and preserved, in line with the structure and guidelines of the Horizon Europe Data Management Plan Template¹.

Along these lines, this Final version of the DMP aims to achieve the following objectives:

- Describe the data management lifecycle for the data collected, generated and / or re-used in the framework of ROBIN, serving as the key element of good data management.
- Outline the methodology employed to safeguard the sound management of the data collected, and/or generated as well as to make them Findable, Accessible, Interoperable and Re-usable (FAIR).
- Provide information on the data that was collected, generated and/or re-used and the way in which it is handled during and after the end of the project along with the standards applied to this end.
- Describe details on how the data is made openly accessible and searchable to interested stakeholders as well as its curation and preservation.
- Address the management of any research outputs other than data in line with FAIR principles.
- Present information on the resources to be allocated so as to make data FAIR, clearly identify responsibilities pertaining to data management, and address data security and ethical aspects.

With the above in mind, this final version of the remaining of the document consists of the following 7 sections:

- **Section 2** presents a summary of the data collected/generated or re-used during the activities of ROBIN including its purpose as well as its types and formats. Additionally, it outlines its origin, volume and the stakeholders that may find it useful.
- **Section 3** describes the methodology that was applied in ROBIN in order to safeguard the effective management of data across their entire lifecycle, making it FAIR.
- **Section 4** presents the management of other research outputs that were generated or re-used throughout ROBIN and provides sufficient details on making them FAIR.
- **Section 5** analyses the resources required for making the project's data FAIR, while also identifying data management responsibilities.
- **Section 6** outlines the data security strategy applied within the context of ROBIN along with the respective secure storage solutions employed.
- **Section 7** addresses ethical aspects as well as other relevant issues pertaining to the data collected/generated or re-used during the implementation of the project.
- **Section 8** concludes on the overall steps taken within the framework of the project with respect to its data management plan.

Annexed in the document the reader may find (i) the project's Privacy Policy (Annex I); (ii) Informed Consent Form template (Annex II); (iii) a Data Subject Request Form template (Annex III); and (iv) the Record of Processing Activities (Annex IV) which were used during

¹https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/temp-form/report/data-management-plan_he_en.docx

the implementation of the project activities to ensure compliance with relevant applicable EU and national regulation(s).

Note that the DMP was treated as a living document, evolving throughout the lifespan of the project. It was further elaborated and updated during ROBIN with additional ad hoc updates incorporated as needed to account for new data, enhanced detail, or changes in methodology and other relevant aspects—such as costs related to making data FAIR, data volume, changes in consortium policies, or external factors. QPL led the elaboration of the DMP, with support from all partners, ensuring it was updated and enriched whenever necessary.

2. Data summary

ROBIN collected/generated or re-used meaningful non-sensitive data that do not fall into any special categories² of personal data as those are described within the General Data Protection Regulation³ (GDPR). This data was either quantitative, qualitative or a blend of those in nature and was analysed from a range of methodological perspectives with a view to producing insights that successfully fed ROBIN's activities, enabled us to deliver evidence-based results and ultimately achieved the objectives of the project. With that in mind, the final Section of the Data Management Plan (DMP) starts by explaining the purpose for which this data was collected/generated and how it relates with ROBIN. It proceeds by describing the different types and formats of this data as well as its origin and expected volume, before concluding with an overview of potential stakeholders for whom it may prove useful for re-use.

2.1 Purpose of data collection / generation or re-use and its relation to the objectives of the project

In order to successfully meet its objectives and ensure the production of evidence-based results, ROBIN entailed several activities during which data was collected/generated or re-used. The purpose for which this data was collected/generated or re-used was interrelated with the objective of the activity during which it is produced.

² Special categories of personal data according to Regulation (EU) 2016/679 of the European Parliament (General Data Protection Regulation) include personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation.

³ 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, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0679>

In particular, these activities along with their objectives in the framework of ROBIN were as follows:

1. **Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular bioeconomy governance**, to understand the state of play in the current ROBIN regions circular bioeconomy policy landscape and to ultimately feed into the regions' governance profiles developed under T1.4
2. **Development of a Typology of Circular Bioeconomy Governance Models in European Regions** to put in context the types of regional governance models in Europe, while accounting for different policy & socio-technical contexts.
3. **Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy**, in order to create an inventory of applied regional bioeconomy governance models.
4. **Analysis of the bioeconomy policy mix of the 5 ROBIN regions**, identifying barriers and opportunities to deepen our understanding of their regional context, their positioning regarding circularity and bioeconomy policies, their governance systems and their strategies' targets and values.
5. **Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox**, used to draw meaningful conclusions on areas of improvement for the Toolbox and its components, utilising the experience and expertise of our Advisory Board.
6. **Monitoring and assessment of the project's outcomes, impacts and perceptions change**, used to spot any inefficiencies or place for improvement and provide continuous feed to the evaluation process.
7. **Monitoring and assessment of the dissemination, communication and stakeholder engagement activities** of ROBIN with a view to measuring their results and impact, fine-tune ROBIN's Dissemination and Communication Plan, as well as fulfil the project's reporting requirements towards the Commission.

The following section provides further details on the different types and formats of data collected/generated or re-used during the project's activities.

2.2 Types and formats of collected / generated or re-used data

ROBIN was set to collect / generate or re-use data of various structures and formats. Along these lines, the data definition process used for this DMP is based on the source and the physical format of the data⁴. In particular, we define two main aspects: (i) the process under

⁴ Jakobsson, U., Braukmann, R., Lundgren M., Expert Tour Guide on Data Management. Retrieved from <https://www.cessda.eu/Research-Infrastructure/Training/Expert-Tour-Guide-on-Data-Management/1.-Plan>.

which the underlying data was created / captured which includes electronic text documents, spreadsheets, questionnaires and transcripts, among others and (ii) the storage format of quantitative and qualitative data. Examples of this aspect include easily accessible formats, such as postscripts (e.g., pdf, xps, etc.), machine readable formats (xml, html, etc.), spreadsheets, (e.g., xlsx, csv, etc.), text documents (e.g., docx, rtf, etc.), compressed formats (e.g., rar, zip, etc.) or any other format required by the objectives and methodology of the activity within the framework of which it is produced.

Under this framework, special attention was paid in using **open formats**⁵ (such as csv, pdf, zip, etc.) and / or **machine-readable formats**⁶ (such as xml, json, rdf, html, etc.) when possible, to enhance the **interoperability** and **re-use** of data. In doing so, we provided data that was **easily readable** and **freely usable in any software program** employed by third parties interested in utilizing the data.

The type and formats of the data collected / generated in the context of ROBIN can be divided into **2 categories**, namely (i) data collected / generated by direct input methods, and (ii) data collected / generated from dissemination, communication, stakeholder engagement and clustering activities, as described in the following subsections. In regards to the ROBIN Toolbox, no data were collected or generated from its usage during the project's implementation.

2.2.1 Data collected / generated through direct input methods

Direct input methods, under the scope of ROBIN, involved methodologies for collecting data through desk research and interactions between consortium partners and external stakeholders, with the latter providing data to the former. Along these lines, external stakeholders undertook the role of a data subject that is a natural person whose personal data was being processed⁷. In particular, the identification and selection of suitable data subjects was based on purposeful sampling according to which, external stakeholders were identified and selected by consortium partners based on their role regarding grounding circular bioeconomy policies in regional governance structures (e.g., individuals involved in implementing and designing regional bioeconomy strategies, stakeholders from local government, business community, academic institutions, primary biomass producers, and civil society, etc.) and the objectives of the respective activity for which data was collected. In this context, quantitative and qualitative data was collected / generated during ROBIN⁸:

⁵ According to the [Open Data Handbook](#): “An open format is a file format with no restrictions, monetary or otherwise, placed upon its use and can be fully processed with at least one free/open-source software tool and it is not encumbered by any copyrights, patents, trademarks or other restrictions so that anyone may use it”.

⁶ According to the [Open Data Handbook](#): “Machine readable formats are file formats that can be automatically read and processed by a computer. Machine-readable data must be structured data”.

⁷ 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, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0679>.

⁸ Neuman, W. L. (2014). Social research methods: Qualitative and quantitative approaches. Boston: Pearson.

- **Quantitative data** is numerical and acquired through counting or measuring. Examples of quantitative data is the yearly turnovers of a business, the hourly compensation of a worker, the number of SMEs in Europe, etc. This data may be represented by ordinal, interval or ratio scales and lend themselves to statistical manipulation.
- **Qualitative data**, sometimes referred to as categorical data, is data that can be arranged into categories based on physical traits, gender, colours or anything that does not have a number associated with it. Moreover, written documents, interviews, and various forms of in-field observation are all sources of qualitative data. Examples of qualitative data is the preferences of learning, skillsets, country of origin, etc.

Additional details with respect to the different types and formats of data that is collected through direct input methods under the frame of ROBIN are provided below.

1. Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular bioeconomy governance

The data collected/generated in the framework of this activity fall under Task 1.1 (WR) and include the opinions of the MARC members on the barriers, opportunities, and incentives that the regional actors have when engaging in circular bioeconomy. The data originated from semi-structured interviews and included qualitative and quantitative data, stored in text documents and spreadsheets (interview transcripts, notes, minutes, questionnaires) in .docx and .xlsx format.

2. Development of a Typology of Circular Bioeconomy Governance Models in European Regions

The data collected in the framework of this activity fall under Task 1.2 (AUM) and include information about specific characteristics of Circular Bioeconomy Governance Models found in European Regions. The analysis of this data generated a Typology of Circular Bioeconomy Governance Models in the EU. The collected and generated data is qualitative and quantitative and stored in text documents and spreadsheets. The storage format is .docx, .xlsx, pdf and web links.

3. Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy

The data deriving from this activity included an inventory of 50 regional good practices and the identification and in-depth analysis of 10 cases of regional government actions towards circular bioeconomy and fall under Task 1.3 (MTU). The data was collected through desk research and include qualitative and quantitative data. It is stored in text documents and spreadsheets (.docx, .xlsx, pdf, web links).

4. Analysis of the bioeconomy policy mix of the 5 ROBIN regions

The data collected/generated here belong to Task 1.4 (AUM) and include insights into attributes of the regional policy mix of the 5 ROBIN regions, as well as views and perceptions regarding the design and implementation of each regional bioeconomy strategy. The methods of data collection included desk research and semi-structured interviews with individuals involved in the design and implementation of such strategies. The data is qualitative and

quantitative and include profiles of the regions and written minutes of the interviews typically stored in a standard text document (.docx), as well as spreadsheets (.xlsx).

5. Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox

The data collected/generated in the framework of this activity fall under Task 3.3 (S2I) and included the conclusions of analysing and validating the data collected by the two testing of T3.2 through the elaboration of a validation workshop which engaged the Advisory Board (AB) members. More specifically the data (qualitative and quantitative) included measures of the successful operation of the ROBIN Toolbox and suggestions for its fine-tuning, as well as insights that were utilised in the creation of the support actions portfolio by CTA. The data storage format includes text documents and spreadsheets (docx, .xlsx, .pdf).

6. Monitoring and assessment of the project's outcomes, impacts and perceptions change

The data that was collected/generated by this activity belong to Task 4.1 (PED) and is quantitative and qualitative data on the indicators set within this task. They include measures of change, success and impact, findings and conclusions, ideas, opinions, useful information, past experiences and suggestions regarding the 5 regions. The data was collected through the methods prescribed by the monitoring and assessment framework (that may include interviews, questionnaires, online surveys and reports etc.) and by a final round of interviews with the MARCs members (4 per region). The data storage formats include text documents as well as spreadsheets (.docx, .xlsx).

2.2.2 Data collected / generated from dissemination, communication and stakeholder engagement activities

The data derived by monitoring and assessment of the dissemination and communication results of the project and by the stakeholder engagement with a view to measuring the impact of the relevant activities fell under Task 5.1 (WR) and included (i) Website analytics; (ii) social media statistics (including Facebook, YouTube, X and LinkedIn); (iii) Data collected from project events; (iv) Newsletter subscriptions and (v) Data collected from dissemination and communication activities (e.g., participation in external events, participation in project workshops, etc.). The data was identified through online analytics, utilising google analytics, SMAs, partners reporting, Mailchimp platform, etc. WR was responsible for sending the necessary templates (.docx, .xlsx) to all partners, alongside with guidelines on how to fill them in, as well as for collecting input on an ad-hoc basis (i.e., each time a dissemination or stakeholder engagement action is performed). WR was also responsible for preparing the necessary reports to evaluate the overall progress of dissemination and communication activities (measuring outcomes against pre-set KPIs) throughout the lifespan of the project. The storage format of the data collected during the project's duration, included .csv, .docx, .xlsx, .pdf, .ppt, .jpeg and .png files.

1. Website analytics:

The ROBIN website was developed during the first months of the project (it was launched on 19/12/22 – M4) and it was the main dissemination channel of the project, hosting the deliverables and links to the tools, providing information about the project, partners, and

regions, as well as sharing news with a dedicated section and a newsletter. Two sets of data were collected within this category:

- Visitors' statistics (anonymised data), through Google Analytics
- Newsletter subscribers, through MailChimp.

This type of information was mostly used for reporting purposes. Data was stored in spreadsheets (.xlsx) while the analysis of the results was stored in a standard text document (.docx).

When people visited the ROBIN website, it (via cookies - as in the case of every online website) automatically collected information about the visitor's device used for accessing the website (e.g., web browser, IP address, time zone). Additionally, information was captured on how visitors interact with the website itself. We refer to this, automatically collected, information as "Device Information".

2. Social Media statistics (including Facebook, YouTube, X and LinkedIn):

This data was collected/generated through periodic monitoring of the project's social media statistics (i.e., Facebook, YouTube, X and LinkedIn) with a view to measuring and assessing the performance and results of the project's social media activity in terms of dissemination and communication. With that in mind, the data was both qualitative as well as quantitative in nature, addressing the metrics reached on each channel (e.g., number of followers, tweets impressions on X, friends, likes on Facebook, number of people reached through posts, etc.). Additionally, this data was followed by an analysis of the results stemming from them and possible ways to improve the results so as to reach the project's targets. All in all, the data was stored in a spreadsheet (.xlsx) while at the same time, the analysis of the results was stored in a standard text document (.docx).

3. Data collected from dissemination and communication activities

This data was collected through the periodic monitoring of the project's miscellaneous dissemination activities, such as publications in relevant journals, posts in blogs, etc. The data consists of a spreadsheet designed to keep track of any kind of communication and dissemination activity, including, but not limited to, press releases, social media posts, website articles, interviews, events (conferences, meetings, workshops, etc.), other publications, e-mails, presentations, informal discussions, seminars, etc. The purpose of collecting this data was to assess the outreach and efficiency of the dissemination activities during the implementation of the project. For this purpose, a template was shared with all partners to recommend activities to be performed and log the activities they performed. The template was also provided online so that the partners can directly update their input. After all, the data was integrated into a single spreadsheet (.xlsx).

4. Newsletter subscriptions

In order to enhance the dissemination activities of the project, newsletter subscriptions were foreseen on the project's website. A subscription form hosted on the project's website facilitates the collection of this data. Any interested stakeholder could voluntarily provide their contact details in a dedicated sign-up form, so as to receive the most up-to-date news and outcomes of the project. A newsletter was sent to subscribers biannually. This data was collected so interested stakeholders could be informed about ROBIN, as well as its Toolbox. Along these lines, the data was comprised of a list of subscribers along with their basic contact

information: (i) email address, (ii) first and last name, (iii) country, (iv) type of organisation, (v) region and (vi) gender. A copy of this contact list was stored on MailChimp's (<http://mailchimp.com>) server, which was used for e-mail campaigns and newsletters distribution. All personal information included in this contact list was used and protected according to MailChimp's Privacy Policy.

2.2.3 ROBIN Toolbox

As part of Task 2.4 “Development of the ROBIN Toolbox for the Implementation of Circular Bioeconomy Strategies,” a digital toolbox was developed and published on the project’s website. This toolbox includes digital versions of:

- I. the **ROBIN Knowledge Platform**, developed through Tasks 1.2 and 1.3, presents a range of regional bioeconomy governance models, good practices, and a typology matrix.
- II. the **ROBIN Tools** (developed in Task 2.3, including the Circular Bioeconomy Governance Model Canvas, the Policy Monitoring System, and the Environmental Protection Planning Tool), and
- III. the **ROBIN Support Actions Portfolio** (developed in Task 2.2).

The Toolbox was designed to consolidate the project’s tools and services, offering support for the implementation of sustainable bio-based value chains, the development and assessment of governance models, and the identification of unsustainable practices. It also served as the central platform for accessing information and ROBIN’s support actions.

While the Toolbox remains freely available for use by a wide range of stakeholders—including regional authorities, policy makers, designers of circular bioeconomy strategies, researchers, and other interested parties—no data were collected or generated from its usage during the project’s implementation.

5. Circular Bioeconomy Governance Model Canvas (CBGMC)

The Circular Bioeconomy Governance Model Canvas (CBGMC) is a strategic co-creation tool designed to support regional stakeholders in developing and refining governance models for circular bioeconomy initiatives. Structured around key components such as vision, activities, partnerships, resources, infrastructure, and policy, the CBGMC helps align regional strategies with the EU Bioeconomy Objectives. It encourages multi-stakeholder engagement following the quadruple or Penta helix model and is intended to be a dynamic, iterative tool that evolves alongside the region’s bioeconomy development.

CBGMC facilitates structured qualitative inputs from regional stakeholders across multiple thematic sections of the canvas. These include the definition of a regional bioeconomy vision, identified support activities, lists of local resources and infrastructure, expected costs and revenue streams, and stakeholder partnerships. Additional entries cover communication channels, development needs, and policy frameworks. These inputs provide region-specific insights into governance planning and reflect the diverse priorities and conditions across participating areas. As a co-creation tool, the CBGMC also captures the collaborative dynamics among regional actors—such as public authorities, civil society, academia, and industry—by documenting joint decision-making processes and evolving stakeholder perspectives.

The CBGMC was designed as a tool for stakeholders to assess their bioeconomy practices, and as such, no specific data was collected from its use throughout the project.

6. Policy Monitoring System (PMS)

The Policy Monitoring System (PMS) is a comprehensive toolset developed to support policymakers in evaluating the performance of bioeconomy governance models, with a particular focus on Environmental, Socioeconomic, Governance (ESG), and Territorial Responsible Research and Innovation (RRI) dimensions. It consists of three key components: the Policy Monitoring Tool (PMT), which provides inspiration and guidance on selecting relevant indicators; the Policy Monitoring Progress Tracker, which allows users to track and assess the implementation and outcomes of their selected indicators; and Additional Resources for accessing complementary data from the EU Bioeconomy Monitoring System developed by the JRC.

The PMS primarily relates to policymaking progress and indicator performance. Users of the PMT identify policy challenges and select relevant indicators across five categories—ethics, public engagement, socioeconomic, governance, and environmental. For each indicator, the system provides an exploratory workspace where users can define policy actions, associated timelines, implementation strategies, and relevant trends, providing a structured record of how bioeconomy strategies are being shaped and applied at the regional or national level. The provided information is both qualitative (e.g. rationale for indicator selection, policy narrative) and quantitative (e.g. completion percentages, start and end dates, implementation status) in nature. Through the Progress Tracker, users can update and record the status of specific policy actions linked to each indicator, including progress updates, timelines, and the percentage of completion, and save this status on their own workspace. This allows for continuous performance monitoring and iterative improvements of governance models. While the PMS captures user-defined inputs during use, it does not generate, store, or retain any of this data. It does not create primary data but provides structured environment to support decision-making and track responses to evolving ESG and RRI-related challenges.

Since the PMS was designed as a tool for stakeholders to assess their bioeconomy practices, no data was collected from its use during the project.

7. Environmental Protection Planning Tool (EPPT)

The Environmental Protection Planning Tool is an online self-assessment tool designed to help regional authorities and practitioners identify environmentally harmful practices and evaluate their region's performance across key environmental management sectors. By guiding users through the assessment of critical areas such as solid waste, liquid waste, and other environmental domains, the tool supports informed decision-making and helps prioritize actions to advance eco-friendly governance aligned with bioeconomy transition goals. It is intended for use by policymakers, public servants, and local experts.

Users may use it to assess eight key environmental sectors by selecting relevant indicators and evaluating the severity of barriers—technical, financial, institutional, etc.—to adopting more sustainable practices. These evaluations, often based on internal consultation with local departments or experts, can be used to calculate a performance score for each sector.

The EPPT was intended as a tool for stakeholders to assess their bioeconomy practices, and no specific data was collected from its use during the project.

2.3 Origin of data and re-use of pre-existing data

In the context of ROBIN, **new data** was collected/generated by partners as well as external stakeholders participating in the activities of the project and/or using its Toolbox. With that in mind and aside consortium partners, **external groups of stakeholders from which new data originated included**:

- Regional authorities within and outside the EU
- Business community (advisors engaging in bio-based industry, primary biomass producers)
- Major European Initiatives (e.g., Circular Cities and Regions Initiative – CCRI)
- Relevant Initiatives (EU projects focusing on bioeconomy, bioeconomy networks and working groups);
- Policy makers at regional, national and EU level (related to bioeconomy governance models)
- Academic experts in the field of bioeconomy and regional development (e.g., within academic institutions, non-university public research organisations, research and innovation organisations etc.).
- Consultants, such as regional development advisory companies.

Moreover, **pre-existing data** was utilised within the context of ROBIN as well. The development of the typology of Circular Bioeconomy Governance Models in European Regions and the creation of the portfolio of support actions of the ROBIN Toolbox, was based upon the pre-existing knowledge, methodologies and outputs of other projects, initiatives, relevant institutions and policies. Also, outputs from EU-funded projects (e.g., POWER4BIO, ICT-BIOCHAIN MPowerBIO, SUPERBIO, BIOCHAIN, BIOSWITCH, Transition2BIO, RRI2SCALE, MARIE etc.), national projects, institutions and other relevant initiatives in a large extent provided a solid basis for ROBIN tools. Finally, consortium partners' internal knowledge, experience and expertise from their participation in other projects and initiatives were directly and indirectly supporting the implementation of activities throughout the project.

2.4 Size of data

ROBIN entailed a series of activities aimed at setting the stage for and ultimately facilitating the development, piloting, evaluation, validation and fine-tuning of the ROBIN toolbox and support services. With that in mind, the table that follows presents the different activities implemented during the course of the project in which data was collected/generated, the types and formats of the data as well as their approximate size.

Table 2: Expected size of data

No	Name of activity	Data	Type of data	Format of data	Size of data*
1	Identification of barriers, opportunities, and incentives of the Multi-Actor Regional	Multi-Actor Regional Constellation opinions on barriers, opportunities, and incentives	Interview Notes, Minutes, Questionnaires, Spreadsheets	.docx/.xlsx	600.000 KB

No	Name of activity	Data	Type of data	Format of data	Size of data*
	Constellation to engage in circular bioeconomy governance				
2	Development of a Typology of Circular Bioeconomy Governance Models in European Regions	Bioeconomy governance models in European Regions	Spreadsheets, notes	.docx, .xlsx, pdf, web links	1.000 KB
3	Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy	Country of each practice, type of practice, deployment setting, replication potential. Regional deployment considerations, stakeholders, beneficiaries, level of uptake, operational time, economic, environmental and social impacts.	Spreadsheets, notes, interview transcripts	.docx, .xlsx, pdf, web links	200.000 KB
4	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Attributes of the regional policy mix of the 5 ROBIN regions, as well as views and perceptions regarding the design and implementation of each regional bioeconomy strategy.	Spreadsheets, Notes, Interview transcripts	.docx, .xlsx	1000 KB
5	Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox	Measures of successful operation of the Toolbox, suggestions for fine-tuning it, and insights to be utilised in the creation of the support actions portfolio	Notes, spreadsheets	.xlsx, .docx	7.026 KB
6	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Measures of success and impact, conclusions, ideas, opinions, useful information, past experiences and suggestions	Notes, Spreadsheets Interview transcripts	.xlsx, .docx, .pdf	*2.000 KB
7	Monitoring and assessment of the dissemination, communication and stakeholder engagement activities	Website and social media analytics	User generated/ machine generated	.csv, .docx, .xlsx, .pdf, .ppt, .jpeg, .png	About 200.000 KB

No	Name of activity	Data	Type of data	Format of data	Size of data*
		Data collected from dissemination and communication actions	Spreadsheets, images	.csv, .xlsx, .pdf, jpeg, .png, .docx	100.000 KB
		Newsletter subscriptions	Spreadsheets	.csv, .xlsx	100.000 KB

* This reflects the approximate size of the data collected, based on the inputs provided by partners regarding the data generated through the project implementation.

2.5 Data utility

The stakeholders that could find meaningful utility for the data collected/generated or re-used by the project (both within as well as outside of ROBIN's consortium) along with the benefits that could arise for them by utilising this data, are concisely presented in the table that follows.

Table 3: Data utility

Stakeholder group	Data utility
Policy makers at regional, national and EU level related to circular bioeconomy	ROBIN aimed to support the 5 participating regions within Ireland, Germany, Spain, Slovakia and Greece to find the ways and means to reach their potential regarding co-shaping their governance structures and models in ways that will help them fulfil their circular bioeconomy targets. The typological analysis of governance models and structures in different regional settings, the co-creation of a digital Toolbox to drive the circular bioeconomy transition and the co-creation of meaningful policy recommendations are going to be very useful for regions around the world that wish to pursue the same endeavours. More specifically, the project's generated data and results offered policy makers the tools to create improved, more inclusive and better-informed governance models based on stakeholder engagement, as well as insights into local potentialities along with the means to tap into them for stimulating bio-based innovation. Along these lines, data generated to this end, was of great utility for experts who design, implement and/or fund relevant policies. Data generated on designated policy activities (policy briefs) provided meaningful input that was used to inform the design of policies targeted in circular bioeconomy regional governance around the world.
Bio-based industry, advisors & investors	The data created/generated through ROBIN provided insights on how to accomplish networking and stakeholder engagement to build the connections required to accelerate bio-based innovation. The project results increased awareness regarding bioeconomy and its benefits and provide useful feedback on a policy-making level regarding integrating bio-based value chain development into broader policies and regional development

	plans. To this end, data generated through ROBIN was of great utility for industry advisors and investors engaging in the implementation and funding of relevant policies.
Scientific community	In the frame of the ROBIN project, interdisciplinary research that largely built upon prior research efforts was performed to generate insights on regional bioeconomy models and structures across Europe. Additionally, local stakeholders were engaged in the project's co-creation, mutual learning, testing and validation activities, mapping a plethora of perspectives regarding the state of play in advancing circular bioeconomy governance in European regions. Research data of the project that was published in reports or peer-reviewed scientific journals as well as deposited in open repositories was of great utility for scientists in the field, aggregating and classifying existing scientific knowledge on types of bioeconomy governance models and creating new knowledge and empirical open data on the application of novel inclusive governance models.
Civil society	ROBIN aimed to engage local stakeholders in its core activities in order to make sure that their perspective was taken into consideration in regional policies and, to find more meaningful ways and develop tools to address their needs, and to empower them in engaging in regional bioeconomy governance and policy making.
Project partners	The data collected/generated during ROBIN was the cornerstone for project partners in order to produce evidence-based results and ultimately achieve the objectives of the project. Indeed, this data enabled the co-creation, testing and validation of regional models and plans, as well as useful tools (ROBIN Toolbox) that helped embed bioeconomy policies in regional and territorial agendas. At the same time, this data remains meaningful for project partners beyond the end of the project as well, enabling them to build and capitalise upon interesting ideas and opportunities that may emerge to ensure the long-term sustainability of the ROBIN methodology and Toolbox.

3. FAIR data

The guidelines on the Data Management Plan⁹ of the Commission emphasise the importance of making the data produced by projects funded under Horizon Europe **Findable, Accessible, Interoperable and Reusable (FAIR)**, with a view to ensuring its sound management. This means using standards and metadata to make data discoverable, specifying data sharing procedures and which data will be open, allowing data exchange via open repositories as well as facilitating the reusability of the data. With that in mind, the following sections of the DMP lay out the methodology followed in the framework of ROBIN with respect to making data

⁹ https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf

findable, accessible and interoperable as well as ensuring their preservation and open access, with a view to increasing its re-use.

3.1 Making data findable, including provisions for metadata

3.1.1 *Data discoverability and identification mechanisms*

ROBIN put special emphasis on enhancing the discoverability of the data collected/generated or re-used during the course of its activities. **Open data produced during the implementation of the project was locatable by means of a standard identification mechanism.** Indeed, ROBIN assigned globally resolvable **Persistent Identifiers (PIDs)** on any open data (more information on open data as well as the respective repositories we employed in the context of the project, are provided in section 3.2). An identifier is a unique identification code that was applied to a dataset, so that it can be unambiguously referenced. For example, a catalogue number is an identifier for a particular specimen and an ISBN code is an identifier for a particular book. PIDs are simply maintainable identifiers that allow for permanent reference to a digital object. In other words, PIDs are a way of giving digital resources, such as documents, images and data records, a unique and persistent reference number.

At the same time, data that is not open was being deposited in a searchable resource (i.e., the cloud web storage service of the project) and well-tailored identification mechanisms were utilized as well, in the form of standard naming conventions that safeguard their consistency and made them easily locatable for partners within the frame of the project. Along these lines, the following subsection provides further analysis of naming conventions and versioning.

3.1.2 *Naming conventions and versioning*

Following a consistent set of naming conventions in the development of the project's data files can greatly enhance their searchability. With that in mind, ROBIN created consistent data file names that provided clues to their content, status and versioning while also increasing their discoverability. In doing so, project partners, as well as interested stakeholders, could easily identify a file as well as classify and sort it.

According to the UK Data Archive ([UK Data Service, 2017b](#)), a best practice in naming convention is to create brief yet meaningful names for data files, that facilitate classification. The naming convention should avoid the utilisation of spaces, dots and special characters (such as & or !), whereas the use of underscores is endorsed, to separate elements in the data file name and make them understandable. At the same time, versioning should be a part of a naming convention to clearly identify the changes and edits in a file.

To support this objective and facilitate the referencing of datasets generated during implementation, ROBIN employed a **standard naming convention that integrates versioning and took into account the possibility of creating multiple datasets** during an activity that entails data collection/generation. Indeed, ROBIN's naming convention considered this issue and addressed it by employing a unique element that captured the number of datasets that were produced under the same activity.

In particular, the naming convention employed by the project is described below.

[Name of project] _ [Name of Study] _ [Number of dataset] _ [Issue Date] _ [Version number]

- **Name of project:** ROBIN
- **Name of Study:** A short version of the name of the activity for which the dataset was created.
- **Number of dataset:** An indication of the number assigned to the dataset.
- **Issue Date:** The date on which the latest version of the dataset was modified (YYYY.MM.DD.).
- **Version number:** The versioning number of a dataset.

With the above in mind, an **indicative example** to showcase the naming structure that was applied in the context of ROBIN is provided below:

- **ROBIN_BarriersOpportunities&Motivations_Dataset1_2022.11.30_v1 p-** The first dataset generated from the semi-structured interviews with the Multi-Actor Regional Constellation conducted to identify their perceived barriers, opportunities, and incentives to be actively involved in collaborative governance schemes. This is the first version of the dataset that was last modified on the 30th of November 2022 (30/11/2022).

Versioning of information made a revision of datasets uniquely identifiable and was used to determine whether and how data changed over time and to define specifically which version the creators/editors were working with. Moreover, effective data versioning enabled understanding if a newer version of a dataset was available and if changes were made between the different versions, allowing for comparisons and preventing confusion. In this context, a **clear version number indicator was used in the naming convention** of every data file produced during ROBIN in order to facilitate the identification of different versions.

3.1.3 *Metadata allowing discovery*

In addition to consistent naming conventions and versioning, the project also followed a metadata-driven approach so as to allow discovery and further increase the searchability of the data, also facilitating its understanding and re-use. Metadata is defined as “data about data” or “information about information”¹⁰. It is usually structured textual information that describes the creation, content, or context of a digital resource – be it a single file, part of a single file, or a collection of many files. Metadata is the glue which links information and data across the world wide web. It is the tool that helps people discover, manage, describe, preserve, and build relationships with and between digital resources¹¹.

¹⁰ Huxley, L., & Jacobs, N. (2004). Online information services in the Social Sciences. Oxford: Chandos.

¹¹ Foulonneau, M., & Riley, J. (2008). Metadata for digital resources: Implementation, systems design and interoperability. Oxford: Chandos.

In particular, three distinct types of metadata exist¹², as presented below:

- **Descriptive metadata**, used to identify and describe collections and related information resources. Descriptive metadata at the local level helps with searching and retrieving. In an online environment, descriptive metadata helps to discover resources. Most of the time includes information such as the title, author, date, description, identifier, etc.
- **Administrative metadata** is used to facilitate the management of information resources. It is helpful for both short-term and long-term management and processing of data. This is information that will not usually be relevant to the public but will be essential for staff to manage collections internally. Such metadata may be location information, acquisition information, etc.
- **Structural metadata** enables navigation and presentation of electronic resources. It documents how the components of an item are organized. Examples of structural metadata could be the way in which pages are ordered to form Sections of a book, a photograph that is included in a manuscript or a scrapbook or the JPEG and TIF files that were created from the original photograph negative, linked together.

With that in mind, **data produced/used during ROBIN was discoverable with metadata** suitable to its content and format. The project employed **metadata standards** to produce rich and consistent metadata with a view to supporting the long-term discovery, use and integrity of its data. More details on the metadata standards adopted by ROBIN are provided in the following subsection.

3.1.4 Standards for metadata creation

ROBIN employed standards for creating metadata for data collected/generated by the project, with a view to describing it with **rich metadata** and thus improving its discoverability and searchability. As a result, effective searching, improved digital curation and easy sharing was achieved. In addition, the metadata standards applied enable the integration of metadata from a variety of sources into other technical systems.

With that in mind, for **ROBIN's openly available data** the metadata standards provided by **Zenodo were being used**. Zenodo (<https://zenodo.org/>) is an open repository developed under the European OpenAIRE programme and operated by CERN. The repository along with its metadata standards, has been adopted and is being used by numerous research communities, enabling them to deposit research papers, datasets, software, reports as well as other research outputs. Along these lines, Zenodo creates metadata to accompany the datasets that are uploaded to the repository, extending their reach to a wider audience of interested stakeholders. These metadata can be exported in several standard formats, including open and machine-readable ones (such as MARCXML, Dublin Core, and DataCite Metadata Schema), following the guidelines of OpenAIRE and are stored by Zenodo in JSON-format according to a defined JSON schema¹³.

¹² Caplan, P. (2003). Metadata fundamentals for all librarians. Chicago: American Library Association.

¹³ For more information on the JSON format and the JSON schema visit the following website: <http://json-schema.org/>

Project **data that was not open was also annotated with open and machine-readable metadata** following the **Dublin Core Metadata standard**. The Dublin Core Metadata element set (certified with the ISO Standard 15836) is a standard that can be easily understood and implemented and, as such, is one of the best-known metadata standards. It was originally developed as a core set of elements for describing the content of web pages and enabling their search and retrieval. Among the reasons for selecting this standard is also the fact that **Zenodo is compatible with Dublin Core metadata formats** and thus, any temporarily closed data that may become open at a later stage (e.g., due to a change in the consortium's policy), will not lose its metadata. With that said, the Dublin Core metadata standard is a simple yet effective set for creating rich metadata that describes a wide range of resources. The fifteen element "Dublin Core" described in this standard is part of a larger set of metadata vocabularies and technical specifications maintained by the Dublin Core Metadata Initiative (DCMI)¹⁴. The full set of vocabularies also includes sets of resource classes, vocabulary encoding schemes, and syntax encoding schemes. **An online metadata generator is being used** to produce the different metadata elements required (dublincoregenerator.com).

3.1.5 *Search keywords included in the metadata*

The project's data was provided with search keywords with a view to optimizing its findability as well as its ultimate re-use by interested stakeholders during its entire lifetime. With that in mind, the metadata standards employed by ROBIN provided opportunities for tagging the data collected/generated and its content with keywords. In general, keywords are a subset of metadata and include words and phrases used to name data. In the context of ROBIN, keywords are used to add valuable information to the data collected/generated as well as to facilitate the description and interpretation of its content and value.

Along these lines, the project's strategy on keywords is underpinned by the following principles:

- The who, the what, the when, the where, and the why were covered.
- Consistency among the different keyword tags needs was ensured.
- Relevant, understandable and clear keywording ought were sought.

In general, the keywords comprised terms related to circular bioeconomy, governance models, and regional authorities. The keywords accurately reflect the content of the datasets and avoid words used only once or twice within them.

3.1.6 *Offering metadata that can be harvested and indexed*

We know that the wild diversity of the metadata accompanying open data across the plethora of online repositories (e.g., disciplinary archives, institutional repositories, open access journals) can serve as barriers to their findability and sharing amongst different research communities. This is why, in the context of ROBIN, we have aligned our metadata-creating approach with the **Open Archives Initiative (OAI)**, which promotes the use of a standard

¹⁴ Retrieved from: <https://www.dublincore.org/>

protocol for metadata harvesting, designed for better sharing and retrieval of data residing in distributed repositories. This protocol, namely the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH)¹⁵ promotes interoperability standards that facilitate efficient dissemination of data amongst diverse communities¹⁶.

All structured **metadata linked to the project's open data was offered in a way that could be exported and harvested** via the OAI-PMH, thanks to the standards we adopt for metadata creation (see section 3.1.4). The same standards also helped us produce **metadata that facilitates indexing**. For instance, the use of the Dublin Core Metadata Standard (as further elaborated in section 3.3) provides a vocabulary of concepts with definitions in open-machine readable formats that enable easier indexing of metadata. Along these lines, there are several tools¹⁷ which implement the Archives Initiative Protocol for Metadata Harvesting, such as **Arc source**, **EnhancedOAIServer** and **eprints.org**, and can be used for harvesting our data by different repositories.

ROBIN's openly available data has been uploaded in Zenodo, which is in line with FAIR principles, including the “To be Findable” principle. The metadata of each record uploaded in Zenodo was indexed and searchable directly in Zenodo's search engine immediately after publishing. The metadata of each record was sent to DataCite servers during DOI registration and indexed there.

3.2 Making data accessible

3.2.1 Repository

The **data produced by ROBIN and deemed open for sharing and re-use, has been deposited to and securely stored by Zenodo (www.zenodo.org)**, which constitutes an **open data repository** and has been specifically selected to enable access to the project's open data free of charge. In fact, Zenodo builds and operates a simple service that enables researchers, scientists, EU projects and institutions, among others, to share and showcase research results (including data and publications) that are not part of the existing institutional or subject-based repositories of the research communities. It accepts any file format, promotes peer-reviewed openly accessible research, allows the creation of own collections and it is available free of charge both for ROBIN to upload and share data as well as for other stakeholders to explore, download and re-use this data.

Moreover, as a digital repository, Zenodo registers **Digital Object Identifiers (DOIs)** for all submitted data through DataCite¹⁸, which is the leading global non-profit organisation that provides PIDs (and specifically DOIs) for research data and preserves these submissions using the safe and trusted foundation of CERN's data centre, alongside the biggest scientific

¹⁵ Retrieved from: <https://www.openarchives.org/pmh/>

¹⁶ Corrado, E.M. (2005) ‘The importance of open access, open source, and open standards for libraries’, *Issues in Science and Technology Librarianship*.

¹⁷ For more information about the tools implementing the OAI-PMH: <https://www.openarchives.org/pmh/tools/>

¹⁸ For more information on DataCite: <https://www.datacite.org/>

dataset in the world, the LHC's 100PB Big Data store¹⁹. This means that the data preserved in Zenodo will be accessible for years to come, and the DOIs will function as perpetual links to the resources. DOIs remain valuable since they are future-proofed against Uniform Resource Locator (URL) or even protocol changes, through resolvers (such as DOI²⁰). With that in mind, an example of a DOI retrieved from this open repository follows the structure illustrated in Figure 1.

Figure 1: Typical DOI created by Zenodo

DOI 10.5281/zenodo.3901783

3.2.2 Data

1. Openly available and closed data

ROBIN, in line with FAIR principles of data management in the context of Horizon Europe, adopted the good practice of making data as open as possible and as closed as necessary. This calls for partners to disseminate their data that had the potential to offer long-term value to external stakeholders and did not harm the confidentiality and privacy of the stakeholders that contributed to the collection/generation of this data, maximising the beneficial impact of ROBIN.

Only anonymised and aggregated data was made open to ensure that data subjects cannot be identified in any reports, publications and/or datasets resulting from the project. The relevant project partner in each case **undertook all the necessary anonymisation procedures** to anonymise the data in such a way that the data subject was no longer identifiable (more details on data management responsibilities are provided in **Section 5.2**).

To this end, it is important to keep in mind that during the process of data anonymisation, data identifiers had to be removed, generalised, aggregated or distorted. Moreover, **anonymisation is different than pseudonymisation**, which falls under a distinct category in the GDPR - anonymisation theoretically destroys any way of identifying the data subject, while pseudonymisation allows for the data subject to be re-identified with additional information. Along these lines, the table which follows provides a **list of good practices** for the anonymisation of quantitative and qualitative data derived from the tour guide on data management of the Consortium of European Social Science Data Archives (CESSDA).

Table 4: Good practices for data anonymisation

Type of data	Good practices
Quantitative data	<ul style="list-style-type: none"> Remove or aggregate variables or reduce the precision or detailed textual meaning of a variable.

¹⁹ Retrieved from: <https://www.software.ac.uk/tags/zenodo>

²⁰ Retrieved from: <http://dx.doi.org/>

Type of data	Good practices
	<ul style="list-style-type: none"> Aggregate or reduce the precision of a variable such as age or place of residence. As a general rule, report the lowest level of geo-referencing that will not potentially breach respondent confidentiality. Generalise the meaning of a detailed text variable by replacing potentially disclosive free-text responses with more general text. Restrict the upper or lower ranges of a continuous variable to hide outliers if the values for certain individuals are unusual or atypical within the wider group researched.
Qualitative data	<ul style="list-style-type: none"> Use pseudonyms or generic descriptors to edit identifying information, rather than blanking-out that information. Plan anonymisation at the time of transcription or final write-up, (longitudinal studies may be an exception if relationships between waves of interviews need special attention for harmonised editing). Use pseudonyms or replacements that are consistent within the research team and throughout the project. For example, using the same pseudonyms in publications and follow-up research. Use 'search and replace' techniques carefully so that unintended changes are not made, and misspelt words are not missed. Identify replacements in text clearly, for example with [brackets] or using XML tags such as <seg>word to be anonymised</seg>. Create an anonymisation log (also known as a de-anonymisation key) of all replacements, aggregations or removals made and store such a log securely and separately from the anonymised data files.

Source: Tour guide on data management of the CESSDA²¹

With that in mind, the following table presents the data collected/generated during the course of the project that was made openly available. In case certain data could not be shared (or had to be shared under restrictions), a justification for that choice is provided.

Table 5: Data availability

No	Data	Availability	Notes
1	Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular bioeconomy governance	Closed	The raw data collected in order to generate the results of this activity is not publicly available because of data privacy and anonymity purposes.

²¹ Retrieved from: <https://www.cessda.eu/Research-Infrastructure/Training/Expert-Tour-Guide-on-Data-Management/5.-Protect/Anonymisation>

No	Data	Availability	Notes
2	Development of a Typology of Circular Bioeconomy Governance Models in European Regions	Open	N/A
3	Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy	Open	N/A
4	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Open	N/A
5	Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox	Open	Public deliverable D3.2
6	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Open	Data from the final interviews are not publicly available due to privacy concerns; only aggregated results have been shared.
7	Website and social media analytics	Closed	Website and social media analytics are available only to the ROBIN consortium and the EU Commission. When statistics were shared, data was aggregated and anonymised before being made openly available, while personal data was treated as expected by the GDPR.
8	Data collected from dissemination and communication actions	Closed	Data collected from dissemination and communication actions was available only to ROBIN consortium and the EU Commission. When needed to share information for dissemination and communication purposes, any personal information was anonymised before being made openly available.
9	Newsletter subscriptions	Closed	Data from newsletter subscriptions remained closed as it contained personal information

No	Data	Availability	Notes
			and was useful only for internal reporting purposes.

It is important to note that **all personal data collected / generated is considered as closed data prior to their anonymisation and aggregation** to safeguard the confidentiality of the data subjects.

2. Data accessibility and availability

Public access to the open data was made available and free of charge through Zenodo, which automatically links to OpenAIRE. The data is fully accessible thanks to the included metadata and the search facility available on Zenodo. At the same time, closed data was stored and shared amongst authorised members of the consortium through cloud storage and file sharing providers which constitute structures that maintain and manage data and made this data accessible over a network, usually the internet (i.e., Google Drive). Before starting using these cloud services from providers situated both inside and outside the EEA, we have ensured that they comply with the relevant GDPR requirements.

The following table presents where data has or will be made accessible in the context of ROBIN.

Table 6: Data accessibility

No	Data	Notes
1	Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular bioeconomy governance	Closed
2	Development of a Typology of Circular Bioeconomy Governance Models in European Regions	ROBIN website, Zenodo, Openair, AUGH's website (i.e., Laboratory of Geoinformatics website)
3	Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy	ROBIN website, Zenodo
4	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	ROBIN website, Zenodo, Openair, AUGH's website (i.e., Laboratory of Geoinformatics website)
5	Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox	Public deliverable D3.2, ROBIN Toolbox, Zenodo, ROBIN website

No	Data	Notes
6	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Zenodo, ROBIN website
7	Website and social media analytics	Closed
8	Data collected from dissemination and communication actions	Closed
9	Newsletter subscriptions	N/A (closed data)

3. *Restrictions on use*

By utilising Zenodo for sharing the project's openly available data, ROBIN applied **different levels of accessibility** for this data taking into account any relevant issues (such as ethical, rules of personal data, intellectual property, commercial, privacy-related, security-related, etc.).

More specifically, **Zenodo offers the following levels of data accessibility**:

- **Open access:** Data remains available for re-use. Nevertheless, the level at which this data can be re-used is determined also by their accompanied licence for re-use (see subsection 3.4.3).
- **Embargoed status:** Access to the data is restricted until the end of the embargo period, when the content will automatically become publicly available.
- **Restricted access:** The data is not made publicly available and sharing will be made possible only by the approval of the project partner that have the responsibility of the data.
- **Closed access:** The data is protected against unauthorized access at all levels and only members of the consortium have the right to access it.

Project partners mainly used the open access level to disseminate the project's data amongst the interested stakeholders. Data that was not available for re-use was accessible only by authorised partners of ROBIN's consortium and /or authorised personnel from the funding authority of the project.

Moreover, **ROBIN ensured open access to all peer-reviewed scientific publications** that were produced in the project's framework. In particular, according to the Grant Agreement:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication was deposited in a trusted repository for scientific publications;
- immediate open access was provided to the deposited publication via the repository, under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights; for monographs and other long-text formats, the licence may have excluded commercial uses and derivative works (e.g., CC BY-NC, CC BY-ND); and
- information was given via the repository about any research output, or any other tools and instruments needed to validate the conclusions of the scientific publication.

Beneficiaries (or authors) retained sufficient intellectual property rights to comply with the open access requirements.

4. Identity ascertainment and data access committee

The identity of stakeholders who want to access the data on Zenodo is not necessary to be ascertained, as the uploaded on Zenodo data is publicly open and no authorization is needed. On the other hand, closed for the public data is available only to authorized consortium partners through dedicated mechanisms provided by the cloud storage service employed by the respective partners in order to deposit the data. As further elaborated in Section 6 of this DMP, technical access controls were built into the ROBIN website and the ROBIN toolbox as well, in order to ascertain the identity and access rights of those who want to access the data.

The need for a data access committee to evaluate or approve access requests to personal data was not foreseen because only authorized partners had access to the project's closed data, accessible only by using their credentials (username/password), and no third-party reused them for their benefit.

3.2.3 Metadata

1. Availability and licences

Metadata of deposited publications generated in the context of ROBIN is **open under a Creative Common Public Domain Dedication (CC 0)** or equivalent, in line with the FAIR principles for data management adopted by the project (in particular machine-actionable). Such **metadata provides information, at least, about the following**:

- The publication at hand (author(s), title, date of publication, publication venue);
- Reference to the Horizon Europe funding;
- The name of the project, including its acronym and Grant Agreement number;
- Any particular licensing terms which may apply (depending on the chosen license);
- Persistent identifiers that have been attributed to the publication;
- Authors involved in the action, their organisations and the project itself.

Where applicable, the metadata also includes persistent identifiers for any research output or any other tools and instruments needed to validate the conclusions of the publication. The metadata is available through Zenodo. It is quite unlikely that Zenodo will terminate its operation and stop providing its services, but in such a case all data, metadata, code and documentation uploaded will be transferred and hosted to other suitable repositories without undue delay. In this respect, it is important to note that since all of ROBIN's openly available data made use of PIDs (i.e., DOIs), which is further elaborated in subsection 3.1.1, the links to the data are not affected. In parallel, the project's data that was not openly available for sharing was deposited, together with their accompanying metadata, code and documentation (if necessary), to the cloud web storage service employed by the project.

2. Methods, Software tools and documentation to access the data

ROBIN emphasised the accessibility of the data collected / generated during the project. With that in mind, no specialised method, software tool and / or documentation was expected to be

needed at the moment, in order to access the data. Stakeholders had the ability to access the data by simply using their web browser (e.g., Mozilla, Google Chrome, Internet Explorer, Safari, etc.) through their computers (either desktop or laptop), smartphones and/or tablets.

More specifically, they first need to access Zenodo through its webpage (following the link <https://zenodo.org/>) and utilise the search engine of the repository to search for interesting data. By typing the name of the project (or any other relevant keyword connected to the ROBIN data) the search engine directs the user to the project's data, ready to be explored and re-used. Moreover, since the data is available in open formats, we ensure that they can appropriately be read by a range of different softwares that are widely and freely accessible to all potential users of the data.

Closed data has been accessed only by authorised project partners through the usage of a cloud storage service. Again, no specialised method, software tool and / or documentation was needed to this end.

As it was further elaborated in subsection 3.2.1, if Zenodo terminates its operation and stops providing its services, in such a case all data, metadata, code and documentation uploaded will be transferred and hosted to other suitable repositories without undue delay.

Along these lines, this section has provided the methodology applied in the frame of ROBIN to ensure that its data is as openly accessible as possible by any stakeholder that may find them interesting for re-use. In this context, ROBIN also focuses on providing metadata standards and appropriate metadata vocabularies to increase data interoperability. The following section provides further details in this respect.

3.3 Making data interoperable

Data interoperability refers to the ability of systems and services that create, exchange and use data to have clear, shared expectations for the contents, context and meaning of that data²². With that in mind, ROBIN has adopted in its data management methodology the use of metadata vocabularies, standards and methods that increase the interoperability of the data collected/generated through its activities.

More specifically, **the interoperability of the publicly shared data is being facilitated by the use of the Dublin Core Metadata standard**. This standard is a small “metadata element set” which accounts for issues that must be resolved in order to ensure that data meets traditional standards for quality and consistency, while remaining broadly interoperable with other data sources in the linked data environment. The fifteen elements of the standard provide a vocabulary of concepts with natural-language definitions (e.g., title, creator, author, etc.) that are instantly converted into open machine-readable formats (such as XML, HTML, etc.), enabling machine-processability. Each element is optional and may be repeated, while the standard itself offers ways for refining them, encouraging the use of encoding and

²² L. Steele & T. Orrell (2017). The frontiers of data interoperability for sustainable development. Publish What You Fund and Development Initiatives

vocabulary schemes. The vocabulary of the Dublin Core Metadata standard is presented in the following table²³:

Table 7: Dublin Core Metadata standard vocabulary

No	Element	Element definition
1	Title	A name given to the resource.
2	Creator	An entity primarily responsible for making the content of the resource.
3	Subject	The topic of the content of the resource.
4	Description	An account of the content of the resource.
5	Publisher	An entity responsible for making the resource available.
6	Contributor	An entity responsible for making contributions to the content of the resource.
7	Date	A date associated with an event in the life cycle of the resource
8	Type	The nature or genre of the content of the resource.
9	Format	The physical or digital manifestation of the resource.
10	Identifier	An unambiguous reference to the resource within a given context.
11	Source	A reference to a resource from which the present resource is derived.
12	Language	A language of the intellectual content of the resource.
13	Relation	A reference to a related resource.
14	Coverage	The extent or scope of the content of the resource.
15	Rights	Information about rights held in and over the resource.

Along similar lines, the interoperability of openly available data is facilitated through **Zenodo**, which adopts community- endorsed practices, since its metadata is stored internally in JSON format according to a defined JSON schema. This encloses HTML microdata that allows machine-readable data to be embedded in HTML documents in the form of nested groups of name-value pairs. Moreover, the JSON schema provides a collection of shared

²³ Sugimoto, S., Baker, T., & Weibel, S. L. (2002). Dublin Core: Process and Principles. Lecture Notes in Computer Science Digital Libraries: People, Knowledge, and Technology, 25-35.

vocabularies in microdata format that can be used to mark-up pages in ways that can be understood by major search engines.

ROBIN's data offer qualified references to other data. A qualified reference is a cross-reference that explains its intent. For example, X is regulator of Y is a much more qualified reference than X is associated with Y, or X see also Y. Our goal is to create as many meaningful links as possible between (meta)data resources to enrich the contextual knowledge about the data, balanced against the time/energy involved in making a good data model. To be more concrete, our references specify if one dataset builds on another data set, if additional datasets are needed to complete the data, or if complementary information is stored in a different dataset. The links between the datasets are also described and, all datasets are properly cited, including their persistent identifiers.

3.4 Increase data re-use

3.4.1 Documentation for validating data analysis and facilitating data re-use

By utilising Zenodo for sharing the project's openly available data, ROBIN ensured the facilitation of data access, validation and re-use, in compliance with the general policies of Zenodo regarding content, access and reuse. More specifically, the following principles are followed by Zenodo to make data re-useable according to the FAIR principles²⁴:

- R1: (meta)data is richly described with a plurality of accurate and relevant attributes
Each record contains a minimum of DataCite's mandatory terms, with optionally additional DataCite recommended terms and Zenodo's enrichments.
- R1.1: (meta)data is released with a clear and accessible data usage license
License is one of the mandatory terms in Zenodo's metadata, and is referring to an Open Definition license. Data downloaded by the users is subject to the license specified in the metadata by the uploader.
- R1.2: (meta)data is associated with detailed provenance
All data and metadata uploaded is traceable to a registered Zenodo user. Metadata can optionally describe the original authors of the published work.
- R1.3: (meta)data meet domain-relevant community standards
Zenodo is not a domain-specific repository, yet through compliance with DataCite's Metadata Schema, metadata meets one of the broadest cross-domain standards available.

²⁴ Retrieved from: <https://about.zenodo.org/principles/>

3.4.2 License schemes to permit the widest use possible

Data is being made freely available in the public domain to permit the widest re-use possible. Moreover, the application of a licence to ROBIN's open data is a simple way to ensure that any interested third-party can re-use it. In this context, licences are the instrument which permit a third-party to copy, distribute, display and/or modify the project's data only for the purposes that are set by the licence. Licences typically grant permissions on the condition that certain terms are met. While the precise details vary, three conditions are commonly found in licences, which are the attribution, non-derivative, and non-commerciality.

Along these lines, ROBIN published openly available data under the **Creative Commons licencing scheme** to foster their re-use and build an equitable and accessible environment for them. Through Zenodo, ROBIN published its open data under five Creative Common licences as follows:

- **Creative commons Attribution-Share Alike 4.0 (CC BY-SA 4.0)** according to which any third party can freely copy, distribute, display and modify the datasets for any purpose. Remix, transform, or built upon data, must be distributed under the same license as the original. Third parties must give appropriate credit, provide a link to the license, and indicate if changes were made.
- **Creative Commons Attribution 4.0 International (CC BY 4.0)** according to which any third party can freely copy, distribute, display and modify the datasets for any purpose. Third parties must give appropriate credit, provide a link to the license, and indicate if changes were made.
- **Creative Commons Attribution-No Derivatives 4.0 International (CC BY-ND 4.0)** during which any third party can freely copy, distribute, display and modify the datasets for any purpose. Remix, transform, or built upon data, however, must not be distributed. Third parties must give appropriate credit, provide a link to the license, and indicate if changes were made.
- **Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0)** based on which third parties can copy, distribute, display and modify the datasets for any purpose other than commercial unless they get a permission by project partners first. Third parties must give appropriate credit, provide a link to the license, and indicate if changes were made.
- **Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0)** according to which third parties can copy, distribute, display and modify the datasets for any purpose other than commercial unless they get a permission by project

Figure 2: CC BY-SA 4.0



Figure 3: CC BY 4.0



Figure 4: CC BY-ND 4.0

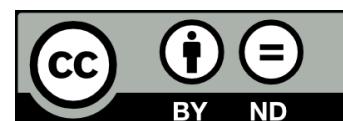


Figure 5: CC BY-NC 4.0



Figure 6: CC BY-NC-ND 4.0



partners first. Remix, transform, or built upon data, however, must not be distributed. Third parties must give appropriate credit, provide a link to the license, and indicate if changes were made.

Different licensing schemes may be selected to better fit the need of ROBIN's open data ensuring not only their long-term preservation and re-use but also the interests of the consortium along with the rights of individuals for whom the data is about. In such a case, this subsection of the DMP will be updated accordingly.

3.4.3 Availability for re-use

The re-use of data is a key component of ROBIN's methodology for making data FAIR. In fact, making data available for re-use ensures interested stakeholders, other than project partners, can benefit from this data, contributing towards maximising the impact of the project. **Rich metadata** created based on metadata standards that enable proper discovery as well as **appropriate licensing schemes facilitate the re-use of ROBIN's open data**, allowing them to find valuable utility even after the end of ROBIN project.

In principle, data became available for re-use no later than 120 days after the end of its processing in the framework of the project (i.e., collection, anonymisation, aggregation, etc.) to ensure that any additional data management activities required to this end do not compete with the timely delivery of the project's planned outputs.

With that in mind, the approximate time that ROBIN's data were made openly accessible and uploaded to Zenodo is indicatively provided in the following table:

Table 8: Expected time that data will be made open through Zenodo

No	Data	Time when the data were made openly available	Notes
1	Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular bioeconomy governance	N/A	N/A
2	Development of a Typology of Circular Bioeconomy Governance Models in European Regions	March 2024 (M19)	Upon approval by the EC (Review meeting)
3	Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy	March 2024 (M19)	Upon approval by the EC (Review meeting)
4	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	March 2024 (M19)	Upon approval by the EC (Review meeting)

No	Data	Time when the data were made openly available	Notes
5	Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox	30/04/2025	M32
6	Monitoring and assessment of the project's outcomes, impacts and perceptions change	30/04/2025	M32
7	Website and social media analytics	N/A	N/A
8	Data collected from dissemination and communication actions	N/A	N/A
9	Newsletter subscriptions	N/A	N/A

3.4.4 Data provenance

Data provenance is the documentation of where a piece of data comes from and the processes and methodology by which it was produced. Put simply, provenance answers the questions of why and how the data was produced, as well as where, when and by whom²⁵. Accurately recording data provenance is a cornerstone of good data management. ROBIN used specific elements of the **Dublin Core Metadata Standards**²⁶ and the **W3C Provenance Data Model**²⁷, to generate specific text files (e.g., README) that accurately capture the history of each data entity throughout its versions (e.g., based on the DOI versioning Zenodo provides)²⁸.

3.4.5 Data quality assurance processes

Quality Assurance (QA) and **Quality Control** (QC) activities were an integral part of ROBIN's data management methodology and are implemented prior to the publication of any data to Zenodo, safeguarding the transparency, consistency, comparability, completeness and accuracy of the data.

²⁵ <https://ardc.edu.au/resource/data-provenance/>

²⁶ https://www.dublincore.org/resources/userguide/creating_metadata/%23Provenance
<https://www.dublincore.org/resources/metadata-basics/>

²⁷ <https://www.w3.org/TR/prov-dm/>

²⁸ <https://help.zenodo.org/>

QA is a planned system of review procedures conducted outside the framework of developing a dataset, by personnel not directly involved in the dataset development process²⁹. In the context of ROBIN, it takes the form of **peer-reviews of methods and/or data summaries** to assess the quality of the dataset and identify any need for improvement, ensuring that the dataset correctly incorporates the scientific knowledge and data generated.

QC is defined as a system of checks to assess and maintain the quality of the dataset being compiled³⁰. The relevant procedures of ROBIN were designed to provide routine technical checks as they measure and control data consistency, integrity, correctness and completeness as well as identify and address errors and omissions. In this context, QC checks cover everything from data acquisition and handling, application of approved procedures and methods, and documentation. Some of the general quality checks that were undertaken in the framework of the project included checking (i) for transcription errors in data input; (ii) that scale measures were within the range of acceptable values; and (iii) whether proper naming conventions were used.

4. Other research outputs

At the moment of elaborating the Final version of ROBIN’s Data Management Plan, no other research outputs have been identified and are expected to be generated or re-used in the context of the project.

5. Allocation of resources

5.1 Estimated costs for making data FAIR

The costs required for making the data collected/generated during ROBIN’s activities FAIR are integrated into the budget of the project. Table 9 provides an overview of the estimated costs of making data FAIR as well as their budget source within the framework of ROBIN.

Table 9: Estimated costs for making data FAIR

No	Data Processing / Management Activity	Budget source	Total estimated effort in Person Months ³¹	Total cost in Euro ³²
1	Collection	Budget allocated to the WP under which the respective data is processed	16.70	85,744.48 €
2	Documentation	Budget allocated to the WP under which the respective data was processed	4.10	21,051,04 €

No	Data Processing / Management Activity	Budget source	Total estimated effort in Person Months ³¹	Total cost in Euro ³²
3	Storage	Budget allocated to the WP under which the respective data is processed	2.05	10,525.52 €
4	Access and security	Budget allocated to the WP under which the respective data is processed	2.05	10,525.52 €
5	Preservation	Budget allocated to the WP under which the respective data is processed	1.00	5,134.40 €
6	Overall data management	WP6	3.80	19,510.72 €
			Total	152,491.70 €

In order to produce the approximate costs for making data FAIR in the context of ROBIN, a series of **assumptions** were made, taking into account the respective **guidelines** provided by the Research Data Management Support, a multidisciplinary network of data experts within Utrecht University³³, as well as of the UK Data Service and its data management costing tool³⁴. With that in mind, the costs for making ROBIN's data FAIR covered **data-related activities and resources across the data lifecycle**, spanning from collection and documentation through storage and preservation over to sharing and re-use.

In particular, costs for **data collection** covered activities necessary for gathering/generating new data, transcribing, formatting and organising this data as well as acquiring informed consent from data subjects. This data processing activity reflects the majority of the costs required for making data FAIR as the majority of ROBIN's data constitutes new data collected/generated over the course of the project. At the same time, **data documentation**

²⁹ 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol. 1 General Guidance and Reporting, CHAPTER 6 Quality Assurance / Quality Control and Verification.

³⁰ 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol. 1 General Guidance and Reporting, CHAPTER 6 Quality Assurance / Quality Control and Verification.

³¹ The total estimated effort for each data processing / management activity reflects the cumulative effort for the implementation of the respective activity for all data collected / generated across the different WPs of ROBIN.

³² The total cost of each data processing / management activity is calculated by multiplying the effort for the respective activity with the weighted average cost of a person month in the framework of ROBIN.

³³ Research Data Management Support. Guides: Costs of data management. Utrecht University.

Retrieved from: <https://www.uu.nl/en/research/research-data-management/guides/costs-of-data-management>

³⁴ UK Data Service. Costing Data Management. Retrieved from: <https://www.ukdataservice.ac.uk/manage-data/plan/costing>

costs address the effort required for describing data (e.g., marking data with variable and value labels, code descriptions, etc.) as well as creating well-defined metadata along with a meaningful description of the context and methodology of how data was collected/generated and processed (where necessary).

Costs for **data storage** included the resources required for ensuring adequate storage space for the data as well as the effort necessary for conducting data back-ups, while **data access and security** costs encompassed costs related to ensuring access to the data as well as for protecting it from unauthorised access or use or from disclosure. Given that the storage of ROBIN's data did not require the procurement of additional space (other than what was already available to project partners) as well as that no special measures or software were required to access and secure the data (other than what was inherently built in to the repositories of ROBIN's data), such costs were kept to a minimum.

Data preservation costs, on the other hand, were estimated relatively higher than data storage, access and security costs, as additional effort was required in several cases in order to convert the collected/generated data from their original form (e.g., physical interview transcripts) to an open and/or machine-readable format suitable for long-term preservation (e.g., to an .xlsx format.). Along the same lines, appropriate effort was needed for **the overall data management** as well, in order to cover the effort related with the operationalisation of data management in the framework of ROBIN.

Finally, costs for **long-term preservation** in the framework of ROBIN were negligible, since the open data of the project is hosted in the repository of Zenodo free of charge.

5.2 Data management responsibilities

For the effective, proper and secure handling of the data collected/generated in the frame of ROBIN, specific data management roles have been established within the data management methodology and procedures of the project. These responsibilities were outlined in this section of the DMP and are as follows.

Project Coordinator (PC): The PC, QPL, was responsible for overall data management in the framework of ROBIN, including the elaboration of the DMP and its updates (when necessary along with the support of all partners). At the same time, the PC was responsible for the elaboration of proper templates for the Informed Consent Form and the Data Subject Request Form to be appropriately adjusted and utilised by project partners during the relevant activities of the project as well as for drafting the project's Privacy Policy that has been uploaded on the project's website. The PC, in collaboration with the relevant project partners (e.g., Task Leaders), examined if additional specific privacy policies were required for certain project tasks and coordinates the elaboration of such privacy policies. Finally, the PC coordinated with Work Package Leaders, Task Leaders and Responsible Partners to determine whether and how the data collected / generated or re-used by the project are shared and become available for re-use, contributes to its quality assurance and uploads the project's openly available data to Zenodo.

Work Package Leaders (WPL): The WPL was responsible for coordinating the implementation of the data processing activities performed under the WPs they were leading. Moreover, they aligned with the PC and the respective Work Task Leader on whether and how the data gathered/produced under the tasks that fell within the WP they were leading was

shared and/or re-used. This includes the definition of access procedures as well as potential embargo periods along with any necessary software and/or other tools which may be required for data sharing and re-use. Finally, the WPL were the main responsible for assuring the quality of the data stemming from the activities of the WP they are leading, including assessing their quality and indicating any need for improvement to the respective Work Task Leaders.

Work Task Leaders (WTL): WTLs were responsible for the data collected / generated or re-used in the frame of the tasks that fall under their leadership as well as for safeguarding their appropriate and timely processing. Moreover, they were responsible for properly adjusting the Informed Consent Form and Data Subject Request Form templates, to the needs and specificities of the activities carried out in the task they were leading. WTLs were responsible for identifying the need for a specific privacy policy regarding the task they were leading and collaborated with the PC for drafting and releasing it to the public. Finally, they undertook any necessary actions to prepare the data collected / generated or re-used through the tasks they were leading for sharing either within the consortium or openly (including the use of proper naming conventions, application of suitable anonymisation techniques, creation of appropriate metadata and documentation, etc.).

Partners: All project partners were tasked to collect, digitise, anonymise, store, destroy and / or otherwise process data for the specific purpose of the activity in which it has been collected / generated or re-used within the project. They were responsible for appropriately collecting the necessary consent for processing data as well as for ensuring that the Informed Consent Form and the Data Subject Request Form used to this end were properly adjusted to the needs of the activity they were participating (including references to the project's Privacy Policy and any other applicable specific privacy policies) and, in any particularities, applicable to their organisation while ensuring adherence to provisions of relevant national data protection legislation in their respective country. Moreover, they were responsible for managing the consents they have collected with a view to demonstrating their compliance with the relevant applicable EU and national regulation(s). Finally, they performed quality checks to assess and maintain the quality of the dataset(s) held within their records.

Data repositories: Data repositories were tasked with the storage and long-term preservation of the project's data. In this respect, Zenodo maintains and preserves the openly available data of ROBIN, enabling its sharing and re-use. To this end, Zenodo assigns metadata and DOIs to the data, while also taking all necessary measures to securely back-up the data and restore it, safeguarding its long-term preservation.

In this context, the following table illustrates the allocation of data management responsibilities amongst the members of the ROBIN consortium per data collected/generated or re-used under each WP.

Table 10: Data management responsibilities of ROBIN's partners per data collected/generated under each WP

WP	WPL	Data	Tasks	WTL	Responsible Partners
WP1	AUTh	Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular bioeconomy governance	Task 1.1	WR	All
		Development of a Typology of Circular Bioeconomy Governance Models in European Regions	Task 1.2	AUTh	All
		Identification of good practices and analysis of case studies of supporting local operators and innovation developers in the Circular Bioeconomy	Task 1.3	MTU	All
		Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Task 1.4	AUTh	All
WP3	QPL assumed leadership from BPRO after Amendment No. AMD-101060504-13	Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox	Task 3.3	S2I assumed leadership from BPRO after Amendment No. AMD-101060504-13	All
WP4	PED	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Task 4.1	PED	QPL, CTA, WR, S2I, ZSK, MTU, AUTh, RCM, CAP, IFA and SRA
WP5	WR	Monitoring and assessment of the dissemination, communication and stakeholder engagement activities	Task 5.1	WR	All

6. Data security

ROBIN securely handled any collected / generated or re-used data throughout its entire lifecycle as it is essential to safeguard this data against accidental loss and / or unauthorised access. To achieve this the project applied appropriate technical and organisational measures

based on a risk assessment of the relevant data that takes into account the impact and the likelihood of a potential data breach. With that in mind, the project's data security strategy aimed at minimizing the probability that a data breach would occur during the course and after the completion of ROBIN, resulting either from human error or hardware failure, as well as inhibit any unauthorised access. Particularly, in case of personal data collection / generation it was crucial that this data **could only be accessible by those authorised to do so**.

All project partners were responsible for processing³⁵ data using appropriate means, such as private servers or cloud service providers that adhere to the relevant legal data protection requirements (e.g., GDPR) and ensured that this **data was protected**, and any **necessary data security controls have been implemented**, to minimize the risk of information leak and destruction. This case refers to the data that was closed and therefore was not shared and / or re-used within the framework of the project. In this case, to minimize the consequences of potential data losses, the data was **backed up at regular time intervals based on change frequency and criticality**. The backed-up files were stored in appropriate storage media including **external hard drives, flash drives, NAS devices and reputable cloud services**, so as to safeguard their preservation, while also enabling their recovery at any time. Moreover, **integrity checks**³⁶ were carried out regularly ensuring that the stored data has not been changed or corrupted. In addition, the ROBIN Toolbox is hosted on the secure web infrastructure of AUTH, which is responsible for its server management and security. The platform employs SSL/TLS encryption and HTTPS to ensure secure communication. AUTH's infrastructure follows institutional cybersecurity protocols, including regular updates, firewall protection, access logging, and system-level access controls, helping ensure service integrity, uptime, and restricted access.

Access to closed data was limited exclusively to authorised project partners. In accordance with the agreed procedure among the consortium partners, any personal data breach required the responsible project partner to promptly **notify the relevant national supervisory authority** (e.g., data protection authority) **and any affected data subject(s), without undue delay and, where feasible, within 72 hours of becoming aware of the breach**. The responsible partner was also required to **document all such breaches**, detailing the relevant facts, their impact, and the corrective measures taken.

Identification and authentication access controls played an important role in the context of the project, as they helped partners protect the data collected / generated or re-used during ROBIN and especially personal data. To this end, each project partner was responsible for and committed to ensuring the application of appropriate access controls to the data they were processing. At the same time, **technical access controls were built into the ROBIN website**

³⁵ Processing, according to Regulation (EU) 2016/679 of the European Parliament (General Data Protection Regulation), means any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction.

³⁶ An integrity check is the process of comparing the current state of stored data and/or programs to a previously recorded state in order to detect any changes.

through a dedicated username and password for WordPress platform that was managed exclusively by WR. The ROBIN Toolbox implements its technical access controls through its underlying WordPress platform, which includes built-in user authentication and role-based permission settings. Access is centrally managed by partner AUGH, who is solely responsible for administering user accounts and assigning access rights. Clear roles were defined within the system to ensure that only authorised personnel can view, modify, or manage the data stored on the platform. These controls help maintain data confidentiality and integrity by restricting access to sensitive information based on predefined responsibilities. Each project partner was provided with unique accounts containing one or more roles assigned to them and, at the same time, enforcing role-based security when its staff processes the project's data. These accounts were username / password protected, maximising access control.

Data Management Approach and Types of Data Collected: In the context of project implementation, personal data were collected both directly and indirectly in accordance with GDPR principles and project-specific ethical guidelines. Direct data collection occurred through mechanisms such as event registrations, newsletter subscriptions, participation in surveys and interviews, and during professional collaboration. The types of personal data collected were limited to what was necessary for conducting research, stakeholder engagement, and project dissemination activities. These included contact details (e.g., name, email, phone number), professional information (e.g., job title, organization), demographics (e.g., age, gender, nationality), and contextual information related to participants' knowledge or beliefs. Additionally, audiovisual materials such as photos and videos were collected during events, with appropriate consent where required.

Finally, in order to safeguard the privacy of the users of the ROBIN website and the ROBIN toolbox, dedicated **privacy policies** defined the way in which these online spaces collected, processed and used personal data, the security procedures followed, the users' rights as well as the cookies policy³⁷ employed. All data processing activities were carried out based on lawful grounds, including compliance with legal obligations, fulfilment of contractual duties under the Horizon Europe framework, and informed consent for specific tasks like surveys and interviews. A comprehensive risk assessment framework was applied to identify and mitigate potential threats to personal data. Technical and organisational safeguards included role-based access controls, non-disclosure agreements, secure data storage systems, anti-malware protection, and regular data backups. Personal data were only shared with trusted third parties under strict contractual safeguards.

On another note, openly available data was stored safely for long-term preservation on Zenodo, in the same cloud infrastructure as research data from CERN's Large Hadron Collider, using CERN's battle-tested repository software INVENIO, which is used by some of the world's largest repositories (such as INSPIRE HEP and the CERN Document Server). Along these lines, data is stored and backed-up in CERN's EOS service in an 18 petabytes disk cluster. Both data files and metadata is kept in multiple online replicas and independent replicas, ensuring their long-term preservation as well as their recovery when necessary.

³⁷ <https://robintoolbox.web.auth.gr/index.php/privacy-and-cookies-policy/>

Moreover, for each file, two independent MD5 checksums are stored. One checksum is stored by INVENIO, used to detect changes to files made from outside of it whereas the other checksum is stored by EOS, and used for automatic detection and recovery of file corruption on disks. In this context, access control is applied by the different level of openness that Zenodo allows (i.e., open, restricted and closed).

7. Ethics and other issues

This Section addresses the ethical aspects of the ROBIN's Data Management Plan and the ethical compliance of the underlying data foreseen collected / generated or re-used under the project's activities. The project processed data that was not included in any special category of personal data (i.e., non-sensitive data) according to the relevant data protection legislation (e.g., GDPR). In accordance with the **Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (GDPR)**, all personal data processed for project's activities shall be:

- processed lawfully, fairly and in a transparent manner in relation to the data subject;
- collected for specified, explicit and legitimate purposes relative to project's objectives and not further processed in a manner that is incompatible with those purposes;
- adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed;
- accurate and, where necessary, kept up to date;
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data is processed;
- processed in a manner that ensures appropriate security of the personal data (see section 6).

For all personal data processing activities within the framework of the project at least one lawful basis as of Art. 6 GDPR applies. Where informed consent is chosen as the lawful basis for processing, all relevant provisions of the data protection legislation (e.g., Art.7 GDPR) are observed. Under this light, further details about the **scope of the activities that entail data collection/generation or re-use** in the frame of ROBIN along with the procedures for identifying/recruiting suitable stakeholders to take part in them as well as for obtaining their informed consent were defined by the respective WP Leaders (AUTH for WP1, CTA for WP2, QPL for WP3, PED for WP4, WR for WP5, QPL for WP6). Moreover, **personal data processing carried out by partners was in line with relevant EU and national regulations**. The project's Privacy Policy and the templates of the Informed Consent Form and the Data Subject Request Form, used in the implementation of the project's activities, were compliant with the General Data Protection Regulation and annexed to this DMP (see Annexes). Last but not least, **no transfer of personal data outside the EU was foreseen as part of the project's implementation**. In the case of data storage providers situated both inside and outside the EEA, partners were committed to ensure their compliance with the relevant GDPR requirements before they started using their services.

It is important to highlight that **each partner was responsible for ensuring that the templates for the Informed Consent Form and Subject Data Request Form (including references to the project's Privacy Policy and any other applicable specific privacy**

policies) were appropriately adjusted according to (i) the needs of the activity for which they were being used by them as well as to (ii) the relevant data protection laws and regulations applicable to their respective countries and / or organisation. **All partners kept records to demonstrate that data subjects have consented to the processing of their personal data** and used consent management mechanisms that made it easy for individuals to withdraw their consent.

Finally, regarding **other national/ funder/ sectoral/ departmental procedures for data management** in the framework of ROBIN, the following can be included:

- **AUTh:** According to the Regulation of Principles and Operation of the Research Ethics Committee of AUTh, every research proposal or project, before its implementation, has to be approved by the Research Ethics Committee. In the case of ROBIN and according to the decision No 151204/2022, when AUTh performed data collection including the participation of individuals, the survey (i.e., questionnaires, data collection form etc) along with the informed consent form had to be submitted to the Research Ethics Committee for review and approval before its implementation.

Upon the end of the project, apart from the aforementioned, **no other national/ funder/ sectoral/ departmental procedures for data management were used in the framework of ROBIN.**

8. Conclusions

This final version of the ROBIN DMP safeguards the sound management of the data collected, processed, and/or generated during the project's activities across its entire lifecycle while also making the data FAIR. It describes all the underlying processes of the ROBIN data management (collection, process and generation) in accordance with the GDPR guidelines and sheds light on (i) the data being collected, processed, generated and/or re-used under the project activities, (ii) the specific objectives under which each dataset is collected, processed, generated and/or re-used, (iii) the management of the other research outputs of the project (iv) the allocation of resources and data management responsibilities and (v) the data security and ethical aspects of the data.

Within the framework of ROBIN, the Data Management Plan (DMP) was treated as a living document and regularly updated to reflect the project's evolving needs, developments, and outcomes. The initial version (D6.2) was delivered at M6 and subsequently updated at M18 in the interim version (D6.3). This final deliverable builds on and enhances the previous versions, presenting an accurate, current, and comprehensive strategy for managing all data collected, generated, or reused throughout the project's lifecycle—including data expected to be gathered after the conclusion of ROBIN. Where necessary, additional ad hoc updates were also made to incorporate new data, provide greater detail, or reflect changes in applied methodologies and other relevant aspects of data management—such as FAIR data costs, data volume, updates to consortium policies, or other external influencing factors.

Annexes

Annex I – Privacy Policy

PRIVACY POLICY

1. Who we are:

ROBIN is a project funded by the European Union's Framework Programme for Research and Innovation Horizon Europe. ROBIN sets out to empower Europe's regional authorities (in 5 European Regions within Ireland, Germany, Spain, Slovakia and Greece) to fulfil their role as agents of just, inclusive and resilient economic development for their territories. The project provides support to co-shape their governance structures and models in ways that accelerate the deployment of their circular bioeconomy targets, while also promoting social innovation and accounting for different territorial contexts. To this end, it sets-up Multi-Actor Regional Constellations engaging key quadruple helix stakeholders to co-create and work alongside novel governance structures, mandated to coordinate and execute circular bioeconomy strategies in coordination with the Circular Cities and Regions Initiatives Coordination and Support Office. The project provides them with tailored support for enhanced and more inclusive stakeholder engagement, as well as a practical toolbox to improve the design, operation and monitoring of their governance models.

The partners of the ROBIN consortium, listed below, process certain types of personal data for the purposes of the project. Each partner is responsible for the personal data they collect and process during their activities under the framework of the project:

- Q-PLAN INTERNATIONAL ADVISORS PC, Greece (Coordinator), <https://qplan-intl.gr/>
- FUNDACION CORPORACION TECNOLOGICA DE ANDALUCIA, Spain, <http://www.corporaciontecnologica.com/en/>
- WHITE RESEARCH SPRL, Belgium, www.white-research.eu
- PEDAL CONSULTING SRO, Slovakia, www.pedal-consulting.eu
- STEINBEIS 2I GMBH, Germany, www.steinbeis-europa.de
- ROZVOJOVA AGENTURA ZILINSKEHO SAMOSPRAVNEHO KRAJA NO, Slovakia, <https://razsk.sk/>
- MUNSTER TECHNOLOGICAL UNIVERSITY, Ireland, www.circbio.ie
- ARISTOTELIO PANEPISTIMIO THESSALONIKIS, Greece, www.auth.gr
- REGION OF CENTRAL MACEDONIA, Greece, www.pkm.gov.gr

- CONSEJERÍA DE AGRICULTURA, PESCA, AGUA Y DESARROLLO RURAL, Spain,
<https://juntadeandalucia.es/organismos/agriculturapescaaguaydesarrollorural.html>
- INSTITUTO ANDALUZ DE INVESTIGACIONES Y FORMACIÓN AGRARIA PESQUERA ALIMENTARIA Y DE LA PRODUCCIÓN ECOLOGICA, Spain,
<https://ifapa.junta-andalucia.es/agriculturapesca/ifapa/web/>
- SOUTHERN REGIONAL ASSEMBLY, Ireland, www.southernassembly.ie

For further information, we can be contacted at: info@robin-project.eu

2. How we collect your personal data

We collect personal data both directly and indirectly:

Directly. We obtain personal data directly from individuals in a variety of ways, including but not limited to the following cases:

- an individual subscribes to our newsletter/s;
- an individual registers to attend meetings and events we host and during attendance at such events;
- we establish cooperative relationships with an individual;
- we provide professional services pursuant to our contract with the European Commission;
- an individual participates in an interview or survey organized by us.

Indirectly. We obtain personal data indirectly about individuals from a variety of sources, including:

- our research partners;
- our networks and contacts;
- public and open data sources such as public registers, news articles and internet searches;
- social and professional networking sites (e.g., LinkedIn).

3. What types of data we collect?

We only collect the data that are necessary for the smooth implementation of our project. This data fall into the following categories:

- **contact details** (name/ surname, e-mail address, street address, mobile phone number, land line phone number);
- **professional information** (job title, organization, field of expertise);
- **demographics** (e.g., age, gender, nationality);
- **information about what a person knows or believes**.
- **videos and photos** (from people that attend our events).

4. Bases of lawful processing

We process personal data on the following legal bases:

Legal obligations - for processing activities required for compliance both with applicable national and European legislation as well as with the specific legal and regulatory framework of the Horizon Europe Framework Programme for Research and Innovation of the European Union.

Consent – for processing activities such as organization of surveys and interviews, completing of questionnaires and dissemination of project's results.

Contractual obligations - for processing activities such as reporting to the European Commission and complying with project's publicity obligations.

5. What we do with your personal data

We process your personal data with the purpose of:

- Conducting research (e.g., interviews, surveys);
- Dissemination our project's results to different types of stakeholder;
- Sending invitations and providing access to guests attending our events and webinars;
- Administering, maintaining, and ensuring the security of our information systems, applications, and websites;
- Processing online requests or queries, including responding to communications from individuals;
- Complying with contractual, legal, and regulatory obligations.

6. How we secure your personal data when we process it

We continuously apply a personal data risk assessment process to identify, analyse, and evaluate the security risks that may threaten your personal data. Based on the results of this risk assessment, we define and apply a set of both technical and organizational measures to mitigate the above security risks, including but not limited to:

- Data Protection Policies to guide our personnel when processing your data;
- Written contracts with organizations that process personal data on our behalf;
- Non-Disclosure Agreements with our personnel;
- Back up process, antimalware protection, access control mechanisms, etc.
- Some of our partners have appointed a Data Protection Officer.

7. Do we share personal data with third parties?

We may occasionally share personal data with trusted third parties to help us deliver efficient and quality services. When we do so, we ensure that recipients are contractually bound to

safeguard the data we entrust to them before we share the data. We may engage with several or all the following categories of recipients:

- Parties that support us as we provide our services (e.g., cloud-based software services such as Dropbox, Microsoft SharePoint, Google);
- Our professional advisers, including lawyers, auditors, and insurers;
- Dissemination services providers (e.g., MailChimp);
- Law enforcement or other government and regulatory agencies or other third parties as required by, and in accordance with applicable law or regulation;
- The European Commission according to our relevant contractual obligations.

8. Do we transfer your personal data outside the European Economic Area?

We do not own file servers located outside the European Economic Area (EEA). However, some partners may use cloud and / or marketing services from reputable providers such as SharePoint, DropBox, MailChimp, Google, etc., situated both inside and outside the EEA. We always check that such providers comply with the relevant GDPR requirements before start using their services.

9. Do we use cookies?

Our websites use cookies. Where cookies are used, a statement will be sent to your browser explaining the use of cookies.

Cookies are small text files which are saved on your computer, mobile phone or tablet. They allow the website to remember your actions and preferences (such as login, language, font size and other display preferences) so you don't have to keep re-entering them whenever you come back to the site. You can control and/ or delete cookies as you wish. If you do this, however, you may need to manually adjust your preferences every time you visit a site. For more information on how to manage cookies, please visit: <http://www.aboutcookies.org/>

We use tools like Google Analytics to better understand how visitors interact with our website. This provides us with important information to enable the site to work better. The information collected is not linked to your personal data. For more information on the cookies set by Google Analytics, please visit: <http://code.google.com/apis/analytics/docs/concepts/gaConceptsCookies.html>

The following cookies are necessary and are always enabled:

Name	Typical content	Cookie expires after
__cf_bm	The cookie is set by cloudflare. This cookie is used to distinguish between humans and bots. This is beneficial for the website, in order to make valid reports on the use of their website.	30 minutes

Name	Typical content	Cookie expires after
cookielaawinfo-checkbox-analytics	This cookie is set by GDPR Cookie Consent plugin. The cookie is used to store the user consent for the cookies in the category “Analytics”.	11 months
cookielaawinfo-checkbox-functional	The cookie is set by GDPR cookie consent to record the user consent for the cookies in the category “Functional”.	11 months
cookielaawinfo-checkbox-necessary	This cookie is set by GDPR Cookie Consent plugin. The cookies is used to store the user consent for the cookies in the category “Necessary”.	11 months
CookieLawInfoConsent	This cookie is set by GDPR Cookie Consent plugin. The cookie records the default button state of the corresponding category along with the status of CCPA.	11 months
viewed_cookie_policy	The cookie is set by the GDPR Cookie Consent plugin and is used to store whether or not user has consented to the use of cookies. It does not store any personal data.	11 months

The following cookies are functional and are always enabled:

Name	Typical content	Cookie expires after
wordpress_sec_COOKIEHASH	This cookie is set by wordpress. The cookie is set to provide protection against hackers, store account details.	session

The following cookies are for analytics and are optional:

Name	Typical content	Cookie expires after
ga*	This cookie is set by Google Analytics. This cookie is used to store and count pageviews.	2 years
_gat	Used to throttle request rate	1 minute
_ga	This cookie is set by Google Analytics. This cookie is used to distinguish users.	2 years

10. Your rights

You have the following rights regarding our processing of your personal data:

- **Right to withdraw consent** – You can withdraw consent that you have previously given to one or more specified purposes to process your personal data. This will not affect the lawfulness of any processing carried out before you withdraw your consent.
- **Right of access** – You can ask us to verify whether we are processing personal data about you and, if so, to have access to a copy of such data.
- **Right to rectification and erasure** – You can ask us to correct our records if you believe they contain incorrect or incomplete information about you or ask us to erase your personal data after you withdraw your consent to processing or when we no longer need it for the purpose it was originally collected.
- **Right to restriction of processing** – You can ask us to temporarily restrict our processing of your personal data if you contest the accuracy of your personal data, prefer to restrict its use rather than having us erase it, or need us to preserve it for you to establish, exercise or defend a legal claim. A temporary restriction may apply while verifying whether we have overriding legitimate grounds to process it. You can ask us to inform you before we lift that temporary processing restriction.
- **Right to data portability** – In some circumstances, where you have provided personal data to us, you can ask us to transmit that personal data (in a structured, commonly used, and machine-readable format) directly to another entity.
- **Right to object** – You can object to our use of your personal data for direct marketing purposes, including profiling or where processing has taken the form of automated decision-making. However, we may need to keep some minimal information (e.g., e-mail address) to comply with your request to cease marketing to you.
- **Right to make a complaint to your local Data Protection Authority (DPA)** (see https://ec.europa.eu/justice/article-29/structure/data-protection-authorities/index_en.htm) regarding any concerns you may have about our data handling practices.

To ask us to do anything of the above, you can contact us by email: info@robin-project.eu. We will promptly examine your request against the relevant requirements of the laws and regulations governing privacy and personal data protection and we will answer the latest within 30 days after receiving your request. We will ask from you some kind of identification (e.g., photocopy of your identity card or passport) to avoid non-authorized reveal of your personal data. If, for reasons of complexity of the request or a multitude of requests, we are unable to respond promptly, we will notify you within 30 days of any delay, which in no case may exceed two months from the expiration of the 30-day deadline.

11. How long do we retain personal data?

We retain personal data to provide our services, stay in contact with you and to comply with applicable laws, regulations, and contractual obligations to which we are subject. Please note that we have an obligation to retain data concerning projects funded by the Horizon Europe Framework Programme for Research and Innovation of the European Union for up to five years after the end of the project (unless further retention is requested by auditors). After the expiry of the retention period, and unless further legitimate grounds for retention arise, we will dispose of personal data in a secure manner.

12. Disclaimer of liability for third party websites

Although our site may contain links to third-party sites, including the sites of the consortium partners, we are not responsible for the privacy practices or content of these sites and we expressly disclaim any liability for any loss or damage that may be caused by the use of these links. We do not monitor the privacy practices or the content of these sites. If you have any questions about the privacy practices of another site, you should contact the site's responsible personnel. We suggest you read the privacy policy of each website you interact with, before allowing the collection and use of your personal data.

We may also provide social media features that allow you to share information on your social networks and interact with our project on various social media sites. The use of these social media features may result in the collection or sharing of information about you. We recommend that you check the privacy policies and regulations of the social networking sites you interact with, so that you can be sure that you understand what information may be collected, used and disclosed by these sites.

13. Children

We do not knowingly collect, use, or disclose information from children under the age of 16. If we learn that we have collected the personal information of a child under 16, we will take steps to delete the information as soon as possible. Please immediately contact us if you become aware that a child under 16 has provided us with personal information.

14. Revisions of this Privacy Policy

This Privacy Policy is valid from 19/12/2022 and replaces any other previous notifications that we had issued in the past regarding our personal data management practices. We reserve the right to revise this Policy at any time. The current version will be always uploaded to our website indicating the date of entry into force, so you know when the most recent revision took place. If there are critical changes in this policy or our personal data practices change significantly in the future, we will notify you by posting the changes on our website.

Annex II – Informed Consent Form

Text in red colour contains guidelines for adjusting this template and should be deleted.
Text in grey colour contains examples and should be adjusted to the context of each activity.
Text included in < > and/or highlighted with yellow should be replaced with content that is suitable to the context of each activity & project as well as to the organisation seeking to obtain the consent.
Before using this template take the time to carefully read and adjust it to the needs of the activity at hand as well as to any relevant regulations and particularities applicable to your country and organisation.

INFORMED CONSENT FORM

Who we are:

We are < Insert Partner Name > and we are contacting you in the framework of ROBIN, a project funded by the European Union under the Horizon Europe Framework Programme for Research and Innovation. A detailed description on how ROBIN handles personal data is presented in the project's Privacy Policy available through the project's web page (www.robin-project.eu).

Project:

ROBIN - Deploying circular BIOecoNomies at Regional level with a territorial approach (GA Number 101060504).

Partner:

Organisation name: < Insert Partner Name >

Address: < Insert Partner Address >.

Phone: < Insert Partner Phone >.

E-mail: <Insert Partner Generic E-mail Address >

Responsible persons:

You may delete the line referring to the Data Protection Officer if your organisation does not have one.

#	Role	Name	E-mail
1	ROBIN Manager Project	<Insert name of project manager from your organisation>	<Insert e-mail of project manager from your organisation >

2	Interviewer	<Insert name of interviewer from your organisation >	<Insert e-mail of interviewer from your organisation >
3	Data Protection Officer	<Insert name of DPO from your organisation >	<Insert e-mail of DPO from your organisation >

What do we need from you?

Please explain in a brief paragraph (4-5 lines) the activity and its purpose under the frame of the project.

Example: We need you to participate in an interview that will be carried out by ROBIN with a view to monitor and assess ROBIN's outcomes, impacts and perceptions change towards the new regional bioeconomy governance models.

The interview is expected to last for no more than <Insert number of minutes > minutes. We will take written notes and we will be making a sound recording of the interview.

Please adapt the following text to accurately depict the type of personal data collected.

To effectively conduct this interview, we need to process some of your personal data:

- Your contact details (full name, email, phone number);
- Some basic demographics (age, gender);
- Your professional info (organization, job position, field of expertise);
- Your education info
- Your opinions on the subject matter.

Why do we need your data & what will we do with them?

We need your data to contact you in order to plan and carry out the aforementioned interview and to resolve any ambiguities, questions and other issues that may arise after and as a result of the interview. We also need to record your data to keep track of the interview process. The project's deliverables that will be derived by the interview will not include your personal data or any other information that could identify you. Your personal data will remain on our written notes (interview's transcript) and the sound recording we will make during the interview.

We will share your data with a few other ROBIN project partners that are also involved in this task and will participate in the drafting of the relevant deliverables. We are also obliged to grant access to your data to:

- EU officials such as our Project Officer for purposes related to project's evaluation;
- EU agencies and other authorities for project's auditing purposes.

We would also be very happy if you gave us your consent to contact you in the future to ask you to participate in other project's activities (e.g., surveys, interviews, project events etc.) and

also to inform you about the project's progress (e.g., by sending you a newsletter or similar messages).

How can you withdraw your consent?

You should know that you can withdraw your consent at any time by communicating either on the phone or by email with the responsible persons listed in the previous page. With regards to the informational messages and newsletters you can always opt out by simply clicking the link "Unsubscribe" or something similar included at the end of all the relevant messages.

I hereby give my consent to the processing of my personal data needed for:

(Please, tick the boxes below to confirm that you give us your consent for the respective subject. Any boxes left unticked mean that you do not consent to the relevant subject.)

#	Consent Subject	Tick box
1	My participation in an interview that will be carried out by ROBIN to < insert key objective of the interview >	
2	My participation in future activities of ROBIN	
3	Receiving newsletters and messages regarding ROBIN activities	

Name of participant

Date

Signature

Annex III – Data Subject Request Form

Text in red colour contains guidelines for adjusting this template and should be deleted.
Text included in < > and/or highlighted with yellow should be replaced with content that is suitable to the context of each activity & project as well as to the organisation seeking to obtain the consent.

ROBIN

Data Subject Request form

You may delete the data referring to the Data Protection Officer if your organisation does not have one.

CONTACT

<Insert name of responsible Project Manager>	<Insert name of DPO > (Data Protection Officer)
<Insert email of responsible Project Manager>	<Insert e-mail of DPO >

DATA SUBJECT REQUEST FORM

This form should be used to submit a data subject request under the provisions of the European Union General Data Protection Regulation (GDPR).

Submitter Details

Title:	
Name:	
Address:	

TYPE OF REQUEST

Please select the type of request you are making:

<input type="checkbox"/>	Consent Withdrawal
<input type="checkbox"/>	Access request
<input type="checkbox"/>	Rectification of personal data
<input type="checkbox"/>	Erasure of personal data
<input type="checkbox"/>	Restriction of processing of personal data
<input type="checkbox"/>	Personal data portability request
<input type="checkbox"/>	Objection to processing of personal data
<input type="checkbox"/>	Request regarding automated decision making and profiling

PERSONAL DATA INVOLVED

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REQUEST DETAILS

--

REQUEST REASON/JUSTIFICATION

--

Name:

Signature:

Date:

Once completed, this form should be submitted via e-mail to <Insert contact e-mail of Partner> or posted to:

<Insert Partner Name>

<Insert Partner Address>

Annex IV – Record of Processing Activities

Table 11: Record of Processing Activities

No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transfer to third countries (non EU-EEA)	Transfer to EU from third countries	Recipients	Comments
1	Set up of ROBIN's Multi-Actor Regional Constellations	Desk research	WP1	Task 1.1	Potential MARC participants	Online databases	Information of candidate MARC members (e.g., name and surname, mail, brief description of professional profile)	WR	All partners	Collection, Use	No	Art. 6(1)(a) - consent	No	No	All partners supported the process by providing candidates to WR.	
2	Set up of ROBIN's Multi-Actor Regional Constellations	Networking	WP1	Task 1.1	Potential MARC participants	Data subject	Information of candidate MARC members (e.g., name and surname, mail, brief description of professional profile)	WR	All partners	Collection, Use	No	Art. 6(1)(a) - consent	No	No	All partners supported the process by providing candidates to WR.	
3	Identification of barriers, opportunities, and incentives of the Multi-Actor Regional Constellation to engage in circular	Interviews	WP1	Task 1.1	Interviewees	Data subject	Contact details, Professional information, Opinions, Demographics, Past experiences	WR	All regional partners	Use, Analysis	No	Art. 6(1)(a) - consent	No	No	All regional partners supported the interview	

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No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countries (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
	bioeconomy governance															ws conduct ion and collecte d raw data.
4	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Interviews	WP1	Task 1.4	Interviewees	Data subject	Contact details, Professional information, Opinions, Demographics, Past experiences	RCM			No	Art. 6(1)(a) - consent	No	No		
5	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Interviews	WP1	Task 1.4	Interviewees	Data subject	Contact details, Professional information, Opinions, Demographics, Past experiences	SRA			No	Art. 6(1)(a) - consent	No	No		
6	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Interviews	WP1	Task 1.4	Interviewees	Data subject	Contact details, Professional information, Opinions, Demographics, Past experiences	CAP			No	Art. 6(1)(a) - consent	No	No		
7	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Interviews	WP1	Task 1.4	Interviewees	Data subject	Contact details, Professional information, Opinions, Demographics, Past experiences	ZSK			No	Art. 6(1)(a) - consent	No	No		

D6.4: Data Management Plan – Final Version, August 2025

No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partne r(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countri es (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
8	Analysis of the bioeconomy policy mix of the 5 ROBIN regions	Interviews	WP1	Task 1.4	Interviewees	Data subject	Contact details, Professional information, Opinions, Demographics, Past experiences	S2I		Collection of personal contact data for some interviewees	No	Art. 6(1)(a) - consent	No	No		
9	Co-creation of the Regional Governance Models and Practices with Key Stakeholders	Workshop	WP2	Task 2.1	Workshop participants	Data subject	Opinions, Past experiences	RCM	CTA	Collection	No	Art. 6(1)(a) - consent	No	No		
10	Co-creation of the Regional Governance Models and Practices with Key Stakeholders	Workshop	WP2	Task 2.1	Workshop participants	Data subject	Opinions, Past experiences	SRA	CTA	Collection	No	Art. 6(1)(a) - consent	No	No		
11	Co-creation of the Regional Governance Models and Practices with Key Stakeholders	Workshop	WP2	Task 2.1	Workshop participants	Data subject	Opinions, Past experiences	CAP	CTA	Collection	No	Art. 6(1)(a) - consent	No	No		
12	Co-creation of the Regional Governance Models and Practices with Key Stakeholders	Workshop	WP2	Task 2.1	Workshop participants	Data subject	Opinions, Past experiences	ZSK	CTA	Collection	No	Art. 6(1)(a) - consent	No	No		
13	Co-creation of the Regional Governance Models and Practices with Key Stakeholders	Workshop	WP2	Task 2.1	Workshop participants	Data subject	Opinions, Past experiences	CTA		Collection	No	Art. 6(1)(a) - consent	No	No		

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No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countries (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
14	Shaping of the Support Actions and Plans for each ROBIN region	Workshop	WP2	Task 2.2	Workshop participants	Data subject	Opinions, Past experiences	CTA	Region al authorit ies (i.e., RCM, SRA, CAP, ZSK, BPRO)	Collection	No	Art. 6(1)(b) - contract	No	No		
15	Elaboration of Toolbox Validation Plans	Regional teams	WP3	Task 3.1	Regional teams' participants	Data subject	Contact details Professional information	S2I assumed leadershi p from BPRO following AMENDM ENT No. AMD- 10106050 4-13.	Region al authorit ies (i.e., RCM, SRA, CAP, ZSK, BPRO)	Collection	No	Art. 6(1)(b) - contract	No	No		
16	Elaboration of Toolbox Validation Plans	Testing teams	WP3	Task 3.1	Testing teams' participants	Data subject	Contact details, Professional information, Demographics, Past experiences	S2I assumed leadershi p from BPRO following AMENDM ENT No. AMD- 10106050 4-13.	Region al authorit ies (i.e., RCM, SRA, CAP, ZSK, BPRO)	Collection	No	Art. 6(1)(a) - consent	No	No		

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No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partne r(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countri es (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
17	Evaluation and Validation of Testing Results and fine-tuning of the ROBIN Toolbox	Validation workshop	WP3	Task 3.3	Workshop participants (AB members)	Data subject	Opinions, Past experiences	S2I	MTU, AUTh, QPL	Use	No	Art. 6(1)(a) - consent	No	No		
18	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Interviews	WP4	Task 4.1	Interviewees (MARC members)	Data subject	Opinions, insights, Past experiences	PED	QPL, CTA, WR, S2I, ZSK, MTU, AUTh, RCM, IFA, CAP and SRA		No	Art. 6(1)(a) - consent	No	No		
19	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Survey	WP4	Task 4.1	Survey participants	Data subject	Contact details Professional information, Opinions	RCM			No	Art. 6(1)(a) - consent	No	No		
20	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Survey	WP4	Task 4.1	Survey participants	Data subject	Contact details Professional information, Opinions	SRA			No	Art. 6(1)(a) - consent	No	No		
21	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Survey	WP4	Task 4.1	Survey participants	Data subject	Contact details Professional information, Opinions	CAP			No	Art. 6(1)(a) - consent	No	No		

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No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countries (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
22	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Survey	WP4	Task 4.1	Survey participants	Data subject	Contact details Professional information, Opinions	ZSK			No	Art. 6(1)(a) - consent	No	No		
23	Monitoring and assessment of the project's outcomes, impacts and perceptions change	Survey	WP4	Task 4.1	Survey participants	Data subject	Contact details Professional information, Opinions	S2I assumed leadership from BPRO following AMENDMENT No. AMD-10106050 4-13.			No	Art. 6(1)(a) - consent	No	No		
24	Exchange of best practices and lessons learnt among the targeted regions	Knowledg e exchange event	WP4	Task 4.2	Event's participants	Data subject	Contact details Professional information, Opinions, knowledge	RCM			No	Art. 6(1)(a) - consent	No	No		
25	Exchange of best practices and lessons learnt among the targeted regions	Knowledg e exchange event	WP4	Task 4.2	Event's participants	Data subject	Contact details Professional information, Opinions, knowledge	SRA			No	Art. 6(1)(a) - consent	No	No		
26	Exchange of best practices and lessons learnt among the targeted regions	Knowledg e exchange event	WP4	Task 4.2	Event's participants	Data subject	Contact details Professional information, Opinions, knowledge	CAP			No	Art. 6(1)(a) - consent	No	No		

No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countries (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
27	Exchange of best practices and lessons learnt among the targeted regions	Knowledge exchange event	WP4	Task 4.2	Event's participants	Data subject	Contact details Professional information, Opinions, knowledge	ZSK			No	Art. 6(1)(a) - consent	No	No		
28	Exchange of best practices and lessons learnt among the targeted regions	Knowledge exchange event	WP4	Task 4.2	Event's participants	Data subject	Contact details Professional information, Opinions, knowledge	CTA assumed leadership from BPRO following AMENDMENT No. AMD-10106050 4-13.			No	Art. 6(1)(a) - consent	No	No		
29	Exchange of best practices and lessons learnt among the targeted regions	Mutual learning workshops	WP4	Task 4.2	Workshops' participants	Data subject	Contact details Professional information, Opinions, knowledge	CTA	ZSK, BPRO	Collection, Use	No	Art. 6(1)(a) - consent	No	No		
30	Exchange of best practices and lessons learnt among the targeted regions	Mutual learning missions	WP4	Task 4.2	Missions' participants	Data subject	Contact details Professional information, Opinions, knowledge	CTA	ZSK, BPRO	Collection, Use	No	Art. 6(1)(a) - consent	No	No		
31	Exchange of best practices and lessons learnt among the targeted regions	Train-the-Trainer event	WP4	Task 4.2	Event's participants	Data subject	Contact details Professional information, Opinions, knowledge	CTA			No	Art. 6(1)(a) - consent	No	No		

No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transfer to third countries (non EU-EEA)	Transfer to EU from third countries	Recipients	Comments
32	Monitoring and assessment of the dissemination, communication and stakeholder engagement activities	Dissemination of newsletter	WP5	Task 5.1	Newsletter subscribers	Data subject	Contact details	WR			No	Art. 6(1)(a) - consent	No	No		
33	Setup and Operation of ROBIN's Advisory Board	Desk research	WP5	Task 5.2	Potential AB participants	Online databases	Contact details, Professional information, Demographics	WR	All partners	Collection, Use	No	Art. 6(1)(a) - consent	No	No	All partners supported the process by providing candidate AB members to WR.	
34	Setup and Operation of ROBIN's Advisory Board	Networking	WP5	Task 5.2	Potential AB participants	Data subject	Contact details, Professional information, Demographics	WR	All partners	Collection, Use	No	Art. 6(1)(a) - consent	No	No	All partners supported the process by providing candidate AB members to WR.	

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No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partner(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countries (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
35	Collaboration and Synergies with the CCR and Related Networks and Initiatives	Networking	WP5	Task 5.3	CCRI and Related Networks and Initiatives' officials	Data subject	Contact details, Professional information, Demographics	S2I			No	Art. 6(1)(a) - consent	No	No		
36	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	QPL			No	Art. 6(1)(b) - contract	No	No		
37	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	CTA			No	Art. 6(1)(b) - contract	No	No		
38	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	WR			No	Art. 6(1)(b) - contract	No	No		
39	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	PED			No	Art. 6(1)(b) - contract	No	No		
40	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	S2I			No	Art. 6(1)(b) - contract	No	No		
41	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	ZSK			No	Art. 6(1)(b) - contract	No	No		

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No	Project Activity / purpose	Data processing activity	Linked WP(s)	Linked Task(s)	Data subjects	Data source	Data category(-ies)	Responsible partner	Involv ed partne r(s)	Type of Involvement	Special category (Art. 9 GDPR)	Lawfulness of processing	Transf er to third countri es (non EU-EEA)	Transfer to EU from third countries	Rec ipie nts	Comments
42	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	MTU			No	Art. 6(1)(b) - contract	No	No		
43	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	AUTH			No	Art. 6(1)(b) - contract	No	No		
44	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	RCM			No	Art. 6(1)(b) - contract	No	No		
45	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	CAP			No	Art. 6(1)(b) - contract	No	No		
46	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	IFA			No	Art. 6(1)(b) - contract	No	No		
47	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	BPRO			No	Art. 6(1)(b) - contract	No	No		
48	Project management, meetings and reporting	Project management	WP6	Task 6.1, Task 6.2, Task 6.3	Project partners	Data subject	Contact details Professional information Videos and photos	SRA			No	Art. 6(1)(b) - contract	No	No		

Annex V – Main changes in the data collected/generated through ROBIN since M18

Table 12: Main changes in the data collected/ generated through ROBIN since Month 18

No	Name of activity	Dataset (data collected/generated)	Status	Remarks
1	Deployment of the Alpha and Beta Testing of the ROBIN Toolbox	Contact details Professional information, Opinions	Removed from the list of data collected/generated	Removed as no data was collected / generated by the utilisation of the ROBIN Toolbox during alpha and beta testing



DEPLOYING CIRCULAR BIOECONOMIES AT
REGIONAL LEVEL WITH A TERRITORIAL APPROACH

About the project

Europe's regional authorities have a crucial role to play as agents of inclusive and resilient economic development for their territories. ROBIN sets out to empower them to fulfil this role with support to co-shape their governance structures in to accelerate the deployment of their circular bioeconomy targets, while also promoting social innovation. We demonstrate the potential of innovative circular bioeconomy governance structures and models in 5 regions within Ireland, Germany, Spain, Slovakia and Greece. We set-up Multi-Actor Regional Constellations engaging key stakeholders to co-create novel governance structures, well-embedded within existing structures of our regions and mandated to execute circular bioeconomy strategies and to coordinate effectively with the CCRI-CSO. We also provide them with tailored support for enhanced stakeholder engagement, as well as a practical toolbox to improve the operation and monitoring of their models. In the process we coordinate our actions with the CCRI-CSO.

Partners	URL
Q-PLAN INTERNATIONAL ADVISORS PC	www.qplan-intl.gr
FUNDACION CORPORACION TECHNOLOGICA SE ANDALUCIA	www.corporaciontecnologica.com
WHITE RESEARCH SRL	www.white-research.eu
PEDAL CONSULTING SRO	www.pedal-consulting.eu
STEINBEIS 2I GMBH	www.steinbeis-europa.de
ROZVOJOVA AGENTURA ZILINSKEHO SAMOSPRAVNEHO KRAJA NO	www.razsk.sk
MUNSTER TECHNOLOGICAL UNIVERSITY	www.circbio.ie
ARISTOTELEIO PANEPISTIMIO THESSALONIKIS	www.auth.gr
REGION OF CENTRAL MACEDONIA	www.pkm.gov.gr
CONSEJERÍA DE AGRICULTURA, PESCA, AGUA Y DESARROLLO RURAL	www.juntadeandalucia.es
INSTITUTO ANDALUZ DE INVESTIGACION Y FORMACION AGRARIA PESQUERA ALIMENTARIA Y DE LA PRODUCCION ECOLOGICA	www.juntadeandalucia.es
SOUTHERN REGIONAL ASSEMBLY	www.southernassembly.ie

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