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Deliverable D2

Quality Data Management Plan

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Deliverable D2
Quality Data Management Plan (QDMP)

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Terms and abbreviations

ALLEA	All European Academies
CO	Confidential
DMP	Data Management Plan
DoA	Description of Action
EC	European Commission
ECM	Enterprise Content Management
EU	European Union
FAIR	findable, accessible, interoperable and reusable
GA	Grant Agreement
GDPR	General Data Protection Regulation
IoT	Internet of Things
IPR	Intellectual Property Rights
ORD	Open Research Data
QDMP	Quality Data Management Plan
RRI	Responsible Research and Innovation

Executive Summary

This deliverable presents the initial version of the Quality Data Management Plan, which is directly connected with the work performed under WP1 – “Project Management”. It serves as the initial plan for the collection, organization, storing and sharing of the knowledge and data created within the project. The described data management plan is formulated based on several inputs, namely: a) the ETIKETA Grant Agreement document, b) the European Commission guidelines for data management of H2020/Horizon Europe [1] research projects and c) the input from the project consortium members.

The document contains the appropriate methodologies, tools and repositories for data management and dissemination of all available information generated by the ETIKETA project. Such information includes, but is not limited to, scientific publications issued by the project’s consortium members, Open-Source software components along with anonymous user statistics, project deliverables, and most importantly data collected from the alliances of European Higher Education Institutions, etc.

Most of this information will be openly accessed and will be compliant to EC’s Horizon Europe guidelines and regulations regarding Open Research Data. For this reason, a descriptive template has been formulated, based on the FAIR principles, which should be followed by all datasets collected during their lifetime and should be updated if there is need.

The publishing repositories should be publicly accessible and offer a secure and reliable environment for data storage. Moreover, they should be as popular as possible on their respective field in order to fulfil ETIKETA’s dissemination purposes.

Finally, it is important to underline that the current deliverable will be a living document which will be continuously adapted depending on the needs of the project research and development objectives, and based on the direct input from members of the consortium and other European Higher Education Institutions.

1 Introduction

1.1 About this deliverable

This deliverable focuses on the management of data in ETIKETA. In ETIKETA there will be four different types of data: (1) data related to publications, (2) data in public deliverables generated as part of the project activities, (3) data related to activity of design and test of transnational cooperation instruments, for the delivery of a joint European degree label for joint transnational higher education programmes. (4) general project’s advances (including technological choices), that will be used as part of the implementation of the different project outcomes established in the project.

Due to ETIKETA’s social aspect, the management of all these data that will arise throughout the project’s lifecycle is crucial for its success. Protecting confidential or sensitive personal information and complying with the new EU General Data Protection Regulation (GDPR), while at the same time contributing to the open research and innovation, are some of the issues to be addressed.

The proposed plan was designed to allow the efficient dissemination of results and the stimulation of research without jeopardizing not meeting any ethical requirements of the project.

More specifically the ETIKETA’s QDMP aims to:

1. Outline the responsibilities for data protection and sharing within an ethical and legal framework;
2. Ensure the protection of the intellectual property created by the project;
3. Support open access to the project’s research outcomes and scientific publications;
4. Support the openness of data related to both the publications and the development processes of the project;
5. Define a documentation framework for the annotation of the collected knowledge towards increased discoverability and validation.

The context of this deliverable is summarized in Table 1.

Table 1: Overall of the deliverable within the context of the ETIKETA project

Project Item	Description
Objectives	The main objective of this deliverable is to provide a first version of the description for the data management life cycle for all data sets that are collected, processed or generated by the project.
Exploitable results	N/A
Work plan	This deliverable is the main result from T1.1/T1.2. It defines and addresses the quality data management plan (QDMP) of the project.
Impacted Work packages	All
Deliverables	All

1.2 Document structure

The document consists of the following sections:

Section 1: Introduction including the purpose and structure of the document.

Section 2: Definition of the Methodological Framework for handling all ETIKETA data, always in accordance with the EU guidelines and applying the adapted H2020 FAIR DMP Template.

Section 3: Presentation of the infrastructure that will be utilised for data archiving and preservation, allowing data to be findable and re-usable.

Section 4: Definition of all data and data handling procedures expected to arise throughout the ETIKETA project. Data format, metadata annotations, sharing, storage etc. are examined in this section. The above information is provided in the form suggested by the adapted FAIR template.

Section 5: Summary of the contents of the deliverable with relevant conclusions.

2 Methodological Framework for Data Management Plan

The role of a QDMP is to define a framework concerning the handling of research data generated or acquired as the project progresses but also after the end of it. Subjects for investigation are: the nature of the data in question, which data will be collected and to whom they will be useful, the use of metadata to render data easily retrievable, standardization, whether and which data will be open-access, how they will be stored and preserved etc.

Aiming to actively be part of the Open Research Data Pilot, the ETIKETA QDMP complies with the H2020 guidelines for making data Findable, Accessible, Interoperable, Re-usable (FAIR). To achieve that, the FAIR template provided by the European Commission¹ is followed. This template is mainly a set of questions addressing the four principles and other related issues and can be found in its original form in Annex II of this document.

The components included in FAIR are the following:

- Data Summary;
- FAIR Data Principles;
 1. Making data findable, including provisions for metadata;
 2. Making data openly accessible;
 3. Making data interoperable;
 4. Increase data re-use (through clarifying licences);
- Allocation of resources;
- Data Security;

¹ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf

- Ethical Aspects;
- Other Issues Refer to other national/ funder/ sectorial/ departmental procedures for data management that you are using (if any).

The Data Summary and the FAIR Data Principles will be addressed separately for each dataset that is expected to be generated from the ETIKETA project. However, given the nature of ETIKETA, the datasets we plan to collect and process are mostly related to information provided by stakeholders

Allocation of material resources for storage and archiving is not foreseen, since we will use the resources already available for the existing joint degrees where the consortium members participate.

As regards publication and other open access costs, they will be provided under the project².

By default, Horizon Europe projects and ERASMUS participate in the Open Research Data Pilot and they must deposit the following data in a research data repository:

1. All data needed to validate the results presented in scientific publications, including the metadata that describe the research data deposited. This is called the “underlying data”. These data must be deposited as soon as possible.
2. Any other data (for instance curated data not directly attributable to a publication, or raw data), including the associated metadata, as specified and within the deadlines laid down in the QDMP – that is, according to the individual judgement by each project/grantee.
3. Projects should also provide information via the chosen repository about the tools that are needed to validate the results, e.g. specialised software or software code, algorithms and analysis protocols. Where possible, they should provide these instruments themselves, or alternatively, provide direct access to them.

In the Guidelines on FAIR Data Management in Horizon 2020, the European Commission states: “Where will the data and associated metadata, documentation and code be deposited? Preference should be given to certified repositories which support open access where possible.”

Researchers, information managers and other stakeholders can rely on a framework of various international certification standards for digital repositories in order to assess and improve the quality of their work processes and management systems. “Trustworthy Digital Repository” (TDR) is a term often used in this respect.

Beneficiaries must also provide open access, through the repository, to the bibliographic metadata that identify the deposited publication. The purpose of the bibliographic metadata requirement is to make it easier to find publications and ensure that EU funding is acknowledged. Information on EU funding must therefore be included as part of bibliographic metadata so that Horizon 2020 can be properly monitored, statistics produced, and the programme's impact assessed.

² http://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-hi-erc-oa-guide_en.pdf

To monitor any embargo periods, the publication date and embargo period must be provided. The persistent identifier (for example a Digital Object Identifier) identifies the publication. It enables a link to be provided to an authoritative version of the publication.

Open Access is one of the main principles of Horizon Europe; by Open Access we mean the provision of free of charge online access to scientific information for any user. The beneficiaries' obligation to granting open access is differentiated between scientific publications and research data.

- Scientific publication: Publication of academic and research work, most often in the form of an article, research paper and otherwise, in scientific journals or in other forms (e.g. textbook, conference proceedings, etc.).
- Research data: This refers to the recorded factual material commonly accepted in the scientific community as necessary to validate research findings. Examples of research data generated from a project like ETIKETA could include: Questionnaires, Algorithms, Methodologies, Source Code etc.

All participating projects' beneficiaries are required to ensure open access for their peer-reviewed scientific publications relating to their results, as defined in Article 29.2 of the H2020 - General MGA³.

There are two routes to open access for scientific publications⁴:

1. Gold open access / open access publishing - the practice of immediately publishing in open access mode (in open access journals or in 'hybrid' journals), shifting the payment of publication costs from readers' subscriptions to author fees. These costs are usually borne by the researcher's university or research institute or the agency funding the research.
2. Green open-access / self-archiving – the practice of depositing of a published article or a final peer-reviewed manuscript in an open-access online repository (by the author or a representative). A 6-12-month embargo period before the data is granted open-access may be considered appropriate by some scientific publishers.

Therefore, the open access to publications process is as follows:

1. Publications are deposited in online repositories.
2. Open access route is selected.
3. Open access is granted to publications.

Note that the steps mentioned above are not strictly successive, but may occur simultaneously, depending on the selected open-access route and a possible embargo period set by the consortium.

³ H2020 Multi-Beneficiary General Model Grant Agreement v5.0, available at: http://ec.europa.eu/research/participants/data/ref/h2020/mga/gga/h2020-mga-gga-multi_en.pdf

⁴ [http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-Access-data-management/open-Access_en.htm](http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/open-Access_en.htm)

Regarding research data for projects participating in the ORD pilot, it is obligatory to ensure open-access to all data needed for result validation⁵. Whether other parts of data will be made open-access, is left to the discretion of the beneficiaries, as they must ensure that the main objective of the project will not be jeopardised by the publicity. Ethical and privacy concerns raised by publication of particular data, as well as protection of Intellectual Property Rights (IPR) are also a great deterrent to granting open access. Justification for excluding particular parts of data from being open access must be included in the QDMP. The open-access research data must be deposited in online repositories, available for access, mining, exploiting, processing and disseminating, free of charge for any user, accompanied by the appropriate information — via the repository — regarding the specific tools and instruments that beneficiaries have at their disposal, considered to be necessary for validating the results. Where possible, these tools or instruments should be provided.

The above described procedures are summarised in the following diagram:

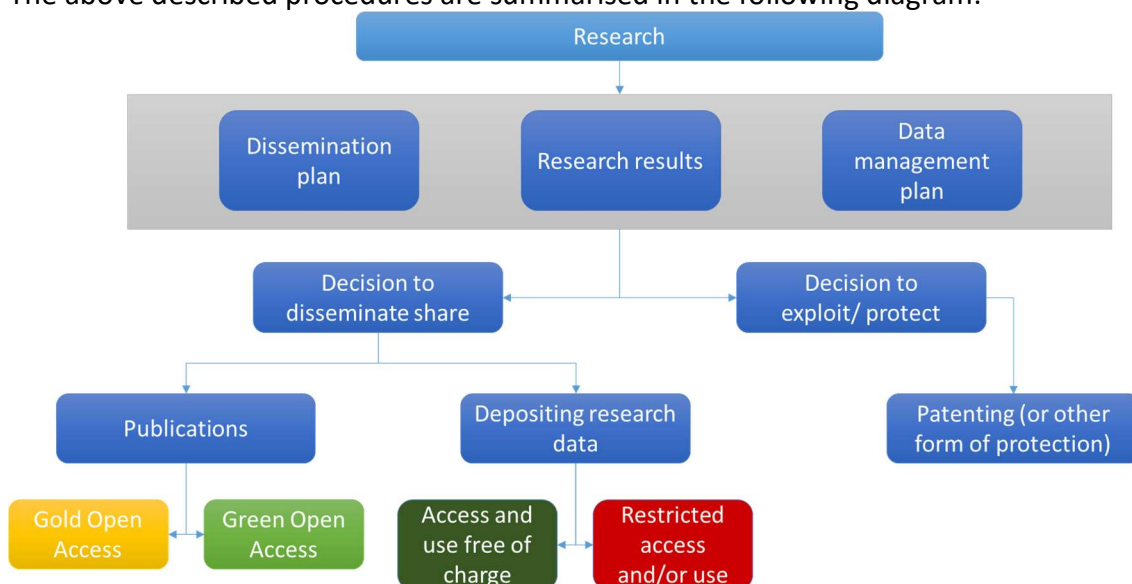


Figure 1: Granting Open Access Diagram.

Provision for the GDPR⁶, the newly enacted EU regulation about data, is also included, as described in the GDPR compliance section of the ETIKETA QDMP.

GDPR is a unified regulatory framework that took effect from the 25th May 2018 and is implemented across the European Union. Due to its regulatory nature, it is directly binding and applicable for all EU members and does not require an individual enabling state legislation. Intended to replace the 1995 EU Data Protection Directive⁷ in the light of the growing need for clarifying and safeguarding the “digital rights” of all natural

⁵ Article 29.3, H2020 Multi-Beneficiary General Model Grant Agreement

⁶ General Data Protection Regulation, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=EN>

⁷ Data Protection Directive, OJ 1995 L 281, available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31995L0046>

persons in EU, GDPR harmonises the relevant national EU States legislations and opens up the scope to cover even companies without physical presence in the EU.

Organisations acquiring and/or processing data of natural persons are required to adopt more robust data management and security systems. At the same time GDPR empowers citizens, by enhancing monitoring and control over their own data. As stated⁸ :

1. This Regulation lays down rules relating to the protection of natural persons with regard to the processing of personal data and rules relating to the free movement of personal data.
2. This Regulation protects fundamental rights and freedoms of natural persons and in particular their right to the protection of personal data.
3. The free movement of personal data within the Union shall be neither restricted nor prohibited for reasons connected with the protection of natural persons regarding the processing of personal data.

As previously noted, significant changes on data, which may arise in the course of the project and the development of the platform, are to be reported in the form of new versions of the present deliverable

2.1 Data Management Process

The ETIKETA DMP is a set of steps aiming to classify the various datasets to be collected and analysed according to the analysis presented in the previous section. Each step of the process contains a question requiring a reply. The reply given in each step defines the actual status, and the respective handling, for each dataset generated or acquired during the project. Data storage, preservation and sharing were intentionally not included in the questionnaire, as all the datasets produced and used in the ETIKETA project will be stored, preserved and shared through the selected platforms (MS Teams), and thus, these aspects of data management are common for all datasets.

For the ETIKETA project, the following questions were selected to classify the datasets:

Table 2: *The Data Management Process approach for each dataset.*

Issues to be addressed for dataset	Positive Answer (yes)	Negative Answer (no)
Needed for result validation?	Public	Private
Produces added value to third parties?	Public	Private
Can the created data - which may be derived from third-party data - be shared?	Public	Private

⁸ Article 1, GDPR

Contains personal data as referred to in GDPR - Article 4?	Private	Public
Contains data back traceable to private individuals?	Private	Public
Contains data that could be used in activities raising ethical issues or constitute a danger to the society?	Private	Public
Contains sensitive data or a security threat for one or more partners of the project (e.g. confidential information)?	Private	Public
Either a Licence restriction or an embargo is applied?	Private	Public
Contains data jeopardising a project patent?	Private	Public

2.2 Data Security and GDPR Compliance

During the course of the project, the data subjects and the GDPR framework will be identified and designed respectively. An analytical description of how the ETIKETA project implements the GDPR regulations will be included, along with the data subjects involved in data collection (surveying, questionnaires, etc), the types and sources of data (including personal data) that will be collected and processed, the data controllers, the data processors, the processing activities of the personal data that are required to reach conclusions regarding the design and implementation of common digital management systems that are compliant with the principles of EWP (Erasmus Without Paper) and facilitate the issuing of joint diplomas.

According to Article 4 of the EU GDPR, the Data Controller, the Data Processor and the Data Recipient are defined as follows:

Controller – “means the natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data”.

Processor – “means a natural or legal person, public authority, agency or other body which processes personal data on behalf of the controller”.

Recipient – “means a natural or legal person, public authority, agency or another body, to which the personal data are disclosed, whether a third party or not”.

2.3 Data related to scientific publications

ETIKETA will publish scientific publications in conferences and journals as part of the planned dissemination activities. Following the EC Mandate on Open Access, ETIKETA adheres to the Open Access policy choosing the most appropriate route for each case. Whenever possible, ETIKETA favours the ‘green’ open access route, in which the published article or the final peer-reviewed manuscript will be deposited in an online

repository, before, at the same time as, or after publication, ensuring that the embargo period requested by certain publishers has elapsed.

Scientific publications' data are made available often using accessible PDF files. The metadata to be used will be compliant with the format requested by OpenAIRE as well as the one requested by the repository where the papers are to be deposited.

2.4 ETIKETA public deliverables

All information and material related to the public, such as public deliverables, brochures, posters and so on will be freely available on the project website in the form of accessible PDF files. When IPR of foreground knowledge needs to be protected, the corresponding disclosures will be published.

All deliverables include a set of keywords and a brief description that aim to facilitate the indexing and search of the deliverables in search engines. The keywords in each deliverable aim to stress the main topics addressed in the document, be it a report or a software – related document.

The audience of the public deliverables of ETIKETA range from general audiences, interested in the activities performed in the project, to more specialized audiences and stakeholders or those who wish to learn about the benefits of ETIKETA through the experiences gathered through the existing joint European degrees.

3 Archiving Data and Preserving Infrastructure

Brief descriptions of the platforms and repositories chosen for the ETIKETA data storage and dissemination are included in the following section. An outline of their structure and functionalities regarding open access, storage, backup and charging policy is drawn and justifies their selection, as all of them fulfil the requirements elicited from the FAIR data principles and ORD pilot.

3.1 SharePoint / Microsoft 365 platform

SharePoint and OneDrive in Microsoft 365 are cloud-based services that help organizations share and manage content, knowledge, and applications to: Empower teamwork. Quickly find information. Seamlessly collaborate across the organization. It simplifies capturing, sharing, and retrieval of information across virtual teams, boosts productivity and reduces network bandwidth requirements and email volumes between project team members. The platform is hosted by ULUSOFONA, and offers a plethora of features such as document locking, online preview and editing and version control. ETIKETA partners use Microsoft's 365 as the main document repository of all the files exchanged within the consortium, including intermediate versions of the deliverables, meetings' material (agenda, notes, presentations, demos, minutes, etc.) and any other documents used for gathering inputs from the project's partners. Credentials are needed to access any of the Microsoft 365 material, as the platform usage is restricted only to the ETIKETA consortium and to the EC (if access is requested).

3.2 Project website

The ETIKETA's website can be considered as the main online public information point of the project and can be found under this URL (To be determined).

The website will hold some static text information, such as the brief presentation of the concept and goals of the project, and the proposed approach, while it also offers some dynamic textual data such as the communication of events, news and blog posts.

There will also be a dedicated section (Published Materials) for all public data concerning the project and its progress. This section will hold the relative documents (deliverables, research publications, press releases, software documentation, etc.) using the portable document format (PDF), as well as the Office Open XML format for some cases for ease of re-use (e.g. for a press release). In case a file is deposited on a social media or data repository platform, a link to the respective source will be provided, enriched with simple metadata information like the title, a short description and the type of the document.

All public information on the ETIKETA's website is available with no restrictions and can be accessed by any visitor with no need to create an account or give any personal data. This information and all webpage-related data is backed on a regular basis.

3.3 Data and Document Repositories

Two services will be used for archiving project data and documents, Zenodo and ResearchGate, which are presented below.

a. Zenodo

Following the EC recommendation, ETIKETA is going to use the Zenodo platform as a data and document repository. Zenodo is a free, open research data repository created by OpenAIRE⁹ and CERN¹⁰ that launched its services in 2013. It is compliant with the open data requirements of Horizon 2020, the EU Research and Innovation funding programme and the Open Access policies of the European Union.

The platform not only supports the publication of scientific papers or white papers in all scientific disciplines, but also the publication of any structured research data (e.g. using XML format) and the collaboration with open source code repositories such as GitHub. All uploaded data and documentation are structured using metadata, licensed under CC license (Creative Commons 'No Rights Reserved'). An important parameter to note is that the property rights or ownership of a data asset do not change by uploading it to Zenodo.

As far as security and availability is concerned, Zenodo guarantees both. All data files are stored in CERN Data Centres, primarily in Geneva, with replicas in Budapest. Data files and metadata are backed up on a nightly basis. Files are regularly checked against their checksums (using MD5 algorithm) to assure that file content remains constant. In case of closure of the repository, Zenodo ensures that all content can be easily integrated into other suitable repositories without this affecting citations and links.

⁹ <https://www.openaire.eu>

¹⁰ <https://home.cern>

Regarding the ETIKETA's data management, all public results generated or collected during the project will be uploaded to Zenodo for open access, long-term storage and dissemination, including public deliverables, software documentation (eventually in the case of common digital management system), research papers, presentations, and datasets. At the end of the project, the option of using an institutional research data repository to further disseminate the project outcomes will be considered.

b. ResearchGate

Along with the establishment of Zenodo as the primary data and document repository, ETIKETA will create a ResearchGate project profile to further promote the dissemination of scientific publications.

ResearchGate, launched in 2008, is a networking site for scientists and researchers, free to join, with more than 3 million users. Sharing publications, connecting with colleagues, asking or answering questions and finding collaborations from around the world are only some of the services the platform has to offer. A ResearchGate project is actually a dedicated place of research results related to a common cause that other researchers can opt to follow, interact and stay in touch with its progress.

In this public area, ETIKETA partners will upload their research publications, fill-in the necessary metadata and try to respond to any questions coming from the community. Both the aforementioned tools hereby defined will act as the platforms for accessing ETIKETA project public results and can be found by following the respective links:

Zenodo Link: N/A yet

ResearchGate Link: N/A yet

3.4 Code Repository

ETIKETA does not foresee any major software development, with the exception of the analysis, evaluation and possible extension of a common digital management system (the system itself is being developed in other projects, and in this project we will mostly extend to fulfill the objectives of the provision issuing of joint diplomas. In any case, if software development does take place, it will be always developed under Open Source paradigm and it will be deposited in a public Git based web repository, where they will be in the disposal of the community for exploitation and expansion.

There are two main options for Git based hosting providers to consider: GitLab and GitHub.

GitLab¹¹ is a Git-based fully integrated software development platform that integrates a great number of essential tools for software development and deployment, and project management:

¹¹ <https://about.gitlab.com>

- Code hosting in repositories with version control;
- Issue Tracker for new implementations, bug reports, and feedback;
- Issue Boards for organisation and prioritization;
- Code review in Merge Requests with live-preview changes per branch with Review Apps;
- Built-in Continuous Integration, Continuous Deployment, and Continuous Delivery support to build, test, and deploy the application. For each pull or push a CI pipeline is triggered and a group of jobs gets executed in stages (batches). All the jobs in a stage are executed in parallel and if they all succeed the pipeline moves on to the next stage. If one of the jobs fails, the next stage is not (usually) executed. The pipeline usually consists of four stages: build, test, staging, production. The status of the current and historical pipeline is visualized in a specific Pipelines tab to assist the end user in monitoring the deployment process;
- Integration with Docker with GitLab Container Registry. Thus every project can have its own space to store its Docker images.

Apart from GitLab the consortium also considers the option to use GitHub for collaborative software development for open source components.

GitHub¹² is also a Git based online repository hosting provider. Although mainly used for code storage, the GitHub platform supports other formats and features too. Being one of the first Git hosting providers, it enjoys a large share of the market, with 24 million connected developers (March 2018). GitHub services are similar to those of GitLab and as such, they also meet the needs of the ETIKETA's project.

¹² <https://github.com>

4 Datasets and Publications for DMP

All data anticipated to be generated during the lifespan of ETIKETA project are presented in this section. They are divided into four categories: public deliverables, software components (open source), research datasets and publications. The adapted FAIR Template will be used to describe every category in general as well as every individual dataset that will be generated in the course of the project.

Guidelines for deciding on the points made in the context of this template are provided through FAIR itself and its four principles pertaining research data, meaning that eventually data should be made easily Findable, Accessible, Interoperable and Re-usable.

4.1 Project Public Deliverables

The public deliverables of the ETIKETA project are presented in the following Table:

Table 3: ETIKETA Public Deliverables

Deliverable Number	Deliverable Title	Due Date
D1.1	Intermediate Monitoring e-book	M6
D2	Quality Data Management Plan	M1
D1.2	Final Monitoring e-book	M12
D3	ETIKÉTA Label Content and requirements	M4
D4	Report on stakeholders views	M4
D5	Report on legal frameworks and requisites	M4
D6	White paper	M11
D7	European degree label of joint programmes brand	M11
D8	Digital EU Label	M11
D9	Guidelines for the ETIKÉTA EU label	M11
D10	Guidelines for future Joint Degrees	M11
D11	ETIKÉTA Label Public Presentation (Final Event)	M12
D12	Final Report Digital End Book	M12
D13	Communication & Dissemination Plan	M12
D14	Minutes of the consortium presentation at the 2nd European University Forum	M12

The FAIR template has been modified, in line with the FAIR data principles, so as to accommodate the required details for all the public deliverables. Resulting is the following table, which contains a general description of the ETIKETA Public Deliverables, addressing all relevant issues indicated originally. Management of all deliverables will be implemented using this table.

Table 4: Description of ETIKETA Public Deliverables

1. Public deliverable summary	
Purpose	The purpose of the public deliverable
Relation to the objectives of the project	Relation of the public deliverable to the project objectives
Types/Formats	All public deliverables are (or are accompanied by) reports in the cross-platform portable document format (PDF).
Re-use of any existing data	Source of re-used datasets, IRP issues etc.
Origin	How the included data was generated (or mention source, if collected)
Size	Size of the public deliverable
Utility for others	To whom and how the deliverable will be useful.
2. FAIR Data	
2.1. Making public deliverables findable, including provisions for metadata	
Metadata provision	Metadata is added manually and includes name, author, all consortium partner organisations, relevant keywords
Metadata standards	No specific metadata standard used
Unique identifier	The public deliverables are assigned URLs by upload on the official ETIKETA website
Naming conventions	<ul style="list-style-type: none"> Naming convention used: ETIKETA _[Deliverable Code]-[Deliverable Title]-vA.BB. Version numbering convention used: vA.BB, where A is a major version of the deliverable (Submission to European Commission) and BB is minor version of the deliverable for updates during the preparation phase.
Search keywords	Metadata keywords serve as search keywords
Version control	All changes reported in the document history section.
2.2 Making public deliverables openly Accessible	
Classification	Confidentiality level: PU (public)

Sharing and access regimes	Before submission: available only to consortium partners through the Microsoft 365 (Sharepoint) platform After submission: publicly available through the official ETIKETA website
Needed method/software	No special software needed for the PDF format
Repository	Microsoft 365 (Sharepoint) platform and ETIKETA's official website
Access authorisation	Before submission: Access only to authorised consortium partners After submission: upload on the website, no authorisation needed
2.3. Making public deliverables interoperable	
Data/metadata vocabularies and other I/O standards	-
Mapping to common ontologies	-
2.4. Increase re-use of public deliverables (through clarifying licences)	
Licence	No licence needed
Re-use availability schedule	After submission: immediately granted free open Access for mining, exploiting, processing and disseminating
Re-use by third parties	After submission: Accessible and re-usable from third-parties. No access and time limitations apply
Quality assurance	Internal quality audit control by the Quality Manager and two assigned reviewers (consortium partners)
Availability period	No time limitation scheduled after the end of the project

This template will be completed individually for each and every public deliverable generated in the project, in order for them to be described in detail. At the time there is no public deliverable prepared and submitted.

4.2 Project Software Components

The software components of the ETIKETA common digital management system are provided below.

4.2.1 Open Source components

The open source components of the ETIKETA and the involved partners are listed in the table below

Table 5: Open Source components

Component name	Involved Partners
Common digital management system (CDMS)	ULUSOFONA (LU)

The relevant FAIR analysis of the software components are provided in the following table:

Table 6: ETIKETA CDMS Module

1. Open component summary	
Purpose	To facilitate the issuing of joint diplomas
Relation to the objectives of the project	Objective 3 Objective 4
Types/Formats	Source code/REST API
Re-use of any existing data	The component will use data produced by the existing joint programmes provisioned by the consortium
Origin	Implemented by the involved partner of the consortium
Size	The final size will be defined after the release of the final version of the component
Utility for others	The system will be potentially used by all Alliances of European Higher Education institutions and the European Commission
2. FAIR Data	
2.1. Making component findable, including provisions for metadata	
Metadata provision	The metadata of the component source code will include the main functionality of the component that will combines and other components, installation and build process, the programming languages and technologies that will be used, bug fixes and last updates.
Metadata standards	The URL address of the component into the Git repository
Unique identifier	The URL address of the component into the Git repository
Naming conventions	Camel-case naming convention
Search keywords	Common digital management system ; digital trust
Version control	The component source code will be stored in a Git repository.
2.2 Making component openly Accessible	
Classification	Public
Sharing and access regimes	Stored into a public repository after the end of the project

Needed method/software	Web browser or Git client
Repository	Git repository
Access authorisation	Authorised users can access the source code of the component. Public access will be provided after the end of the project in order to assure that the user will access the final version of the component.
2.3. Making component interoperable	
Data/metadata vocabularies and other I/O standards	N/A
Mapping to common ontologies	N/A
2.4. Increase re-use of component (through clarifying licences)	
Licence	Apache license (The GNU General Public License is also under consideration).
Re-use availability schedule	The component will be available for reuse after the end of the project.
Re-use by third parties	After submission: Accessible and re-usable from third-parties. No access and time limitations apply.
Quality assurance	SonarQube will be used for source code quality assurance.
Availability period	No time limitation scheduled after the end of the project.

4.3 Project Research Datasets

N/A

4.4 Project Publications

4.4.1 Scientific Publications

Along with the dissemination of project deliverables and datasets, we are considering as part of the QDMP, further dissemination of project Scientific Publications.

Each publication will be added here using the following structure:

4.4.1.1 *[Title of the publication]*

Publication reference and name

Publication abstract

Table 7: Title of Publication

1. Data summary	
Purpose	

Relation to the objectives of the project	
Types/Formats	
Re-use of any existing data	
Origin	
Size	
Utility for others	
2. FAIR Data	
2.1. Making data findable, including provisions for metadata	
Metadata provision	
Metadata standards	
Unique identifier	
Naming conventions	
Search keywords	
Version control	
2.2 Making data openly Accessible	
Classification	
Sharing and Access regimes	
Needed method/software	
Repository	
Access authorisation	
2.3. Making data interoperable	
Data/metadata vocabularies and other I/O standards	

Mapping to common ontologies	
2.4. Increase data re-use (through clarifying licences)	
Licence	
Re-use availability schedule	
Re-use by third parties	
Quality assurance	
Availability period	

4.4.2 Other Publications

Other publications refer to any published material created by the consortium members during the project’s lifetime that do not fall under the academic research field. Such publications may include press releases, presentations, software documentation, or produced multimedia for dissemination purposes (e.g. a ETIKETA video).

All of this material will be available at the ETIKETA website, either in their original form or as a link to a related social media/data repository platform (e.g. YouTube or Zenodo link) or as embedded multimedia frame (e.g. embedded radio interview). Their metadata should be available on the source.

When such material is created, special attention should be given on providing references on the various sources used. In case a source is not publicly available, consent should be required.

Publications from third parties that refer to ETIKETA (e.g. a special article on a blog post or an extensive tv reportage on the ETIKETA approach), or are in any other way related to ETIKETA, should go through the project’s Coordinator and the Dissemination leader for approval and will be also kept in a dedicated section of the ETIKETA website as a reference.

5 Summary and Conclusions

The present deliverable attempts an early approach on the definition of the ETIKETA's QDMP. Described are the main principles and regulations which the QDMP is aligned with, as well as the methodology deriving thereof. Following the EU guidelines regarding open access to scientific publications and research data, and FAIR Data Management, we used consistently the adapted FAIR Data template for presentation of all expected data. These data are categorised in four main groups: public deliverables, software components, research datasets and publications. The relevant storage solutions are set out in a dedicated section along with the characteristics that made them an appropriate choice. In the light of the changes in EU data protection regulation, identification of the GDPR roles (controllers, processors, recipients) even among the consortium partners is crucial for clarifying data protection responsibilities. Personal data that will be acquired for the ETIKETA needs and the relevant data processing activities are, to the extent possible, foreseen and described.

All the above mentioned approaches and methodology will mainly serve as a guideline for handling the data that will stem from the project. As stated before, this document is intended to be a living document; the here presented version of the QDMP is not the final and during the project may be subject to minor or major amendments and additions, if need be.

Data coming from publications will be stored in OpenAIRE indexed repositories favouring the green model whenever possible. Other publications such as deliverables will be stored at ULUSOFONA's hosting services and the public deliverables will be published in the project website.

This deliverable is a first version, and a living document during the course of the project, that will be updated in a subsequent release.