



CO3

Digital Disruptive Technologies to Co-create, Co-produce and Co-manage Open Public Services along with Citizens

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Deliverable

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Ethics, Gender and Data Management Framework

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RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Abstract	
According to available guidance, H2020 project have to provide a first version of the Data Management Plan (DMP) within the first six months of the project. The DMP should be updated during the lifetime of the project, to describe the project's current on the data management.	
Statement of originality	
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1 Introduction

In accordance with the guidance provided by the European Commission, H2020 projects are requested to provide a first version of the Data Management Plan (DMP) within the first six months of the project. The initial DMP should then be updated during the project lifetime, to reflect the implementation of new Data Management Policies.

The present document is the first version of the *Ethics, Gender and Data Management Plan* for the CO3 project, and describes the current view of the CO3 consortium partners on ethics, gender and data management related issues arising in the context of the CO3 project. The document presents a first overview of the planned collection, management and processing policies and procedures that will be applied to the data generated by the three CO3 pilots and that will successively be used for the evaluation of the very same pilots and the general research objectives of the CO3 project as a whole.

The structure of the present document follows the Data Management Plan template provided by the European Commission in the H2020 Online Manual¹. First an overview of the data expected to be collected in the framework of the CO3 project is given (Section 2). We then describe the procedures and techniques by which the data will be made Findable, Accessible, Interoperable and Reusable (FAIR) (Section 3). This is followed by an assessment of the allocated resources (Section 4). Data security measures are presented next (Section 5).

In addition to the standard DMP template a discussion on ethical aspects and data privacy issues related to GDPR (Section 6) and a discussion of gender aspects of the project (Section 7) are included in the present document.

¹

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-data-management/data-management_en.htm

2 Data Summary

The CO3 project aim is to assess the benefits and risks of using a set of five disruptive technologies (Augmented Reality, Blockchain, Geolocalized Social Networks, Interactive Democracy and Gamification) for creating a new model of interaction between citizens and the Public Administration in the process of co-design, co-creation and co-management of Urban Commons. The assessment is to be carried out through qualitative and quantitative analysis of data collected in the context of three pilot projects which will make use of a purposely developed app integrating the technologies.

2.1 Purpose of data collection/generation and relation to the project objectives

The reason of data collection in the CO3 project is to address the overall research objectives previously described.

The CO3 platform will be deployed in three pilot sites, starting from month 18 of the project onwards. During the pilot evaluation phase data will be collected in relation to the evaluation objectives, that is to

- check that the CO3 pilot systems do work as expected,
- assess if the impact of the use of the identified technologies is clear and positive,
- determine whether the CO3 pilot system is worth being maintained after the end of the project.

The outcomes of the evaluation will be the input to the assessment of the potential and risks connected to the use of the identified technologies, and the development of a comprehensive exploitation plan for the platform.

2.2 Data types

Different types of data will be gathered by the pilot projects during the lifetime of the CO3 project, including quantitative data generated by the interactions of the *data subjects* with the platform components. At the present stage of development of the project the data we expect to collect include:

- **Master data:** used to univocally identify a user account.
 - numeric user ID,
 - username.
- **Identification data:** used to associate a user account with an accredited person.
 - name,
 - surname,
 - E-mail address,
 - year of birth.

- **Profile data:** voluntary information provided by the participant about themselves and may be changed or deleted at any time by the participant.
- **Content data:** refers to user actions within the platform, enriched with creation and update time.
- **Usage data** actions taken by the users in the CO3 platform, including transactions performed through the Blockchain Exchange System.
- **Login and settings data.**
- **Web server log data:** generated whenever the Logger is used, either to store or to retrieve events.
 - Source of request (IP address),
 - Timestamp of request,
 - Requested URL,
 - HTTP Referer,
 - HTTP User Agent,
 - Size of response,
 - Status code of response.

The previous list will be integrated in future updates of the Data Management Plan, should new types of data be collected within the project.

2.3 Data re-use

The CO3 project will create a novel platform to be applied in new pilot projects at the three sites identified in the proposal. There is no existing data that can be re-used for the purposes of the research objectives identified in the framework of the project.

2.4 Data origin

The origin of data collected within the CO3 project are the *data subjects* themselves. The contributed data include both the information contributed during their registration to the CO3 platform, and the activities carried out by the data subjects within the platform in the context of the specific pilot projects.

2.5 Data size

Data collected and processed during the lifetime of the project will consist of raw, analytical and metadata, the databases put in place to support the project's operations and the transaction data recorded on the project blockchain. Given the number of potential target users of the services provided by the CO3 pilots, and previous experience of some of the CO3 partners in similar projects (for example the H2020 project WeGovNow), an educated guess for the total amount of data that will be collected has been made, and the support infrastructure has been dimensioned accordingly. The size of the collected data

will be continually monitored during the project, in order to expand the repository capacity if needed..

2.6 Data Utility

Data gathered during the project lifetime in the three pilot sites will refer to the utilization of the platform by the *data subjects*. This data are of utility primary to understand and assess the potential and limitations of using the disruptive technologies considered in the CO3 project in the interaction of citizens and the Public Administration in the processes of co-design, co-creation and co-management of Urban Commons.

3 FAIR Data

3.1 Making data Findable, including provisions for metadata

The first FAIR principle is making data **Findable**. To achieve this goal each data object should be uniquely and persistently identifiable. Furthermore, the data object should be re-findable at any given point in time, therefore data objects should be persistent, with emphasis on their metadata. A data object should be identifiable through basic machine actionable metadata.

The data produced during the lifetime of the CO3 project will not be published as primary data in order to protect the privacy of the *data subjects*. However reports and papers where these data are analysed in an aggregated and anonymized form will be published on the project website. Furthermore, the results of studies based on the collected data will be disseminated at the final conference of the project, through scientific publications and presentations at conferences and through policy reports.

3.2 Making data openly Accessible

The second FAIR principle of making data openly **Accessible** will be achieved by following the Guidelines on Open Access to Scientific Publication and Research data in Horizon 2020² for the management of the project data and documents. To maximize public and researcher approachability, open access will be granted to all scientific publications resulting from the project.

3.3 Making data Interoperable

The third FAIR principle is making data **Interoperable**. The principle is based on the ability of systems and services that create, exchange and consume data to have clear, shared expectations for the contents, context and meaning of that data³. This allows data or tools from non-cooperating entities to integrate or work together with minimal effort. Project CO3 will make use of standard vocabularies for all data types present in the data set, to allow interdisciplinary interoperability. Furthermore, to facilitate data exchange, reuse and recombination, clear metadata will be used. Finally, the consortium will use data formats that are compliant with open software applications.

3.4 Increasing data Re-use (through clarifying licenses)

The fourth FAIR principle is making data **Re-usable**. No particular restrictions on the re-use of data generated during the project will be imposed. The appropriateness of different licensing agreements under the Creative Commons licensing (CC BY 4.0) will be explored and the data will remain re-usable until the storage repository will be withdrawn.

² [Guedj, D. & Ramjoué, C. \(2017\). European Commission Policy on Open-Access to Scientific Publications and Research Data in H2020. Version 3.2. Biomedical Data Journal 01\(1\), 11-14](#)

³ Pagano, P., Istituto di Scienza e Tecnologie dell'informazione A. Faedo (ISTI). Data Interoperability.

4 Allocation of Resources

Following CO3 Grant Agreement, a part of the project budget is allocated to cover the costs related to storing the project data, as well as making publications and research data openly accessible in Open Access repositories. These costs will be re-assessed along the course of the project and forecasts will be verified with the partners every 6 months.

At present, it is not possible to estimate the costs of data set preparation, data management and additional documentation needed for making the collected CO3 project data FAIR.

5 Data Security

5.1 Data management during and after the project execution

During the lifetime of the project CO3 data will be stored on servers administered by the three pilot sites, implementing multiple levels of security measures to protect and back-up files, such as encryption methods for data transfer and storage. Public files will only be accessible to people who have a direct link to the file(s) or have a registered credentials to login on the system.

A list of publicly accessible files, used for dissemination and communication purposes, will be maintained available and accessible by download via web server after registration and login for tracking purposes.

Public and Confidential data will be kept accessible to authorized users, with an appropriate access method, for at least 5 years after the end of the project.

5.2 Protection of personal data

The personal data will be protected against:

- unauthorized access to the personal data;
- unauthorized modification of the personal data;
- unauthorized loss or deletion of the personal data.

In particular, each partner of the consortium will adopt technical and organizational security measures (pursuant to the article 32 of the Regulation (EU) 2016/679) for ensuring the confidentiality, integrity, availability and resilience of processing systems and services, and for ensuring the ability to restore the availability and access to personal data in a timely manner in the event of a physical or technical incident.

Data collection and transfer within the EU/EEA countries are not subject to specific authorizations but the procedures employed need to comply with the general requirements of 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” (General Data Protection Regulation), and repealing Directive 95/46/EC.

In case of privacy and electronic communications it is necessary to apply the Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 and upcoming regulations concerning the processing of personal data and the protection of privacy in the electronic communications sector.

No data collection or processing is foreseen to happen in third countries within the scope of the CO3 project.

The specific security measures adopted will be indicated in the data protection impact assessment, that will be drafted in relation to each technology used within the CO3 Project.

5.3 Data storage

Data collected and generated in the framework of the CO3 project will be safely stored in a certified repository for long-term preservation and curation, with GDPR compliant features and security measures. The servers ensure that regulations and security procedures are complied following the GDPR (EU) standards.

Data will be stored exclusively for the time needed to address the research goals of the CO3 project, and to comply with legal obligations and project auditing process by the funding authority.

6 Ethical Aspects

The Consortium confirms that all the activities planned in the context of the CO3 project will comply with ethical principles and relevant national, Union and international legislation (including the Charter of Fundamental Rights of the European Union and the European Convention of Human Rights and its supplementary protocols). The consortium will respect the human dignity of research participants and their rights to freedom and security. Their life and their personal data will be protected throughout the implementation of the project, and especially in those tasks where potential harms might raise.

The CO3 Consortium further confirms that each partner is aware of ethics and research integrity concepts and that will respect the basic principles of reliability, honesty, respect and accountability, as described in the European Code of Conduct for Research Integrity.

All the activities carried out by the Consortium will comply with ethical principles established in the H2020 program, according to article 19 Regulation No. 1291/2013 and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols.

The Consortium has appropriate infrastructures and knowledge for the management and protection of data and research materials. The Coordinator will share with non-academic partners the UNITO Ethics code for those parts that concern academic research, conduct within the consortium and external relationships.

6.1 Ethical issues

The Consortium will handle research subjects with respect and care, and in accordance with ethical and legal provisions.

Participants will register and participate in the CO3 activities on a voluntary basis. The consortium will ensure that the whole participants recruitment procedure will be equitable and respect racial, ethnic, educational, socioeconomic and gender diversity, according to non-discrimination principles. The Consortium will respect cultural, religious and linguistic diversity and will ensure equality between men and women within the project activities.

The Consortium ensures that data collection will always be authorized and collected information will only be used for the purposes covered by the Grant Agreement. The CO3 project will involve humans also in the phase of co-design of the pilot projects. Ethical standards will be respected during all interactions, according to the cardinal principles of the European Code of Conduct for Research Integrity. In any interaction the informal collection of information will be informed by the principles of privacy and confidentiality. In this encounters, partners must always explain the nature and the goal of the CO3 activities and provide essential information about the project.

6.2 Informed consent procedures

Informed consent forms for the sharing of anonymised evaluation data and their long-term preservation will be included in the registration procedure for participants at all of the three CO3 pilot sites. The consortium privacy policy and consent forms, published in English on the project website, will be translated for the individual pilots in Italian, French and Greek respectively.

A template of the informed consent form for data storage, collection and processing in English has been prepared according to GDPR guidelines, and is already available.

6.3 Relevance of the data to the purposes of the research project

The individual data of the participants will be collected, processed and stored only in order to achieve specific tasks and the purposes of the research, in accordance to the “data minimization principle”. Individual data will be collected only if this is deemed adequate, necessary and not excessive with respect to the research purposes.

6.3 Anonymization of data

The data collected will be anonymized to be quoted in reports and academic publications or presentations.

7 Gender Aspects of the project

The CO3 Consortium is committed to adopt the principles of gender mainstreaming throughout the various components of the project, in accordance with Articles 2 & 3 of the Treaty of Amsterdam (1997) and other EU policy directives (COM (96) 67 final). In this regard, the Consortium will ensure that its activities contribute to the promotion of gender equality wherever possible.

Overall, 27% of the researchers involved in CO3 proposal are women. In addition, women play an important role in the project since **3 out of 7** WPs are lead by women. Furthermore women have strong position in both Work Package boards and the Project coordination board.

	Women	Men	Total	% Women	% Men
General Assembly	2	8	10	20%	80%
Executive Board	3	4	7	43%	57%
External Experts Advisory Board	0	3	3	0%	100%

While keeping scientific excellence and expertise as the basic selection criteria, the CO3 consortium is willing to implement an action plan to promote gender equality. The following actions will be undertaken:

- a) Special attention will be played to female recruitment during the project implementation
- b) Monitoring of the participation of women researchers, especially young women, as contributors in plenary conferences and workshops.

Gender dimension will be considered also in the conduct of research throughout most tasks in all WPs.