

Data driven implementation of hybrid nature-based solutions for preventing and managing diffuse pollution from urban water runoff

D7.3 Initial Data Management Plan

February 2023





D7.3 Initial Data Management Plan	
Work Package	WP7
Deliverable lead	UC
Author(s)	Jorge Rodríguez (UC) Irune Indacoechea (UC) Pablo Pascual (UC) Sara García (UC) Daniel Castro (UC) Contributors: All D4RUNOFF partners
Contact	info@d4runoff.eu
Grant Agreement number	101060638
Start date of the project / Duration	1 September 2022 / 42 months
Type of deliverable (R, DEM, DEC, other)	DMP
Dissemination level (PU, SEN)	PU
Project website	www.d4runoff.eu

Document	Document history									
Version	Date	Authors (organisation)								
0.1	31.01.2023	UC								
0.2	10.02.2023	Revision by 3OC								
0.3	28.02.2023	Revision by VCS								
1.0	28.02.2023	Final version								

R=Document, report; **DEM**=Demonstrator, pilot, prototype; **DEC**=website, patent fillings, videos, etc.; **OTHER**=other; **PU**=Public, **SEN**=Sensitive, limited under the conditions of the GA





Acknowledgement

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101060638.

Copyright Statement

The work described in this document has been conducted within the D4RUNOFF project. This document reflects only the D4RUNOFF Consortium views, and the European Union is not responsible for any use that may be made of the information it contains.

This document and its content are the property of the D4RUNOFF Consortium. All rights relevant to this document are determined by the applicable laws. Access to this document does not grant any right or license on the document or its contents. This document or its contents are not to be used or treated in any manner inconsistent with the rights or interests of the D4RUNOFF Consortium or the Partners detriment and are not to be disclosed externally without prior written consent from the D4RUNOFF Partners.

Each D4RUNOFF Partner may use this document in conformity with the D4RUNOFF Consortium Grant Agreement provisions.





Executive Summary

This report has been prepared in the framework of Work Package 7 (WP7): Management (led by VCS) and specifically Task 7.3: Data management and ethics issues (led by UC). This WP oversees the activities to manage and monitor the development and integration activities carried out in the project. Task 7.3 specifically addresses how data will be generated, collected, stored, handled, shared and maintained.

In line with Horizon Europe prerequisites, D4RUNOFF aims to make all data generated during the project as widely accessible as possible while ensuring the protection of personal and sensitive data. This deliverable includes an analysis on how research data, which relates to the project objectives and WP structure, will be collected, stored and made available internally (for further processing by project partners) and externally (disseminated) in full respect with the FAIR (Findable, Accessible, Interoperable, Reusable) principles, and in accordance with the D4RUNOFF adhesion to Open Research Data Pilot conditions. This report presents the preliminary structure of the Data Management Plan for the D4RUNOFF project with the research data that will be generated, modified and used during the project's lifetime per WP and per partner, and beyond the end of the project in general. The data included in this preliminary document is only a first example of the data that the project will manage, and it will be updated with real generated data in M30 (D7.5) and M42 (D7.7).





Table of Contents

1	Int	trodu	ction	7
	1.1	Pur	pose of the document	7
	1.1	1.1	Scope of the document	7
	1.1	1.2	Structure of the document	7
	1.1	1.3	Next step of the document	8
2	Da	ata su	mmary	8
	2.1	Тур	es and formats of Data Generated	8
	2.2	Met	hodology	8
	2.3	Dat	a summary per WP	9
	2.3	3.1	WP1: Novel detection methods for urban runoffs pollutants characterization.	.10
	2.3	3.2	WP2: Novel sensors for remote measurement of CECs and new pollutants	.11
	2.3	3.3	WP3: MCDA framework for hybrid NBS design.	.13
	2.3	3.4	WP4: Al-Assisted urban runoff management platform.	.14
	2.3	3.5	WP5: Case studies and validation.	.17
3	Fa	ir Dat	a Management	.19
	3.1	Mal	king data findable	.19
	3.1	1.1	Naming conventions for file identifications and metadata	.19
	3.1	1.2	Metadata provisions	.19
	3.2	Cor	ntribution to Open Data Research (data openly accessible)	.20
	3.2	2.1	Which data will be made open	.20
	3.2	2.2	How the data will be made open	.21
	3.2	2.3	Methods or tools to access the data	.21
	3.3	Dat	a interoperability	.21
	3.4	Dat	a reusability	.21
	3.5	Allo	cation of resources	.22
	3.6	Dat	a Security Plan	.22
4	D4	IRUN(OFF ethics and legal aspects	.22
	4.1	Eth	ical aspects	.22
	4.1	1.1	Ethics self-assessment	.22
	4.2	Leg	al Aspects	.23
5	Co	onclus	sions	23
6	Re	eferen	ces	.24
7	Ac	rony	ms	.24
Q	۸n	nov	A Titlo	25





List of Tables

Table 1 Format per data type used	
Table 2 Data set WP1	10
Table 3 Data set WP2	11
Table 4 Data set WP3	13
Table 5 Data set WP4	14
Table 6 Data set WP5	17





1 Introduction

1.1 Purpose of the document

1.1.1 Scope of the document

The Data Management Plan (DMP) will be generated, covering internal and external perspectives of the D4RUNOFF project, oriented to:

- D4RUNOFF participant organizations.
- Partner's personnel.
- Data Protection Officer.
- The European Commission.

Following the European Commission (EC) guidelines [1] the purpose of the DMP is to:

- Support the data management life cycle for all data that will be collected, processed or generated by the project.
- Provide an analysis of the main elements of the data management policy which will be followed by the applicants regarding all the datasets generated by the project.
- Provide details and guarantee about the preservation of the data collected during the project, as well as any results derived from the associated research.
- Create a report which explains the management of data collected during the project and beyond.

Once data has been collected, it will be outlined and properly managed according to the next points:

- Collection, processing, storage and exploitation.
- Applicable methodologies and standards to be observed.
- Whether and how this data will be shared and/or made available for open access.
- How the data will be curated and preserved during and after the project.

This DMP will comply to all applicable legislation during the duration of the project and will respect national legislation and the requirements of the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679) [2] and will be in accordance with the ethical principles for protection of individuals mentioned in deliverable D7.4 Management of ethics issues.

1.1.2 Structure of the document

The document consists on a first section with general information about the data that will be generated during the project and some preliminary examples of how this data will be collected and presented. After that, the management of the data according to FAIR principles has been addressed.





1.1.3 Next step of the document

This initial DMP is available from M6 (D7.3). However, as a living document, updates will be delivered at M30 (D7.5) and M42 (D7.7).

2 Data summary

2.1 Types and formats of Data Generated

The project will generate different types of data around the development of its objectives. The following Table 1 presents a preliminary list of possible formats for each type of data generated. This table will be reviewed and updated in the following version of the DMP (M30 and M42), with all data generated.

Table 1 Format per data type used

Type of Data	Data format used
Text	.txt, .docx, .pdf, .pptx, .dat
Video	.mp4, .avi
Images	.bmp, .tiff, .jpeg, .png, .pdf
Datasheets	.xlsx, .csv, .txt
Laboratory tests	.cdf, .dm3, .dm4, .tiff, .png, .dat
Models/ algorithms	GeoJson, raster, GIS and binary data, .pdf
Technical designs (i.e CAD)	.pdf, .dwg, stl, .stp, .dxf, dgn
Georeferenced data (GIS)	Shapefile, GeoTIFF, grib, .txt, .csv, binary, GeoJson, raster
Questionnaires	.docx, .pdf, .csv

2.2 Methodology

The methodology that will be followed for the collection of data during the project will be the following: during the preparation of the General Assembly, every 6 months, this table will be filled up by each Work Package Leaders (WPL). The updated table will be available in Teams repository.





2.3 Data summary per WP

Data summary will reflect the data generated during the project with the goal of achieving the objectives described in each WP.

In this section some examples of the metadata that partners will need to complete and update for each WP by M30, and M42 is presented. Indicate that this is only preliminary according to the general view of the project.

The tables will include the following information, which will be updated, if needed: means of data collection, origin, re-use of existing data (yes/no, source, licensing), type of data, format, expected size, partner receiving the data (for example, it could be only some partners in some WP), internal or external use and dissemination level of the data (public or confidential).

The template of the table is included in the Annex section. Indicate that FAIR, ethics and legal GDPR data management are also taken into account in these tables. In this deliverable, only some preliminary content has been included in the tables.

Concerning personal data collection, in WP6, the collection of personal data through the registration to events, such as the Open Day. The data will be collected through an online form (EU survey, compliant with GDPR). This personal data will only be shared with consortium partners and only for the duration and purposes of the project to contact them, if needed, and keep them informed prior, during and after the event. Personal data management is fully addressed in D7.4 Ethical issues deliverable.

Other anonymized data (IP, page visits, number of users) will be collected through Google analytics to improve the visitor's experience on the website and produce content that they are looking/interested in. This data will only be shared with consortium partners and will serve as reporting to the EC with regards to KPIs and the project's impact.





2.3.1 WP1: Novel detection methods for urban runoffs pollutants characterization.

Table 2 Data set WP1

WP1 Data set	Description/WP objective	Origin of data	New / Re-used	Type of data	Format of data	Expected size of data	Receiver	Internal/ External	Public Yes/No
Set I: Method development	Initial screening for methods on case studies	Three case studies	New	LC-MS ¹ , GC×GC-MS ² Processed data	CDF files ³ CSV	15-20 samples x 2-10 GB per sample = 30-200 GB	-	Internal	No ⁴
Set II: Method validation	Target, suspect and non-target screening	Three case studies	New	LC-MS, GC×GC-MS Processed data	CDF files	Approximately 10 samples x 2- 10 GB per sample = 20-100 GB	-	Internal	No
Set III : Runoff screening	Target, suspect and non-target screening	Three case studies + additional sites	New	LC-MS, GC×GC-MS Processed data	CDF files	40 samples x 2- 10 GB per sample = 80-400 GB	WP4, WP5	Internal	No
Set IV : Fate of pollutants	Target screening	Three case studies	New	LC-MS, GC×GC-MS Processed data	CDF files	Approximately 20 samples x 2- 10 GB per sample = 40-200 GB	WP4, WP5	Internal	No

¹ Liquid chromatography-mass spectrometry

² Two-dimensional gas chromatography-mass spectrometry

³ See <u>Unidata | NetCDF (ucar.edu)</u>

⁴ All data-sets are by default not public, but this could be subject to change depending on potential scientific publications where sharing of data might become relevant





2.3.2 WP2: Novel sensors for remote measurement of CECs and new pollutants.

Table 3 Data set WP2

WP2 Data set	Description/WP objective	Origin of data	New / Re- used ⁵	Type of data	Format of data	Expecte d size of data	Receiver	Internal/ External	Public Yes/No
Library of SERS substrates	Nanostructured nanomaterials that will allow the detection of CECs	Experimental data will be acquired using scientific equipment (e.g. Raman spectroscopy, electron microscope (EM),)	New	Standard operating procedures (SOPs); raw data of EM images, characterization data.	.txt; .spc; .pdf; .dm3/.dm4; .tiff; .png .csv;. xlsx; .dat; docx, pptx	< 3 GBs	INL	Internal	No
SERS/Raman library	Spectroscopic Fringerprints together with operational AI for spectral discrimination.	Experimental data will be acquired using Raman systems. Data analysis of these data will be carried out using AI models.	New	Spectroscopic databases; Al algorithms; codes	.txt, .dat, .csv; .pdf	Variable size (each spectros copic map > 50 MB)	INL	Internal	No
Technical design documents	Development of the prototype based on Raman and SERS	Data will be collected to set up the different design for prototype fabrication in WP2.	New	Diagrams, CAD files, videos	Reports of the performance: .pdf; Diagrams: .pdf; CAD files: .dwg, .stl, .stp; videos: .mp4	Variable size <2GB	INL	Internal	No

⁻

⁵ Please, indicate if data is new or re-used and if re-used, mention source and licensing (if any).





D4RUNOFF

Measurement	Sensors for	Electrochemical	New	ASCII	Data package	200KB/fi	INL, ITG	Internal/	Yes
s of metals	metals in runoff	read-out platform			defined by	le		External	
concentration	waters				MethodSCRIPT				
		Experimental data				Variable			
CECs concentration measurement based on SERS	Sensors for CECs in runoff waters using SERS	will be acquired using Raman systems. Data analysis of these data will be carried out using AI models.	New	Spectroscopic databases; Al algorithms; codes	.txt, .dat, .csv; .pdf	size (each spectros copic map > 50 MB)	INL, ITG	Internal/ External	Yes





2.3.3 WP3: Multi-criteria decision analysis (MCDA) framework for hybrid NBS design.

Table 4 Data set WP3

WP3 Data set	Description/WP objective	Origin of data	New / Re- used ⁶	Type of data	Data format	Exp. size of data	Receiver	Internal/ External	Public Yes/No
Library of Drainage Solutions	Factsheets of drainage solutions (NbS, Blue and Grey)	Internal and external references (International NbS catalogues, government drainage design guides and research articles)	New	Text	Word	1Mb	WP4	Internal and External (deliverable)	Yes
Parametrization of Drainage Solutions	Parametrization of the techniques included in the Library	Internal and external references	New	Text CAD	DWG DXF DGN	500Mb	WP4	Internal	No
MCDA and Relation NbS/Ecosistem Functions/SDG's/I mpact	MCDA description and Matrix displaying connections among different groups.	Internal and external references	New	Text Code Matrix	Word Excel File	2Mb	WP4	Internal	No
Geospatial information	GIS of the 3 case studies	AQUALIA VCS ING. TOSCANA UC	Re-used	Georefe renced data (GIS)	Shapefile, GeoTIFF	500Mb	WP4, WP5	Internal	No

⁻

⁶ Please, indicate if data is new or re-used and if re-used, mention source and licensing (if any).





2.3.4 WP4: AI-Assisted urban runoff management platform.

Table 5 Data set WP4

WP4 Data set	Description/WP objective	Origin of data	New / Re- used ⁷	Type of data	Format of data	Expected size of data	Receiver	Internal/ External	Public Yes/No
Data set from stakeholder consultation	Design of the best user experience in the Al-assisted platform for the different stakeholders	Questionnaires filled in by stakeholders and end-users of the Al- Assisted Platform	New	Responses of stakeholders and end- users of the AI-Assisted Platform	Word/Excel/CSV documents containing question and stakeholders and end-users responses	A few of KBs /MBs per questionnaire	3OC, VCS, MDS, ITG, INL, AQU, UC, ITS, MTG, KLK	Internal	Yes
Data gathering architecture and calculation engine module	Design of the data gathering architecture and calculation engine module	System to gather and process information from existing data sources (internal and external) and develop models	Re- used	Al models: temporal series, predictions and alerts. Intelligent models will be stored (Binary data) to execute them	Data (GeoJson, raster, GIS and binary data). Maps (PDFs)	Variable size	ITG	Internal	No
Operational and strategic module	Development of a smart operation functional module to support NBS modelling and urban planning	Federated AI, IoT Sensors (MQTT, CoAP, REST protocols and standards); Sanitation Network topology (GIS) and	New and Re- used	Data by means of GIS interface: real-time and simulated data extracted from existing sources (sewer network & NBS monitoring, weather forecast, urban	Data (GeoJson, raster, GIS and binary data). Maps (PDFs)	Variable size	ITG, VCS, HDR, UC, ITS, INL, MTG, KLK	Internal	No

⁷ Please, indicate if data is new or re-used and if re-used, mention source and licensing (if any).





		rainfall-runoff		planning and ML models					
		simulation models		trained, etc.)					
Risk assessment methodology and module	Development of a risk assessment module to identify the more critical vulnerable areas affected by pollutants	Urban Land Uses, Digital Elevation Model (GIS); Weather Forecasting Services; Data provided by smart operation module; physics and statistical models' simulations; economic and assets datasets	New and Re- used	GIS data, weather and climate datasets, in-situ measurements, gridded datasets, spread sheets, text and tabular files, etc.	GIS data, GeoJson, netCDF, grib, txt, pdf, csv, binary, etc.	Variable size	MTG, ITG, VCS, HDR, ITS	Internal, External	Access to some data may be restricted by provider/ originator
Policy- making module	Development of a policy-making module to analyze the impact of changes in the policies related to NBS	Decision criteria provided by stakeholders. Legislation Framework; Purification potential of NBS provided by AI models (smart operation); economic assessment	New and Re- used	Data from questionnaires, interviews and the co- design process. Data and information provided by experts. Data from literature review and documented cases. Elaboration (graph/network analysis) of process data from regulatory / governing bodies	Quantitative digital data in transferable format (csv, json, xml) Qualitative digital data (texts) in transferable format Code (models, configurations) specific to running environments Unstructured	Overall size: few GB Size of each set variable between KBs and Gbs	KLK, ITG, ITS	Internal, External	Access to some data may be restricted by provider/ originator





Data generated by AI Pictorial modules of the AI information assisted platform (Graphs, plots, Data generated by images) simulation algorithms (neural networks, ABM) Social Development of Simplified models Re-Different data related GIS and Around UC, ITG, Yes Internal module a social module delivered from with this module of the application code 100MBs 30C, used for social **Smart Operation** AI-Assisted Platform: for the serious AQU, MDS Module; Urban land scenarios derived from games engagement Word/Excel/CSV through serious uses (GIS); GIS and text with the Economic documents with games descriptions assessment; the description Purification and results potential of NBS provided by AI models





D4RUNOFF 2.3.5 WP5: Case studies and validation.

Table 6 Data set WP5

WP5 Data set	Description/WP objective	Origin of data	New / Re- used ⁸	Type of data	Format of data	Expected size of data	Receiver	Internal/ External	Public Yes/No
Water quality – NBS-Middelfartvej	Data collection from another ongoing project, that might be of interest to included in WP	Internal lab- test (VCS)	Re- used	Unknown	Unknown	Unknown	WP1	Internal	No
Water quality, NBS- Kallerupvej	Data collection from another ongoing project, that might be of interest to included in WP	External testing (universitys, SDU and KU)	Re- used (evt. Li- cened)	Unknown	Unknown	Unknown	WP1	Internal and External (unknown if deliverable)	No
Permeability – Permeable asphalt road, Agerlandsvej	Existing data that might be of interest to included in WP	External testing – VCS has aces to data	Re- used	Text, presentation, tables	Powerpoint Word Excel File	100 MB	WP3	Internal	No
Water quality and plant-uptake, floating planters for retention basins. Flydeøer	Data collection from another ongoing project, that might be of interest to included in WP	External testing (universities, SDU and KU)	Re- used (evt. Li- cened)	Unknown	Unknown	Unknown	WP1	Internal and External (deliverable)	No

-

⁸ Please, indicate if data is new or re-used and if re-used, mention source and licensing (if any).





Water quantity.	Existing data that	Internal.	Re-	Text,	Word	400 MB	WP3	Internal	No
Level metering in	might be of	Level data	used	presentation,	Excel File				
NBS - Bioretention	interest to	downloaded		tables					
systems	included in WP	to excl from							
		IOT-platform.							





3 Fair Data Management

3.1 Making data findable

In the D4RUNOFF project, all data will be easily traceable and easy to find. The consortium will be responsible for managing the documentation, templates, final versions of deliveries, minutes, meeting presentations, etc. Members will have free access to shared documents and folders, thanks to their own password and to the links that will be sent to them.

3.1.1 Naming conventions for file identifications and metadata

The D4RUNOFF deliverable template will be available in Teams in a folder specifically devoted to that (and as specified in the D7.1 Project Handbook & Quality assurance plan [3]). The title page will contain the name of the deliverable as defined in the GA.

All deliverables must be named and numbered according to the following rules in order to facilitate the quick identification and indexing:

<dateYYYYMMDD> <orgshortname> D4RUNOFF <dnum> <dname> <dlevel> <ver>.pdf

- <orgshortname> Organization that is performing the changes on the version
- <dnum> Represent the code of the deliverable.
- <dname> The name of the deliverable as stated in the DoA.
- <dlevel> dissemination level
- <ver> The version of the document.

Versions 0.X will indicate that the document is still a draft. The first official document to be sent to the EC will be numbered as V1.0. Further revisions or new issues of a deliverable will make use of the following format: V1.X when drafting and V2.0 when submitting and successively.

For example, deliverable D7.3 Initial Data Management Plan' traceability matrix, would be named in the following way:

20230228 UC D4RUNOFF D7.3 Initial Data Management Plan PU v1.0.pdf

3.1.2 Metadata provisions

The bibliographic metadata must be in a standard format and must include all the following:

- The terms "European Union (EU)" and "Horizon Europe".
- The name of the action, acronym, and grant number.
- The publication date, and length of embargo period if applicable, and a persistent identifier

In general, the metadata domain model includes the following mandatory items:

- Title
- Domain
- Full text language





- Author(s)
- At least one affiliation
- Description
- Type
- Purpose
- Main use
- Availability (public or private)
- Source (URL)
- Owner
- Contact person
- Licensing terms
- Version

Other document-specific required metadata may include:

- Article: paper title, contributors, journal title, volume, pages, publication date, persistent identifier.
- Conference paper, poster: paper title, contributors, conference title, conference data, city, country.
- Proceeding: Conference title, conference name and acronym, publication date, ISBN, persistent identifier.
- Book section: book title, section title, publication date, author(s), ISBN.
- Patent: inventors, title, date, patent number, country (bibliographic record only).
- Other publications: description, contributors, publication date, type (blog post, book review, dictionary notice, translation).
- Report: report type (research, technical, etc.), title, contributors, institution, publication date (deposit date), production date.
- Photos: shooting date, owner/s, keywords, license, type, country.
- Video, audio: recording date, license.

3.2 Contribution to Open Data Research (data openly accessible).

3.2.1 Which data will be made open

This initial DMP is aligned and serves D4RUNOFF aim to contribute to the open research data initiatives of the EC. Data sets, which are candidates for sharing, will be checked to ensure that:

• They are not confidential and do not include personal or commercially sensitive information.





- Permission from the relevant stakeholders and/or data subjects has been obtained.
- Sharing the data does not infringe on the exploitation or Intellectual Property Rights
 (IPR) protection prospects, in alignment with processes set in Task 6.4 (Exploitation
 plan). Specifically, deliverable D6.6 that will identify the datasets that might be of
 commercial value. Where data must be embargoed towards IP protection or
 exploitation, a timeline for its release will be provided.

3.2.2 How the data will be made open

To maximize the impact of the project, selected results and data will be shared with the scientific community and other stakeholders through publications in scientific journals and presentations at conferences, as well as through open access repositories.

Public deliverables and more specific technical documents related to D4RUNOFF will be published and made available online in an open and accessible way. The project website will contain a dedicated area to store all public deliverables and reports generated in the project. It will also include general information about the project, such as background content, objectives, news and updates, and communication materials (infographics, factsheets, videos...) The website will be updated continuously, and will remain available for at least three years after the project end.

On the other hand, sharing of data among partners during the execution of the project will be done via Microsoft Teams. A folder for each WP has been created where data, deliverables and working documents are uploaded and available for all partners.

For other public data and metadata, the use of ZENODO [4] or another institutional repository is encouraged.

3.2.3 Methods or tools to access the data

In most cases, data will be published using standard file formats that can be accessed using standard tools. In some cases, data will be interpreted into usable results in reports, public deliverables and publications, also mentioning analytic standards or methodologies used.

3.3 Data interoperability

A key component of data interoperability is that the data and metadata use vocabularies that follow FAIR principles so that the data can be understood and used correctly by data consumers and members of the Consortium. Standard vocabulary (or specific technical vocabulary of the corresponding field of knowledge) will be used for all data types. Vocabulary will follow European or International standards for each thematic area (if available).

3.4 Data reusability

Data, if determined to be public, will be made available for re-use on the D4RUNOFF website or the specific selected repository until at least three years after the project ending.

Open deliverables will be made available at the website once the submitted deliverable is approved by the EC. Scientific publications will be made available in selected open access repository as soon as they are published by the journal.





For open research data, susceptible to be re-used, no general restrictions of re-use are foreseen. Specific restrictions, if any, will be indicated in due time by the data owner. In case data generated by D4runoff is re-used, the user must to appropriately cite D4runoff work and authors.

To ensure the data re-use of the deliverables and publications of the D4RUNOFF results, the search engine of the website will be made to secure Open Access (OA) to all interested persons, mainly through the project website but also through selected OA repositories.

As for the data quality assurance processes, deliverables follow an internal peer revision according to the procedure defined by D7.1, scientific publications follow journals own peer revision process.

Finally, information about potential licensing of D4runoff generated data will be provided in future versions of the DMP.

3.5 Allocation of resources

About the costs for making data FAIR in the project, main costs are related to Open Access publication and the hourly costs due to website creation and maintenance, repository set-up and data management.

All these costs have been foreseen in the project and are assumed by the corresponding budget of the responsible partner. Although the Risk and Data Manager (RDM) centralize and survey the data management, each entity is responsible to mange each own data. Each work package leader is also responsible to follow-up data management for his/her WP.

As for the long-term deposit of public shareable data, no costs are expected since the use of repositories such as Zenodo are encouraged, that do not apply fees for data storage and preservation.

3.6 Data Security Plan

A specific internal storage has been set up and adopted to share relevant data among partners (teams repository). The access to this data is restricted to the partners. Apart from shareable data, at each partner institution, own research data will be stored in computers, laptops, intranets or hard-drives accessible through institutional password according to national law provisions for data security and protected by regularly updated antiviruses. Every partner is responsible to ensure that the data are safely and securely stored and in full compliance with European Union data protection laws.

4 D4RUNOFF ethics and legal aspects

4.1 Ethical aspects

4.1.1 Ethics self-assessment

The D4RUNOFF partners must comply with the ethical principles as set out in Article 14 of the Grant Agreement, which states that all activities must be carried out in line with the highest ethical standards and the applicable EU, international and national law on ethical principles, including the EU Charter of Fundamental Rights [5] and the European Convention for the Protection of Human Rights and Fundamental Freedoms and its Supplementary Protocols [6].





Ethical aspects of D4RUNOFF will be addressed in task 7.3 within WP7, defined as "Data management plan & ethic issues". All the ethical aspects will be developed in a specific deliverable D7.4 "Management of ethics issues (initial report)" that will be submitted on the M6 and updated in M30 and M42.

4.2 Legal Aspects

As part of D4RUNOFF actions, human participants will be recruited to carry out research activities through social engagement and stakeholders.

The consortium will collect common personal data related to name, surname, address, professional telephone number and email address of involved project partners, and external stakeholders linked to the use cases, local events, ideation workshops and interviews/questionnaires. That data will be anonymized or pseudonymized and secured in servers located in the European territory, adopting all state-of-the-art security mechanisms, including access control: only the researchers responsible for the activity will access that data. The partner collecting and processing the data during its own project activity will thus remain responsible for that data.

Any report produced by the consortium will respect the privacy of the participants, and therefore only anonymized or aggregated data will be used. The centre-piece legislation applicable to personal data processing activities carried out within the D4RUNOFF project is the General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679). This regulation includes definitions, principles, legitimate basis for processing personal data, rights of data subjects and obligations of data controllers.

The information obligation of the GDPR must always be satisfied. Data collection and analysis will happen on the basis of the consent of research participants, using the template consent form found in Annex 1 of D7.4 "Management of Ethics Issues". This same procedure (collecting consents from participants) will be carried out in the events that are held.

To be valid such consent must be freely given, specific, informed, and unambiguous. The consent can be collected verbally, virtually or in written format, and must be recorded. For this reason, a template informed consent form is included in this deliverable, which will facilitate record keeping.

Contacts will be inserted in the communication database only after receiving informed consent as explained above. As the result of the project will be in the form of public deliverables, no sensitive data will be generated, shared or stored. In any case, partners of the D4RUNOFF project do not expect to collect sensitive data such as gender, health data, sexual lifestyle, ethnicity or political opinion that would require approval.

Only adults with legal decision capacity and autonomy will be allowed to participate in the games/be part of the advisory boards, and will have to sign a detailed consent form which will be tailored to their specific needs or conditions if needed.

5 Conclusions

In this deliverable the data management strategy for the D4RUNOFF project has been outlined. It includes a preliminary description of the data that will be generated, processed or used within D4RUNOFF in each of the WPs, as well as its relationship with the objectives.





This document has been aligned with the Horizon Europe open data requirements and the FAIR guidelines. The content of the DMP will be updated in M30, and the final version will be submitted on M42.

6 References

- [1] H2020 Online Manual. Open access and Data management. Available at https://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/open-access-dissemination_en.htm (December 2022)
- [2] 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.
- [3] D7.1. Project Handbook and Quality Assurance Plan (Nov 2022). Deliverable from D4RUNOFF project.
- [4] https://zenodo.org/
- [5] EU Charter of Fundamental Rights
- [6] European Convention for the Protection of Human Rights and Fundamental Freedoms and its supplementary protocols. https://www.echr.coe.int/documents/convention_eng.pdf
- [7] EU Grants. How to complete your ethics self-assessment. Version 2.0. 13 July 2021. https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/quidance/how-to-complete-your-ethics-self-assessment en.pdf

7 Acronyms

Acronym	Full name					
CA	Consortium Agreement					
CDMP	Communication and Dissemination Master Plan					
DMP	Data Management Plan					
DPO	Data Protection Officer					
EC	European Commission					
EU	European Union					
FAIR	Findable, Accesible, Interoperable, Re-usable					
GA	Grant Agreement					
GDPR	General Data Protection Regulation					
IP	Internet Protocol					
IPR	Intellectual Property Right					
OA	Open Access					
ORDP	Open Research Data Pilot					





Annex A Title

Template for WP progress. This table needs to be completed for each WP and month of deliverable.

WPX Data set	Description/WP objective	Origin of data	New / Re- used	Type of data	Format of data	Expected size of data	Receiver	Internal/ External	Public Yes/No
Text	Text	Text	Text	Text	Text	Text	Text	Text	Text