



reSEARCH-EU

# Data Management Plan

D.1.2

Version: 1

WP 1 –Task 1.3 Led by UNIST



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reSEARCH-EU

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**REINFORCING  
SUSTAINABLE  
ACTIONS,  
RESILIENCE,  
COOPERATION  
AND  
HARMONISATION  
ACROSS AND BY  
THE SEA-EU  
ALLIANCE**

“



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## Deliverable identification

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Leader	Prof. Mile Dželalija (UNIST)
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Authors	Mile Dželalija (UNIST) Marko Vuckovic (UNIST) Juan Ramón Real (UCA)
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<p><u>Abstract</u></p> <p>The Data Management Plan is the document that provides an overview on the policies implemented in the reSEArch-EU Project regarding collection, storing, sharing and publication of research data through the life of the project. This document has been created taking the <i>Guidelines on FAIR Data Management in Horizon 2020</i> as its main reference.</p>	

## Versions and contributions history

Version	Date	Modified by	Reason
0	02/06/2021	N/A	Version sent for review to the QandES and the Extended EC.
1	17/06/2021	Juan Ramón Real (UCA)	First version, produced after the review and approval of the QandES and the Extended EC.

## List of acronyms

Acronym	Meaning
CAU	University of Kiel
DMC	Data Management Coordinator
DMO	Data Management Operator
DMP	Data Management Plan
Extended EC	Extended Executive Committee
IPR	Intellectual Property Rights
QandES	Quality and Ethics Subcommittee
UBO	University of Western Brittany (France)
UCA	University of Cadiz (Spain)
UG	University of Gdansk
UM	University of Malta
UNIST	University of Split (Croatia)
WP	Work Package

# 1. Introduction

## 1.1. Overview of the Data Management Plan

This document contains the Data Management Plan (DMP) designed for reSEArch-EU. The DMP consists of a thorough explanation of the common framework to implement for data collection, storing, sharing and publication in this Project. In the creation of the project proposal for reSEArch-EU, SEA-EU partners committed to creation of the DMP. Despite being an optional decision for H2020 Projects, SEA-EU partners considered the implementation of a DMP as a favourable step towards a better data governance.

## 1.2. Objectives

The aims of this DMP are varied and address different needs.

- Firstly, the DMP is a useful guide for those researchers who are involved in reSEArch-EU and require guidance for the management of the data they will be generating.
- Secondly, the DMP serves as an assessment tool for the European Commission to monitor how data collected and generated in reSEArch-EU is managed.
- Thirdly, the DMP holds an ambitious purpose, and intends to serve as a reference in data management for European Projects. The learnings acquired in its creation and evolution will be shared with external entities in different tasks of the project.

## 1.3. Rationale

The creation of the DMP is part of WP1 (Project Management), led by UCA, and of Task 1.3 (Quality Assurance and Ethics), led by UNIST. Therefore, the creation of this DMP requires a close collaboration between both partners.

Since all Project partners will have to deal with data management at some stage of their respective work in the Project, all partners will be consulted during the creation of the DMP and the final version of such a document will be submitted to the European Commission in M6 (June 2021).

## 1.4. Approval procedure and update

Although UNIST and UCA are the main partners responsible for the DMP, all partners will be consulted during the creation of this DMP. In addition, as stated in the Project Handbook of reSEArch-EU, the Data Management Plan will undergo a two-phase approval process prior to its submission to the European Commission:

- Firstly, the Quality and Ethics Subcommittee (QandES) will discuss and approve the document in a meeting that will take place on 2<sup>nd</sup> June 2021.
- Secondly, the Extended Executive Committee (Extended EC) will discuss and approve the DMP, once feedback, if any, of the QandES has been considered. This meeting will take place on 11<sup>th</sup> June 2021.

The DMP is by nature a living document; it would be neither realistic, nor efficient, trying to have a complete final version encompassing how all data will be managed in such an early stage of the Project. An appropriate implementation of the FAIR (findable, accessible, interoperable and re-usable data) data management principles implies the need of updating periodically the DMP through the life of the Project.

Every six months, partners responsible for the DMP (UNIST and UCA) will meet and discuss the possibility of updating the DMP. Should an updated version be agreed upon, the update proposal will be presented for approval to the QandES.

## 1.5. Relationship with other tasks and deliverables

The DMP is included within WP1 (Project Management), thus having a close link with a deliverable submitted in M3 (March 2021): The Project Handbook. The DMP draws from



the experience acquired in the creation of the Project Handbook and considers the governance structure of the project, work package distribution among partners and the list of deliverables and milestones to reach in the different phases of the Project. Data management and open science are deeply intertwined terms, and so are the DMP and WP5 (Building an open future: fostering open science across the SEA-EU community and beyond), led by UM. That is the reason why partners involved in the DMP will work closely with UM in respect to research data policies and implementation of Open Research Data Systems (Task 5.3).

Beyond its technical dimension, data management is also of great importance from an ethical perspective. Therefore, the DMP will be developed in parallel with the Ethics Self-Assessment, the deliverable of WP8 (Ethics Requirements, led by UCA), due to submission by M7 (July 2021). The latter will feed from the provisions of the former and will focus on all ethical issues that may arise in the development of the project.

## 1.6. Synergies with the SEA-EU project

Data management and data protection have been previously addressed in the SEA-EU project by the Ethics Manual. The experience acquired while compiling this document is useful for the preparation of the reSEArch-EU DMP.

## 2. Structure of the DMP

This document starts with a summary containing types of data handled in the Project, identification of tasks that collect such data, purpose and description, origin, format and utility of data collected.

Then, the DMP will follow the structure of the FAIR principles by addressing the following topics:

- Findability. This includes identification mechanisms, naming conventions, search keywords, version numbers and metadata that might be created.
- Accessibility. This section will encompass the publication policy in reSEArch-EU, and it will be specified what data will be made available and under which conditions, as well as the repositories that will be used to access data.
- Interoperability. This section will cover all policies implemented in reSEArch-EU with the aim of making data exchange with other researchers and institutions easier. Therefore, data and metadata vocabularies and standards for data types will be explained.
- Re-usability. This section will cover the protocols to be implemented in reSEArch-EU to allow and even promote re-use of the data collected and/or produced in the project by third parties in the future.

### 3. Data summaries by Work Package

The following tables display summaries of data that partners plan to collect and/or produce in the different research activities of their WPs:

Type of data	Task (s)	Description	Purpose	Origin (e.g., primary data, publicly available sources, etc.)	Public / restricted data
<b>Questionnaires</b>	2.3.	Survey of research fields, groups and situations where remote work is already practised	To explore existing remote work practises	Primary data	The data will be limited to the members of the SEA-EU Alliance
	3.1.	Survey on innovation and entrepreneurial potential of Alliance with HEInnovate.	The results from the survey will form the basis of a public Report (deliverable D3.1.)	Primary data	Public
	3.2	Creating a common patent base as the base for the Patent Landscape Tool	To identify strengths and weaknesses in the development of common technologies To plan future scientific cooperation within consortium members.	Primary data owned by the universities - patent database;  Purchasing of partial reports that will identify the competitive position of patent clusters	No
	4.1	Online questionnaire collecting information about universities' experience with involving non-	The information is analyzed and will be used for a final report (to be published online in Dec 2021)	Primary data from participants; publicly available sources (websites, publications)	Public

		academic stakeholders (may+june 2021). In addition information case studies (running projects or finished projects) are collected. A template (word document) is used to collect the information from all partner universities			
	5.1	Survey of best practices in Open Science	A Scoping survey will be undertaken to identify the 'state of play' of Open Science practices at each SEA-EU university.	Primary data	Public
	6.2	Survey	To aks questions to Principal Investigators of all Research Units of the Alliance + multivariate analysis	Primary sources	The data collected will be limited to the members of the SEA-EU Alliance
<b>Images</b>	4.2	Photos (if available) taken from pilot activities:  Market Place, Transformation Labs, Science Shop and Citizen Science Contest	Communication to the public via Website, Brochure, Social media, Traditional media (press, radio, TV)	Created by Project team	Public

	5.2	Staff Week	Dissemination purposes	Primary data	Public
	5.3	Exchanges	Dissemination purposes	Primary data	Public
	5.4	Information sessions & Visits	Dissemination purposes	Primary data	Public
	5.5	Webinar	Dissemination purposes	Primary data	Public
<b>Audio files</b>					
<b>Video files</b>	3.1.	Workshop minutes	To record proceedings that take place at the workshops.	Primary data	Restricted
<b>Documents (Deliverables, reports, manual, power point, white paper, policy paper).</b>	2.1.	AFTT rules of procedure and key areas of impact.	Rules of the procedure, identification of anti-fragility sources and key areas of impact in universities will be set to guide the alliance in time of unforeseen events.	Primary data	Public
	2.2.	Digital transformation of research and innovation roadmap.	Roadmap for digital transformation will be developed according to identified shared goals, actions, experiences and barriers, aimed at exploiting the opportunities and	Primary data	Public

			building resilience of the alliance.		
	2.3.	Remote work and remotization of infrastructure case study.	A case study on remote work and remotization as tools towards achieving Alliance anti- fragility.	Primary data	Public
	2.4.	SEA-EU Academy constituted with guiding principles.	SEA-EU Academy will be constituted as a virtual teaching space for the capacity building of the alliance	Primary data	Public
	2.5	SEA-EU position paper on the footprint of R&I activities	Paper presenting context of the action and methodology on how to consider the 'ecological footprint of profesional activities in R&I	Primary data	Public
	3.1.	Summary report on Innovative and Entrepreneurial potential of the SEA-EU.	Report will will help to design solutions tailored to the Alliance's needs for a strategic approach to innovation and entrepreneurship .	Primary data	Public
	3.2	Patent Landscape Tool Development (creation of a joint database of patents and patent applications of	1. Supporting the development of a research unit's intellectual property strategy; 2. Identification	Primary data	Public

		SEA-EU Alliance members) + Patent Landscape Report	of emerging technologies and technology trends in the industry;  Identification of inventors' networks and scientific trends in industries and between countries.		
	3.3	Sharing best practices in IPR management through Virtual TTO: Reports of common ventures, both from IP protection and commercialization of IP perspective + presentations (pptx) for 6 workshops planned in this task.	Mapping and analysing the IPR management practices	Primary data	Public
	3.4.	Exploring innovation and entrepreneurial potential of Alliance with SEA Innovate HUB - Marketplace Tool needs to be developed	Looking for new approach, new forms of collective action between public and private stakeholders, and new solutions in order to address social challenges through innovation.	Primary data	Public
	3.5	Spin-off Competence Lab:  Virtual surveys used to configure	Development of a competence laboratory dedicated to early stage researchers and offering	Primary data	Public

		<p>the modules of the programme</p> <ul style="list-style-type: none"> <li>Assessment of the current trends and challenges related to entrepreneurship and digital competences.</li> </ul> <p>Report on the experience and results of delivered workshops and webinars</p>	<p>virtual training.</p> <ul style="list-style-type: none"> <li>Acquisition of hard skills: knowledge on intellectual property rights (IPR) and innovation management.</li> </ul> <p>Improvement of soft, “future-proof” skills: problem-solving, self-management, entrepreneurial abilities.</p>		
	4.1	Report on stakeholder engagement (to be published online in Dec 2021)	Project documentation	Created by Project team	Public
	4.3	Good practice guide for transdisciplinarity and stakeholder engagement (to be published in 2023)		Created by Project team	Public
	5.1	Report of best practices on Open Science.	Topics: procedures, methodologies and resources that are currently in place that relate to open data management practices	Primary data	Public
	5.2	Open Research Data Policies	The policies will be developed and agreed with	Primary Data	Public



			terms of reference that encompass the national, regional and/or university policies on data management and data sharing.		
	5.2	SEA-EU Open Research Data Toolkit	A tool-kit will be developed, to provide guidelines for the implementation of these open research data policies.	Primary Data	Public
	5.3	Design of SEA-EU Open Research Data System	Support the design of tangible organisational frameworks and common procedures and practices that will be implemented across the SEA-EU universities	Primary Data	Public
	5.4	Plan Open Science Ambassadors programme - Training Documents	Ambassadors will be trained to participate and develop a better understanding of their role. Each university will have a dedicated mentor to follow and guide these ambassadors	Primary Data	Public
	5.5	Training Workshops documents/presentations	A series of internal Training Workshops (4), part of a Training Programme, will	Primary Data	Public

			be held for staff at each of the SEA-EU universities to promote and showcase the benefits of open science, of working collaboratively with open research data, and coping with its various challenges		
		Webinar minutes	To record proceedings that take place at the webinar.	Primary Data	Public
	5.1-5.5	Meeting minutes	To record proceedings that take place at meetings.	Primary Data	Restricted
	6.1	Deliverables from the project, databases	Production of a Digest paper which will be published.	Primary data, publicly available sources, other deliverables from the project	The digest paper will be public
	6.2	Deliverables from the project, databases	Definition of a Long-Term Research Agenda	Primary data, publicly available sources, other deliverables from the project	The Long-Term Research Agenda will be limited to members of the SEA-EU Alliance
<b>Software</b>					

Web content	2.4.	SEA-EU Academy platform	Impact the capacity building of human capital at SEA-EU universities.	Primary data	Public
	4.1/4.2/4.3	Report on all activities on the reSEArch-EU website	Project documentation; public relations	Created by Project team	Public
	7.1.	Report on all activities on the reSEArch-EU website	Dissemination purposes	Primary data	Public

## 4. FAIR Data Management in reSEArch-EU

### 4.1. Findability

To ensure that all data generated and made available in reSEArch-EU is easily findable, project partners will have three tools at their disposal: identifiers, naming conventions and version control.

- *Identifiers.* There are two possibilities: either assigning a Zenodo DOI to documents uploaded to Zenodo (see Accessibility) or assigning a non-Zenodo DOI in case they are initially published in a scientific journal.
- *Metadata.* Embedded metadata in the documents uploaded will include authors, title, keywords, the project where the document or dataset is inserted, date, time and versions.
- *Naming conventions and version control.* All datasets uploaded to the repositories will follow this naming scheme: Date[year-month-day]\_keywords\_v[number]. This will facilitate identification, time allocation and clarity to differentiate diverse versions of the same document that might have been created over time.

## 4.2. Accessibility

- *Repository.* As stated in the above paragraphs, reSEArch-EU will make use of the Zenodo repositories. A SEA-EU Community will be created, and within it a collection for reSEArch-EU.
- *Access and publication policies.* reSEArch-EU holds a commitment towards open science and the freedom to access knowledge beyond borders and with minimum restrictions. Depending on the data, different degrees of access may be established:
  - Access limited to researchers of the project.
  - Access limited to all Universities of the SEA-EU Alliance.
  - Unlimited access to the general public.

The final decision on the upload of a dataset to the repository will be made by the WP Leader responsible for it, who will ponder:

- The scientific interest of the dataset to be uploaded.
- The legitimate rights (e.g., safety, privacy, personal data protection) of the people involved in the creation of the dataset.

## 4.3. Inter-operability

The diverse nature of research matters covered in reSEArch-EU makes necessary to adopt a flexible approach with regards to data vocabularies, standards and methodologies.

In every case, discussions will be held between participants in the different WPs and the Data Management Coordinators to agree on ad hoc data classifications that might improve inter-operability in certain cases.

## 4.4. Re-usability

The possibility of the data collected and made available to be used by researchers in other disciplines or projects makes necessary to clarify certain aspects regarding licenses for use, embargoes and restrictions and longevity of the datasets.

- *License.* The by-default option to follow by documents uploaded will be the adoption of a Creative Commons License for Attribution, Non-Commercial, No-Derivates 4.0 International (CC BY-NC-ND 4.0). In all cases, the final decision will have to be made by the WP Leader in charge of the production of the document to be licensed.
- *Longevity.* Depending on the decisions made by the Alliance, common decisions on the longevity of documents on Zenodo or potential migrations to other repositories will have to be made as Alliance.

## 5. Allocation of resources and data security

### 5.1. Cost associated to FAIR data management

Since reSEArch-EU will make use of an open-source, freely available tool such as *Zenodo* as repository, the implementation of this Data Management will not suppose additional costs to those already planned in the project proposal.

### 5.2. Responsibilities for data management in reSEArch-EU

A two-dimension scheme for the allocation of responsibilities with regards to data management in reSEArch-EU has been established. Two main roles will be established:

- The Data Management Coordinator (DMC). As Leader of WP1 and Coordinator of the SEA-EU and reSEArch-EU projects, UCA will assume the role of DMC, being its responsibilities the following:

- Submission of the DMP to the European Commission.
- Communications with the European Commission in all matters related to data management.
- Guidance and assistance to other partners in the implementation of this DMP.
- Ensuring general compliance with the terms established in this DMP for data management.
- The Data Management Operators (DMO). Since all partners will be involved in data management as part of their respective research activities, all of them will have the status of DMO, which will give them the following functions:
  - Collection of data in their respective research activities, in compliance both with data management established procedures.
  - Uploading of research data to the repositories on behalf of researchers.
  - Suggestions of review and updates of the DMP.

## 6. Future updates

This DMP must be designed in an early moment within the life of the project when several issues are still to be developed and brought to life. Therefore, it is to expect that their unfolding will bring changes to data management structures and procedures; all of them will be reflected in future updated versions of this DMP. The Data Management Plan is a living document and over the course of the project it will be updated whenever significant changes arise, such as (but not limited to):

- New data.
- Changes in consortium policies.
- Changes in consortium composition and external factors (e.g. new consortium members joining or old members leaving).

## 6.1. Pending issues

The following list is non-exhaustive and it covers some of the issues that will be addressed in depth in future versions of this DMP:

- Resources for long-term preservation of research data.
- Nomination and work schedule of data management operators.
- Relations between the promotion of open science and open research data with patents and IPR management.
- Complete data categories (see Annex I).
- Metadata formats and standards that ensure compliance with open software applications.

## 6.2. Tentative timetable for updates

As stated in section 1.4 of this document, the DMP will be revised on a periodic basis by the project partners in charge of its creation (UCA and UNIST), with the collaboration of all project partners. Taking the submission of the first version as a reference, the following timetable for updated of the DMP is proposed.

Type of update	Date
<b>Ordinary review</b>	M12 (December 2021)
	M18 (June 2022)
	M24 (December 2022)
	M30 (June 2023)
	M36 (December 2023)
<b>Extraordinary review</b>	When agreed by partners at the reSEArch-EU Technical Working Group

# Annex I. Template for comprehensive data classification

## Management of documents

Documents	Task	Purpose and description	Format	Data utility	Origin	Data openly available	Justification	Ethics approval needed



## Management of questionnaires

Questionnaires	Task	Purpose and description	Format	Data utility	Origin	Data openly available	Justification	Ethics approval needed

### Management of images, audio and video files

Images, audio files, video files, software and portal	Task	Purpose and description	Format	Data utility	Origin	Data openly available	Justification	Ethics approval needed