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RECYCLING OF WASTE ACRYLIC TEXTILES

D8.16 - Data Management Plan

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Abstract	The data management plan describes what data the project will generate, how they will be produced and analysed. It also aims to detail how the data related to the project will be disseminated and afterwards shared and preserved.
Keywords	GDPR, Consortium Agreement

Document Revision History

Version	Date	Description of change	List of contributor(s)
V0.1	11/11/2019	ToC	Daniele Piga, Roberto Vannucci
V0.2	13/12/2019	Revision 2	Donatella Macchia, Daniele Piga (Centrocot)
V0.3	20/01/2020	Internal review	Roberto Vannucci (Centrocot)

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Acknowledgment

** R: Document, report (excluding the periodic and final reports)*

DEM: Demonstrator, pilot, prototype, plan designs

Project co-funded by the European Commission in the H2020 Programme		
Nature of the deliverable:	Report	
Dissemination Level		
PU	Public, fully open, e.g. web	
CI	Classified, information as referred to in Commission Decision 2001/844/EC	
CO	Confidential to REACT project and Commission Services	✓

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc

EXECUTIVE SUMMARY

This deliverable has been created in the context of the Work Package 8 (Work Plan, coordination and document management) of the H2020-funded project REACT (Grant No. 820869).

The deliverable refers to the deliverables delivered in the past. During the first half of the project, any problems arising from the GDPR, IPR, Consortium Agreement, etc. regulations were analysed and managed.

The deliverables in question are:

- D7.1 - Dissemination and exploitation strategy and plan;
- D8.1 - Project quality and contingency plan;
- D9.3 - POPD - Requirement No.3

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ABBREVIATIONS

DMP	Data Management Plan
FAIR	Findable, Accessible, Interoperable and Re-usable
ORDP	Open Research Data Pilot
KPI	Key Performance Indicator

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1 INTRODUCTION

A Data Management Plan (DMP) describes the data management cycle for the data to be collected, processed and/or generated by a Horizon 2020 project. In Horizon 2020, as projects should aim to make their research data Findable, Accessible, Interoperable and Re-usable (FAIR), this should be reflected in the DMP.

All projects generating or collecting data need to create a DMP, except if they opt out of the Open Research Data Pilot (ORDP). However, projects that opt out are still encouraged to submit a DMP on a voluntary basis. The DMP is not submitted a proposal stage, since participation in the ORDP is not an evaluation criterion. The DMP is an early deliverable within six months after the project has started. It should be updated during the project as appropriate.

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2 SCOPE OF THE DOCUMENT

This document is a deliverable of the REACT project, which is funded by the European Union's. It describes what data the project will generate, how they will be produced and analysed. It also aims to detail how the data related to the project will be disseminated and afterwards shared and preserved. It covers:

- the handling of research data during and after the project.
- what data will be collected, processed or generated.
- what methodology and standards will be applied.
- whether data will be shared/made open and how.
- how data will be curated and preserved.

The DMP is not a fixed document. On the contrary, it will have to evolve during the lifespan of the project. This first version of the DMP includes an overview of the datasets to be produced by the project, and the specific conditions that are attached to them.

An updated version of the DMP will get into more detail and will describe the practical data management procedures implemented by the REACT project.

2.1 Information about the project

The following table provides synthetic information about REACT

Name	**Recycling of waste Acrylic Textiles**
Acronym	REACT
Project Objectives	REACT proposal will address the management of waste acrylic textiles coming from outdoor awnings and furnishing. A clue issue is the analysis and removal of finishing substances (fluorocarbons, melamine and acrylic resins, anti-mold agents) that affect the secondary raw material purity and their management. Then a mechanical recycling process will be implemented to obtain second life fibre and fabrics, which performance will be tested for best application. A full environment friendly process to remove hazardous materials on finishing of waste acrylic textile will be investigated and developed to enhance their recycling, improve sustainability and reduce environmental and health risk. The removing of finishing products via chemical reaction will involve the combination of many factors and has never been studied in this sector. Final goal is a fully compatible recycled acrylic textile for reuse and guidelines for hazardous chemicals removing from finished textile with innovative investigation techniques. The main objectives are therefore: to remove those substances up to 93%; re-use the acrylic textiles as raw material for other production cycles, also in combination with virgin fibres to reach 3,300 tons total of waste prevented from disposal; reduce the amount of landfill and incineration of acrylic textiles of at least 30% for the outdoor sector (awnings and furnishing). At the end of the project, we aim to set recommendations on the design and manufacturing of materials for recyclability and on the recycling process for standardization of the whole process, that would be applied on other sectors.
Members of the consortium	• Centro Tessile Cotoniero e abbigliamento S.p.A. (Italy) • University of Gent (Belgium) • CETI (France) • Parà S.p.A. (Italy)

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	• Soft Chemicals S.r.l. (Italy) • Jak Spinning (Hungary) • Martel GMBH (Switzerland)

Table 1 : REACT project

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3 DATA SUMMMARY

This chapter provides a summary of the data addressing the following issues:

- State the purpose of the data collection/generation
- Explain the relation to the objectives of the project
- Specify the types and formats of data generated/collected
- Specify if existing data is being re-used (if any)
- Specify the origin of the data
- State the expected size of the data (if known)
- Outline the data utility: to whom will it be useful.

The most of data will from software used for experimental setups and equipment used. The format of the data and associated metadata will be mainly electronic, and will include lab measurements and records, schemes, technical protocols, the datasheets and performances of the technological developments of the project, the validation results with the KPIs used to evaluate the system performances, meeting presentations, videos and validation and integration data.

More in detail, the project partners have identified the dataset that will be produced during different phases of the project. The list is provided below. This list is indicative and will be adapted if needed (addition/removal/modification of datasets) in the next versions of the DMP.

Data set name	**Docs**
Types of data	Documents
Format	.docx, .doc, .rtf, .xlsx, .xls, .pptx, .ppt, .pdf, .xps, .txt
Source	These data come from: • Protocols elaborated by the partners • Project meetings (presentations, other supporting documents), exchange of ideas • Group meeting discussions transcribed to documents • Literature review • Documents with search details (databases, strategies, results) and reviews
Reuse and sharing	The partners share and reuse the Documents.
Archiving and preservation (including storage and backup)	The data will be stored by the partner collecting it (on their own computers and/or institutional servers).

Table 2 : Types of documents

Data set name	**Video**

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Types of data	Video files
Format	.avi, .mp4, .m4p, .m4v, .mpg, .mp2, .mpeg, .flv
Source	These data come from: • Presentation and dissemination of project • Project meetings • Laboratory activities
Reuse and sharing	All partners have access to files. The files are used in publications and presented at meeting, and sharing on Social media and web-site project
Archiving and preservation (including storage and backup)	The data will be stored by the partner collecting it (on their own computers and/or institutional servers).

Table 3 : Types of video

Data set name	**Image**
Types of data	Images files
Format	tif, .tiff, .gif, .jpeg, jpg, .png, .pdf, .psd, .bmp.
Source	These data come from: • Dissemination of project • Project meetings • Conferences, congresses, fairs, etc. • Laboratory activities
Reuse and sharing	All partners have access to files. The files are used in publications and presented at meeting, and sharing on Social media and web-site project
Archiving and preservation (including storage and backup)	The data will be stored by the partner collecting it (on their own computers and/or institutional servers).

Table 4 : Types of images

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4 FAIR DATA

4.1 Making data findable, including provision for metadata

Fair data mean:

- Outline the discoverability of data (metadata provision)
- Outline the identifiability of data and refer to standard identification mechanism. Do you make use of persistent and unique identifiers such as
- Digital Object Identifiers?
- Outline naming conventions used
- Outline the approach towards search keyword
- Outline the approach for clear versioning
- Specify standards for metadata creation (if any). If there are no standards in your discipline describe what metadata will be created and how.

The data collected/generated will be standardized, when is possible. The project data are stored in a specific folder on local computers/servers of partners. To enable an efficient and ordered management of all the documentation and other artefacts generated during the execution of the project activities, and to ensure their availability to all members of the consortium, a "Nextcloud" repository was created by the partner responsible for communication. (https://drive.martel-innovate.com/). It serves for management of working documents, reports, official outputs, and deliverables as well as for the exchange documents.

The metadata/report will be made every time a set of data, results or protocol is generated, the files will contain the information to make the data FAIR prior the deposition and storage.

The open data bibliography, as described in Art. 29.2 in the Grant Agreement of REACT, must be in a standard format and must include all the following:

- the terms "European Union (EU) and "Horizon 2020";
- the name of the action, acronym and grant number;
- the publication date, and length of embargo period if applicable;
- a persistent identifier.

The publications resulting from REACT will have the acknowledge of European Union for the financial support: "REACT project has received funding from the European Union's H2020 research and innovation programme under grant agreement N° 820869"

The Deliverable will be written with the following rules:

	Rule	Exceptions
Nomenclature	deliverables will follow the naming convention: DX.Y-<Title>_vZ	For undeliverable documents, these rules may not apply. However, try to stick to the rule as much as possible.
Templates	Deliverables, Pages Agenda and Minutes template in Word. Presentation template in PowerPoint.	The templates created using other editing tools/format, should be also made available in the templates folder of the Nextcloud

Table 5 : Overview of Deliverables

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The Reports will be written with the following rules:

	Rule	Exceptions
Nomenclature	reports will follow the naming convention: RX.Y-<Title>_vZ	For undeliverable documents, these rules may not apply. However, try to stick to the rule as much as possible.
Templates	Reports, Pages Agenda and Minutes template in Word. Presentation template in PowerPoint.	The templates created using other editing tools/format, should be also made available in the templates folder of the Nextcloud

Table 6 : Overview of document management rules

4.2 Making data openly accessible:

Openly accessible data mean:

- Specify which data will be made openly available? If some data is kept closed provide rationale for doing so
- Specify how the data will be made available
- Specify what methods or software tools are needed to access the data? Is documentation about the software needed to access the data included? Is it possible to include the relevant software (e.g. in open source code)?
- Specify where the data and associated metadata, documentation and code are deposited
- Specify how access will be provided in case there are any restrictions.

The data will be made open if it is possible. The datasets will be primarily used by the Consortium to address the REACT project objectivise. The specific identification of closed data, or data subjected at embargo will be decide by Consortium after discussion in periodical meeting or conference calls. The open data after publication and used by Consortium will be shared with community through project website, publications, etc. On the project website are present a dedicated area for the open data documents, videos, publications, etc. (https://www.react-project.net/resources/).

4.3 Making data interoperable

Interoperable data mean:

- Assess the interoperability of your data. Specify what data and metadata vocabularies, standards or methodologies you will follow to facilitate interoperability.
- Specify whether you will be using standard vocabulary for all data types present in your data set, to allow inter-disciplinary interoperability? If not, will you provide mapping to more commonly used ontologies?

In broad terms, interoperability is the ability of different information and communications technology systems and software applications to communicate, to exchange data accurately, effectively, and

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consistently, and to use the information that has been exchanged. Data interoperability is the ability to interpret correctly data across systems or organizational boundaries.

Interoperable data means it can be integrated with other data, applications and workflows.

REACT makes your data interoperable by using a common formats and standards (Cf. Table 2 : Types of documents, Table 3 : Types of video and Table 4 : Types of images).

4.4 Increase data re-use (through clarifying licenses):

Increase data re-use mean:

- Specify how the data will be licenced to permit the widest reuse possible
- Specify when the data will be made available for re-use. If applicable, specify why and for what period a data embargo is needed
- Specify whether the data produced and/or used in the project is useable by third parties, in particular after the end of the project? If the re-use of some data is restricted, explain why
- Describe data quality assurance processes
- Specify the length of time for which the data will remain re-usable.

The data re-use is governed by Grant Agreement Article 26.2 with the following additions:

Unless otherwise agreed:

- each of the joint owners shall be entitled to use their jointly owned Results for non-commercial research activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s), and
- each of the joint owners shall be entitled to otherwise Exploit the jointly owned Results and to grant non-exclusive licenses to third parties (without any right to sub-license), if the other joint owners are given:

  (a) at least 45 calendar days advance notice; and

  (b) Fair and Reasonable compensation.

During the Project and for a period of 1 year after the end of the Project, the dissemination of own Results by one or several Partner including but not restricted to publications and presentations, shall be governed by the procedure of Article 29.1 of the Grant Agreement subject to the following provisions.

Prior notice of any planned publication shall be given to the other Partner at least 45 calendar days before the publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Coordinator and to the Partner proposing the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

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5 ALLOCATION OF RESOURCES

This chapter explains the allocation of resources, addressing the following issues:

- Estimate the costs for making your data FAIR. Describe how you intend to cover these costs
- Clearly identify responsibilities for data management in your project
- Describe costs and potential value of long term preservation.

The responsibilities for data management, storage and use by partner on their own computers and/or institutional servers will be assigned at the project manager for each partner.

The data will be communicated at European Commission are under the responsibility of the CENTROCOT, they will be previously written by the collaborators and the final revision will be approved by project coordinator.

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6 DATA SECURITY

Data security means to address data recovery as well as secure storage and transfer of sensitive data.

The controller and the processor shall implement appropriate technical and organisational measures to ensure a level of security appropriate to the risk, including:

- Pseudonymisation and encryption of data – data will be pseudonymised as long as it does not affect the impact of the project, i.e. the accuracy to provide personalized recommendations;
- Ability to ensure the ongoing confidentiality, integrity, availability and resilience of processing systems and services. In REACT, access to the database will be performed after a process of authentication/authorization so access will be ensured only for allowed people;
- Ability to restore the availability and access to data in a timely manner in the event of a physical or technical incident – periodic backups will be performed in REACT;
- A process for regularly testing, assessing and evaluating the effectiveness of technical and organisational measures for ensuring the security of the processing.

Measures to protect storage of personal data must be checked and compliance to guidelines from ISO/IEC 27000 "Information Security Management Systems" series.

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7 ETHICAL ASPECTS

Ethical aspects must be covered in the context of the ethics review, ethics section of DoA and ethics deliverables. Include references and related technical aspects if not covered by the former

No ethical issue has been identified.

As it was mentioned, REACT will not manage any sensitive data. However all ethics aspects related with the project were detailed in Deliverables 9.1, 9.2 and 9.3.

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8 OTHER

This chapter refers to other national/funder/sectorial/departmental procedures for data management that are used.

This DMP has been created with the tool “DMPonline” (https://dmponline.dcc.ac.uk/) following the Guidelines on FAIR Data Management in Horizon 2020 and on the Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020.

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