JUST2CE

A Just Transition to Circular Economy

DATA MANAGEMENT PLAN

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JUST2CE
A Just Transition to Circular Economy

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Topic: Understanding the transition to a circular economy and its implications on the environment, economy and society

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Coordinator: Universitat Autònoma de Barcelona (UAB)

Associated Beneficiaries:

1. UNIVERSITAT AUTÒNOMA DE BARCELONA
2. UNIVERSIDAD DE VIGO
3. THE UNIVERSITY OF SHEFFIELD
4. UNIVERSITA DEGLI STUDI DI NAPOLI PARTHENOPE
5. CENTRO DE ESTUDOS SOCIAIS
   - UNIVERSIDADE DE SANTIAGO DE COMPOSTELA
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13. AFRICAN CIRCULAR ECONOMY NETWORK
14. ENERGY@WORK SOCIETA' COOPERATIVA A R.L.

JUST2CE

A Just Transition to Circular Economy

PROJECT No. 101003491

Just2ce will assess the current state of transition towards the circular economy in relevant economic sectors and analyse possible transition scenarios, as well as their outcomes and impacts. It will identify the key factors that can stimulate or hinder this transition. Natural resources are extracted and transformed into products, which are eventually discarded. As many natural resources are finite, it is important to keep materials in circulation for as long as possible. This makes the transition to circular economy more vital than ever but is a responsible, inclusive, and socially just transition to a circular economy possible or even desirable? What technical, political, and social factors can enable or hamper such transformation? The EU-funded JUST2CE project will answer these questions. It will explore the economic, societal, gender and policy implications of the circular economy paradigm. The project's findings will shed light on how to ensure democratic and participatory mechanisms when designing and managing such technology.

History Chart

Version	Date	Implemented by
V2.0		
V1.1		
V1.0	24.02.2022	UAB

Disclaimer

Executive Summary

This Data Management Plan (DMP) defines the data management policies that are followed during the execution of JUST2CE project and provides an overview of all the datasets that are collected and generated. It describes the types of data that are collected, processed or generated, how the data is handled during and after the project and the measures that are taken to ensure that the data collected or generated follows the FAIR principles of EU Horizon 2020 projects, ensuring that the data is finable, accessible, interoperable and reusable. The plan discusses the used metadata standards and identifiers, repositories for making the data available as well as quality assurance methods and reusability.

JUST2CE will participate in the Horizon 2020 Open Research Data Pilot, meaning that the partners are committed to give open access to the research data generated, following the as 'open as possible, as closed as necessary' -principle.

The DMP is a living document and it will be updated when significant changes are taking place that affect the type or handling of the data. Updated DMP will be submitted on month 36.

Table of Contents

List of abbreviations

AB	*Advisory Board*
DMP	*Data Management Plan*
EC	*European Commission*
GA	*Grant Agreement*
PB	*Plenary Board*
PC	*Project Coordinator*
PM	*Project Manager*
PU	*Public*
QCB	*Quality Control Board*
SOTA	*State-of-the-art*
TL	*Task Leader*
WP	*Work Package*
WPL	*Work Package Leader*

1. Project abstract

JUST2CE aims at understanding, in critical and thoughtful way, under which conditions a responsible, inclusive and social just transition to a circular economy is possible and desirable, what technical, political and social factors can enable or hamper such transformation and how these aspects can contribute to the development of transitional policy measures. The project will identify enablers and barriers to CE in a number of key strategic sectors. The results of this analysis will be used to develop a decision support system and macroeconomic analytical tools to design new or improve existing CE practices.

2. Dataset summary

2.1 Purpose of the data collection and generation

WP1 aims to deliver a comprehensive review of current applications of CE. Data will be collected to create a Global Atlas of CE practices and initiatives.

In WP2 data will be collected in order to develop a mixed qualitative-quantitative database of case studies to develop a multidimensional analytic framework that will guide data collection guaranteeing high standard qualitative research when conducting case studies by all partners.

Primary quantitative and qualitative data about CE activities in the 10 cases studies will be integral to JUST2CE activities. Data will be collected and analysed to develop an integrated tool capable of framing the circular economy paradigm (Integrated Support System, DSS WP4) around environmental justice and gendered innovation, which will combine several evaluation methods. Based on the previous analysis, systemic models for aiding policy design and evaluation at a meso- and macro-level will be developed and will represent the first attempt to construct a macroeconomic synthesis capable of exploring the environmental, social, economic and financial effects of the transition towards a Circular Economy.

WP3 aims to develop a framework for designing circular economy practices that include the principles of RRI. Data will be generated to deliver RRI training to the members of the consortium and their associated partners and to inform scholars, practitioners and policymakers about deliberative methods to image a transition to Circular Economy.

WP4 aims to develop an integrated tool capable of framing the circular economy paradigm around global environmental justice and gendered innovation (DSS). The DSS will be developed performing data-driven analytics and will combine several evaluation methods capable of assessing the degree of circularity of a given unit of analysis.

WP5 aims to develop a suite of macroeconomic multidimensional models based on a Stock-Flow Consistent Input-Output paradigm, and will represent the first attempt to construct a macroeconomic synthesis capable of exploring the environmental, social, economic and financial effects of the transition to CE. Data will be collected from the case studies.

In WP3, WP4 and WP5, data will be mainly extracted from secondary sources, and it will use data generated from WP2.

WP6 aims to raise awareness and efficiently disseminate the knowledge generated in JUST2CE to all the actors of the society from stakeholders to researchers in view of maximizing the impact of JUST2CE's outcomes in specific fields of circular economy. Data will be collected to make project's best practices accessible to a wide range of stakeholders enabling exploitation and transfer of knowledge.

The main goal of WP7 is to ensure a timely execution of the project and the accomplishment of its objectives. The policies and guidelines for handling all the data collected, processed and generated during JUST2CE will be set as a part of WP7.

WP8 sets out the 'ethics requirements' that the project must comply with. The policies for handling personal data will be included in the data protection policy.

2.2 Collected and generated data

Due to the comprehensive multi-aspect approach of JUST2CE, the information will be collected from various sources. Information regarding the origin, type, format and size of datasets collected or generated during the implementation of JUST2CE were collected from each beneficiary. Types of data collected during the JUST2CE project will include:

- Derived data, derived from the experimental data, literature data and statistical data

- GPS coordinates

- Survey and interview data, from JUST2CE partners, potential stakeholders and focus groups

- Methodologies and workflows, standard operating procedures

- Multimedia documents (reports, spreadsheets, presentations) to present JUST2CE data

- Documents, spreadsheets

- Images

- Videos

- Transcription data (interviews)

- Recorded data (interviews)

- Field notebooks

- Secondary data from scientific and nonscientific sources

The main formats of data generated/collected will include:

- Reports, spreadsheets, presentations - Microsoft Office formats, .pdf

- Observed data (experimental) - original format, .csv, .txt

- Images – .jpg, .gif, .png, svg

- Audio – .mp3, mp4

- Videos – .mpg, .avi, .mp3, mp4

These data will be anonymized, processed and analyzed manually or using software. Whether recorded or not, the event will be transcribed or documented using agreed formats and standards for handling the issue of multiple voices, interruptions, labelling of participatory and visual activities, and so on.

In any case, a letter explaining the purpose, approach and dissemination strategy (including plans to share data) of the research, and an accompanying consent form (including to share data) will be prepared and translated into the relevant languages. A clear verbal explanation will also be provided to each interviewee and focus group participant. The collection of personal data will be limited to strictly necessary data and conducted in a manner that is appropriate for the domain and application. A strategy of anonymization will be adopted for the data collected during the case studies.

Fully anonymised data arising from interviews and focus groups will not be shared, unless explicit consent was given by respondents. When the data cannot be anonymized completely, it will be pseudonymized as much as possible. The key between the pseudonymized file and the list of participants will be stored by the project management on a separate physical location from the original files.

In case interviewees may be more comfortable if some sections of their interview are not recorded or made public, recording will be paused or sections of text will be expunged from shared transcripts, and an indication made that this is the case.

2.3 Reuse of existing data

Just2ce will use secondary data sources: secondary literature, grey literature, databases, models and case studies of past and current initiatives on CE will be collected as part of an effort to establish a comprehensive knowledge base across WP1-5.

Existing data from past previous reviews of the consortium will be also used for the purpose for any WP

2.4 Origin of existing data

The data will be derived from numerous sources throughout the project, including:

- Literature

- External databases

- Stakeholders

- From JUST2CE partners

- Data subjects (surveys, interviews, training workshops, questionnaires)

2.5 Size of the data

Different data formats provide for different storage sizes and needs. Interview texts, user manuals, internal documentation, internal and public reports and evaluation questionnaires will be small. Audio and image will be medium or large. Software components, video and content enrichments are expected to be large.

WP	Types of data size	Estimated
WP1	Analytical data (.xlsx, .csv)	<500MB
WP2	Analytical data (.xlsx, .csv)	<500MB

WP3	Analytical data (.xlsx, .csv)	<500MB
WP4	Analytical data (.xlsx, .csv)	<500MB
WP5	Analytical data (.xlsx, .csv)	<500MB
WP6	Website user data and event registrations	<500MB
WP7	Documentation (.xlsx, .docx, .pdf) Sample Lifecycle Management System (.xlsx)	<100MB <100MB
WP8	Documentation (.xlsx, .docx, .pdf)	<100MB

2.6 Data utility

The generated data will be useful for JUST2CE consortium partners for their own research and for exploitation of the data generated in the project. Datasets will be actively shared within the consortium to ensure successful transfer of knowledge. In addition, the generated data will be of interest for researchers working on related fields.

The generated data will also raise awareness to all societal actors (general audience, stakeholders, researchers and policymakers) on the solutions that JUST2CE project can provide for evaluating the feasibility of the transition to the circular economy.

3. FAIR data and resources

3.1 Making data findable

3.1.1 Naming conventions

To ensure that the data is findable, all the data objects will be made uniquely and persistently identifiable. A consistent naming convention will be used to link the documents to other data in the project. The naming convention to be used for documents in the JUST2CE project will be as follows:

JUST2CE_WPX_L_N_YYYYMMDD_vX.Y	
WPX	Work Package This can be left out for documents that are not related to a specific WP.

L	Label and number of the dataset/document
	Examples:
	    Deliverable 7.2– D7.2
	    Technical report M24 – TR_M24
	    Financial report M24 – FR_M24

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N	Name of the dataset/document
YYYYMMDD	Date
vX.Y	Version

Version numbers incremented at each revision will be included in the filenames. The version control will be as follows:

- Initial drafts (before submission) will be labelled as v0.X

- Revisions to draft prior to submission will be numbered in ascending order (e.g. v0.1, v0.2, v0.3)

- The submitted document (final draft) will be labelled as v1.0

- If a document needs to be resubmitted, or requires major changes, the first number in the version identifier will increase by 1 (e.g., v1.0 will become v2.0)

3.1.2 Metadata

Descriptive metadata is essential for allowing also stakeholders to re-use the generated data set. The metadata will include information on how the data where generated and how the data will be re-used.

The relevant metadata and each presentation will depend on the type of the data set and the used repository.

The metadata standard used to describe the dataset will be the Dublin Core Schema (DC), as it is a flexible and commonly used standard and is also the one adopted by the European OpenAIRE repository. If any extensions are needed the Data Document Initiative (DDI) will be included (see Table below).

DC Element	DDI Element	Notes
Title	<titl> 2.1.1.1	Title of Data Collection
Title	<titl> 2.1.1.1	Title of Data Collection
Creator	<AuthEnty> 2.1.2.1	Authoring Entity of Data Collection
Subject	<keyword> 2.2.1.1	Keyword(s)
	<topcClas> 2.2.1.2	Topic Classification
Description	2.2.2	Abstract
Publisher	<producer> 2.1.3.1	Producer of Data Collection
Contributor	<othId> 2.1.2.2	Other Identification/Acknowledgements - Data Collection

Date	<prodDate> 2.1.3.3	Production Date - Data Collection
Type	<dataKind> 2.2.3.10	Kind of Data
Format	<fileType> 3.1.5	Type of File
Identifier	<IDNo> 2.1.1.5	ID Number - Data Collection
	<holdings location="" callno="" URI=""> 2.1.8	Holdings Information - Data Collection
Source	<sources> 2.3.1.8	Sources - Used for Data Collection
Language		
Relation	<othrStdyMat> 2.5	Other Study Description Materials
Coverage	<timePrd> 2.2.3.1	Time Period Covered
	<collDate> 2.2.3.2	Date(s) of Data Collection
	<nation> 2.2.3.3	Country
	<geogCover> 2.2.3.4	Geographic Coverage
Rights	<copyright> 2.1.3.2	Copyright - Data Collection

3.2 Making data available

Data sets will be searched internally with the consortium using the Teams platform or Just2ce website (https://just2ce.eu/).

Data will be stored and shared using the digital document repository of UAB (http://ddd.uab.cat/) Which provides a unique URL to access the files. Alternatively, open data will be collected in Zenodo (https://zenodo.org/), an open online research data repository, the repository structure, facilities and management of which follow the FAIR data principles.

Potential restrictions to sharing datasets as open access will be reviewed on a case-by-case basis. Access to confidential or restricted data will be awarded under the discretion of the Work Package Leader (WPL) of the work package that generates the data, alongside the coordinator.

To protect the copyright of the project knowledge, Creative Commons license will be used in some cases.

When data is publicly shared, the person accessing the data will not be directly identified. The users are expected to follow 'The European Code of Conduct for Research Integrity'.

3.2.1 Making data openly accessible

To maximize the impact of the JUST2CE project, selected data and results 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 data repositories. All the data associated with scientific publications will be made openly available as the default unless there is a specific reason not to publish the data.

Just2ce will participate in the Pilot on Open Research Data in Horizon 2020. 'Guidelines on Open Access to Scientific Publications and Research data in Horizon 2020' will be followed by Just2ce project. The data will be made available following the 'as open as possible, as closed as necessary' principle, meaning that all the data will be made available for verification and re-use, unless the owner of the data can justify why data cannot be made openly accessible.

JUST2CE will strictly follow an open access policy by providing on-line access to scientific information that is free of charge to the end-user and that is re-usable. In the context of this project, scientific information refers to peer reviewed scientific research articles (published in scholarly journals), pre-print articles, conference papers, patents, books and research data (data underlying publications, curated data and/or raw data). Each consortium partner commits to deposit as soon as possible each latest publication. Each partner will ensure open access to the deposited publications (via the repository), if an electronic version is available for free via the publisher, or within six months of publication, if it is not.

3.3 Making data interoperable

3.3.1 Data access provision

Data will be openly shared in the DDD once it has been analysed and published.

In case it is decided to temporarily restrict the access to a particular data set it will be possible to ask for individual access by contacting the principal investigator.

3.3.2 Data accessibility

Data will be made accessible to other group members and project partners in open access, and to the general public (data sets on title, author, edition, location, document scans) when copyright permits.

3.3.3 Software requirements to access the data

Data will be stored in CSV, TSV or TXT to ensure flexibility for data reuse.

CSV (comma separated values) files are used to store tabular data in plain text format. Most often the fields in this data are separated by commas but other delimiters can be used such as |. TSV (tab separated values) files are similar but breaks are delimited by tabs. Both formats are widely supported and are often used to exchange data across multiple different computers and systems that support the format.

Most modern spreadsheet packages can open CSV/TSV files for viewing. To maintain formatting data you will want to save in a proprietary format like XLS (Microsoft Office Excel), ODS (Open Office spreadsheets) or numbers (Apple Mac), depending on the software you use.

TXT is a standard of unformatted text. It is recognized by any text editing or word processing program and can also be processed by most other software programs.

Images will be shared in PNG or PDF format since they are commonly used formats with widely distributed visualization software.

3.3.4 Data deposit

Data will be shared via a repository held and managed by the lead participant, Digital Deposit of Documents at Universitat Autònoma de Barcelona. (https://ddd.uab.cat/).

Other options for repositories will also be considered after discussion within the Consortium.

3.4 Increasing data reuse

In general, the consortium partners, intend to provide the results and deliverables emerging from the project the widest possible dissemination via the project website, direct emails, social media, publications…. A creative common CC-BY or CC-O license will be used for all the project's outputs., to ensure that they are shared with minimal restrictions.

Particular attention will be paid to Intellectual Property Rights that may be used to specifically support exploitations such as design rights, utility models, database rights and others in the context of the 10 cases studies. Support for complying with and planning for obtaining and safeguarding eventual Intellectual Property Rights, as well as exploring possibilities in cooperation in shared-rights agreements with associated partners will be provided to the case studies.

4. Quality assurance

At the stage of data collection, a range of system will ensure quality. Contextual interviews will be conducted by experienced researchers and preceded by appropriate training (WP2) and developed of interview schedules, information sheets, and consent forms. Partners will take a proactive approach and receive guidance to ensure that the appropriate standards are followed using project templates, guidelines and specific tools to record data, cleaning of quantitative and qualitative data prior to analysis, and when qualitative data is collected., working following an agreed coding structure.

All the information necessary for the analyses in WP2 will be included in the protocol and guidelines will be set out for how the case studies will be conducted. The guidelines will also set out which procedures should be followed if problems arise, and how the results will be used. The final draft of the guidelines will be presented to the Advisory Board for feedback.

5. Costs

Costs related to open access of the research data in Horizon 2020 are eligible for reimbursement under the conditions defined in the H2020 Grant Agreement. Project beneficiaries will be responsible for applying for reimbursement for costs related to making data accessible to others beyond the consortium. If a cost-free repository is used, there will be no allocation of resources necessary for data storage.

The project coordinator and the innovation board ???will be responsible for the overall data management in the project, with the help of the WPLs. However, each partner has to respect the policies set out in this DMP and the datasets have to be created, managed and stored appropriately and in line with applicable legislation. The partner that generates the data is responsible for the validation and registration of the datasets, for providing the required metadata and for sharing the data through the open access repositories.

6. Data security

Costs related to open access of the research data in Horizon 2020 are eligible for reimbursement under the conditions defined in the H2020 Grant Agreement. Project beneficiaries will be responsible for applying for reimbursement for costs related to making data accessible to others beyond the consortium. If a cost-free repository is used, there will be no allocation of resources necessary for data storage.

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7. Ethical aspects

As well as European Commission policies on open data management, Project Partners must also adhere to their own institutional policies and procedures for data management. The WP9 aims at ensuring that ethical requirements are met for all research undertaken in the project, including data management aspects, in compliance with H2020 ethical standards. All partners will assure that the EU standards regarding ethics and data management are fulfilled in compliance with the ethical principles (see Article 34 in the Grant Agreement) and confidentiality (see Article 36 in the Grant Agreement).