Deliverable 6.2: Data management plan & Ethics - initial

WP6, Task 6.6

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[1] *PU = Public*
PP = Restricted to other programme participants (including the Commission Services)
RE = Restricted to a group specified by the consortium (including the Commission Services)
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Deliverable administrative information

OVERVIEW	
Project Acronym	**METACCAZE**
Project Title	Flexibly adapted MetaInnovations, use cases, collaborative business and governance models to accelerate deployment of smart and shared Zero Emission mobility for passengers and freight
Project Coordinator	ERTICO
Project Duration	48 months
Deliverable Title	Data management plan & Ethics - initial
Deliverable No.	D6.2
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29/06/2024	0.1	MaaSLab	First draft of deliverable
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Abbreviations and Acronyms

ACRONYM	DESCRIPTION
AIRE	Access Infrastructure for Research in Europe
APCs	Article Processing Charges
BIGMs	Business Innovation and Governance Models
CCBY	Creative Commons Attribution
CERIF	Common European Research Information Format
D	Deliverable
DMP	Data Management Plan
DoA	Description of Action
DOI	Digital Object Identifier
DPA	Data Protection Act
DPO	Data Protection Officer
EC	European Commision
EU	European Union
FAIR	Findable, Accessible, Interoperable and Re-usable
F-LLs	Follower Living Labs
GDPR	General Data Protection Regulation
GHG	Greenhouse Gas Emissions
IPR	Intellectual Property Rights
KPIs	Key Performance Indicators
LL	Living Lab
OpenAIRE	Open Access Infrastructure for Research in Europe
OSI	Open Source Initiative
PPI	Personally Identifiable Information
T-LLs	Trailblaizer Living Labs
UCs	Use Cases
WP	Work Package

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Background: About the metaCCAZE project

Transport is the second largest source of Greenhouse Gas Emissions (GHG) and accounts for more than 30% of the total energy consumption. A series of global crises highlight the need for a significant shift from conventional vehicles to well-integrated, energy efficient, connected and automated passenger and freight services that meet the ambitious EU goals. To do so, a paradigm shift is required in the operations of electric vehicles that tackle their inherent vulnerabilities, including: the electric fleet-grid supply mismatch, the slow charging times, and the vehicle delays at charging stations. This requires automated charging processes, intelligent scheduling operations and matching to the grid, interconnectivity and automation of transport operations, and a shift from private cars to shared modes.

metaCCAZE is a Horizon Europe Mission project co-funded by the 2Zero, CCAM and Cities' Mission partnerships. It participates in the CIVITAS Initiative, an EU-funded programme working to make sustainable and smart mobility a reality for all and contributes to the goals of the EU Mission Climate-Neutral and Smart Cities.

The metaCCAZE project aims to revolutionise mobility in European cities, serving both passengers and freight, with innovative electric, automated, and connected solutions designed to make transportation smarter, net zero, and more efficient for all. It builds on the expertise of 44 partners from 12 different European countries and contributes to the green metamobility era that the Green Deal, 2ZERO, CCAM, Cities Mission, CIVITAS and other EU initiatives aim to reach by 2030. In the vibrant streets of four trailblazer cities – Amsterdam, Munich, Limassol, and Tampere – metaCCAZE implements, tests and demonstrates cutting-edge technologies and services that support shared zero emission mobility solutions for people and goods, contributing to climate neutrality. Successful technologies and activities are transferred and implemented to six Follower Cities – Athens, Krakow, Gozo, Milan, Miskolc, and Poissy, Paris.

metaCCAZE organises a series of metaDesign activities and develops a toolkit called MetaInnovations. This toolkit is pioneered in passenger and freight services (public transport, on-demand minibuses, bike and scooter sharing, deliveries) and related infrastructure (mobility and logistics hubs, traffic management centres, charging infrastructure, transport and energy integration) and widely demonstrated in our four trailblazer cities for a whole year. Successful MetaInnovations and MetaServices are transferred, implemented and demonstrated in the 6 follower cities for up to 8 months, to ensure their transferability and resilience potentials.

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Executive Summary

This report is the first deliverable of Task 6.6 “Data management, ethics and open science” and describes the initial Data Management Plan (DMP) for the metaCCAZE project, funded by the EU’s Horizon 2021 - 2027 Program under the Grant Agreement number 101139678. The purpose of this initial DMP is to provide an overview of the datasets we anticipate to be collected or generated by the project and to define the consortium’s data management policy that is used with regard to these datasets.

The CLARITY DMP follows the structure of the HORIZON 2021 - 2027. It reflects the status of how the data is collected, processed or generated following what methodology and standards, whether and how this data will be shared and/or made open, and how it will be curated and preserved.

This initial version of the DMP defines the general policy and approach to data management in CLARITY that handles data management related issues on the administrative and technical level. This includes for example topics like data and meta-data collection, publication and deposition of open data, the data repository infrastructure and compliance with the Open Access Infrastructure for Research in Europe (OpenAIRE).

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1. Introduction

Task 6.6 establishes an effective ethical management, with a thorough understanding of both the underlying science as well as the associated ethical principles. Since metaCCAZE also collects personal data, this task will review and approve all the ethics forms required in the project, such as the consent forms for the interviews and surveys, the data protection and privacy issues for the survey participants, the data handling and storing security standards, the data controllers and data processors, the data encryption/anonymisation and removal. To ensure ongoing monitoring and ethical issues, a report will be included in the annual reports. Finally, the partners will follow the data protection legislation set out in the Data Protection Act 2018 (DPA) and the General Data Protection Regulation (GDPR). T6.6 develops the interim (M6, M18, M36) and final Data Management Plan (DMP; M48). The DMP will support the data management life cycle for all collected, processed or generated data by the project. Certified repositories such as, the Registry of Research Data Repositories and Databib, will be used for long term preservation and curation. The consortium members will investigate the possibility of providing open access to these databases without violating legal and ethical issues.

1.1. Purpose and Target Group

Management of data is an important element of large scale multi-disciplinary projects. MetaCCAZE collects uses and generates a heterogeneous set of data as it lasts. This deliverable is the first version of the project's Data Management Plan and provides an initial view of the datasets that are expected to be accessed, processed, created, or acquired during the lifetime of the project. Moreover, this deliverable reports on the data sharing agreements that are to be put in effect over the course of the project in order to adhere to the GDPR regulations for primary data issued by the metaCCAZE activities among 10 Mission Cities.

1.2 Overall Approach

The DMP explains the proposed actions for the overall control of metaCCAZE's data and publications. The DMP is a "living document" that will be constantly updated during the course of the project. More specifically, three further versions of the DMP will be produced in M18, M36 and M48 respectively.

In order to derive the data sources which are generated and used within the metaCCAZE project, a collaborative methodology is followed where all partners dealing with data are involved. Templates to record existing and new datasets are created and provided to relevant partners. The templates are filled in by partners and include information regarding the dataset's description, purpose and utility, reference and name, storage, partners involved, format, related metadata and standards, related to the project's objectives, whether it is a new or an existing dataset with expected size. An initial list of dataset descriptions from the metaCCAZE project partners was collected and can be found in ANNEX I of this first version of the Data Management Plan.

The present version of the DMP, provides an initial view of the datasets that will be used, accessed and produced, based on the DoA of metaCCAZE. Therefore, in order to reach the updated view of the metaCCAZE datasets, partners will be asked to revise the data templates based on recent and relevant information. Moreover, this deliverable reports on the data sharing agreements that will be put in effect over the course of the project in order to adhere to the GDPR regulations for primary data emerging from the metaCCAZE surveys. Last but not least, this deliverable provides a set of new datasets which are expected to be generated and published by the metaCCAZE project. These datasets are described in Section 3.3.

The remainder of the deliverable is structured as follows. In Section 3 the document embarks with an updated summarisation of the types and sources of data and continues in Section 4 with the description of the practices for safeguarding that the metaCCAZE research data are findable, accessible, interoperable and re-usable (FAIR). An account of the allocated resources for data management is included. Then as an appreciation of the data security and ethical considerations, principles to be adopted are provided in Sections 5, 6. The conclusions and next steps are part of Section 7.

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DELIVERABLE No	Deliverable Name	Work Package	Lead Beneficiary	Type	Dissemination Level	Due Date (Month)
D6.2	**Initial Data management plan & Ethics**	**WP6**	**MLab**	**DMP – Data Management Plan**	**PU**	**M6**
D6.3	**First interim Data management plan & Ethics**	**WP6**	**MLab**	**DMP – Data Management Plan**	**PU**	**M18**
D6.4	**Second interim Data management plan & Ethics**	**WP6**	**MLab**	**DMP – Data Management Plan**	**PU**	**M36**
D6.5	**Final Data management plan & Ethics**	**WP6**	**MLab**	**DMP – Data Management Plan**	**PU**	**M48**

Table 1: List of DMP deliverables of metaCCAZE

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2. Data Summary

2.1 Purpose of Data Collection

Within WP6, the T6.6 is specifically dedicated to the management of data coming from the metaCCAZE project. This will include the management of different types of data and results/ outputs generated during the project (numeric/quantitative, text/qualitative, personal/confidential data). Such data will be managed in compliance with the FAIR data principles, while respecting the conditions that will be outlined in the Consortium Agreement regarding Intellectual Property Rights (IPR), access rights and confidentiality. DMP deliverables will describe in detail what data metaCCAZE will generate and/or use, and what measures will be taken to ensure that data are FAIR and that their management is compliant with the GDPR and Ethical policies relevant to different types of data and organizations, following the guidelines as well as template provided on the Funding and Tender portal:

Findability (F): To ensure that others can find the metaCCAZE data and the other outcomes (i.e. project deliverables), the data and reports will be hosted on a stable and recognized open repository (i.e. Zenodo) in order to be assigned a globally unique persistent identifier (i.e. DOI). The data will be accompanied by dictionaries describing the data and any other appropriate metadata. Using such a repository and identifier ensures that the metaCCAZE data warehouse will continue to be available to both humans and machines in a usable form after the completion of the project. Academic papers that will be outputs of this project and will be submitted to journals will be assigned with a DOI upon their publication.

Accessible (A): The published research data will be provided with the Intellectual Property Rights (IPR) and Open Access licenses. Common access control policies will be applied to ensure accessibility of the target and beneficiary groups. Datasets, APIs and application code will be published both on GitHub and on the project website to ensure wide accessibility and for at least 5 years after the conclusion of the project.

Interoperable (I): The data produced in the project will use the standard data and file formats (as CSV or JSON), standard and community accepted metadata vocabularies which should also be supported by available software tools, applications, and repositories; this should ensure the intended project interdisciplinary outreach and exploitation.

Reusable (R): Data produced in the project will be supplied with the licenses allowing the widest reuse possible. In case of constraints incurred for some data, an "embargo period" or restricted use policy will be explicitly attached to specific data sets. The primary goal is to support the reproducibility of scientific research and publications validation purposes. **Curation and storage/preservation costs**: MaaSLab is the partner who is responsible for developing the DMP and the metaCCAZE data warehouse. MaaSLab leads T2.2.: Harmonise: AI-Data warehouse and APIs (M4- M40), and T6.6: Data management, ethics and open science (M1-M48).

2.2. Relation of Data to the project's objectives

The following table summarizes the relation of the different data categories to the project objectives, as they are described in Chapter 1.1.1. Note that O1, O2 are related to the development of the metaCCAZE tools and innovations (use cases, models, MetaInnovations), whereas O3, O4, O5, O6 are related to the implementation and demonstration of the tools and to the dissemination of results.

Data required to build the metaCCAZE tools and models	Data required for the metaCCAZE Living Labs
O1: Design use cases, cross-sector collaborative business innovation and governance models (BIGMs)	O3: demonstrate widely the MetaDesigned Zero Emission Shared Mobility (ZESM) Use Cases (UCs)
O2: Develop the MetaInnovations toolkit	O4: validate that the metaCCAZE UCs, BIGMs, and MetaInnovations are transferable, resilient, and flexibly adjustable
	O5: boost and influence the metaCCAZE and any European city and the market

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	O6: Organize dissemination, communication, liaison and exploitation

Table 2: Data required through metaCCAZE project

2.3. Data sources in relation to metaDesign activities

As per the Grant Agreement, there are two groups of metaDesign activities that generate data: 1. The LLs' metadesign activities:,

LIVING LAB'S METADESIGN ACTIVITIES	
LL1	Mini-dialogues
LL2	metadesign use cases + BIGMS
LL3	Metadesign the metaServices with sitizens
LL4	Validate metadesigned use cases +BIGMS
LL5	Define the KPIs and Impact Evaluation framework

Table 3: Living Lab's metaDesign Activities

and 2. LL's metadesign activities: Social embracement & behavioural change surveys.

LIVING LAB'S METADESIGN ACTIVITIES: SOCIAL EMBRACEMENT & BEHAVIOURAL CHANGE SURVEYS	
SS1	Travel bahaviour &UC's preference exploration
SS2	Travel behaviour change and preferneces monitoring

Table 4: Living Lab's metaDesign Activities: Social Embracement & Behavioural

The data of these activities are used for the development of the tools/metaInnovations, as well as the impact evaluation of the implemented metaCCAZE UCs in the 10 LLs.

For each activity the objective of data collection, the anticipated time that data will be collected, the format and tools that will be used for data collection, as well as the related tasks and the partners responsible to collect the data are described. It should be noted that the datasets will be updated as the project advances and further information will be added to this document. For the purposes of the present version of the deliverable, metaCCAZE partners have filled out the forms that detail the data that will be accessed/ produced and can be found in ANNEX I of this document. A brief description of the 7 foreseen activities that will take place in the 10 Living Labs is laid out in the following sections.

In general, for each activity the LL Supporter is responsible for monitoring the Ethics, the Data Protection Protocols and the FAIR guidelines that are provided by MaaSLab, the Data Management Leader of the metaCCAZE project. The LL Supporters clean and anonymise the datasets and apply the FAIR standards; in turn they deliver the datasets to the partner who leads each activity or task that this data is related to; this partner checks the validity of the datasets; and finally, this partner delivers the datasets to MaaSLab. This process is depicted in Figure 1 below.

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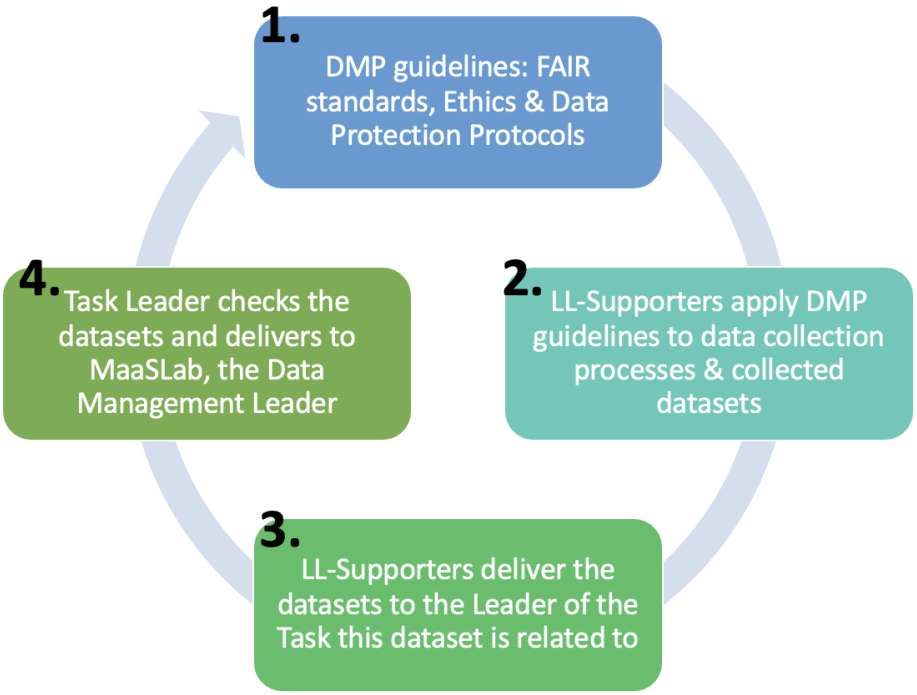

Figure 1: Application of data management plan & datasets collection

The following sections, describe the various activities that have currently been identified within the metaCCAZE project and generate primary data.

2.3.1 LL1: mini-dialogues

LL1: mini-dialogues (M3-M4: T-LLs + M7-M8: F-LLs ; related to WP1)	
Objective	Each LL organizes an event with selected stakeholders who are involved in the LL's SUMP to discuss and specify their needs in terms of smart systems and services with an ultimate goal to derive the Empathy Map of the LL.
When	M3-M4 for T-LLs M7-M8 for F-LLs
Format	1 physical or hybrid workshop: 1 in each Living Lab (1 X 10 Living Labs = 10 activities)
Participants	Stakeholders who are related to the measures and policies in the LLs' SUMP
Related to	WP1 – T1.1 - ST1.1.2
Method	Mini-dialogues
Data	Text
Leader in designing the activity	BABLE
Leader in delivering the activity	The Leader of each task related to LL

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Leader for the data collection and analysis	The supporter of each LL

Table 5: Living Lab metadesign activity 1

2.3.2. LL2: metadesign use cases and business innovation and governance models

LL2: metadesign use cases + BIGMS (M6-M7: T-LLs +M19: F-LLs; related to WP1)	
Objective	To discuss the prototype Use Cases (UCs) with citizens and stakeholders to prepare the metadesigned UCs that will be demonstrated in each LL. It is also discussed the business model and the governance structure of each Use Case.
When	M6-M7 for T-LLs M19 for F-LLs
Format	1 physical or hybrid workshop + online questionnaires (if it is needed/ in case the workshop's duration is too long, we may collect some info through questionnaires): 1 in each Living Lab (1 X 10 Living Labs = 10 activities)
Participants	Citizens and stakeholders who are related to the UCs that the LLs have proposed for metaCCAZE
Related to	WP1: T1.2 –ST1.2.1 + T1.3 – ST1.3.1.
Data	Text
Leader in designing the activity	BABLE + ERTICO
Leader in delivering the activity	The Leader of each task related to LL (as part of WP3 or WP4)
Leader for the data collection and analysis	The supporter of each LL (as part of WP3 or WP4)

Table 6: Living Lab metadesign activity 2

2.3.3 LL3: metaDesign the metaServices with citizens

LL3: METADESIGN THE METASERVICES WITH CITIZENS (M8 - M9: T-LLS + M20: F-LLS)	
Objective	Given the UC that each LL has proposed, workshops are organized with citizens to discuss with them the characteristics that the UCs and metaServices would like to have in order to secure the maximum uptake of the metaServices, and also take insights about the topics the marketing campaigns should target.
When	M8-M9 for T-LLs M20 for F-LLs

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Related to	WP1: T1.2 –ST1.2.1
Data	Text
Leader in designing the activity	BABLE
Leader in delivering the activity	The Leader of each task related to LL (as part of WP3 or WP4)
Leader for the data collection and analysis	The supporter of each LL (as part of WP3 or WP4)

Table 7: Living Lab metadesign activity 3

2.3.4 LL4: Validate metadesigned use cases and Business Innovation and Governance Models

LL4: VALIDATE METADESIGNED USE CASES + BIGMS (M10: T-LLS + M22 -M23:F-LLS)	
Objective	Discuss and verify the final metadesigned UCs and their BIGMs in order stakeholders to be informed about what UCs will be demonstrated and the role that each actor should have to enable and support the demonstration of the UCs.
When	M10 for T-LLs M22-M23 for F-LLs
Format	Physical or hybrid workshop + online questionnaires (if it is needed/ in case the workshop's duration is too long, we will select to collect some info through questionnaires) :1 in each Living Lab (1 X 10 Living Labs = 10 activities)
Participants	Citizens and stakeholders that are related to the UCs that the LLs have proposed for the metaCCAZE
Related to	WP1: T1.2 –ST1.2.1 + T1.3 – ST1.3.1
Data	Text, numeric
Leader in designing the activity	BABLE+ ERTICO
Leader in delivering the activity	The Leader of each task related to LL
Leader for the data collection and analysis	The supporter of each LL

Table 8: Living Lab metadesign activity 4

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2.3.5 LL5: Define the Key Performance Indicators and impact evaluation framework

LL5: DEFINE THE KPIS AND IMPACT EVALUATION FRAMEWORK (M10 : T-LLS; M19: FLL)	
Objective	Define the Key Performance Indicators (KPIs) that will be measured in each LL based on the UCs that will be demonstrated and the climate neutrality objectives of each LL. The units of the KPIs and the methods that these KPIs will be measured, will also be discussed.
When	M10 for T-LLs M19 for F-LLs
Format	Workshop + online questionnaires (if it is needed/ in case the workshop's duration is too long, we will select to collect some info through questionnaires): 1 in each Living Lab (1 X 10 Living Labs = 10 activities)
Participants	Stakeholders that are related to the UCs, the LL's SUMP and the Mission Initiative
Related to	WP1: T1.4
Data	Text
Leader in designing the activity	TRT
Leader in delivering the activity	The Leader of each task related to LL
Leader for the data collection and analysis	The supporter of each LL

Table 9: Living Lab metadesign activity 5

2.3.6 SS1: Travel behaviour & use cases' preference exploration

SS1: TRAVEL BEHAVIOUR & UC'S PREFERENCE EXPLORATION (M12-M14: T-LLS +M27-M28:F-LLS – ATHENS +KRAKOW)	
Objective	Explore the travel behaviour of citizens before the implementation of the UCs and metaServices (to act as a basis for comparison), and their preferences, ideas and embracement for the metadesigned UCs and metaServices.
When	M12-M14 for T-LLs M27-M28 for F-LLs
Format	Smartphone-based questionnaires and trip/activity diaries

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Participants	The sampling strategy and number of participants will be defined once the UCs have been defined
Related to	T1.5 +T3.2 – T3.5 + T4.1 + T4.2
Data	Text, numeric
Leader in designing the activity	MLab
Leader in delivering the activity	The supporters of each LL
Leader for the data collection and analysis	The supporters of each LL

Table 10: Social Embracement and behavioural change Survey 1

2.3.7 SS2: Travel behaviour change and preferences monitoring

SS2: TRAVEL BEHAVIOUR CHANGE AND PREFERENCES MONITORING (M25-M28: T-LLS +M33-M35: F-LLS – ATHENS +KRAKOW)	
Objective	Explore the travel behaviour of citizens while the UCs and metaServices are demonstrated and compare it to SS1 Data to assess travel bahaviour changes + explore citizens/ "users" preferences, ideas and embracement for the demonstrated UCs and metaServices.
When	M25-M28 for T-LLs M33-M35 for F-LLs
Format	Smartphone-based questionnaires and trip/activity diaries
Participants	The sampling strategy and number of participants will be defined once the demonstrations start (it will include users of services and citizens in general)
Related to	T1.5 +T3.2 – T3.5 + T4.1 + T4.2
Data	Text, numeric
Leader in designing the activity	MLab
Leader in delivering the activity	The supporters of each LL
Leader for the data collection and analysis	The supporters of each LL

Table 11: Social Embracement and behavioural change Survey 2

2.4. Types and format of the project's data

In the following sections, the primary and secondary data which have currently been identified within the metaCCAZE project are being discussed, along with steps taken for their handling among partners. Note that this is the initial DMP and the datasets will be updated as the project advances and further information will be added to this document.

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2.4.1. Primary data from surveys and Living Labs

As part of the metaCCAZE metaDesign activities and especially the social surveys in the LLs, the personal data of survey participants will be collected by metaCCAZE project partners. Following the GDPR regulations, the metaCCAZE consortium has established a set of data sharing and processing agreements between project partners in order to facilitate data exchange and processing.

In order to be able to process the corresponding data a joint *Data Sharing Agreement* will have to be signed by ERTICO (the project coordinator) and MaaSLab (the partner who collects the data through the Moby app, the application which is going to be used to collect all the necessary data from the socila survey).

Moreover, a *Data Processing Agreement* will be signed between partner ERTICO (the project coordinator) and MaaSLab (the partner managing metaCCAZE's Data Warehouse) for the potential storage of primary data in metaCCAZE's data warehouse.

Datasharing agreements between other partners have not been signed at this point as they will have access to anonymized, aggregated, and processed data from the primary surveys. In case a need for data sharing emerges separate agreements between the project coordinator and the partners will be put in place.

metaCCAZE will demonstrate activities in ten (10) Mission Cities across 10 different European countries. The MetaInnovation Toolkit is going to be applied to all ten (10) Mission Cities and is expected models will generate evidence which will allow the identification of mobility solutions, measures, policies, and business models to address current and future challenges of implementing smart shared and zero-emission mobility systems, so the way to climate neutral will become easier and quicker.

2.4.2. Secondary data from the Living Labs

Secondary data are provided by the Living Labs and will be used as input to the MetaInnovations technologies. At this point the consortium is in the process of collecting the information for the available secondary data including information for accessing the data and related access rights. The next step involves an evaluation regarding their fit-for-purpose for the MetaInnovations and UCs.

2.4.3 Data generated by metaCCAZE and potentially published as open data

metaCCAZE will generate numerous primary data in each LL. Primary data and datasets will start being produced from the time we initiate the metaDesign activities in each LL, till the time we implement the metaInnovations and UCs and monitor impact. Given also the Grant Agreement, these datasets will be anonymised and published by the project. The list of generated datasets will be updated in the interim version of the DMP and also towards the end of the project.

3. Fair Data

3.1 Making data findable, including provisions for metadata

To make the project data findable, a Digital Object Identifier (DOI) will be requested for each artefact. In more detail, DOIs from Crossref will be used for research publications, while DOIs from DataCite will be pursued for labelling each public dataset of the project. In addition, a metadata record for each output of the project will be created and stored in the data directory. Amongst other fields, each metadata record will have a set of keywords that will make searches easier for external parties.

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3.1.1. Naming Convention Strategy

In metaCCAZE, each data source will be provided with a specific name that is composed by different parts/elements, containing information about pilot country, data type or format and naming structure as follows:

ORIGIN_ORG_ TOD _ FORMAT_Info_VERSION

ORIGIN: A prefix denoting if the dataset is pre-existing or new, followed by the first letters (three max) of the pilot's country or GEN if the data artefact is pilot agnostic

TOD: The type of data

FORMAT: The data format/extension

Info: Additional (abbreviated) information about the dataset. For example, the year when the dataset was published.

VERSION: The version of the dataset.

3.1.2. Version Numbering Strategy

In metaCCAZE, a data versioning strategy similar to software versioning is followed, applying a two-part numbering rule: Major or Minor. Major data revision indicates a change in the formation and/or content of a dataset that may bring changes in scope, context or intended use. For example, a major revision may increase or decrease the statistical power of a collection, require change of data access interfaces, or enable or disable answering of more or less research questions. A Major revision may incorporate:

- substantial new data items added to /deleted from a collection
- data values changed because temporal and/or spatial baseline changes
- additional data attributes introduced
- changes in a data generation model
- format of data items changed
- major changes in upstream datasets

Minor revisions often involve quality improvement over existing data items. These changes may not affect the scope or intended use of initial collection. A Minor revision may include:

- renaming of data attribute
- correction of errors in existing data

3.1.3. Metadata & Search keywords

All datasets that will be openly available will be accompanied with metadata information which will render them findable by interested third parties. Search keywords will be defined and will be part of the related metadata for each dataset.

At this point, the CERIF[2] metadata format will be used and in the course of the project, additional applicable formats may be identified and used.

2 https://www.eurocris.org/cerif/main-features-cerif

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3.2. Making data openly accessible

Some of these datasets are already publicly available, while others are proprietary and have high commercial sensitivity. In the cases where private data are processed and aggregated (e.g. as part of a model, or functionality of a component) permission will be requested by the provider prior to making the altered data publicly available.

In reference to the nature of the user data involved, some of the results that will be generated by each project phase will be restricted to authorised users, while other results will be publicly available. As per the consortium's Ethics commitment during the negotiation phase of the project, data access and sharing activities will be rigorously implemented, in compliance with the privacy and data collection rules and regulations, as they are applied nationally and in the EU.

Since the DMP is expected to mature during the project, the subsequent releases of the deliverable will specify the repositories where the data will be stored and go into more detail on how this data can be accessed by the wider research community.

3.2.1. Datasets

Datasets characterised as "openly accessible" will be published in the following open repositories in OpenAire[3].

3.2.2. Scientific Publications

As required by the Grant Agreement, research publications will be made available through Green Open Access, where each publication needs to be made available at the metaCCAZE and Institutional portals. If applicable, Gold Open Access may be necessary, where the publication will be openly available through the publisher's website. The publications generated within the project will be disseminated through the project's dissemination and exploitation channels and follow the process described in the relevant project strategies.

3.2.3. Source code

It will be at the discretion of individual consortium members to decide whether the source code of their developed software is openly accessible. In such cases, different free and open-source software licenses will be investigated and the appropriate ones will be selected. Open source code from the metaCCAZE project will be made available through a common GitHub Repository.

3.3 Making data interoperable

metaCCAZE partners will use metadata vocabularies, when possible, to render the provided datasets interoperable. The formats that will be used will be described in later versions of the data management plan.

4. Allocation of Resources

This section details how resources are allocated for data management in the project. Managing data effectively is a critical part of the project, ensuring that the data collected is reliable, accessible, and can contribute to metaCCAZE's objectives.

metaCCAZE has allocated a specific part of the budget for data management as part of T6.6, as well as part of WP1, WP3 and WP4, work packages that collect and analyse data. This covers the costs of data collection,

3 https://www.openaire.eu

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storage, processing, analysis, and dissemination. It also includes the resources necessary for the secure and ethical management of data. This is drafted for each partner and foreseen in the GA for data collection purposes.

Regarding the resources related to data management activities, the project includes:

1. WP1 were data collection tools and ethics forms regarding designing use cases, business inovation and governance models, social embaracement and travel behavior change are designed and the collected data is analysed.
2. WP3 and WP4 that host the actual activities needed to collect the data described in WP1. The data generated in WP3 and WP4 are directed to WP1 for analysis. WP3 and WP4 also generate data that are used for impact evaluation within T3.6 and T4.8.
3. WP6 has a dedicated task, T6.6, dedicated to creating and updating the data management plan. The data management plan task is led by MaaSLab that, together with all the partners, will handle the management of data relative to the technological aspects of the platform.

5. Data Security and Protection

The metaCCAZE will provide all required measures for secure data access with the usage of the latest encryption tools and protocols as well as data access control practices to prevent data misuse or manipulation. The data security mechanisms will be defined and implemented during the design and implementation of the metaCCAZE data warehouse (D2.2).

5.1. Storage of sensitive data

Data privacy and user data protection issues will strictly follow the "user decides" principle. End-users will always have the possibility (and only the user) to decide which personal or private data to be used and all user referenced data will always be grouped and combined via anonymization tools to avoid the possibility of breaking it down to one user. All personal data stored within the metaCCAZE project will be archived for the lifetime of the project only, and will be coded, stored and kept privately in a secure location. No information will be shared with any external to the metaCCAZE consortium party without the prior express permission of the user. Sensitive information will be stored in an encrypted form, and all data will be protected by password access.

5.2. Provisions for sharing of data amongst partners

In terms of the collaboration among partners, a Consortium Agreement is signed by all partners of the Consortium. The purpose of this Consortium Agreement is to specify with respect to the Project the relationship among the Parties, concerning the organisation of the work between the Parties, the management of the Project and the rights and obligations of the Parties concerning inter alia liability, access rights, and dispute resolution. Specifically for the sharing of sensitive/personal information, data, and code, special provisions are made within the Consortium Agreement that will ensure the secure handling of the above, and the protection of confidentiality by terms of non-disclosure to third parties. These provisions are complementary to the *Data Sharing Agreement* and *Data Processing Agreement* that are already described in chapter **Σφάλμα! Το αρχείο προέλευσης της αναφοράς δεν βρέθηκε.**.

5.3. Adherence to the General Data Protection Regulation

The General Data Protection Regulation (GDPR) (Regulation (EU) 2016/679)[4] concerns issues related to the protection of natural persons regarding the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). The regulation has been proposed and established bythe European Parliament, the Council of the European Union and the European Commission. It

4 http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32016R0679

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intends to strengthen and unify data protection for all individuals within the European Union (EU) and addresses issues related to the export of personal data outside the EU[5].

The GDPR aims primarily to give control to citizens and residents over their personal data and to simplify the regulatory environment for international business by unifying the regulation within the EU. GDPR was adopted on 27 April 2016, while it became enforceable from 25 May 2018, allowing a two-year transition period for member states. It is important to note that GDPR does not require national governments to pass any enabling legislation and is thus directly binding and applicable. The metaCCAZE consortium is taking measures so that any user and related personal data gathered from the project strictly respect required consent management and related GDPR compliancy process. More specifically, there are eleven main steps followed by the consortium, as they have also been proposed by the ICO organization (Information Commissioner's Office) in the UK.

Step 1: Awareness. All partner organizations, corresponding decision makers and key persons within the metaCCAZE consortium have been informed of the GDPR enforcement and have been provided with related material in order to understand the impact of GDPR in their work. Partners will be requested to identify areas that could cause GDPR compliance issues and proceed with resolution actions if needed.

Step 2: Information held. The consortium, starting from this deliverable, is documenting the personal data that will be stored along with information related to where these data came from and with whom they will be shared with. Records of data processing activities will be maintained. The aforementioned actions will allow the consortium to comply with the GDPR's accountability principle, which requires organisations to be able to show how they comply with the data protection principles, for example by having effective policies and procedures in place.

Step 3: Communicating privacy information. The metaCCAZE plan for providing privacy notices already considers the GDPR guidelines. Users who will participate in the Living Lab's surveys will be provided with all needed information, including the project's identity and how the consortium intends to use the collected information through privacy notices. End-users will also be informed of the legal basis for processing the data, the data retention period and their right to complain to metaCCAZE if they think there is a issue with the way their data are handled. All related information will be communicated to end-users in concise, easy to understand and clear language.

Step 4: Individuals' rights. The metaCCAZE consortium will provide procedures to cover all the rights individuals have, including personal data deletion as well as making data electronically available in a commonly used format. More specifically, the following rights for individuals are considered:

- the right to be informed;
- the right to access;
- the right to rectification;
- the right to erase;
- the right to restrict processing;
- the right to data portability;
- the right to object;
- the right to refuse automated decision-making including profiling.

Step 5: Subject access requests. Handling data access requests in metaCCAZE considering the following points:

- Access requests are free of charge.
- Data access requests will be handled within one month maximum period.
- The project will reject requests that are proven to be manifestly unfounded or excessive.
- If a request is rejected, a clear justification will be provided and the individual will be informed of the right to complain to the supervisory authority and to a judicial remedy. Any justification will be provided within a maximum period of one month.

[5] https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr

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Step 6: Lawful basis for processing personal data. A lawful basis for data processing activities has been established and relies on consent for information and privacy notices.

Step 7: Consent. The information consent forms which will be provided to end-users will comply and meet the GDPR standards. The consent will be freely provided, specific, educated and unambiguous. Moreover, it will be separate from other terms and conditions, and will provide simple ways for users to withdraw from consent.

Step 8: Children. Some Living Labs, like Limassol's Living Lab, promotes some mobility services for pupils between 11 to 1. The age of the users will be verified and parental or guardian consent for any data processing activity will have to be obtained for underage users.

Step 10: Data Protection by Design and Data Protection Impact Assessments. metaCCAZE implements a privacy-by-design approach. Both WP1 and WP6 are set out to handle all related aspects.

Step 11: Data Protection Officers. The responsibility for data protection compliance falls under the Data Protection Officers of the partners involved in sensitive data handling, who have the knowledge, support and authority to ensure that the project, its procedures and outcomes adhere to GDPR.

5.4 Data anonymisation guidelines

Data anonymisation is an essential aspect of ensuring privacy and compliance with GDPR requirements within the metaCCAZE project. Anonymizing data involves removing Personally Identifiable Information (PII) from datasets so that individuals cannot be identified, either directly or indirectly, through the remaining data. This section outlines the guidelines for data anonymisation in metaCCAZE.

1. *Identifying Personally Identifiable Information (PII):* Project partners must identify all PII in their datasets. PII includes, but is not limited to, names, addresses, email addresses, phone numbers, identification numbers, and other unique identifiers. Partners should also consider indirect identifiers that could be used in combination with other data points to re-identify individuals.
2. *Selecting Anonymisation Techniques*: There are several anonymisation techniques available, such as data masking, pseudonymisation, generalisation, and aggregation. The choice of technique depends on the nature of the data, the intended use of the anonymised data, and the desired level of privacy protection. Project partners must evaluate and select the most appropriate anonymisation technique(s) for their datasets.
3. *Assessing Re-identification Risks*: After applying the chosen anonymisation techniques, project partners must assess the risk of re-identification. This involves evaluating the likelihood that individuals can be re-identified through the remaining data or by combining the anonymised data with other publicly available datasets. If the re-identification risk is deemed too high, additional anonymisation techniques should be applied to further protect privacy.
4. *Data Minimisation*: Project partners should adhere to the principle of data minimisation, which involves collecting and processing only the minimum amount of data necessary to achieve the project's objectives. This helps reduce the amount of PII in the datasets and thus simplifies the anonymisation process.
5. *Data Retention*: Anonymised data should be retained only for as long as necessary to fulfill the project's objectives. Project partners must establish clear data retention policies and ensure that anonymised data is deleted or securely archived when it is no longer required.
6. *Documentation*: Al anonymization processes, techniques, and decisions must be thoroughly documented. This documentation should be retained as part of the project's records and may be required for compliance audits or other regulatory purposes.
7. *Training and Awareness*: Project partners should ensure that all team members, who handle personal data are trained in data anonymization techniques and understand the importance of data privacy and compliance with GDPR requirements.

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PROCESS	DATASET APPLICABLE TO	PROCESS EXPLANATION	KPI TO MEASURE
1. Identify PII		Identify all personally identifiable information in datasets, including direct and indirect identifiers	Number of PII data points identified
2. Select anonymisation techniques		Evaluate and select the most appropriate anonymisation techniques for the dataset based on data nature and intended use	Anonymisation techniques applied
3. Assess re-identification risks		Evaluate the likelihood of re-identification after applying anonymisation techniques and adjust if necessary	Risk assessment conducted and documented
4. Data minimisation		Collect and process only the minimum amount of data necessary to achieve the project's objectives	Amount of data collectedand processed
5. Data Retention		Retain anonymised data only for as long as necessary and establish clear data retention policies	Maximum date of retention

Table 12: Data anonymization process and guidelines

6. Ethical Aspects

Given that metaCCAZE intends to involve citizens in surveys, it is necessary that a governance and ethics framework is embedded within the project. Ethical aspects related to the activities of the project will be managed within T6.6 “Data management, ethics and open science”. This task establishes an effective ethical management, rooted in the project, with a thorough understanding of both the underlying science as well as the associated ethical principles. It covers the management of the project ethical issues related to user studies ensuring the adherence to relevant regulations. It also includes the provision of consent forms, information sheets and anonymity to participants in the different surveys, while it foresees the monitoring of data-sharing frameworks, privacy and information laws.

6.1. Informed Consent

Participation of persons will be entirely voluntary and metaCCAZE-related initiatives will need to obtain (and clearly document) informed consent from users in advance of their involvement in the metaCCAZE project. The informed consent form with information sheets will be in a language and in terms fully understandable to participants, describing the aims, methods and implications of the research, the nature of the participation, the amount and nature of the data being stored, any benefits, risks or discomfort that might be involved and the nature of any resulting dissemination. Consent forms will explicitly state that participation is voluntary and that anyone has the right to refuse to participate and to withdraw their participation, samples or data at any time, without any consequences. The consortium will indicate what procedures will be implemented in the event of unexpected or incidental findings and will ensure that the potential participant has fully understood the information and does not feel pressured or forced to give written consent. Templates of the informed consent/assent forms information sheets covering the voluntary participation and data protection issues (in language and terms intelligible to the participants, similar to the one submitted in the proposal), will be kept on file and will be submitted upon request.

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6.2. Exchanging, archiving and preservation of data

The consortium, within its competences and available infrastructure, will ensure secure storage, delivery and access of personal information, as well as managing the rights of the users. In this way, there is complete guarantee that the accessed, delivered, stored and transmitted content will be managed by the right persons, with well-defined rights at the right time. State-of-the-art firewalls, network security, encryption and authentication will be used to protect collected data (specific details will be developed in the course of the project, within WP2, WP3 and WP4, during the design and implementation of the data warehouse and the whole MetaInnovations tools that are going to be built. Firewalls prevent the connection to open network ports, and exchange of data will be through consortium-known ports, protected via IP filtering and password. Where possible (depending on the facilities of each partner) the data will be stored in a secured server, and all identification data will be stored separately. Intrusion Detection systems will monitor anomalies in network traffic and activate restraint policy if needed. A metadata framework will be used to identify the data types, owners and allowable use.

This will be combined with a controlled access mechanism and in the case of wireless data transmission with efficient encoding and encryption mechanisms. Data security will be implemented across all the research sites, and will cover procedures for storage, encryption and transmission of personal data in addition to any national data protection jurisdiction.

The collected data will be stored in a secure server, only visible to the research site network. Anonymous and identifiable data will be stored separately, and only the project-authorized person(s) will have access to the stored data. Anonymity will be guaranteed by separating identifiable data from anonymous data. Anonymous data will be available to researchers. If any identifiable data is required for the research purposes, access and distribution to it will be granted only after explicit authorisation and after consent of the data holders (participants providing the data). Authentication will be required to access stored data on the research site.

Authorized researchers will have access to the recorded anonymous data after authentication with a centralized server and on a need-to-know basis. Researchers will have access rights to add data to the identity database. No editing or reading rights will be granted to them to prevent alteration/disclosure of private data, if a specific permission is not granted by the data holder.

Those researchers handling and processing personal and sensitive data within the project will be required to sign a statement that they are familiar with and abide by the contractual obligations of the consortium. If not included in this obligation, they will sign a statement that commits them to make sure project data are not provided to persons outside the project consortium.

When conducting research with vulnerable people and groups, honouring and protecting anonymity and confidentiality is especially important. Potential physical, emotional and social dangers to which participants could be exposed through participation will be highly discussed and taken into account. The project consortium will ensure the avoidance of inadvertent reinforcement of negative social stereotypes concerning particular groups and unfair exploitation of vulnerable research participants

A Data Protection Officer (DPO) will be appointed by all partners involved in personal data handling and the contact details of the DPOs will be made available to all data sets involved in the research.

As part of follow-up activities and for the preparation of the next version of this initial DMP long term a data preservation mechanism will be explored. The intention is to preserve non-sensitive data for a predetermined period after the completion of the project. Furthermore, the consortium will identify appropriate archiving institutions that might serve as long-term data preservation entities, so that the data produced as part of metaCCAZE are accessible by the research community in the long term.

6.3 Appointment of Data Protection Officers

To oversee and manage data protection and privacy concerns, we appoint Data Protection Officers (DPOs) for the metaCCAZE project. DPOs are responsible for monitoring compliance with GDPR and other applicable data protection regulations (see Annex III). They act as the point of contact between the project and relevant data

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protection authorities, ensuring that the project adheres to the highest ethical standards and maintains open communication with stakeholders.

7. Open Science

7.1. Open access publishing guidelines

The concept of open access publishing has gained significant importance in recent years, driven by the need to promote the dissemination of knowledge and enhance transparency in scientific research. Open access publishing enables free, unrestricted online access to scholarly literature, ensuring that research findings are widely available to both the scientific community and the general public. This section provides an overview of open access publishing guidelines relevant to metaCCAZE.

7.1.1. Definition of Open Access Publishing

Open access publishing refers to the practice of making peer-reviewed scholarly research freely available online, without any financial, legal, or technical barriers to access. It allows readers to view, download, copy, distribute, print, search, or link to the full texts of published articles without requiring a subscription or payment. Open access publishing is crucial for fostering collaboration, accelerating innovation, and maximizing the impact of research.

7.1.2. Open Access Publishing Policies in the European Union and metaCCAZE

The European Union strongly supports open access publishing as a means of improving the visibility and accessibility of research outcomes. Under the Horizon Europe framework, all projects receiving funding are required to ensure that any peer-reviewed publications resulting from the project are made openly accessible. This mandate extends to the metaCCAZE project and its consortium members.

To comply with this requirement, metaCCAZE is committed to ensuring that all publications resulting from the project are made available through open access channels, either via the gold or green open access models. The gold open access model involves publishing articles directly in open access journals, while the green open access model allows authors to deposit a version of their published articles in an open access repository.

7.1.3. Guidelines for Selecting Appropriate Open Access Journals and Repositories

To facilitate open access publishing, metaCCAZE partners should follow these guidelines when selecting appropriate open access journals and repositories:

- Ensure that the chosen journal or repository is reputable, indexed in relevant databases, and complies with the principles of the Directory of Open Access Journals (DOAJ).
- Verify that the journal or repository supports the Creative Commons Attribution (CC BY) license, which allows for the widest possible dissemination and re-use of the published content.
- Choose a journal or repository with a clear and transparent policy on publication fees, waivers, and embargo periods.

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7.1.4. Embargo Periods, Licensing, and Copyright Considerations

Embargo periods refer to the time between the publication of an article in a subscription-based journal and its availability through an open access repository. While metaCCAZE encourages immediate open access, some journals may impose an embargo period, typically ranging from 6 to 12 months.

Project partners should strive to negotiate the shortest possible embargo periods to ensure timely access to their research findings. Regarding licensing, metaCCAZE recommends adopting the Creative Commons Attribution (CC BY) license for all publications. This license allows others to freely distribute, adapt, and build upon the work, provided that the original authors are appropriately credited.

Project partners should also be aware of copyright considerations, including retaining the right to deposit their articles in open access repositories and ensuring compliance with the publisher's copyright and self-archiving policies.

7.1.5. Support for Publication Fees and Waivers

Publication fees, also known as Article Processing Charges (APCs), are often associated with open access journals to cover the costs of peer review, editorial services, and online hosting. The metaCCAZE consortium acknowledges that these fees can be a barrier to open access publishing and is committed to supporting partners in securing funding for APCs, where possible. In cases where funding is not available, project partners are encouraged to negotiate fee waivers or discounts with publishers, or to consider alternative open access options that do not incur APCs.

7.2. Monitoring open science compliance

To effectively monitor open science compliance, metaCCAZE has established a set of Key Performance Indicators (KPIs) that will be used to assess the level of adherence to open science principles. These KPIs include:

1. Number of open access publications produced by the project partners.
2. Percentage of datasets made available through open access repositories.
3. Degree of compliance with FAIR (Findable, Accessible, Interoperable, and Reusable) data principles.
4. Number of collaborations and partnerships established with external stakeholders and researchers.

The metaCCAZE project will adopt a continuous monitoring approach, with partners required to report their progress in meeting the KPIs every three months. This reporting process will be facilitated through regular steering meetings, where partners will present updates on their open science compliance efforts. The data collected during these meetings will be analysed and discussed to identify potential areas of improvement and to ensure that the project remains on track in terms of open science compliance.

In addition to the internal monitoring process, metaCCAZE will also engage with external stakeholders to gather feedback on the project's open science initiatives. This feedback will be collected through surveys, workshops, and other engagement activities and will be used to further improve the project's open science compliance strategies.

Overall, the monitoring of open science compliance in the metaCCAZE project is aimed at fostering a culture of openness and collaboration among project partners and ensuring that the project's research outputs are widely accessible to the scientific community and other stakeholders. By establishing a robust monitoring process and engaging with both internal and external stakeholders, metaCCAZE aims to achieve its open science objectives and maximize the impact of its research.

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7.3 Ensuring access to datasets, databases, and repositories

To maximise the impact and reach of the metaCCAZE project's research, it is crucial to ensure open access to the datasets, databases, and repositories generated or utilised throughout the project. This section outlines the strategies and procedures that will be put in place to guarantee the accessibility of these resources to the scientific community and other interested stakeholders.

1. *Identification of relevant resources*: The first step in ensuring access to datasets, databases, and repositories is to identify the resources that are generated or used within the metaCCAZE project. This process will involve close collaboration between all project partners, who will provide information about the resources they are working with, their formats, and any associated metadata.
2. Adherence to FAIR data principles: To make the identified resources as accessible and reusable as possible, the metaCCAZE project will adhere to the FAIR (Findable, Accessible, Interoperable, and Reusable) data principles. This includes using standard data formats, providing comprehensive metadata, and employing persistent identifiers for all resources.
3. Selection of appropriate repositories: To ensure that the project's datasets, databases, and repositories are accessible to the wider scientific community, they will be stored in established and recognized open access repositories. The choice of repositories will depend on the specific requirements of each resource, such as subject area, format, and licensing.
4. Development of data sharing agreements: To comply with ethical and legal requirements, particularly those related to the GDPR, data sharing agreements will be developed for all resources that involve personal or sensitive information. These agreements will outline the terms and conditions for accessing and using the data, as well as any measures taken to protect the privacy of participants.
5. Documentation and training: To facilitate access to the project's datasets, databases, and repositories, the metaCCAZE project will develop comprehensive documentation, including user guides and tutorials. Additionally, training sessions will be organised for project partners and external stakeholders to help them navigate and use the resources effectively.

8. Conclusions

This first version of the Data Management Plan provides an initial overview of the identified datasets based on the foreseen data requirements for the execution of the project, and an overview of the data sharing agreements that have been put in effect over the course of the project in order to adhere to the GDPR regulations for primary data generated by the metaCCAZE surveys. This document will be updated at M18 by D6.3 “Data management plan & Ethics- first interim”, later at M36 by D6.4 “Data management plan & Ethics- second interim” and then finalised by the end of the project into a final version (D6.5) “Data management plan & Ethics –final” that will be produced at M48.

metaCCAZE remains committed to the FAIR usage of data collected by the research community In addition, the data security and ethical considerations, as well as the resources available for managing data as part of the project continue to apply.

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1. ANNEX I: Forms to be filled for Data Management of the LL's metaDesign activities

1. LL1: mini dialogues (M3-M4: T-LLs +M7-M8: F-LLs)

meta CCAZE Work Package and Month	M3-M4: T- LLs M6; M7-M8: F-LLS ; relates to WP1 – T1.1 – ST1.1.2
metaCCAZE activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	1
Activities involved	*Dialogues in 10 cities. 10 physical or hybrid workshops: 1 in each of Trailblazer cities (4) + 1 of each Follower cities(6). Total 10 events*
Methods used for data generation	*Mini dialogues*
Data used/collected	*text, numeric*
Brief description of the data	
Is the data primary or secondary?	Primary
(If secondary data is used/collected) Has consent for secondary use been obtained?	
Who is the creator of the data?	
Who is the owner of the data?	
Time period of data collection	
Location of data collection	
Detailed description of variables or records	-
Where will the data be stored?	
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	
Will the data be publicly available?	
Describe the procedure(s) for safely storing and securing the data	
Does the data include personal information? (e.g. name, email)?	
Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion) ?	
Does the data involve tracking, observation, or localisation of participants?	
Does the data involve further processing of previously collected personal data ('secondary use')?	
Will Informed Consent Forms be used?	
How will the identity of participants be protected if required (e.g. via anonymization)?	
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	

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2. LL2: metaDesign use cases + BIGMS

metaCCAZE Work package and month	M6-M7: T-LLS + M19: F-LLs ; relates toWP1:T1.2 – ST1.2.1 +T1.3- ST1.3.1
MOVE2CCAM activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	2
Activities involved	*10 physical or hybrid workshops + online questionnaires: 1 in each of Trailblazer cities (4) + 1 of each Follower cities (6). Total 10 events*
Methods used for data generation	*Discussions, systems thinking*
Data used/collected	*text, photos, numeric*
Brief description of the data	
Is the data primary or secondary?	
(If secondary data is used/collected) Has consent for secondary use been obtained?	
Who is the creator of the data?	
Who is the owner of the data?	
Time period of data collection	
Location of data collection	
Detailed description of variables or records	-
Where will the data be stored?	
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	
Will the data be publicly available?	
Describe the procedure(s) for safely storing and securing the data	
Does the data include personal information? (e.g. name, email)?	
Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion) ?	
Does the data involve tracking, observation, or localisation of participants?	
Does the data involve further processing of previously collected personal data ('secondary use')?	
Will Informed Consent Forms be used?	
How will the identity of participants be protected if required (e.g. via anonymization)?	
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	

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3. Metadesign the metaServices with citizens

metaCCAZE Work package and month	M8-M9: T-LLs + M20:F-LLs; relates to WP1: T1.2 – ST1.2.1
metaCCAZE activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	3
Activities involved	*10 workshops: 1 in each of Trailblazer cities (4) + 1 of each Follower cities(6). Total 10 events*
Methods used for data generation	*Design thinking and discussions*
Data used/collected	*text, photo, numeric*
Brief description of the data	
Is the data primary or secondary?	
(If secondary data is used/collected) Has consent for secondary use been obtained?	
Who is the creator of the data?	
Who is the owner of the data?	
Time period of data collection	
Location of data collection	
Detailed description of variables or records	-
Where will the data be stored?	
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	
Will the data be publicly available?	
Describe the procedure(s) for safely storing and securing the data	
Does the data include personal information? (e.g. name, email)?	
Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion) ?	
Does the data involve tracking, observation, or localisation of participants?	
Does the data involve further processing of previously collected personal data ('secondary use')?	
Will Informed Consent Forms be used?	
How will the identity of participants be protected if required (e.g. via anonymization)?	
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	

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4. Validate metaDesigned use cases + BIGMS

metaCCAZE Work package and month	M10: T-LLs + M22 - M23:F-LLs; relates to WP1: T1.2 - ST1.2.2 + T1.3 - ST1.3.2
metaCCAZE activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	4
Activities involved	*10 physical or hybrid workshops + online questionnaires: 1 in each of Trailblazer cities (4) + 1 of each Follower cities(6). Total 10 events*
Methods used for data generation	design thinking *and discussion*,
Data used/collected	*text, numeric*
Brief description of the data	
Is the data primary or secondary?	
(If secondary data is used/collected) Has consent for secondary use been obtained?	
Who is the creator of the data?	
Who is the owner of the data?	
Time period of data collection	
Location of data collection	
Detailed description of variables or records	-
Where will the data be stored?	
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	
Will the data be publicly available?	
Describe the procedure(s) for safely storing and securing the data	
Does the data include personal information? (e.g. name, email)?	
Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion) ?	
Does the data involve tracking, observation, or localisation of participants?	
Does the data involve further processing of previously collected personal data (‘secondary use’)?	
Will Informed Consent Forms be used?	
How will the identity of participants be protected if required (e.g. via anonymization)?	
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	

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5. **Define the KPIs and Impact Evaluation framework**

metaCCAZE Work package and month	M10: T-LLs + M19:F-LLs; relates to WP1: T1.4
metaCCAZE activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	5
Activities involved	*10 physical or hybrid workshops + online questionnaires: 1 in each of Trailblazer cities (4) + 1 of each Follower cities(6). Total 10 events*
Methods used for data generation	design thinking *and discussion*
Data used/collected	*text, numeric*
Brief description of the data	
Is the data primary or secondary?	
(If secondary data is used/collected) Has consent for secondary use been obtained?	
Who is the creator of the data?	
Who is the owner of the data?	
Time period of data collection	
Location of data collection	
Detailed description of variables or records	-
Where will the data be stored?	
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	
Will the data be publicly available?	
Describe the procedure(s) for safely storing and securing the data	
Does the data include personal information? (e.g. name, email)?	
Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion) ?	
Does the data involve tracking, observation, or localisation of participants?	
Does the data involve further processing of previously collected personal data ('secondary use')?	
Will Informed Consent Forms be used?	
How will the identity of participants be protected if required (e.g. via anonymization)?	
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	

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ANNEX II: Forms to be filled for Data Management of the LLs' social embracement & behavioural change surveys

1. Travel behaviour & UC's preference exploration

metaCCAZE Work Package and Month	M12 –M14: T-LLs + M27 – M28:F-LLs; relates to WP1: T1.5
metaCCAZE activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	1 Social Survey
Activities involved	1 online survey in 6 countries
Methods used for data generation	Smartphone-based questionnaires and trip/activity/diaries
Data used/collected	*text, numeric*
Brief description of the data	• Data from a questionnaire filled out by participants before the implementation
Is the data primary or secondary?	Survey data
(If secondary data is used/collected) Has consent for secondary use been obtained?	Not applicable
Who is the creator of the data?	MLab
Who is the owner of the data?	MLab
Time period of data collection	December 2024
Location of data collection	On line (10 countries)
Detailed description of variables or records	• Questionnaire data variables: demographics, travel behaviour, health and wellbeing, perceptions and attitude about connectivity, electrification and automation • Ratings, rankings, and choices made by participants in their preferences, ideas and embracement for the metaDesigned UCs and metaServices
Where will the data be stored?	MLab secured machines
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	MLab
Will the data be publicly available?	No
Describe the procedure(s) for safely storing and securing the data	Data files secured with passwords in a laptop also secured with a password
Does the data include personal information? (e.g. name, email)?	No. Emails will only be collected for recruitment purposes and then securely deleted from the dataset.
Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion)	Health and wellbeing
Does the data involve tracking, observation, or localisation of participants?	Tracking
Does the data involve further processing of previously collected personal data ('secondary use')?	No

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Will Informed Consent Forms be used?	Yes
How will the identity of participants be protected if required (e.g. via anonymization)?	• Emails will only be collected for recruitment purposes and then securely deleted from the dataset. • No information will be collected in the survey than can allow, individually, or through combining several variables, allow the identification of the participant
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	No

2. Travel behaviour change and preferences monitoring

metaCCAZE Work Package and Month	M25 –M28: T-LLs + M33 – M35:F-LLs; relates to WP1: T1.5
metaCCAZE activity number (if data will be collected as part of activity) – please refer to the Activities plan in the Activities folder)	2 Social Survey
Activities involved	1 online survey in 6 countries
Methods used for data generation	Smartphone based questionnaires and trip/activity/diaries
Data used/collected	*text, numeric*
Brief description of the data	• Data from questionnaire filled by participants while UCs and metaServices are demonstrated
Is the data primary or secondary?	Survey data
(If secondary data is used/collected) Has consent for secondary use been obtained?	Not applicable
Who is the creator of the data?	MLab
Who is the owner of the data?	MLab
Time period of data collection	January 2026
Location of data collection	Online (10 countries)
Detailed description of variables or records	• Questionnaire data variables: demographics, travel behaviour, health and wellbeing, perceptions and attitude about connectivity, electrification and automation • Ratings, rankings, and choices made by participants in their preferences, ideas and embracement for the metadesigned UCs and metaServices
Where will the data be stored?	MLab secured machines
Who is the responsible partner for managing the data (collection, processing, storage, backups, GDPR etc.)?	MLab
Will the data be publicly available?	No
Describe the procedure(s) for safely storing and securing the data	Data files secured with passwords in a laptop also secured with a password
Does the data include personal information (e.g. name, email)?	No. Emails will only be collected for recruitment purposes and then securely deleted from the dataset.

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Does the data include sensitive personal data (e.g. health, ethnicity, political opinion, sexuality, religion) ?	Health and wellbeing
Does the data involve tracking, observation, or localisation of participants?	Tracking
Does the data involve further processing of previously collected personal data ('secondary use')?	No
Will Informed Consent Forms be used?	Yes
How will the identity of participants be protected if required (e.g. via anonymization)?	• Emails will only be collected for recruitment purposes and then securely deleted from the dataset. • No information will be collected in the survey than can allow, individually, or through combining several variables, allow the identification of the participant
Does a Data Protection Certificate exist (i.e. including rules for protection, retention, destruction etc.)?	No

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ANNEX III: metaCCAZE's Data Protection Officers

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