ELABORATOR

Deliverable 1.4

Data management plan – version I

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Project Executive Summary

ELABORATOR stands for 'The European Living Lab on designing sustainable urban mobility towards climate neutral cities'. The EU-funded project uses a holistic approach for planning, designing, implementing and deploying specific innovations and interventions towards safe, inclusive and sustainable urban mobility. These interventions consist of smart enforcement tools, space redesign and dynamic allocation, shared services, and integration of active and green modes of transportation.

They will be specifically co-designed and co-created with identified "vulnerable to exclusion" user groups, local authorities and relevant stakeholders. The interventions will be demonstrated in a number of cities across Europe, starting with six Lighthouse cities and six Follower cities with three principal aims:

I. to collect, assess and analyse user needs and requirements towards a safe and inclusive mobility and climate neutral cities;
II. to collect and share rich information sets made of real data, traces from dedicated toolkits, users' and stakeholders' opinions among the cities, so as to increase the take up of the innovations via a twinning approach;
III. to generate detailed guidelines, policies, future roadmap and built capacity for service providers, planning authorities and urban designers for the optimum integration of such inclusive and safe mobility interventions into Sustainable Urban Mobility Plans (SUMPs).

ELABORATOR Lighthouse cities

- Milan (Italy)
- Copenhagen (Denmark)
- Helsinki (Finland)
- Issy-les-Moulineaux (France)
- Zaragoza (Spain)
- Trikala (Greece)

ELABORATOR Follower cities

- Lund (Sweden)
- Liberec (Czech Republic)
- Velenje (Slovenia)
- Split (Croatia)
- Krusevac (Serbia)
- Ioannina (Greece)

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Project Partners

Organisation	Country	Abbreviation
INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS	EL	**ICCS**
POLIS AISBL	EL	**POLIS**
EVROPSKI INSTITUT ZA OCENJEVANJE CEST	SI	**EURORAP**
INTERNATIONAL ROAD ASSESSMENT PROGRAMME	UK	**IRAP**
UNIVERSITY OF BRISTOL	UK	**UBRIS**
MULTICRITERI-MCRIT AIE	ES	**MCRIT**
INSTITUT D'ARQUITECTURA AVANCADA DE CATALUNYA	ES	**IAAC**
COMUNE DI MILANO	IT	**CDM**
STEFANO BOERI ARCHITETTI SRL	IT	**SBA**
THINGS SRL	IT	**THIN**
AGENZIA MOBILITA' AMBIENTE E TERRITORIO SRL	AMAT	**AMAT**
KOBENHAVNS KOMMUNE	DK	**CPHK**
KOBENHAVNS UNIVERSITET	DK	**UCPH**
ANALYSE & TAL F.M.B.A	DK	**A&T**
FORUM VIRIUM HELSINKI OY	FI	**FVH**
TEKNOLOGIAN TUTKIMUSKESKUS VTT OY	FI	**VTT**
SOCIETE D'ECONOMIE MIXTE ISSY - MEDIA (SEM ISSY MEDIA)	FR	**ISSY**
COLAS	FR	**COLAS**
IFP ENERGIES NOUVELLES	FR	**IFPEN**
URBAN RADAR	FR	**URAD**

AYUNTAMIENTO DE ZARAGOZA	ES	**AYZG**
FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS	ES	**CIRCE**
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SVEUCILISTE U ZAGREBU FAKULTET PROMETNIH ZNANOSTI	HR	**FPZ**
CITY ADMINISTRATION OF THE CITY OF KRUSEVAC	RS	**KRUS**
MUNICIPALITY OF IOANNINA	EL	**IOANN**
PLATOMO GMBH	DE	**PLAT**

List of abbreviations and acronyms

Acronym	Meaning
CSV	Comma Separated Values
DMP	Data Management Plan
DMPO	the Data Management and Protection Officer (DMPO)
DOI	Digital Object Identifier
EC	European Commission
FAIR	Findability, Accessibility, Interoperability, and Reuse
GA	Grant Agreement
GDPR	General data protection regulation
JSON	JavaScript Object Notation
KoM	Kick-off Meeting
KPI	Key Performance Indicator
ML	Machine Learning
SPH	Smoothed-particle hydrodynamics
SUMP	Sustainable urban mobility plan
WFS	Web Feature Service
WMS	Web Map Service
WP	Work Package
XML	Extensible Markup Language

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Deliverable executive summary

This document initiates the Data Management Plan for the ELABORATOR project, describing the procedures for data collection, storage, and processing within the framework of the project.

All data processing activities within the ELABORATOR project will comply with the requirements of the General Data Protection Regulation. In parallel, ELABORATOR will ensure that its data is Findable, Accessible, Interoperable and Reusable.

This deliverable provides a General Data Protection Regulation (GDPR) summary and localisation, providing information for national legislation applicable to all partner pilots sites and partners who may need to collect, store, or process data for ELABORATOR. We identify roles and responsibilites that need to be established within the project to handle and establish that processes such as pseudonymisation are necessary for the scientific analyses will be stored and processed according to a data sharing agreement.

The consent of the users to the processing of their data will be asked before their involvement in any of the project's activities (focus groups, questionnaires etc.) or during their registration in ELABORATOR tools. Additionally, users will be given the possibility to withdraw their consent and to exercise their rights deriving from the General Data Protection Regulation.

The ELABORATOR outputs in terms of deliverables and will be named and indexed with appropriate keywords and will be available via the project website and in research fora. ELABORATOR will ensure the open access to all scientific publications derived from processes and outcomes and will provide access to research data needed to validate the results presented in deposited scientific publications.

1 Introduction

The purpose of deliverable D1.4 "Data Management Plan vesrion.1" is to outline the principles and core elements of the data management policy that will be employed by the ELABORATOR Consortium.

ELABORATOR aims to design, implement and deploy specific innovations and interventions towards safe, inclusive, and sustainable urban mobility. To co-design these interventions the project will engage various stakeholders—citizens, including vulnerable groups, operators, public administration, service providers, researchers, and technology suppliers. By listing (by WP2), collecting (by WP3, 5, and 6) and structuring (by WP4) indicators and documentation of effects of interventions as well as user feedback , the ELABORATOR has three principal aims:

i) to collect, assess and analyse user needs and requirements

ii) to collect and share rich information changes in mobility in the cities, based on monitoring real data sterming from sensors, traces from dedicated toolkits, users' and stakeholders' opinions among the cities, applicable to increase the uptake of the innovations in lighthouse as well as in follower cities via a twinning approach

iii) with respect to data collection, structuring and dissimination of data and information, to support generation of detailed guidelines, policies, future roadmap and thereby build capacity of service providers, planning authorities, and urban designers for the optimum integration of such inclusive and safe mobility interventions into Sustainable Urban Mobility Plans (SUMPs).

Given the progress of the discovery and definition phase of the project (WP3) and the stage of the data modelling to be aligned by WP4 by M18 (D4.1) , ELABORATOR's concrete knowledge and experience has yet to be developed and described. Therefore, this deliverable is delimited to principles that will govern the data collection, storage and management of data, needed to deploy and evaluate interventions designed within ELABORATOR.

Although the project will implement, test, and evaluate mobility interventions directly deployed in the urban fabric of twelve (12) cities in Europe[1], it will limit the processing of personal data to an absolute minimum. These may be needed to methodologies, guidance, and recommendations, and when obtaining feedback from community engagement activities like focus groups and questionnaires, targeting vulnerable groups, such as vulnerable to exclusion or vulnerable road users. Attributes such as gender, age, disabilities, travel habits, vehicle ownership, and area of residence will be collected to qualify inputs internally, while ensuring that no identity data will be shared.

All data processing within ELABORATOR will adhere to EUs General Data Protection Regulation (GDPR) and ELABORATOR will ensure that the research data is FAIR—Findable, Accessible, Interoperable, and Re-usable—following the relevant EU guidelines.

This report is structured as follows:

[1] The 12 Partner Cities of ELABORATOR are split in 6 Lighthouses, namely: Milan (Italy), Copenhagen (Denmark), Helsinki (Finland), Issy-les-Moulineaux (France), Zaragoza (Spain) and Trikala (Greece), and 6 Followers: Lund (Sweden), Liberec (Czech Republic), Velejne (Slovenia), Ioannina (Greece), Split (Croatia) and Kruševac (Serbia).

- Section 2 presents main principles of the GDPR (2.1), and FAIR (Findable, Accessible, Interoperable and Reusable) data management (2.2), establishing the necessary background for a DMP.
- Section 3 introduces the Elaborator Data Landscape (3.1), establishing guidelines for the processing of personal data (3.2) and their protection (3.3), and details accountability and governance (3.4)
- Section 4 presents the ELABORATOR proposal for FAIR data management.
- Section 5 concludes this document

2 The Fundamentals

2.1 GDPR background

The General Data Protection Regulation (GDPR), officially Regulation (EU) 2016/679, was approved by the European Parliament and the Council on April 27 2016, coming into effect on , on May 25 2018. Towards the protection of natural persons with regard to the processing of personal data and on the free movement of such data, GDPR applies to any organization that handles and stores personal data of EU residents regardless of their location.

2.1.1 General termonilogy

To establish a common language based on the GDPR we provide relevant definitions for use in this document and the project at large

'personal data' means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person;

'processing' means any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction;

'restriction of processing' means the marking of stored personal data with the aim of limiting their processing to enable identification of natural persons, in the future;

'profiling' means any form of automated processing of personal data consisting of the use of personal data to categorise certain personal aspects relating to a natural person, in particular to analyse or predict aspects concerning that natural person's performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements;

'pseudonymisation' means the processing of personal data in such a manner that the personal data can no longer be attributed to a specific data subject without the use of additional information, provided that such additional information is kept separately and is subject to technical and

organisational measures to ensure that the personal data are not attributed to an identified or identifiable natural person;

'filing system' means any structured set of personal data which are accessible according to specific criteria, whether centralised, decentralised or dispersed on a functional or geographical basis;

'controller' means the natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data; where the purposes and means of such processing are determined by Union or Member State law, the controller or the specific criteria for its nomination may be provided for by Union or Member State law;

'processor' means a natural or legal person, public authority, agency or other body which processes personal data on behalf of the controller;

'recipient' means a natural or legal person, public authority, agency or another body, to which the personal data are disclosed, whether a third party or not.

'third party' means a natural or legal person, public authority, agency or body other than the data subject, controller, processor and persons who, under the direct authority of the controller or processor, are authorised to process personal data;

'consent' of the data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to them;

'personal data breach' means a breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorised disclosure of, or access to, personal data transmitted, stored or otherwise processed;

'biometric data' means personal data resulting from specific technical processing relating to the physical, physiological (explicit-) or behavioural (implicit-) characteristics of a natural person, which allow or confirm the unique identification of that natural person, such as facial images or dactyloscopic data;

'cross-border processing' means either:

1. processing of personal data which takes place in the context of the activities of establishments in more than one Member State of a controller or processor in the Union where the controller or processor is established in more than one Member State; or
2. processing of personal data which takes place in the context of the activities of a single establishment of a controller or processor in the Union but which substantially affects or is likely to substantially affect data subjects in more than one Member State.

'relevant and reasoned objection' means an objection to a draft decision as to whether there is an infringement of the GDPR, or whether envisaged action in relation to the controller or processor complies with this Regulation, which clearly demonstrates the significance of the risks posed by the draft decision as regards the fundamental rights and freedoms of data subjects and, where applicable, the free flow of personal data within the Union;

2.1.2 Legal context on the GDPR enforcement in the ELABORATOR

With regards to the 12 Pilot cities of ELABORATOR, the following respective national laws have been adopted to implement the GDPR:

1. **Italy** (Milan) - The domestic data protection regulation is represented by legislative decree n. 196 of 30 June 2003 (the "Italian Privacy Code") modified by legislative decree n. 101 of 10 August 2018, is implementing the provisions of the GDPR.
2. **Denmark** (Copenhagen) – The Data Protection Act (no. 502 of 23 May 2018) "on supplementary provisions to the regulation on the protection of natural persons with regard to the processing of personal data and on the free movement of such data" implements and supplements the GDPR.
3. **Finland** (Helsinki) - The Data Protection Act (1050/2018), which entered into force on 1 January 2019, supplements the GDPR, and repealed the old Personal Data Act (523/1999). Moreover, additional amendments have been introduced to other legislation regarding the processing of personal data such as the Act on the Protection of Privacy in Working Life (759/2004), amended in 2019, the Criminal Code (39/1889), the Act on Enforcement of Fines (672/2002), and the Act on Grey Economy Information Unit (1207/2010).
4. **France** (Issy-les-Moulineaux) - The French Act No. 2018-493 of 20 June 2018 ('the Amendment Law') incorporates the General Data Protection Regulation (Regulation (EU) 2016/679) ('GDPR') provisions in the existing Act No. 78-17 of 6 January 1978 on Information Technology, Data Files and Civil Liberties, which governs the protection of personal data. For greater clarity, the law has been modified via Ordinance No. 2018-1125 of 12 December 2018, which took effect on 1 June 2019.
5. **Spain** (Zaragosa) - The Spanish Data Protection and Digital Rights Act 3/2018 (the "Data Protection Act") helps implement the GDPR and created a new digital charter of rights, since its application on Dec. 7, 2018.
6. **Greece** (Trikala) - Greece introduced Law 4624/2019 on the Protection of Individuals Regarding Processing of Personal Data (the "Data Protection Law"), which supplements the GDPR and further specifies some of its requirements. Moreover, provisions of the Law 2472/1997 on the Protection of Individuals Regarding Processing Personal Data remain effective (Art.84: Data Protection Law).
7. **Sweden** (Lund) - In Sweden the GDPR is implemented by the Swedish Data Protection Act (2018:218) (Swe. lag (2018:218) med kompletterande bestämmelser till EU:s dataskyddsförordning) (unofficially translated to English as "the Data Protection Act"), and The Swedish Data Protection Regulation (2018:219) (Swe. Förordning (2018:219) med kompletterande bestämmelser till EU:s dataskyddsförordning) (the "Data Protection Regulation").
8. **Czech Republic** (Liberec) Act No. 110/2019 Coll. (the Personal Data Processing Act), is the law implementing the GDPR in the Czech Republic, coming into effect on 24th April 2019. This statute regulates personal data processing within the scope GDPR and the processing of this data by competent authorities (namely the Office for Personal Data Protection - UOOU) for preventing, searching and detecting criminal activity, ensuring safety and public order, etc.
9. **Slovenia** (Velenje) – The Personal Data Protection Act (Zakon o varstvu osebnih podatkov, ZVOP-2, "ZVOP-2"), voted on 15/12/2022 and inf force since 26/1/2023, is the national law implementing the EU General Data Protection Regulation ("GDPR")
10. **Croatia** (Split) Two acts complement the GDPR: The Act on the protection of natural persons with regard to the processing and exchange of personal data for the purposes of the

prevention, investigation, detection or prosecution of criminal offences or the execution of criminal penalties (Official Gazette 68/18) and the Act on the implementation of General Data Protection Regulation (Official Gazette 42/18).

11. **Serbia** (Kruševac), On Nov. 9, 2018, Serbia adopted the Law on Personal Data Protection ("Official Gazette of RS" No. 87/2018). The law went into effect on 21/8/2019. In general, the LPDP is harmonized with the EU General Data Protection Regulation, as this was the obligation of Serbia as an EU member candidate in the process of EU integration. Provisions of the LPDP mirror the normative provisions of the GDPR in almost all aspects.

Additional to the 10 Member states hosting pilot sites and Serbia, ELABORATOR has partners in Germany, Belgium, and the UK. Withing these, the following respective national laws have been adopted to implement the GDPR:

12. **Germany**: In July 2017, Germany was the first EU member state to pass a Data Protection Adaptation and Implementation Act (Bundesdatenschutzgesetz: BDSG-New). The BDSG includes regulations for processing personal data in the employment context. The most prominent sector-specific legislation is in relation to electronic communication, such as websites and apps: the "Act to Regulate Data Protection and Privacy in Telecommunications and Telemedia" ("TTDSG"). Germany is also distinguished by its structure of Data Protection Authorities (DPAs), comprising one federal authority that oversees telecoms and postal services, and 16 state authorities responsible for monitoring private-sector companies within their respective territories. To streamline regulatory processes for businesses active in multiple German states, the BDSG-New has instituted a "One Stop Shop" system. This system designates a Lead DPA based in the state of the company's principal office to act as the primary regulatory contact.
13. **UK**: The Data Protection Act of 2018, is the UK's implementation of the GDPR: The Act has adapted the GDPR, for example by providing some specific conditions for processing sensitive data, and some exemptions specific to the UK. It also provides for regulation and enforcement in the UK.
14. **Belgium**: The Act of July 30, 2018 on the Protection of Natural Persons with Regard to the Processing of Personal Data applies to the processing of personal data in the context of the activities of an establishment of a controller or a processor in Belgium, regardless of whether the processing takes place in Belgium or not.

2.1.3 General principles

According to the GDPR principles relating to processing of personal data, they shall be:

- processed lawfully, fairly and in a transparent manner in relation to the data subject.
- collected for specified, explicit and legitimate purposes and further processed for achieving the ELABORATOR purposes.
- adequate, relevant, and limited to what is necessary for the purposes for which they are processed.
- kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed.

According to the GDPR, specific requirements are applied for processing of special categories of personal data (e.g., revealing race, health, politics, religions). The ELABORATOR shall comply with these requirements as follows:

- the data subject shall give explicit consent to the processing of those personal data for the research purposes of the project.
- Processing will be performed when necessary for achieving purposes in public interest, scientific or historical research purposes or statistical purposes which shall be proportionate to the aim pursued, respect the essence of the right to data protection and provide for suitable and specific measures to safeguard the fundamental rights and the interests of the data subject.

2.1.4 Consent to processing

Processing of personal data is applied in a lawful basis by the GDPR when the data subject has clearly provided consent to processing their personal data. The conditions that shall be ensured when requesting a data subject's consent are summarized:

- The request for consent shall be presented in a prominent manner and clearly distinguished from other matters, in a comprehensible and easily accessible form, using clear, plain, and easy to understand language.

For example, in workshops and meetings where data is to be acquired from project participants or invited persons not being members of the ELABORATOR consortium, consent forms will be handed out, by a member of the consortium who will explain in brief their content.

- The consent shall include:
  - the identity and the contact details of the controller,
  - the contact details of the Data Management and Protection Officer (DMPO),
  - the purposes of and the legal basis for the processing,
  - the recipients of the personal data, if any
  - the period for which the personal data will be stored,
  - the existence of the data subject's right to request access to and rectification or erasure of personal data, restriction, or objection of processing, as well as the right to data portability, withdraw consent at any time and lodge a complaint with a supervisory authority.

Moreover,

- data subjects should be asked to positively opt in.
- subjects should be asked to consent separately to different types and purposes of processing.

Consent should be regularly reviewed to verify that the purposes of processing have not changed and therefore processes to refresh consent at appropriate time intervals shall be established. Data subjects who wish to withdraw shall not be penalized.

2.1.5 Rights of the data subjects

The data subject has the following rights according to GDPR:

Right to be informed

Data processing information shall be provided to the data subjects in a concrete, transparent, intelligible, and easily accessible form, using plain and understandable language.

Right of access

Data subjects shall have the right to obtain from the controller confirmation as to whether or not personal data are being processed, and, if processing takes place, access to the personal data and processing information. The right of access should be given free of charge unless it is unfounded or excessive. If requested, the information shall be provided without delay, at the latest within one month from the receipt of request.

Right to rectification

Data subjects shall have the right to have their personal data rectified if inaccurate or, taking into account the purposes of the processing, completed if incomplete by providing a supplementary statement.

Right to erasure

Data subjects shall have the right to have their personal data erased where the four following circumstances are met: (i) when personal data is no longer necessary, (ii) when the data subject withdraws consent, (iii) when the data subject objects to the processing, (iv) when personal data have been unlawfully processed.

Right to restriction of processing

Data subjects shall have the right to obtain restriction of processing of personal data under certain conditions. In this case, personal data can be stored but not processed.

Right to data portability

Data subjects shall have the right to receive and reuse the personal data for their own purposes. Therefore, personal data shall be provided in a structured, commonly used, and machine-readable format ensuring that they can be easily copied, moved, and transferred in safe and secure way free of charge.

Right to object

Data subjects shall have the right to object at any time to processing of personal data. Data processing shall no longer take place as soon as an objection is received. Data subjects shall be explicitly and distinguishably informed about their right to object at the latest at the time of the first communication.

2.1.6 Obligations of controller and processor

The Controller shall implement appropriate and organizational measures, such as pseudonymisation, to ensure and to be able to demonstrate that processing is performed in accordance with the GDPR and data protection principles, such as data minimisation applied to the amount of personal data collected, the extent of their processing, the period of their storage and accessibility, are met. The Controller shall also proceed with the assignment of processing and access rights responsibilities.
The Controller shall maintain a record of processing activities which shall contain the following information:

- the name and contact details of the Controller and the Data Management and Protection Officer,
- the purposes of the processing,
- a description of the categories of data subjects and of personal data,
- the categories of recipients to whom the personal data have been or will be disclosed including recipients in third countries or international organizations,
- the envisaged time limits for erasure of the different categories of data, if possible,
- a general description of the technical and organisational security measures, if possible.

The Processor shall process the personal data only on documented instructions from the Controller, ensure that individuals authorised to process the personal data have committed themselves to confidentiality and delete or return all the personal data to the Controller after the end of the processing.
The Controller and the Processor shall implement appropriate technical and organizational measures to ensure a level of data security, and may include:

- the pseudonymisation and encryption of personal data,
- the ability to ensure the ongoing confidentiality, integrity, availability and resilience of processing systems and services,
- the ability to restore the availability and access to personal data in a timely manner in the event of a physical or technical incident,
- a process for regularly testing, assessing and evaluating the effectiveness of technical and organizational measures for ensuring the security of the processing.

In the case of any identified personal data breach, the Controller shall without undue delay notify the personal data breach to the supervisory authority, unless the personal data breach is unlikely to result in a risk to the rights and freedoms of natural persons. When the personal data breach is likely to result in a high risk to the rights and freedoms of naturals persons, the Controller shall communicate the breach to the data subject without undue delay

2.2 FAIR Data management

2.2.1 EC Guidelines on fair data management

According to the EC Guidelines on FAIR Data Management [2], each project shall provide information on:

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

For this purpose, a Data Summary shall be developed, presenting:

- the purpose of the data collection/generation and its relation to the objectives of the project,
- the types and formats of data that the project will generate/collect,

- the re-use of any existing data, if any,
- the origin of the data.

The mechanisms to make data findable shall be described entailing the possible use of metadata, naming conventions, search keywords and Digital Object Identifiers. Data that will be made openly available or be licensed for re-use shall also be specified including the way that they will become accessible, referring to the repository, access methods and any relevant documentation.
Data should be interoperable as far as possible. This may include using standard formats, open software applications or standard data and metadata vocabularies. Provisions should be put in place for data security and recovery, if needed. Informed consent needs to be discussed too.
Some of the above guidelines are overlapping with the GDPR requirements, for example the informed consent procedure, the data description, and the security provisions.

3 Elaborator Data landscape

3.1 Overview

The ELABORATOR project will deliver urban mobility interventions which will be demonstrated in six Lighthouse cities and six Follower cities. To do so the project has laid out a work plan which delivers methodological and practical tools to co-design the interventions, jointly with relevant local stakeholders, including citizen groups (with a particular focus on those vulnerable to exclusion and vulnerable road users) and twin interventions designed and implemented at the six Lighthouse Pilots to the six Followers.

In this regard, exchange of information is crucial, both within local Pilots' Living Labs, as well as through the community of practice which will have a central role in the twinning process of the interventions. This is evident by the design of the project, where WP4 alone is dedicated on the data sharing, while tasks in all WPs deal with either the generation or consumption of data relevant to pilots, constituents/stakeholders, design, implementation monitoring and evaluation, as well as scale up.

In an initial evaluation, which will be elaborated further in the follow-up version of this deliverable (D1.6, in conjunction with D4.1 and work performed jointly in the following 12 months by T1.4 and T4.1), we now identify three broad classes of datasets to be collected or created and maintained throughout the lifecycle of ELABORATOR:

Class 1. Pilots' Citizens- and local stakeholders-collected information from online and physical workshops towards:

(i) realizing the tools for the co-creation of the interventions, within WP2,

(ii) performing the Discovery and Definition phase of the project within WP3, as well

(iii) facilitating the Evaluation phase of the project (WP7)

The generation method of these data, a significant volume of which will be qualitative, can be either (A) physical (e.g. canvases with drawings and sticky notes), or (B) digital (e.g. questionnaires facilitated via a web page).

Adhering to the principles laid out in the previous section, physically collected data, will be digitised for portability within the consortium and to facilitate transfer of knowledge, while originals of physical data forms will be kept under appropriately secure means.

Class 2. Data pertaining to the characterization of the site of the intervention needed for (i) (digital) tools driving the co-creation process, (ii) support the technical definition of the interventions, as well as (iii) delimiting the area of analysis and evaluation of behavioural change as a consequence of the interventions. Such data can span from representations of the physical space (e.g. geodata, aerial/satellite images, BIM models/ XML formats defined to represent topology information),

Class 3. Evaluation-Oriented Data, used to estimate the pre-intervention KPI values, as well as quantify the intervention impact by post-intervention technical monitoring and surveys, such can be national/local statistical data, monitoring data such as data pertaining to the usage of the space (e.g. traffic volumes), as well as data from previous co-creative processes, which can be seen as past attempts of collection of class 1 data as above.

3.2 Personal Data processing guidelines

All the data processing activities within the project will comply with the requirements of the GDPR. Special categories of personal data (racial or ethnic origin, religious beliefs and data concerning health) will be collected under any relevant ethics review the collector must perform by national laws , and processed, given the data subjects' consent, for the ELABORATOR purposes.

With respect to modality of the data, types of data and metadata, the corresponding standards will be followed. Due to the multimodal and heavily distributed effort associated with the intervention co-design and evaluation data, each effort towards the design, implementation and validation of a data collection campaign will be accompanied with a respective design record, directly linked to Task 4.1. This record, will include: administrative information, such as the controller, type of media used to store data, copyright statement and information on intellectual property rights, technical information, such as fields included, formats and platform utilised, data structure, content information, such as domain, entry types, informal and formal validation, where possible/relevant.

Public project deliverables and the executive summaries of deliverables which are not public will be available in the project website and will be made available to the European Open Science Cloud.

For Data of Class 1, as well as those derived in Class 3 via surveys/interviews, only pseudonymous data that are necessary for the design and evaluation analyses will be exchanged between partners, adhering to all privacy and security measures. No identity data will be shared between partners or linked to any results. While stakeholders' opinions/input and will be erased immediately after the end of the project. All collected data will be securely stored and shared between partners according to a data sharing agreement to be arranged and signed by all partners.

The consent of the citizens/stakeholders/participants to the processing of their data will be asked before their involvement in the project surveys, workshops, focus groups, interviews, and tests. Additionally, they will be given the possibility to easily withdraw their consent and to exercise their rights deriving from the GDPR. Furthermore, since the ELABORATOR project has a special focus in investigating vulnerable user groups' mobility needs, concerns, and expectations, the ELABORATOR researchers will and must consider additional protection for vulnerable user groups. In this context, ELABORATOR will ensure a full understanding by all the participants of the information given when inviting them to participate in a study protocol and their ability to give or withdraw consent; ensuring

in parallel that the study subjects are not selected or rejected for the wrong reasons and that there are no secondary or hidden interests when performing the research.

3.3 Personal Data protection

Within ELABORATOR, the purpose and means of the processing of the data that will be collected and stored are jointly determined by partners participating in the WPs relevant to the design, implementation and evaluation of the interventions (WP2-8).

Therefore, there is a need for joint controllers of the data who shall determine in a transparent way their respective responsibilities for compliance with the obligations under the GDPR, in particular regarding the exercising of the rights of the data subjects and their respective duties to provide the information referred to in Articles 13 and 14 of the GDPR. Respectively, a Data Sharing Agreement will be arranged and signed by all partners reflecting the respective roles and relationships of the joint controllers in relation to the data subjects. The Data Sharing Agreement will be made available to the data subjects. In particular, transparent information will be provided to data subject concerning the recipients or categories of recipients of the personal data. Controllers and processors will comply with Article 30 of the GDPR. Respectively, each controller will maintain a record of processing activities under its responsibility and each processor will maintain a record of all categories of processing activities carried out on behalf of a controller, containing in both cases the necessary information. The framework for such records will be precured and made available by D1.6, the extension of the DMP delivered on M18.

Any ELABORATOR Personal Identity Data will be safely and securely stored according to the internal procedures of each responsible partner for each activity in compliance with the GDPR and in line with the most updated version of the Data Management Plan. All data will be pseudonymous, and no identity data of the subjects will be referred to in any ELABORATOR output or publication or shared amongst ELABORATOR partners or elsewhere. Collected data will be securely shared between partners according to a data sharing agreement (detailed in Section 3.3).

3.3.1 Consent

Before engaging with any ELABORATOR co-creation activity, interviews, and, citizens and stakeholders will be asked to consent to the processing of their personal data.

They will be given a physical or electronic copy of the Consent Form and they will be asked to complete it, indicating their consent or not. If a subject does not consent to the processing of their personal data concerning the activities, they will be excluded from the process and no data will be recorded of them. Copies of the physical signed consent forms will be maintained by each partner processing data from the activity.

The ELABORATOR Data Management and Protection Officer will be asked review the consent forms prior to each activity requiring one, to check that the processing and purposes have not changed from what has been communicated to data subjects.

3.3.2 Security of personal data

Personal data in ELABORATOR will be securely stored and processed within by authorized users according to the data sharing agreement.

Hard copies of consent forms will be kept in locked drawers. Any electronic copy will be stored locally, encrypted and protected according to internal procedures by the responsible partner. Only

authorised employees will have access to such data. Such data will be handled according to internal procedures of each partner and will not be transferred to other partners.

Neither physical nor electronic versions of questionnaires will include identity data of the respondent.

3.4 Accountability & Governance

The present document describes the measures to be implemented, so that ELABORATOR complies with the GDPR requirements. Deviations in practice from the initial Data Management Plan will be captured by LiU resulting in D1.{6, 7, 9}: Data management plan {v.2,3, and final} (M18/30/42) as per the Grant Agreement.

The ELABORATOR implements principles of data protection by design and data protection by default. A data minimisation policy is adopted by ELABORATOR, which means that only data strictly necessary for the needs analyses, design and evaluation of the interventions, will be stored and processed. Processing will be transparent to subjects since they will be informed in a clear and easy understandable language.

4 FAIR data management in ELABORATOR

4.1 Findable and Accessible

ELABORATOR has a strong focus on making sure that the generated data will be identifiable and easily discoverable. ELABORATOR will ensure the open access to all peer-reviewed scientific publications relating to its results and will provide access to the research data needed to validate the results presented in deposited scientific publications.
The following lists the minimum fields of metadata that should come with a ELABORATOR project-generated scientific publication in a repository:

- The terms: “European Union (EU)”, “Horizon Europe”
- Identifier of the action (HORIZON-MISS-2022-CIT-01 -01)
- Acronym and grant number (ELABORATOR, 101103772)
- Publication date
- Length of embargo period if applicable
- Individual, persistent identifier (such as the artilcle DOI)

Apart from any scientific publications, ELABORATOR will publish all its public Deliverables and dissemination material in its web site. When referencing Open access data, ELABORATOR will include at a minimum the following statement demonstrating EU support (with relevant in-formation included into the repository metadata)

“This project has received funding from the European Union’s Horizon Europe research and innovation program under grant agreement No101103772”

ELABORATOR will follow the Open Access practice [3] of providing online access to its scientific research articles, selecting by order of preference either:

- open access publishing / 'gold' open access -whereby an article is immediately published in open access mode
- self-archiving / 'green' open access – the author, or a representative, archives (deposits) the published article or the final peer-reviewed manuscript in an online (institutional, such as the ICCS' Sharepoint) repository before, at the same time as, or after the publication,

The ELABORATOR consortium will strive to make many of the collected intervention (Class 2 and 3) datasets open access. When this is not the case, the data sharing section for that particular dataset will describe why access has been restricted

In summary, as a baseline, ELABORATOR partners shall deposit:

- Scientific publications – on their respective institute repositories in addition (when relevant) to the ELABORATOR online data repository
- Intervention data (Class 2 & 3)– to the ELABORATOR public online data collection (when possible)
- Other project output files – to the ELABORATOR public online data collection (when relevant)

This version of the DMP does not include the actual metadata to be produced in the ELABORATOR project. Details about technical means and services for building repositories and accessing to this metadata will be provided in the next version of the DMP in conjunction with relevant sections of D4.1, and D3.1.

4.2 Interoperability and Reuse

WP4 will work dedicatedly towards data interoperability in T4.2 data within the project will be available using the sharing platform of WP4. Relevant APIs will be open and thoroughly documented to enable and encourage its usage from third parties (e.g. the Observer cities). The platform tools will be based on open-source software to facilitate adoption and possible modifications. The data in the platform for the storage of mobility intervention will be exposed in a text format following well-known and established standards (e.g., CSV, JSON, SHP, Geopackage, WMS, WFS, or XML).

The Simulation (T5.3) and ML/prediction (T4.3) tools will be developed on open source frameworks to foster replication at large scale. Being highly interoperable, the ELABORATOR data will be easily reusable also outside the project. Finally, to be completely reusable, the data and all the strategies and methodologies developed within the project, will be accompanied by a common vocabulary that will help in understanding words and concepts. The ELABORATOR Intervention data will be available for five years after the project end.

5 Conclusion

The ELABORATOR project, aims to design sustainable urban mobility for climate-neutral cities through a holistic approach. This approach encompasses planning, designing, implementing, and deploying innovative interventions for safe, inclusive, and sustainable urban mobility. These interventions include smart enforcement tools, space redesign, dynamic allocation, shared services, and the integration of active and green transportation modes.

A significant aspect of the project is its focus on co-designing and co-creating these interventions with vulnerable user groups, local authorities, and stakeholders. This ensures that the solutions are inclusive and cater to a diverse range of needs. ELABORATOR is set to be demonstrated in 12 European cities, starting with six Lighthouse cities and six Follower cities. The project has three principal aims: firstly, to collect, assess, and analyze user needs and requirements for safe and inclusive mobility in climate-neutral cities; secondly, to gather and disseminate comprehensive information sets, including real data and stakeholders' opinions, to foster the uptake of innovations through a twinning approach among cities; and thirdly, to create detailed guidelines, policies, and a future roadmap to aid service providers, planning authorities, and urban designers in optimally integrating such mobility interventions into Sustainable Urban Mobility Plans (SUMPs).

Addressing these aims, this initial Data Management Plan for ELABORATOR outlined the procedures for data collection, storage, and processing, adhering strictly to the General Data Protection Regulation (GDPR). The plan emphasized that all data within the project will be Findable, Accessible, Interoperable, and Reusable. It included a GDPR summary and its project-relevant localisation, addressing national legislation applicable to partner pilot sites and partners involved in data handling. The plan also identified necessary roles and responsibilities for data management, emphasizing processes like pseudonymisation for scientific analysis. Consent for data processing will be sought from users prior to their involvement in any project activities or during registration in ELABORATOR tools. Users will also have the option to withdraw consent and exercise their rights under GDPR. Furthermore, ELABORATOR commits to open access of all scientific publications and research data, ensuring validation of results in scientific publications. These deliverables will be indexed with appropriate keywords, and made available on the project website and in research forums, reinforcing the project's dedication to transparency and accessibility in its pursuit of sustainable urban mobility solutions.

6 References

[1] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

[2] European Commission Directorate-General for Research and Innovation. H2020 Programme Guidelines on FAIR Data Management in Horizon 2020. Version 3.0, 26 July 2016.

[3] Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020, Version 3.2, 21 March 2017