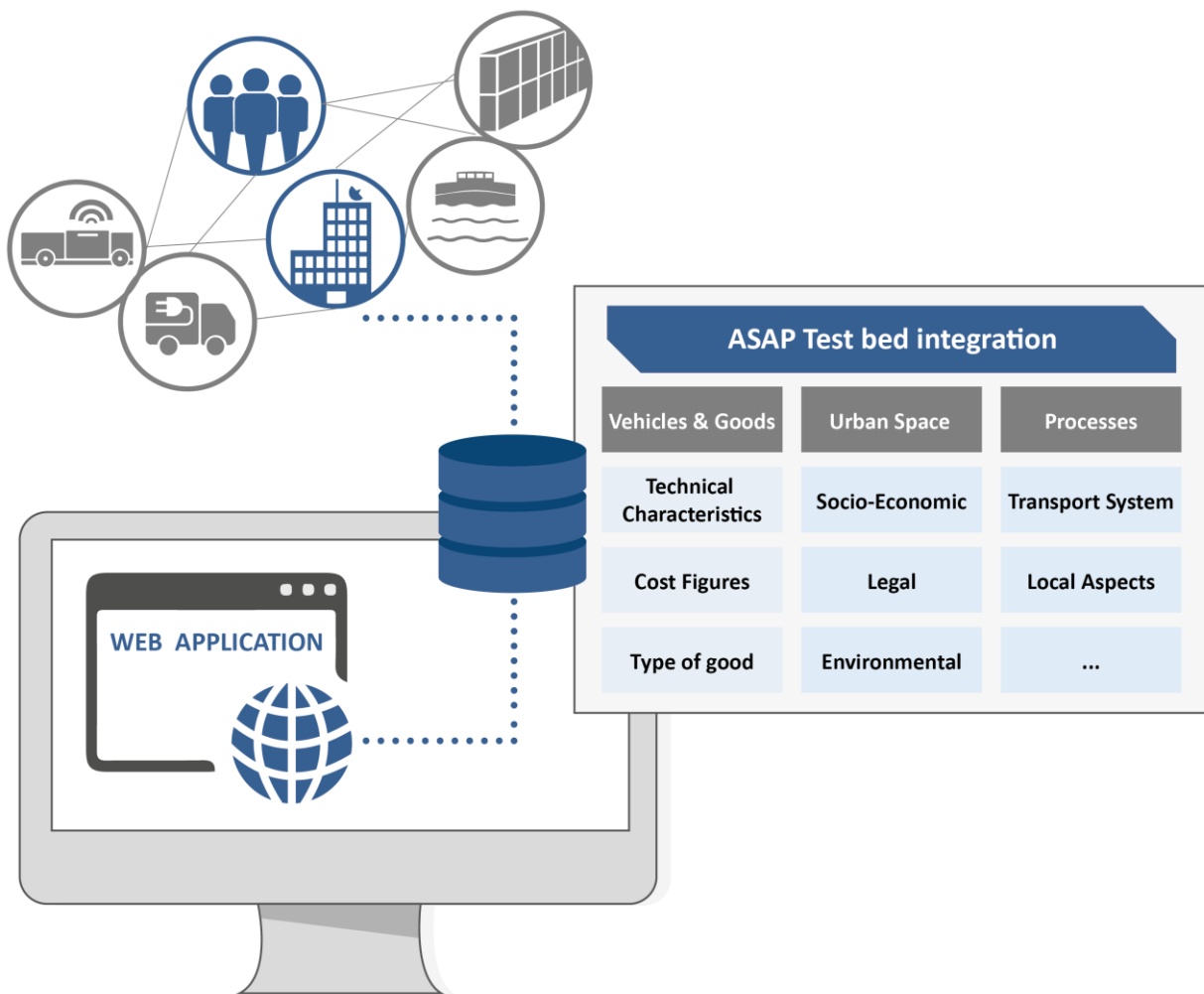


AWAKEN SLEEPING ASSETS PROJECT

Data Management Plan



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D3.2: Data Management Plan

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Project partners

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h2 projekt.beratung KG h2pro	AUSTRIA
Fraunhofer Institut für Materialfluss und Logistik FHG	GERMANY
Freie und Hansestadt Hamburg Behörde für Wirtschaft und Innovation Hamburg	GERMANY
Incharge GmbH incharge	GERMANY
Association pour la Recherche et le Developement des Methodes et Processus Industriels - Centre de Gestion Scientifique ARMINES	FRANCE
L'agence mobile de messagerie ecologique Fluids	FRANCE
Orange S.A Orange	FRANCE
Stockholms stad Stockholm	SWEDEN
Stockholm Vatten och Avfall SVOA	SWEDEN



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Abbreviations

- ASAP *Awaken Sleeping Assets Project*
- CA *Consortium Agreement*
- DMP *Data Management Plan*
- FAIR *findable, accessible, interoperable and reusable*
- GDPR *General Data Protection Regulation*
- SDG *Sustainability Development Goal*
- WP *Work Package*

1. Introduction

This deliverable is part of Work Package (WP) 3 of the Awaken Sleeping Assets Project (ASAP) and describes the Data Management Plan (DMP). The document includes information on:

- how (research) data will be handled within the project,
- what kind of data will be collected and processed,
- what methodology and standards will be used,
- whether and how data will be shared and made available for a greater audience,
- how to follow the FAIR guiding principles for scientific data management and stewardship to make data findable, accessible, interoperable and reusable,
- how data will be curated and stored.

The purpose of the DMP is to provide an overview of the main elements of the data management policy applied with respect to the data handled within ASAP, covering the entire life cycle of data (see Figure 1).

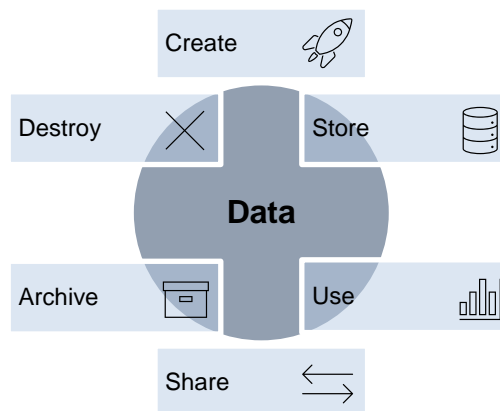


Figure 1: Data Lifecycle within ASAP

ASAP partners dealing with data (inter alia collecting, generating, processing, disseminating, ...) were consulted and contributed to this document. Furthermore, all project partners can refer to this document as guidance for data related actions during the project period. It consists of ten chapters focusing on the different aspects of data management within the project. In Chapter 2, there is a brief data related summary of the project as well as purposes and consequences of the data generation and collection within ASAP. Chapter 3 deals with the data storage system. Afterwards, Chapter 4 outlines the FAIR concept and Chapter 5 focusses on the use of data in terms of open access. Chapter 6 deals with data interoperability, Chapter 7 with data management responsibilities and resources, Chapter 8 with data security and Chapter 9 with the ethical aspects of data use in the project. Last, Chapter 10 concludes this deliverable.

It is expected that updates of the ASAP DMP might occur. Reasons can be the generation of new data, changes in the consortium policies (e. g. new innovations) or changes in the composition and external factors (e. g. consortium members joining or leaving). Hence, this DMP is an active document that will be updated throughout the project if necessary. In this case, the document will be assigned the new version after each update.

2. Data Summary

The purpose of this chapter is to identify the main types of data that will be generated during the project lifetime and to define and categorize its exploitation and preservation in ASAP. Data collection in ASAP aims to contribute towards the project objectives, WP developments and results (e. g. outlining of logistics requirements and definition of sleeping assets in WP 2, evaluation of ASAP testbeds in WP 3 or smart cities logistics simulations in WP 5). Table 1 provides a consolidated overview of the data generated, how the data will be exploited and how the data will be preserved.

WP 1 - Project Management		
Generated Data	Exploitation of Data	Preservation of Data
<ul style="list-style-type: none"> ▪ Email addresses of partners ▪ Project results collected for yearly progress reports for ENUAC 	<p>Use of partner contact information in project internal communication only.</p> <p>Yearly progress reports are sent to ENUAC.</p>	<p>Documents containing private/personal/sensitive information or data will be preserved with the consent of the data creator within specific data processor's (local) repositories with access restrictions for third parties.</p> <p>Providing consent documents to all stakeholders to protect individual data.</p>
WP 2 - Analysis and Conceptual Work		
Generated Data	Exploitation of Data	Preservation of Data
<ul style="list-style-type: none"> ▪ Stakeholders' expertise (e. g. about barriers of sleeping assets/innovative logistic concepts) by interviews with magistrates and authorities of the cities of Vienna, Hamburg, Paris and Stockholm ▪ Workshop related data 	<p>Outline logistics, political, legal, financial, infrastructural barriers as part of the Sleeping Assets catalogue and Sulp report.</p>	<p>Documents containing private/personal/sensitive information or data will be preserved with the consent of the data creator within specific data processor's (local) repositories with access restrictions for third parties.</p> <p>Providing consent documents to all stakeholders to protect individual data.</p>
WP 3 - Evaluation of Existing Test Beds		
Generated Data	Exploitation of Data	Preservation of Data
<ul style="list-style-type: none"> ▪ Vehicle related data (e. g. loading capacity) ▪ Good related data (CEP, waste, construction, etc.) ▪ Urban space related data (e. g. socio-economic, environmental) ▪ Process related data 	<p>At first, organizing and deriving sustainability goals and possible indicators by literature review.</p> <p>Exploring options how to operationalize and measure the required indicator data from real-life testbeds by including ASAP testbed partners.</p> <p>Evaluating benefits of using and the effort of capturing data.</p>	<p>Documents containing private/personal/sensitive information or data will be preserved with the consent of the data creator within specific data processor's (local) repositories with access restrictions for third parties.</p> <p>Providing consent documents to all stakeholders to protect individual data.</p>

	Evaluating results for all testbeds regarding Sustainability Development Goals (SDGs).	
WP 4 - Development of Method and Web-Application		
Generated Data	Exploitation of Data	Preservation of Data
<ul style="list-style-type: none"> Stakeholder perspectives and user requirements regarding the web-application are integrated, e. g. by questionnaires Co-creation and continuous quality assurance reviews with future users of the web-application 	<p>Identifying user preferences concerning e. g. necessary content about the ASAP testbed, the interface of the web-application and additional desired functionalities.</p> <p>Ensuring that WP 4 yields a user-friendly web-application according to the requirements identified in task 4.1 and the aspects of cognitive ergonomics.</p>	<p>Documents containing private/personal/sensitive information or data will be preserved with the consent of the data creator within specific data processor's (local) repositories with access restrictions for third parties.</p> <p>Providing consent documents to all stakeholders to protect individual data.</p>
WP 5 - New Test Bed Initiation and simulation		
Generated Data	Exploitation of Data	Preservation of Data
<ul style="list-style-type: none"> Simulations/Models outcome 	Evaluate and optimize the performance of (intended) testbeds.	<p>Documents containing private/personal/sensitive information or data will be preserved with the consent of the data creator within specific data processor's (local) repositories with access restrictions for third parties.</p> <p>Providing consent documents to all stakeholders to protect individual data.</p>
WP 6 - Dissemination, Knowledge Transfer and End of Project		
Generated Data	Exploitation of Data	Preservation of Data
<ul style="list-style-type: none"> Information on testbeds in the partner cities and news on project results in testbed cities Project results and learnings from ASAP platform and related to testbeds 	<p>Content for website and social media.</p> <p>Publication of scientific papers, presentation at conferences.</p> <p>SDG impact and Sulp recommendation report to enable target group to use support urban transition processes.</p> <p>Webinars and policy brief to feed into political processes and policies.</p>	<p>Documents containing private/personal/sensitive information or data will be preserved with the consent of the data creator within specific data processor's (local) repositories with access restrictions for third parties.</p> <p>Providing consent documents to all stakeholders to protect individual data.</p>

Table 1: Overview of data generated in ASAP

2.1. Data types, categories and formats

The types and formats of data produced within ASAP will depend on the one side on how data collection and analysis is carried out by respective task leaders. It is proposed to use discipline-specific standards and practices. Nevertheless, to ensure on the other side the long-term usability of ASAP data, the most appropriate types and file formats must be considered in advance. It is foreseen that the data collected and processed as part of ASAP research activities will be of different types and formats.

- **Data sets:** Literature review, best practice reviews, interviews, (online) surveys, stakeholder workshops, spreadsheets, quantitative data, operational data, public data, etc.
- **Data sharing of research and study results:** Word documents, Excel spreadsheets, PowerPoint presentations, PDFs, workshops, webinars, (online) interviews, etc.
- **Documentation of results:** Word documents and PDFs (deliverables and publications), PowerPoint presentations, videos, dissemination materials (various formats).
- **Personal data:** Project internal contact list, advisory board contact list, contact list of other stakeholders, professional activity and region, access data to online workspaces and repository (for internal use only), contact details of testbeds (partly also for public use).

2.2. Reuse of existing data

Existing statistical information, inter alia on the societal, economic and environmental parameters, will be used to extract new insights on urban freight transport: numeric parameters from available statistic reports or open data sources will be utilized as additional explanatory variables to reflect the (dis-)similarities between testbeds and concepts involved in the project and to substantiate eventual differences in the obtained results.

Data to be reused is listed below (see Table 2). Furthermore, ASAP builds on other initiatives and EU projects in the field of urban logistics and intends to exploit the prior work to further enhance its own results. It is foreseen that over the project period other (data) sources might complete this provisional picture.

<p>WP 1 - Project Management</p> <ul style="list-style-type: none"> ▪ Reports (midterm and final) as well as progress updates will summarize and exploit the collected and processed data from WP 2-5
<p>WP 2 - Analysis and Conceptual Work</p> <ul style="list-style-type: none"> ▪ Defining different classes of urban areas regarding with socio-geo-statistical parameters by inter alia using open data sources provided by cities, regional or national statistics institutions as well as Open Street Map data. ▪ (Scientific) Literature about underused resources, neglected routes as well as idle infrastructure in urban areas. ▪ Other project descriptions and results (e. g., ENUAC) ▪ Literature review of existing SULPs and related documents from previous projects and from partner cities. Relation of SDGs to Logistics and related indicators
<p>WP 3 - Evaluation of Existing Test Beds</p> <ul style="list-style-type: none"> ▪ (Scientific) Literature review of existing SULPs and KPIs defined to derive (sustainability) impact assessments of urban logistics concepts within ASAP.
<p>WP 4 - Development of Method and Web-Application</p> <ul style="list-style-type: none"> ▪ ASAP aims to build upon and learn from the evaluation toolkit provided by the NOVELOG-project and to focus on the activation of underused, inactive or inefficiently used infrastructure or resources for sustainable urban logistics as well as the implementation and spread of the concept of SULPs. Furthermore, the web-application aims at allowing the potential users to assess the impacts of ASAP testbeds related to SDGs.
<p>WP 5 - New Test Bed Initiation and simulation</p> <ul style="list-style-type: none"> ▪ Open data sources from partner cities (e. g. Öppna data - Trafikkontoret (stockholm.se)) and statistics providers (e. g. Statistics Sweden (scb.se)). ▪ Data from partner cities as well as project related companies (e. g. SVOA, Sweco), which are not publicly accessible, are also requested.
<p>WP 6 - Dissemination, Knowledge Transfer and End of Project</p> <ul style="list-style-type: none"> ▪ Publication of project results as well as from other projects or logistics operations in the partner countries on website and social media <ul style="list-style-type: none"> ▪ Publication of scientific papers, presentations at conferences ▪ SDG impact and Sulp recommendation reports to support target group with urban logistics transition processes ▪ Webinars and policy brief to feed into political processes and policies

Table 2: Data reused in ASAP

2.3. Data creation and origin

The partner, who creates new data (e. g. by conducting data collections, workshops, interviews), is responsible for the proper storage, processing and sharing of that data and must ensure that it does not contain personal data before it is shared with consortium members.

Also, existing data will be collected and provided by ASAP partners (e. g. testbed description). Data sets provided to the project will be reviewed by the respective partners prior to use. Only technically and legally appropriate data will be used within ASAP. Furthermore, the origin must always be stated to ensure traceability for others. Personal data (or datasets containing personal data) collected by a

consortium member will remain with that consortium member and will not be shared with other consortium members or with third parties outside the consortium. If (processed) data is to be transferred from one partner to another, the transfer will be made securely over a secure data channel, in an encrypted form or by physical transfer (see Chapter 3).

2.4. Expected use and size of data

The size of data must be monitored over the life of the project. For example, in case of videos a single set of high-resolution files can comprise several GB of data. In such cases, especially for internal use only reduced, relevant sets should be provided. Also, as simulations (WP 5) represent a part of the project's scope, their implementation, storage and provision to third parties should be appropriate in terms of benefit and size.

2.5. Data utility

A provisional list of players who is foreseen making use of the data collected and processed as well as its results throughout the project are

- City councils, city administrations, city administrators in charge of innovation tracks regarding logistics, city administrators in charge of SUMP/SULPs,
- ASAP consortium,
- All stakeholders directly or indirectly involved in ASAP,
- European Commission and
- The general public including the broader scientific community

3. Data storage

The main place for open data storage will BOKUdrive, hosted by BOKU. The BOKUdrive was set up and filled with ASAP project key data, like user accounts and project related folders, at project start and has been fully operational as of project month 1 (April 2021).

It is possible on BOKUdrive for several people to work simultaneously and collaborative on the same files (Microsoft Office applications like inter alia Word, Excel, PowerPoint are supported) and save it real time online. It is also a storage platform with various additional use possibilities, such as:

- Create document libraries
- Check out documentation and work on it simultaneously
- Within 30 days it is possible to access or restore old versions and files/directories deleted during this period if necessary
- Data transfer between project partners

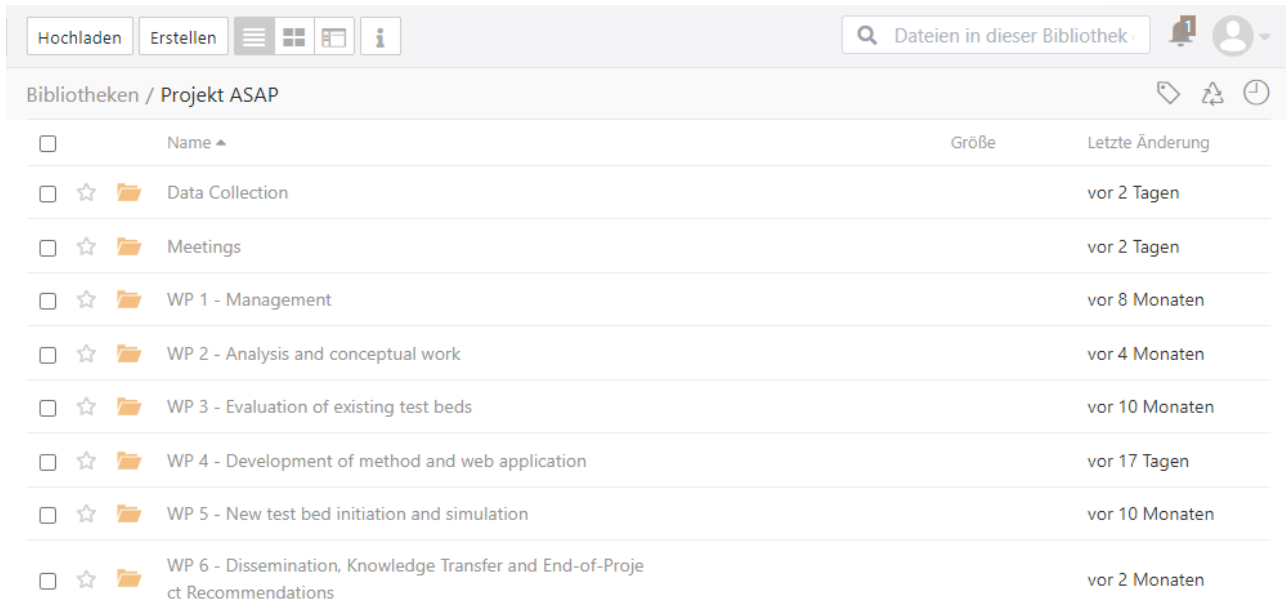
All entities and persons part of the ASAP project team have been set up in the system by BOKU. Individual users are assigned accounts according to their respective role in the project (coordinator, work package leader, main contact, contact), providing them with different and configurable rights to view or edit information, as their respective roles require. The system distinguishes between administrators and users who can have different levels of participation (e. g. reading and writing (online only or as download) or only read (online only or as download)). Furthermore, a two-factor authentication can be chosen. This fact represents a pillar for a secure data transfer.

New and additional user accounts can be created upon request by the main contacts of each project partner. The latter are obliged to inform the project coordination team if a person leaves the project partner organisation or is no longer actively involved in ASAP. This ensures that the person's account can be set to inactive to secure project related data during the project period.

The scope of data stored in ASAP stretches to

- project structure (WPs, tasks, subtasks), periods, milestones,
- project partners (organisations and persons),
- documents (deliverables, (public) reports, meeting agendas and minutes, etc.) and
- reporting on project progress, deviations, dissemination.

BOKUdrive is structured like many common data storage systems and can be displayed in any language (see **Fehler! Verweisquelle konnte nicht gefunden werden.**). It is possible to create folders as well as files using the web interface with a browser. Also, it is possible to upload files from devices of all kinds (e. g. laptops, handhelds). Therefore, it is possible to create WP and task related containers which can store several (ideally: related) files in different formats. This feature enables users to group different versions of a file, or any supportive data, in the same folder.











<input type="checkbox"/>	Name ▲	Größe	Letzte Änderung
<input type="checkbox"/>	☆  Data Collection		vor 2 Tagen
<input type="checkbox"/>	☆  Meetings		vor 2 Tagen
<input type="checkbox"/>	☆  WP 1 - Management		vor 8 Monaten
<input type="checkbox"/>	☆  WP 2 - Analysis and conceptual work		vor 4 Monaten
<input type="checkbox"/>	☆  WP 3 - Evaluation of existing test beds		vor 10 Monaten
<input type="checkbox"/>	☆  WP 4 - Development of method and web application		vor 17 Tagen
<input type="checkbox"/>	☆  WP 5 - New test bed initiation and simulation		vor 10 Monaten
<input type="checkbox"/>	☆  WP 6 - Dissemination, Knowledge Transfer and End-of-Project Recommendations		vor 2 Monaten

Figure 2: Interface of BOKU Drive

Consequently, the project coordinator BOKU will take care of the project repositories periodically and generate back-up files in case any data on BOKUdrive may get lost, corrupted or become unusable at a later stage. The responsibility of taking care of the files produced also extends to each partner for their own (local) repositories.

Based on this, the project coordination team has decided there is no need for an additional repository system to mirror all public documents. Rather, documents are to be stored in the local systems (servers) of the respective authors' organization.

Updates of BOKUdrive will be communicated and monitored by the ASAP's Steering Committee, formed by the following organisations:

- Work Package leaders
- Coordination Team

Storing sensitive data (inter alia to evaluate the testbeds in WP 3 or simulate testbeds in WP 5) is foreseen too. It is proposed to be executed by exchanging data with the respective partner who is in charge of data processing and the data originator directly. Possibilities of exchange are inter alia emails, physical devices or via encrypted folders. Consent and record of processing activities forms (see Appendix) can be used to foster the transparency of data processing for the data originator if necessary.

Compliance with the General Data Protection Regulation (GDPR) is ensured thanks to applying a strict policy in granting and revoking access to data.

4. FAIR data

With respect to the FAIR guiding principles for scientific data management and stewardship (Wilkinson et al. 2016 and European Commission 2016), the ASAP consortium will take all necessary measures making its data FAIR. As indicated in Chapter 3, the primary responsibility for following the principles lies with the data creators. Yet, all public data created within ASAP will be stored in BOKUdrive. This repository is to be maintained by BOKU.

4.1. Naming and discoverability of data

A structured data filing system is essential for the proper and secure storage of files and records. For any file-based storage, this means clear and unambiguous naming of files, the use of correct versioning, and a clear and intuitive folder structure. All relevant documents that need to be accessed by project partners are stored in BOKUdrive.

4.1.1. Storage categorisation

BOKUdrive features a set of dynamic filters by offering a search bar, allowing for a convenient and fast discoverability of data. Furthermore, the system distinguishes and categorizes documents by type, providing a drop-down menu to create a new document, as well as the possibility to upload files via drag and drop. Using a uniform structure for all project documents is proposed:

- Document Title / Description/ Type / Last Modified / Responsible / Due Date

e. g. D3.2 Data management plan / This report will describe ... / "date of modification" / "relevant person" / 2022_March_30

4.1.2. Presentations and minutes

- Date_Title_Version (if applicable). File Extension

e. g. 20220330_ASAP MoM presentation_v01.pptx
e. g. 20220330_ASAP MoM minutes.pdf

4.1.3. Deliverables

- ASAP_D_Deliverable Number. File Extension

e. g. ASAP_D_3.2.pdf

4.2. Version control and metadata

Version control for documents can be performed on BOKUdrive. BOKUdrive stores the creator of a document and the time of its creation. It allows several people to work on one document simultaneously. Any change is automatically saved, documents can be commented and previous versions can be easily opened.

Metadata is described by Eurostat as "information that is needed to be able to use and interpret statistics". Two different types of metadata are mentioned in this definition:

- **Structural metadata:** Used to identify, formally describe or retrieve statistical data (e. g. dimension names, variable names, dictionaries, descriptions, locations, keywords etc.).
- **Reference (or explanatory) metadata:** Describe the content and quality of the statistical data from a semantic point of view (e. g. methodologies of data collection, context of the statistical data, quality and dissemination characteristics etc.).

Both types of metadata will be compiled and stored in ASAP and specified as such in the dataset description (see Chapter 4.3) to inter alia support the members of the project consortium in aligning

key words and vocabularies (see Chapter 4.4). Once the document is finalized, the final version is uploaded to BOKUdrive, with restricted, password-protected access.

4.3. Dataset description

This section provides a preliminary table to be used for describing datasets to be handled in the ASAP project (see Table 3). As the nature of the datasets can evolve during project lifetime, changes in the template may occur.

Dataset reference	See Chapter 4.1
Dataset name	Name of the Dataset (see Chapter 4.1) Date_Task_Title_Specification_Version (if applicable). File Extension <i>e. g. 20220930_T3.3_Testbed1_Evaluation_v01.xlsx</i>
Dataset description	Datasets will have a full data description explaining the origin of the data and its usefulness
Standards and metadata	Structural/ Reference metadata
File format	Format that defines the data
Data size	(Expected) size of the data
Data sharing	Conditions of sharing and accessing data for (different) users. Options: Public – Open for public disposal Embargo – To become public after the embargo applied by the publisher is over (YYYYMMDD format) Restricted – For project internal use only
Archiving and preservation	The preservation guarantee and the data storage during and after the project
Reused data	Y/N – If yes, indicate how/from where it was retrieved

Table 3: Dataset Description Template

4.4. Keywords, abbreviations and data search

A list of abbreviations in each document is created in ASAP. These should be catalogized. In addition, the title should also be a keyword that defines the content of the file. This approach facilitates the search function in BOKUdrive, for which it is possible to search for document titles and use a common vocabulary within the consortium (see Chapter 6.1).

5. Open access data

5.1. Open available data

In most cases, data collected and processed within ASAP will be open by default. However, some sensitive data may be shared only under restrictions (see Chapter 3). This is specifically the case for WP 3 and WP 5 in which the specific data gathered during the existing and intended testbeds will be confidential as they represent sensitive company data. It is foreseen that this qualitative and quantitative data will be used to draw conclusions in an iterative process to assess their impact related to SDGs (WP 3) as well their simulation (WP 5). In order to use the closed data for a greater audience, this data can be modified e. g. by anonymizing or aggregating the data, which leads to a non-sensitive level of information.

“Public” deliverables and insights will be uploaded to the ASAP website, where open access is granted to all interested parties.

5.2. Data access

To share open data and make it accessible within ASAP, BOKUdrive has been set up by BOKU (see point 5.1). As mentioned, public deliverables and publications will be available on the ASAP website as well as on BOKUdrive.

For public data and project results, in line with Article 10 of the Consortium Agreement (CA), project partners will deposit an electronic copy of the published version or final peer-reviewed manuscript accepted for publication on the project’s website – this ensures a long-term preservation. Measures to enable third parties to access, mine, exploit, reproduce and disseminate research data free of charge for any user, as stated in Article 11 of the CA, will be taken.

ASAP project authors will be encouraged to retain their copyrights and grant adequate licenses to publishers.

5.3. Use of data and restrictions

Access to BOKUdrive will be provided by BOKU. Access is only granted to project beneficiaries. Open available data (e. g. public deliverables, publications, research results) will be available on the ASAP website and in respective depositories as described in Chapter 5.1. Sharing sensitive data is proposed to be executed by exchanging data with the respective partner who is in charge of data processing and the data originator directly (see Chapter 3). There is no need for a data access committee.

6. Interoperability of data

Common standards and formats for data and metadata are an important aspect of data usability. Standardization makes data discoverable and, in this way, promotes international and interdisciplinary access to and use of research data. To ensure the correct use of data by owners and re-users in ASAP, the use of standardized vocabularies is necessary.

6.1. Vocabularies, standards and licensing

Standardization at data level is achieved through the application of community-based standards as used in peer-reviewed publications and conferences, as well as ISO standards. Standard and common vocabularies are used for all types of data published by ASAP. Where additional explanation is required, it will be provided. Quantitative datasets should be prepared in a standard CSV format, by which the data will be accessible from most (open) data analysis systems: in this format, datasets can be inter alia processed in the R environment, the Python interpreter and other environments for data analysis. Also, datasets in the CSV format are compliant with the standard office software, such as MS Office, Apache OpenOffice, LibreOffice, etc.

Furthermore, in WP 5 digital testbeds will be implemented in a simulation environment to assess the potential of new concepts of urban logistics. To do so, the software “AnyLogic” will be used. The access to the software is restricted by licensing. Nevertheless, results can be exported to “AnyLogic Cloud” with public or non-public access.

6.2. Reusability of data

As soon as public data and results can be made available, they will be published and/or uploaded for open access.

Public project results and outputs will be posted on the ASAP website for external parties and in BOKUdrive which is accessible for internal review and reuse. ASAP supports the concept of FAIR (research) data. Most of the results and dissemination documents in ASAP will be freely accessible once the research is completed and published. There are no plans to stop making ASAP data available, and it will therefore be available for reuse as long as the repositories exist.

6.3. Data quality assurance

An initial check of the data (during data collection) is required. This data control is to be performed by the creator/owner of the data together with the data processor, who must ensure that the data reflect correct facts, answers, observations and derivations.

7. Allocation of resources

7.1. Costs of making data FAIR

BOKUdrive will be maintained and kept active by BOKU. The repository system, as well as the ASAP website, are foreseen to be accessible up to five years after project end. All open accessible data will be provided to the website. The activities related to making the data/outputs open access are anticipated to be covered within the allocated budget for each work package.

Furthermore, it is an essential part of the project to ensure the long-term preservation of the results beyond the end of the project and the partners' project budgets. Hence, the consortium will search for a suitable partner organisation willing to host and advance the web-application, in form of a so-called "SULP-Platform", as a part of its business. Suitable candidates would be practitioners and European networks, such as POLIS which also provided a letter of intent. In having the new SULP-Platform in place, "follower" cities can access knowledge and measures from the project's "lighthouse cities" in order to further activate their own underused or inactive resources for sustainable urban logistics. This encompasses sharing and exchanging information related to SULPs carried out in European cities as well as assistance to learn from other cities which concepts and solutions implemented by others might work for them.

7.2. Responsibilities of data management

The ASAP consortium has organised a well-structured data repository on BOKUdrive. WP 1 project partners BOKU (project coordinator) will be responsible for:

- Upgrades and maintenance of BOKUdrive
- Access control, reporting and blocking any possible security threat

The quality of data control is the primary responsibility of each ASAP partner as well as the processing parties within ASAP.

8. Data security

Open research data will be shared between project partners and stored in BOKUdrive, with limited password-protected access during the project period.

All processed and shared data are stored in secure environments. If processed data has to be transferred from one partner to another, the transfer is usually done in a secure manner via inter alia emails, physical devices or via encrypted folders. Consent and record of processing activities forms (see Appendix) can be used to foster the transparency of data processing for the data originator if necessary. ASAP makes all necessary efforts to protect data, products and services from unauthorized use and to ensure secure access to data. The primary responsibility to take the necessary measures to ensure data security rests with each individual partner. Log-in systems are used prior to accessing secured data and information. ASAP takes measures to comply with EU regulations on the protection of personal data, including the GDPR, and promotes openness and sharing of data and best practices wherever possible.

9. Ethical aspects and templates

9.1. Ethical or legal issues on data sharing

In compliance with the EU General Regulation, no sensitive personal data, such as ethnicity data, will be collected. ASAP has plans to elaborate surveys, address local stakeholders and persons from the logistics sector, local retailers, lobby groups and collect data from testbed implementations. No biomedical, psychological, or sociological research will be conducted. No vulnerable groups (e. g., children, elderly, people of ill health, disabled people) will play a role as informants/survey participants in any of the ASAP research activities. Participants in meetings, workshops and other participative formats will not be actively selected based on ethnicity or socioeconomic factors. They are representatives of geographic groups or local stakeholders in terms of implementing innovative urban logistics concepts. Before sharing and/or publishing data with internal/external parties it has to be ensured that the data processed in ASAP does not contain any personal or commercially sensitive information. Hence, there are no ethical or legal issues that could impact data sharing. Data processed in ASAP is limited to the purposes of the research project.

9.2. Documentation of consent / or data sharing

For ASAP, as with any activity subject to the GDPR, data sharing consent is one of the keys to the success of activities involving sensitive data. For this reason, a standard consent form is provided (see Appendix 12.1) as proposed in the guidance for ethics self-assessment provided by the European Commission (2019).

9.3. Data processor's record of processing activities

(Individual) consent is not the only requirement for the correct use and processing of personal data. Together with consent, individuals who agree to the use of their personal data must have access to:

- Contact details of the persons who will process their personal data (data processors and controllers)
- Full information: How the personal data will be handled and for what purpose
- What security measures (e. g. encryption) are available to ensure the confidentiality of the personal data

For these reasons, a record of processing activities is also provided for the partnership within the project (see Appendix 12.2).

10. Conclusion

This DMP provides an overview of the data generated as well as foreseen processing processes during the project lifetime in ASAP (see Chapter 2). Second, the data storage system and its technical possibilities in relation to security, cooperation and responsibilities were described (see Chapter 3). Regarding this, the use of metadata, a unified categorisation as well as the use of common vocabularies foster this process. On this basis, recommendations were made to follow the FAIR guiding principles for scientific data management and stewardship (see Chapter 4). Ensuring to share insights and results of ASAP is key and was outlined in Chapters 5 and 6. Last, related legal and ethical aspects were reflected as well as forms for data collection and processing provided (see Chapters 7, 8 and 9). Hence, this document intendeds to offer internal guidelines to data management with respect to appropriate data and privacy management.

Nevertheless, this document will be updated throughout the lifetime of the project, in order to appropriately address the practical requirements and to be able to react to possible changes during the project. The most sensitive data are expected to be produced in WP 3 (Evaluation of ASAP testbeds) and in WP 5 (Smart cities logistics simulations). Although datasets are expected and will be produced in all the project WPs which incrementally enrich the ASAP database over the project period. Hence, all measurements described in this DMP will be followed to ensure that data gathered qualified as sensitive and confidential will remain confidential, which are nevertheless expressive enough to be able to derive conclusions for ASAP and interested parties. All deliverables that are labelled as "public" will be made available and published on the ASAP website.

11. References

European Commission (2019):

Guidance. How to complete your ethics self-assessment, URL:

https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/ethics/h2020_hi_ethics-self-assess_en.pdf, last checked: 08.02.2022

European Commission (2016):

Guidelines on FAIR Data Management in Horizon 2020, URL:

https://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-data-mgt_en.pdf, last checked: 08.02.2022

Eurostat (2019):

Glossary: Metadata, URL:

<https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Metadata>, last checked: 08.02.2022

Wilkinson et al. (2016):

The FAIR Guiding Principles for scientific data management and stewardship, URL:

<https://www.nature.com/articles/sdata201618.pdf>, last checked: 08.02.2022

12. Appendix

12.1. Participation Consent Form

Research participants' identity and dated signatures of the participant affirming that consent was given.

The information shown below identifying the participant should be entered in the designated spaces at the time of execution of the consent document.

Name: _____

Anonymisation code: _____

Participation Consent Form

Title of the study:

Place of the study:

	Please circle as necessary	
I have read and understood the written information handed out for the study mentioned above. My questions in connection with the study have been answered satisfactorily. I can keep written information and receive a copy of my written declaration of consent.	Yes	No
I had sufficient time to take my decision.	Yes	No
I have spoken to Dr./Ms./Mr.:		
I understand that I am free to withdraw from the study <ul style="list-style-type: none"> • At any time • Without having to give a reason for withdrawing 	Yes	No
The confidentiality of my personal data/individual data was assured to me. Personal/Individual data will be anonymised at the publication of the study's results. I however approve the fact that, under a strict compliance with confidentiality, the responsible authority experts and the ethic commission may look at my original data due to examining and control purposes.	Yes	No

Signed _____

Date _____

Name (in capital letters) _____

Investigators' confirming statement

I have given this research participant information on the study, which in my opinion is accurate and sufficient for the participant to understand fully the nature and benefits of the study, and the rights of a research participant. There has been no coercion or undue influence. I have witnessed the signing of this document by the participant.

Investigator's name: _____

Investigator's signature: _____

Date: _____

Currently, no other issues of interest are identified. During the course of ASAP, additional aspects will be added here if necessary.

12.2. Record of processing activities form

1 Contact details of Data Processor (and Controller on behalf of which the processor is acting)	
Data Processor's name(s)	
Email address	
Company address	
Telephone	
Data Controller's name(s)	
Email address	
Company address	
Telephone	
2 Categories of processing carried out on behalf of the Controller	
3 Where applicable, transfers of personal data to a third country or an international organisation, including the identification of that third country or international organisation	
4 Where possible, add a general description of the technical and organisational security measures	
a	The pseudonymisation and encrypting of personal data -
b	The ability to ensure the ongoing confidentiality, integrity, availability and resilience of processing systems and services -
c	The ability to restore the availability and access to personal data in a timely manner in the event of a physical or technical incident -
d	A process for regularly testing, assessing and evaluating the effectiveness of technical and organisational measures for ensuring the security of the processing