



**SELSUSTAINED CROSS-BORDER
CUSTOMIZED CYBERPHYSICAL SYSTEM
EXPERIMENTS
FOR CAPACITY BUILDING AMONG
EUROPEAN STAKEHOLDERS**

Research Innovation Action

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Data Management Plan

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Abstract

The SMART4ALL Data Management Plan (DMP) defines how data generated or collected within this project will be treated, archived, disseminated, and maintained by the project partners and PAE sub-grantees and how the data will be shared with the wider community, e.g., via the SMART4ALL website and marketplace. This DMP is a live document that will be regularly updated whenever new or additional relevant data is generated/collected. Snapshots of this document will be taken at the appropriate times and presented as deliverables D1.2 (in M6), D1.3 (in M12), D1.4 (in M30), and D1.5 (in M48).

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Executive Summary

The SMART4ALL Data Management Plan (DMP) defines how data generated or collected within this project will be treated, archived, disseminated, and maintained by the project partners and PAE sub-grantees and how the data will be shared with the wider community, e.g., via the SMART4ALL website and marketplace. This DMP is a live document that will be regularly updated whenever new or additional relevant data is generated/collected. Snapshots of this document will be taken at the appropriate times and presented as deliverables D1.2 (in M6), D1.3 (in M12), D1.4 (in M30), and D1.5 (in M48). This series of deliverables is strongly related to Deliverable D8.4 “Ethics Requirements.”

Abbreviations and Acronyms

CLEC	Customized Low-Energy Computing
CPS	Cyber Physical System
CTTE	Cross-domain Technology Transfer Experiment
DMP	Data Management Plan
FTTE	Focused Technology Transfer Experiment
IoT	Internet-of-Things
KTE	Knowledge Transfer Experiment
PAE	Pathfinder Application Experiment

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1 INTRODUCTION

1.1 Purpose and Scope

The purpose of this document is to present how the data within the SMART4ALL project is managed in a FAIR (findable, accessible, interoperable and reusable) manner. It follows the “Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020” and “Guidelines on FAIR Data Management in Horizon 2020” within the H2020 Programme. This document is intended to be a *live document* that will be updated on a regular basis and snapshots will be taken at the appropriate times and presented as deliverables D1.2 (in M6), D1.3 (in M12), D1.4 (in M30), and D1.5 (in M48). The DMP is the outcome of task T1.6 “Data Management & Strategy Plan” in Work Package 1.

The vision of the SMART4ALL project is to build capacity amongst European stakeholders via the development of self-sustained, cross-border experiments that transfer knowledge and technology between academia and industry. It targets customized low-energy computing (CLEC) cyber-physical systems (CPSs) and the Internet-of-Things (IoT) and combines a set of unique characteristics that join together under a common vision different cultures, different policies, different geographical areas and different application domains. The overall vision of SMART4ALL is depicted in the following figure.



Figure 1: SMART4ALL Vision

Based on this vision, the following objectives were defined in the SMART4ALL project:

1. Bring innovative CLEC CPS and IoT technologies to underrepresented business sectors.
2. Unlock South-Eastern European parties' potentials through links to investors across value chains and regions in order to accelerate CLEC CPS/IoT solutions development and industrialization.
3. Develop/offer novel tools to boost the use of CLEC CPS and the IoT technologies Europe-wide.
4. Ensure post-project sustainability and growth of the SMART4ALL experiments and digital innovation hubs (DIHs) network.
5. Bring innovative CLEC CPS and the IoT technologies in the lives of sensitive social groups
6. To support Digital Skills & Jobs policy of European Commission.

SMART4ALL is targeting, on one hand, at four (4) specific domains which are considered underrepresented based on the documented success stories of the SAE projects (<https://smartanythingeverywhere.eu/success-stories/>). These include: **Digitized Transport, Digitized Agriculture, Digitized Environment and Digitized Anything**. On the other hand, SMART4ALL will focus on enhancing and accelerating product development capabilities of Southern-Eastern Europe areas. In this way, SMART4ALL will facilitate the transfer of knowledge and novel technologies amongst universities, research institutes, industry partners and the respective ecosystems. This will be achieved by offering regional contact points offering brokerage services between the local industry clients and the EU-wide network. The SMART4ALL project, as an Innovation Action, has a special structure and set-up that differs from more research-oriented projects. The SMART4ALL consortium is comprised of twenty-five (25) highly competent partners spanning a wide range of expertise and experience ranging from Universities, Research Centers and Digital Innovation Hubs to innovative SMEs and Slightly Bigger Companies. All SMART4ALL partners bring valuable knowledge derived from participation in numerous FP and H2020 project as well as other DIHs initiatives. Additionally, in the context of SMART4ALL, sixty-seven (67) Knowledge and Technology Transfer Pathfinder Application Experiments (PAEs) will be conducted, supported and funded emphasizing on cross-border and cross-regional PAEs. Three carefully considered types of PAEs have been defined, each one offering unique characteristics or advantage. 1) 43 Knowledge Transfer Experiments (KTEs) which comprise a novel type of experiments allowing smaller projects, or less mature ideas to be presented, tested and thus potentially find the fertile ground to grow and reveal its product potentials. 2) 12 Focused Technology Transfer Experiments (FTTEs), focusing on one of the four defined underrepresented areas, will give the opportunity to form synergies, accelerate product orient projects and offer guidance towards successful commercialization. 3) 12 Cross-domain Technology Transfer Experiments (CTTEs) will target to more complex multidisciplinary transfers and productization of novel CLEC CPS and the IoT technologies to wider markets. Another unique tool SMART4ALL will offer, aligned with the specific sub-topic description is a novel MaaS approach which, apart from sharing information and matchmaking services will heavily focus on the exchange of actual technologies (either developed in the context of SMART4ALL or pre-existing). To achieve this goal, SMART4ALL MaaS will devote a specific section facilitating, on one hand, the uploading of ICT developments of any kind (e.g., SW, HW IPs, models) and on the other hand, the discovery of receivers that could benefit from these technologies. One of the main goals of SMART4ALL MaaS is to facilitate business/technology suppliers and users of CLEC CPS and the IoT technologies to find each other. The PAEs include this brokerage between supply and demand and support also value chain development.

The unique setup of the SMART4ALL objectives require the use of traditional and specifically tailored data management tools to deal with the wide variety of potential data sources and use. In order to structure and streamline the presentation of the SMART4ALL data management plan, it was decided to do this via the locations where data can be stored. At this stage of the SMART4ALL project, we can clearly identify several locations where data will be stored:

- Website (including publications) – e.g., publications, media kits, ...
- Repository – e.g., partners' data, project and research data, ...
- FundingBox Platform – e.g., Pathfinder Application Experiments data, ...
- Marketplace – e.g., (software) tools, user profiles, services, documentation, any original (or not) material provided by the contributors, ...

More details on the precise data that is being kept at each location will be detailed in subsequent sections.

In this first version (D1.2) of the DMP, we define the general policy and approach to data management in the SMART4ALL project. In particular, we identify where in this project data will be collected/generated and our approach to manage the data in a FAIR manner. In subsequent versions (D1.3 - D1.5), we will update with data specifics and how they are managed as well as potentially other areas (within the project) where data management is needed.

1.2 Approach

This document is the result of the work outlined in T1.6 “Data Management & Strategy Plan” that is led by partner TUD with contributions from all other partners as well as the PAE sub-grantees.

This document is intended to be a live document that will be updated on a regular basis and snapshots will be taken at the appropriate times and presented as deliverables D1.2 (in M6), D1.3 (in M12), D1.4 (in M30), and D1.5 (in M48). We will regularly review all data used within the project and establish the need to manage it in a FAIR manner. For this purpose, we have devised an extensive questionnaire (in Excel format) that will be regularly distributed to all partners as well as the PAE sub-grantees. The purpose of this questionnaire is to identify, classify, and (more importantly) motivate partners to treat all (relevant) data in a FAIR manner. An example of the Excel sheet is provided below:

Figure 2: Excel file questionnaire to collect FAIR data within the SMART4ALL project.

The (relevant) columns of the Excel file are labeled as follows:

- Column C – data (name)
- Column D – collected or generated?
- Column E – purpose of data
- Column F – related to objectives
- Column G – types and formats
- Column H – expected data size
- Column I – naming conventions (including versioning)
- Column J – origin of data
- Column K – will the data be re-used?
- Column L – if yes, how will the data be re-used and intended for who?
- Column M – search method
- Column N – location of data
- Column O – how can the data be accessed?
- Column P – (additional) notes

Furthermore, if needed, the questionnaire will be also be adapted and/or tailored when new data sources are being identified during the execution of the SMART4ALL project. In all DMP versions, we will include (as an appendix) all the data collected via this Excel file for review.

1.3 Document Structure

This document follows the guidelines the “Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020” and “Guidelines on FAIR Data Management in Horizon 2020” within the H2020 Programme. It is organized as follows. Section 2 provides a summary of the data that is stored in the 4 main identified storage locations – website, repository, FundingBox platform, and the Marketplace. Section 3 details how the data stored at these locations follow the FAIR principles. Section 4 describes the allocation of resources to maintain the project data. Section 5 details the security measures undertaken to protect the project data. Section 6 describes the ethical aspects related to the project data. Section 7 present other issues related to the project data that are not covered by the preceding sections.

2 DATA SUMMARY

Within the SMART4ALL project, a multitude of data will be collected, generated, and maintained. Instead of discussing each data item/type/category by itself, we decided to structure the DMP by the location of where the data is stored as it is very unlikely that the same data will be kept at different locations. If such a case occurs, we will clearly mark this in this DMP as well as the main storage facility.

Within the SMART4ALL project, we can clearly identify the following data storage locations:

- **Website (including publications):** Regarding **publications**, the SMART4ALL consortium will conform to the Horizon2020 Open Access regulations including Gold Open Access and Green Open Access (or self-archiving) for all scientific publications produced through internal or third party PAEs. As a general rule, all publications will be available via Green Open Access. The consortium will create SMART4ALL repositories on EC OpenAIRE and CERN's ZENODO and populating them with open access articles, chapters and public deliverables of the project. All SMART4ALL beneficiaries will be contractually obliged in the Consortium Agreement to submit their articles and (book) chapters to the SMART4ALL open repositories. The beneficiaries are responsible to select among the "gold" or "green" open access models (as defined in the H2020 guidelines). **Other materials** stored on the webserver include media kits, files that constitute the content of the SMART4ALL website, and log files.
- **Repository:** The SMART4ALL repository is an internal space that aims to facilitate the collaboration among the consortium partners. The SMART4ALL repository is based on Nextcloud which is a very popular open source software for file hosting services. The repository gives authorized access to documents and various material of the project (tasks, events, etc.) to the project partners. The information that is handled by the repository is stored in the filesystem of the hosting machine and in database.
- **FundingBox Platform:** The FundingBox Platform will be the main vehicle the SMART4ALL project will use to administer the Pathfinder Application Experiments (PAEs). All relevant information required for the drafting, submission, evaluation and administration of proposals are maintained at the platform.
- **Marketplace:** Marketplace has a two-fold purpose. The Match Making tool aims to support the users of the Marketplace to find partners, tools, services, etc. that will help them to develop their business further, address open problems and establish new collaborations. In that context the match making services based on AI technologies need to have access to data related to the profile and the needs of each organization that uses the services. These data are asked by each user that joins the platform and are stored in databases. The results set of the Match Making services contain a wide range of artefacts (tools, docs, etc.). These artefacts are described by various metadata such as domain, category, type, license that are stored in marketplace databases. The artefacts could be stored as binaries in the Marketplace file system or could be shared as links coming from 3rd party services (Dropbox, Github, etc.). An online "SMART4ALL Helpdesk" platform is also provided for topics related only to: Open Call (Technical Question), Marketplace & Technology, Funding & Helpdesk Registration.

2.1 Website (including publications)

There are several usage scenarios related to the SMART4ALL website.

1. Website surfing: The most usual usage scenario. It refers to an unregistered user exploring the content of the website. No data are stored.
2. Join Us page: When a user decides to register to the SMART4ALL content services, a registration page needs to be filled in. The process integrates the Mailchimp service.

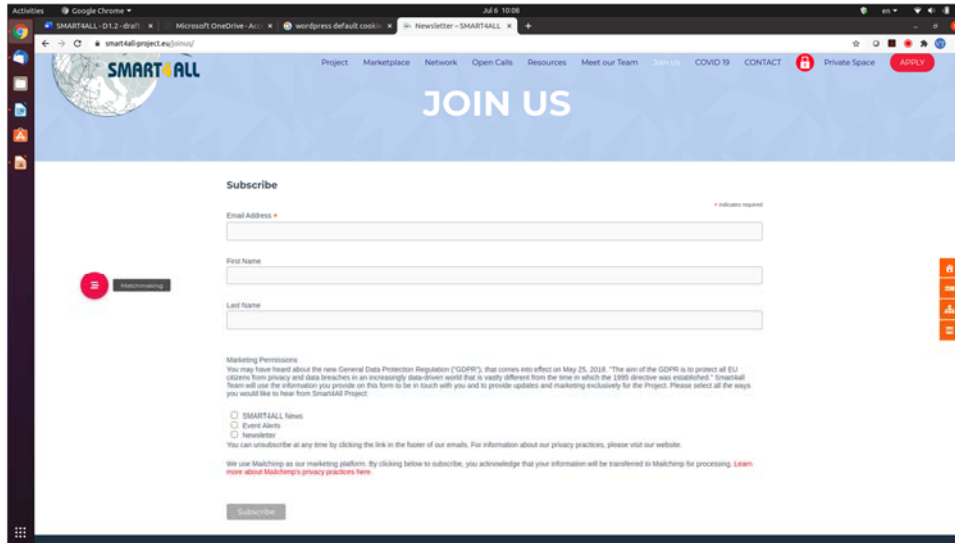


Figure 3: Join Us webpage.

3. Partner (authorized): SMART4ALL website includes a private space, where consortium members can log in and explore additional services, mainly related to reporting tasks. This usage scenario includes the storage of session details (date, time, duration, etc.) as well as complete information about user's actions performed.

2.2 Repository

The repository could store any file of any size. However, for the scope of the project, the users have an available space of 5GB each. That means that they cannot store files of more than 5GB in total. Available quote could be increased upon request. The users of the repository are not restricted to the file type they could store. Such files could be:

- Documents, spreadsheets, presentations
- Compressed files (tar.gz, zip, rar, 7z, etc.)
- Executables

The users of the repository have full access on their own files (read & modify & delete). Users cannot have access to files of others users unless access is given by the owners of the files.

Moreover, Nextcloud provides additional functionalities such as:

- Chat and teleconference (voice, video)
- Some primitive task management functionalities
- Calendar

Data of these aforementioned functionalities are stored in the database.

2.3 FundingBox Platform

SMART4ALL, as a project, will deal with ethics issues related to 'Protection of Data' because it will collect general data of European companies, through an online form within FundingBox Platform, to select the cross-border Pathfinder Application Experiments (PAEs). The Data to be collected are (non-exhaustive list): Country; Organization name; Project name; Address; Number of team members; Funds requested; Verticals Targeted; Solution type; Name of coordinator and name of the team members;

Abstract; Brief description; Company years of experience, etc. SMART4ALL will guarantee a proper use of those data. Data collected within the open calls are limited to the data necessary to evaluate an application. Personal data collected are mainly data of the team members and information about their experience and professional career. Participation in the open call is voluntary as well as providing personal information (except contact details). SMART4ALL will also take care that the 67 PAEs selected through Open Calls will also apply the ethical standards and guidelines of Horizon 2020 regardless of the country in which the projects are located. Specific support actions regarding protection of personal data will be provided, to each experiment, by the Coordinator. This support will be done depending on the specific needs of each project. The Coordinator, will set up a process to ensure that the initiatives and projects which it funds conform to the ethical standards and guidelines of Horizon 2020.

2.4 Marketplace

The following types are stored:

- User profile:
 - Username
 - Email
 - Name
 - Organization name
 - Other Organization data to be defined as the Match Making services develops.
- Artefacts: Binary data that could be:
 - Source code
 - Documents
 - Executables
 - Virtual Machines
 - Configuration text files (e.g. Dockerfiles, docker-compose, etc)
- Artefact metadata:
 - type, category, domain, license
 - Description
 - Links

Preparing an appropriate license model for the Marketplace is currently under development. UoP legal department is working together with an external attorney to formulate an appropriate license scheme. The process of defining a license scheme for the Marketplace was proved more complex than initially foreseen due to “push” and “pull” features of the SMART4ALL Marketplace.

3 FAIR DATA

In this section, we will describe how the data identified in the SMART4ALL project will adhere to the FAIR principles. They are categorized in clearly identifiable subsections. Moreover, as mentioned earlier, we subdivided all project data by their storage location.

3.1 Making data findable, including provisions for metadata

In this section, we will describe how relevant data in the project should be made findable.

3.1.1 Website (including publications)

- Publications will be uploaded to online repositories and they will contain keywords.
- Publications will also be stored in the website and made searchable.
- Website will be indexed by Google and findable.
- Users that register to the SMART4ALL Join Us page can unsubscribe at any time, using the Mailchimp service.
- Consortium members can delete their account at any time. In that case all relative information regarding this specific account will be deleted.

3.1.2 Repository

Data of the repository are not supposed to be publicly available. Access is given only to the authorized users of the consortium. However, provision has been made to allow all users of the repository to find the data that are associated to their privilege rights.

- Deliverables (in PDF format) will be placed in easy folders, there will also be a search function to all searchable files, e.g., PDF
- Media press kits.
- Presentations will be stored in dedicated folders. The PPT files will be annotated with information to allow for searching based on topics and presentation dates.

The repository is based on the Nextcloud platform which provides:

- Search functionalities by filename
- Annotate files with tags for easy filtering

3.1.3 FundingBox Platform

All relevant data concerning PAEs will be tagged with key information relevant for the PAEs. These fields include: project name, address, vertical targeted, solution type, coordinator name, project members names, abstract, project description, etc. and are all made searchable.

3.1.4 Marketplace

The Marketplace is intended to serve as an AI-based match-making and collaboration tool. The development of the Marketplace is still underway and how the data in made findable will be elaborated in future versions of this DMP. At this point in time, limited search functionality is implemented – all marketplace data (defined as artefacts) are searchable by: Title, Domain, Category, Type and License.

3.2 Making data openly accessible

In this section, we will describe how relevant data in the project should be made openly accessible.

3.2.1 Website

The website is publicly accessible. All promotional material will be made publicly available on the website, links will be provided to social media platforms or news media outlet where promotional data will be sent.

3.2.2 Repository

Data are fully protected from unauthorized users. Access control is given by the Nextcloud software.

Some of the contents of the repository might be public available at some time such as the public deliverables, media kits, etc. However, these files are not going to be public through repository but through other channels such as an official project website.

Authentication is performed through username/password. Password is stored encrypted in database. Two factor authentication is also available to harden the authentication mechanism.

Access to the data that the user stores in the repository is achieved through the web browser or/and the desktop client. The desktop client is available for all the popular flavors of OS (Windows, Linux, Mac). The desktop client as a part of the Nextcloud project is an open source.

Data (binary files, metadata, user data, etc.) are stored in the same host in the filesystem or a MariaDB database.

3.2.3 FundingBox Platform

The data on the FundingBox platform are not intended for open access. Data will be deposited and secured in the FBA platform. The information will be captured through online forms and will be recorded and stored in FBA Cloud infrastructure as an object database. The information will be accessible through an online Dashboard application and only the anonymized data will be downloadable in csv and xls formats. Only authorized users will be allowed to access the data sets via authentication. The authorized users will be the project coordinator, the two technical coordinators and the evaluators. In the latter case, the evaluators will be able to view only the data included in the submitted applications that will be assigned to them.

3.2.4 Marketplace

The Marketplace stores many artifacts (presented in Section 2.4). These artifacts are:

- accessible for view and download to the public and
- accessible to edit/update/delete only to the owner (registered users).

3.3 Making data interoperable

In this section, we will describe how relevant data in the project should be made interoperable.

3.3.1 Website (including publications)

At this point in time, no data currently present at the website not the publications (and related research data) need to be interoperable. However, the Mailchimp user repositories have interoperability capabilities that can be used when needed.

3.3.2 Repository

At this point in time, no data currently present in the repository need to be interoperable.

3.3.3 FundingBox Platform

At this point in time, no data currently present in the FundingBox need to be interoperable.

3.3.4 Marketplace

At this point in time, no data currently present in the Marketplace need to be interoperable.

3.4 Increasing data re-use (through clarifying licenses)

In this section, we will describe how relevant data in the project should be made re-usable.

3.4.1 Website (including publications)

At this point in time, there is no (research) data at the website that is intended for re-use except for promotional multimedia data and press kits. Such data will be kept and made available at the website.

3.4.2 Repository

At this point in time, there is no data stored in the repository that is intended for re-use.

3.4.3 FundingBox Platform

At this point in time, there is no data stored in the at the FundingBox platform that is intended for re-use.

3.4.4 Marketplace

At this point in time, there is no data stored in the Marketplace that is intended for re-use. Of course, we intended to populate in the future marketplace with tools and other software that can be (re-)used. We will report on such tools and/or data when they appear.

4 ALLOCATION OF RESOURCES

Project team staff time has been allocated budget to develop a common ICT infrastructure and data management platform providing a comprehensive horizontal set of common data-management, normalization and storage tools on which the services (including the MaaS services) will be implemented. In general, costs related to open-access to research data in Horizon 2020 are eligible for reimbursement under the conditions defined in the H2020 Grant Agreement, but also other articles relevant for the cost category chosen. Costs cannot be claimed retrospectively. Project beneficiaries will be responsible for applying for reimbursement for costs related to making data accessible to others beyond the consortium.

The Data Manager of the project is partner TUD. Therefore, TUD, represented by Prof. Stephan Wong, will be the primary contact point regarding data management and can help in case of questions regarding the implementation of the Data Management Plan. The leaders of the task(s) generating each dataset have the ultimate responsibility of the correct implementation of the provisions in the DMP.

The partners or the subgrantees that produce any kind of data as a part of the SMART4ALL project are responsible for: i) informing the data & dissemination managers when new open data / papers ready for publication are available and ii) depositing (publishing into a repository) the data in accordance to the SMART4ALL data management policy and with help of the tools (catalogue, repository, ...) provided by the project.

Public project deliverables and datasets are published on the SMART4ALL website and the SMART4ALL repository. There is no additional cost for publication on the website because this is already included in the cost of operating the website as a whole, included the public and private parts. This also includes the financial resources for storage, cloud, hosting, IT infrastructures etc.

It is important to note that we have already defined a policy for the managing all the SMART4ALL data. According to our policy, during the project, data/metadata on SMART4ALL server will be backed up monthly.

Finally, data will be preserved at least 5 years after the project according to the requirements of the Grant Agreement. The associated costs for dataset preparation for archiving will be covered by the project itself.

5 DATA SECURITY

5.1 Website (including publications)

The current SMART4ALL website employs SSL to encrypt all data exchanged between visitors and the webserver.

5.2 Repository

The security/privacy mechanisms of the repository can be summarized in the following:

- End – to – End encrypted connection over SSL for browser and clients,
- Authenticated access to the platform,
- Brute Force Protection (Brute Force Protection logs invalid login attempts and slows down multiple attempts from a single IP address),
- Password security enforcement and
- Fine grained authorization policies and file permissions.

5.3 FundingBox Platform

The FundingBox Platform employed in the SMART4ALL project will promote specific activities to guarantee the accomplishment of the following ethics issues regarding the **protection of personal data** (more details in Section 6). SMART4ALL will collect data of the applicants, through an online form within FBA Platform which will be used during the projects Open Calls and other administration processes managed by FBA. Data will be deposited and secured in the FBA platform. The information will be captured through online forms and will be recorded and stored in FBA Cloud infrastructure as an object database. The information will be accessible through an online Dashboard application and only the anonymized data will be downloadable in csv and xls formats. Only authorized users will be allowed to access the data sets via authentication. The FBA platform applies technological and organizational measures to secure processing of personal data against publishing to unauthorized persons, processing in violation of the law and change, loss, damage or destruction. FBA platform security measures:

- Information security: SSL (Secure Socket Layer) certificates are applied. In order to ensure the appropriate level of security, the password for the account will exist on the platform only in a coded form. Registration on and logging in to the platform proceeds in a secure https connection. Use of password to access data sets: the FBA platform offers 4 different access levels/roles (administrators, developers, evaluators and guests) to secure access to data by unauthorized users. Communication between the User's device and the servers will be encoded using the SSL protocol.
- Options for reading data: the platform offers the possibility to make data available in a read-only or downloadable format, hindering the access to information by unauthorized users. Once an Open Call finishes information is archived, so it's no longer publicly accessible, only administrators will have access to the historic data in a read-only mode.
- Back-up policy: complete and redundant backups are done every hour. Moreover, every time a modification is done an older version is saved.
- Accidental deletion or modifications: in case of a catastrophic event that implies the partial or complete deletion of the data sets, the data from the most recent backup will be

automatically restored (back-up every a predefined time period). In case of accidental deletion or modification only the most recent document will be restored, so in case of accidental changes or deletion data can be easily recovered.

- Deletion or modification of data by users: only administrators have the rights to delete or modify the information included in the datasets. Under exceptional circumstances administrators can be given the permission to delete applications (utilities offered by the FBA platform) but the user responsible of its creation will be notified before doing so.
- Deletion of data by participants in open calls: users having started the application process can withdraw any time using the FBA platform before the deadline for submission.
- Terms and conditions: the FBA platform have specific terms of use and conditions that have to be accepted by all users of the platform.
 - FundingBox terms of service: <https://fundingbox.com/trust/terms>
 - FundingBox platform privacy policy: <https://fundingbox.com/trust/privacy>

Each partner is responsible for all obtained data during their processing and acquisition in their own organization. Each partner is obliged to implement appropriate security measures to ensure the confidentiality of the data. Each partner has to keep on file detailed information on the informed consent procedures in regard to data processing and templates of the informed consent forms and information sheets.

5.4 Marketplace

- Access to “SMART4ALL Helpdesk” online platform is end-to-end secure by means of HTTPS/SSL protocols and CAPTCHA challenge-response test is used to ensure use by humans. A daily data backup plan, with 15 days rotation window, has been implemented.
- Users are allowed to submit a support ticket to the “SMART4ALL Helpdesk” online platform without registration by providing their “E-mail address” and “Full Name” information. This method, in combination with a unique ticket number that is generated by the platform allows access only to a specific support ticket. Registration is also supported, which allows enhanced ticket monitoring and historical information of all the user submitted tickets.
- Access to “SMART4ALL Matchmaking & Partner Search” platform end-to-end secure by means of HTTPS/SSL protocols and CAPTCHA challenge-response test is used to ensure use by humans. A daily data backup plan, with 15 days rotation window, has been implemented.
- Users are allowed to submit a New Search to the “SMART4ALL Matchmaking & Partner Search” platform online platform without registration by providing their “E-mail address” and “Full Name” information. A unique ticket search number is generated by the platform and along with the user e-mail can be used to obtain an access link (for online progress & contact with SMART4ALL support team) only for that specific search ticket information.
- Both Marketplace platforms (“Helpdesk” & “Matchmaking and Partner Search”) conform to <https://smart4all-project.eu/privacy-policy/> terms. A link to the respective SMART4ALL privacy policy is provided in both platforms at their web pages footers.

6 ETHICAL ASPECTS

As part of the engagement on ethics, the SMART4ALL consortium has been committed to ensure that ethical principles and legislation are applied in the scope of the activities performed in the project from the beginning to the end. For this reason, the consortium has identified relevant ethical concerns already during the preparation of the project proposal. During this phase, ethics issues have been already covered as part of D8.4 “Ethics Requirements.”

In the context of this deliverable, the following issues are determined:

- A plan to ensure that all the activities of the project are compliant with the ethical standards of EC. Additionally, the approach that will be followed through the entire life of the SMART4ALL Project is analyzed, which is the self-assessment, the screening of the proposals, the ethics assessment from the ethics experts, the coaching and finally, the ethics check/audit.
- The ethical standards and guidelines of Horizon 2020 that will be painstakingly applied in the SMART4ALL Project, regardless of the country where the research is carried out. Also, there is a description of the role of the Ethics Helpdesk that will be established, which constitutes a centralized service which aims to provide constant advice before and during the entire lifetime of funded proposals. Finally, the ethics coaching towards funded proposals is described.
- The legal base on which the ethical requirements are analyzed. Specific attention has been paid towards people that are not able to give their own consent and the procedures that need to be followed in order to be fully informed about the SMART4ALL Project.

Finally, D8.4 includes also the information sheet and the consent form needed in order to proceed with the SMART4ALL ethics requirements.

- **Protection of personal data**

SMAT4ALL complies with:

- The 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 until valid, the repealing Directive 95/46/EC (General Data Protection Regulation),
- Directive 2002/58/EC on privacy and electronic communications,
- The Charter of Fundamental Rights of the EU (2000/c 364/01).

As stated in the Grant Agreement, personal data, collected for for the experiments selection) should be adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed ('data minimisation') ((Reference: Regulation (EU) 2016/679, particularly Article 5.1c,).

- **Gender issues**

Fair treatment based on gender is ensured in:

- **Project Management:** SMART4ALL will take all measures to promote equal gender opportunities in the implementation of the action and will aim for a gender balance at all levels of personnel assigned to the action, including at supervisory and managerial level. Concretely, SMART4ALL will try to get a gender balance of **50% of the underrepresented gender in decision-making structures and 50% for advisory Groups.**
- **Evaluation.** When articulating the **Expert Evaluators Panels**, SMART4ALL will try to reach also a **30%** target of the underrepresented sex, taking into account the situation in the specific field of expertise.

- **Subgrantees:** The Open Calls will be run as a fair and open competition and as such we will select all project based on the excellence of the ideas proposed. However, we are keen to promoting the participation of females in project subgrantees. Therefore, in case of a tie the projects with a female in the position of management will be prioritised to those without women or having women but not in management positions.

The coordinator UoP has been granted the Excellence in Research Award by the European Commission. The award reflects the commitment to continuously improve human resource policies in line with [the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers](#), notably the commitment to achieve fair and transparent recruitment and appraisal procedures. UoP provides stimulating and favorable work environments for its researchers.



- **Ethics Management**

As per Grant Agreement, the SMART4LL project has nominated an Ethics Manager, who will be responsible to formulate the ethics requirements of the project and to ensure that all activities are in accordance to the ethics regulations of the EC.

- Ethics Manager : Mr. Dimitris Tourlidas, from MARGARITA VTC

The Ethics Manager will lead the Ethics Committee, assisted by the following Advisory Board member:

- Ethics Assistant : Mr. George K. Kostpoulos, from University of Patras, Medical School.

SMART4ALL will also take care that the projects selected through Open Calls apply to the ethical standards and guidelines of Horizon 2020. The Ethical Committee will review all projects selected, subject them to strict ethical screening/requirements on personal data protection and any other potential ethical issues. This Committee will produce a Report according with the *Ethical guidelines of Horizon 2020 (Ethics Summary Report, Task 6.4)*. If any project seems to have Ethical issues the Committee will indicate the specific actions to be taken (contractual requirements wherever necessary) and will participate in the monitoring sessions of these projects during the entire project life cycle.

7 OTHER ISSUES

At this moment, there are no other issues to be reported.