



Sino-European Innovative Green and Smart Cities

Deliverable 7.2

Data Management and RRI Plan

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SiEUGreen

The project has received funding from the European Union's Horizon 2020 Research, and Innovation programme, under grant Agreement N 774233 and from the Chinese Ministry of Science and Technology.

Throughout SiEUGreen's implementation, EU and China will share technologies and experiences, thus contributing

The project SiEUGreen aspires

to enhance the EU-China cooperation in promoting urban agriculture for food security, resource efficiency and smart, resilient cities.

The project contributes to the preparation, deployment and evaluation of showcases in 5 selected European and Chinese urban and peri-urban areas: a previous hospital site in Norway, community gardens in Denmark, previously unused municipal areas with dense refugee population in Turkey, big urban community farms in Beijing and new green urban development in Changsha Central China.

A sustainable business model allowing SiEUGreen to live beyond the project period is planned by joining forces of private investors, governmental



SiEUGreen
Sino-European innovative green
and smart cities

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Project References

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¹ PU = Public

PP = Restricted to other program participants (including the Commission Services)

RE = Restricted to a group specified by the consortium (including the Commission Services)

CO = Confidential, only for members of the consortium (including the Commission Services)

Document History			
Version	Date	Author - Partner	Summary of Changes
0.0	04/05/2018	NMBU	Initial Draft
1.0	19/06/2018	NMBU	Circulation of the 1st DRAFT version to all partners for comments
2.0	30/06/2018	NMBU	Final check and ready for submission
3.0	14/01/2020	NMBU	Revised Submission, after revision comment



Executive Summary

The SiEUGreen project brings together a multi-disciplinary consortium of European and Chinese researchers, technology providers, Small and Medium-sized Enterprises (SMEs), financiers, local and regional authorities and resident communities, to apply novel urban agricultural techniques and new approaches for social engagement and investigate the economic, environmental and social benefits of Urban Agriculture (UA). Environmental, behavioral and economic data will be collected from the showcase communities and “feedback” to the researchers for analysis and improvement. SiEUGreen activities will involve human participants and institutions and their social, cultural, political and economic actions and behavior in generating urban agricultural techniques and waste recycling and reuse methods in selected European and Chinese urban and peri-urban areas. The data type generated from the showcases documenting the social and economic benefits of the SiEUGreen project will be of both qualitative and quantitative nature.

SiEUGreen will adhere to the guideline outlined in the FAIR data management in Horizon 2020, and this data management plan will help research partners make their research data findable, accessible, interoperable and reusable (European Commission, 2016) to ensure that data are properly managed.

The SiEUGreen project participates in the Pilot on Open Research Data launched by the European Commission along with the H2020. In open access SiEUGreen project, the partners will publish scientific publications in peer-reviewed journals and then self-archive a version of the article for free public use in the designated repository.

This document provides the data management framework for the project. The Data Management Plan (DMP) describes the type of research data that will be collected or generated during the project, how the research data are preserved and re-used and how scientific publications and other articles will be made publicly available, for example through free on-line access. It also provides the general guideline the consortium will follow on data management.

The DMP will be updated whenever there is significant changes during the lifespan of the project. The overview of the datatype that will be produced by the project is included in this first version. The next version of the DMP will get into more detail on the specific datasets and describe the practical data management procedure.



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1. Introduction

The SiEUGreen project brings together a multi-disciplinary consortium of European and Chinese researchers, technology providers, Small and Medium-sized Enterprises (SMEs), financiers, local and regional authorities and resident communities, to apply novel urban agricultural techniques and new approaches for social engagement and investigate the economic, environmental and social benefits of Urban Agriculture (UA). Environmental, behavioral, and economic data will be collected from the showcase communities and “feedback” to the researchers for analysis and improvement. SiEUGreen activities will involve human participants and institutions and their social, cultural, political, and economic actions and behavior in generating urban agricultural techniques and waste recycling and reuse methods in selected European and Chinese urban and peri-urban areas. The data type generated from the showcases documenting the social and economic benefits of the SiEUGreen project will be of both qualitative and quantitative nature.

This document provides an overview of the different types of data that the SiEUGreen project generates. Also, the general guidelines that the consortium will adopt for the data management and the data management protocol for data storage, sharing and preservation.

The DMP is not expected to be a static document and, therefore, will be updated whenever there are significant changes throughout the project (EC, 2016). The overview of the datatype that will be produced by the project is included in this first version. The next version of the DMP will get into more detail on the specific datasets.

Data collected in SiEUGreen will include those of human participants, hence as per data protection and ethical guidelines (EC, 2009), the personal data must be handled ethically and securely during fieldwork, analysis, storage, and sharing (EC, 2018a).



2. Data Summary

The SiEUGreen project will assemble numerous existing and/ or unexploited technologies for the first time to facilitate the development of a state of the art UA model that can be implemented in Europe, China and elsewhere beyond the project period. Data collection is mainly focused on the showcase countries; Denmark, Norway, Turkey, and China. Environmental, behavioral, and economic data will be collected from the showcase communities and will be “feedback” to the researchers for analysis and improvement.

Data collection activities associated with the showcase implementation are:

- Data required for the development of the Showcase Framework (T 1.1, T1.2, T 3.1)
- Data collected during the showcase implementation activities for assessment purposes (T3.2)
- Results of the showcase implementation

The impact measurement during and especially beyond the project period is a crucial component in SiEUGreen. To evaluate the project outcomes the qualitative and quantitative data on land use, resource-efficiency and energy footprint, food security and health, societal inclusion and general quality of life will be collected in addition to considering behavioral and cultural change . Primary data will be collected by interviews, focus groups, participant observations, field visits and participation in local meetings with the relevant stakeholders. The stakeholders being both politicians and employees and other relevant groups. Further data on formal institutions like policy instruments, regulations and incentives will be gathered from documents and interviews. The sensitive data involving human participants will be collected following the ethical Guidelines (EU, 2016 and EU, 2018a).

SiEUGreen project will also incorporate elements of Digital Social Innovation (DSI), by enhancing resident participation and awareness-raising through a gamification app and an interactive platform COMMURBAN. COMMURBAN will use gamification techniques to reward both intrinsically and extrinsically users for their contributions to the community. This will facilitate the collection of essential data linked to the social and cultural change expected to be generated at each of the local communities.

The type of data collected in the SiEUGreen project is both quantitative and qualitative. The data will be collected from the three showcases in Europe and two showcases in China. The dataset collected from the pilot showcases belongs to the following main domains: Land use, food security, and health; resource efficiency including energy footprint; societal inclusion and general quality of life (including. health) while considering the behavioral and cultural change.

The dataset on plant cultivation techniques will be generated by performing an experiment in a controlled and open environment. The dataset will include the plant physiological, morphological parameters and plant growth conditions. The information collected will be used to understand how the plant responds to different treatments and the environment in urban agriculture.



To evaluate the performance of treatment technologies (filters, ponds, biogas reactors, and wetlands) deployed in the showcases and to investigate possibilities for reuse options of different water and growth media qualities “Soil production and nutrient recovery” datasets will be generated. This includes testing the water quality of the inlet and outlet of treatment options for different water sources and water qualities, as greywater, urine, black water, digestate (effluent from biogas reactor), compost, and other growth media, runoff from roofs and urban areas. Parameters include physical-chemical parameters and microbial parameters. Data will be collected as grab/composite samples from I) laboratory experiments of different treatment options, II) mesocosm/pilot experiments and III) showcases (full scale) after implementation. These data will be useful for planning reuse of water and nutrient sources in urban living areas using diversion of wastewater fractions and blue-green infrastructure. Samples will be analyzed according to international standards for water analyzes at commercial laboratories and by students and NMBU and NIBIO laboratories under the guidance of qualified experts.

To fully integrate and optimize the different treatment techniques, water, and energy sensor systems (GREENERGY) will be deployed in the showcase. The collected sensor data will be used as surrogate parameters, giving the possibility to read online data and transform it into the other useful parameters. We see the potential that Greenenergy is operated by the ‘Urban farmer’ in the future.

Market analysis datasets will be collected/ created during the SiEUGreen project implementation (Task 5.1). The Market Analysis dataset will be used for the development of the relevant Market Analysis Deliverables (D5.1; D5.2; D5.3), as well as it will support and feed the development and drafting of Sustainability and Exploitation Plan (D5.4), and Business Plan (D5.5). These data would be useful to anyone who would like to reflect on the market intelligence in the domains relevant to the SiEUGreen project. The primary data for market analysis will be collected through in-depth interviews, surveys, as well as from the input of the Sustainability Working Group, Advisory Board, and showcases. Secondary data will be collected from external sources, such as scientific publications, studies, periodicals, books, official publications etc. It will be collected through digital and paper-based means. Additionally, further data will be collected from the project partners through direct communications and questionnaires (whenever necessary) and integrated into the market analysis. The data collected will be integrated into the relevant PEST and SWOT analysis that will be used in Tasks 5.1 and 5.2.

Detailed descriptions of each dataset are presented in *Annex 1*. The type of research data that the project will produce are summarized in Table 1. Datasets presented in Table 1 and Annex 1 are indicative and mainly defined in Work Packages 1, 2, 3 and 4 (WP1, WP2, WP3, and WP4). Whenever there is a significant change in the type of dataset collected during the project period, these lists will be modified with the addition or removal of datasets.



Table 1: SiEUGreen Dataset Overview

S. No.	Dataset	Lead partner (s)	Related WP	Related Showcase
1.	Land use	NORDREGIO, NIBIO, CAAS	WP1 and WP2	Arhus, Fredrikstad, Hatay, Changsha, Beijing
2.	Resource-efficiency, and energy footprint	NORDREGIO, NIBIO, VILABS, CAAS	WP1, WP2 and WP3	Arhus, Fredrikstad, Hatay, Changsha, Beijing,
3.	Food security and health	NORDREGIO, NIBIO, VILABS, CAAS	WP1, WP2 and WP3	Arhus, Fredrikstad, Hatay, Changsha, Beijing,
4.	Behavioral and cultural	NORDREGIO, NIBIO, CASS	WP1, WP2 and WP3	Arhus, Fredrikstad, Hatay, Changsha, Beijing,
5.	Soil production and nutrient	NIBIO, NMBU	WP2	Arhus, Fredrikstad, Hatay, Changsha, Beijing,
6.	Market research and benchmarking	CREVIS	WP 5	Arhus, Fredrikstad, Hatay, Changsha, Beijing,
7.	Data for COMMURBAN	CREVIS, VILAB, OKYS	WP3	Arhus, Fredrikstad, Hatay, Changsha, Beijing,
8.	GREENERGY	A-Aqua, VILABS	WP3	Fredrikstad and Changsha
9.	Plant Cultivation	NIBIO, NMBU	WP2, WP3	Arhus, Fredrikstad, Hatay, Changsha, Beijing



3. FAIR Data

3.1 Making data findable, including provisions for metadata

Identification of data

The data will be uploaded to Zenodo, which is a data repository that complies with the OpenAIRE principles. Zenodo provides all uploaded data with a persistent and unique data object identifier (DOI).

Metadata will include information such as Title, Description, Author, Grant Number, and Funding Organization, as well as other information that is relevant to the dataset.

Naming Convention

All the datasets will adhere to a consistent naming convention. The data will have a naming convention consisting of the following parts.

- i. Title or an easily identifiable name.
- ii. Work package that the data was added by.
- iii. Consortium partner that the data was added by.
- iv. Version number.

The above information will be separated by ‘_’ (underscore). Version numbers will be provided for the datasets.

Keywords related to the data collected will be added to the corresponding data. Keywords like SiEUGreen, European union, and horizon 2020 will also be attached to the datasets as per the grant agreement (Grant Agreement Article 29.2.C).

Most of the data will be uploaded to Zenodo (2020). Zenodo uses JSON Schema as an internal representation of metadata and offers export to other popular formats such as Dublin Core or MARCXML. Zenodo’s metadata is compliant with DataCite’s Metadata Schema (<https://about.zenodo.org/principles/>).

All the datasets will include metadata to describe the data. The metadata will include the title, description, author, Creation/modification date.

3.2 Making data openly accessible

The SiEUGreen project will produce a wide range of deliverables that are made public. These deliverables will be made public through project websites and included in Zenodo Repository. The data associated with these deliverables will also be made openly available along with the metadata linked with it. The data that is used and/or produced will be made openly available as the default. Any dataset that will not be shared or restricted will include an explanation along with any legal/contractual obligation that prohibits its open access in the data management plan.



SiEUGreen will use Zenodo (2020) as the data repository for all non-sensitive data. The SiEUGreen will also use Service for Sensitive Data (TSD) available at University of Oslo (UiO) (TSD, 2018 The TSD (in Norwegian, Service for Sensitive Data) service is designed for storing and post-processing sensitive-data in compliance with the Norwegian “Personal Data Act” and “Health Research Act”. TSD is developed and maintained by USIT at the University of Oslo and supports research activities run at Norwegian public institutions.

The project consortium includes partners from the private sector, the public sector, and end-users. Some partners may have Intellectual Property Rights (IPR) on their technologies and data. Consequently, the SiEUGreen consortium will protect those data and crosscheck with the concerned partners before data publication. SiEUGreen consortium will declare that it reserves the right to exclude any data that does not adhere to the ethical guidelines, raises IPR issues, security issues, or privacy-related issues, an explanation for the exclusion will be included in the data management plan.

3.3 Making data interoperable

The SiEUGreen project database will be designed to ensure the reproducibility and usability of the scientific results of the project throughout the project. By the end of the project, the final datasets will be transferred to an open access repository (Zenodo repository), which ensures sustainable archiving of the final research data. Zenodo is the open access repository of the open open-access infrastructure for research in Europe, OpenAIRE (2017). All metadata necessary to uniquely identify datasets will be provided. All datasets will be disseminated without an embargo period unless linked to a green open access publication. In the OpenAIRE repository – use and reuse of data will be permitted if there is no conflict to unless the ethical guidelines, IPR/security/privacy policy.

3.4 Increase data re-use (through clarifying licenses)

Most data will be reusable and will be offered under the Creative Commons CC BY 3.0 license. The data will be available for re-use after the end of the project period. As the Zenodo repository can retain data for up to twenty years (Zenodo II 2020) the data will be re-usable for as long as possible. If an embargo is sought, then the data will only be available after the embargo period. The exception to this will be data that is of sensitive nature or data where the partners have Intellectual Property Rights (IPR).



4. Allocation of resources

The SiEUGreen project will use the Zenodo repository, which is free of charge. Any sensitive data will be stored in TSD servers. The cost associated will be eligible as part of the Horizon 2020 grant.

The project coordinator is responsible for data management. The project coordinator is responsible for ensuring that the research datasets are created, managed, and stored in line with the applicable legislation. The project partners are responsible for upload to the repository.

5. Data Security

The SiEUGreen project will use Zenodo as its primary data repository. Zenodo stores all data files in CERN Data Centers which have multiple replicas and backed up on a nightly basis. The data are stored along with an MD5 checksum of the file content to assure that the file content remains constant (Zenodo II, 2020).

TSD provides virtual servers, backup-systems, storage-systems, high-performance computing facility, and databases all confined within a highly secured environment. Storage in TSD makes use of a dedicated portion of the storage facility “Astrastore” provided by NorSTore, the Norwegian data infrastructure provider. In addition, TSD offers a large set of software tools for data management and analysis. Furthermore, a PGP encrypted version of the UiO web-questionnaire (Nettskjema), interfaced with the governmental ID-portal for login, allows secure data harvesting, time-point studies and strong identification of the respondents. (TSD II, 2016)

During the phase where data is being collected and prior to storing it in the Zenodo data repository, all data will be stored in the servers of the institutions that collected them. The servers are mainly the Nordregio servers and servers at NIBIO. They will have backup procedures and be behind a secure firewall.

6. Ethical aspects

Data collection and treatment of data will be conducted in compliance with Article 8 of the Charter of Fundamental Rights in the European Union (European Union, 2012), specifically the provision concerning the protection of personal data. Also, the collection of data will be conducted in compliance with data protection acts, legislation, and directives both at European and national level (EU 2012 and NESF 2016). The European Union (EU) has adopted a new data protection reform packages comprising the General Data Protection Regulation (GDPR).



One of the critical changes in the new GDPR is that conditions for consent have been strengthened. The request for consent as specified by GDPR Article 7 Consent (GDPR, 2016) must be given in the context of a written declaration which is clearly distinguishable from other matters, in an intelligible and easily accessible form, using clear and plain language, with the purpose of data processing attached to that consent. It must be easy to withdraw consent, as it is to give it. The fundamental ethical procedure that SiEUGreen will follow regarding the handling and treatment of participant's data is provided in Ethics Deliverables 8.1 to 8.4.

Ethical issues are addressed in the ethic deliverables D 8.1 to D 8.5 of this project. Each researcher and participating institutions have, therefore, the obligation to follow the ethical standards and guidelines of Horizon 2020 regardless of the country in which the research is carried out.



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Annex I – Detailed description of the datasets

1. Datasets: Landuse; Dataset: Resource-efficiency and energy footprint; Dataset: Food security and health; Dataset: Behavioral and cultural changes.

<p>Purpose of dataset collection</p>	<p>The purpose of this collection of data is to give an overview of existing experiences across Europe on the organization and flow of people, land, resources, and knowledge on UA in different institutional, natural and technical settings.</p> <p>It includes an overview of policies and legislation relevant for UA and land use including incentives and regulations; statistical data for the flow and utilisation of resources, products and creation of waste and energy; and lessons learned on social, environmental and economic impacts.</p> <p>Finally, the cultural, social, institutional and natural contexts for practices related to food culture, energy culture, consumption practices are briefly discussed.</p> <p>This datasets provides a useful starting point for further analyses on what are the key areas for in-depth research for developing urban agriculture providing positive impacts for the environment and for local communities.</p>
<p>Source</p>	<p>This dataset will mainly based on desk-study of recent research literature, statistical analyses, study visits and interviews with some key stakeholders.</p>
<p>Type of Data that will be collected or created</p>	<p>Different type of data will be gathered on land use, food security, resource efficiency and societal inclusion. Most quantitative data are based on existing material available as open-access. Qualitative data are mainly based on interviews with key stakeholders and observations from field visits.</p> <p>The quantitative data are mainly provided as tables, diagrams and figures in the report. The qualitative data are analysed and the results are included in the report as text.</p> <p>The interviews and the quantitative data are stored, back-up'ed at Nordregio's and Nibio archive for the Aarhus, Fredrikstad, Hatay, Changsha, and Beijing showcase and the Synthesis part of the report.</p> <p>The data will be uploaded to the SiEUGreen project database (Zenodo) for access for all SiEUGreen partners and the public. Potential confidential information from interviews will be anonymized before uploading to the SiEUGreen project database.</p>



Partner Responsibilities and related WP and Task	
Partner in Charge of the data collection	Nordregio: In charge of data from the Aarhus, Hatay, Changsha and Beijing showcase and the Synthesis report. Nibio: In charge of data collection from the Fredrikstad showcase.
Partner in charge of the data analysis (if different)	Nordregio: In charge of analysis of the Aarhus, Hatay, Changsha and Beijing showcases, and of the overall analyses in the Synthesis report. Nibio: In charge of data analysis on the Fredrikstad showcase.
Partner in charge of the data storage (if different)	Nordregio: In charge of data storage for the Aarhus, Hatay, Changsha and Beijing showcases, and the Synthesis report. Nibio: In charge of data storage for the Fredrikstad showcase.
Work Package and Task	The data are going to be collected within activities of WP1, Task: 1.1.; 1.2; 1.3; 1.4
Data access policy/Dissemination level (confidential, only for members of the Consortium Services)/public	Most quantitative data on resources, processes and consumption of food, energy, water, waste, transport etc. will be openly available. Data on land use, ownership, rights, access etc. will be openly available. Some economic data, e.g. prices, may not be openly available. Some data on societal inclusion where interviews most likely will be used may not all be public available due to confidentiality for the interviewees. If the data are confidential only Nordregio and NIBIO-Department of Economy and Society will have access to these data. Otherwise the data will be openly accessible within the SiEUGreen Project Database and for the general public through Zenodo. In case of analyses for peer reviewed papers the analyses may not be publicly available before the paper is published.
Embargo periods (If any)	In case of need for quality reviews or for peer reviews from articles some embargo periods may appear.

2. Dataset -Market research and benchmarking

Purpose of data set	The purpose of the Market Analysis dataset is to collect, document and manage all the relevant data that will be available and/or be created by the market analysis exercise during the SiEUGreen project implementation.
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	<p>The Market Analysis dataset will be used for the development of the relevant Market Analysis Deliverables (D5.1; D5.2; D5.3) as well as it will support and feed the development and drafting of Sustainability and Exploitation Plan (D5.4), and Business Plan (D5.5). These data would be useful to anyone who would like to reflect on the market intelligence in the domains relevant to the SiEUGreen project.</p>
Source	<p>The collection of data will be based on surveys including both primary and secondary data building the relevant dataset:</p> <ul style="list-style-type: none"> - Primary data: will be collected through in-depth interviews, surveys as well as form the input of the Sustainability Working Group; Advisory Board; showcases. The data will be processed, analysed and integrated as market insights and potential take-up to support business plan and sustainability. All inputs will be reported in an anonymous way, reflecting the market status. - Secondary data: coming from external sources, such as scientific publications, studies, periodicals, books, governmental publications etc. It will be collected through digital and paper based means. Additionally further data will be collected from the project partners through direct communications and questionnaires (whenever necessary) and integrated into the market analysis. The data collected will be integrated in the relevant PEST and SWOT analysis that will used in Tasks 5.1 and 5.2. <p>Existing data and reports in partners' repositories may also be used or reused.</p>
Type of Data that will be collected or created	<p>The data will have the following formats: *.xlsx, *.doc, *.pdf files.</p> <p>A series of meta-data tables and figures will be produced in similar forms to feed the drafting of deliverables under Sustainability and Exploitation Plan (D5.4), and Business Plan (D5.5).</p> <p>This is also expected that to enhance the visibility of the markets analysis results.</p> <p>Reports related to the partners or stakeholders' interviews will also be in *.doc format. Series of *.xlsx format tables and figures will be produced mainly with coded recommendations. Additionally *.xls tables will also be created to include the list of the contact details of the external stakeholders contacted and interviewed.</p> <p>The total file of this dataset will be approximately 1 Gb. This will include text and .xlsx files.</p>



Partner Responsibilities and related WP and Task	
Partner in Charge of the data collection	CREVIS
Partner in charge of the data analysis (if different)	CREVIS
Partner in charge of the data storage (if different)	The Project Lead, will be provided with the data so as to store the dataset in the relevant repository of the project
Work Package and Task	The data are going to be collected within activities of WP 5 – Business modelling and Sustainability
Data access policy/Dissemination level (confidential, only for members of the Consortium Services)/public	<p>The datasets will not be publicly available, but confidential only for the consortium members. They will only be accessible through the project repository only to the members of the consortium.</p> <p>Final data will be publicly available within the related deliverables deposited in the project website and the project repository. Any individual or third party interested to access and reuse the data can download the deliverable from the project repository and project website in *.pdf format.</p>

3. Dataset - COMMURBAN mobile application DIY crowdsourced projects

Purpose of dataset collection	<p>COMMURBAN will be comprised by an application for mobile smart-phones which will present DIY projects with step by step instructions) which have been contributed by project partners or public users.</p> <p>Also user data will be kept accompanying the profile creation (only registered users can contribute or “follow” projects)</p>
Source	COMMURBAN users will data entry the data to the application.
Type of Data that will be collected or created	The data will regards projects step by step instructions with text, image, videos as well as user data. The data will be stored in a database files.



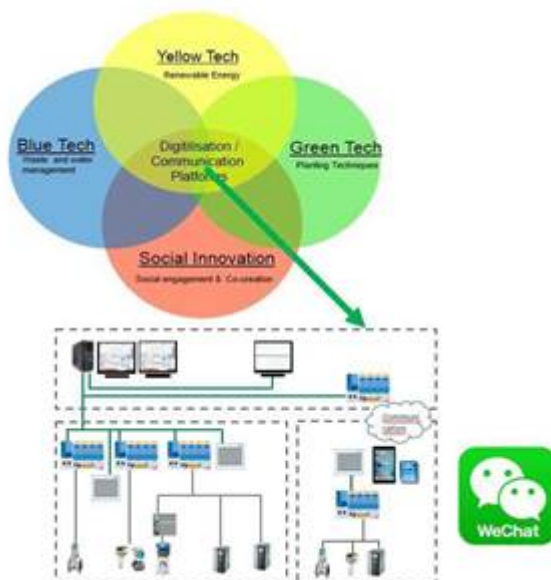
	The volume is not yet known.
Partner Responsibilities and related WP and Task	
Partner in Charge of the data collection	<p>CREVIS handles the development of the mobile app and all WP3 specifications for the platform.</p> <p>Data will be gathered through the application.</p>
Partner in charge of the data analysis (if different)	No further analysis is foreseen now. Data will be created and live in the COMMURBAN application
Partner in charge of the data storage (if different)	CREVIS will develop the mobile app and relevant database.
Work Package and Task	The data are going to be collected within activities of WP 3 – Showcase deployment
Standards	
Making data findable, including	No specific formats or standards have been decided yet
Standards, Format , Estimated volume of data	<p>No specific formats or standards have been decided yet.</p> <p>The volume is still not known and will depend whether users will contribute videos along with their projects.</p> <p>It is not anticipated that to have more than 15-20 projects consisting of 5-6 steps each.</p>
Organizing data	Data will be stored in a database server and we will not keep different versions of the data.



Data access policy/Dissemination level (confidential, only for members of the Consortium Services)/public	<p>User data such as age, mobile phone, full name then we will not be made open.</p> <p>The anonymized project data (the different steps for completing a project) can also be shared as open data from within the COMMURBAN application or the project web portal and project repository.</p> <p>The anonymized project data can be provided as a zip file containing HTML files and the media files (video+images) for the projects.</p>
Data Sharing, re-use and distribution (How)?	The data will be available via the COMMURBAN application using the mobile app and as downloadable zip files.
Embargo periods (If any)	If we do not have more than 10 projects in the platform, we do not foresee the data will make sense to anyone to have.
Archiving and preservation (including storage and backup)	Data will be stored in a database with a backup plan to keep daily and weekly full backups. As the data are in a database they can be exported later at any format we desire (e.g. XML, JSON, EXCEL) at least for the informative data not the media files.
Data storage (including backup): where? For how long?	<p>Data will be provided by users. We do not collect data on our own so we will not need to review or perform any similar processes.</p> <p>The data will be stored in a database for all the project duration (since the data creation in the COMMURBAN application)</p>

4. Dataset: GREENERGY

Data set	GREENERGY is our concept name for water and energy in the showcases.
Source	The data collection is introduced in the model here:



We see the design done with data collection via sensors and modelled and distributed via PLCs. Data is then presented on f.ex Pad or WeChat (special for China showcase).

Type of Data that will be collected or created

We hope that GREENERGY will lead to different type of sensor needs. Examples are sensor linked to water quality, water flow and sensor that will give us data for valuable information regarding operation and maintenance of the different technologies put together in GREENERGY.

Partner Responsibilities and related WP and Task

Partner in Charge of the data collection

Name of Partner: A-AQUA

Partner in charge of the data analysis (if different)

Name of Partner: A-AQUA

Partner in charge of the data storage (if different)

Name of Partner: A-AQUA

Work Package and Task

The data are going to be collected within activities of WP 2 and WP 3



Data Exploitation (purpose /use of the data analysis)	<p>Collected data will be used for operation and optimization of the processes included. We will also find potentials for using collected sensor data as surrogate parameters, giving us the possibility to read online data and transform it to other useful parameters (this might be needed in the process of safety and regulation of different water types).</p> <p>We see the potential that GREENERGY is operated by the Urban Farmer in the future, thus data collection and presentation need to be done on a different format that today's practices.</p>
Data access policy/Dissemination level (confidential, only for members of the Consortium Services)/public	<p>Different type of access will be given here by the administrator. We will investigate needs for the members of the consortium.</p>

5. Dataset: Plant cultivation

Purpose of dataset collection	The purpose of this data collection is to check the plant responses to different treatments and urban growth situations/environments.
Source	This dataset will mainly be based on experiments on plant cultivation in laboratory environment and from all the showcases .
Type of Data that will be collected or created	To be decided
Partner Responsibilities and related WP and Task	



Partner in Charge of the data collection	NIBIO and CAAS
Partner in charge of the data analysis (if different)	NIBIO and CAAS
Partner in charge of the data storage (if different)	To be decided
Work Package and Task	WP2