



Sino-European Innovative Green and Smart Cities

Deliverable 5.7

Establishment of Sustainability Working Group

Lead Partner: CREVIS
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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 to the future developments of urban agriculture and urban resilience in both continents.

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 policy makers, communities of citizens, academia and technology providers.



SiEUGreen
Sino-European innovative green and smart cities

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Technical References



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¹ PU = Public

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

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

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

Document History			
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2.0	17/07/2019	Dimitrios Petalios (CREVIS)	Draft final version sent to coordinator for comments
3.0	18/07/2019	Dimitrios Petalios (CREVIS)	Integration of final version
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5.0	31/01/2020	Dimitrios Petalios (CREVIS)	Final version sent to coordinator for re-submission



Executive Summary

The current Deliverable 5.7 – Establishment of Sustainability Working Group, provides an overview of the establishment of the SiEUGreen Sustainability Working Group (SWG). Its structure is realised on the vision of SiEUGreen project partners to guide the long-term sustainability to ensure showcase activities in partnership with local community stakeholders, private sector organisations and governmental partners, and promote concrete results, products and services beyond the end of the SiEUGreen project term (as to be developed within D5.4 Sustainability and Exploitation Plan – M30).

In that sense, SWGs are groups of excellence and sustainability composed of key stakeholders from SiEUGreen project - showcase implementation teams - (core part), and local stakeholders and experts non-directly involved in the project. SWGs are formed as counseling bodies with a two-fold objective:

- i) primarily focus on supporting the sustainability of the concepts and results developed within the SiEUGreen showcases, in terms of their sustainability plans
- ii) boost the exploitation and replication of SiEUGreen results (with a special focus on strategies of the showcases, in terms of their exploitation plans).

Due to the complexity and different characteristics of the showcases, the SWGs will have a showcase orientation, resulting in the establishment of SWGs per showcase. Apart from the showcase level SWGs an overarching group is set to support exchange across the showcases in terms of knowledge sharing and exploitation.

The main activities will be realized within the overall duration of the showcases deployment in the form of activities to support engagement, dissemination and the realization of sustainability and exploitation plans of the showcases. The whole activity will be performed within Task 5.2 and the insights of the SWGs will be reported within the Deliverable D5.4 Sustainability and Exploitation Plan and D5.5 Business Plan.

The document is structured in 5 chapters. Chapter 1 presents an overview of the objectives and the role of the SWG in the SiEUGreen project while Chapter 2 presents the implementation framework and activities of the SGW. The document continues with the SWGs composition in Chapter 3 and concludes with the planning for the SWG activities in the upcoming period in Chapter 4.



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List of Acronyms

Acronym	Description
D	Deliverable
DoA	Description of the Action
NGO	Non-Governmental Organisation
SiEUGreen	Sino-European innovative green and smart cities
SWG	Sustainability Working Group
UA	Urban Agriculture



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1. Objectives and role of the Sustainability Working Group(s)

Ensuring the sustainability of the project results – including showcases - is of utmost importance for the SiEUGreen project team. To strengthen the overall approach in achieving sustainability, and to boost the exploitation and replication potential of project results, SiEUGreen establishes its Sustainability Working Group (SWG) as a counselling body consisting of SiEUGreen project partners that are strongly involved in the preparation and implementation of individual showcases (such as showcase leaders, technology partners and other project partners) and various local stakeholders (that are not SiEUGreen project partners) but do have a strong interest in shaping sustainable solutions for UA, adapting and supporting replication and exploitation of the solutions developed within the SiEUGreen project, and the long-term continuation of showcase activities beyond the project term), with a main two-fold objective:

- i) primarily focus on supporting the sustainability of the concepts and results deployed within the SiEUGreen showcases, in terms of shaping sustainable solutions and coordinating activities beyond the project term;
- ii) boost the exploitation and replication potential of SiEUGreen by supporting the exploitation strategies of the showcases, in terms of their exploitation plans (scaling up and scaling out).

The complexity of the SiEUGreen showcases is expressed in the diversity of the vision, objectives, technologies developed and used, stakeholders targeted and involved, together with the socio-economic, institutional, policy environments as well as the innovation level of technical solutions deployed. These are key factors¹ that determine the sustainability of SiEUGreen outputs beyond the project implementation and further its exploitation. To consider the factors as mentioned above and best fit the sustainability planning into the needs and specific characteristics of each SiEUGreen showcase, the establishment of the SiEUGreen SWG is realised at the showcase level, resulting in 5 showcase-related SWGs.

¹ Reference to these factors is provided in project Deliverables D1.1 - Maps of quantitative and qualitative data for each of the showcase locations, D3.1 – Requirement plans for each of the showcase locations, D3.2 Common implementation framework.



To facilitate and strengthen the cross-border exchange of experiences and knowledge between showcases and further strengthen the potential exploitation of the project outputs, an overarching SWG is set up. The overarching SWG consists of the leaders of the showcase level SWGs, including ScanWater the SiEUGreen Innovation Manager, and HHEPSTI being investors participating in the project. The overarching SWG will act as an evangelist of the project outputs across borders supporting the diffusion of project results and become a platform for targeted dissemination to potential investors and users. Among others, SiEUGreen technology partners such as ScanWater and financial partners HHEPSTI have established relations with other potential investors (in both geographical territories) which will help in facilitating connections with them and boost the exploitation and replication potential of SiEUGreen).



Figure 1 – SiEUGreen Showcase & Overarching SWGs



2. Implementation framework and activities of the SWG(s)

2.1 At Showcase level

The Showcase SWGs will act as focal points for the conceptualisation of the sustainability and exploitation of the showcases. In such a way they are an integral part of the overall strategy for sustainability and exploitation providing substantial inputs to the development of viable business models and inform the commercialization and investment strategy.

In this way the showcase SWG will contribute and provide valuable inputs to:

- i) The elaboration of the sustainability and exploitation strategy (including the development of showcase-specific business models),
- ii) Activities that lead from engagement to dissemination and exploitation

Elaboration of the sustainability and exploitation strategy

The first step towards the exploitation is to identify exploitable project results and classify them accordingly to their commercial potential. The sustainability and exploitation strategy of the SiEUGreen will provide an overview of the exploitable outputs, and will describe the exploitation pathways at different levels (individual; showcase; consortium) including the development of business models and go-to-market strategies. All the relevant activities and outcomes will be consolidated in the D5.4 – Sustainability and Exploitation plan (M30).

The showcase formed SWGs - consisting of project partners that have an interest in sustaining and potentially exploiting the showcase concepts - will provide input for relevant activities under Task 5.2, aiming to:

- Identify the potentially exploitable outputs of the showcases.

While all partners will provide their individual views and vision on the exploitable outputs of the project, the SWGs will provide information about the showcase concepts. This will provide input for the development of relevant showcase business models and plans and also pave the way for the development of commercialisation and investment strategy.

The collection of data is performed via the questionnaire and will feed into individual and combined exploitation plans.

- Development of showcase business models and plans.



Upon the analysis of the commercially exploitable outputs, the SWGs will be part of the development of relevant business models. Members of the SWGs will be invited to participate in a 2.5-day business model development workshop². The workshop is designed to initiate a change in the ability of SiEUGreen project partner organisations (both EU & Chinese) to substantially ideate, describe, evaluate and discuss business models using the Business Model Canvas. It serves as the basis for the development of relevant business models and business plans by the respective partners intending to proceed with the commercial exploitation of SiEUGreen project outputs. Such an approach will ensure that local/showcase specificities and market aspects are grasped and incorporated within the elaboration of the business plans (D5.5 Business plans – M46).

The overall activity relating to the input for the development of showcase sustainability and exploitation plans is performed by the SWGs and coordinated by CREVIS.

From engagement to dissemination and exploitation

As directly connected with the showcases, activities and implementation (Task 3.2 Showcase deployment M16-M48), the SWGs activity will be deployed along with the showcases implementation. Therefore, it will be aligned with the relevant time plans for the stakeholders' engagement and technologies implementation.

The SWGs will capitalize on the engagement strategies (to be developed under T1.3) of the showcases. The structure of the SWGs (showcase teams, tech partners, local stakeholders) will strongly support the actual implementation of the engagement strategy.

The activity of the showcase related SWGs will be realized through the provision of input and organization of targeted activities. The organisation of the SWG activities is comprised of 3 phases: preparatory phase, implementation phase and reporting. Reporting is considered as an ongoing activity within the overall preparatory and implementation phases of the SWG

² A business model workshop is planned to be organized within *T 5.2 Development of Exploitation and scaling plans for each of the 5 showcases*. Further information is to be provided in D5.4 Sustainability and Exploitation plan (M30).



activities and will be incorporated in the Commercialisation and Investment Strategy (D5.5 Business plan, M46).

The preparatory phase focuses on the identification and selection of SWGs members, performed by the SWGs leaders. Showcase partners have already identified the different groups of stakeholders they will aim at engaging in the deployment of the showcases (D3.2 Common Implementation Framework), who will also become a part of the SWGs.

The following Table 1 presents the different groups of stakeholders targeted to be involved as per the showcase.

Table 1 - Stakeholders groups per SiEUGreen showcase

Stakeholder category	Norway, Fredrikstad	China, Changsha	Turkey, Hatay	China, Beijing	Denmark, Arhus
Government/policy makers	X		X	X	
Community / residents / neighbors	X	X	X	X	X
Services industry				X	
Suppliers of equipment and /or technology	X	X		X	
Welfare organizations				X	
Local authorities	X				
Civil society / NGOs	X		X	X	

Each showcase has incorporated different tools and activities to ensure the active engagement of identified stakeholders. Workshops (and the use of the COMMURBAN application) are common in all showcases. Allowing a dynamic interaction between the organisers and the participants, the workshops/roadshows but also ad hoc meetings with targeted stakeholders (investors, buyers, etc.) will be the focus of the SWG activity.

Through active participation in engagement activities, consortium partners will aim at creating dynamic interactions with public and private stakeholders (from showcase participants to policy makers, users or buyers of technologies and produce, and investors, etc.) aimed at generating positive perceptions derived by the recognition of economic, social, operational, technological, political benefits of the showcases and optimally achieve attraction for further development and potential exploitation. To achieve this, and in line with the engagement strategies for the showcases, the SWGs will focus on raising targeted awareness to local beneficiaries and stakeholders, and exploiting the demonstration power of the showcases will



aim to create interest in potential exploitation. Such activities will be demonstrated within visits and workshops at the showcase sites, performed by the leaders of the SWGs with the support of showcase and technological partners. The overall activity will be coordinated by CREVIS.

Moving across engagement, dissemination and exploitation, the SWGs will aim at attracting stakeholders having primarily a market focus, connecting project showcases and commercially exploitable results with potential buyers and investors. Information from D5.4 Sustainability and Exploitation Plan will drive the SWG in identifying the potential clientele as per the results of the business models developed for the showcases. The SWGs with the support of ScanWater, HEEPTSI and the Nordic Group Holding will coordinate the identification of relevant organisations and organise demonstration activities (and workshops) at the showcases locations, but will also be extended to B2B meetings; presentations in dedicated events; online/ media activity; etc.

In doing so, the SWGs will also contribute to T5.3 (Commercialization and Investment Strategy) by identifying and potentially securing (private) sector investment for vertical scaling (scaling-up operations in the current location) and horizontal scaling (scaling-out, expanding to geographies). Given the diversity of technologies and approaches developed for and deployed at the 5 SiEUGreen showcases and in the understanding that the combination of these approaches and technologies is unique to each showcase, commercialisation and investment strategies will be developed at the showcase level. The overall activity performed and the Commercialization and Investment Strategy developed, will be led by SEECON and will be reported in the D5.5 Business plan (M46). This also gives the opportunity to provide updated information regarding the potential exploitation of the showcases within the relevant business models (developed in M30) and strengthen marketing strategies.

Creating targeted awareness and disseminating project results is an ongoing activity performed by all the project partners, in line with the project Communication and Dissemination plan (WP6). Therefore the SWGs approach will be aligned with the dissemination and exploitation strategy and building upon the showcases will turn outcomes into success stories. Optimally this will enable achieving a long-term impact on the sustainability of the showcases, and strengthen exploitation by market-uptake of the project outcomes.



SWG focus	Objective	KPIs	Target value*	Monitoring
Support targeted dissemination of project results	SWGs (core) members project partners perform targeted dissemination reaching out to showcase beneficiaries, neighboring communities, relevant key stakeholder and the public at large	No of people reached	Linked to the dissemination targets	Dissemination reports – specific reference activities focusing
Support exploitation meetings with potential investors	SWGs will attract business using the demonstration power of the showcases and technological innovations performing meetings with potential investors	No of meetings held	>20 (also linked to the commercialization and investment strategy)	Reporting of the SWG leader

**Aligned with the deployment workshops at the showcase level*



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2.2 Overarching SWG

The main role of the overarching SWG will be to ensure cross-border exchange between showcases and support knowledge transfer across and beyond the project showcases. The project has dedicated a whole WP on International Knowledge Transfer WP4, within which some of the partners participating will be members of the overarching SWG. This creates a strong basis upon which participants of the overarching SWG will focus on sharing the exploitation related issues and findings, across showcases and with the project high-level advisory board and the Technical Transfer Offices (TTO), being responsible for the commercialization of ideas originating from the research activity performed.

Leveraging the Transnational Board Meeting, that will be organized at the end of the third year, members of both the overarching SWG will participate to demonstrate and exchange the results of the showcases with the relevant stakeholders.

Both the above activities will be co-ordinated by CREVIS (from WP5) and NMBU (WP4) with the contribution of showcase partners, technology providers and the investors/financing partners (HEEPTSI and Nordic Group Holding).



3. The showcases SWGs composition

The showcase SWG composition has been based on the vision of the showcases and the stakeholder groups that will aim at engaging. To support the sustainability of activities and results of the showcases, as well as its potential exploitation, the SWGs will be composed of targeted stakeholders per showcase that beyond engagement correspond to potential users/exploitation groups of the showcase expected outputs.

3.1 Fredrikstad showcase SWG

The showcase of Fredrikstad is characterized by the variety of the innovative SiEUGreen UA technologies (under all the technology categories - green, blue and yellow) that will be incorporated and used for the retrofitting of the former hospital complex into a residential and commercial area (Cicignon Park). The stakeholder engagement activities are planned to commence on M25 and will focus on involving most of the stakeholders' groups, as presented in Table 1. The time plan for the technology deployment on-site commences on M22 with most of the yellow technologies deployment and progresses with the deployment of green and blue technologies as from M24 (see relevant time plan in D3.2 Common implementation framework).

The Fredrikstad SWG will be led by the responsible partner(s)/showcase leader (NMBU & NIBIO) and will comprise of representatives of the technology providers, the Fredrikstad municipality, the residence park development team, and the local community.



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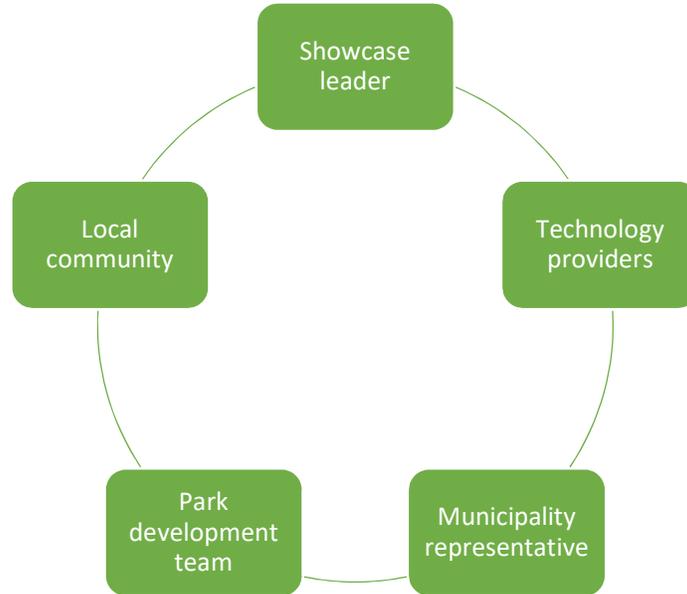


Figure 2 - Composition of the Fredrikstad SWG

3.2 Changsha showcase SWG

One of the two showcases in China, is located in Changsha where the Futiancangjun (formerly named Hemeixingcheng) project is going to be used. The project a total construction area of 740,000 m² consisting of schools (kindergarten, primary school and junior school), apartments, mountain park and commercial buildings, all being in the Green Controlling Area of the city. Similar to the Fredrikstad showcase, the one of Changsha is technology intense.

Changsha being one of the most densely populated provinces in China, it faces environmental challenge regarding food supply, and within SiEUGreen will aim to showcase how UA will ameliorate the situation by producing food locally in an environmentally friendly manner with zero transport required, and support leisure environment and quality of life. To this end, the main stakeholder groups that will be engaged are regarding residents and the industrial companies involved in the construction project realization. Within the showcase deployment, as consultations with the local government are expected to take place, local institutional representatives will be invited to be involved in the SWG activity.

The engagement activity has commenced on M18 in Changsha with the promotion of the COMMURBAN app, mainly focusing on the engagement of the community. Workshops and



consultations are expected to be realized as from M28 that will aim to a more dynamic interaction with other stakeholders.

The Changsha SWG will be led by the responsible partner(s)/showcase leader (CAAS & NMBU) and will comprise of representatives of the technology providers, the construction development team, local institutions and the local community.



Figure 3 - Composition of the Changsha SWG

3.3 Hatay showcase SWG

The Hatay showcase is more socially than technologically oriented. Within the SiEUGreen two projects within Hatay Province are supported, the construction of a greenhouse on the Kisecik Expo Zone in the urban fringe of Antakya, as a demo and pilot case; and the ‘Women’s Cooperative’ (Ureten Eller) initiative. Overall the scope of the Hatay showcase is the provision of access to new UA-related technology and knowledge, with the aim of creating job opportunities, increasing food production and resource efficiency.

The engagement activity in Hatay has mainly commenced on M13, while initial activities were performed within the first year of the project implementation (2018). At the same time technologies installation started on M13. The Hatay SWG will be coordinated by the Hatay Municipality, leading the showcase implementation and will consist of representatives from



the technology providers, policymakers, the local community and representatives of local NGO.



Figure 4 - Composition of the Hatay SWG

3.4 Beijing showcase SWG

The Beijing showcase activities are deployed at Sanyuan Farm, located in the metropolitan area of Beijing. The farm is a state-owned farm belonging to the Beijing Agricultural Group Co. Ltd. It consists of two parts – East District and West District. The East District has been running for decades, and the West District is in the planning phase. The farm has adopted the concept that the development of UA shall be based on agriculture, and be combined with tourism, technology, and education. At present, the farm’s two main activities are production and marketing of green agricultural products, and education initiatives and promotion of farming culture. The aim of the showcase at Sanyuan Farm is to demonstrate resource-efficient UA and a healthy happy-life style.

Engagement activities within the showcase commenced mainly on M13 and the different technologies (only green technology) have been incorporated since M13 (specific technologies will be implemented as from M25 and M37).



The Beijing SWG will be led by project partner CAAS, responsible for the showcase deployment and will consist of representatives from technology providers, government, services industry, welfare organizations and the local community.

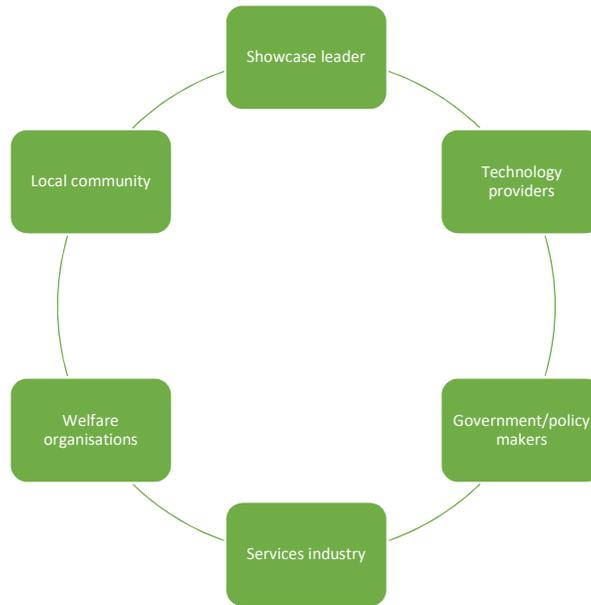


Figure 5 – Composition of the Beijing SWG

3.5 Aarhus showcase SWG

Within the Aarhus showcase deployment, stakeholder engagement activities have commenced on M18 (as presented in the relevant time-frame provided in D3.2). The municipality of Aarhus aims to create a more socially inclusive and sustainable community through the promotion of urban agriculture. Community members/residents are the main groups of stakeholders that are aimed to be engaged in the showcase activities, with a particular focus on unemployed individuals.

The SGW in Aarhus will consist of the representatives of the Showcase, being led by the municipality of Aarhus (involving planning administration, social sector, health care,



educational sector), the technology providers and representatives of the community. Taste Aarhus is a well-established initiative with numerous UA activities across the city of Aarhus. The initiative will incorporate SiEUGreen technologies (green and blue) and showcase how they could further contribute in achieving its objectives towards the development of UA in the city, supporting environmental sustainability, societal inclusion, circularity and resource efficiency.



Figure 6 - Composition of the Aarhus SWG



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4. SWG activities planning

The overall planning of the SWG related activities is presented in the timetable below.

Phase	Activity	Time/Months																														
		M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48
Preparatory	Establishment of the methodology/objectives of the SWG	█																														
	Identification of SWG members and establishment of the teams	█																														
	Distribution of the exploitable results/individual exploitation plans questionnaire		█	█	█	█	█	█	█	█	█																					
	Analysis of questionnaires feedback			█	█	█	█	█	█	█	█																					
	Developing draft business models for showcases																															
	Support development of Sustainability & exploitation plans				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Implementation	Support engagement																															
	Support dissemination																															
	Support exploitation																															
Reporting	Ongoing	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	

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