



# **D6.3 Cooperation handbook: Report of lighthouse projects cooperation: Working groups and platform results**

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## Dissemination level

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## Deliverable administration

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## About SPARCS

Sustainable energy Positive & zero cARbon Communities demonstrates and validates technically and socioeconomically viable and replicable, innovative solutions for rolling out smart, integrated positive energy systems for the transition to a citizen centred zero carbon & resource efficient economy. SPARCS facilitates the participation of buildings to the energy market enabling new services and a virtual power plant concept, creating VirtualPositiveEnergy communities as energy democratic playground (positive energy districts can exchange energy with energy entities located outside the district). Seven cities will demonstrate 100+ actions turning buildings, blocks, and districts into energy prosumers. Impacts span economic growth, improved quality of life, and environmental benefits towards the EC policy framework for climate and energy, the SET plan and UN Sustainable Development goals. SPARCS co-creation brings together citizens, companies, research organizations, city planning and decision making entities, transforming cities to carbon-free inclusive communities. Lighthouse cities Espoo (FI) and Leipzig (DE) implement large demonstrations. Fellow cities Reykjavik (IS), Maia (PT), Lviv (UA), Kifissia (EL) and Kladno (CZ) prepare replication with hands-on feasibility studies. SPARCS identifies bankable actions to accelerate market uptake, pioneers innovative, exploitable governance and business models boosting the transformation processes, joint procurement procedures and citizen engaging mechanisms in an overarching city planning instrument toward the bold City Vision 2050. SPARCS engages 30 partners from 8 EU Member States (FI, DE, PT, CY, EL, BE, CZ, IT) and 2 non-EU countries (UA, IS), representing key stakeholders within the value chain of urban challenges and smart, sustainable cities bringing together three distinct but also overlapping knowledge areas: (i) City Energy Systems, (ii) ICT and Interoperability, (iii) Business Innovation and Market Knowledge.

## Partners



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## EXECUTIVE SUMMARY

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SPARCS is an active partner in the overall H2020 collaboration framework and actively participates in the already established SCC1 clustering initiatives. The impact objectives of these projects and a significant portion of the target audiences overlap and therefore these common activities will capitalise on this overlap with the aim to increase the individual reach and enlarge the potential pool of replication and innovation acceptance. The collaboration enables knowledge exchange, and sharing, among individual partners and work packages of the projects as well as participating to its governance. The collaboration will take place by means of participation on meetings, organization of joint events, conference participation and by building common recommendations (in T6.2). The knowledge exchange further builds on partnerships with external cross-cutting and regional initiatives that offer additional opportunity to make contact with SCC projects (in T6.3 and T6.4). Opportunities for further common activities and common deliverables will be regularly assessed and subsequently discussed and agreed with the projects' officers.

This handbook focuses on the work done in subtask 6.1.2 Clustering activities. This handbook defines cooperation means and rules for the activities with the other projects and initiatives. This will define the objectives and activities, the responsible SPARCS partners across the consortium as well as the main cross-cutting issues agreed by the cluster. It will be periodically updated according to the progress of the cooperation. Updates will be reported periodically and consolidated in a final deliverable of this task in the end of the project.



## 1. INTRODUCTION

### 1.1 Purpose and target group

The deliverable is generated by task T6.1, which ensures a deeper collaboration, communication and knowledge exchange among all H2020 SCC1, foreseeing the organisation and coordination of common activities with other projects. The impact objectives of these projects and a significant portion of the target audiences overlap and therefore these common activities will capitalise on this overlap with the aim to increase the individual reach and enlarge the potential pool of replication and innovation acceptance.

This handbook focuses on the work done in subtask 6.1.2 Clustering activities. SPARCS will be an active partner in the overall H2020 collaboration framework and actively participate, in the already established SCC1 clustering initiatives, enabling knowledge exchange, and sharing, among individual parts and work packages of the projects as well as participating to its governance. The collaboration will take place by means of participation on meetings, organization of joint events, conference participation common recommendations (T6.2). The knowledge exchange further builds on partnerships with external cross-cutting and regional initiatives that offer additional opportunity to make contact with SCC projects and relevant platforms (in T6.3 and T6.4). Opportunities for further common activities and common deliverables will be regularly assessed and subsequently discussed and agreed with the projects' officers.

This handbook defines cooperation means and rules for the activities with the other projects and initiatives. This will define the objectives and activities, the responsible partners across the SPARCS consortium as well as the main cross-cutting issues agreed by the cluster.

### 1.2 Contributions of partners

The following Table 1 depicts the main contributions from SPARCS partners contributing to this deliverable.

*Table 1. Contributions of partners*

Partner	Contributions
<b>VTT</b>	Editor and main author of the deliverable.
<b>GOPA</b>	Contributions to the content, checking the content
<b>CVUT</b>	Contributions to the content, checking the content
<b>Fraunhofer, Civiesco, SUITE5, City of Leipzig, City of Espoo</b>	Members of SCC1 tasks groups described their objectives for cooperation and planned activities in Table 3





### 1.3 Baseline

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As described in D6.1 (Cerna, 2019), the co-operation and knowledge sharing among the H2020 SCC1 smart city lighthouse projects is coordinated by Collaboration Task Force and the Collaboration Task Force Space. These help us to navigate and organise all the information from individual partners and work packages to other projects and vice-versa, but also on a lot more granular, city level, matching technical expertise with other technical experts from among all these initiatives. The coordination of cooperation aims at ensuring a clear communication and information flow and to acting flexibly and reactively towards requests.

### 1.4 Relations to other activities

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The handbook will be periodically updated according to the progress of the cooperation. Updates will be reported periodically and consolidated in a final deliverable of this task in the end of the project. This deliverable D6.3 has relations to following activities:

- Task 6.2 will elaborate and consolidate joint recommendations based on the defined cross-cutting issues.
- D6.1 presents the coordination of collaboration, and this deliverable and SCC1 clustering activities follow the same workflow and process.
- D6.2 presents the Collaboration task force and outlines individual memberships in initiatives among others for H2020 SCC1.
- Close relation to WP8 Dissemination and Communication.
- Each SCC1 cluster topic is related to corresponding WP in SPARCS: WPs 1-5, and WP7.



## 2. MEANS FOR H2020 SCC1 COLLABORATION

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### 2.1 Overall H2020 SCC1 collaboration framework

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In the already established H2020 SCC1 clustering initiatives, SPARCS targets to enabling knowledge exchange, and sharing, among both individual parts and work packages of involved projects as well as participating to its governance. The SPARCS project will actively participate in the SCC1 project coordinators' steering group ("board of coordinators"), in the communication collaboration and in the replication group, where many of SPARCS partners are already active contributors.

Based on the most efficient task distribution, SPARCS has assigned its partners to be members of individual groups collaborating in H2020 SCC1 framework. The individual experts report to the Collaboration Task Force group of the project.

### 2.2 Cooperation means and rules for the activities

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The cooperation is realised through establishing dialogue and knowledge exchange in regular H2020 SCC1 meetings on various levels. The specific topic related SCC1 task force groups and their members from SPARCS are:

- Board for Coordinators: **VTT**
- Communication and Dissemination Coordinators: **GOPA com.**
- Replication Coordinators: **Fraunhofer**
- Business Models Group: **CiviESCo**
- Data group: **SUITE5**
- Monitoring and Evaluation group: **SUITE5, VTT, CVUT**
- Lighthouse Cities Coordinators (City-to-City group): **Cities of Espoo and Leipzig**

From the SPARCS point of view, the project has nominated an Ambassador into each group to act on behalf of SPARCS as an interlocutor between the project and the group.

Each one of these groups is coordinating and managing efforts of all lighthouse projects in their own area, focusing specifically on establishing common practices, common goals and baselines and/or common outcomes and recommendations, when it comes to replication.

All groups also collaborate via online calls, an established cloud platform and a series of in-person joint events, such as workshops, presentations and conference participations.

Some of the common activities are agreed upon on the Board for Coordinators or Group-level and are fulfilled by all projects within the H2020 SCC1 group. Those activities are executed within the SPARCS project boundaries, through the WP6, with the help of other project members and work package leaders, as and when needed.

Other, optional, selected activities and opportunities for further common activities and common deliverables will be regularly assessed and subsequently discussed and agreed with the projects' officers.



Within the project, the knowledge sharing is enabled in two ways:

- from the H2020 SCC1 to the project members (through the Ambassadors)
- from project members to the H2020 SCC1 (and back, if applicable) (through the Ambassadors)

When there are elements from the H2020 SCC1, the SPARCS Ambassador in the group has the mandate to take a decision, together with the Project coordinator or Project partner in question, when and if needed, and subsequently inform the project partners, usually during executive board calls and in the communication meetings and newsletter.

When project partners have requests for SCC1 group members, they leave an information request on Teams for the responsible partner, as outlined in the Ambassador workflow. In return, the Ambassador answers their request in Teams as well and if widely applicable – enters this outcome also into the newsletter.

All these activities are followed in the stakeholder mapping document in Teams and via requests in Teams in WP6. In case of participation and contributing to events, workshops and webinars, we will use tracking documents from WP8.

## 2.3 Events targeted to different audiences are being collected and proposed in the course of the project at the common communication meetings. Objectives and activities for SCC1 clusters

SPARCS participates in the following SCC1 task groups: Board for Coordinators, Communication and Dissemination, Replication, Business models, Data, Monitoring and Evaluation, and City-to-city. The objectives for cooperation and planned activities for SPARCS members participating to SCC1 clusters is summarized in Table 2. Cooperation in SCC1 task groups: objectives and planned activities.

*Table 2. Cooperation in SCC1 task groups: objectives and planned activities*

SCC1 Task Group: Board of Coordinators (VTT)	
<b>Objectives for cooperation</b>	<p>Objective 1: Common coordination and strategic guidance of all H2020 SCC1 projects</p> <p>Objective 2: Ensuring knowledge sharing and knowledge transfer and lessons learnt from “older” to “younger” H2020 SCC1 projects</p> <p>Objective 3: Enabling and preparing the conditions for the development of the market on smart cities solutions</p> <p>Objective 4: Strategic input for further H2020 and other smart city, energy-efficiency and sustainability related programmes of the EC</p>
<b>Activities planned</b>	Monthly Telcos

SCC1 Task Group: Communication and Dissemination (GOPA)	
<b>Objectives for cooperation</b>	Objective 1: Knowledge sharing between the Lighthouse Cities on new developments in the projects



	<p>Objective 2: Common approach to branding and visibility and dissemination efforts of the H2020 projects</p> <p>Objective 3: Harmonised dissemination and coherent communication outputs for the overall Smart Cities group</p> <p>Objective 4: Coordinated efforts to the event/ workshop / webinars presence</p>
<b>Activities planned</b>	<p>Monthly Telcos</p> <p>In-person meetings minimum twice a year</p> <p>Branding meetings and other ad-hoc meetings depending on event or topic more frequently (especially e.g. Barcelona Expo calls)</p>

<b>SCC1 Task Group: Replication (Fraunhofer)</b>	
<b>Objectives for cooperation</b>	<p>Objective 1: Knowledge sharing between Lighthouse projects on replication strategies.</p> <p>Objective 2: Further identification, understanding and uptake of barriers and drivers for replication as encountered in the Lighthouse projects.</p> <p>Objective 3: Supporting EU-regional and Member State networks of SCC01 cities, and other European networks, to accelerate scale-up and replication.</p> <p>Cooperation with other Task groups &amp; dissemination</p>
<b>Activities planned</b>	<p>Monthly Telco's</p> <p>Live meetings twice a year</p> <p>Supporting PED/SCC booklets</p>

<b>SCC1 Task Group: Business Models (CiviESCO)</b>	
<b>Objectives for cooperation</b>	To achieve SPARCS' objective n.8 in order to support benchmark analysis related to the business models and financing instruments for smart positive energy districts.
<b>Activities planned</b>	Ad hoc meeting within the EIP SCC, frequent Telco on-demand and information/lesson learnt exchange among respective partners of the whole SCC1 business ecosystems.

<b>SCC1 Task Group: Data (SUITE5)</b>	
<b>Objectives for cooperation</b>	<p>Build a consistent data collection methodology via identifying and following best practices of similar SCC1 projects.</p> <p>Utilization of common practices for the BASELINE definition methodology</p>
<b>Activities planned</b>	Monthly Telco's

### SCC1 Task Group: Monitoring and Evaluation (SUITE5, VTT, CVUT)



<b>Objectives for cooperation</b>	Learning from experiences of older SCC1 projects. Actively collaborating on development of not yet well-established indicators such as those for PED evaluation.
<b>Activities planned</b>	Monthly telcos and face-to-face workshops twice a year

<b>SCC1 Task Group: City to City (Cities of Espoo and Leipzig)</b>	
<b>Objectives for cooperation</b>	Learning from experiences of other SCC1 projects and sharing knowledge. LPZ: Cross dissemination of experiences as a Lighthouse City to Follower Cities from the previous SCC1 project Triangulum (e.g. City of Prague, Sabadell).
<b>Activities planned</b>	Telcos, visits

## 2.4 Recommendations for cross-cutting issues

Based on the activities for the exchange and the consolidation of knowledge among other SCC1 projects, SPARCS will facilitate building common recommendations (in T6.2) on agreed cross-cutting issues. Recommendations will be synchronized with the corresponding project meetings and workshops, by adding a dedicated agenda. These recommendations will contribute to on-going work and filling the existing gaps. Each cross-cutting issue has a responsible project partner, as follows:

- impact monitoring: **SUITE5**
- effective business models for sustainable solutions: **FHG**
- regulatory, legal aspects and data security/protection: **SUITE5**
- gender and socio-economics (Social Sciences and Humanities): **SPI**
- storage solutions (from short-term to seasonal): **VTT**
- big data, data management and digitalization: **VERD**
- electro-mobility: i) its impact on energy system and ii) appropriate city planning measures to support large scale roll-out: **VTT**
- positive energy blocks: **VTT**
- citizen engagement: **GOPA, SPI**.



### 3. BRINGING TOGETHER A NETWORK ON POSITIVE ENERGY BLOCKS

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#### 3.1 Co-operation among SCC1 projects focusing on Positive energy blocks

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SPARCS will facilitate cooperation among interested groups and targets to bring together people developing Positive Energy blocks (PEB), Neighbourhoods (PEN) and Districts (PED). Actions will be done both in the SCC1 clustering activities, but also in broader networks.

Continuous collaboration will be established with the other H2020 SCC1 projects, with an emphasis on projects targeting positive energy blocks. This means projects funded under the LC-SC3-SCC-1-2018: +CityxChange and MAKING-CITY and from 2019: ATELIER and POCITYF. In addition, also follower cities from earlier launched SCC1 projects can be interested when taking steps towards their city visions. Among this group, SPARCS targets to cooperate in order to align specific call issues such as the positive energy blocks and its monitoring specificities in order to enhance the show of evidence and boost replication. One of the first collaboration topics will be to define common approaches for defining positive energy blocks, and related KPIs and relevant monitoring framework.

SPARCS is effectively using existing platforms for dissemination and knowledge exchange. Within the European PED-ecosystem other relevant networks that contribute to the development of positive energy districts and neighbourhoods include the European Energy Research Alliance Joint Programme Smart Cities. It unites research and technology organizations that work together on five activities (modules) contributing to implementation of SET-Plan strategy (100 positive energy districts in 2025). In two of the modules, SPARCS partners work as coordinating organizations (1, 4), while division of Fraunhofer (ISE) leads another (3). All running PEB/PED projects are represented among EERA JPSC members and observers. The activities involve:

- Module 1 Towards European Positive Energy Cities (Lead: **VTT** & TNO),
- Module 2 PED Labs (Lead: LNEG),
- Module 3 PED Guides & Tools (Lead: Fraunhofer ISE),
- Module 4 PED Replication & Mainstreaming (Lead: **CVUT** & ENEA),
- Module 5 Monitoring and Evaluation (Lead: AIT).

Joint Programming Initiative Urban Europe runs a PED programme that further reinforces SPARCS replication efforts by bringing together funding agencies and aligning national funding for PEDs across Europe. SPARCS has nominated Ambassadors both towards EERA JPSC and JPI UE (T6.3).

#### 3.2 Annex 83 Positive Energy Districts

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SPARCS has been hosting the preparation in IEA-EBC<sup>1</sup> Annex 83 Positive Energy Districts (PED). The Annex will bring together a larger network working to build

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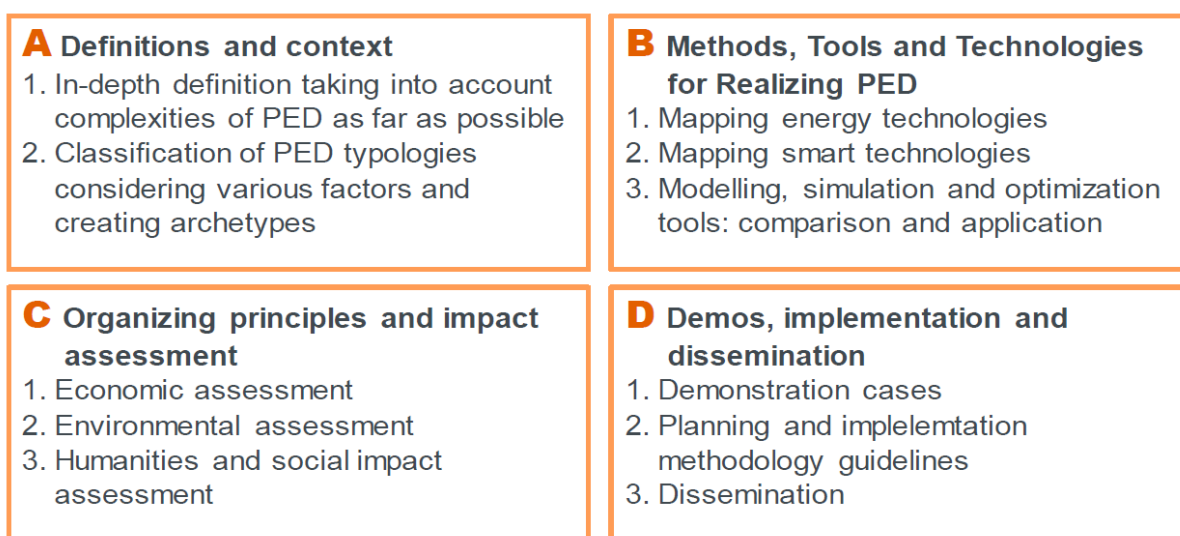
<sup>1</sup> Energy in buildings and communities programme of the International Energy Agency (IEA)



demonstration cases for Positive Energy Districts. This collaboration can both provide support for SPARCS demonstrations, but even more importantly, provide a channel for enhancing the replication of SPARCS solutions internationally.

The Annex is developing an in-depth definition of PED and the technologies, planning tools and planning and the decision-making process related to positive energy districts. Experience and data to be used in Annex will be gained from demonstration cases. The Annex will be active for five years beginning in November 2019. There is no participation fee, rather participants provide applicable results according to the Annex plan. The Annex is an excellent venue for international collaboration, sharing results from around the world and lessons learned as well as finding partners for future projects. The Annex 83 latest updates are available on the website: <https://annex83.iea-ebc.org/Default.aspx>.

The sub-topics of Annex 83 align well with SPARCS activities (Figure 1).



*Figure 1. Annex 83 Positive Energy Districts: sub-topics*



## 4. REFERENCES (ALL)

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Cerna, V. (2019). D6.1 Knowledge sharing and collaboration plan, including members, structure and calendar of activities and task force establishment. SPARCS Deliverable, confidential.

