



D6.9 Report of cooperation with other EU initiatives, regional and local initiatives - updated version 1

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Description of the related task and the deliverable. Extract from DoA	<p>T6.3 cooperation with horizontal cross-cutting initiatives and policy making (CVUT) M1-M60</p> <p>T6.3 will activate the consortium to contribute to relevant policy making and develop cooperation with relevant initiatives and horizontal cross-cutting initiatives. To avoid any duplication when it comes to data and knowledge generation, SPARCS will closely cooperate with EU-level initiatives to gather all the relevant information and assign partners to be its ambassadors.</p> <p>This deliverable D6.9 is an update for D6.8 for the months M24 – M36. This deliverable is a report on SPARCS cooperation with relevant initiatives and horizontal cross-cutting initiatives in the European innovation ecosystem. The deliverable includes a section about the online platform (WP8) and to create one steady feed of information from SPARCS and its projects in cities to be shared with the initiatives.</p>			
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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

Since the start of the project in 2019, SPARCS has developed links with other projects and initiatives at the EU, national, regional and local levels. However, in the light of the COVID-19 pandemic, SPARCS partners had to find new ways to establish new connections but also strengthen existing ties.

The new set up for communication and collaboration between projects and initiatives is defined by online or hybrid formats. In the immediate aftermath of the COVID-19 outbreak, this transition to online activities has ensured continuity in collaboration, smooth exchanges with other projects and active participation in ongoing initiatives. At the same time, the “zoom fatigue” continues to be more evident through less participation in online activities. Nonetheless, as the covid consequences continue, online activities and hybrid formats continue to be relevant in the future. The spring of 2022 brought new impulse to European collaboration and on multiple occasions SPARCS representatives were able to work together on common initiatives with EU and global partners and to meet in person.

This report summarises the most relevant collaborations between M24 – M36 of SPARCS following the submission of D6.8 in M24. The project partners have been active in dissemination of SPARCS objectives within their local regions as well as on the European level.



1. INTRODUCTION

1.1 Purpose and target group

This deliverable provides updates regarding SPARCS cooperation in terms of its horizontal cross-cutting initiatives in the European innovation ecosystem as well as more policy-oriented initiatives. The target group is divided into two main segments: (1) horizontal cross-cutting and policy-oriented initiatives, and (2) regional, national and local initiatives. Figures Figure 1 and Figure 2 below show the further sub-segmentation of those two categories.

Selected horizontal cross-cutting and policy-oriented initiatives

Positive energy districts initiatives



Smart City, smart energy and innovative construction related initiatives



Sustainable urban development initiatives



Figure 1: Segmentation of priority global and EU-level horizontal cross-cutting and policy-oriented initiatives, without EIP SCC Action Clusters

Selected national and regional smart city initiatives

Local and national

- 6Aika** Six-city collaboration 
- Energy Efficient Cities of Ukraine 
- SCC01 cities' informal groups    
- RNAE (National network for all energy agencies) 
- Municipal Energy Managers Association 
- NTNU Smart Sustainable Cities competence cluster 

Regional

Connective Cities (Southeast Europe)

Urban Lab Network in Visegrad Countries (V4+) (Central Europe)

Figure 2: Priority national and regional initiatives selected for closer cooperation



1.2 Contributions of partners

Partner	Contributions
GOPA	Editor of the deliverable. Content planning, summarising inputs from partners.
All other project partners	Contributions to the writing of the deliverable, content related to Task 6.3.

1.3 Baseline

At the beginning of the project, the existing networks of the partners were identified with a high priority for the ones directly relevant for SPARCS overall targets. This coordination work simplified the navigation and organisation of all the information flowing from individual partners and work packages to external collaboration networks and vice-versa. It also brought benefits at a more granular (city) level, matching technical expertise with other technical experts from among all these initiatives. The coordination aims to ensure a clear flow of communication and information and to allow requests to be handled flexibly and reactively.

Outwards from SPARCS:

- dissemination of SPARCS activities and deliverables;
- creating common outputs together with partner initiatives where SPARCS is represented;

Inwards to SPARCS:

- publications on topics, such as studies and practical guidance documents on local energy solutions, smart city strategies, building sustainability standards and public procurement methods;
- information on relevant activities, seminars, and potential demand for positive energy district (PED) solutions etc.

Table 1 and Table 2 show the list of active ambassadorships as of 9/2022.

Table 1: List of active horizontal (H) ambassadorships

Initiative	Type	Task	Organization(s)
EIP-SCC Investor Network	Horizontal	6.1.2	CiviESCo
Joint Programming Initiative Urban Europe - City Panel / PED stakeholder group	Horizontal	6,3	CVUT
EERA JP Smart Cities	Horizontal	6,3	CVUT
COST Action PED-EU-NET	Horizontal	6,3	CVUT
Energy Cities	Horizontal	6,3	CVUT
Joint Programming Initiative Urban Europe - City Panel / PED stakeholder group	Horizontal	6,3	Espoo
Covenant of Mayors	Horizontal	6,3	Espoo
Climate-Neutral and Smart Cities (EU Mission)	Horizontal	6,3	Espoo
Morgenstadt Network	Horizontal	6,3	FHG



Joint Programming Initiative Urban Europe - City Panel / PED stakeholder group	Horizontal	6,3	Kladno
Climate-Neutral and Smart Cities (EU Mission)	Horizontal	6,3	Leipzig
IUCN (International Union for Conservation of Nature)	Horizontal	6,3	Lviv
Connective Cities	Horizontal	6,3	Lviv
IOPD (International Observatory on Participatory Democracy)	Horizontal	6,3	Maia
Eurocities	Horizontal	6,3	Reykjavik
Open and Agile Smart Cities	Horizontal	6,3	Reykjavik
Bloomberg Smart City	Horizontal	6,3	Reykjavik
C40 Cities	Horizontal	6,3	Reykjavik
Climate-Neutral and Smart Cities (EU Mission)	Horizontal	6,3	Reykjavik
ECTP (European Construction Technology Platform)	Horizontal	6,3	RIL
CIB (International Council for Building and Innovation) Task group of Smart Cities (TG88)	Horizontal	6,3	RIL
Envision Sustainable Infrastructure	Horizontal	6,3	Seecon
SCIS - Smart City Information System / Smart City Marketplace	Horizontal	6,3	SUITE5
EERA JP Smart Cities	Horizontal	6,3	VTT
SET-Plan Action 3.2 on Smart Cities and Communities, Implementation Working Group	Horizontal	6,3	VTT
International Energy Agency Annex 83 on Positive Energy Districts	Horizontal	6,3	VTT

Table 2: List of active regional and national (R) ambassadorships

Initiative	Type	Task	Organization(s)
RNAE (National network for all energy agencies) (Portugal)	Regional	6,4	AdEPorto
SMS - Association of Local Administrations (Czech Republic)	Regional	6,4	CVUT
CZGBC (Czech Green Building Council) (Czech Republic)	Regional	6,4	CVUT
SEMMO (Municipal Energy Managers Association) (Czech Republic)	Regional	6,4	CVUT
6aika, Six City Strategy – Open and Smart Services 2014–2020 (Finland)	Regional	6,4	Espoo
Finland's Lighthouses and Fellows Group	Regional	6,4	Espoo
Kaupunkiakatemia / Urban Academy	Regional	6,4	Espoo
Sustainable City (Greece)	Regional	6,4	Kifissia
Association for Sustainable City Development (SBAA) (Greece)	Regional	6,4	Kifissia
Union of Towns and Municipalities of the Czech Republic (Czech Republic)	Regional	6,4	Kladno
Energy Community Platform (Czech Republic)	Regional	6,4	Kladno
Energy Efficient Cities of Ukraine (Ukraine)	Regional	6,4	Lviv



Visegrad+ Network of Urban Labs (Hungary, Poland, Czech Republic, Slovakia, Ukraine, Armenia, Georgia)	Regional	6,4	Lviv
Mayors for Economic Growth (Ukraine, Georgia, Azerbaijan, Armenia, Belarus, and Moldova)	Regional	6,4	Lviv
Association of Ukrainian Cities (Ukraine)	Regional	6,4	Lviv
UkrElectroTrans Corporation	Regional	6,4	Lviv
ANMP – Associação Nacional de Municípios Portugueses (National Association of Portuguese Municipalities) (Portugal)	Regional	6,4	Maia
Eixo Atlantico (Portugal, Spain)	Regional	6,4	Maia
RAP – Rede de Autarquias Participativas – Portuguese Participatory Municipalities Network (Portugal)	Regional	6,4	Maia
CEE Bankwatch Network (Central and Eastern Europe)	Regional	6,4	NECU
Nordic Smart City Network (Nordic countries)	Regional	6,4	Reykjavik
SUSTAINORDIC, Sustainable Construction Materials and Architecture	Regional	6,4	Reykjavik
NTNU Smart Sustainable Cities competence cluster (Norway)	Regional	6,4	RIL
Energietropole Leipzig - Network on regional energy actors in the Middle Germany (Germany)	Regional	6,4	Seecon
Smart Waste Portugal Cluster (Portugal)	Regional	6,4	SPI

1.4 Relations to other activities

This report is periodically updated according to the progress of the cooperation. The updates will be consolidated in a final deliverable of this task at the end of the project (M60). This deliverable has links with the following activities:

- D6.1 presents the coordination of collaboration; this deliverable and the SCC1 clustering activities follow the same workflow and process.
- D6.2 presents the Collaboration task force and outlines individual memberships in initiatives for H2020 SCC1 among others.
- D6.3 Cooperation handbook: Report of lighthouse projects cooperation: Working groups and platform results.
- Task 6.2 will elaborate and consolidate joint recommendations based on the defined cross-cutting issues.
- Close relation to WP8 Dissemination and Communication.
- Topic-specific relevance and collaboration with corresponding work packages in SPARCS: WPs 1-5, and WP7.

2. COLLABORATION AT THE EUROPEAN AND GLOBAL LEVEL

This section provides an overview of some of the most important collaboration at European and global level. The highlights are based on the project period October 2021 (M24) – September 2022 (M36).



2.1 Smart Cities Marketplace and SCC1 projects

The Smart Cities Marketplace was created by merging the two former Commission projects “Marketplace of the European Innovation Partnership on Smart Cities and Communities” (EIP-SCC) and the “Smart Cities Information System” (SCIS) into one single platform. The merger facilitates bringing cities, industries, SMEs, investors, researchers and other smart city actors together.

The city-led initiative Scalable cities encompassing all the 18 SCC1 lighthouse projects (REMOURBAN, TRIANGULUM, GROWSMARTER, SMARTENCITY, REPLICATE, SMARTER TOGETHER, SHARING CITIES, RUGGEDISED, MYSMARTLIFE, IRIS, MATCH UP, STARDUST, +CITYXCHANGE, MAKING-CITY, SPARCS, POCITYF, ATELIER, RESPONSE) flow into this bigger family.

SPARCS partners have collaborated with SCIS over the long term. Suite5 has been working with the self-reporting tool to provide information for the SCIS database on smart city projects.



Communication: SPARCS is proactively collaborating with Smart Cities Marketplace with regard to communication and dissemination – e.g. sharing input for relevant news and events for Smart Cities and Communities Newsletter. The project also took part in the latest edition of the Smart Cities Marketplace Forum that was held in April 2022 together with several partners including FHG, BABLE and GOPA. All the SCC1 projects mentioned above work together to demonstrate the processes, technologies and business models they built in the Lighthouse Cities and aim to replicate in the Fellow Cities. This is facilitated through monthly Scalable Cities telcos where projects share up-to-date information about their progress, events and communication activities.

In addition, the SCC1 projects are engaged through social media by using the @SPARCSeu and resharing content on Twitter. This website and monthly newsletters also provide information about details of workshops, webinars and other events organised by sister projects.

Events: Event co-organisation and co-participation is key part of the collaboration with the SCC1 network. This leads to better knowledge sharing and dissemination of activities organised by other sister projects. For example, in October 2021 SPARCS co-organised a joint event together with RESPONSE and POCITYF called “Fair and inclusive citizen engagement towards a new city vision in the energy transition.” Following the success, SPARCS and POCITYF organised a second joint event under EU Green Week in June 2022 under the topic “The role of digital solutions in enabling cities’ energy transition towards climate neutrality: Challenges, Solutions and Impacts”.

A new joint venture is being under the umbrella of EU Weeks of Cities and Regions October 2022. Common participation and input into joint events (e.g. Smart City Expo Barcelona, Nordic Edge, EUSEW, ERREG, URBIS etc.) is also a key focus in the cooperation with SCC1 Task groups for Communications and Dissemination. More specifically, in 2022 it was decided that SPARCS, amongst some 230 other project and initiatives will attend Barcelona Smart City Expo taking place in November. The major activities would consist of high-level speakers conferences, agora sessions, booth



sessions, and matchmaking activities organized by the SC Marketplace. The work around this event started in August 2022.

Task Groups: The SCC1 Monitoring and Evaluation Task Group works on KPIs, social evaluation, baseline definition methods and lessons learnt from replication processes (Suite5, VTT). The Task Group on Business models and Finance explores possibilities for better opportunities financing and funding schemes (CiviEsco). With regard to the Task Group for City Coordinators, the Fellow Cities have also been invited to the group, which initially included only Lighthouse cities. This enables easier knowledge exchange and also enhanced networking.

PED e-learning course: Another example of collaboration between SCC1 projects is the MOOC (“massive open online course”) on PEDs initiated by ATELIER and joined by SPARCS, Making City and +CityXChange. CiviESCO on behalf of the SPARCS consortium is working to create a global MOOC on how to develop a full PED and enable capacity-building for city representatives and other stakeholders. The first action was to agree on the MOOC’s common rules and then to create a common framework based on the topics. As such, SPARCS will cover the topics related to the Governance model and the Funding and Financing Mechanisms. The course is currently under preparation.

2.2 European Energy Research Alliance (EERA) & JPI Urban Europe

SPARCS partners have been participating in the European Energy Research Alliance’s Joint Programmes¹ [EERA JP Smart Grids](#) (VTT) and [EERA JP Smart Cities](#) (VTT, CVUT). EERA JPSC proved to be very active in producing its own content (e.g. position papers and workshops), in match-making, and in acting as the intersection for multiple other initiatives. It has worked as a facilitator fostering alignment and closer collaboration between PED-EU-NET, Annex 83, JPI UE and Task Group for Replication.



EERA unites research and technology organizations that work together on five activities (modules) contributing to the implementation of SET-Plan strategy (100 positive energy districts in 2025). In two of the modules, SPARCS partners have worked as coordinating organizations (1, 4), while FHG (ISE) leads module (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).

SPARCS was introduced to the JPSC partners in 6/2019. Since then, it has interacted steadily with the programme via contribution by Dr. Francesco Reda (VTT) and Michal Kuzmic (CVUT) to the SSPCR Bolzano conferences in 2019 – 2022.

¹ <https://www.eera-sc.eu/>



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).

2.3 IEA Annex 83 on Positive Energy Districts

VTT is the coordinator (operation agent) for the International Energy Agency Annex 83² on PEDs and contributes to all of its subtasks. Annex 83 aims to enhance cooperation on PED development at an international level through the collaboration initiatives of the IEA. Its main objectives include mapping relevant PED stakeholders and their needs, creating a shared definition of PEDs and developing guidelines on replication of technical solutions, planning and implementation of PEDs.

The proposed Annex aims to enhance the cooperation on PED development to an international level through the collaboration initiatives of the IEA. The main objectives and scope are defined by the following:

- Objective 1. Map the relevant city, industry, research, and governmental (local, regional, national) stakeholders and their needs and roles to inform the work for Objectives 2, 3, 4 and 5. The main purpose is to ensure the involvement of the main stakeholders in the development of relevant definitions and recommendations.
- Objective 2. Create a shared in-depth definition of PED by means of multistakeholder governance model. So far international activities have developed generalized definitions that leave many questions open.
- Objective 3. Develop the needed information and guidance for implementing the necessary technical solutions (on building, district and infrastructure levels) that can be replicated and gradually scaled up to the city level, giving emphasis to the interaction of flexible assets at the district level and also economic and social issues such as acceptability.
- Objective 4. Explore novel technical and service opportunities related to monitoring solutions, big data, data management, smart control and digitalisation technologies as enablers of PEDs.
- Objective 5. Develop the needed information and guidance for the planning and implementation of PEDs including both technical and urban planning. This includes economic, social and environmental impact assessment for various alternative development paths.

The work is divided into the following four subtasks:

² <https://annex83.iea-ebc.org/>



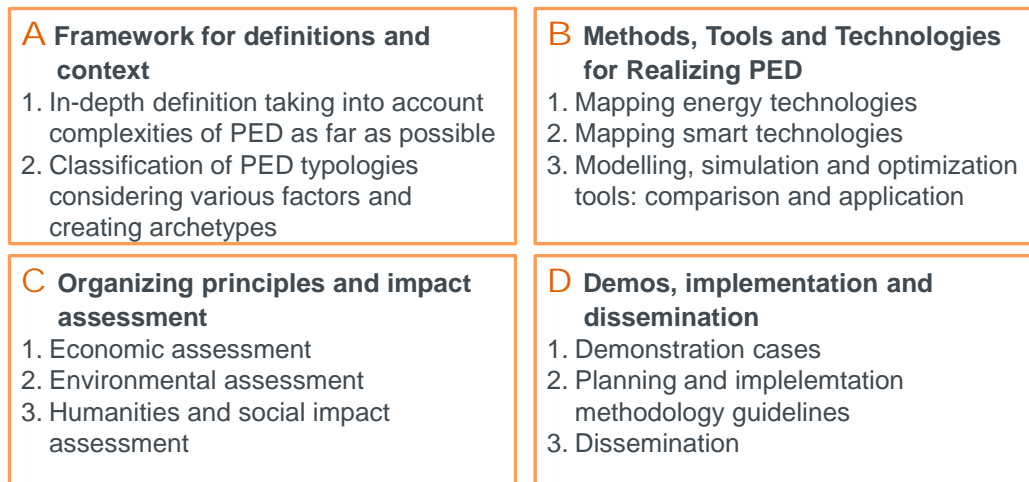


Figure 3: Annex 83 structure

The discussions helped to head towards broader international research and scientific publications. Since M24, SPARCS has published one scientific article³ and one conference paper⁴ together with Annex partners. In addition, SPARCS also presented the developed KPI framework together with Subtask C partners at the SSPCR 2022 conference in Bolzano, Italy in July 2022. In addition, VTT gave a second presentation on PEDs (more info in 4.1).

In September 2022, VTT hosted the first Annex 83 face to face meeting in Espoo on (14th – 16th 2022). The event included partners from Europe, Japan, Canada and Australia. SPARCS was one of the highlights of the meeting agenda. Mari Hukkalainen presented the SPARCS project and demonstration actions. The group also visited the SPARCS demo sites in Lippulaiva and Sello and met partners from Citycon, City of Espoo and Siemens.



³ Siddharth Sareen, Vicky Albert-Seifried, Laura Aelenei, Francesco Reda, Ghazal Etminan, Maria-Beatrice Andreucci, Michal Kuzmic, Nienke Maas, Oscar Seco, Paolo Civiero, Savis Gohari, Mari Hukkalainen, Hans-Martin Neumann, Ten questions concerning positive energy districts, Building and Environment, Volume 216, 2022, 109017, ISSN 0360-1323, <https://doi.org/10.1016/j.buildenv.2022.109017>.

⁴ Cheng, C. et al. (2022). A Systematic Approach Towards Mapping Stakeholders in Different Phases of PED Development—Extending the PED Toolbox. In: Littlewood, J.R., Howlett, R.J., Jain, L.C. (eds) Sustainability in Energy and Buildings 2021 . Smart Innovation, Systems and Technologies, vol 263. Springer, Singapore. https://doi.org/10.1007/978-981-16-6269-0_38





Figure 4: Annex 83 meeting in Espoo (September 14th – 16th, 2022)

2.4 COST Action on Positive Energy Districts: PED-EU-NET

VTT, CVUT and City of Espoo are involved in the research and dissemination activities related to the COST Action on Positive Energy Districts (PEDs)⁵. In addition, Leipzig, Maia, Kifissia, Kladno and CENERO all provided inputs for development of the PED database.

This COST Action whose activities started in September 2020 has two objectives. The first covers research-oriented objectives, including the harmonisation and dissemination of knowledge on PEDs among different target groups, the co-creation of an innovative PEDs ecosystem and the consolidation of a common definition of PEDs. The second objective revolves around capacity-building, such as establishing a list of interdisciplinary practitioners, providing training and learning opportunities, and creating dedicated scholarships in the field of PEDs.



SPARCS partners have been particularly active in two out of four working groups:

In Working Group 1 (WG1): PED Mapping, Characterisation and Learning (led by CVUT), PED-EU-NET's main outcome between 9/2020-7/2021 was a framework for an EU-wide PED database. This challenging process involved some SPARCS partners as well as alignment with the working group focusing on PED Labs (an experimental variety of PED projects), IEA Annex 83, SCC1 TG Replication, and the JPI Urban Europe PED programme. The database entered its programming phase as of 7/2021 and continued throughout the spring of 2022. At the moment, the database is being updated with further material to make it as comprehensive as possible. It is expected to be released by the start of 2023. SPARCS case studies have been involved in the first wave of information collection on PED case studies. The CVUT SPARCS team co-authored two papers for the SEB-21 conference, focusing respectively on PED

⁵ <https://pedeu.net/>



database development and PED definition^{6,7} and one joint publication with WG2 – WG4.⁸

In Working Group 4 (WG4): Dissemination, Outreach and Exploitation (co-led by VTT) the main objective is to achieve effective dissemination within both research and municipal communities. WG4 has an important role towards all other working groups since one of its main activities is to organise PED-EU-NET workshops and events with stakeholders.

SPARCS partners are also involved in intensive collaboration with the other two working groups of PED-EU-NET focus on PED Guides and Tools (Working Group 2) and PED Laboratories, Monitoring and Replication (Working Group 3).

SPARCS cities are vital stakeholders in the COST Action as they contribute to building up the PED database and taking active part in dissemination activities.

2.5 Climate-Neutral and Smart Cities (EU Mission)

This is directly embedded in the EU Mission (policy). The group already has started its work in June 2022 with Espoo, Leipzig and Reykjavik being three of 112 cities on board. Climate City Contracts will be co-created with local stakeholders and citizens, with the help of a Mission Platform (which is currently managed by the project NetZeroCities). Furthermore, the SPARCS cities became eligible for additional technical support by NetZeroCities. Details and impacts of this collaboration shall be clear in the next period.

2.6 SCC1 Cluster City Coordinators Task Group

This Task Group consists of 120 Lighthouse and Fellow Cities. It is an opportunity for Lighthouse and Fellow cities to expand their network, to find new project partners, to discover an innovative solution, to get an inspiration, to advocate city needs at the EU level and to boost the replication of SCC solutions. This group meets at occasional intervals during the year. From within SPARCS, Kladno, Kifissia, Maia and CiviESco participate in the telcos organized by the City Coordinators group. The next meeting is scheduled for October 2022. The City of Espoo and Leipzig anticipate a more active role in the task group in the upcoming months.

⁶ Turci, G.; Alpagut, B.; Civiero, P.; Kuzmic, M.; Pagliula, S.; Massa, G.; Albert-Seifried, V.; Seco, O.; Soutullo, S. A Comprehensive PED-Database for Mapping and Comparing Positive Energy Districts Experiences at European Level. Sustainability 2022, 14, 427. <https://doi.org/10.3390/su14010427>

⁷ Albert-Seifried, V. et al. (2022). Definitions of Positive Energy Districts: A Review of the Status Quo and Challenges. In: Littlewood, J.R., Howlett, R.J., Jain, L.C. (eds) Sustainability in Energy and Buildings 2021 . Smart Innovation, Systems and Technologies, vol 263. Springer, Singapore. https://doi.org/10.1007/978-981-16-6269-0_41

⁸ Sareen, S. et al. (2022). Ten questions concerning positive energy districts. Building and Environment, Vol. 216, 15 May 2022, 109017. <https://doi.org/10.1016/j.buildenv.2022.109017>.



3. SPARCS CITIES – COLLABORATION AT EUROPEAN, REGIONAL, NATIONAL AND LOCAL LEVELS

Cooperation and networks at the EU level are only a fraction of all the interconnections that SPARCS partners hold. Collaborations at the regional, national and local levels are continuously developing and strengthening through SPARCS. Moreover, they also play an important role in knowledge exchange as well as in the dissemination of SPARCS activities and results. The collaborations at different levels by all the SPARCS cities during this reporting period are described below by city.

3.1 Espoo

- ❖ The Finnish Ministry of Environment has been focusing on its Metropolitan policy⁹. The goal of the effort is to enable better collaboration and projects in cooperation with metropolitan area cities to address common energy challenges. As such, the national level (Ministry of Environment) will become better connected to local level activities and challenges in rapidly growing metropolitan areas. The first three key themes selected for this Government term are i) employment, ii) preventing the social exclusion of immigrants, and iii) carbon neutrality. Espoo has been especially active in the group working on carbon neutrality. The carbon neutrality working group has a subgroup for energy that supports collaboration and knowledge exchange within metropolitan administrations and the preparation of collaboration energy projects. Reports and project plans were written and subgroup work contributed to metropolitan policy meetings led by the Director of Sustainable Development Pasi Laitala. He is also chair of the carbon neutrality working group.
- ❖ The City of Espoo applied and was chosen to be one of the forerunner cities in the EC mission for cities to reach carbon-neutrality by 2030. The **100 Climate Neutral and Smart Cities Mission by European Commission** kick-off took place on 13 June 2022. Espoo climate emissions account for energy (50%) and traffic/mobility (30%). Work done in SPARCS is supporting Espoo to reach its carbon neutrality target by 2030. Espoo can scale-up and disseminate SPARCS actions working towards that goal. Espoo is also exchanging information and learning from actions being taken by other cities.
- ❖ **The COST Action on PEDS (EU initiative)** is a platform to share ideas and best practices, and to exchange PED information with others.
- ❖ **The New European Bauhaus (NEB, EU initiative)** is being closely followed at the EU-level; in particular, how is it being implemented at the national and regional levels. The objective is to localise the NEB initiative by creating collaboration with other local, national and EU-level actors on NEB. There has been close collaboration with the Metropolia University of Applied Sciences and other stakeholders on localising the NEB in Espoo. Connections have been established with the national Archinfo contact point. A new sustainable development project on

⁹ <https://ym.fi/en/metropolitan-policy>



New European Bauhaus (financed through one of the NEB-related EU project financing instruments) combining different thematic sectors in the project (urban development, energy, citizen engagement) was launched that utilises SPARCS learnings and insights as a springboard for NEB perspectives.

- 2021 - Kera area submitted as a contestant in the first New European Bauhaus 2021 competition.
- 2022 – NEB-themed session organised by ESP/SPARCS and Metropolia University of Applied Sciences on [Finnish Urban Studies Days 2022](#). Presentations were also made by the local NEB contact point Archinfo Finland.
- 2022 - Applied for small project funding on localising NEB themes in the Kera area.
- 2022 – An NEB-themed workshop was organised as part of Eurocities annual conference in Espoo.

❖ **Finland's Lighthouse Project City Collaboration Group (LH Cities: Helsinki, Tampere, Oulu, Turku and Espoo); Fellow cities: Kerava, Vaasa) (National initiative)** is being carried out in collaboration with other SCC1 projects. The peer support and city perspective gained is highly appreciated. The whole Espoo SPARCS project group attends the events and meetings including Jani Tartia, Angela Juslin, Joni Mäkinen, Mia Kaurila and Elina Wanne. The group meets at least twice a year to discuss challenges and how to overcome them while learning from each other. There is an emphasis on the city perspective. One city at a time hosts the meetings. In April 2022, a mobility themed co-working session was organized for projects' and cities' mobility experts.

❖ The Kaupunkiakatemia / Urban Academy¹⁰ (**regional initiative**) is a joint platform for cooperation organised by three cities (Espoo, Helsinki and Vantaa) and two universities (University of Helsinki, Aalto University). The platform facilitates discussion between cities and universities. The platform is being used as a way to disseminate SPARCS results and learnings. There are three activities planned in the upcoming months:

- 2022 - Attending the Platform's steering group for the thematic year 2022 'Cities of Climate Actions'
- 2022 – Research event on sustainable lifestyles for the city departments (already took place in spring)
- 2022 – PED-themed 'morning café' research webinar planned for October 2022 that will include presentations on SPARCS activities.

❖ Espoo has also applied to the **Craft Cities** call in September 2022. The CrAFt (Creating Actionable Futures) aims to make climate-neutral transformations beautiful, inclusive and sustainable in the cities. Running until 2025, CrAFt should support the implementation of the Cities Mission, the NetZeroCities Mission Platform and the New European Bauhaus (NEB).

¹⁰ <https://urbanacademy.fi/>



- ❖ The City of Espoo is also a part of the Eurocities network. The city hosted the Eurocities in June 2022 and had the opportunity disseminate SPARCS goals and outcomes on a large scale. VTT and FHG also participated together with City of Espoo.

3.2 Leipzig

- ❖ During a workshop on Energy Communities held as part of the EC² project¹¹, the SPARCS partners shared their own knowledge about such energy communities, how to support them and also provided an opportunity to discuss with an environmental psychology specialist. Irene Müller participated (online) and her contribution can be viewed [here](#) (p. 68/69).
- ❖ **Cooperation with the 'Connected Urban Twins' Project** to integrate data into an Urban Data Platform. In order to enhance municipal climate district planning, Leipzig cooperated with colleagues from CUT by discussing goals, and aligning use cases and approaches. The cooperation between various offices shall enhance the capacity to obtain data, make meaningful tools for district energy planning and monitoring, and speed up planning and actions. Meetings were held approximately every 2 weeks and mostly covered how data can be made useful to expedite district energy transitions and what must be done to make it happen. Nadja Riedel and Irene Müller used a public event in the Duncker demo district as an opportunity to present SPARCS activities and the Seecon district participation tool. It is planned to participate in internal municipal events in September/October 2022.
- ❖ One of the SPARCS objectives is 'citizen involvement', so Leipzig took part in the **Cooperation with Technology Workshop** for 'GaraGe' students for a project week with pupils (aged 15/16) on energy transition including a tour through SPARCS demo districts. Students and the wider public were sensitised about district energy transition topics, informed about SPARCS, and made aware of what is going on in their own districts. The tour also included the SPARCS demo districts and it is also accessible as a [digital tour](#) for the wider public. Furthermore, a digital treasure hunt through the SPARCS districts was prepared and enjoyed by the pupils. The treasure hunt is now publicly available and it is continuously being updated and adjusted. Irene Müller and

¹¹ <https://ec2project.eu/>



Lisa Röder organised and presented SPARCS at a school. A second school tour took place on 28 June 2022 and a continuation is planned next year.



Figure 5: Workshop for GaraGe students in Leipzig

- ❖ **The Workshop on the (EU) Funding Landscape and Energy Projects in cooperation with the Energy & Environmental Companies Network** was an online event on realising climate/energy projects with EU funding as a means to facilitate businesses' ability to realise climate projects and hopefully achieve climate neutrality (January 2022). Seven planning meetings were held with NEU EV (Network Energy & Environment) as well as once for the post-event evaluation. Irene Müller and Nadja Riedel presented SPARCS.

3.3 Maia

- ❖ Maia participated in the PT Discussion Group as part of the **COME RES – Advancing Renewable Energy Communities** to analyse the barriers and drivers for the establishment of Renewable Energy Communities (RECs). The Discussion Group also takes into account regional, environmental, legal and social contexts. The analysis will build on focus group interviews conducted by the partners in Latvia, Norway, Poland, Portugal and Spain while being aware of the local context and technology available in the selected target region. The previous actions/participations provided opportunities to access knowledge, technologies and strategies to address common problems (Renewable Energy Communities). Moreover, Maia participated in bilateral meetings, in an online survey and in national discussion group meetings.
- ❖ Maia is a **Covenant of Mayors for Climate and Energy** signatory and already submitted its SECAP and the Climate Change Adaptation Plan in February 2021. AdEPorto develops Emissions and Energy Annual Reports for the Maia Municipality to gain a better understanding of the evolution of greenhouse gas (GHG) emissions over the territory and to ensure SECAP monitoring of both GHG emissions and the implementation of measures to address the issue. By analysing the sectorial contribution for overall emissions, the Covenant of Mayors framework and the underlying studies have contributed to signalling critical SPARCS strategy



points towards GHG emission reduction. Monitoring and assessment of SECAP and CAAP are ongoing.

- ❖ **The Omega-X – 'Orchestrating an Interoperable Sovereign Federated Multi-vector Energy Data Space Built on Open Standards and Ready for GAia-X'** Project aims to implement a Data Space (based on European common standards) that will include federated infrastructure, data and service marketplaces, data sharing between different stakeholders, and demonstrating its value for real and concrete energy use cases and needs. Scalability and interoperability with other Data Space initiatives should be guaranteed; not just for energy, but also cross-sector. The project was approved in December 2021, and involves 31 partners from ES, PT, DE, BE, RS, IT, NO, IE, GR, FR and DK. The contract was signed and the kick-off occurred in May 2022. Maia's role will be a test bed, at a municipality level, as a big and complex prosumer on using energy flexibility services. The previous actions/participations provided opportunities to access knowledge, technologies and strategies to address common problems, especially regarding flexibility based on data. A first meeting among the local consortium was organised in order to coordinate efforts. Further actions will be planned.
- ❖ **EHHUR – Eyes Hearts Hands Urban Revolution** is a project submitted under the Horizon Mission New European Bauhaus with the aim to develop and test a co-designed methodological structure to support cities in their built environment transformation by using existing good practices, and complementing them with the New European Bauhaus and EU Missions principles. Seven Lighthouse demonstrators will be involved across the EU and associated countries (DK, EL, BE, PT, TK, HR and IT). The previous actions/participations provided opportunities to access knowledge, technologies and strategies to address common problems (Renewable Energy Communities, Energy Poverty, Co-design activities, and Urban Transformation among others). This project was approved, however the contract has not yet been signed. The kick-off is expected on October 14th, 2022. However, a first meeting was held among the local consortium in order to coordinate efforts.
- ❖ **The EUCF 3rd Call - Renewable Energy Maia Hub** investment concept focuses on energy transition to renewable energy sources; specifically building integrated renewables (rooftop PV installation) on buildings. The Renewable Energy Maia Hub will be a unique and a specialised centre for designing and advising on sustainable energy solutions. It will also be a centre to promote the constitution of Local Renewable Energy Communities. In essence, it will be a one-stop shop for private agents in the search for the best energy solutions. Studies and analyses will be conducted that will help to support further investments. The grant agreement has been signed.
- ❖ Maia submitted a proposal for **100 Climate-Neutral and Smart Cities by 2030**, however, the application was not approved. The city is, nonetheless, following work being done by other partner cities.
- ❖ **Eixo Atlantico** is an Association of 35 local authorities in Galicia and northern Portugal; including the main cities of the Euro-region Galicia (Spain)-North Portugal. It is a supra-municipal entity responsible for defining common strategies



for its members and works for a coordinated development in the Euro-region Galicia-North of Portugal. The municipalities of Eixo Atlântico have been cooperating in several fields for almost 25 years. Its new initiative focuses on developing a decarbonisation plan. Urban areas share common energy use contexts and challenges, financial frameworks and opportunities, and legal structures. Having this in mind, the initiative expects that by sharing similar contexts and challenges, replicable or adaptable solutions might be found that may contribute to expediting SPARCS implementation.

- ❖ The **Portugal Digital - Portugal Digital Mission Structure** was created to be one of the key components of Portugal's transition to a more digital, competitive, and an internationally strengthened country. In the context of digital transformation, Portugal Digital will be tasked with monitoring, operationalising and implementing the measures outlined in the Action Plan for Digital Transition. Maia participated in and continues to participate in surveys and discussions whose conclusions are being delivered to the National Strategy for Smart Cities. Future activities will be planned.
- ❖ The **RAP – Rede de Autarquias Participativas – Portuguese Participatory Municipalities Network** (RAP) was created in December 2014. The initiative emerged in a context of exploring and deepening the mechanisms of citizen participation at the local authority level. As a collaborative structure, RAP intends to promote the meeting between different initiatives, provide a platform to exchange experiences, and to increase public awareness about citizen participation methods and their importance for local governance. Maia is participating in RAP activities and has applied for the Annual Best Participation Practices Award for its citizens engagement activities during its Master Plan revision. Plans are being made to jointly present and discuss SPARCS achievements with the initiative.
- ❖ Maia intends to contact the **Smart Cities Section of the ANMP – Associação Nacional de Municípios Portugueses** (National Association of Portuguese Municipalities) and share some information about SPARCS with other Portuguese municipalities.
- ❖ **AdEPorto** is part of the Portuguese Energy and Environmental Agencies Network (RNAE) and plans to leverage SPARCS dissemination to fellow energy agencies and Portuguese municipalities through this network. AdEPorto collaborates with RNAE in the elaboration of national plans and in the exchange of information and experience on activities. The opportunity will also be used to gather relevant information stemming from other projects. AdEPorto disseminates information about SPARCS through its active membership in Energy Cities and FEDARENE.

3.4 Reykjavik

- ❖ The City of Reykjavik has been selected as part of the **European Missions – 100 Climate-Neutral and Smart Cities by 2030**. SPARCS is an integrated part of Reykjavik's Mission. The 100 Climate-Neutral and Smart Cities project team and the SPARCS project team have weekly meetings to discuss the possible synergies



and overlaps between the two projects. The fact that Reykjavik has become a part of the Mission puts even more emphasis and focus on the important goals of climate neutrality. Together with the other cities in the Mission, Reykjavik will act as a hub of experimentation and innovation for other European cities to follow by 2050. SPARCS is an important project within this as it will act in many ways as a pilot for the city's participation in future EU-initiatives. The SPARCS project manager took part in the working group that was involved in the writing of the application for 100 Climate Neutral Cities. The project managers of the mission at the City of Reykjavik take an active part in SPARCS and will be involved in the working group, workshop and designing the roadmap towards climate neutrality. Meetings and a workshop will be held during the next 6 months.

- ❖ The Nordic countries have set a joint ambition for creating a sustainable and competitive construction sector by 2030. The **Nordic Council of Ministers - SUSTAINORDIC Transformation Panel** addresses sustainable construction materials and architecture. As a contribution to the Nordic action plan under the Nordic Council of Ministers' Vision for 2030, the Nordic Sustainable Construction Project was established as an investment in innovative and green solutions, the goal of which is for the Nordic region to be a leader in sustainable and competitive housing and construction with a lower environmental and climate impact. SUSTAINORDIC involves and facilitates the right actors who possess the power and mandate to catalyse the necessary cultural change within and around the built environment; and to activate a shift towards a total conversion of the Nordic housing and construction sector towards practices with minimal environmental and climate impacts. SPARCS project manager in Reykjavik is taking part in the Sustainordic Transformation Panel and adds the learnings from SPARCS and Reykjavik's Green Housing Project. The Transformation Panel will meet twice per year during the three-year project period. The Panel will take part in the NEB Festival in Brussels, meetings across the Nordic countries, Arctic Circle in Island, COP27, UIA Congress and World Capital of Architecture in Copenhagen 2023.
- ❖ **IMPULSE** is an EU digital transformation project on the development of a common secure e-identification. This project is also exploring the possible impact of AI and blockchains on the public sector. Impulse is supporting Reykjavik's smart city ambitions. The Impulse project leader and the SPARCS project leader are both part of the same team and meet three times a week where the project's processes and content, challenges and successes are discussed. The close collaboration means that SPARCS gets a boost, both regarding the professional input as well as potential widened network from Impulse. Moreover, the project leaders use all opportunities to present EU-projects that the team is working on, including SPARCS. The same exchange of ideas and stimuli applies to Reykjavik's participation in COST Action Net4AgeFriendly where an interdisciplinary team aims to foster awareness and support the creation and implementation of smart, healthy indoor and outdoor environments for present and future generations.
- ❖ City of Reykjavík organized EU-funded events, such as Climathon (Climate-KIC initiative) and EU Mobility Week 2021. Both programmes put the spotlight on mobility issues, which align with one of SPARCS projects, mobility hub, and aim to raise the awareness of the public on transportation being the highest GHG emission



sector. Climathon also acts as a strategy of public engagement in searching for innovative ideas to co-create mobility hub and multi-modal mobility within the city.

3.5 Kladno

- ❖ Kladno was invited to share its experiences at the **PED City Panel Initiative**. This was an interesting opportunity to deliver SPARCS outcomes and experiences regarding PED design. The panel has organised a number of webinars and online meetings are held about three to four times per year. A series of interactions are foreseen in 2022.
- ❖ Kladno is running another small project under the **EUCF Tool** (as the first city in the Czech Republic) which focuses on securing more energy and climate investment actions in Kladno. A grant was awarded for the acquisition of studies, documents, analyses and other supporting materials for energy and climate development for the preparation of the investment plan. An analysis concerning the potential mapping of the city rooftops for solar system installation is currently running.
- ❖ Kladno is a partner in the **Urban GreenUP¹²** project that focuses on nature-based solutions. The EU-funded project aims to develop, apply and validate a methodology for re-naturing urban plans to mitigate the effects of climate change, improve air quality and water management, and increase the sustainability of our cities through innovative nature-based solutions. Kladno was invited to take a part in webinars and on other occasions. The project was concluded in May 2022. Kladno is presently assessing the outcomes for its potential use.
- ❖ Kladno has also signed its interest in the **Craft Cities** call in September 2022. The CrAFt (Creating Actionable Futures) aims to make climate-neutral transformations beautiful, inclusive and sustainable in the cities. Running until 2025, CrAFt should support the implementation of the Cities Mission, the NetZeroCities Mission Platform and the New European Bauhaus (NEB).
- ❖ Kladno has submitted several other projects all of them together with international partners: **Urban Chameleon** (Horizon) – not approved; **GlocalFlex** (Horizon) – approved by Commission (starting in 2023); **GHCE, Green Heart of Central Europe** (Interreg Central Europe) – under evaluation; **ENCODES, Energy Community** (Interreg Central Europe) – under evaluation.
- ❖ Kladno had an intensive dialogue with the **National Development Bank** (expert support, potential funding, technical support, etc.) and signed a **Memorandum of Understanding** that includes EPC technical assistance; business models and potential investment; and technical assistance within technology projects.
- ❖ **Smart City Compass** aims to create a virtual environment for the monitoring and evaluation of the smart cities. Kladno has been setting up the system to track the

¹² <https://www.urbangreenup.eu/>



progress of the strategies and KPIs. More than 10 meetings were held so far and the city hopes to test its indicator structure system soon; a system will use SECAP as a basis. A few details still need to be fine-tuned. After that, monitoring and decision-making will be easier. Final testing of the system is foreseen this year in 2022 for integration in the city in the future.

- ❖ **Collaboration among the Czech Cities Network** is an association of cities and municipal representatives that meet to exchange experiences in the fields of energy saving and urban energy, thus stimulating the creation of new energy saving projects. Several meetings per year have been held, including individual meetings with CVUT and other cities. Up to 3 more meetings will happen in 2022 (from June onwards) on different topics such as energy management, waste incineration for energy, and investment projects in energy and mobility.
- ❖ Kladno was invited to bring a practical municipal view to the **Energy Community Platform**. The Platform consists of more than 30 national and regional partners concentrating on local and regional energy policy development and support. There have only been a few meetings, but there have already been some practical outcomes. For example, 'energy community' was defined in a new law under preparation. Since energy policy, community energy and other related topics are addressed by SPARCS as well, the link between the Energy Community Platform and SPARCS is intensive. SPARCS was presented as a potential good example of a community approach, and in terms of the future project outlines during the first session.
- ❖ The **Union of Towns and Municipalities of the Czech Republic (SMO)** is the largest association in the Czech Republic. Regular events, workshops, webinars, platforms and meetings are organised. Topics circulate around the smart city, energy, mobility and other innovative sectors. SMO activities are interconnected with SPARCS in practical ways (case studies, tools, etc.). There are several outcomes from regular communication and projects which are under realisation (Smart Funding, Smart Czechia, etc.). SPARCS has been presented as a good example on several occasions. Thanks to its involvement in SMO, Kladno had the opportunity to present SPARCS at the World Urban Forum in June 2022.
- ❖ Kladno established and is the leading partner in the **Kladno Energy Ecosystem Platform**. The platform consists of various city partners and also partners from the regional and national level as well as business and research stakeholders. The focus is on energy transition development. The platform is a strategic body for all relevant aspects of Kladno's energy policy and serves as a regular place for interaction regarding the realisation of energy policy and attaining SPARCS goals. For example, a hybrid kick-off meeting with key partners was launched in April 2022, and the platform dealt with the vision process in November 2022. The COVID-19 pandemic has prevented the organisation of public events; however it is hoped that the global health situation will improve and that some could be planned in the future. Once the COVID situation improves, there are plans to approach citizens and other business partners. SPARCS is featured in popular newspapers and magazines on a regular basis.



- ❖ The **PED Sletiště Working Group** was established to design and realise the PED Sletiště Sports area in the south of the city. The group consists of local, regional and national stakeholders (e.g. Energy distributor, Sports Area management company, CVUT etc.). Kladno is the founder and the leading partner in the Working Group. Up to 3 meetings are foreseen a year. PED Sletiště WG is also used as a core platform for vision roadmapping, workshops and exchanging information.
- ❖ Kladno maintained collaboration and exchange on numerous occasions with the Czech Fellow City group comprising of Brno (RUGGEDISED), Litomerice (STARDUST), Pisek (+CityxChange) and Prague (TRIANGULUM). SPARCS provided a strong ground for Kladno to participate in wider events. Moreover, Kladno liaised with the city of Karvina (demo site in the ARV Green Deal project) supported by CVUT's facilitating role.

3.6 Kifissia

- ❖ Kifissia is a member city of the **Civitas Initiative**. Civitas supports cities on sustainable urban mobility and mobility decarbonisation through networking, peer exchange and training. Urban mobility accounts for a considerable percentage of GHG emissions produced in Kifissia, therefore making it one of the most challenging areas. Participation in Civitas allows access to important information and best practices that can help boost urban mobility transition. Kifissia (together project manager in SPARCS and Head of Planning and Monitoring Programme Implementation Office) attended the first conference organised by the CIVINET Greece-Cyprus Network¹³ that was held in Greece in December 2021. The 2-day event was focused on 'Greek society facing the challenges of sustainable mobility on the horizon of 2030'.
- ❖ Kifissia participated (representing SPARCS) in the AGORA Strategic Dialogue: 'Identifying the crossroads between urban circularity, mobility and energy', organised by **JPI URBAN EUROPE**¹⁴. The Agora is a stakeholder involvement initiative that aims to identify priorities, issues and concerns which link different cities that share the common vision of a prosperous and sustainable urban transition. The event was held online in February 2022 by the virtual host city of Athens, Greece. Kifissia presented its work and progress towards urban transformation, and useful information was exchanged. The Project Manager of SPARCS presented the ongoing work of SPARCS through a short video that spotlighted challenges and thoughts about the role of experimental approaches to address urban challenges and support urban transitions.
- ❖ Kifissia is a member of **Sustainable City**¹⁵, a network for sustainable development and circular economy. The network consists of municipalities from Greece and

¹³ <https://civitas.eu/events/greek-society-facing-the-challenges-of-sustainable-mobility-on-the-horizon-of-2030>

¹⁴ <https://jpi-urbaneurope.eu/event-calendar/agora-strategic-dialogue-2/>

¹⁵ <https://www.sustainable-city.gr/eng.html>



Cyprus, the National Technical University of Athens, Maniatakeion Foundation, and the Institute of Environment and Sustainable Development of Cyprus. The purpose of the network is to support municipalities submitting proposals for funding from European programmes, and to assist implementation of those that are successful. The network enables better access to funding options and boosts implementation of relative projects.

- ❖ Kifissia is a member of the **Association for Sustainable City Development (SBAA)**. The main actions of the association are environmental protection, future foresight, improving quality of life for citizens, and social justice. The SBAA members have committed to form their policies and plan their actions on the basis of the above goals.
- ❖ With support from SPARCS and HERON ENERGY, Kifissia is now part of DECIDE4energy Project. DECIDE is a H2020 project focusing on how energy communities and energy efficiency services are established and managed. HERON is a group of companies that operates in Greece and mainly deals with the production and supply of electricity. Kifissia co-organised the 'Energy Communities - Everything You Need to Know' event that helped disseminate the goals of SPARCS for green energy production and reducing GHG emissions. Citizens were engaged and motivated through an open discussion about energy communities. The open event took place at the Town Hall of Kifissia on 14 May 2022. Representatives from DECIDE4energy, SPARCS, GREENPEACE, GENEVERST and Elin Verd attended the event and spoke about collective energy actions, the challenges, the needs, and the long-term benefits for the economy and the environment.

3.7 Lviv

Despite the fact that Ukraine became the victim of Russian military aggression since 2/2022, Lviv team maintained a commitment to contribute to knowledge exchange, within the limits of its capacities.

The City of Lviv is continues to be part of the Eurocities network and this provides a valuable opportunity for knowledge exchange. Before the war, the city of Lviv cooperated with the regional project Connective Cities¹⁸ which aims to establish a formal network of urban practitioners in south-east Europe. The group discusses topics linked to urban resilience.

On a national level, Lviv is the organiser of an annual event for local government representatives, the All-Ukrainian Local Self-Government Forum. Topics related to energy management in Ukraine are discussed every year, after which a resolution is submitted to the Ukrainian government. Some of Lviv activities include a meeting with the **Association of Energy Efficient Cities** of Ukraine regarding data collection for SECAP (October 2021); communication and preparation of the documentation for **Memorandum of Understanding with H2020 CIVITAS Fast Track Project** on joint development of e-mobility solutions such as e-bikes and e-scooters (December 2021). Lviv has been thoroughly active participating in several events and meetings, despite the overwhelming circumstances. More detailed information is provided in D6.11.



4. SPARCS PARTNERS – COLLABORATION AT EUROPEAN, REGIONAL, NATIONAL AND LOCAL LEVELS

4.1 VTT

VTT has been active in attending and supporting partners in events/activities to disseminate the need and purpose of energy transformation. Some of VTT highlights are mentioned below:

- VTT is a partner in [NetZeroCities](#) project targets the work towards the targets of the EU's Cities Mission and supports cities in developing their climate city contracts. VTT co-leads the knowledge platform development for the Cities Mission one-stop-shop platform, and contributes to the monitoring and impact assessment framework and other work packages. VTT has been actively supporting to build bridges and seeking collaboration with the Cities Mission at different levels (from EU level to national and local levels), and the many learnings from the lighthouse projects have supported this work.
- October 2021 – VTT coordinator Mari Hukkalainen presented SPARCS at Lviv's Homeowners Association event. This was held online and translated into the local language for the audience. Altogether there were 300 – 400 participants. The presentation focused on improving energy efficiency of buildings and increasing building integrated RES production, sharing solutions and learnings from SPARCS project.
- May 2022 – Keynote presentation at EU Green Week on the topic of "The role of digital solutions in enabling cities' energy transition towards climate neutrality: Challenges, Solutions and Impacts". The focus was on ensuring that innovations focus on environmental feasibility, economic viability, and use desirability. Tools and technologies act as a catalyst to provide smart users with actionable intelligence to make informed decisions.
- July 2022 – VTT provided input to the SSPCR conference in Bolzano, Italy regarding quality of life indicators for Positive Energy Districts based on work done in WP2. This work was compiled together with Annex 83 partners SINTEF, EnergyVille, Advanced Building & Urban Design and VTT and titled "*Do you want to live in a Positive Energy District? A review of Quality-of-Life indicators from existing PED projects*". In addition, VTT presented "*Lessons learned from Positive Energy District (PEDs): methodology for cataloguing and analysis PED models*" in the session "Planning and Implementing Positive Energy Districts from Concept to Practice: Mapping of Characteristics, Technologies, Stakeholders, Methods and Processes".
- July 2022 – VTT participated in the combined online lecture given to design students in Italy as part of the 'Design Workshop' held from 4-8 July 2022 in San Marino. The title was: Responsible Research and Innovation (RRI). SPARCS Lippulaiva district was presented as an example of the latest sustainable and co-creation design in Finland.

4.2 CVUT

- ❖ CVUT is the Working Group 1 leader of PED characterisation and mapping, and a Core Group Member of **COST ACTION PED-EU-NET**. The Working Group is active



in developing the [PED Database](#), PED Definition advancements, and scientific publications on PEDs. As of June 2022, three scientific publications were completed, and another is planned for the [Bolzano SSPCR Conference 7/2022](#). CVUT participated in an online webinar (9-10/2021) and in person at the [1st Urban Stakeholder Workshop on PEDs](#) in Rome where it presented the PED concept of Kladno and PED Database. Another presentation was made at the [Amsterdam PED Conference](#) on 23-24 June 2022. CVUT is co-organising a Training School on PEDs in Sweden in October 2022 that is open to all SPARCS partners.

- ❖ CVUT was a participant and Module 4 coordinator at the week-long online **European Energy Research Alliance: Joint Programme on Smart Cities** in May 2021. As such, it was able to co-design in the EERA JPSC agenda towards PEDs, Climate-Neutral Cities and other initiatives. CVUT presented a Mutual Learning Exercise (MLE) pilot, including collaboration with SPARCS. Another meeting is planned for Spring 2023 in Portugal.
- ❖ CVUT is a CRAFT Cities consortium member and co-organiser of Mutual Exchange of NEB Reference Cities under the **New European Bauhaus Initiative**. The goal of the activity is to prepare ground for New European Bauhaus Reference Cities plan to be introduced among SPARCS partners. A Call for CRAFT Reference Cities was published (6-7/2022). CVUT is co-organising an event on New European Bauhaus in Prague planned for November 2022 to which SPARCS cities will be invited.
- ❖ CVUT is also active in the **Joint Programming Initiative Urban Europe** and **IEA Annex 83 on Positive Energy Districts** involving bilateral collaboration and co-designing parameters to be collected on existing PEDs. This year will see the joint roll-out of the PED information collection. The first information request was started with SPARCS in May 2022.
- ❖ CVUT was the organiser of the pilot **Energy Efficiency Network (EEN CZ-Bavaria)** on innovative energy efficiency projects (formal group of ca. 10 cities). Based on the EUKI Project, EEN creates exchange opportunities for Kladno and enables the dissemination of information to cities outside of SPARCS. There are quarterly meetings and fact-finding missions.
- ❖ CVUT organises joint activities for Czech cities on a needs basis through **SEMMO (Municipal Energy Managers Association - Czech Republic)**. SEMMO is useful in its roles for disseminating and exchanging lessons learnt from neighbourhood level projects, and sharing tools and methodologies. SPARCS activities were presented within the framework of the [Prospect+](#) Capacity Building Programme.
- ❖ CVUT was also the organiser of **Power2Heat4Cities (National project focusing on decarbonization of District heating networks)**. The project consists of a panel of cities that exchange information and experience on industrial heat pumps and disseminating lessons learnt from SPARCS. Semi-annual activities are held by Kladno, Karviná, Litoměřice and Kutná Hora under this umbrella.



- ❖ CVUT and Prague activities on RES included being an ad hoc expert partner on PV installations and supporting the increase in RES in Prague. CVUT moderated events on PVs and green roofs in Prague in June 2022, at which it derived lessons learned from SPARCS.
- ❖ As a participant in the **Czech Fellow City Group, Czech PED Ecosystem**, CVUT supported Prague and Kladno and collaborated with Litoměřice, Brno and Židlochovice. A good practice exchange was made with Písek.
- ❖ The **Urbis Smart City Fair 2022** workshop was organized by CVUT and it hosted 4 Czech follower/fellow/sandbox cities: Brno (Ruggedised), Kladno (SPARCS), Praha (Operátor ICT - OICT) – CRAFT Cities, Písek – (+CityxChange). Kladno highlighted SPARCS as a kick-starter of wider systemic changes in the city (four key strategies were developed through SPARCS) and work on Positive Energy District concept. All participants were in consensus when they said that most of these activities would hardly happen without international collaborations. Several other Czech cities attended the workshop and were inspired by the stories. The workshop attracted around twenty in-person participants. The program continued in the evening with a reception and informal discussions.



Figure 6: URBIS workshop coordinated by CVUT (September 2022)

4.3 FHG

- ❖ FHG is the national coordinator of the **Morgenstadt network**¹⁶. Its objectives are to think, develop and test innovative solutions for the cities of tomorrow. The network comes together multiple times annually to examine the integration and sustainability of urban development.
- ❖ FHG also participates in the annual **Eurocities** network meeting in order to network and team up with new partner cities as well as promote its own projects. Niklas Effenberger attended the event this year in June 2022 hosted by the City of Espoo.

¹⁶ [Morgenstadt - City of the future Initiative](#)



4.4 LSW

- ❖ The IPCEI joint project **LHyVE** will develop the hydrogen economy in the Leipzig region along the entire value chain, and thus significantly reduce greenhouse gas emissions in all sectors (logistics, air traffic, industry, urban mobility, heat and electricity)¹⁷. The aim of the LHyVE System is to realise a blueprint for the future hydrogen economy and connect the north of Leipzig to the European hydrogen backbone by 2027. LHyVE consists of three complementary individual projects: Leipziger Versorgungs- und Verkehrsgesellschaft (LHyVE System), ONTRAS Gastransport GmbH (LHyVE Transport) and EDL Anlagenbau mbH (Erzeugung); and includes 15 partners (see below). The link to the hydrogen transport network, such as connecting the city of Leipzig to the LHyVE Transport hydrogen pipeline built by Ontras Gastransport, will enable the usage of hydrogen for carbon-neutral applications such as mobility, electricity and heat; and thus complements the SPARCS approach to carbon-neutral districts with innovative energy storage and usage technologies.
- ❖ **Connected Urban Twins (CUT) - Urban Data Platforms and Digital Twins for Integrated Urban Development – IT Department / LSW (Uwe Fischer)** is a cross-city project between Hamburg, Leipzig and Munich. LSW's role in the project is as a strategic IT consultant for the city on digitalization. LSW has partnered together with City of Leipzig and several other local partners. During the five-year project period, the cities want to advance the development of data-driven urban twins while establishing open standards. With the help of these standards, the systems will be made permanent so that they can be used in other urban fields of action and for other cities.
- ❖ The aim of the joint project '**Leipziger BlauGrün – Blau-grüne Quartiersentwicklung in Leipzig**'– **MSE Department / LSW (Marcus Krüger)** is the science-based transfer of the "double interior development", i.e. the combination of structural densification with the development of green areas into the concept of 'multifunctional interior development'. The latter integrates green, construction and traffic areas and urban infrastructure in such a way that new complementary area functions are created within existing land use (BlueGreen System Architecture). For example, one can see the large-scale 'Eutritzscher Freiladebahnhof' Project (Leipzig416), on which a drain-reduced, resource-efficient and (climate) resilient inner-city district is to be built for around 3,000 inhabitants from 2020.

Findings from SPARCS are to be replicated during the development of the district. District heating is to be combined with decentralised renewable energies. Discussions with the city administration and citizens' events are regularly organised by the investor in which LSW also participates.

¹⁷ <https://lhyve.de/>



4.5 RIL

RIL actively organizes webinars to bring SPARCS partners together. Materials can be found [here](#). A webinar was organized in November 2021 with 23 participants related to ‘Citizen engagement in public-private partnerships for sustainable transition’. The webinar invited a guest speaker Dr. Anna Zhelnina who is an expert in citizen engagement and social movements from the University of Helsinki and Heli-Maija Nevala who is the Service Manager from the City of Espoo

4.6 BABLE

BABLE is a partner in EIT Urban Mobility, an EU project designed to accelerate positive change on mobility to make urban spaces more liveable. BABLE joins in the project’s Central Hub calls every second Friday. During these bi-monthly virtual meetings the participants discuss events and projects, and new partners present themselves.

4.7 KONE

KONE is one of the partners in the EIT Digital ecosystem. This project, launched in 2010, aims to answer specific innovation needs, for example through matchmaking, scaling-up start-ups and attracting young talent. Through KONE’s participation in this network, SPARCS has access to a platform for knowledge sharing and new digital innovation.

5. ONLINE PLATFORMS (WP8)

Since the beginning of the project SPARCS has used Microsoft Teams as the main channel to facilitate the flow of information. An Ambassador working space coupled with a repository of materials useful for implementation of the SPARCS objectives was created on this internal platform to include expert as well as more general documents published by partner initiatives (JPI UE, Energy Cities, EIP SCC clusters etc.) and projects. This serves as a tool to the SPARCS partners to build capacity and obtain information relevant to their work through regular updates from SC Task groups. A new dashboard has been created within Teams to facilitate new comers and finding basic project information instantly (Figure 7). In addition, a comprehensive Miro Board has also been created by Eveliina Grönroos (VTT) to support onboarding (Figure 8).





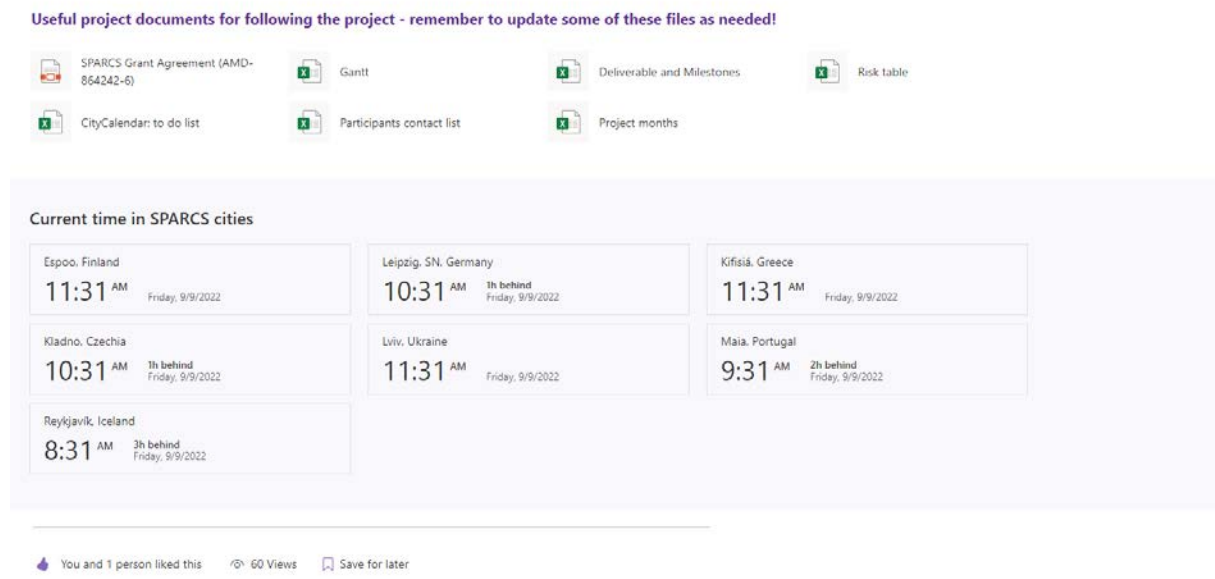


Figure 7: SPARCS Teams Dashboard with useful project links

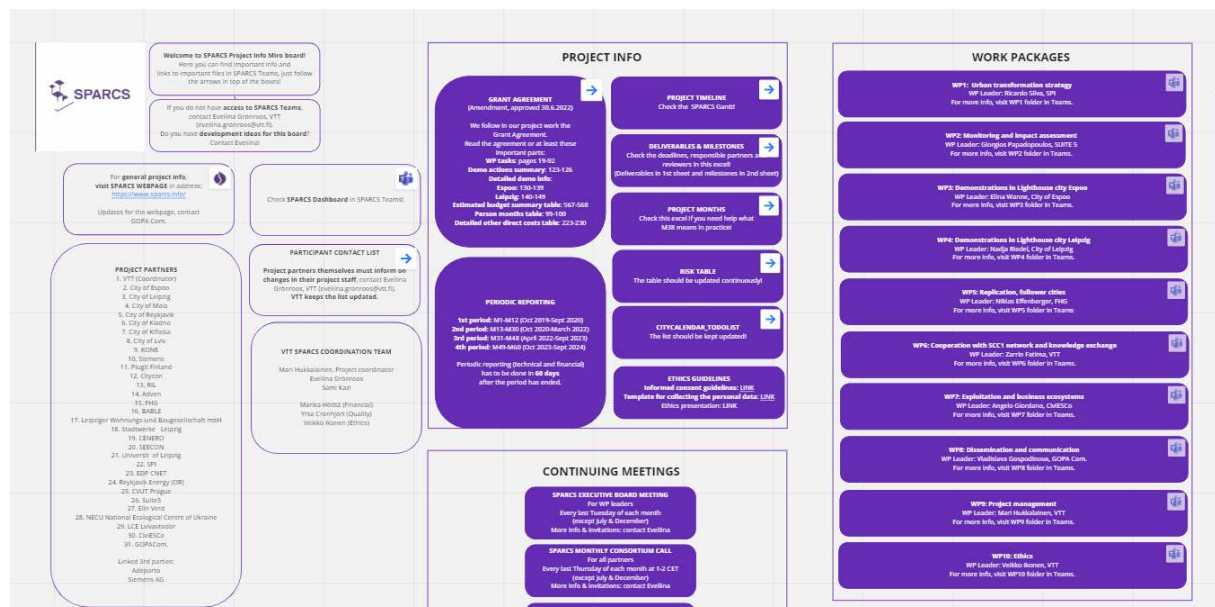


Figure 8: SPARCS project management Miro Board

In addition to the internal channel, cooperation with networks is also encouraged via the [SPARCS online platform](#) where key updates are shared with SPARCS stakeholders and partners through both the website's "News and events" sections and the monthly newsletter. News from other projects is also shared on the website and newsletters to keep the consortium well informed. Both Teams and newsletters are critical tools to announce new initiatives and funding opportunities.



6. CONCLUSION

Since its launch in 2019 SPARCS has succeeded in establishing a large number of collaborations and connections. Thanks to the active involvement of its cities and partners, SPARCS collaborates and participates in many different networks and projects that are active at the international and EU level as well as at regional, national and local levels.

While the outbreak of the COVID-19 pandemic disrupted many of the major activities in 2020, SPARCS partners swiftly switched to online operations and adapted to the new reality. SPARCS has managed to find new opportunities to co-organise events with other SCC1 initiatives, mostly in an online format. Now as the project is entering the next stage of its life, cooperation with other EU, regional and local initiatives is becoming even more important as it would facilitate more effective dissemination of results. It would also enable better knowledge sharing which is crucial for the transition to sustainable, green and citizen-centred cities.

