

# D9.12: Report on Intra-Project Collaboration Including Study Visits and Peer-to-Peer Workshops 5

+CityxChange | Work Package 9, Task 9.1

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## List of Acronyms

<b>API</b>	Application Programming Interface
<b>CIEMAT</b>	Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas
<b>ENEA</b>	Energia Nucleare ed Energie Alternative
<b>EU</b>	European Union
<b>FP7</b>	Seventh Framework Programme, European Union
<b>IREC</b>	International Renewable Energy Conference
<b>ISE</b>	Fraunhofer Institute for Solar Energy Systems ISE
<b>JPI UE</b>	Joint Programming Initiative Urban Europe
<b>KPI</b>	Key Performance Indicator
<b>LCCC</b>	Limerick City and County Council, Ireland
<b>LHC</b>	Lighthouse City
<b>MAI</b>	Municipality of Alba Iulia, City of Romania
<b>MP</b>	Mesto Pisek, City of Czeck Republic
<b>PED</b>	Positive Energy District
<b>SB</b>	Sestao Berri 2010 Sociedad Anonima
<b>SCC01</b>	Horizon 2020 Smart Cities and Communities call
<b>SMO</b>	Obshtina Smolyan, City of Bulgaria
<b>TK</b>	Trondheim Kommune
<b>VORU</b>	Võru Linnavalitsus, City of Estonia
<b>VTT</b>	Technical Research Centre of Finland
<b>WP</b>	Work Package
<b>ZenN</b>	Near Zero Energy Neighbourhoods

# 1 Executive Summary

This report provides an overview of the study visits, peer-to-peer workshops, and other intra-project learning activities performed by the Lighthouse and Follower Cities and the other partners in +CityxChange, between 1 November 2020 and 30 April 2021 (M25-30).

These activities form part of Work Package 9 “Inter-Project Collaboration and Clustering”, Task 9.1 “Intra-Project Lighthouse and Follower City Cooperation”. They are designed to address the needs of the participating cities and solution providers in an effective manner, to better align goals and priorities, to promote cross-cultural communication, understanding and collaboration between the partners, and to speed up the learning process and iteration of results across the entire value chain.

As support to deliver better study visits and peer-to-peer workshops, the deliverable also describes ex-ante/ex-post evaluation of cross-cutting issues within clean energy, open innovation, gender, socio-economic science and humanities to increase impact and deliver practical recommendations to partners and beyond.

This report (D9.12) is complemented by D9.13: Report on attendance at events held by other SCC-01 co-ordinators 5. Some general content is repeated from the previous D9.9: Report on Intra-Project Collaboration, including study visits and peer-to-peer workshops 4.

## 2 “Pathways to PEBs” Learning Sessions (Online)

### 2.1 Scope

The Learning Sessions are an internal forum for +CxC cities and solution providers to discuss cross-cutting challenges, exchange experiences, and develop solutions. They aim to support the Lighthouse and Follower Cities in their development of Positive Energy Blocks, in particular related to the tacit knowledge that is accumulated among partners and stakeholders in preparation of their PEB processes and solutions. As such, they form a valuable source of information for T7.4 Guidelines and recommendations. In particular, the learning sessions act as a catalyst for sharing qualitative and experiential data. Non-confidential outcomes have also been included in the SCIS Solution Booklets (see D9.10).

Due to COVID-19 restrictions, we organise a series of learning sessions online, rather than one on-site learning workshop concentrated in the course of a couple of days. The online sessions have the added benefit that they can reach more participants, and that we can organise regular sessions throughout the entire year, one feeding into the other.

Based on the positive experiences of Spring 2020, we have continued “Pathways to PEBs” as a main topic for our cross-cutting learning sessions, in which the cities, solution providers and external guests share their stories of success and failure in developing Positive Energy Blocks and Districts.

In addition, several of the cities have organised their own learning sessions among the local partners and stakeholders.

### 2.2 +CxC Pathways to PEBs: the Clean Energy Package (23 April 2021, Online)

On 23 April, we organised a learning session on “+CxC Pathways to PEBs: the Clean Energy Package”. During the session, we discussed the impact of the European Clean Energy Package on the development of positive energy districts, and on smart and sustainable cities and communities in general.

First, Han Vandevyvere (NTNU/VITO) presented a summary of the impact of the EU’s changing electricity market design on the development of smart and sustainable cities and energy communities. The presentation was based on the SCIS Policy Paper on the same topic.<sup>1</sup>

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<https://smart-cities-marketplace.ec.europa.eu/insights/publications/scis-policy-paper-impact-eu-clean-energy-package>

Then, Pat Stephens (LCCC) presented LCCC's experiences in creating a common energy vision for different stakeholders, including:

- convergence of EU, National and Local energy goals with bottom up citizen activism
- the Leadership role of Limerick City & County Council
- experiences in establishing the DPED, Independent Renewable Energy Generation and engaging Community Stakeholders

Afterwards, we discussed how to use these new opportunities to support the development, replication, and scaling of PEBs in our cities.

Vandevyvere started by discussing the challenges of an energy paradigm shift, as it currently exists in an "in-between" state. This is something the lighthouse projects are experiencing directly, as existing legal frameworks and incumbent business models dominate the current landscape. As a consequence, lighthouse projects need to establish "legal sandboxes" and use experimental value propositions to break open markets. The new CEP changes things in a drastic way, and several of the new directives interfere directly with our activities in the SCC01s.

Meaningful integration of different levels of scale (macro - meso - micro-scale RES installations) is often lacking. RES solutions are also often space-intensive and will compete with other solutions that require space. There is increased emphasis on virtual PEDs - each individual district does not need to have a positive energy balance, it might also be possible to make an agreement with a site in which there is ample space for RES.

Energy landscape design is very much an interdisciplinary exercise, requiring the integration between energy and urban/landscape planning, and requiring interventions of urban planners, architects, landscape planners etc. There is not sufficient data on these types of solutions in order for them to become more widespread.

We will avoid costly grid upgrades by emphasising flexibility; however we need quite a high flexibility demand in order to make it interesting and profitable. Size matters in the energy world.

What can the consumers (including energy communities) do? The energy consumption component of the energy bill can give an incentive, if it gives savings to avoid peak times. Grid tariffs are a second option. However, here we have a societal challenge: the overall grid is still necessary, but energy communities can opt out in order to create their own solutions. This means that only those with lower resources/competency will stay in the overall grid and will need to bear the costs. Maximising self-consumption is another option. Even a small town of 20 000 inhabitants can implement these kinds of solutions. You just need good drivers, and you need authorities that can remove the barriers.

Second, Pat Stephens (LCCC) presented LCCC's experiences in creating a common energy vision for different stakeholders. In the past few years, a number of citizen activism initiatives have arisen, including schools and children/youth (e.g. Fridays for Future). This is no longer a niche area of interest, but becoming more mainstream. The Climate Action and Low Carbon Development bill will come out soon, including climate change action



committees and requirements on local authorities. There is a clear understanding of sustainability. The work at LCCC in this area will also be informed by the +CxC Bold City Vision. +CxC will be added to LCCC's smart city brand to demonstrate local authority leadership.

Local authorities are being asked to establish decarbonisation zones by the Irish government. The advantage of being part of +CxC is that we know what a decarbonisation zone is, and we can expand our +CxC demonstration area into a decarbonisation zone. Learnings and lessons from +CxC can be applied quickly to this request by the government.

In +CxC, we have pre-existing relationships with most of the building owners in the LCCC demonstration areas. We established MoUs with them to specify the interaction related to this project and discuss expectations.

COVID-19 has had a greater impact than we would originally have foreseen. Digital platforms are fine but are not the same as on-site meetings in order to develop interpersonal relations. You have to keep in contact with people and to make sure they are aware of what is going on. The establishment of the Positive Energy Champions was highly productive and enjoyable in that respect. And, cooperating with UL as an engagement task, next week we'll have the third Citizen Engage Week. We also have to set up new citizen-related initiatives - whether this is done by a citizen cooperative or others, is still open.

The sustainable energy community programme is organised nationally (the Sustainable Energy Authority of Ireland). LCCC wants to help create such communities - but having created it, we cannot control it. Asset ownership is definitely an issue, as already discussed. What is the additional attraction of owning a local energy community grid? Local authorities are sometimes concerned with being involved in local community projects that might end up in the local authorities needing to support them with substantial funding. However there is support in principle to establish RES assets and an Renewable Energy CoOp (REC).

Overall, we see a convergence of objectives from the EC and from the local communities - the latter want to show that they can play a leadership role.

What is emerging in Limerick is the Local Authority's role as an activation/ acceleration/ advisor role. There is also a requirement for an infrastructure of integrated digital and built environment monitoring systems and an evaluation capacity at the local level that allows citizens knowledge of the city to become knowledge for the city.

In Spring-Summer 2021, the other +CxC cities will be presenting their experiences within this area as well, in additional learning sessions.

## 3 Other events

### 3.1 Trondheim PEB Sluppen sessions (10 February 2021, Online)

In Trondheim, we are organising a series of learning sessions around the development of PEB Sluppen. The sessions are hosted by RK and co-coordinated by NTNU, in cooperation with WP5 lead TK and all involved solution providers. The sessions include, amongst others, discussions on updated targets, ambitions and strategies for the development of the district, the status of the PEB, which changes are necessary in terms of technologies, financial or other resources, timelines for implementation, planned improvements, dialogue with the regulatory authorities on regulatory barriers for energy sharing, and support structures for cross-partner cooperation in order to identify optimal solutions and processes. In addition, there is an ongoing dialogue on how sector coupling will be practiced at Sluppen, how the local energy and flex market will work, and how this new instrument will be able to support the local PEBs.

### 3.2 +CityxChange BCV Workshop on processes and challenges with FCs and LHCs (2 March, 2021)

On the 2<sup>nd</sup> of March 2021, ISOCARP held a Bold City Vision workshop, aiming at exchanging knowledge between Lighthouse Cities and Follower Cities. The workshop was a virtual event of 2 hours and hosted on Zoom.

Work on the BCV by the FCs, especially on local engagement has been partly hindered by the COVID19 pandemic. LHCs and FCs shared their experiences and knowledge on implementing the BCV framework in practice; what challenges are being faced in each local context, etc. The event was structured in two main parts.

First, 10 min presentations were given by each LHC and FC on their BCVs. The presentations aimed at giving a quick update on the process of the BCV. The following elements were covered in the presentations: data collection process, citizen engagement events, municipal staff engagement, visions, roadmaps, link to SDGs, etc. The presentations from the LHCs focused on engagement around the BCV and SDGs with the public (through tools such as word clouds, Miro and workshops). Trondheim discussed more in detail how the BCV has been used internally in the municipality (through a digital whiteboard tool called Miro). The FCs presented their approach towards data collection and citizen engagement events so far. FCs are using the U4SSC<sup>2</sup> key performance indicators to assess the achievement of SDGs in their local context.

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<https://unece.org/fileadmin/DAM/hlm/documents/Publications/U4SSC-CollectionMethodologyforKPIfoSSC-2017.pdf>

The second part of the BCV event was led by Trondheim Municipality and was intended to take FCs through a BCV mapping exercise. The workshop lasted 30 min, however, more minutes should have been dedicated to the workshop exercise. In order to allow participants to work collaboratively, Miro was used as a tool. There were three main activities planned within the Miro board to guide the participants through the process of mapping SDGs and then mapping sustainability-related activities across the municipality. Only the first activity, SDGs in your local context, was explored within the event format, where participants divided into breakout rooms in Zoom were asked to work with SDGs and propose up to 5 overarching themes that could reflect their city priorities.

This workshop was the first one of many to come. Strategizing the next workshops is key to the development of clear communication mechanisms. The following workshops will contain elements that will be used to better structure and evaluate the development of each city progress.

### **3.3 56th ISOCARP World Planning Congress (December 2020 - February 2021, online)**

+CityxChange partner organised the World Planning Congress, featuring the +CxC project in multiple sessions.

#### **3.3.1 ISOCARP Institute session on “Digital Infrastructure for Smart Services and Public Value (9 December 2020)**

This session<sup>3</sup>, organised by the ISOCARP Institute, featured digital Infrastructure for smart services and public value. NTNU presented +CxC experiences regarding digitalization in transformation processes for Positive Energy Districts.

#### **3.3.2 Session: World Planning Congress Review Roundtable – Planning for Post-Oil Cities. (3 February 2021)**

In this session<sup>4</sup>, organised by ISOCARP, the role of research and creativity as key areas of innovation in the shift to Post-Oil Urbanism was discussed. NTNU presented +CxC experiences on “Co-creating local energy transitions through smart cities: piloting a prosumer-oriented approach”, based on a paper co-written by +CxC partners ISOCARP, R2M and NTNU.

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<sup>3</sup><https://doha2020.isocarp.org/programme/discussions/program-schedule/program/27/isocarp-institute-digital-infrastructure-for-smart-services-and-public-value>

<sup>4</sup><https://doha2020.isocarp.org/programme/discussions/program-schedule/program/66/world-planning-congress-review-roundtable-with-isocarp-review-16-authors>

## 4 Monthly Executive Board Meetings

+CityxChange organises monthly online Executive Board light meetings to support better interaction between the cities, to get a good rhythm going, to ensure that all cities are fully engaged and included in the project, and to make sure that the Follower Cities have the support they need to be successful in early replication.

During the monthly meetings, the cities receive an update from the Technical Board, and each city reports on its ongoing activities. Based on these talks, topics are selected for upcoming learning sessions. In April 2021, we organised a first learning session regarding the Clean Energy Package and Energy Communities, and will continue with follow-up sessions to give each of the cities the opportunity to share and discuss their experiences.

## 5 Conclusion

Months 25-30 of the +CityxChange project continued with a transformation of activities from planning to implementation mode, with demonstration activities being initiated in the Lighthouse Cities. Due to COVID-19, several demonstration activities and events experience delays and uncertainty, which are being handled in the appropriate consortium bodies.

The next six months will bring important updates regarding the viability of the demonstrations in the Lighthouse Cities, and their potential need for adjustments due to COVID-19, and feasibility studies of the Follower Cities, showcasing their needs, priorities and pathways to PEBs. As always, these experiences will be embedded in our upcoming deliverables and posted on our website to share, as we, likewise, look to our peers to be inspired.