

D9.14: Report on Intra-Project Collaboration Including Study Visits and Peer-to-Peer Workshops 6

+CityxChange | Work Package 9, Task 9.1

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List of Acronyms

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

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 May 2021 and 31 October 2021 (M31-36).

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 (D9.14) is complemented by D9.15: Report on attendance at events held by other SCC-01 co-ordinators 6. Some general content is repeated from the previous D9.12: Report on Intra-Project Collaboration, including study visits and peer-to-peer workshops 5.

1 “Pathways to PEBs” Learning Sessions and Consortium Week (Online)

1.1 Scope

As reported in previous deliverables in this series, 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. Selected non-confidential outcomes have also been included in the SCIS Solution Booklets (see D9.10 and D9.13).

Since Spring 2020 we have shifted from organising one annual on-site learning session to hosting regular shorter learning sessions online. The sessions all deal with “Pathways to PEBs” as a main topic, in which the cities, solution providers and external guests share their stories of success and failure in developing Positive Energy Blocks and Districts.

The topics for the learning sessions are derived from discussions in the Executive Board with the +CxC cities. In the next months, we will also organise cross-cutting meetings with WP7-8-9-10 to optimise how the learning sessions may provide direct input to monitoring and evaluation, replicating and scaling, storytelling and dissemination, respectively.

In June 2021, we organised an ad hoc learning session in the preparation towards the second review meeting with the Project Officer and external reviewer.

In the week between 18 and 25 of October 2021, NTNU organised the Consortium Week, consisting of a concentrated series of online learning sessions and workshops. The Consortium Week consisted of two main blocks:

Project-internal:

- Where are we at the end of Y3 and how does this influence Y4-5? Priorities, needs for changes and updates.
- What have we learned from RP2, and how do we use that in the project going forward?

Outlook:

- IPCC has confirmed that time is running out. +CxC aims to deliver innovations for the energy transition. What are the innovations we are delivering, and how can we support these even further? What could we do more / differently?



- Learning sessions hosted by each of the seven individual +CxC cities

The results of these learning sessions related to the review meeting and consortium week are summarised in the corresponding sections below.

1.2 Review meeting (RP2) and preparatory meeting (1 July and 28 June 2021, online)

During the preparations for our second review meeting with CINEA's project officer and an external reviewer, we held an ad hoc learning session – among all of the project updates that we would present during the review meeting, what were the main learnings across cities, solution providers and Work Packages?

In summary, we discussed that the following questions deserve further attention, e.g. through cross-cutting learning sessions and documentation of experiences and results:

- How to make real innovation in the city? Going beyond the most obvious “low hanging fruits” when choosing buildings to be transformed into Positive Energy Blocks and Districts, but instead, making existing/heritage buildings and neighbourhoods attractive again? This will require a balanced approach including not only technological measures and investment packages, but also a cultural shift, shaping trusting relations with local stakeholders to increase overall willingness to participate, making the transformation visually and socially attractive, and, in short, making it irresistible for people to take part in. Invest in placemaking, with qualities that improved our PEB processes. It is never just about energy. A pure (autonomous) PEB is hard to achieve in an existing built environment, it needs the context of the city around it
- The priority for the cities is to create holistic, integrated PEBs and PEDs that trigger innovation and exploitation in real life, including technical, social, circular, economic and other perspectives in the on-the-ground, less-than-ideal realities of urban areas with existing and heritage areas and widely diverse demographics.
- Correspondingly, achieving these integrated PEBs and PEDs requires organisational changes within and across existing municipal units, to better organise the work across sectors, to enable efficient agenda setting with relevant stakeholders, to actively feed lessons learned back into our own organisations, and to trigger broader decarbonisation strategies.
- We highly welcome the New European Bauhaus initiative and consider it to be an additional booster for fully integrating communityxchange in Positive Energy Districts.

1.3 Consortium Week: Scope, project status and WPs (18 October 2021)

The IPCC has confirmed that time is running out. +CxC aims to deliver innovations for the Clean Energy Transition. What are the innovations we are delivering, and how can we support these even further? What could we do more or differently?

At the end of the third project year, we designed the +CxC Consortium Week 2021 to take stock of the achievements and experiences thus far, and to discuss expectations for the next and last two years of the project. The programme was structured around the specific challenges and needs of all seven cities in the project, discussed in online workshop settings.

For the Fellow Cities, the sessions were specifically linked to their feasibility studies and the road ahead. For the Lighthouse Cities, the workshops dealt with what we learned from the (still ongoing) demonstration phase, and plans for moving forward towards Monitoring and Evaluation.

All WPs held their monthly WP meetings in the weeks before the consortium meeting, in order to be fully prepared for discussing their key achievements and challenges.

In addition to discussing individual cities, a range of cross-cutting challenges and opportunities were brought forward by the partners. These will be followed up in the next months by WP9:

- We should investigate how to operationalise the +CxC CommunityxChange pillar towards the New European Bauhaus initiative, and the entire +CxC project towards the EC Cities Mission.
- We see a lot of interest for digital twins e.g in the Smart Cities Marketplace - can we connect our +CxC DST results?
- Interest in Energy Communities, as part of the SCM Initiative on Regulatory Frameworks as well as an additional level of community engagement. Energy Communities are not planned in +CxC, but they are worth investigating further to support the roll-out of our PEBs.
- Horizon Europe has new calls related to PEDs and other innovation actions - when should we start to work on these to have a seamless transition from +CxC, but without reducing operational capacity to finalise +CxC?
- Some solution providers easily connect with the experiments and see new market opportunities, others do not engage due to lacking market opportunities or regulatory challenges. Can we share/document experiences on how we solve this?
- We should write a "Pathways to PEDs" cookbook based on our experiences across all learning sessions, reports, and interviews. What changed along the way, how would we organise the work if we could start anew?

1.4 Cities Sessions

1.4.1 Overall outcomes

In the period 18-27 October 2021, all seven cities of +CxC presented their experiences on developing PEBs and PEDs, and shared what they learned along the way. Brief summaries of the individual cities sessions are reported in the next Sections.

Across the Cities Sessions, we made a number of cross-cutting observations that will be followed up by WP9 in the coming months:

- We have good experiences in creating positive and accelerating cycles of cooperation through Positive Energy Champions, City Engage Weeks, Citizen Observatories and community-led open innovation in general. These cycles can even be reinforced by engaging designers and artists to work with the community groups to support their ideas. How can we replicate these and strengthen them beyond the project? How do we track and document the impact of these activities? How can we use them towards the New European Bauhaus?
- Many of the technical innovations such as the turbine would not have been possible without the CommunityxChange pillar. The technical innovations become possible to implement because of long-term relationship building with the different stakeholders
- Perceptions change over time, with age, and so do spaces. How can people participate in improving their local spaces? How to involve youth? How can the municipality support this?
- If we want to engage stakeholders in our activities, we should lead with the concrete challenges we want to address, and build interest towards the particular priorities of the stakeholders. Going door to door to engage citizens. We should not necessarily frame it as a +CxC event, and definitely don't make that the core of the invitation.
- Some of our cities are building ecosystems not only with local communities and solution providers, but with bankers and investors. The city is acting as a facilitator for this. This role as societal actor is fairly new to the municipalities and something to explore and document in further detail.
- How do we go from feasibility studies to implementation and financing? Green finance models will be tested by the Lighthouse Cities and transferred to the Fellow Cities. We are interested in discussing with the other SCC projects and the SCALE secretariat how they are getting this done in practice.
- Most of the Fellow Cities are eligible for EEA / Norway Grants. With the Norwegian Project Coordinator, we have started to explore this mechanism to gain additional funding for the Fellow Cities

- If you describe your relationship with your partner as “sustainable”, you’re in trouble. Then why would we do the same with our city? Sustainable is an absolute minimum - we should move towards regenerative or more.
- We should investigate how to integrate the concept of Total Value Creation and Capture in our work, moving beyond ESGs.

1.4.2 Limerick (18 October 2021, online)

Limerick presented the challenges that emerged in their PEBs as the project developed. These challenges including the lack or limit of renewable energy options directly in the PEB or the PEB buildings (while the Demonstration Area has options), delays in the retrofitting of buildings, the necessity of creating a “gridless” PEB as the timelines for grid connection approval go beyond the implementation phase and limited energy would be available for local trading within the community grid, changes in the turbine deployment, and others.

They also brought up good outcomes coming from the project, such as the imminent testing of the first turbines, successful City Engage Weeks, engaged Positive Energy Champions, the opening of the Citizen Innovation Lab, Innovation playgrounds, and more. They presented the challenges of adapting the plan¹ and the PEB structure to the current circumstances being faced in the region, not least due to Covid-19, and their strategies to dealing with them.

1.4.3 Trondheim (21 October 2021, online)

Trondheim presented their path from Innovation Playground² to Bold City Vision, updates on their PEB and Local Energy Market statuses, and business models. The +CxC participants talked about strategies to engage the population and it was suggested that the citizen engagement process could be captured and summarised in one of the city’s reports.

If we want to fuel change, we need to figure out the benefit for each party. The other parties might not share the same goal, but we need to share the same vision. Hence there has to be “something” in it for the asset owners, the people, the DSOs, the tech suppliers. When it all adds up we are able to achieve the vision.

4C’s mobility app (Mabee³) was a topic of interest. According to TK, the good engagement of different providers in this single app was likely due to it being an open marketplace, that is scalable, easy to use and cheap to include real time data from real time providers. The technology used makes the app’s backend very open and therefore attractive to the actors. It was agreed that having a combined solution for different providers has a huge potential and that the one developed within +CxC can be easily adapted to other cities.

¹ Plan and status is available as D4.4: Limerick DPEB Implementation Guide 1

² Part of the work has since been completed as D5.8: +Trondheim Citizen Observatory

³ <https://www.mabee.no/>

1.4.4 Vöru (22 October 2021, online)

Vöru presented their experiences with developing the Bold City Vision, including the challenges of planning for 2050 (which is longer than any other of the municipality's strategic documents), the initiatives for stakeholder engagement, setbacks and lessons learnt.

The presentation was followed by an interactive exercise for all meeting participants where one example of "crowdsourcing" mobility data was presented, followed by a discussion about the impacts of travelling and co-creation of ways of reducing one's environmental footprint. The group discussed the costs of being carbon neutral, consciousness of impact and effects of subsidies in customer behaviour.

1.4.5 Písek (22 October 2021, online)

Písek presented their feasibility study and way to dPEBs, including some legal challenges related to smart grids, implementation of an energy centre (the first in the Czech Republic), outcomes of their Climathon in 2020, their campaign on Energy communities, online workshop with solution providers, establishment of a group interested in community energy (mainly from owner associations) and City Engagement Week.

In the following group discussion, the city mentioned a successful experience with bicycle sharing, an initiative that was originally criticised due to the small size of Písek and risks of vandalism. The bicycles had a huge impact on the way people are moving around the city. They also did some studies to evaluate the market for car sharing, but the original results were that the city was too small for it. It was suggested that they reevaluate these given the positive results with the bicycle sharing.

1.4.6 Smolyan (26 October 2021, online)

The municipality of Smolyan shared their current situation with the consortium, including their positive experience with youth engagement to which Písek and Sestao also commented on the effectiveness of their sporting facilities to stimulate participation.

The session included a storytelling session held by ISOCARP that explored youth involvement that helped develop the discussion even further. That will be separately presented in D9.16: CityXChange storytelling workshops, inviting other LHCs and FCs 3.

1.4.7 Sestao (26 October 2021, online)

Sestao shared their experience in applying to the European Energy Efficiency Fund (eeef⁴) and invited the eeef to the session to present the fund and its Technical Facility program. OV offered to support other cities that might be inclined to apply.

⁴ <https://www.eeef.lu/home.html>

This was followed by a presentation of hydrogen technology offered by Sestao's partner Fusion Fuel. This topic has been brought up by the cities lately and Fusion Fuel gave more information on efficiency, the advantages of having a centralised solution, losses in transmission and the necessity of adapting the Hydrogen solution to different uses (as purity and pressure demands vary significantly between applications).

1.4.8 Alba Iulia (27 October 2021, online)

Alba Iulia presented an overview of the Alba Iulia Smart City project status, which includes activities in connectivity and mobility, administration, e-government, education, e-health, business, energy and environment, and tourism.

There was also a presentation about the Social Green project pilot funded by the INTERREG EUROPE Program. The aim of the project is to improve policies and operational programs aimed at greening the social housing sector. It emphasises the link between the social housing sector, energy efficiency and greening interventions, taking into account the political, institutional, financial and technical levels. The pilot in Alba Iulia aimed at improving energy efficiency and consumer behaviour in social housing and had positive results, and therefore one of the final recommendations from the project is that smart solutions be included in all energy efficiency projects.

2 Other events

2.1 The Days of Sustainable Heating and Construction (23-25 September 2021)

Between 23 and 25 of September, the Municipality of Smolyan, the Black Sea Energy Research Center and the Center for Energy Efficiency "EnEffect" organised the exhibition "Days of Sustainable Heating and Construction". The event's goal was to promote opportunities for implementing energy efficient solutions for households and businesses and included an open exhibition with outdoor information and a series of thematic hybrid (physical and on-line) training.

Exhibitors were leading local companies / representative offices offering environmentally friendly heating solutions, building materials and components for energy efficient construction. Participants had the opportunity to receive free consultations from independent experts on the stands of the REPLACE and nZEB Roadshow projects, funded by the H2020.

The stand of the Municipality of Smolyan provided information about the initiatives of the Municipality in the field of energy efficiency and the +CxC project. The programme of the second day included a presentation by EAP about The Smart Cities in Action and the Role of the PEDs in Urban Development.

2.2 NTRANS Lunch Seminar Series (29 September 2021)

On 29 September 2021 Trondheim Kommune presented the seminar "Vehicle to grid (V2G) - a kinder surprise for cities and businesses?" to the Norwegian Centre for Energy Transition Strategies / NTRANS. The main goal was to present the +CxC approach to V2G from a business perspective.

Trondheim Kommune focused on the relevance of V2G when countries with carbon intensive and weak electric grids are building charging infrastructure, and where EV charging may increase CO2 emissions and local EL grids may "kneel" - experience grid fallouts. V2G may also be a valuable part of local electricity markets, and the third part - making it a "kinder egg" - that V2G may provide a business opportunity for car sharing actors basing its business on electric vehicle sharing.

Car sharing is still a marginal business business-wise, and piloting this as we do in +CxC is important for finding out whether V2G may contribute to increased revenue through selling energy/capacity to a local energy market.

There was substantial interest among the partners at NTRANS given the theme's novelty and potential impacts. There were also significant questions regarding +CxC Mobee app and the opportunities deriving from it.

2.3 Smart Písek

Starting from August 2021, Písek has hosted a booth showing the public what their office deals with, what projects we're currently working on, and how the citizens could get more involved in the city matters. Some of the presented activities included: Nextbike, MPLA, EPARKOMAT, +CityxChange, "PODNIKNI TO!", Climathon, The Stockholm Solution For Planting Trees, PARO, SDGs, and SECAP.

In September 2021, they started a new project called "Podnikni to!" It supports entrepreneurship in the regions and organises an entrepreneurship course for the citizens of the city and adjacent municipalities. Moreover, "Podnikni to!" is intended for everyone who is thinking about starting their own project, but also for those who are already actively working on it.

On 25-31 October 2021, they organised an event called "Hlava v Písku". It was an event composed of activities of various city organisations, institutions and departments. The purpose of this event was to raise citizens' awareness of the city's functions and activities. The Climathon was included in this event on Friday, October 29th, on the theme of community energy.

2.4 57th ISOCARP World Planning Congress (10 November 2021, online/Doha)

+CityxChange partner ISOCARP's mother organisation organised the World Planning Congress, featuring the +CxC project in an ISOCARP Institute special session "Innovative Solutions for Climate Resilient Cities and Communities". This session⁵ focused on innovative solutions for climate resilient cities and communities, subtitled "From research to practice", in a combination of thematic presentations, panel, and World Café format. NTNU presented the +CityxChange project under the topic "Urban Energy Transitions as City Climate Strategies" and how its positive energy blocks address climate action.⁶

⁵<https://doha2021.isocarp.org/programme/sponsor-lounge/discussions/program-schedule/program/138/special-session-isocarp-institute-innovative-solutions-for-climate-resilient-cities-and-communities>

⁶ Session video is available at <https://www.youtube.com/watch?v=J04zw4z0RAM>

3 Monthly Executive Board Meetings

As reported previously in this deliverable series, +CityxChange organises monthly online Executive Board light meetings to support interaction and learning between the cities, 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 on discussions held in the Technical Board (Work Package leads), and each city reports on its ongoing activities. Based on these talks, topics are selected for upcoming learning sessions. In M31-36, a considerable amount of time was dedicated to the impact of COVID-19 on the progress made by the project, amongst others in terms of supply chains, furlows, and online communityxchange events, and the corresponding need for change requests and amendments in dialogue with CINEA's Project Officer. Some of the cities have started to include the New European Bauhaus initiative in the scope of their +CxC activities. To reach our objectives related to the Clean Energy Transition, we experienced that stakeholders are more easily engaged by building strong relations and a sense of belonging, and connecting the energy upgrades with making the urban environment more beautiful and inclusive.

In addition, we discussed the transition from the implementation (up to and including M36) to the monitoring period (the final two years of the project, with modifications due to COVID-19). This typically included a celebration of milestones reached, as well as sharing of ongoing risks related to challenges such as keeping property owners on board of the PEBs, procurement, systemic changes of governance, and pending approval by regulatory authorities. Furthermore, the meetings included achievement of objectives, status of interaction with local stakeholders and solutions providers, and measures taken to ensure the continuation of activities such as citizen innovation labs beyond the project's lifetime.



4 Conclusion

Months 31-36 of the +CityxChange project continued in implementation mode, with demonstration activities being rolled out in the Lighthouse Cities and initiated in the Fellow 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 feasibility studies of the Fellow 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.

