

+D9.8: Report on attendance at events held by other SCC-01 co-ordinators 3

+CityxChange | Work Package 9, Task 9.2

Final delivery date: 29-05-2020



Deliverable version	v.03
Dissemination level	Public
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 824260.

Document Information

Project Acronym	+CityxChange
Project Title	Positive City ExChange
Project Coordinator	Annemie Wyckmans, Norwegian University of Science and Technology
Project Duration	1 November 2018 - 31 October 2023
Deliverable Number	D9.8: Report on attendance at events held by other SCC-01 co-ordinators 3
Dissemination Level	PU-Public
License	CC-BY4.0 Creative Commons Attribution, except where otherwise noted. https://creativecommons.org/licenses/by/4.0/
Status	Completed
Due Date	30-04-2020
Work Package	WP9 – Inter-Project Collaboration and Clustering
Lead Beneficiary	NTNU
Contributing Beneficiaries	LCCC, TK, MAI, MP, SB, SMO, VORU, R2M, ISOCARP

Revision History

Date	Version	Author	Substantive changes made
30-04-2020	v.01	Annemie Wyckmans (NTNU)	Structure of the report
24-05-2020	v.02	Annemie Wyckmans (NTNU), All partners	Full Draft, all partners added relevant activities, NTNU added storylines
29-05-2020	v.03	Annemie Wyckmans (NTNU)	Final Draft



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Table of Contents

Table of Contents	2
List of Abbreviations	4
1 Executive Summary	5
2 Interaction with other SCC01 Projects, SCIS and EIP-SCC	6
2.1 Scope	6
2.2 Cross-SCC01 Board of Coordinators and Task Groups	6
2.2.1 Board of Coordinators	6
2.2.2 Task Group Replication	7
2.2.3 Task Group Dissemination	8
2.2.4 Task Group Monitoring	8
2.2.5 SCC01 Interaction towards international cooperation	9
2.3 SCIS Solution Booklets and corresponding articles	9
2.4 Smart City Expo Barcelona (19-21 November 2019, Barcelona)	11
2.4.1 Scope	11
2.4.2 GROWSMARTER Conclusions from the implementation of Low Energy Districts (18 November 2019, Barcelona)	12
2.4.3 Agora Session “The Journey: From Nearly Zero Energy Neighbourhoods to Positive Energy Districts” (20 November 2019, Barcelona)	12
2.4.4 Nordic Smart Cities Roundtable (20 November 2019, Barcelona)	12
2.5 UERA seminar “Building Collective Intelligence to Support Local Governments” (10 December 2019, Bolzano)	14
2.6 Triangulum webinar on “Citizen Engagement in Positive Energy Districts” (12 December, online)	15
2.7 EIP-SCC “City Representatives Meet Investors” Matchmaking Event (20 February 2020, Brussels)	15
2.8 URBIS Smart City Fair (2-3 September 2020, Brno)	16
3 Contribution to SET-Plan Action 3.2	18
3.1 SET-Plan Action 3.2 Stakeholder Group	18
3.1.1 Scope	18
3.1.2 PED Booklet	19
3.1.3 Expert Workshop on PED Framework (26 March 2020, online)	19
3.1.4 PED Agora (3 April, Lisbon)	19
3.1.5 PED European Reference Framework	20
3.2 SET-PLAN ACTION 3.2 Steering Committee Meeting and Implementation Working Group 3.2 (6-7 November 2019, Berlin)	20
3.2.1 Scope	20
3.2.2 Outcomes & Learnings	20



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 824260.

3.3 Interaction with EERA AISBL and EERA JP Smart Cities	22
3.3.1 Scope	22
3.3.2 EERA Policy Working Group and SUPEERA project	22
3.3.3 Contributions to Horizon Europe, the Green Deal and the Clean Energy Transition Partnership	23
3.3.4 Social and Governance Tools for PEDs	23
3.3.5 COST Action PED-EU-NET	23
3.3.6 EERA JPSC Special Issue #3	24
3.3.7 Energy-SHIFTS	24
3.3.8 EERA JP Smart Cities Partner Meeting and Energy Flexibility Workshop (10-13 December 2019, Bolzano)	25
3.3.9 EUSEW Sessions (June 2020, Brussels)	26
4 Conclusions	27
References	28



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List of Abbreviations

+CxC	+CityxChange or Positive City ExChange
DG ENER	Directorate-General for Energy
EC	European Commission
EERA JPSC	European Energy Research Alliance, Joint Programme on Smart Cities
EIP SCC	European Innovation Partnership on Smart Cities and Communities
ERRIN	European Regions Research and Innovation Network
FAC	Future Analytics Consulting, Ireland
INEA	Innovation and Networks Executive Agency
ISOCARP	International Society of City and Regional Planners
JPI UE	Joint Programming Initiative Urban Europe
LCCC	Limerick City and County Council
MAI	Municipality of Alba Iulia
MP	Mesto Pisek
NTNU	Norwegian University of Science and Technology
PEB/D/N	Positive Energy Blocks / Districts / Neighbourhoods
R&I	Research and Innovation
R2M	Research to Market
SB	Sestao Berri 2010 Sociedad Anonima
SCC01	Horizon 2020 Smart Cities and Communities call
SDG	Sustainable Development Goals
SCIS	Smart Cities Information System
SET	Strategic Energy Plan
SMO	Obshtina Smolyan (Smolyan Municipality)
TK	Trondheim Kommune
TRD3.0	Universitetskommunen Trondheim 3.0
VORU	Võru Linnavalitsus (Võru Municipality)
WP	Work Package
ZEB	Zero Emission Building
ZEN	Zero Emission Neighbourhood



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1 Executive Summary

+CityxChange actively pursues synergies with other relevant EU platforms and projects, facilitating collaboration and exchanging good practices. Partners will further leverage on their existing commitments in other EU initiatives such as the European Innovation Partnership on Smart Cities and Communities (EIP SCC), the EERA Joint Programme on Smart Cities (EERA JPSC), the Urban Europe Research Alliance (UERA) and the Covenant of Mayors (CoM), effectively linking +CityxChange to these EU-wide initiatives. This offers additional possibilities for dissemination and knowledge sharing and exchange.

This report describes the participation and lessons learned by +CityxChange partners in events organised by other SCC01 projects, SET-Plan Action 3.2, EERA Joint Programme Smart Cities, SCIS, EIP SCC, and other European networks during the third six-month period of the project, i.e., M13-18.

The report is Deliverable 9.8 of +CityxChange Task 9.2 “Extra-Project Cooperation with existing LHCs and FCs through clustering events and workshops run by existing SCC01 projects, EIP SCC, SCIS and other EU platforms”, in Work Package 9 “Inter-Project Collaboration and Clustering”. It complements Deliverable D9.7 “Report on Intra-Project Collaboration, Including Study Visits and Peer to Peer Workshops 3”.



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2 Interaction with other SCC01 Projects, SCIS and EIP-SCC

2.1 Scope

+CityxChange cooperates with other SCC01 projects, the Smart Cities Information System (SCIS) and the EIP-SCC Marketplace to anchor its experiences in a broader setting, get feedback by peers, and to share learnings that might help others achieve their goals faster and better - or at least avoid the pitfalls +CityxChange already has encountered.

2.2 Cross-SCC01 Board of Coordinators and Task Groups

+CityxChange participates in the online meetings of the Board of Coordinators (NTNU), and the Task Groups on Replication (R2M, co-chair), Communication & Dissemination (ISOCARP), Business Models and Finance (OV) and Monitoring (FAC and NTNU). These groups meet regularly in online meetings, as well as semi-annual face-to-face meetings back-to-back with smart city events, e.g. in Brno, Stavanger, and Barcelona.

2.2.1 Board of Coordinators

The cross-SCC01 Board of Coordinators is a valuable meeting arena for the SCC01 Project Coordinators, with monthly online and semi-annual face-to-face meetings. It enables us to get better connected to the other SCC01 projects, and to develop a joint collaborative approach towards SCIS and EIP-SCC.

The meetings include, amongst others, sharing of experiences regarding common challenges in implementation and funding of SCC01 activities, development and use of common tools, packaging of smart city solutions to promote scalability, preparation of joint activities in smart city expos in Brno, Stavanger and Barcelona, and strategic discussions regarding Horizon Europe, including the Mission on Climate-neutral and Smart Cities. In the past months, risk registration and mitigation due to COVID-19 has become a major point of discussion; being able to compare risk management practices across SCC01 projects, and to develop potential joint approaches in communication with the European Commission, is highly useful for +CityxChange.

Through the BoC, +CityxChange has contributed to the idea consultation for the intermediate H2020 Green Deal call for 2020, based on our project experiences of which are the most promising solutions to kick-start the EC Green Deal, with high visibility to European citizens.



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2.2.2 Task Group Replication

TG Replication aims to accelerate scaling up and replication of SCC01 projects, solutions and processes. In order to achieve this, the TG facilitates knowledge sharing on replication activities among the SCC01 projects, including commonly used roadmaps, toolkits and assessment techniques. In addition, the TG promotes cooperation among SCC01 projects to jointly overcome challenges and barriers, and to promote drivers for replication. At each meeting partners present the replication practices developed in different Lighthouse projects. The most recent presentations were from GrowSmarter, Triangulum and Smarter Together and some of the outcomes discussed were:

- Replication can be achieved by building on existing processes, city targets and plans;
- There is no turnkey solution, replication is only achievable when aligned with a city's problems and local context;
- Customer centric solutions and technology solutions require different approaches for replication.

The lessons learned from these project presentations and from the future presentations will be used to maximise replication across EU cities. +CityxChange will use this in its Task 8.2 on "Replication across EU cities".

The Replication TG is also working alongside the TG Business Models in developing a common action plan which, among other things, will focus on replication in the SCC01 fellow cities. We will feed back the action plan and following outcomes to the +CityxChange Follower Cities and partners in WP6 "+Followers".

In the past six months, we have also discussed how to increase alignment between the TG Replication and:

- The EIP-SCC Marketplace
- SCIS Solution Booklets (+CityxChange currently contributes to 2 Solution Booklets, on Citizen Engagement and Positive Energy Districts);
- EURO CITIES' Knowledge Society Forum, aiming to support cities' and citizens' access to the knowledge and information society;
- Local SEAPs / SECAPs of the Follower Cities, to promote replication of LHC and other relevant solutions;
- SET-Plan Action 3.2 and EERA JP Smart Cities.

These alignments are directly relevant for +CityxChange Task 9.2 "Extra-Project Cooperation with existing LHCs and FCs through clustering events and workshops run by existing SCC-01 projects, EIP SCC, SCIS and other EU platforms", in which we seek active cooperation with the many of the same platforms.



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2.2.3 Task Group Dissemination

ISOCARP participates in the TG Dissemination on behalf of +CityxChange.

This provides added value to +CityxChange in the form of coordination and joint approach for events, the sharing of invitations to webinars and similar events, coverage in newsletters of other SCC01 projects, resharing posts on social media, answering questions for new projects, and joining forces to improve overall impact presentation.

It is also very useful for us to understand the difference in scope between the SCC01 projects before and after 2018, the latter, including +CityxChange, having a large emphasis on Positive Energy Blocks and Districts as holistic concepts.

In the near future, we hope to be able to extend this towards organising joint webinars with other SCC01 projects, for example at the European Week of Regions and Cities, or similar events in which we can reach new audiences to disseminate joint impact. We also intend to invite other SCC01 projects to our +CityxChange learning sessions, for example to exchange experiences and approaches on creating PEDs in heritage districts, which is the main scope of the POCITYF project and of large interest for +CityxChange Follower and Lighthouse Cities.

2.2.4 Task Group Monitoring

+CxC participates in the newly formed Task Group on Monitoring, in close cooperation with SCIS. The Task Group facilitates the cross-project collaboration of responsables for monitoring and evaluation in each SCC01 project, aiming to improve and share:

- Common understanding on the scope and meaning of monitoring and evaluation, scope, evaluation boundaries, and monitoring protocols for quantitative as well as qualitative project outcomes;
- Mapping of Key Performance Indicators used across projects, aiming to harmonise them for better cross-project comparison and learning, and to identify gaps for new KPIs to be developed (e.g., related to Positive Energy Districts, qualitative outcomes, environmental, financial and societal KPIs);
- Facilitate reporting to SCIS, including discussion of appropriate data boundaries and scoping for SCIS reporting, as well as methodological differences, to find a common reporting approach for comparable results.

+CityxChange is particularly interested in sharing experiences related to the ex-ante and ex-post evaluation of cross-cutting issues, such as balanced gender representation, qualitative project outcomes, citizen science, open innovation, and integration of energy and mobility services. The project is, for example, currently developing metrics to be able to assess the impact of collaboration among the partners, as well as with local and international peers. Such metrics would help +CxX identify important insights in how to facilitate open innovation, feed these back into the project, and create shared value for all involved. Similarly, +CxX is looking for appropriate metrics that can support co-creation with



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citizens, to improve local energy transitions. Our intention is to learn from the SCC01 projects that started earlier and thus have a longer experience with what works and what does not, while engaging in active cooperation and sharing of learnings with SCC01 projects that started in 2017-2019, as these are responding to a similar call as +CxC and thus will face similar challenges.

2.2.5 SCC01 Interaction towards international cooperation

The EU-China Smart Sustainable Cities Event, organised on 17 December 2019 in Brussels and hosted by NTNU, brought together around 40 actors involved in EU-China Cooperation on sustainable urban development. The event was co-organised by the European Innovation Partnership on Smart Cities and Communities. Among the presenters was SCC01 project IRIS, represented by the City of Utrecht, to highlight their experience on how R&I projects can support and inspire public urban administration in their transition to urban sustainability.

The URBAN-EU-CHINA Platform has identified Collaborative Innovation as one of four main pillars for near-future cooperation between Europe and China (Wyckmans et al. (eds), 2019). Included in this pillar is a recommendation for China to provide a funding mechanism similar to Europe's Smart Cities and Communities programme in Horizon 2020, and to enable joint or aligned projects between the SCC01 projects in Europe and the Chinese New Areas. The concept of Positive Energy Districts is also of high interest for China, making a structured interaction between Europe and China on this topic even more relevant.

Similarly, there is a large potential for European SCC01 projects to cooperate with the Indian Smart Cities Mission, with its strategic components of city improvement, city renewal, and city extension as well as pan-city implementation of smart solutions (Smart Cities Mission, 2020). A meeting between the SCC01 projects, EIP SCC and the Indian Smart Cities Mission delegation was originally planned to take place during the Smart City Expo in Barcelona in November 2019, but could unfortunately not take place due to external circumstances. NTNU has presented +CityxChange and the H2020 SCC01 programme in India in February 2020, to the Indian Ministry of Housing and Urban Affairs, the World Bank, and other interested stakeholders. Further cooperation plans have been temporarily delayed due to COVID-19, but will be taken up again in Autumn 2020.

2.3 SCIS Solution Booklets and corresponding articles

During the Board of Coordinators meeting in Lyon in October 2019, SCIS made a call for involvement of Lighthouse Projects in the development of Solution Booklets, to share knowledge and support replication efforts. Among the topics selected were "Citizen Engagement" and "Positive Energy Districts", both of which are of high relevance for +CityxChange.



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In addition to the SCIS Booklets that already are available (SCIS 2020), the next booklets in line will deal with Citizen Engagement, Building retrofit, PEDs, SECAP development and Circularity. More booklets may follow depending on potential further collaborations with Lighthouse projects. The PED booklet will be overarching in character, referring to several of the other booklets.

The joint SCC01-SCIS-EIP SCC stand of the Smart City Expo in Barcelona in November 2019 provided an excellent opportunity to follow up on this initiative, and to find other SCC01 projects with whom to cooperate on these topics. Spending time at the booth, hearing each other explain our projects to visitors and engaging in open dialogue in between sessions, enables us to get a deeper insight in the various projects, and to identify joint interests and priorities. Based on these dialogues, +CityxChange confirmed its interest to contribute to two upcoming SCIS Solution Booklets, in cooperation with other SCC01 projects.

The Solution Booklet on Citizen Engagement and Co-Creation is a cooperation between SCIS, SCC01 projects +CityxChange and IRIS, the CitizenCity project and the EIP SCC Action Cluster on Citizen Focus. The Solution Booklet builds, amongst others, on the projects' shared interest in creating a structured methodological approach regarding co-creation with citizens, including use of referential theories such as Arnstein's ladder (1969), open innovation and design thinking. The Booklet includes references to four +CityxChange deliverables (D3.1, D3.2, D3.3 and D9.1), as well as concrete solutions from Lighthouse Cities Limerick and Trondheim. The Solution Booklet was finalised on 30 April 2020, and published on 8 May 2020 (Jaubin et al. 2020).

Based on these common interests, the projects agreed to continue to cooperate on developing the structured framework for citizen co-creation. This has resulted, amongst others, in a joint abstract - to be developed into a full paper - to the third Special Issue of the EERA Joint Programme on Smart Cities. The Special Issue forms part of the Energies open access scientific journal, and will be published later in 2020 under the topic "Smart Cities and Positive Energy Districts: URBAN PERSPECTIVES in 2020". The paper is called "Reframing urgencies towards positive-energy, socially innovative cities through artistic practices", and will be based on cross-cutting analysis of the experiences of four European projects: +CityxChange, IRIS, CitizenCity and COST Action CA18136 European Forum for Advanced Practices (EFAP).

These discussions are taken forward towards the preparation for a new KIC on Creative and Cultural Industries (CreativeKIC, EIT-KIC-CCI).

We are also discussing whether we should propose to develop a new cross-SCC01 Task Group on Citizen Co-Creation as a Task Group for a more structured approach to this topic, to compare methodological frameworks, to share hands-on experiences, and to mutually improve citizen engagement practices in our projects. With increasing attention for this challenge in the most recent SCC01 calls, such a Task Group would be highly relevant to gather and analyse experiences from all 17 former and current SCC01 Lighthouse projects,



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in cooperation with SCIS and the EIP SCC Citizen Focus Action Cluster, as a firm basis for new initiatives in Horizon Europe.

A second Solution Booklet with +CityxChange contributions is currently being developed in cooperation with SCIS and SCC01 project ATELIER, on the topic of Positive Energy Districts.

2.4 Smart City Expo Barcelona (19-21 November 2019, Barcelona)

2.4.1 Scope

Several partners of +CityxChange participated in the Smart City Expo in Barcelona with a joint stand with the SCC01 projects, SCIS and EIP SCC, and organised or made active contributions to several workshops, events, posters and presentations: NTNU, ISOCARP Institute, Limerick City and County Council, Trondheim municipality, Sestao Berri, Písek, Alba lulia, and IOTA Foundation. In addition, Trondheim municipality and NTNU had a joint stand on Trondheim3.0 as part of the Nordics stand, in which +CityxChange was promoted by video, presentations, brochures and expert talks.

Amongst others, the Project Coordinator, Solutions providers, Lighthouse and Follower Cities presented and discussed +CityxChange in a workshop on Positive Energy Districts organised by the Austrian Ministry for Transport, Innovation & technology (BMVIT), an Agora session “from nearly Zero energy neighborhood to positive energy districts” organised by SCC01, a Spanish Smart Cities seminar organised at the European Smart Cities and Communities stand, a Nordic Smart City Roundtable side event, and a presentation of +CityxChange and of the 10 Nordic Lighthouse Cities at the Nordics stand.

Originally meetings with the Indian Smart Cities Mission representatives was planned for 19 and 21 November, including Mr. Rahul Kapoor, Director of Smart Cities at the Ministry of Housing & Urban Affairs (MoHUA), Government of India. Due to external circumstances, however, this meeting could not take place. NTNU has met with Mr. Rahul Kapoor and his team early February 2020, to discuss collaboration between the Indian Smart Cities Mission and +CityxChange, and potentially additional SCC01 projects.

The ability to meet and discuss face to face with the other SCC01 projects, SCIS and EIP SCC is the main points of attraction of the Smart City Expo Barcelona. Using the Expo as a venue for organising SCC01 Board of Coordinators, Task Group and SCIS meetings makes this a very effective meeting place. Organising workshops and stands also enables us to gain entrance tickets free of charge for some participants. However, we are aware that the otherwise high cost of the Expo may cause a barrier for additional partners to participate, and we are cautiously assessing whether participation is worth the cost.



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2.4.2 GROWSMARTER Conclusions from the implementation of Low Energy Districts (18 November 2019, Barcelona)

During the Smart City Expo in Barcelona, the Barcelona City Council with the support of the Industry Partner NATURGY organised a seminar in which the GrowSmarter SCC01 project, together with invited guests, presented their conclusions on Low Energy Districts.

The agenda included presentations and discussions on policy strategies related to the Energy Performance of Buildings Directive (EPBD), as well as case studies from SCC01 projects GrowSmarter and Remourban, as well as selected other European projects.

Among the presenters was Sestao Berri, Follower City in +CityxChange, to showcase and discuss their work on efficient energy renovation in the EU-Gugle project, and to identify how the results of this project have contributed to participation in +CityxChange.

Additionally, the +CxC Project Manager participated in a panel discussion on refurbishments with speakers from GrowSmarter, Remourban, and SCIS, and discussed existing and planned pathways within the project in LHCs and FCs.

This seminar was also important as it shows concrete mechanisms for replication and scaling up from one project to another, most likely through the participation of some of the same partners, but also by making project learnings on what works, and what does not, explicitly available to other stakeholders through concise presentations and discussions across projects. As such, the seminar was closely linked to the cross-SCC01 Task Group on Replication.

2.4.3 Agora Session “The Journey: From Nearly Zero Energy Neighbourhoods to Positive Energy Districts” (20 November 2019, Barcelona)

During this session, four SCC01 projects (REMOURBAN, mySMARTLife, MAKING-CITY and +CityxChange) discussed the evolution from nZEBs to PEDs. LCCC and Písek participated in this session, to give their perspectives as Lighthouse and Follow Cities.

2.4.4 Nordic Smart Cities Roundtable (20 November 2019, Barcelona)

NTNU hosted a Nordic Smart Cities Roundtable as a cooperation between +CityxChange and the EIP SCC Smart City Guidance Package (Borsboom-Van Beurden et al. 2019). The 3-hour Roundtable event was organised by the Nordic Pavilion (Business Finland, Cleantech Scandinavia, CLEAN and Innovation Norway), as a side event of the Smart City Expo Barcelona.

The Smart City Guidance Package supports the transformative actions foreseen by city partners in close collaboration with their local stakeholders (citizens, NGOs, researchers, businesses and other public sector partners), throughout the entire transformation process



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from visioning to anchoring, planning, piloting, improving, implementing, managing, scaling up and replicating. The aim of the SCGP is to increase and substantiate the societal impact of urban investments and place them in a proper long-term perspective reflecting the lifecycle of investments in the built environment.

During our two Roundtable sessions, we discussed with participants from private and public sector as well as academia how to adjust the roadmap methodologies of the SCGP to the Nordics in terms of legal and regulatory contexts, spatial planning procedures, ICT, transport and energy infrastructures, and the Nordic culture of citizen participation.

The discussions have led to interesting results for +CityxChange and the Smart City Guidance Package, though not specifically oriented towards Nordic implementation.

A first point of discussion was centred on *testbeds* for small-scale prototyping and proof of concept of innovations in a controlled environment, that can be replicated in other markets and by others. We discussed the challenges creating and managing such testbeds locally, as well as integrating them in national and international ecosystems to substantiate and monitor impact in scalable learning environments. Pilots are usually quite heavily subsidized, how to handle transition to a regular market?

A second point of interest was *co-creation in open innovation ecosystems*: how to create and cooperate within clusters of companies, municipalities, and academia to produce knowledge and joint results that can be used in society and the market. Everyone has one piece of the puzzle, how do we create cultures that allow us to bring these together - within and beyond smart city lighthouse projects? Peer to peer networks are also important, solutions will not just transfer easily between cities and countries; how do we enable co-creation across geographically distributed partners?

A third focal point was the creation of *customer journeys* of smart city processes for the private and public sector. The ones that succeed fastest, are the ones that have a good overview of the demand side. If we have a good idea of what the “customer” (i.e., target group for our documents) goes through, we will know how to address their needs better, to define concrete and effective actions to fulfil their ambitious targets, and to make the results accessible. What we need is a pathway that would tell one what to do when, by whom, and how. Currently, for each phase, one needs to go through the same steps again and again, with legal challenges, between experiments, procurement, public-private innovative cooperation. Cities and solution providers are on a tight schedule, they have no time to re-do these things. Can we make the experimentation cycles more efficient?

The open innovation challenge is further explored within +CityxChange in Deliverable 9.7, as well as abstracts submitted to ENERGIES (Special Issue by EERA Joint Programme Smart Cities, see Section 3.3.6), as well as a review paper submitted to the ISOCARP Congress 2020 (both currently under review).

The customer journey concept is taken onwards within the +CityxChange learning sessions and corresponding white papers and guidance documents (Task 7.4). Amongst others, we



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have started to organise a set of learning sessions on “Pathways to PEBs” in which our Lighthouse and Follower Cities explain how they create their processes, anchor their decisions and decide on priorities in order to achieve PEBs, and ask questions to the fellow cities and solution providers to help them onwards. This spurs on detailed discussions e.g. regarding integration of energy sources, but also on how to engage with local building owners, and how to interact with regulatory authorities. These learning sessions are paired with dedicated investment workshops to identify potential funding solutions for each specific local PEB. Summaries of these sessions will be used to inform the upcoming SCIS Solution Booklet on Positive Energy Districts (see Section 2.3), the PED Reference Framework of SET-Plan Action 3.2 (see Section 3.1.5) and the T7.4 Guidance documents.

2.5 UERA seminar “Building Collective Intelligence to Support Local Governments” (10 December 2019, Bolzano)

On 10 December, UERA in collaboration with EIP SCC, JPI Urban Europe, SET-Plan Action 3.2, SCC-01 projects Smarter Together and Stardust, and TOUR4EU, organised a full-day seminar on “Societal, Research and Innovation Challenges in Integrated Planning and Implementation of Smart and Energy-efficient Urban Solutions - How to Support Local Governments across Europe?”. The seminar was organised as a side event during the SPPCR Conference 2019, alongside events by EERA JP Smart Cities (see Section 3.3.8). The aim of the seminar was to emphasise the perspective of integrated planning in smart city projects, as input to UERA and the EIP SCC Action Cluster themselves, as well as the HEU Mission Board on Climate-Neutral and Smart Cities and the Driving Urban Transition Partnership. NTNU was invited to present experiences regarding integrated planning of positive energy districts from the +CityxChange project. The agenda also included presentations by SCC01 projects STARDUST, SINFONIA, Smarter Together and REPLICATE.

This seminar perspective gave us the opportunity to extract and present cross-cutting results from the citizen engagement, energy, mobility and ICT tasks of +CityxChange, and to reflect on the importance of open innovation processes with the public and private sector, academia and citizens, to enable integrated processes and solutions beyond delivering each individual task and work package. During the panel debate and group sessions, it became clear that most projects start with high ambitions of integrated solutions, but find it difficult to keep this perspective in focus for 5 years amidst challenges regarding budgets, procurement, regulations, communication and more. However, drawing on important elements from collaborative governance, open innovation and similar cooperative innovation frameworks, and comparing experiences across projects and organisations, helps us to avoid common pitfalls and to learn from each others’ successes and challenges. Based on this presentation, +CityxChange was invited to write a reflection paper to the Italian Urban@IT report on Sustainable Urban Development, which is currently under review.



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2.6 Triangulum webinar on “Citizen Engagement in Positive Energy Districts” (12 December, online)

In this webinar, around 30 participants from across Europe came together to discuss and share experiences on citizen engagement in the different Lighthouse Cities. LCCC represented +CityxChange in this webinar, as one of three speakers, alongside Stavanger and Eindhoven (both Triangulum Lighthouse Cities).

In LCCC's presentation on the topic of “Public Engagement: Do we really engage?”, they introduced the challenges that Limerick has with the historical building stocks in the heritage area of the city, where most of the buildings are more than 200 years old and are protected by national law. They introduced Limerick's vision focused on – but not limited to – creating a resilient city by increasing the use of clean energy sources; repopulating the historic city centre by making it more attractive; new Smart Community Cooperation / Participation Models across all sectors.

On public engagement, the presentation focused on reasons that motivate people to get engaged, principles of engagement and types of engagement and bringing it back to +CityxChange with a few general comments on how we are dealing with the co-creation process within the project. A few remarks were made especially in the traditional ways of public involvement processes, where the focus is mainly on informing the citizens instead of making them part of the development process, instilling in this way a sense of ownership.

Some actions that Limerick is using to engage citizens in the participation processes within the +CityxChange project, were introduced. They range from designing a coherent social media campaign strategy, definition of clear message on what to communicate to the general public, using simple visualizations to explain complex terminology, innovative event format, providing open data platforms, etc.

2.7 EIP-SCC “City Representatives Meet Investors” Matchmaking Event (20 February 2020, Brussels)

This was the first EIP-SCC matchmaking event of a planned series by the Marketplace initiative (EIP-SCC, 2020). Participants included representatives of the European Commission, SCC01 projects, cities, industry, and finance, under the theme “City Representatives meet Investors”. The series forms part of EIP-SCC's new “Explore, Shape, Deal” approach for proposal development and financing. The event covered overall funding for standard areas of smart city approaches on mobility, ICT, and energy, as well as city development and Fellow City opportunities.

Representatives from NTNU and Sestao joined the event. We used the opportunity to engage with other SCC01 projects, including the new SPARCS, POCITYF and ATELIER projects, and participated in roundtable sessions on PEB/PED development with SET-Plan Action 3.2. We further discussed dissemination and data strategies with the Marketplace



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and SCIS teams. Here we could share our approach and learnings 1,5 years into the +CityxChange project, and build stronger relations for knowledge exchange specifically with other projects working on PEDs

Sestao participated with a focus on investment opportunities and joined matchmaking sessions. They had several individual talks with solution providers and investors to explore options for the Sestao PEB and regeneration pathways. For Sestao Berri, participating in the event was very useful. Valuable contacts were made with entities that might potentially help finance various +CityxChange related projects (among the projects that were discussed and garnered interest were: the energy efficient restoration for the Escuela de Aprendices and the Casa de Socorro Buildings, the solar PV farm, the sustainable school project). Some of the contacts also had experience with financing energy efficient improvements in steel plants, which opened the window for inviting local industry to consider implementing some of these measures. Overall, it was uplifting to see such an interest to invest in our projects and this translates towards helping us consider more ambitious actions than originally thought, such as considering to implement Passivhaus standards for the restoration of our buildings and potentially making the solar farm bigger than the minimum size needed for the +Cityxchange project alone.

The exchanges were valuable for overall PEB work and specific investment needs. One take-away message is that there is still a gap in financing. While the projects aim to build and deploy innovative solutions, investors are looking for bankable and rather standardised investment-ready projects. This last part will have to be taken up in individual project pipelines and replication tasks, but also in the respective BoC groups.

Based on the conversations between SCC01 project partners and the financial sector that took place during this event, the idea arose to write a position paper to bring attention to the challenge of scaling successful smart city solutions, and of matching these efforts with available funding - and to extend available resources towards more flexible and resilient approaches. The leader of the SCC01 Board of Coordinators initiated a position paper on this topic, which was signed by +CityxChange and other SCC01 projects.

2.8 URBIS Smart City Fair (2-3 September 2020, Brno)

+CityxChange has committed to participate in the URBIS Smart City Fair (pending COVID-19) with at least two contributions.

POW, leader of WP2, will participate in the interactive workshop on the topic of P2P Energy Market Platforms, organised by SCC01 projects POCITYF and SPARCs as a side event of URBIS. The workshop will be composed of expert presentations (cities, DSOs, ESCOs, R&D, etc.) and a hands-on discussion session on the following questions:

- How can P2P market platforms underpin an inclusive and fair energy transition?
- Are P2P market platforms truly a win-win situation to all its stakeholders (municipalities, citizens, DSOs, aggregators, etc.)?



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- Will P2P market platforms be part of the future smart city? How will they serve the need for adaptation and resilience in case of management of unexpected crisis and risk situations?
- How to successfully deploy P2P platforms while ensuring a good replication and upscaling potential?

TK, POW and NTNU will present their proposal for a new EIP-SCC initiative on regulatory frameworks during the EIP-SCC sessions that will take place alongside the URBIS Fair. The proposed EIP-SCC Initiative has been under development since the first talks with EIP-SCC on this topic in December 2019 in Bolzano. The Initiative is planned to be integrated in the Action Cluster on Integrated Planning, Policy and Regulation. It aims to *“support the transition towards regulatory and legal frameworks that enable the societal planning, implementation and management of smart and climate-neutral districts and cities - for and with the citizens, local businesses and other stakeholders. Specific emphasis will be placed on broadening the opportunities and incentives for city administrations to fulfil their climate and energy ambitions, and to become positive energy cities in the future”* (Myrstad et al. 2020)



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3 Contribution to SET-Plan Action 3.2

SET-Plan Action 3.2 Smart Cities and Communities aims to create 100 Positive Energy Districts by 2025. +CityxChange contributes to this Action by sharing knowledge regarding definitions, boundary conditions and Key Performance Indicators, as well as experiences from the participating Lighthouse and Follower Cities on planning and implementing Positive Energy Blocks and Districts. SET-Plan Action 3.2 is coordinated by the Austrian Federal Ministry of Transport, Innovation and Technology (BMVIT), and managed by Joint Programming Initiative Urban Europe (JPI UE).

+CityxChange contributes to SET-Plan Action 3.2 both directly as an SCC01 lighthouse project, and through European networks such as EERA Joint Programme Smart Cities and the European Innovation Partnership on Smart Cities and Communities. In addition, NTNU (Annemie Wyckmans) is R&I Chair of the Stakeholder Group to SET-Plan Action 3.2, which enables her to participate in the SET-Plan Action 3.2 Steering Committee as an observer. This position enables us to align R&I efforts across European platforms; the SET-Plan Action 3.2 Stakeholder Group includes, amongst others, representatives from SCC01 projects, the EERA Joint Programme Smart Cities, the Urban Europe Research Alliance, the European Construction Technology Platform, and ERRIN.

3.1 SET-Plan Action 3.2 Stakeholder Group

3.1.1 Scope

In 2020, SET-Plan Action 3.2 is making a major effort to engage more urban stakeholders in the planning and implementation of Positive Energy Districts. This includes, amongst others, mobilisation of ecosystems of relevant stakeholders in each country, and creating events for beginners and more advanced professionals in which experiences, practices and knowledge can be shared.

Based on experiences from +CityxChange, we have suggested specific topics for discussion during future events, such as regulatory frameworks, hybrid public-private funding models, and how to engage local building owners.

We have also given input regarding key challenges and barriers that need to be addressed in order to create viable PEDs, to the shaping of the PED Pilot Call that was issued in April 2020 (JPI Urban Europe / SET-Plan Action 3.2 2020b). Unfortunately, the Pilot Call only includes Austria, Belgium, Czech Republic and Sweden. The local eligibility rules in the Czech Republic exclude +CityxChange Follower City Písek from participating in the call. As such, +CityxChange is not able to apply for funding in this Pilot Call. We do hope that the next joint call will be broader in terms of scope of participants, enabling +CityxChange partners to team up with partners from our own and other projects to create additional, cross-cutting impact.



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3.1.2 PED Booklet

+CityxChange has contributed to the PED Booklet "Europe towards Positive Energy Districts", created by JPI Urban Europe for SET-Plan Action 3.2 (JPI Urban Europe / SET-Plan Action 3.2 2020a).

The booklet currently includes 60 cases, including three cases by +CityxChange (Limerick, Trondheim and Vöru). More +CityxChange cases will be added after the Follower Cities complete their feasibility studies.

The PED Booklet provides an interesting overview of projects with PED ambitions, which, combined with the Stakeholder Group, provides a useful arena for discussion and comparison with peers. The booklet produced by SET-Plan Action 3.2 currently does not include qualification of the described cases, nor any common Key Performance Indicators or comparative analysis of their performance. We hope that this functionality can be developed in the near future, in cooperation with the SCC01 projects and SCIS, that have been gathering on-the-ground, verified data regarding smart city projects, PEBs and PEDs across numerous projects.

3.1.3 Expert Workshop on PED Framework (26 March 2020, online)

Based on discussions within the SET-Plan Action 3.2 Implementation and Stakeholder Groups, JPI Urban Europe is developing a White Paper called "PED Reference Framework for Positive Energy Districts and Neighbourhoods" (JPI Urban Europe / SET-Plan Action 3.2 2020c). On 26 March, they invited selected experts to discuss the operationalisation of this framework to best fit cities' needs and priorities. Several +CityxChange partners participated in the expert workshop.

During the expert workshop, we discussed the updated draft of the PED Framework, the key findings from the national consultation process, and the next steps for further developing and operationalising the framework.

While the expert workshop originally was set to be held in Brussels, it was moved to an online format due to COVID-19.

The outcomes of the expert workshop were to be used as the basis for the PED Agora workshop on 3 April in Lisbon. The Agora workshop was unfortunately cancelled.

3.1.4 PED Agora (3 April, Lisbon)

+CityxChange was originally planning to attend the PED Agora Workshop on 3 April in Lisbon, to exchange PED experiences with other solution providers, cities, academia and civic society organisations. Through the SET-Plan Action 3.2 Stakeholder Group, NTNU contributed to shaping the Agora session.

The PED Agora session was cancelled due to COVID-19.



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3.1.5 PED European Reference Framework

SET-Plan Action 3.2 is also continuing to map existing projects that aim to implement Positive Energy Districts, and has developed a Reference Framework for Positive Energy Districts to support joint efforts across Europe (JPI Urban Europe / SET-Plan Action 3.2 2020c).

We have invited the authors to present the Reference Framework during an online PED Talk on 8 May 2020, for +CityxChange partners and additional Norwegian stakeholders, and to discuss how our on-the-ground experiences in +CityxChange and similar projects, may inform the operationalisation of the Reference Framework in the near future.

3.2 SET-PLAN ACTION 3.2 Steering Committee Meeting and Implementation Working Group 3.2 (6-7 November 2019, Berlin)

3.2.1 Scope

During this meeting, the SET-Plan Action 3.2 Steering Committee discussed the policy coordination and progress of the European PED programme and decided on next steps. The R&I, Cities and Industry Chairs gave feedback from the SET-Plan Action 3.2 Stakeholder group. Important discussion points were, amongst others, the progress of consultations among the Member States and Associated Countries, to endorse the development of a common PED framework definition, as a basis for future joint calls. In addition, the co-funded Horizon Europe Partnership on Sustainable, Smart and Inclusive Cities and Communities (now called “Driving Urban Transitions”) was presented, and the contributions from European platforms such as EERA Joint Programme Smart Cities, the SCC01 projects, and others, were analysed.

Back to back with this meeting, a kick-off meeting was organised for the PED City Panel, in which cities from across Europe discuss their needs, challenges and priorities in order to create PEDs.

3.2.2 Outcomes & Learnings

By having a PED City Panel by and for cities, SET-Plan Action 3.2 aims to make more cities interested in Positive Energy Districts, and to lower the threshold for cities to engage in this ambition. The PED City Panel consists of cities that already have generated experience towards creating PEDs, as well as cities at the very start of their journey. Together, these cities will help SET-Plan Action 3.2 to identify key challenges and prioritise activities.

One of the key messages of the cities during the kick-off meeting, was that they are ready to get going - they would prefer support for implementation, both in terms of logistics, funding and evidence-based approaches. Closer cooperation regarding public-private partnerships



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and business models to develop and run PEDs, including funding sources from public and private sources as well as crowdfunding, was also high on the priority list. And, above all, a precise PED definition with performance criteria that will enable the cities and their stakeholders to prioritise investments.

The cities' recommendations will also help the customisation of R&I to support cities' efforts. As such the PED City Panel forms a complementary mechanism to the SCC01 Cities Task Group, in which Lighthouse and Follower Cities learn from each other.

In addition to the PED City Panel, a PED Mobilisation and Replication Group was initiated, to reach out to larger national networks of cities and enable them to share experiences across national boundaries, thus supporting replication. The PED Agora forms a platform for exchange and learning among a broader range of urban stakeholders.

The PED City Panel, Mobilisation and Replication Group and Agora have obvious parallels to the cross-SCC01 Task Groups and the EIP SCC in terms of content and functionality. They have a broader scope than the SCC01 Task Groups, though, as they are open to cities and stakeholders beyond those that have received funding from the H2020 SCC01 programme. In addition, the SET-Plan Action 3.2 groups are managed by JPI Urban Europe, which enables them to function as informal advisory groups towards the funding bodies of Member States and Associated Countries linked to JPI Urban Europe. SET-Plan Action 3.2 has engaged in communication with DG ENER, SCIS and EIP SCC to align activities and identify complementary actions.

Due to their complementarity in terms of content, stakeholders and functionality, SET-Plan Action 3.2 activities are highly useful for +CityxChange. Representatives from SCC01 projects that participate in the SET-Plan Action 3.2 Stakeholder group, including +CityxChange, SPARCS and Atelier, are giving feedback during each meeting regarding potential points of connection with the SCC01 Task Groups and Board of Coordinators.

Amongst others, it was discussed that the Follower/Fellow Cities of the SCC01 projects should be excellent candidates for the SET-Plan Action 3.2 PED Programme, including joint calls, City Panel and other support measures.

The topic of smart cities and positive energy districts is for the time being part of 2 Horizon Europe Partnerships under development: "Sustainable, Smart and Inclusive Cities and Communities" and "Clean Energy Transition". Potential contributions to both partnerships and their complementarity were discussed during the Berlin meeting. One of the main advantages of SET-Plan Action 3.2, as managed by JPI Urban Europe, is that it has the experience and capacity to include cities that are not yet engaged in the H2020 SCC01 programme, to lower the threshold for their participation. This includes cities and stakeholders in the Widening Countries.



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NTNU has registered to participate in the JPI Urban Europe AGORA Virtual Dialogue “From ambition to local action: Co-Designing a programme for urban research, innovation and experimentation” that will take place on 5-6 May 2020.

3.3 Interaction with EERA AISBL and EERA JP Smart Cities

3.3.1 Scope

EERA JP Smart Cities is an official stakeholder in the SET-Plan Action 3.2, and EERA JPSC partners are involved in all SCC01 projects. The Project Coordinators of the 2018- and 2019-funded SCC01 projects, are all EERA JPSC partners, and NTNU leads the EERA JPSC.

EERA JPSC is developing a strategic research agenda for Positive Energy Blocks, Districts and Cities, to support SET-Plan Action 3.2 as well as the upcoming Mission on Climate-Neutral and Smart Cities and the Urban Partnership in Horizon Europe. As a concerted effort between European universities and RTOs, the strategic research agenda will provide a scientifically valid and practically viable methodology (bridging science and practice), a systemic dimension (merging technical, spatial, regulatory, innovation, economic, social and other perspectives), and a mixture of participatory, practice-based, transformative, experimental and technical research, to support the real-time and future challenges European cities experience in their ambitions to develop, scale up and replicate Positive Energy Blocks, Districts and Cities.

3.3.2 EERA Policy Working Group and SUPEERA project

As coordinator of EERA Joint Programme Smart Cities, NTNU participates in the EERA Policy Working Group. Through the Policy Working Group, we receive up-to-date information regarding the development of Horizon Europe and its Missions and Partnerships, the European Green Deal programme, and other important European strategy developments such as the EU Climate Plan.

The EERA Policy Working Group is closely linked to the SUPEERA project (Grant Agreement nr. 949125), aiming to support the SET-Plan and the clean energy transition European by promoting cross-cutting collaboration in European research and innovation. The SUPEERA project is organising a series of webinars to promote the integration of research and innovation challenges in European programmes, including Horizon Europe and the Green Deal. The first webinar dealt with the European Green Deal, with speakers from European Commission Directorates for Research and Innovation, and for Energy analysing opportunities for research in the clean energy transition.

This information is used to fine-tune the organisation of the +CityxChange programme, for example to give feedback from on-the-ground experiences in the +CityxChange project into the ongoing development of Horizon Europe.



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3.3.3 Contributions to Horizon Europe, the Green Deal and the Clean Energy Transition Partnership

Where possible, EERA makes recommendations for the development of Horizon Europe, the Green Deal and the Clean Energy Transition Partnership (CETP). The CETP is a Cofund Partnership, with Member States and Associated Countries as the process owners.

NTNU feeds important learnings from +CityxChange into EERA's recommendations regarding the needs for research and innovation in Horizon Europe. Our recommendations include cross-cutting challenges related to Positive Energy Districts and Cities, such as regulatory, investment, spatial, social and technical perspectives, and the importance of a holistic sector coupling approach, balancing technological and social innovation, in the clean energy transition. In particular, we have promoted the use of urban living labs as boundary-spanning spaces to test the clean energy transition, aiming to accelerate the social innovation for climate-neutral and smart cities, and the emerging role of researchers to facilitate the co-creation and prototyping needed to achieve a climate-neutral Europe by 2050.

This work also builds on SET-Plan Action 3.2. However, while the SET-Plan has a perspective of 2030, the HEU CETP will also take into consideration the 2050 perspective.

3.3.4 Social and Governance Tools for PEDs

Late 2019, EERA JPSC decided to split their strategic module on PED Tools in two, one emphasising technical tools, while a second group analyses social and governance tools for PEDs (e.g., citizen engagement, governance, spatial planning/integration, learning/upscaling, decision making, financial, social acceptance). The second group is led by TNO and includes, amongst others, mapping of tools and how they are used, gathering examples and experiences from other European and national projects, and analysis of gaps where more research is needed. NTNU contributes to this work, building on the experiences of +CityxChange, and feeding new findings from this group back into the project.

3.3.5 COST Action PED-EU-NET

In Autumn 2019, EERA JPSC created and submitted a proposal for a COST Action to create a "European Network on Positive Energy Districts". The proposal was led by Fraunhofer ISE. NTNU contributed to the proposal as leader of EERA JPSC and with on-the-ground experiences of the +CityxChange project. We invited +CityxChange Follower Cities and EAP to join the proposal - other +CityxChange partners will be linked to the project once it commences.

In Spring 2020, we were notified that the COST Action proposal was approved. It will officially start in Autumn 2020, after 7 participating countries will have signed the Memorandum of Understanding, including at least 4 Inclusiveness Target Countries. In



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Norway, NTNU has gathered the four universities and research institutes that participate in EERA JPSC, and that have important experiences with smart city and Positive Energy District projects: University of Stavanger, University of Bergen, SINTEF, and NTNU. In the next months, NTNU will extend this Norwegian network towards the Nordic Edge Innovation Cluster on Smart Cities (originating from SCC01 project Triangulum), Smartbyene, the Norwegian cluster of 14 smart municipalities, and the Norwegian solution providers of +CityxChange.

The COST Action will give us an opportunity to build new evidence-based research combining resources from innovation projects and scientific communities. The Action will provide additional travel funding and opportunities for short term scientific missions, and will enable us to promote in particular the younger researchers that are linked to +CityxChange and similar smart city projects. For the Norwegian Management Committee, for example, we nominated two promising postdoctoral researchers with hands-on experience of +CityxChange and other smart city research and practice.

3.3.6 EERA JPSC Special Issue #3

EERA JPSC is preparing its third Special Issue, on “Smart Cities and Positive Energy Districts: Urban Perspectives in 2020” in the ENERGIES open access scientific journal. The topic and scope were chosen to be able to showcase the role of research and researchers in the H2020 SCC01 and similar local or national projects.

+CityxChange has contributed with 3 abstracts, on “Reframing urgencies towards positive-energy, socially innovative cities through artistic practices”, in cooperation with SCC01 project IRIS and EIP-SCC initiative CitizenCity and Action Cluster Citizen Focus, “Enriching the concept of PEDs – What can we learn from the planning and implementation of PEDs in Norway?”, based on our 13 March PED Talk on definitions and regulatory frameworks (see Wyckmans et al. 2020, Section 3.3), and “Improving Risk Management through Collaborative Governance - Lessons learned from the +CityxChange smart city lighthouse project”, based on project experiences with risk management and mitigation due to COVID-19.

We have not yet received feedback on whether these abstracts are accepted to be developed into full articles.

3.3.7 Energy-SHIFTS

NTNU forms part of the Energy-SHIFTS Working Group on Smart Consumption. The aim of this group is to guide the European Commission on the role and potential contribution of Social Science and Humanities in smart consumption as a European priority area for the SET-Plan. The recommendations of the Working Group will be submitted to DG RTD units on ‘Ecological and Social Transitions (C5)’ and ‘Clean Energy Transition (D1)’.

NTNU’s contribution to the horizontal scanning survey that was performed by Energy-SHIFTS in Spring 2020, with three recommended research questions that are very



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pertinent for +CityxChange when starting to implement communityxchange demonstration activities in the Lighthouse and Follower Cities:

- How may co-creation and open innovation, empowering citizens to come together to discuss, test, fail, try again and eventually find good solutions for their local environment, be used as key drivers towards smart and sustainable consumption?
- How may the inclusion of the arts, creative and cultural industries, generate possible new pathways to address the complexity of smart, sustainable, positive energy cities attuned to citizens' and local businesses' interests?
- How may innovation by citizens be nurtured and supported to contribute to value and job creation, in addition to more sustainable consumption?

Based on the suggested research questions of all 31 members of the Working Group and the respondents to whom they forwarded the survey, the Working Group will in May-June set priorities among the research questions and their justifications, and compose a joint set of recommendations.

3.3.8 EERA JP Smart Cities Partner Meeting and Energy Flexibility Workshop (10-13 December 2019, Bolzano)

The semi-annual partner meeting of EERA JP Smart Cities was held in Bolzano, back-to-back with the Smart and Sustainable Planning for Cities and Regions conference (SSPCR), in which also the EIP SCC Action Cluster on Integrated Planning, Policy and Regulations, and the Urban Europe Research Alliance were organising meetings and events. This enabled us to participate in each others' activities, learn from each other, and build plans for future cooperation.

During the partner meeting of EERA JPSC, we organised an open workshop on energy flexibility, building on the development of the PED Definition working document of Spring 2019 (see Wyckmans et al. 2019, Section 3.1). After an introduction by NTNU, framing the challenge of supporting cities in their development of PEDs, the need for energy flexibility was discussed, with suggested steps for 2020 for EERA JPSC and SET-Plan Action 3.2. EERA JPs ESI (Energy Systems Integration) and E3S (Energy, Economy and Society) presented potential for cooperation on energy flexibility, both in terms of holistic approaches for sector coupling, and from the perspective of social sciences and humanities.

In addition, we organised sessions in which partners could introduce new projects or project results. Amongst others, the new SCC01 project POCITYF was presented by EERA JPSC partner EDP, as well as updated results from the MAtchUP project by EERA JPSC partner VTT, the COST-Action proposal PED-EU-NET, led by Fraunhofer ISE (see Section 3.3.5) and the new IEA Annex 83 on Positive Energy Districts, led by VTT.

In addition to the topic of Positive Energy Districts itself, we discussed the emergence of a new role for research and researchers in smart city projects, as facilitators of the boundary-spanning cooperation necessary to achieve Positive Energy Districts and Cities in



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practice. This topic will be further developed within EERA JPSC and within +CityxChange, that for the time being still is the only SCC01 project led by a university.

3.3.9 EUSEW Sessions (June 2020, Brussels)

+CityxChange contributes to two sessions for the European Sustainable Energy Week, scheduled for end of June 2020.

NTNU will chair and Trondheim municipality will present during a session on “Stakeholder Engagement in Positive Energy Districts: What can we learn from existing models?”, organised by EERA JP Smart Cities, REScoop.eu (European federation of citizen energy cooperatives), Trondheim Municipality and the Aspern Smart City Research joint venture. In this session, the participants will discuss the innovative collaboration models of municipalities, citizen communities and businesses necessary to support the on-the-ground integration of PED technical solutions in cities - contributing to the goal of SET-Plan Action 3.2 to have 100 Positive Energy Districts committed by 2025.

A second session is organised by VITO, NTNU, FFG and Steinbeis, on the topic of “Creating a Joined Vision for PEDs (Positive Energy Districts)”. PEDs (Positive Energy Districts) are an important concept in both the EC’s Smart Cities & Communities (SCC) programmes and the Strategic Energy Technology Plan (SET plan). The session consists of a series of pitches that provide an overview of the state-of-the-art and main challenges within these programmes, as well as their further development. Furthermore, there will be two discussion groups, related to the PED definition and certification, and related to challenges and barriers related to on-the-ground PED development, to inform EU policy and regulatory frameworks.

Both sessions were approved for the main programme of EUSEW. However, we have received notification that EUSEW will be reorganised due to COVID-19, not only with a reduced programme and digital format, but also with a changed scope to reflect the need for economic recovery due to COVID-19.

The session organisers have been asked to consider participating as a side event instead, this decision is currently being discussed with the involved contributors.

For +CityxChange, both sessions are highly relevant as they directly links to the open innovation framework we have created in our project (see Wyckmans et al. 2019). The sessions will give us the opportunity to showcase our own concepts and have them tested by peers, while learning from the experiences of others to improve our own work in +CityxChange.



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4 Conclusions

During months 13-18 of the +CityxChange, our interactions with other SCC01 projects, SCIS, EIP-SSC, SET-Plan Action 3.2 and EERA JP Smart Cities have consolidated into robust collaborative mechanisms. +CityxChange and its peer projects and platforms are mutually inspiring each other and cooperating to organise joint events, share learnings, and identify areas for more in-depth collaboration within smart city innovation, research and education. The shaping of Horizon Europe and the Green Deal has brought many additional arenas in which we can cooperate, and in which we can test the viability and relevance of our project's findings.

Many of the activities planned for May - October 2020 (Months 19-24 of the +CityxChange project) have already been mentioned in this document. For each activity, we are planning a digital alternative due to COVID-19.



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 824260.