

Integrated Planning and Implementation of Smart and Energy-efficient Solutions in Cities

Special Session at Smart Sustainable Planning of Cities and Regions 2019 Conference in Bolzano

10 December 2019

This event was jointly organized by Urban Europe Research Alliance (UERA), JPI Urban Europe, the SET-Plan Action 3.2 on Positive Energy Districts, the Action Cluster Integrated Planning, Policies and Regulation of the European Innovation Partnership on Smart Cities and Communities, SCC-01 project Smarter Together and STARDUST, European energy award, and Tuscan Organisation of Universities and Research for Europe. Its aim was to bring together a wide range of key stakeholders around integrated planning and implementation of smart and energy-efficient solutions in cities, to discuss not only how efforts to decarbonise cities can be stepped up through wider replication, but also which agenda for research and innovation should be defined to build more collective intelligence and transformative capacity for local governments, under Horizon Europe, national policy agendas and JPI Urban Europe's Strategic Research and Innovation Agenda 2.0.

The opening session was setting the scene for Horizon Europe and discussed European research and innovation policies for smart and energy efficient cities. Adriano Bisello of EURAC, host and organiser of the SSPCR2019 Conference, Simona Costa of TOUR4EU, leader of the Action Cluster on Integrated Planning, Policies and Regulations in the European Innovation Partnership on Smart Cities and Communities and Judith Borsboom of NTNU, Chair of UERA and Initiative Leader in the EIP-SCC, welcomed all participants.

Subsequently, Georg Houben, Policy Officer, DG Energy Dir. C2, discussed EC's plans on smart cities policies and funding schemes in the future programming period. Following, Jérôme Böhm, Programme Manager Italy and Malta of DG Regio Dir. G 4, comprehensively highlighted the adjusted Cohesion Policy Objectives for the new programming period, with a larger role for urban sustainability projects, the plans on an European Urban Initiative, and the synergies between European Structural Funds and other funds as Interreg, ESF+ and InvestEU.

Cohesion Policy objectives 2021-2027



A smarter Europe (innovative & smart economic transformation)



A greener, low-carbon Europe (including energy transition, the circular economy, climate adaptation and risk management)



A more connected Europe (mobility and ICT connectivity)



A more social Europe (the European Pillar of Social Rights)



A Europe closer to citizens (sustainable development of urban, rural and coastal areas and local initiatives)

Horizontal issues:

- Administrative capacity building
- Cooperation outside the programme area

30% of ERDF operations expected to contribute to climate objectives!

Minimum 6% of ERDF at national level to sustainable urban development!

European Urban Initiative (EUI) -

ERDF/CF Article 10 European Urban Initiative

2. The European Urban Initiative shall consist of the following three strands, all with regard to sustainable urban development:

- (a) support of capacity-building;
- (b) support of innovative actions;
- (c) support of knowledge, policy development & communication.

Upon request from one or more Member States, the European Urban Initiative may also support **inter-governmental cooperation on urban matters**.

Figure 1 Cohesion Policy Objective and the European Urban Initiative of DG-Regio in the new programming period

After this, a plenary session focused on innovative approaches to integrated planning and implementation of smart city solutions with real life examples from SCC-01 lighthouse projects, all in different stages of their 5-year implementation period.



Figure 4 Daniele Vettorato (EURAC) discusses of Smart City projects in the region

Adriano Bisello and Daniele Vettorato of EURAC, Project Managers STARDUST and SINFONIA and conference hosts, highlighted how making co-benefits visible has been of crucial importance for integrated planning and implementation of smart and energy-efficient solutions in Trento and

Bolzano. Following, Etienne Vignali of Lyon Confluence, Project Manager of Smarter Together, discussed lessons learned and potential replication of co-created smart city solutions in Vienna, Munich and Lyon. Inclusiveness through engagement and co-creation with stakeholders is at the heart of the project,

however, per Urban Living Lab, this took place in a very different way. Smarter Together learns that integrated planning and implementation cannot be done using a blueprint, but that different approaches have to reflect local different realities and contexts. After



Figure 3 Etienne Vignali (Lyon Confluence) highlights Smarter Together's approach

that, Alessandra Barbieri, City of Firenze, Project Manager REPLICATE, explained Florence's take on integrated planning and implementation in which the city dashboard BigData Platform, developed together with Paolo Nesi from University of Florence, plays a key role. Data are considered as a core

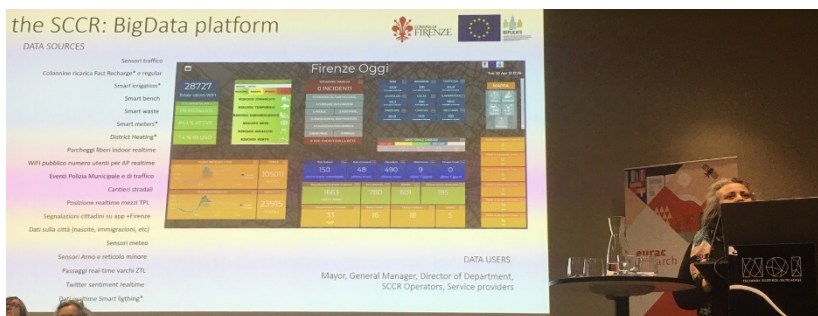


Figure 2 Alessandra Barbieri (City of Florence) speaks about the BigData platform as enabler of Florence's lighthouse project

enabler for acting, as sharing of data can help to simplify life for citizens, to improve communication not only between experts but also between citizens, and to avoid reinventing the wheel.

Integrated planning means sharing skills, data, infrastructures and services and the Smart City Control

Room makes this possible. The platform also enables a federated model where the role of the municipality can be compared to that of a conductor of an orchestra: a centre of aggregation that takes care of collaboration and synergies between different bodies and utilities, while the individual parties play their part.

Finally Annemie Wyckmans, NTNU, Project Coordinator +CityxChange, explained how integrated planning of positive energy districts is taking shape in their project: e.g. by organising glossary workshops, where a project-wide common understanding of specific terms and expected outputs

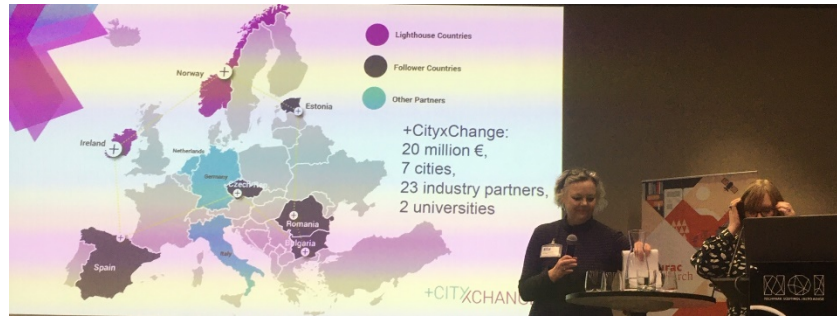


Figure 5 Annemie Wyckmans about to present the +CityxChange project

provided a very useful basis for multi-disciplinary collaboration, by creating the Bold City Vision which provides guidelines for balancing long-term strategic planning aims for the cities with short-term incremental actions in the project, by exploring how regulatory frameworks should be adjusted to enable the desired innovations, and by developing a framework for innovation playgrounds.



Figure 7 Marc Dijk giving his keynote on upscaling lessons learnt

The plenary session was followed by a panel discussion on how the uptake of successfully demonstrated smart sustainable city solutions for integrated planning and implementation could be accelerated in the future. Marc Dijk, Research fellow University of Maastricht, kicked-off after lunch with a key note on how the project SmarterLabs discovered that many Urban Living Labs suffer from two major pitfalls: there are unforeseen constraints on large-scale change in socio-technical urban systems, and social groups not matching the required “smart citizen” profile are excluded. These major pitfalls translate in ten typical constraints to upscaling of living lab results. Per constraint, SmarterLabs collected, elaborated and validated in the four engaged cities (Bellinzona, Brussels, Maastricht, Graz) measures to anticipate this particular constraint, what resulted in a set of valuable recommendations to ensure not only inclusiveness but also upscaling

and replication after the project’s end-of-life. His keynote was followed by a lively panel discussion, moderated by Simona Costa, EIP-SCC/TOUR4EU, with several Horizon2020 SCC-01 fellow cities.

Topics were challenges, needs, and how to accelerate the market uptake of smart city solutions through practice, research and innovation. Panellists were Serena Pagliula, Project Manager H2020 projects City of Lecce, Tommaso Dell’Acqua, City of Bassano del Grappa, Marc Dijk, Research Fellow University of Maastricht and Joanna Tobolewicz, City of Gdansk. The panellists agreed that while in-depth collaboration between practitioners, city administration, solution providers and civil society is key to success, it is not yet common practice, while mutual interdependencies and expectation between different stakeholders need to be made explicit.

Further, the panellists agreed that such collaboration can be made more efficient, e.g. in getting everybody on the same page. What is more, specific



Figure 6 Panelists discussing integrated approaches and upscaling

local situations and contexts in integrated planning and implementation of smart city projects. A role for the research community could be to moderate these collaboration processes when plans are prepared during preparation of plans.

The last plenary session was on how to step up the efforts to create smart and sustainable cities in the near future by practice, research and innovation, and it was moderated by Georg Houben, Policy Officer, DG Energy Dir. C2. Presenters were all UERA members. Judith Borsboom, UERA/EIP-SCC/NTNU, outlined which actual contribution better integrated planning and implementation can make to boosting climate-neutral and smart cities with the help of the Smart City Guidance Package. Next, Christoph Gollner and Susanne Meyer, FFG and AIT, explained how currently collective



Figure 8 Christoph Gollner (FIG) and Susanne Meyer (AIT) presenting the SET Plan Action 3.2 and JPI Urban Europe

transformative capacity is built in the SET-Plan Action 3.2 and JPI Urban Europe. Following, Chiara Tavella and Mariadonata Bancher of the European Energy Award, shared their experiences gained in 20 years European Energy Award in terms of standardised processes and learning communities. Lastly, Carmelina Cosmi of CNR-IMAA, presented PrioritEE, an Interreg Project to support decision-making on energy-efficient buildings, which showcases how EU structural funds can be used to bring about innovation in several EU territories.

The event ended with two interactive sessions, where the main research topics in integrated planning and implementation, including financial possibilities, were discussed. Session 1 focused in particular on recommendations for Horizon Europe. It was moderated by Judith Borsboom, UERA/NTNU/EIP-SCC, Carmelina Cosmi, CNR-IMAA, and Paolo Nesi, University of Florence. Researchers from Smarter Together SCC-01 project, Urban Europe Research Alliance, Tuscan Organisation of Universities and Research for Europe, PrioritEE project and others discussed current knowledge gaps and barriers to widespread innovation. The second interactive session was on how to build new projects for positive energy districts through replication. It was moderated by Simona Costa and Susanne Meyer, and focused on upcoming calls in HorizonEurope, JPI Urban Europe and Urban Innovative Actions, which will offer new possibilities for replication of successfully implemented smart city solutions across Europe. What will it take to build new projects and capacity for Smart Cities and Positive Energy Districts and learn from the experiences in other projects?

After the wrap-up, those attendants interested in matchmaking, participated in a final session organised by UERA which provided the opportunity to start preparing ideas for the upcoming JPI-Urban Europe- ERANET-Cofund calls on Positive Energy Districts, and other relevant calls, in particular Horizon 2020 and European Urban Initiative.

The lively and highly successful event was attended by around 140 participants. Key takeaways are:

- Cross-domain working, multidisciplinary and profound stakeholder engagement are of paramount importance for making districts or cities effectively smarter and more energy-efficient, and Europe provides many excellent examples;

- A commonly accepted definition and scoping of integrated planning and implementation is still lacking and some key aspects of smart and energy-efficient cities are not yet incorporated, such as urban data as an enabler. A comprehensive definition could facilitate the integration of different concepts and tools in future, enlarging their joint applicability for users as city administrations;
- To better support local governments, it would also help to make current concepts and tools better accessible for time-pressured city administrations, adapt them towards specific urban situations and contexts, and translate them into specific local processes and procedures;
- There are still some persistent knowledge and innovation gaps research could address, such as making clear which technologies are when applicable, which stakeholders should be engaged then, and which dilemmas can be expected; or: investigating how to make smart city plans ready for procurement;
- Next to Horizon Europe and Green Deal funding, ERDF funding will be available for local innovation, while synergies between ten European direct funding programs (including Horizon Europe, Digital Europe and Invest EU and ERDF) will be possible to promote the entire chain from low to high Technology Readiness Level, stimulating not only SME participation but also providing opportunities for researchers and practitioners;
- The commitment of 100 cities through city contracts as planned by the Mission on Climate-Neutral and Smart Cities in Horizon Europe, would mobilize citizens, policies and actors well beyond research and innovation.

A longer, more detailed account of this joint event will be published around December 2020 in a Springer book <https://www.springer.com/gp/book/9783030573317>. Besides, the core messages will be transferred to national policy makers and the Mission Board on Smart and Climate-neutral Cities and other relevant Mission Boards in the form of a manifesto.

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