Three Cities – Lyon, Munich, Vienna – will be SMARTER TOGETHER

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1 ABSTRACT

In September 2015, the cities of Lyon, Munich and Vienna and 28 partners from research and industry were awarded funding for a joint project proposal within the European „Smart City and Communities" intiative. Under the headline „SMARTER TOGETHER", the consortium applied for a volume of 25 Mio. EUR for the implementation of „smart" and innovative actions in the three partner cities and for cooperation with three so called follower cities – Santiago de Compostela, Sofia und Venice. The requested funding is available as part of the EU-framework programme for research and innovation „Horizon 2020".

The funding is provided to support the implementation and testing of innovative Smart City solutions for low energy districts on a large scale and in an integrated way: Extensive energetic renewal of existing housing stock with (in Lyon and Munich) multi-faceted ownership structures, user-centered sustainable mobility solutions, innovative business models, generation of renewable energy and multiple use of infrastructure through the use of information- and communication technology (ICT). The overall aim is to improve the quality of life in neighbourhoods and to create more sustainable and user-friendly living environments. A particular focus will be on „smart" and active forms of participation of citizens.

The timeframe for the project roll-out is three years (2016-2018) followed by two years of monitoring and evaluation (2019-2020). Thereafter, successful solutions and findings are to be replicated in other districts and cities for further added value. Here, the follower cities Santiago de Compostela, Sofia and Venice as well as the European city network Energy Cities will play an important role. The projects will be implemented in close cooperation between industry, small and medium-sized enterprises, municipal companies, citizens and other interested stakeholders. The EU commission lauded the right balance between innovative technologies and the social dimension of the project: smart and integrated solutions shall improve the quality of life of citizens.

The main challenge of Smarter Together is related to the so-called co-creation approach. All involved cities, research institutes and industrial partners as well as external stakeholders seek to jointly create solutions and methodologies for innovative and replicable city development, based on lessons learned and strong knowledge exchange. Therefore the project defrined a complex iterative peer-to-peer process, allowing for a constant knowledge exchange among all affected stakeholders.

2 SMART CITIES - THE EU PERSPECTIVE

The battle against climate change will be either won or lost in cities, as 70% of all energy-related greenhouse gas emissions arise from cities.[1] Only lately mayors of leading European cities met in Paris to underline the urgent need for worldwide action and the willingness of the cities to contribute by making cities resource-efficient and carbon-free, innovative and open – in short more liveable and smarter for all.

Numerous European activities on reducing urban greenhouse gas emissions have been carried out in recent years. One of the most prominent ones is related to Smart Cities and Communities. It started as a European Industrial Initiative in 2011, which one year later became the so-called "European Innovation Partnership on Smart Cities and Communities (EIP SCC).[2] This partnership brings together cities, industry partners and civil society organizations to reach the European climate and energy goals and to improve urban life through more sustainable integrated solutions. This includes applied innovation, better planning, a more participatory approach to urban planning and management, better transport solutions, and the intelligent use of

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[1] EIP SCC 2013, 5
[2] http://ec.europa.eu/eip/smartcities/timeline/index_en.htm

Information and Communication Technologies (ICT) with the final aim of building a European market for Smart City solutions. [3]

In 2012 and 2013, the EIP SCC published two key documents on the EC approach to Smart Cities and Communities: The Strategic Implementation Plan (EIP SCC) [4] and the Operational Implementation Plan (OIP SCC). These documents define the European Smart City activities as resting on three vertical pillars (Sustainable urban mobility, sustainable districts & built environment, integrated infrastructures & processes) combined by eight horizontal priority areas that work as enablers: Citizen focus, policy and regulation, integrated planning, knowledge sharing, metrics & indicators, open data, standards, business models, procurement & financing.

Figure 1: Priority areas of European Innovation Partnership on Smart Cities and Communities[5]

The Strategic Implementation Plan (SIP) highlights the challenges in the priority areas, while the Operational Implementation Plan[6] provides more specific recommendations for the implementation. The SIP and the OIP are implemented by two different means: By investment projects supported by structural funds, and by research initiatives within HORIZON 2020

Since H2020 started in 2014, several calls have been launched in this work programme, covering diverse areas such as demonstrating smart city solutions in the urban context, performance measurement of and data standards for smart city solutions. The most prominent call in the focus area, and also the biggest in terms of volume is the SCC1 Call for "Smart City Light House Projects". The Smart City Light House Projects primarily target large scale demonstration of replicable solutions in the context of cities. The focus should be on the innovative integration of already existing technologies or technologies close to entering the market, rather than on the development of new technologies. Existing urban neighborhoods should be refurbished to near to zero or at least low energy standards. Energy in these neighborhoods is to be supplied predominantly using locally available sources, such as renewable sources and waste heat. Integrated infrastructures, such as smart grids and poly networks should be rolled out, connecting not only the different sources of energy supply and buildings, but also integrating storage technology and electric vehicles. This system ingreation should be enabled by state-of-the art ICT systems, like Neighourhood Energy Systems of Urban Data Platforms.[7]

3 THE SMARTER TOGETHER LIGHT HOUSE CITIES

In September 2015, the cities of Lyon, Munich and Vienna and 28 partners from research and industry were awarded funding for a joint project proposal wihtin the SCC1 call. Under the headline „SMARTER TOGETHER", the consortium applied for a volume of 25 Mio. EUR for the implementation of „smart" and innovative actions in the three partner cities and for cooperation with three so called follower cities – Santiago de Compostela, Sofia und Venice.

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[3] http://ec.europa.eu/eip/smartcities/index_en.htm
[4] EIP SCC 2013: Strategic Implementation Plan. Brussels
[5] Ibid.
[6] EIP SCC 2014: Operational Implementation Plan. Brussels
[7] HORIZON 2020 2013: Work program 2014-15 „Secure, clean and efficient energy", 82-86

Figure 2: Light House Cities and Follower Cities of the SMARTER TOGETHER project

3.1 Lighthouse City projects - Lyon

Lyon Metropolis (1.3 M inhabitants) is the second largest urban area in France. It has adopted a smart city roll out strategy which shall allow reaching simultaneously several goals. This includes climate plan targets (3x20 by 2020 and Factor 4 by 2050) by setting up ambitious goals and rules like the development of local energy guidelines for new buildings with better energy performance compared to the regulation (updated in 2012 and 2013), and by developing an Energy Master Plan as framework to reach the sustainability goals. Also, it is intended to trigger a new wave of innovation and economic wealth by making Lyon Metropolis one of the leading metropolis in the smart city economy. The smart city strategy led by Lyon Metropolis paves the way for a "new deal" between the quadruple helix actors: local government, research and training bodies, companies and citizens (more than 40 ongoing projects highlight the smart city model generation which is currently taking place).

The area Lyon has selected to become its Smarter Together Light House Area is Lyon Confluence, one of the largest urban redevelopment projects in France (150 ha – 600 000 m²existing floor area – 1.000.000 m² of new buildings) and is a place of many urban innovations: For example, guidelines for the selection of a real estate developers with ambitious energy requirements are given in addition to the typical building use requirements and architectural requirements. This has been implemented for the first time in France in 2004 within the FP6 – CONCERTO project and is now the basis of the actual French building regulation. SPL Lyon Confluence now even requires real estate developers to build positive energy buildings which are really innovative compared to the French state of the art. The first one was done within a FP7 Very Low Energy Buildings project, the following ones without any support from the EU. Also, Lyon Confluence has established an international partnership with the Japanese organisation NEDO in order to demonstrate some smart city solutions also clearly positioned the Lyon-Confluence project as one of the leading urban redevelopment in Europe. Finally. Lyon-Confluence is the first WWF approved urban development in France. The sustainable action plan signed in 2010 with WWF addresses many different topics of the sustainable development such as zero carbon development, sustainable mobility, local and sustainable materials, sustainable water management, natural habitat and biodiversity, equity and economic development, quality of life and well-being.

The deployment of the SMARTER TOGETHER project in Lyon aims at four main objectives

- Increasing the quality of life of inhabitants with many different strategies: construction of comfortable and affordable dwellings and office places, convenient public spaces, easy access to the district, new services and others.

- Involving citizens in the redevelopment of the Lyon Confluence area, and assist inhabitants of the district to improve the comfort of their dwellings and to reduce the amount of energy consumed for the heat demand.

- Refurbishment of existing buildings of the Perrache/Sainte-Blandine area with a target of 550 dwellings – 35,000 m2. In addition, SPL Lyon Confluence will build a 2MWe/4MWth wood-gas fired cogeneration power plant connected to the district heating and 4 PV systems for a total power of approx. 1 MWp.

- Providing support to inhabitants about alternative means of transport with smart charging stands and electric-vehicle car-sharing system.

Figure 3: Light House Area in Lyon

In addition to this, another objective is provide to the Grand-Lyon data platform new sets a dynamic data from the energy sector and the sustainable mobility sector collected by many various sources: smart power and heat meters, building energy management system, energy production systems in the area such as photovoltaic systems and the district heating power plant). These new sets of data will be used to develop new applications or will be used by existing applications such as the Community Management System (CMS) developed by Toshiba that will be used to have a global understanding of the energy flows of the district in order to improve the urban planning process and the planning, design and operation of public infrastructure.

3.2 Lighthouse City projects - Munich

The process of "smartification" - or the steps that ultimately led to the successful funding application within H2020 - started some years ago after a series of unsuccessful applications for EU funding by the City of Munich. The department of urban development planning and the department of labour and economic development cooperated and reached out to other cities, to industrial and research partners, to learn and improve their performance.

The strategic framework for future urban development in Munich is "Perspektive München" with its leitmotiv of "city in balance" which also set the frame for the Munich Smart City strategy. "Smart City Munich" is building upon and expanding on the 4 guiding principles of this framework: 1) far-sighted action and cooperative management; 2) solidary and committed urban society; 3) significant and high quality urban places; and 4) open and attractive appearance. Quality of life, individual development and participation in shaping the own living environment are important principles. Perspektive München also links the

development of a "Smart City Munich" directly to specific urban areas with their particular challenges, which are to be addressed through "smart" actions.

"Smart City Munich" puts additional emphasis on the integration of intelligent technologies (energy efficient buildings, sustainable urban mobility, intelligent energy management systems etc.) which support the transition to a post-fossil city. For this transition, Munich set itself ambitious climate goals within the "Integrated Action Programme for Climate Protection", to which the Smarter Together projects are set to contribute: The aim is to reduce CO_2 emissions by 10% every five years and to halve per capita emissions by 2030 (from a 1990 baseline); to cover the complete electricity demand of Munich from renewable energies in 2025; to complete the conversion to renewable energy district heating by 2040.

Figure 4: Light House Area in Munich

Specifically, the project will concentrate on Neuaubing-Westkreuz, a district in need of redevelopment, and Freiham, a new neighbouring district that is still under construction. The targets expressed for the area are to implement CO_2-neutral energy supply by 2050; to reduce primary energy demand by 80% up to 2050; to increase the annual refurbishment rate from currently 0,8 to 2%; and to increase the annual refurbishment rate of heating systems to 3%;

The smart city project sets out additional objectives in the area of mobility and integrated infrastructures: To provide integrated multi-modal mobility solutions leading to a significant reduction of private cars in the area and adding to the electrification of related transport means, and to reach a reduction of GHG emission by 40%.

- An open data platform merging data from different sources to allow for holistic city planning and the creation of innovative Smart City services.
- To address policy and regulation issues for solutions to be deployed on both public and private ground and addressing challenges of data usage.
- To leverage citizens' and stakeholder expertise to deliver user-centred solutions and to ensure wide take-up of sustainability goals.
- To support business model innovation for solutions in the district

The main emphasis of the projects developed in the context of "Smarter Together" is on modernizing housing estates with varied structures of ownership, formulating user-centric mobility concepts and developing innovative business models. Special attention will be paid to smart forms of active public participation.

With regard to mobility and transport, the project includes plans for multimodal mobility stations that facilitate eco-friendly sharing systems for both private and business mobility. Unavoidable traffic should increasingly be shifted to alternative driving systems – primarily e-mobility. A mobility "butler" – an app

that doubles up as a registration and payment system – should identify the best available modes of transport for the user.

Within the framework of its Renewable Energies Expansion campaign, municipal utility company Stadtwerke München (swm) aims to produce as much green electricity in its power stations as consumed by the whole of the city. Munich would be the first large city in the world to achieve this. In the project area, municipal utilities company Stadtwerke München are realizing a model eco-friendly power supply in the new Freiham district. Deep geothermal energy will be fed into the district heating network that is currently being built. As Freiham gains access to district heating, the already existing infrastructure for the urban district of Neuaubing/Westkreuz shall be extended. A "virtual power station" will interconnect decentralized power generation units to create a single areawide network that optimizes existing structures.

One exceptionally important aspect is the socially responsible modernization of existing energy systems. Around 35,000 m2 of living space is to be refurbished to meet the low-energy standard of 50 kWh / m2 / year. Organizing these works in in a tenant-friendly way will constitute a major challenge. Since the project catchment area also accommodates numerous owners of small homes, a "modernization toolkit" will be developed containing a variety of components to meet each individual modernization need.

Information and communication technologies will be used to converge and control technical solutions. But at the same time, municipal platforms are to be crafted into a smart data platform to help residents get involved in both implementing the project and using the solutions provided, such as delivery and shopping services.

3.3 Lighthouse City projects - Vienna

In 2014, the City of Vienna adopted the so-called Smart City Vienna Framework Strategy (Smart City Wien Rahmenstrategie – SCWR) as a medium to long-term umbrella strategy for integrated urban development. For example, the strategy aims at a reduction of energy consumption by 40% by 2050, an increase of renewables from 10% to 50%, a reduction of motorised transport from 29% to <15% while maintaining green space at 50%

Figure 5: Light House Area in Vienna

In order to reach these and other ambitious goals and keep up the quality of living in spite of city growth and climate change, joint efforts of actors throughout the city are necessary. Therefore, Smarter Together is already a key project in Vienna, actively involving around 70 experts from different sectors and fields in its implementation: Nine different departments of the Viennese administration, housing associations, utility companies, energy suppliers, SMEs, city agencies and a research institution.

With Simmering, a lighthouse area was chosen which is quite representative for Vienna. It´s traditionally a worker`s district with large housing estates from 1940- 1980 but also some industry and some housing from the 1920ies. It is located in the South-East of Vienna and would have received only little attention without "Smarter Together", since it is between two large development areas.

In order to reduce energy consumption and CO2 emissions in the lighthouse-area, a multitude of actions are necessary on different levels, targeting the areas of housing, mobility, refurbishment, ICT, user-dialogue and innovation. An Urban Living Lab is currently in development to increase acceptance of the intended actions and to represent the project in the district. In Vienna, the Urban Living Lab will be a vehicle to foster communication in public space. It will be branded for the project and used in various locations throughout the project area of Simmering to foster dialogue and exchange.

Moreover, the project will

- focus on refurbishment of social housing and a public secondary school with a gym (8.800m²) at large scale (66.000 m2) reducing energy demand by >60 % by using new methods

- renovate the district heating system with a unique integration of local renewable energy sources and related new business models

- develop Simmering NW into a flagship e-mobility area and reduce mobility-related energy consumption by novel business and implementation concepts as well as citizen engagement

- involve all main actors of the area (housing operators, energy suppliers, educational institutions and businesses) working together towards integrated and sustainable solutions and at the same time foster the engagement of tenants and residents in the transformation and co-design processes

- work out governance structures suitable for complex integrated renewal projects

All activities are designed to serve as a catalyst of knowledge and substantially contribute to further develop the city's governance in relation to smart city issues and feed into international cooperation and provide the basis for a systematic analysis, monitoring and replication of described solutions.

The city of Vienna as the owner of over 220.000 subsidized apartments has a profound interest in high-end solutions for achieving good technical results as well as efficient methodology to get in dialogue with the citizens The best-practise exchange with the partner cities and institutions involved in Smarter Together has already proved to be of great value for the process of improving the urban renewal processes in Simmering.

4 THE SMARTER TOGETHER APPROACH

4.1 Ambition

The SMARTER TOGETHER project is designed as a systematic approach to establish highly deployable solutions for Smart City Districts. The project wants to develop a systems implementation process of solutions for low-emission housing, electric mobility and urban services which are on the one hand highly adapted to local needs, and on the other hand highly replicable self-dependent in their operations. As key feature, five thematic clusters of co-created smart and integrated solutions will address the needs of four targeted end users:

- Citizens: their needs in regards to social and technological innovation on individual as well as on subgroup level are complex, the solutions must hence be multidimensional and provide for instance financial incentives (cost saving, financial mechanisms…), on demand services (customized, easy and friendly interfaces, respecting the privacy and with no sunk costs), rewarding in various forms, while the whole process of societal innovation requires learning, awareness, responsible implication, engagement and participation;

- Cities: their needs are financial (optimizing capital and operational expenditures (Capex and Opex) and in regards to the openness of the solutions (no vendor lock-in) as well as in regards to human resource development and organizational development. Furthermore, the expected outcomes regarding sustainability and fostering local ecosystem are extremely important.

- Housing associations need to optimize their Capex and Opex as well and find news solutions and services, targeting low income household and anticipating the ageing of their tenants. Also buildings in Smart Cities are no longer consumers of energy only. The increasing importance of building integrated RES and storage systems requires new business models and is about to change the self-image housing companies.

- Utility companies: To run a city efficiently, it is necessary to manage its metabolism in a proper way. Utility operators therefore are important partners for smart city projects. Due to a dynamic environment and the increasing importance of renewable energy, many utility companies are currently modifying their business models, which will become more and more based on holistic services rather than on provision of energy.

- SMEs and Startups: The challenge is to provide disruptive innovations without having business models. Solving this issue requires the cooperation of all stakeholders in order to envision the proper value chain and the monetization side. It will be at the core of the project.

4.2 Work breakdown structure

SMARTER TOGETHER has ten work packages (WPs):

- WP1 Innovation Action Framework provides a first action framework for the successful implementation of smart solutions, striving for capacity building, common perceptions and consistentworkflows in the later Work Packages.

- WP2 Co-Creation for Smart City Solutions - a peer to peer process establishes reference processesand tools for co-creation, building on the inputs of WP1 to define thematic guidelines for successfulimplementation of co-created city solutions in cities.

- WP3 Lighthouse Demonstration Lyon implements the demonstration activities in the lighthousetarget area of Lyon, ensures their monitoring during the implementation and prepares the replicationphase.

- WP4 Lighthouse Demonstration Munich implements the demonstration activities in the lighthousetarget area of Munich, ensures their monitoring during the implementation and prepares the replicationphase.

- WP5 Lighthouse Demonstration Vienna implements the demonstration activities in the lighthousetarget area of Vienna, ensures their monitoring during the implementation and prepares the replicationphase.

- WP6 Monitoring & Evaluation ensures the 3-years post-implementation monitoring phase, running the monitoring infrastructures, collecting data and evaluating processes and impacts.

- WP7 Integrated strategies in Follower Cities supports the replication of successful demonstration solutions and services in the Follower Cities target areas.

- WP8 Replication of smart city solutions ensures the replication of results and outcomes of the demonstration phase as well as replication of monitoring actions both at the city level in the Lighthouse cities and in other cities and at commercial and industrial levels, allowing the scaling-up and deployment of the developed smart city solutions in Europe.

- WP9 Dissemination and Communication ensures effective communication actions and dissemination of project results, which will support transferability towards scientific, policy and industrial communities.

- WP10 Project Management ensures the steering and planning of all activities, time schedule, quality and cost management to meet the project's objectives from both technical and administrative perspective.

4.3 Addressing the main challenges

The SMARTER TOGETHER project aims at developing co-created smart and integrated solutions for low energy districts, sustainable mobility, integrated ICT infrastructures and citizen engagement within three lighthouse cities, further providing recommendations for follower cities and for all cities which are willing to support sustainable and resilient development. The project is conceptualized as a city LED project that benefits from the institutional advantages of structured governance in dialogue with industrial, SME, third institutional as well as citizens partners.
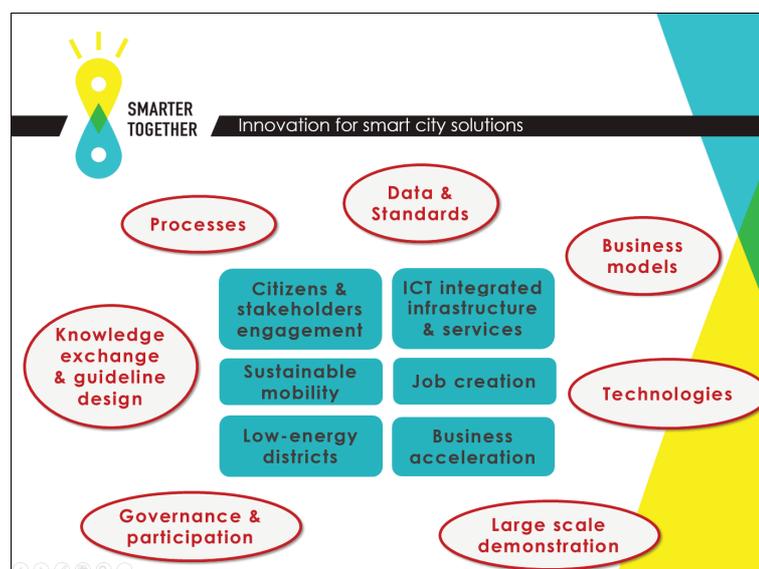
Figure 6: Innovation for Smart City Solutions

For the three cities, the challenge translates into the question of how to manage technological innovation for the benefit of the citizen and with the citizens. Most innovations fail in the diffusion or adoption phase because the end users (the citizen or the cities representatives) have not been properly associated.

A large part of the bottleneck in adopting smart city solutions lies within the cities day-to-day operating of cities: Information currently collected in silos is to be re-connected in sensible ways to create useful insight into more complex dependencies. Long timeframes for authorisation procedures (e.g. site approval, etc.) are getting in the way of tight schedules for implementation. Often, legal frameworks for innovative solutions are missing and it is important to cooperate with legal authorities and politicians to find alternative models. Key questions to address are related to structural improvements in the field of integrated management, organisational learning and change management in cities and regulations.

The three pilot areas are large scale urban areas addressing the refurbishment issue at district scale. The objective of successfully addressing the eco-renovation of existing public and private residential housing present specific legal and societal challenges and appeal to different requirements in communication, management and regulation. Success in implementing projects at this scale is dependent on broad user acceptance and a relevant critical mass to support smart city business models – which are both financially viable for companies and socially acceptable for the end user.

Increased efforts need to be undertaken to activate citizen and residents to engage with the topic of smart cities in their immediate environment and to raise user acceptance. Solutions need to be attractive and tangible at an early stage. All three cities are therefore heavily building and expanding upon existing outreach activities in the pilot areas. The planned "smart" projects provide safety, respects privacy and protects citizens from abuse of their data. Cities as trustworthy partners for data collection and use, play a key role.

Since the three lighthouse cities will implement a great number of highly different but in parts also very comparable projects within the Demonstration WPs 3 to5, the project will face several challenges in order to be able to design co-created and integrated solutions and produce replicable results, In particular the following four main challenges need to be addressed when designing a general concept for the project:

- Cross-Silo-Thinking: Overcome thematic silos in order to allow knowledge exchange between experts of projects with a highly diverse thematic orientation (e.g. IT-experts of e-mobility and smart district projects), helping to overcome specific emerging problems and generating a basic knowledge set of recommendations for cocreated solutions.

- Cross-City-Thinking: Allow a knowledge exchange within a thematic silo but in between all respective experts of that silo (e.g. all refurbishment experts of all cities) in order to address and solve specific thematic problems.

- Stakeholder-Involvement: Involve relevant external stakeholders in order to include all available knowledge into the co-creation process. This step should include both local experts as well as external domain experts.

- Knowledge-Transfer: Disseminate generated knowledge in between the project and over its borders in order to actively perform a co-creation process and to provide a set of recommendations for co-created and integrated smart city solution for cities.

4.4 A concept for co-created smart city development
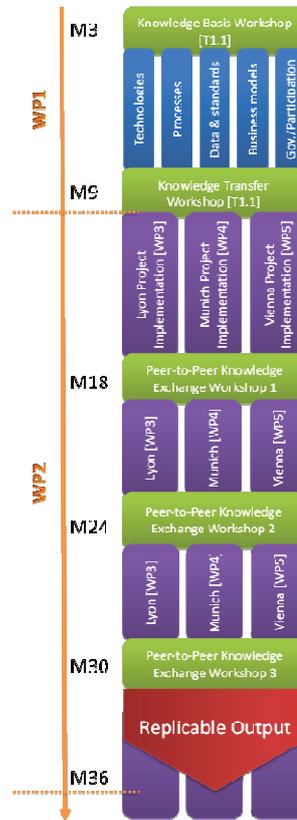
In order to encounter the outlined main challenges and to foster co-creation within the Smarter Together project, the overall concept of the project consists of two general groups of work packages. While the work packages 3 to 5 are dedicated to the already outlined demonstration projects to be implemented within the three cities, all other work packages are foreseen to enable the development of co-created and integrated solutions, addressing the organizational and peer-to-peer knowledge exchange, allowing for impact monitoring and striving for high replicability. Therefore, a strong interaction between the so-called Enabler and Demonstration work packages will be established.

The main concept can be structured in the following four main steps:

(1) Design of a first innovation action framework (WP1) for the successful implementation of innovative smart solutions, addressing the whole SMARTER TOGETHER project and particularly the smart solutions to be implemented in demonstration activities. This first set of recommendations of key-components, frame conditions and barriers for successful solutions will be the basis for the Demonstration WPs 3 to 5 as well as for the organizational and peer-to-peer knowledge exchange process of WP2.

(2) The peer-to-peer knowledge exchange process of WP2 will then not only try to bring together the experts and affected stakeholders of the demonstration projects at different stages of the implementation process (months 18, 24 and 30) in order to overcome common challenges and to benefit from lessons learned. Rather, by constantly monitoring the feasibility of the WO1 recommendation, WP2 will develop the recommendations further, finally aiming for a set of proven recommendations ready to be used by other interested cities, specifically by the follower cities in WP7.

(3) The already outlined demonstration activities (chapter 3.2, 3.3 and 3.4) will be based in the three cities on a common methodology of urban design thinking, with differences due to the local context. Cities and their

partners will strive to address in a large scale project the five clusters of co-created and integrated solutions, defined in WP1.

(4) Based on the outputs from the demonstration activities, evaluation and transversal activities like replication (WP8), monitoring (WP6) and dissemination (WP9) will be deployed. The replication plan will address the target areas in the follower cities and in the lighthouse cities.. In order to ensure the inclusion of the follower cities in all outlined Enabler activities a dedicated work package has been foreseen (WP7), further allowing knowledge exchange in between the follower cities.

The organizational and peer-to-peer knowledge exchange to be established within the Enabler WP2 is of utmost importance to develop co-created and integrated solutions within the project itself and to develop recommendations based on the lessons learned during the implementation process.

The main concept to follow a co-created approach and to define recommendations for successful solutions for innovative smart cities will start with a knowledge basis workshop, addressing the needs and demands of the lighthouse as well as the follower cities. This workshop to be organized in month 3 of the project will build the basis for the state of the art analysis, which aims to define external conditions, key-components and barriers for 5 thematic focus fields. The final output of this research will be presented and adapted with the city partners in the final workshop of WP1 in month 9.

This workshop will also be the starting point for the actual implementation process of the WPs 3 to 5, providing them with a first set of recommendations for successful solutions. Then, it will be continuously monitored how the recommendations can be applied during the implementation processes of the WPs 3 to 5, recording their usefulness as well as potential needs for adaptation. This activity will be organized within the five thematic clusters, grouping the related projects and allowing for a cross-project evaluation. As defined in chapter 1.4.1 the five clusters are: Citizen Engagement – Innovation Labs, Holistic refurbishment in Smart Districts, District Heating and Renewables, Data Management platform & Smart services, E-mobility solutions.

After approximately one year of implementation and then in 6 month intervals peer-to-peer knowledge exchange workshops will be performed, bringing the knowledge of all involved stakeholders together and respecting the challenges defined in chapter 1.4: Cross- Silo-Thinking, Cross-City-Thinking, Stakeholder Involvement and Knowledge-Transfer. The workshops will include all lessons learned from the implementation processes, improving the first set of recommendations of WP1 in order to provide an output as applicable as possible. By repeating this process three times at different stages of the project SMARTER TOGETHER will be able to continuously improve the recommendations, aiming for a replicable and highly application oriented set of recommendations for co-created solutions.

5 OUTLOOK AND CONCLUSION

The timeframe for the project roll-out is three years (2016-2018) followed by two years of monitoring and evaluation (2019-2020). Thereafter, successful solutions and findings are to be replicated in other districts and cities for further added value. Here, the follower cities Santiago de Compostela, Sofia and Venice as well as the European city network Energy Cities will play an important role. The projects are implemented in close cooperation between industry, small and medium-sized enterprises, municipal companies, citizens and other interested stakeholders. The EU commission lauded the right balance between innovative technologies and the social dimension of the project: smart and integrated solutions shall improve the quality of life of citizens. All project activities are supported and reinforced by local and European communication dissemination work serving the common vision: Being SMARTER TOGETHER in order to provide to provide Smart and Inclusive Solutions for a Better Life in Urban Districts.

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