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Assembling the Smart City

The networks behind the narrative

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ABSTRACT

Smart Urbanism is opening its ways throughout many cities around the world. In Europe, the European Commission has envisioned this model as the future of the urban. Actions are taking place in order to materialise this belief. City imaginaries along with many other assumptions are being deployed in forms of Metagovernance, Governance Networks and Funding Opportunities. Nonetheless, the Smart Urbanism interpretation will occur within the interaction of the European (where the ideals are conceived), and the local (where the ideals are materialised).

This research exposes some of the effects of European Commission Smart Urbanism policies in the re-configuration of local governance. Business Consultancies, ICT Corporations and Technologic centres arise as the protagonist and 'true' holders in 'Smart' urban governance dynamics. Two case studies of European 'Smart City lighthouses' are developed: San Sebastián (Spain) and Valladolid (Spain).

Keywords: Smart City, Urban Governance Networks, Metagovernance, Urban Regimes.

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ABBREVIATIONS

EC – European Commission

EIP – European Innovation partnership

EIP-SCC – European Innovation Partnership on Smart Cities and Communities

EU – European Union

ICT – Information and Communication Technologies

IFG – Interactive Forms of Governance

SC – Smart City

SIP – Strategic Implementation plan of the EIP-SCC

SS – Smart Solutions

SU – Smart Urbanism

UG – Urban Governance

URT – Urban Regime Theory

INTRODUCCION

1 Assembling the Smart City: the networks behind the narrative

In recent years, many cities around the world are formulating or tailoring their branding, strategy and development plans towards a Smart City (SC) model. From the west coast of US in Portland to the surroundings of Seoul in South Korea, it seems that 'becoming Smart is the new black'. Reviewing the numbers in Europe, 51% of cities of more than 100.000 inhabitants are developing or implementing a SC program. Moreover, 90% of all European cities of more than 500.000 inhabitants are also following the 'Smart' trend (Manville et al., 2014, p.9) and are 'dressing' their plans accordingly.

As a result of the dimension of the SC uprising, a vast amount of academic literature has been produced addressing the concept, its representation and its possibilities (Cocchia, 2014). However, it is possible to differentiate two main approaches in the consideration of the Smart City as an economic and social development model. The first one, from an entrepreneurial ideological approach, conceives the SC as a possibility for urban economic growth and a progression in urban governance, through the implementation of ICT in the provision and administration of urban services (Batty et al., 2012; Leydesdorff and Deakin, 2011; Nam and Pardo, 2011). And the second one, from a critical urban studies approach understands the SC model as a narrative being deployed to justify the creation of a new capital cycle in the urban production of space (Hollands, 2008; Kitchin, 2013; Söderström et al., 2014; Vanolo, 2013).

Although, in the analysis both seem antagonistic, there is a common ground regarding how ICT implementation could bring gains in urban dynamics. As a result of this, the discussion is moving towards a more inclusive conception of the SC, having authors taking into account social innovation factors (Calzada and Cobo, 2015) and also, creating bridges between ICT companies, critical scholars and scholars with a strong technological approach to the model (Luque-Ayala and Marvin, 2015).

The theoretical and empirical discussion about the SC concept is taking place. Nevertheless, the research interests of this thesis points towards other direction. The objective of this work is to go beyond the structuralist approaches that are trying to frame the SC model, and recognise the specificity assembled in each local context. From this point of view, the vision, the objectives, the

discourses, the stakeholders involved, the funding, the governance and participation processes are considered specific outcomes of 'glocal' dynamics. According to Haarstad (2016, p.208) quoting the theory of urban assemblage by MacFarlane (2011):

"Cities are complex assemblages of conflicting cultures and interests distributed across a differentiated material landscapes. ... Urban policy development takes place in interaction between, on the one hand, the different local/urban sites of implementation and, on the other, transnational networks and circuits where knowledge about cities is produced"

In other words, the interpretation of the SC model occurs between the interaction of the 'global' (where the narrative of the SC is created) and the 'local' (where the model of SC is negotiated and restructured by urban actors). In this sense, this research is interested in the interplay, and in how the SC is materialised by the local actors from the global to the urban.

2 'Smart' Europe

Apropos the SC, the European Commission (EC) conceives it as the urban development model that will address environmental challenges and will create new markets for European emerging ICT industries. As a result of this, a governance body was created in 2012 in order to put forward its interest in the topic. The European Innovation Partnership on Smart Cities and Communities (EIP-SCC) is in charge of "overcoming the challenges that remain as road blocks ... to 'smartening up' Europe's cities" (European Innovation Partnership, 2013, p.3). In order to do so, the EIP-SCC is aligning existent city initiatives towards a standard framework, is creating networks between similar initiatives, is training interested cities or stakeholders in financial models or procurement of resources, and is speeding up the 'industrial-scale roll out' of SC technologies and solutions. In other words, the EIP-SCC is performing as a platform organisation coordinating and aligning interested cities and stakeholders in the same Smart City page.

Moreover, from 2012 around 64 projects¹ has been funded or partially funded by the EC in order to stimulate the production of SC innovations that could be replicated and commercialised in other cities.

¹ <http://smartcities-infosystem.eu/projects>

Additionally, from 2013 EC structured a call on its plan H2020 to fund the development of SC projects. In the initial call –Smart Cities and Communities (H2020-SCC-2014/2015)– 7 projects were selected in order to perform as ‘lighthouses’ of what the future of the SC should look like. These projects taking place in 21 different cities, serve as a large-scale demonstration of the implementation of SC technologies. In order to accomplish the objective of future replicability, the involved actors must follow some specificities regarding the partners involved, the standards to follow, the objectives to accomplish and the share of know-how with follower cities (cities that are not going to have a large-scale demonstration, but are going to benefit from the knowledge developed in the ‘lighthouses’). In 2016 call –Smart and Sustainable cities (H2020-SCC-2017)– Another two projects were added including 6 more cities to the ‘lighthouses’ list.

But why are so many cities engaging with the EC vision of the Urban future? Is there no opposition to the model that is being promoted by the EC? Two case studies of cities participating for EC funding concluded that the urge for the money mobilised a rebranding of previous urban projects or development plans in order to fit into the ‘Smart’ suit. Turin municipality took advantage of the “ambiguity and versatility” of the EU concept of ‘Smartness’, and gathered previous existent initiatives to re-label them as ‘Smart’. New private and public actors were involved due to the possibility of obtaining EC funds (Crivello, 2014, p.919). Stavanger in Norway, also restructured previous urban renewal projects in order to be able to apply for European funding. “Rather than being imposed from above, the EU’s policy frame on SC has arguably been mobilised and used to support a series of pre-existing activities, projects and ambitions in the city” (Haarstad, 2016, p.212).

Furthermore, a research done by Vanolo (2013) supported in policy document analysis concludes that new assumptions and geometries of power are being assembled in European cities. Disciplinary mechanism as EC funds, rankings and the possibility to attract private investment are co-opting local and national agendas towards a ‘Smartmentality’: “the discourse on the city as the protagonist of social, technological and environmental development, the construction of a system to measure the performances of the cities, the promotion of new public–private partnerships and the empowerment of local communities and citizens, are all aspects of ‘technologies of government at a distance’ or ‘smartmentalisation’” (Vanolo, 2013, p.894).

Although the two case studies (Crivello, 2014; Haarstad, 2016) argue that the possibility of getting EC funding structured a re-branding of urban development plans and projects towards a SC model, this research considers that both studies are not inquiring in other visible and relevant dynamics. For example, Crivello (2014) mentioned the involvement of other public and private stakeholders for the call, however, she does not articulate the finding with the possibility of changes in urban governance. Was there a total agreement by the local council regarding the re-branding of actual city plans? On the other hand, Vanolo (2013, p.884) states that Governmentality technologies are configuring new geometries of power in the urban level “broadening the field of action of technicians, consultants and private companies”. Nevertheless, is not explicit how and in which ways these ‘technologies’ are conditioning urban governance dynamics and what is the role of local politicians legitimising and supporting the new actors Vanolo (2013) states are being empowered.

Thence, this research will go beyond Vanolo’s (2013) conclusion of the ‘Smartmentalisation’ of European cities by different mechanisms of the EC and will explore more in detail SC networks that are being structured at the European, national and urban scale. At the European level, the research will target the networks being strengthen by the EC and the effects of its agency. At the national level, the plans, policies and cities networks being promoted by the government will be discussed. And at the local level, the networks being part of the SC plans and the role of local politicians legitimating and materialising the narrative. How the interaction between the global and the local occurred, who are the actors involved and how metagovernance mechanisms were settled are further questions driving this research. The theoretical toolbox to use includes a ‘governance network’ and ‘metagovernance’ approach (Sørensen and Torfin, 2007) and a regime theory approach (Stone, 1989).

The narrative of the EC SC is being deployed, the EIP-SCC is acting as a platform, the funding schemes are financing the projects. Nevertheless, the SC outcome will vary according to the local political actors and context. The interplay between what is being set-up in the EC level as the SC and the interests and actions of urban actors will assemble the local portray of what a ‘Smart City’ is. This research does not aim to make general conclusions about Urban Governance in European cities, notwithstanding, the development of case studies will give relevant empirical insights about the assemblage processes taking place in governance networks in the European SC sphere. Taking into account that 51% of cities of more than 100.000 inhabitants in Europe are developing or structuring SC programs (Manville et al., 2014), the agency of the EIP-SCC as a platform and the actual and future funding schemes (EIP-SCC

2014/2015, EIP-SCC 2016/2017) deploying 'lighthouses' projects for future replicability, it is relevant to explore which could be the possible consequences unleashed by actual EC metagovernance mechanisms in the present and the future of European urban governance.

LITERATURE REVIEW

3 Introduction

The following literature review explores the theories, approaches and concepts that are relevant for the development of this research. The relevant academic theories of governing will be explored.

4 Governing cities

1) Urban Regimes

Urban Regime Theory (URT) (Stone, 1989) has been a prominent framework² to interpret urban American politics in the second half of XX century. The initial assumption for URT is that the capacity to govern a city is not only given by the victory in the electoral process. The scarcity of municipality resources, mainly dependant on tax payers' money, limits local government capability to perform. Because of this, local politicians and authorities are encouraged to involve new actors in the action of governing (Stone, 1993, p.1). In a modern industrial context where cities are competing to attract industries and therefore, jobs, private sector actors are conceived as essential part of a coalition to govern and to maintain political power. Their capacity to stimulate economic growth and the creation of new employments, acknowledge corporate stakeholders as the main target of the municipality to structure governing alliances. On the other hand, corporate interests to be part of a coalition relies on the possibility to acquire institutional authority, condition policy development and protect their own interests. A "governing coalition" arise from a consensus of the vision of the city underlying the sharing of resources, collective objectives and individual concessions of political and corporate power.

² The author itself confessed to feel "uncomfortable" with the definition of URT as a theory. In further works he uses the concept of "approach" and also he refers to URT as "*bringing analytical concepts to bear on an especially illuminating set of political conditions*" (Stone, 2015, p.123). Other authors as Pierre (2014, p.870) refer to Urban Regime Analysis as a framework: "*an approach identifies a research topic or field and presents some general notion about how it could be studied. A framework defines the key concepts and identifies dependent and independent variables. A theory, finally, departs from an abstract analysis of the research field, defines the relationships among the key concepts, and stipulates causal relations and the direction of that causality among those concepts*". For the purpose of this research, URT and UGN will be conceptualized as frameworks to study urban governance.

Furthermore, URT interprets governing from a political economy perspective. In this sense, it is not assumed the subordination of politics to economics, but it is considered as a both ways dynamics. "economic forces both shape and are shaped by political arrangements" (Stone, 1993, p.2). In this sense, this framework will be relevant to understand how the SC is materialising at the urban level. Which are the dynamics structure between the political and the economic powers? Which are the scarce resources to govern? Which are the new corporate actors? Which are their interests? What are the agreements made to structure the governing coalition?

2) From governing to governance

Governing cities is an evolving activity. In the last 30 years, Europe had a profound change on how local municipalities were performing urban planning and city administration. The hollowing out of the state and the structuring of new political spaces, set up new political geometries at the urban governance level (Brenner, 2004). the change from government (where the municipality had an overarching control over the services provided by the city, and the decisions made to assure them) to governance (where different local and non-local actors could be part of city decision making and provision of services) brought new ways of interpreting urban governing dynamics.

Althought, URT has proven to be an important analytical tool in the specific American industrial context of the second half of the XX century. There is not a consensus among European scholars regarding its actual applicability in post-industrial urban governance. Pierre (2014) for example, argues:

"With an urban economy characterized by a very large number of smaller businesses and with corporate players increasingly operating as part of national or even transnational industrial conglomerates, the prospects of building an urban regime might not altogether disappear, but it certainly becomes much more challenging" Pierre (2014, p.867).

In other words, globalisation and its outcomes transgress the frames set up at the local level by the Urban Regime framework. The easiness of transnational flow of capital, the detachment of place of manufacturing and services corporations, the rescaling of the state-hood and the entrepreneurial role

of the city, are conditioning the continuity of an agreed urban agenda between the local municipality and the local private stakeholders (Pierre, 2014).

Furthermore, the author suggests that URT is a specific form of Urban Governance that only focus in the possibility of “governing coalitions” between the local government and corporations. The inclusion of actors outside of this two categories is not contemplated in theory:

“while urban regime theory is preoccupied with the synergy between political and corporate capabilities, urban governance theory simply asks who controls the resources that are critical to governing and to what extent they can sustain collective action” Pierre (2014, p.867).

3) Urban Governance in Europe

Governance arose as the neoliberal response to the economic and political crisis of 1970. The conception of the corporate as efficient, and of the public as slow and bureaucratic, brought changes on how governing was being performed. At the national level, social welfare was gradually dismantled as a responsibility of the nation-state, and the provision of some public services became a market where private and public-private organisations could participate. At the urban level, local development issues were conceived as ‘too complex’ for the local government to administrate them by itself. New local, and trans-local actors were included in the structure of economic plans, urban planning and provision of urban services, configuring what is conceptualised in the academia as Urban Governance (UG) (Torfing, 2014, pp.331-332).

The concept of Governance is widely address by many European scholars. Torfing (2012, ch.1) define governance as “the process of steering society and economy through collective action and in accordance with some common objectives”. Other authors like Pierre and Peters (2000) elaborated Governance as an analytical framework to analyse urban political processes. The objective of their approach is to:

“look beyond the institutions of the local state and to search for processes and mechanisms through which significant and resource-full actors coordinate their actions and resources in the pursuit of collectively defined objectives” (Pierre, 2005, p.452).

4) Interactive governance

Considering URT limitations to frame and study urban scale politics, an additional theoretical tool is required in order to explore the interactions between the local, national and the European level of the SC networks. Taking the previous into account, and doing focus in the policy making processes, governance has been lately interpreted by academics as "Interactive Forms of Governance". This concept brings the possibility of other actors besides government, to perform governance participation, steering and control. In specific, Torfing (2012, ch.1) defines IFG as:

"the complex process through which a plurality of social and political actors with diverging interests interact in order to formulate, promote, and achieve common objectives by means of mobilizing, exchanging, and deploying a range of ideas, rules, and resources".

Within the concept, three different types of IFG are conceptualised by Torfing (2012, ch.1). Quasi-markets, Partnerships between public and private actors, and Governance Networks. For the purposes of the research, 'Governance Networks' framework will provide the necessary tools in order to analyse in interactions at the European level and between the European and the local.

5) Governance Networks (GN)

In order to define Governance Networks, Sørensen and Torfing (2007: 9-11) identify 5 points that should be inherent to the group formation and processes.

- I. The first characteristic is that GN connect private, semi-public and public actors that are *"dependent"* on each other's resources in order to develop or implement policies. To be part of the network, actors' resources should be valuable for the objective of the group. In addition, they should be *"operationally autonomous"*. Their convictions may not be co-opted by other actors participating in the network. Relationships are conceived in a horizontal way of functioning. Nevertheless, it is possible that an asymmetrical disposition of resources and authority exist.
- II. The interaction of the actors should occur in a *"negotiations"* manner, including actions of bargaining and deliberation. Moreover, the authors highlight that total consensus is not always achieved. Deliberation happens in a context of power struggle and antagonism.

- III. The interaction and negotiation between the actors take place in a "*institutionalized framework*" framed by regulatory, normative, cognitive, and imaginary aspects.
- IV. GN are consider "*relatively self-regulating*". They are not guided by the market and they are not subordinated to other hierarchies. However, it is important to recognize the political and institutional context conditioning their ability of self-regulation.
- V. And lastly, GN should be structured to the "*production of public purpose*". By public purpose the authors refer to the "expression of visions, values, plans, policies and regulations that are valid for and directed towards the general public" (Sørensen and Torfing, 2007: 11). In this sense, GN are embedded in the policy territory.

Governance Networks provides a proper framework to analyse the interaction between actors that are part of SC networks. Private, semi-public and public organizations usually are involved in the negotiation. Different kind of resources are put on the table by the stakeholders: know-how, capital, willingness to modify regulations, technology, etc. Actors are considered autonomous and are pursuing to maximise their own benefits, however, consensus building is part of developing a future 'Smart' vision for the city.

5 Theories of Governance Networks

According to Sørensen and Torfing (2007: 14), the second generation of governance networks academics has focused their interest in network formation and dynamics. In specific, the topics of the functioning and development of governance networks, the causes of its failure and success, its democratic issues and possibilities and its metagovern mechanisms. In order to get insights about these themes, three theoretical perspectives have been used in the literature. Institutional theory, to inquire in network formation and operation. Governance Network Theory, to understand why networks failure and which will be the best way to metagovern them. And democratic theory, to unveil the democratic limitations and possibilities of Governance Networks (Sørensen and Torfing, 2007: 16; Bogason and Zølner, 2007: 7)

Even though there are three different theoretical approaches in GN research, Sørensen and Torfing (2007, p. 17) developed a heuristic map that categorise four transversal theoretical positions according to their conceptions of social action and societal systems of governance. The four theoretical positions are the Interdependency theory, the governability theory, the integration theory

and the governmentality theory. What makes them different are two things. The first one is how they understand of social action:

"Is social action driven by self-interested individuals' rational calculation of costs and benefits, or is it shaped by rules, norms and values intrinsic to particular cultures and historical contexts" (Sørensen and Torfing, 2007, p. 16).

And the second one is related to how they understand conflict in societal governance. Are conflict and power struggles inherent to societal governance or are a consequence of lack of coordination between the actors.

6 Metagovernance

Metagovernance refers to the process through which, different legitimate actors try to manage, conduct and facilitate different forms of governance according to their specific interests. Sørensen and Torfing (2009, p. 246) identify three main objectives when metagovernance is performed:

"(1) the production and dissemination of hegemonic norms and ideas about how to govern and be governed; (2) political, normative and context-dependent choices among different mechanisms of governance, or among different combinations of governance mechanisms; and (3) the strategic development of particular institutional forms of governance in order to prevent dysfunctions and advance particular political goals."

There are different ways in which metagovernance can influence governance networks. Sørensen and Torfing (2009, p. 246-247) define a typology of 4 approaches through which, public administrators and elected politicians can perform metagovernance. To condition the scope, character, composition or institutional processes of the network is considered *network design*. To define political objectives, legal-basis, fiscal conditions and the rhetoric of the network is called *network framing*. The different material or immaterial actions in order to harmonise dynamics, to empower stakeholders and to improve network efficiency are actions of *network management*. And to influence the range of possibilities, the underlying assumptions for decision making and the policy agenda is considered *network participation*. Network design and network framing are implemented at a distance from the networks, in other words 'hands-off'. On the contrary, network management and network

participation involves the interaction between the metagovernors and the GN, so the actions are taken 'hand-on'.

The typology developed by Sørensen and Torfing (2009) will be the starting point in order to analyse the different mechanisms of Metagovernance performed by the EIP-SCC. They will be categorised according to the type of metagovernance they represent.

7 Governmentality

One of the different theories supporting the understanding of GN is Governmentality (Dean, 1999; Foucault, 1991; Rose & Miller, 1992 cited in Torfing and Sørensen (2014, p.338)). Even though governmentality is not a theory tough to analyse GN, it can be used in order to study its formation and agency. In this sense, GN are conceived as state mechanisms to condition and conduct the free actions of actors being part of a network developing or implementing a policy. These networks are structured and condition by different 'technologies' and 'narratives' with an explicit interest of exercising power and mobilising actors' agency towards specific policy objectives. An important assumption of Governmentality theory refers to actors' freedom of choice. Even though they are conditioned by different mechanism, they are not obliged or forced to act in a particular manner. The possibility of choice opens the window for resisting metagovernance mechanism and the configuration of conflicts and struggles (Triantafillou, 2004).

Regarding urban planning and the SC, Vanolo (2013) uses a governmentality approach in order to explain how the SC narrative is being deploy in order to justify new economic paradigms and political choices. A theoretical approach and the identification of different mechanism of metagovernance used on cities (narratives of environmental improvements, the possibilities of economic growth, city rankings, EU funding and governance networks) are the main points of his article. However, there is not a development regarding on how and by whom these mechanisms are being configure in the Europe and at the urban level.

This research will complement the governmentality understanding of the SC trough the GN and Metagovernance frameworks.

RESEARCH DESIGN

With an understanding of the problematic, the theories and concepts on which the study is framed, the research question, hypothesis and methodology will be presented. It is important to mention that this research does not aim to make an overarching conclusion about the Smart City processes taking place in European cities, but as an exploratory work, it intends to add a new perspective to actual debate in literature and to propose a new approach to understand the Smart City.

As we pointed before, the European SC assemblage is taking place in the interaction between the global, in this case represented at the European scale in European Union institutions (European Commission and the EIP-SCC), and the local, among the interested actors in the urban scale (some of them are not fixed to the local). In both levels the Smart City is configured by the interplay of engaged stakeholders.

What is new in this approach is to conceive this interplay in an Interactive Governance framework. Previous authors have questioned the concept of the SC (Hollands, 2008), the deployment of the Ideology (Söderström, Paasche, and Klauser, 2014), and the disciplinary mechanisms to promote as an urban imaginary (Vanolo, 2013) from an urban entrepreneurialism understanding of the processes (Harvey, 1989). This structural conception of the topic leaves behind all the micro-interactions and networks formation taking place in diverse geographical scales, as relevant elements of analysis to portrait in the Smart City picture.

The two governance networks assembling the SC in the local scale are represented at the European level by the EIP-SCC, and in the urban level by the stakeholders being part of the elaboration of the Smart Plans for the city. The interaction between these two occurs through metagovernance mechanism implemented by the GN at the European level. The hypothesis here is that the metagovernance mechanism implemented by the EIP-SCC conditions the urban governance network in the urban level. The availability of funding, the deployment of a 'Smartmentality' and the structuring of a platform involving different Smart City actors at the European level are possible causes of the actual change in urban governance dynamics.

Taking this into account, the question to address by this research is the following:

- *Are European Commission Smart City policies configuring new urban regimes? How European Commission Smart City policies are metagoverning the agency of cities?*

In order to answer this questions, it is also necessary to address other questions:

- *How are the European SC networks structured? How they are conditioning the agency of cities?*
- *How are the urban SC networks structured? How they legitimise the SC model at the local level?*

The expected outcomes will be an understanding of SC networks structure, actors, policies, at the European and urban level.

8 Methodology

Even though the understanding of the SC assemblage as a GN is merely descriptive, the analysis of the GNs participating in the processes points towards an explanatory conclusion. The answer to the questions regarding the formation, the initiative, the purposes, the knowledge produced and the instruments used, the composition, the accessibility, the role of metagovernance, the monitoring, the hierarchy, the norms and political discourses, the autonomy and the democracy (Bogason and Zølner, 2007, p.8), will be the evidence needed in order to verify the hypothesis of this work.

Bogason and Zølner (2007) highlighted the most important methods to address GN research. Their point of departure is based on backward mapping (Elmore (1985) cited in Bogason and Zølner (2007, p.29). This method examines the processes that took place in the development of a policy output. In our case, a multilevel research is justified because of the interaction between the European and the urban scale. Two policy outputs will be examined. At the European level, the EIP-SCC that is the platform where all the interested European SC stakeholders gather and share knowledge, experiences and other resources in order to overcome barriers in the deployment of the SC. And at the urban level, the local Smart City projects and plans that set-up the guidelines regarding objectives and actions that are going to take place in the city.

In order to perform a backward mapping and to answer the questions regarding the Smart City Networks at both levels, two methods of data gathering were selected according to possibilities and limitations of time, accessibility, and knowledge. First a Document Analysis of Network topography and Network programmes. Network topography aims to discover which are the participants and what are their roles and positions in the network. And Network programmes seek to make explicit the underlying logics, norms, actions and strategies composing the networks that are being researched. In this sense, documents are relevant telling the history, identifying the actors and discovering the norms and the ideologies behind. On the other hand, they do not say much about how the interactions had occur, which were the dominant actors defining key variables in the network and the possible conflicts in it. Because of this, qualitative interviews were used in order to enhance the comprehension of the information answering previous questions. In addition, qualitative interviews were also useful to gather information regarding personal experiences about networks and to understand beliefs and knowledge assumptions of participants.

Other relevant methods in GN research are mentioned by the authors. Observation, expert reports, diaries, focus groups are also recommended as useful methods to enrich the the study. Nevertheless, due to limitations they are considered for further works.

9 Case selection

Around 64 projects related to energy efficiency and Smart Cities had been funded by the European Commission programmes from 2005 (Concerto 1, Concerto 2, Concerto 3, FP6, FP7 and H2020). These projects have actively involved 190 cities across the continent. The three calls regarding SC projects (H2020-SCC-2014, H2020-SCC-2015 and H2020-SCC-2016) were by far away the most ambitious. The outcomes of these 9 projects taking part in 27 cities, are planned to be reproduced and commercialized in an industrial scale of 'Smart City solutions'. The first filter to select the case studies is that the city should be participating as a 'Lighthouse' in any of these projects. The argument of this criteria is that these three calls are exclusively dedicated to SC projects and therefore, represent what EC wants to promote and deploy as the SC. The cities that are part of the projects are the following (Table 1):

Table 1. Lighthouses cities in EIP-SCC H2020 calls

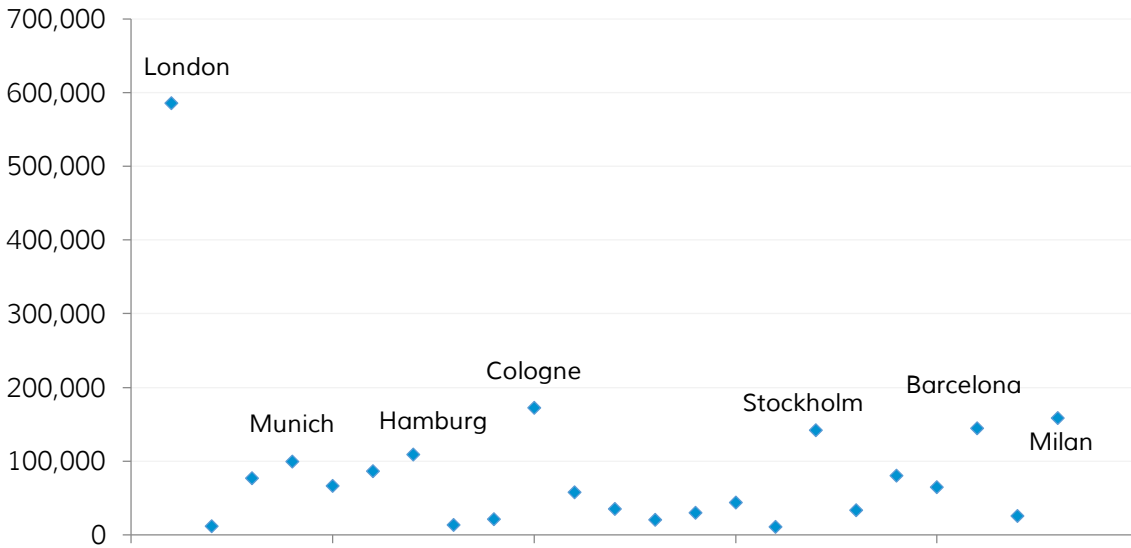
Project	City 1	City 2	City 3
Replicate	Florence	San Sebastián	Bristol
Sharing cities	London	Lisbon	Milan
Smartencity	Vitoria-Gasteiz	Tartu	Sonderborg
Smartertogether	Lyon	Vienna	Munich
Growsmarter	Barcelona	Cologne	Stockholm
Remourban	Nottingham	Valladolid	Eskisehir
Triangulum	Manchester	Stavanger	Eindhoven
Ruggedised	Umea	Glasgow	Rotterdam
MySmartLife	Nantes	Helsinki	Hamburg

The following rationality to filter the case studies is how much the city is relying on EC funds to develop urban infrastructure. As is acknowledge, cities with a large population and a dynamic economy are much more likely to have available resources or are more attractive for private investments in urban development. Taxpayers' resources, industry and financial taxes resources, private investment resources represent an opportunity for cities to engage in urban projects that go along their development plans. Nonetheless, small and medium size cities and cities without a high attractiveness for private investments, usually rely on EC funds as a possibility to perform urban development projects and are willing to adapt their plans in order to be able to get funding (Crivello, 2014; Haarstad, 2016).

In order to categorise 'lighthouses' cities in this criteria, each of the annual infrastructure development budgets was going to be compared, however, due to the lack of standardised data other variables were used. Taking into account that most of the cities income comes from taxpayers' money and that a dynamic economy brings attractiveness for capital investment, the number of inhabitants and the GDP were used to compare them.

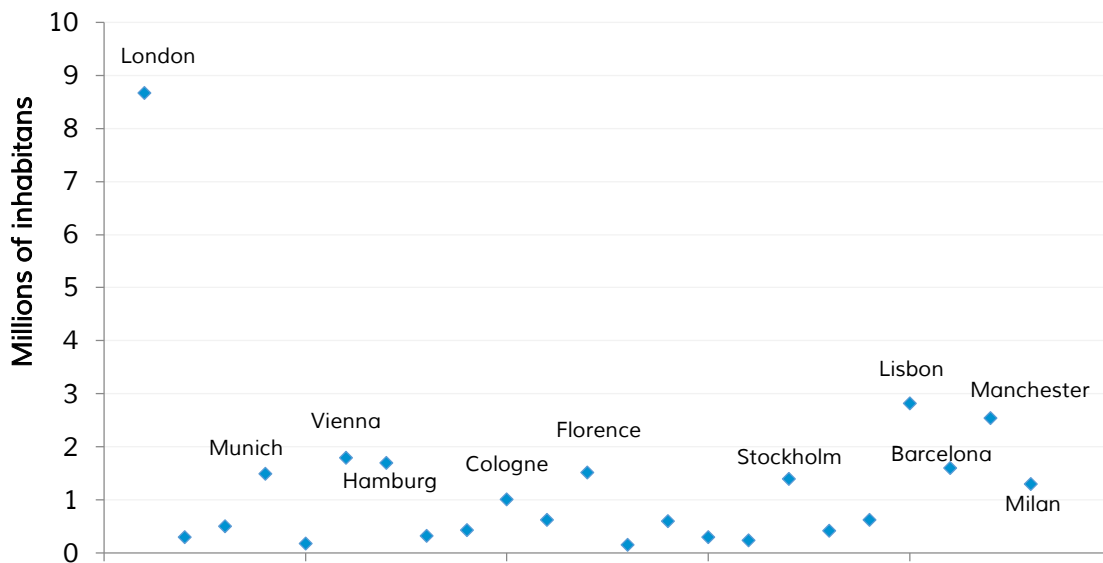
Figure 1 shows that out of the 23 cities with reliable and standardise data, 16 had a GDP below 100,000 million EUR (70%). Figure 2 shows that 11 out of 23 cities are above 1 million inhabitants (48%).

Figure 1. 2015 GDP NUTS 3 (in million EUR)



Source: Eurostat

Figure 2. Millions of inhabitants 2016

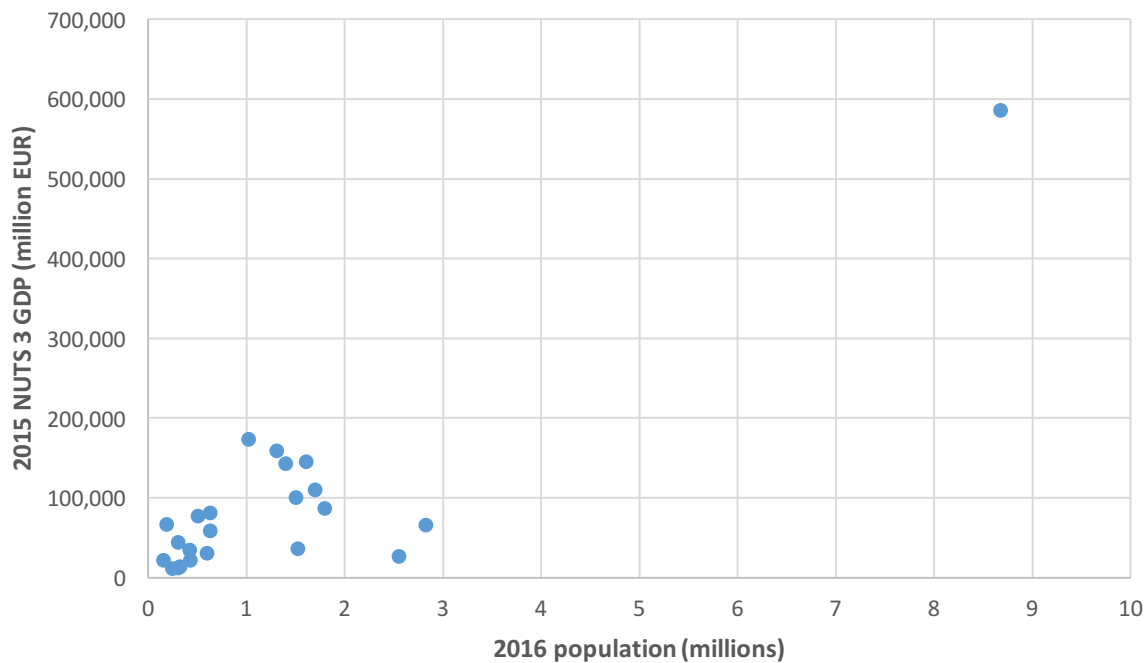


Source: Eurostat

When we put together both variables, two clusters can be identified. The first one, with 7 cities between 1 and 2 million inhabitants and 85,000 and 172,000 million EUR GDP. And the second one with 12 cities between 150 and 630 thousand inhabitants and 10,000 and 81,000 million EUR GDP.

Therefore, and as a result of the interest of researching 'lighthouses' cities that could rely much more on external funding for urban development projects, cities in the 2nd cluster will be the object of study.

Figure 3. Population vs GDP (Eurostat)



Source: Eurostat

The last criteria to take into account is if cities were involved in previous EC SC calls. The previous calls were within the programme 'Energy efficiency in buildings' that had 57 calls that engaged cities in a similar concept to the SC lighthouses (cities implementing the project and other taking advantage of the knowledge produced). The argument here is that the city has to follow certain EC regulations and guidelines in order to apply for the funding. The participation in these projects means that there was a prior involvement of new actors and visions in city plans following EC guidelines. So, the more projects you are involved in, the more appropriated you have EC SC visions and the more you are relying on EC funding for project development.

Table 2. Cities in cluster 2

City	Population 2016	GDP 2015 (millions EUR)	# of SC related projects
Helsinki	629,512	80,958	1
Lyon	506,615	76,800	4
San Sebastian	186,064	66,553	3
Rotterdam	630,000	58,495	2
Nantes	300,000	43,893	2
Eindhoven	419,045	33,984	1
Glasgow	598,830	30,375	2
Bristol	428,100	21,456	2
Tartu	152,188	21,083	2
Nottingham	321,500	13,646	2
Valladolid	301,876	11,871	4
Vitoria-Gasteiz	244,634	10,907	2

From the 12 cities in cluster 2, 3 of them have more than 2 SC projects that have received funds from the EC. Lyon in France with 3 energy efficiency projects and 1 SC project, San Sebastian in Spain with two energy efficiency projects and 1 SC project, and Valladolid, also in Spain with 2 energy efficiency projects and one SC project.

Table 3. Cities with the most Energy efficiency and SC projects funded by the EC

City	Project
Lyon	Reinassance, Nextbuildings, Smartertogether, Transform
San Sebastián	Tetraener, Steep, Replicate
Valladolid	Cityfied, Direction, R2CITIES, Remourban

Due to limitations of time, 2 out 3 cases studies were developed. The selection was done supported by the possibility of getting more insights in the study of SC plans and development plans that were in Spanish, author's mother tongue. Therefore, the two case studies to explore are San Sebastian and Valladolid.

10 Documents and interviewee selection EIP-SCC network

In order to get an in-depth understanding of EIP-SCC network, the actors involved, the assumptions, the objectives, the strategies, and the relationships of power existent in the networks, different strategic documents and presentations were analysed. The documents taken into account in the analysis in the EU scale are the following:

- Europe 2020: A strategy for smart, sustainable and inclusive growth: the document set-up the economic strategy for the European Union towards the year 2020. Is relevant to analyse if the Smart City is conceived as a vehicle to achieve strategic economic objectives.
- European innovation partnership on smart cities and communities, strategic implementation plan: the strategic implementation plan establishes the EIP-SCC objectives and the actions to follow in order to accomplish them.
- European innovation partnership on smart cities and communities, operational implementation plan: this document gives an overview of the performance of the EIP-SCC according to the defined in the strategic implementation plan.

SCC-01-2014 and SCC-01-2015: Smart Cities and Communities solutions integrating energy, transport, ICT sectors through Lighthouse (large scale demonstration - first of the kind) projects: these documents are the guidelines for cities interested in applying for funding regarding Smart City projects.

In addition to the analysis of the documents, two experts belonging to the administration of the marketplace of the EIP-SCC were interviewed. The discussions hold with the professionals were semi-structured interviews addressing the following topics:

- The purpose of the EIP-SCC
- The structure and governance of the EIP-SCC
- The actual agency of the EIP-SCC
- The agreed consensus related to what a SC is and which is the path to follow by the EU
- The criteria to structure the EIP-SCC calls
- The possibility of a European market of SC solutions
- The functioning of the financial mechanisms of SC projects
- The re-branding of previous urban development plans in order to apply for EC funding
- The involvement of new stakeholders in the urban governance scene

The criteria to select the interviewees were defined taking into account the next rationality:

- A relevant position in the EIP-SCC with influence in the strategic direction of the entity
- A professional background in governance in order to address topics related to governance networks and stakeholders' interests

The process for the selection of the interviewees started with the people that were part of the Sherpa group and the High-level group of the EIP-SCC, however, none of them agreed to have an interview. The second possibility was to interview the people in charge of running the EIP-SCC. Two directives of the network agreed on having an interview with the author. Their profiles are the following:

- Juan Cristobal Garcia Soriano: coordinator of the management team of the EIP-SCC from 2013 to 2016. Sennior Innovation consultant in Urban Innovation – Zabala Consulting.
- Gerben Wedekind: manager of the action Cluster "Sustainable Districts and Built Environment" of the EIP-SCC between 2015 and 2016. Manager Innovation group – EY.

11 Documents and interviewee selection San Sebastián and Valladolid

Regarding the case studies, the documents that I will analyse will be the Smart City plans taking into account also the development plans.

The documents are the following:

- a. E2020SS: San Sebastian strategic plan 2020
- b. Valladolid towards 2016: Strategic plan
- c. Plan Smart San Sebastian 2016-2020
- d. Innolid 2020

The criteria to select the interviewees were that they had a relevant position in the development of SC knowledge in their cities or they were academics with a broad understanding of SC processes taking place in Spain. The interviewees were:

- Eukén Sesé: general manager of 'Fomento San Sebastián', development agency of the Basque city and the public realm leader for SC projects.
- Igor Calzada: academic, expert in SC topics and Spanish national.

ANALYSIS

12 The European Governance Network on Smart Cities

Smart Cities initiatives are widespread all over Europe. 240 cities of more than 100.000 inhabitants are preparing or developing SC plans at the urban level (Manville et al, 2014, p.9). Nevertheless, until 2012 there was not an overarching network of cities and other stakeholders that gathered to work on the topic. In 2010 the EC thought that the subject represented a big opportunity for Europe. The Smart City was selected as one of the five European Innovation Partnerships (EIP) that were in charge of promoting growth, increasing the efficiency and create new, innovative solutions to critical social challenges in the Union (European Commission, 2014, p.4). The inclusion of the SC as an EIP shows that the SC had a relevant role in the EC agenda.

1) The EIPs

The EIPs are considered instruments to foster cooperation and develop innovation between interested stakeholders in strategic sectors for the EC. Their main objectives are to address societal challenges and to create and develop new markets bringing together industry, policy makers, civil society, academy and cities. In other words, the EIPs could be considered networks where different actors are gathered in order to generate new dynamics between them. Regarding the SC, the EC conceived and developed the European Innovation Partnership on Smart Cities and Communities. This entity will be in charge of bringing together stakeholders in order to direct and enhance future possibilities in the SC sphere. Other EIPs of the EC are related to the topics of 'active and healthy ageing', 'agricultural sustainability and productivity', 'water' and 'raw materials'.

2) The EIP-SCC

The EIP-SCC is a complex body in charge of developing EC interests in the field of the SC in Europe. According to the organisation its main objective is:

"to significantly accelerate the industrial-scale roll-out of smart city solutions integrating technologies from Energy, Transport and Information and Communication Technologies" (European Innovation Partnership on Smart Cities and Communities, 2013, p.3)

In order to do so, part of the EIP-SCC (the EIP-SCC market place) is structured as a platform where all the interested stakeholders, from companies to NGOs, can participate. This research argues that this body is serving as a Governance Network of the Smart City at the European level. They are conducting actions in order to develop what the SC is and what the SC should be in the European context. With the purpose of building on the arguments that support the hypothesis, I will draw on the questions arising from Network theory and Institutional theory (Bogason, P. and Zølner, M., 2007, p.7) to explain the dynamics of the network and to understand how metagovernance mechanisms are being coordinated (consciously or unconsciously) between the actors in the platform.

(1) Network theory

In order to have an understanding of how the Governance Networks operate from a Network theory perspective, the following questions will be addressed (Bogason, P. and Zølner, M., 2007, p.7):

- How was the network formed?
- Who took the initiative?
- How stable are they?
- Do they have a spatial dimension?
- What instruments were used in the network?
- What type of actors were involved?
- How open and accessible was the network?
- How each of the actors perceived their roles?
- What is the role of metagovernance?
- Did some of the actors establish the goals of the network or just monitor its dynamics?
- Is there any overseen hierarchy between actors?

As it was pointed out before, the EIP-SCC was created by the EC with the objective of setting a common ground in the actions being taken to implement SC projects in Europe. In order to do so, the organisation was structured by three levels that articulate its agency. The first level is the EC, where the strategic objectives are agreed and the stakeholders involved in the development of those objectives are selected. The second level refers to the selected stakeholders that set-up and roll-up a strategic plan aligned with the initial objectives defined by the EC. And the third level is the platform where all the public and private SC related stakeholders interact and make part of different working

groups to develop specific topics as urban mobility, built environment, business models and policy and regulations (Interview 3, Gerben Wedekind).

In the EC level the strategic objectives of the EIP-SCC are settled. In the paper, the EIP-SCC arise as a driver of quality of life and as a possibility to boost European economy:

"This partnership strives at a triple bottom line gain for Europe: a significant improvement of citizens' quality of life, an increased competitiveness of Europe's industry and innovative SMEs together with a strong contribution to sustainability and the EU's 20/20/20 energy and climate target. This will be achieved through the wide-reaching roll out of integrated, scalable, sustainable Smart City solutions – specifically in areas where energy production, distribution and use; mobility and transport; and information and communication technologies are intimately linked." (European Innovation Partnership on Smart Cities and Communities, 2013, p.3)

The initial discourse explicitly links the roll out of SC solutions with the improvement of the quality of life, sustainability and the enhancement of Small and Medium Enterprises (SMEs) engaged in the electric and technologic sphere. Therefore, the directive from the EC is:

"Identifying bottlenecks that are blocking or slowing down the development and deployment of technologies and their market uptake in order to address pressing societal needs, and

Identifying the actions that need to be taken to overcome these bottlenecks. This could include more effective use of EU funds, as well as actions needed on public procurement, standard setting and regulatory frameworks" (European Commission, 2012, p.10)

Reading more in detail the mandate of the EIP-SCC, it is possible to identify the assumptions being made about the SC. First of all and again reinforcing the previous overall objective of the EIP, the roll out of the SC is presented as a key factor to "address pressing societal needs" (referring to environmental challenges, economic challenges and quality of life) without supporting evidence or case studies that could set a precedent.

Second, there is the assumption of a potential market creation and development of SC solutions by the EIP-SCC. In this regard, both of the interviewees working in the EIP-SCC were confident on the possibility of a market creation and development for SC solutions in Europe:

Juan: Are you optimistic about the possibility of creating a market for Smart City Solutions?

Gerben Wedekind: Yeah, I think it could happen, but obviously it won't be one market, it would have different markets, the idea is that this marketplace SCC will bring about different groups of people, procurers of solutions, solution providers, that come together, do things, and also this could be of interest of external people. this could occur but it won't be one market. It would be hopefully as many as possible initiatives (annex 2).

Juan Cristobal García: I believe yes. In fact, when Asian or Latin American cities search for references (SC) they mainly take European cities examples. Chinese or Indian cities also prefer to take European cities as an example before going for North American, Japanese or Korean that also have interesting examples (author own translation) (annex 3).

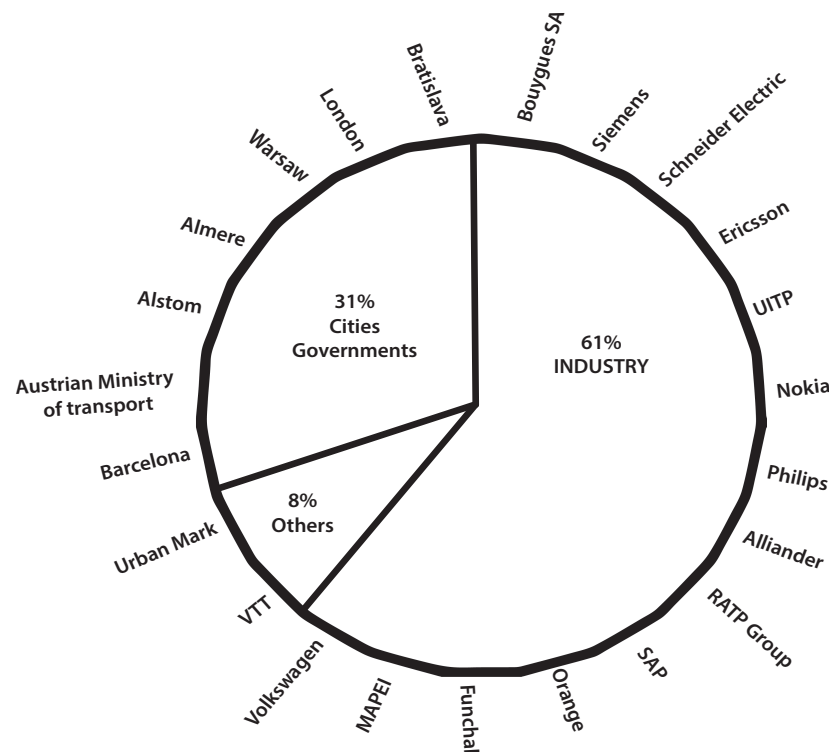
The previous shows an alignment between what is being settled in the first level of the EIP-SCC and the narrative being shared by the EIP-SCC marketplace promoters.

The second level of the EIP-SCC is structured by two groups, the High-level and the Sherpa groups. The High-level group is the board of the EIP-SCC and has the responsibility of developing and implement a strategic plan that is aligned with EC mandates. The appointment of members to the High-level group is done by the European Commissioners of Transport, Energy and the Digital agenda according to what they consider is a balanced representation of the interested stakeholders and the personal capacities of the appointed members (European Commission, 2012, p.10).

Additionally, each of the High-level group members can appoint one adviser according to his or her interest and him or her will be part of the Sherpa group. The Sherpa group is the group of experts that advises the board of the EIP-SCC and has also a leading role in the partnership.

The High-level group is mainly structured by individuals that represent the interests of industry (61%) and European city governments (31%). The technologic (25%), transportation (25%) and telecommunication sectors are the most represented within the industry stakeholders³. Big technologic companies as Schneider Electric, SAP, Siemens are part of the affiliations of some of the High-level group members.

Figure 4. High level group affiliation



Source: Author

Regarding the High-level group composition, three things can be pointed out. First, there are no stakeholders representing the academia. According to the interviewee Dr. Igor Calzada:

“the academy is a minority, a minority within the H2020 program, there is not too much capacity of influencing endogenous differential developments that try to give some light regarding the possible market for Smart Solutions” (Translation by the author).

³ http://ec.europa.eu/eip/smartcities/whos-who/index_en.htm#hlg

Therefore, the no engagement of the academic stakeholders it is not only an isolated situation of the EIP-SCC but a recurring circumstance in the development and implementation of the Horizon 2020 agenda for Europe.

Second, the selection of the board of the High-level group raise a contradiction to one of the main objectives of the EIP-SCC: *“increased competitiveness of Europe's industry and innovative SMEs”* (page 27). The fact that there is no any Small and Medium innovation Enterprises representative sends a clear message about who are the ones driving policies related to the SC.

And third, there is not any stakeholder representing the interests of the community. Maybe city governments could be the actors watching over citizens' interests, however, one of the interviewees and a previous statement from the EC recognised that they had “issues” in the High-level board selection process (European Commission, 2014, p.10-11).

Juan: Regarding the composition of the market place and also the Sherpa and high-level group, do you think all interested groups are represented equitably or there are not?

Gerben Wedekind: I am not sure; I would say yes. Because it is an open platform, everyone is able to participate. I am just thinking very hard, because the EIP is also a large body, with different levels, programmatic side, initiatives, clusters, you have the stakeholders, I think overall, there is a good representation of industry, of local authorities, although is never enough, it could always increase. and a good representation of other stakeholders. I think what could be enhance it is citizen representation.

Juan: Even though you have an action cluster totally dedicated to citizens.

Gerben Wedekind: It is difficult, I think the citizen cluster is very small and at European level there is always a tendency, now is getting less and less, towards technocracy, a solution is considered to be Smart when is technologically smart and innovative. For many years, the citizen aspect and the adaptation of certain technological solution has been quite ignored I would say. You may want to have a look at that more critical, I found it difficult to answer. Citizen involvement may be strengthening.

The third and most complex level of the EIP-SCC is the stakeholder platform or the Market place. In the official documents the EIP-SCC market place is conceived as a platform to gather all interested SC actors. The objective of bringing together stakeholders is to perform activities in order to support the roll-out of the SIP (European Commission, 2012, p.10-11). Furthermore, the platform should be the

channel of communication between the EC and the SC stakeholders, they must identify the market behaviour, ensure the knowledge sharing and partnerships between participants.

The platform is run by a consultancies partnership that won the EC commission marketplace tender. The companies involved in the project are Zabala Innovation consulting (Spain), Prestomedia (Spain), SP Technical research institute of Sweden (Sweden), Imperial College London (United Kingdom), Trento Rise (Italy) and the European Water partnerships (Belgium). So far, the marketplace put together around 4600 SC partners from 31 different countries (Hertzsch, 2016) representing city governments, industries, associations, tech experts and platforms, regulators and consultants (European Commission, 2016).

According to *Juan Cristobal Garcia* (coordinator EIP-SCC Marketplace management team) the two main objectives while conceiving the marketplace were: first, to bring together all kind of SC stakeholders in order to counter duplication and align standards in the development of new technologies. And second, follow the EC approach of relying in network development in order to engage and interact efficiently with Europe's stakeholders.

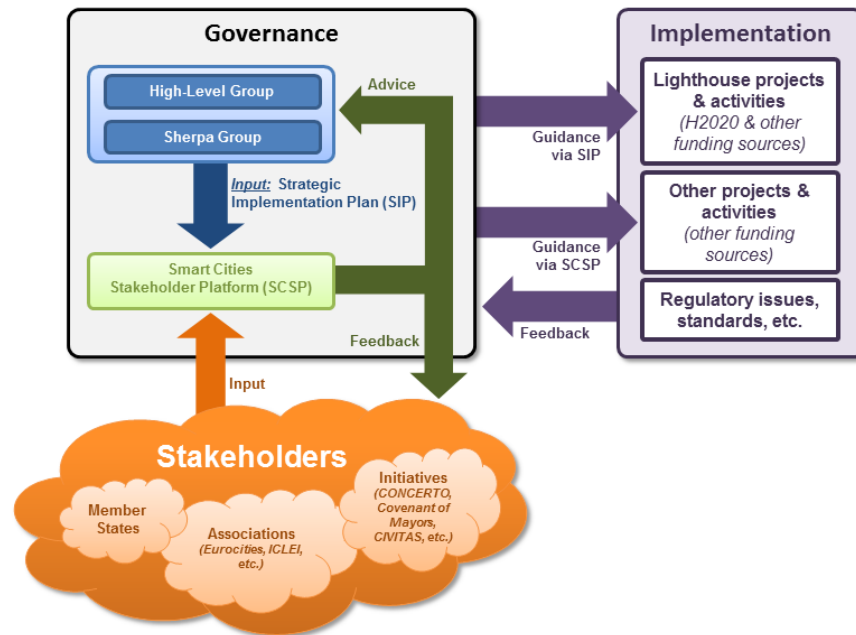
i How the market place operates?

The conception and operation of the marketplace was defined by the High-level group in the SIP. The board identified three areas with potential to "focus energy and gain momentum" to deploy the SC in Europe (European Innovation Partnership on Smart Cities and Communities, 2013a). The three areas are the following:

- *Sustainable Urban Mobility – Alternative energies, public transport, efficient logistics and planning*
- *Sustainable Districts and Built Environment –improving the energy efficiency of buildings and districts, increasing the share of renewable energy sources used and the liveability of our communities*

- And, Integrated Infrastructures and processes across Energy, ICT and Transport – connecting infrastructure assets to improve the efficiency and sustainability of cities

Figure 5. EIP-SCC structure by European Commission



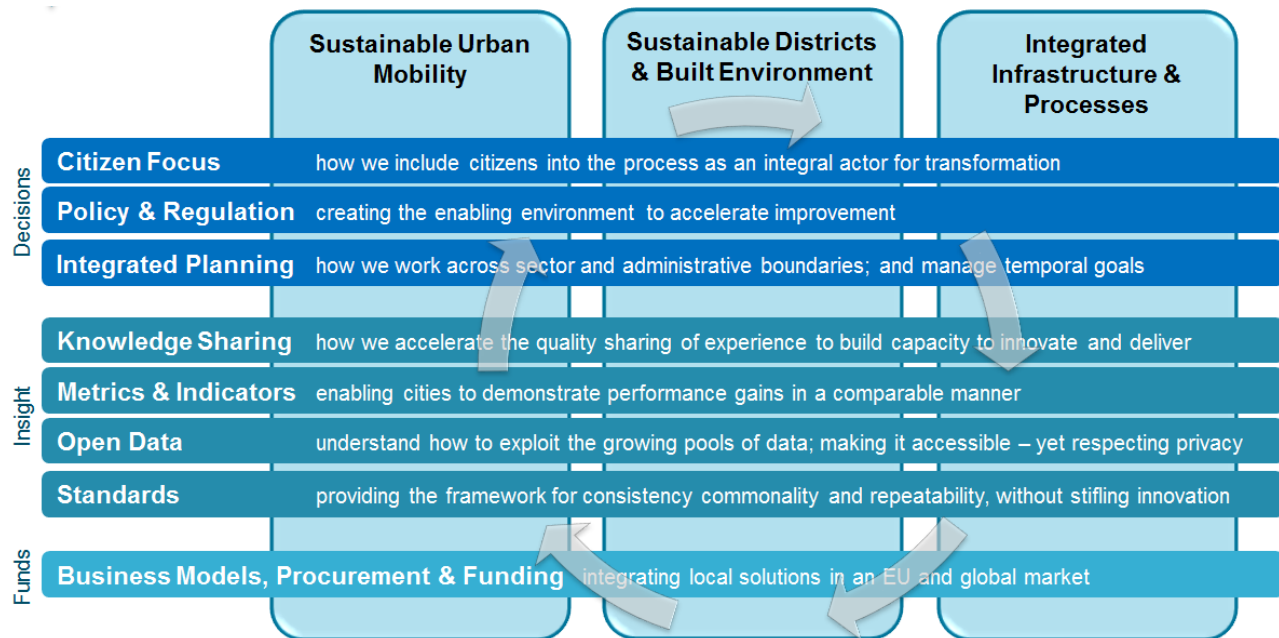
Source: http://ec.europa.eu/eip/smartcities/about-partnership/how-does-it-work/index_en.htm

In addition, 8 themes were conceived in order to integrate transversally the three potential SC areas identified by the High-level group. The main purpose of the 8 integration themes is to coordinate and align the developments being made. The 8 topics are:

- Citizen focus, conceiving how to involve citizens in the development of SC project implementation
- Policy and regulation, understanding possibilities and limitations of policies and regulations.
- Integrated planning, coordinating effort between the sectors involved in the planning and development of urban projects.
- Knowledge sharing, enabling cooperation between different cities experiences encouraging creativity and innovation.
- Metrics and indicators, understanding data and creating insights to showcase projects achievements.

- Open data, to foster cooperation with citizens interested in adding value to the city.
- Standards, structuring an aligned framework to allow commonality and repeatability.
- And business models, structure financial and procurement guidelines in order to get funds for SC projects.

Figure 6. Priority areas to address SIP



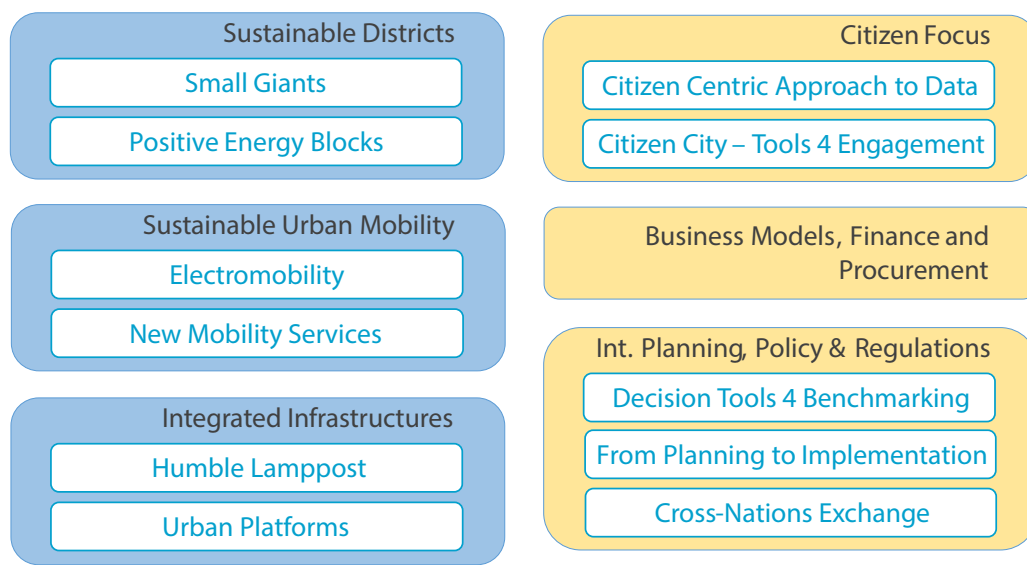
Source: European Innovation Partnership (2013a)

Out of these 11 points, 8 were selected by the Market place in order to structure 6 action clusters. The choice was made taking into account stakeholders preferences. Actors were grouped according to subjects in order to develop projects with others participants. These projects were called commitments. According to the European Commission (2016, p.6), the commitments “constitute the core part of the Market Place”. More than 4000 partners are now involved in 371 commitments that go from ‘the identification of mobility needs for impaired citizens’ to ‘develop future cities standards’.

Action clusters are where most of the market place dynamics happen. Here, actors gather in order to produce and share knowledge and identify current barriers in the development of Smart City projects. Each of the 6 clusters defined a work plan of initiatives according to their interests and objectives of the SIP. For example, the Sustainable Districts and Built Environment cluster has as a goal to provide

different tools for cities in order to address holistically the implementation of large scale SC projects. Hence, they are working on two initiatives, Small Giants and Positive energy blocks. The former aims to support cities of less than 250.000 inhabitants engaged in SC solutions. According to the cluster, there are specific difficulties and limitations for medium-size cities that could be addressed effectively if they work together. The network plans to establish an SC office in order to “break down silos currently existing between stakeholders, thus countering duplication, harnessing collective skills, knowledge and resources towards a more integrated and holistic approach to smarter cities and societies”. In this initiative, 6 cities and 20 members are participating (Hertzsch, 2016).

Figure 7. Market place action clusters and initiatives



Source: Adapted from Hertzsch, E. (2016)

In addition to the initiatives, the market place has many other activities and tools in order to enhance the capacity of the platform:

- Interactive maps to visualise geographically where the initiatives, projects and stakeholders are located.
- Conferences, assemblies and mobility programs between participants in different projects.
- Webinars, strategic documents, newsletters and agreements with different institutions.

ii Network theory reflections at the Smart City European level

After having an overview of the three levels that structure the European Governance Network on Smart Cities, some reflections will be structured guided by the questions that were raised initially in this section.

- How was the network form? Who took the initiative?

The initiative to structure the network was taken by the EC. Additionally, the directives underlying the agency of the network were settled by what the EC conceives as their main pillars to foster cooperation and promote innovation in Europe (EIPs).

- What type of actors were involved? How open and accessible was the network?

The types of actors involved are different according to the level where the network is operating. In the Strategic and operational level, the actors are the EC, industries and city governments. These two levels of the network are not open because the stakeholder selection is made by the EC according to their own criteria. On the other hand, the EIP-SCC is open to any interested actor. However, the priority to attend assemblies, meetings and to participate in action cluster is given to actors that take an active role in the development of SC projects (city governments, ICT organisations, consultancies, etc.).

- Do they have a spatial dimension?

There is not a fixed spatial dimension. Action clusters working groups develop projects online and had yearly meetings in different cities.

- What is the role of metagovernance? Did some of the actors established the goals of the network or just monitor its dynamics? Is there any overseen hierarchy between actors?

There is an explicit agency of metagovernance performed by the first two levels of the European SC Networks in the market place. The evidence allows concluding that 3 out of 4 of the metagovernance

typologies defined by Sørensen and Torfing (2009) are configured in the structure and operation of the network.

First, there was a **network design** performed by the 1st and 2nd level stakeholders of the network. The EC set-up the guidelines for the network structure and selected its board and its operators. Additionally, the High-level group developed the SIP that establishes which are the priorities of the EIP-SCC and how the market place will operate.

The **network framing** is performed also by the 2 first levels of the network by defining the rhetoric of what is conceived as a SC and which are the main themes that will drive the network. The concept of the SC was not an agreed definition by the all the participants in the network, in fact, the definition was done initially by the EC and complemented by the High-level group SIP.

Network management is performed by the operators of the market place (Zabala consulting and all the other selected companies). Each of the participants and agendas of the clusters and the working groups is selected by the Market place operators. Even though the creation of the clusters took into account Market place participants, the selection by cluster and the formulation of the agenda could be part of network management.

(2) Institutional theory

After an overview of the SC network formation and structure at the European level, a development of its underlying assumptions will be discussed. The institutional approach to study Governance Networks (Sørensen and Torfing, 2009) focus on the implicit mechanisms that legitimate the operation of the network. Political discourses, paradigms, operational instruments and the potential degree of autonomy of each of the actors are part of this approach.

The starting point to understand institutionally the EIP-SCC network at a European level is the Strategic Implementation Plan. The SIP was launched the 14 of October of 2013 by the High-level group as the roadmap document to “speeding up the transformation of European Cities into “Smart cities”” (European Innovation Partnership on Smart Cities and Communities, 2013, p.2). In the document, the SC is defined as:

"Smart cities should be regarded as systems of people interacting with and using flows of energy, materials, services and financing to catalyse sustainable economic development, resilience, and high quality of life; these flows and interactions become smart through making strategic use of information and communication infrastructure and services in a process of transparent urban planning and management that is responsive to the social and economic needs of society." (European Innovation Partnership on Smart Cities and Communities, 2013, p.5)

The first to say about the document is that does not offer a development of the concepts that brings to define what an SC is. Concepts as resilience, high quality of life and the understanding of smart flows remain unclear. Additionally and although some of the concepts are not well developed, it is possible to infer some implicit propositions and causal relationships between variables.

First,

that cities economic, services, energy and material flows become Smart using ICT communication infrastructure and services

And second,

that Smart urban planning and management are responsive to the social and economic needs of society

As a result of the previous two proposition is possible to conclude that the underlying idea on the SIP SC definition is that:

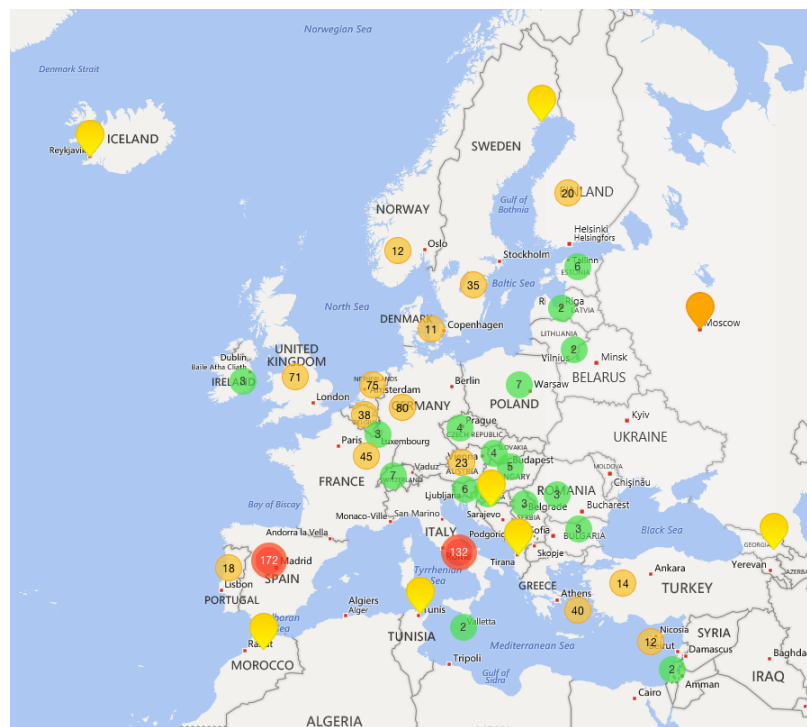
in order to be responsive to the social and economic need of society ICT communication infrastructure and services should be used

Furthermore, the SIP links the deployment of SC projects with environmental and economic goals. The environmental goals refer to the climate actions goals of the European Union. According to the plan, the roll-out of SC projects will increase energy efficiency, will increase the use of renewable energy sources and will reduce the emission of green-house gases (European Innovation Partnership on Smart Cities and Communities, 2013, p.6).

In the economic sphere, the document highlights the importance to create and develop a Smart City Solutions market where the European SMEs could be the global leaders. In this sense, many of the tools and future actions established in the plan are focused on creating an attractive scenario for city stakeholders to commit to the implementation of SC projects. On the other hand, the EC is engaged and will assume the initial costs in order to lower financial risks and attract new investors, industries, national, regional and city funds to back up SC projects, and with this, bring benefits to European Cities, Industries, SMEs, society and environment (European Innovation Partnership on Smart Cities and Communities, 2013, p.22).

Taking into account the previous ideas, it is also possible to identified the assumptions being made in the environmental an economic sphere of the SIP. First, that the implementation of SC project will have a determinant role in the European Union climate goals without any research or previous examples to support the proposition. And second, that subsidising SC will have as an outcome the development of an SC market where European SMEs will be the share leaders.

Figure 8. Commitments, EU projects and proposals



Source: <https://eu-smartcities.eu>

(3) The EIP-SCC and the H2020 programme

Apropos EC subsidies for SC projects, the interaction between SC GNS at the European level and at the urban level happens in an another place than the Marketplace. The H2020-EIP-SCC-2014/2015/2016 calls are part of the H2020 EC agenda and have a close interaction with the EIP-SCC. The purposes of the calls are to enhance the development of SC technologies, validate new business and financial models, standardize in order to be able to scale and replicate SS and to gain the acceptance and engagement from users that in this case are mostly citizens (European Commission, 2015, p.82). The H2020-EIP-SCC-2014/2015/2016/2017 consist of 4 calls:

- SCC 1 – 2014/2015: Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration - first of the kind) projects
- SCC 2 – 2014: Developing a framework for common, transparent data collection and performance measurement to allow comparability and replication between solutions and best-practice identification
- SCC 3 – 2015: Development of system standards for smart cities and communities' solutions
- SCC 4 – 2014: Establishing networks of public procurers in local administrations on smart city solutions
- SCC 1-2016-2017: Smart Cities and Communities lighthouse projects
- SCC 2 - 2016-2017: Demonstrating innovative nature-based solutions in cities
- SCC 3 - 2016: New governance, business, financing models and economic impact assessment tools for sustainable cities with nature-based solutions (urban re-naturing)
- SCC 4 - 2016: Sustainable urbanisation

The analysis of this research will be focus on the SCC 1 – 2014/2015 lighthouses project. According to my rationality, these calls are conditioning urban governance in participating cities. The documents related to the calls will be analysed in order to understand possible metagovernance mechanisms.

i SCC 1 – 2014/2015 Lighthouses call

The lighthouses call is part of the strategy to accelerate the roll-out of Smart Technologies in European Cities. In this case, they are encouraging SC GN between cities, industry, and academy in order to put

forward large scale SC projects. The interests of implementing such projects are to showcase the possibility of creating a financially viable market for Smart Technologies and addressing current market issues as replicability, standardisation and variable contexts.

Projects proposals should address current urban challenges integrating energy, transportation and ICT topics. EC suggestions include projects of low energy districts, Integrated infrastructure, and sustainable mobility.

Even though 'lighthouses' projects are conceived as front runners in SC technology, one of the EC requirements is to use a Technology Readiness Level 7 or further. What this means is that any of the technology to be applied in each of the 'lighthouses' should be already tested as a prototype in a verifiable context. What could be considered as an innovative part is the magnitude of the interventions to develop. Sometimes a neighbourhood, sometimes a district. The following were the requirements in order to participate in the call (European Commission, 2015, p.85):

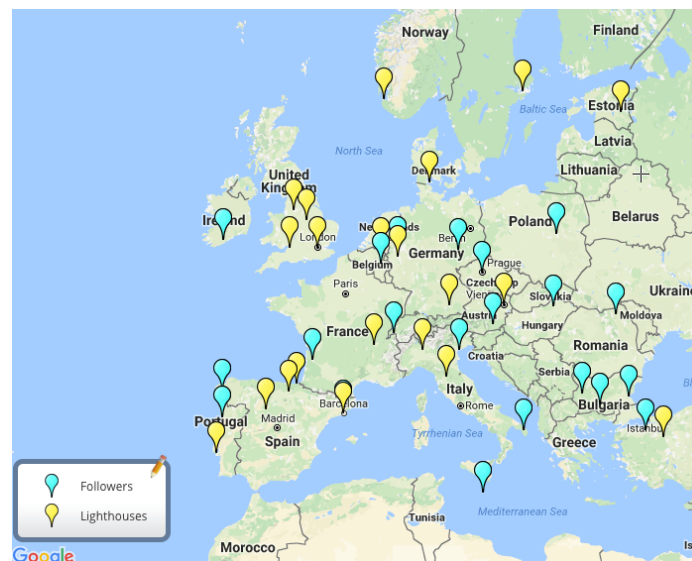
- The project should be developed by 2 or 3 cities that would be considered the lighthouses. The big interventions will happen in those cities.
- Industry, city planning, Academy, SMEs and consumer's organisation should be involved in the project.
- 2 to 3 'follower' cities should be involved in the process. To be a follower city means to have a willingness to replicate part of the solutions developed. Followers cities will have a participant role throughout the whole project.
- The Lighthouse project should be included in a much more ambitious urban development plan.
- The call recommends assuring funding from other EU funding sources or private ones.
- Projects should demonstrate and validate an attractive business plan regarding the implementation of SS.
- Data measuring and interoperability should be supported on EC standards. The monitoring of the project should last at least 2 years after finishing the development.

The EC estimates a budget between 18 and 25 million EUR for the development of this proposal and expects the following outcomes for each of the projects:

- The deployment of wide-scale, innovative replicable and integrated solutions in the energy, transport, and ICT sectors.
- Attract additional economic investments to the projects.
- Increase the energy efficiency where the project is going to be developed. The use of renewable sources should be promoted.
- Improve mobility efficiency and reduce the emission of pollutants.
- Reduce energy costs.
- create stronger links between cities involve as lighthouses or followers.
- Increase quality of life creating local jobs that cannot be delocalised.
- Increase air quality.

The SCC 1 – 2014/2015 has 7 projects developing SC lighthouses in 21 different European cities, 21 more are participating as followers and 3 as observers. In addition to this, the SCC 1 – 2016 has 2 more projects with 4 follower cities.

Figure 9. Lighthouses and follower cities H2020-EIP-SCC-2014/2015



Source: author

Map 6 shows all the European cities involved in the 2015 and 2016 SC lighthouses call. Additionally, each of those projects involves many other local and non-local actors as companies, research centres and universities. The assemblage of all the actors involved in 'lighthouses' projects structures another part of what is conceived here as the European Governance Network on Smart Cities. Considering the amount of funds intended for 2014 and 2015 (90 EUR million and 106 EUR million accordingly⁴) and the amount to destinate in 2016 and 2017 (129.5 EUR million⁵) the SC 'lighthouses' arise as one of the main urban development projects of the EC.

(4) The SC GN metagovernance

As it was shown before, the Smart City Governance Network at the European level is a complex formation structured by many different actors, interacting through diverse platforms in different ways. However, after being immersed in all the documents framing the network and listening to people involved in it, it is evident that there are metagovernance mechanisms conducting the interactions between actors. The fact that the EIP-SCC platform and the H2020-EIP-SCC calls are the principal scenarios through which Smart City actors are interacting, some of the actions conditioning the organic development of the network could be considered meta-governing.

From a theoretical approach, the concept of Governmentality (Dean, 1999; Foucault, 1991; Rose & Miller, 1992 cited in Torfing and Sørensen (2014, p.338)) it is useful to understand the meta-governing being developed by the EC and the High-level group. From this perspective, GN are conceived to conduct the free actions of the stakeholders structuring a network.

In order to condition the development of the network, the meta-governors (the EC and the High-level group) used different 'technologies' (in the GN theory are called tools (Torfing and Sørensen, 2009,

⁴ <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/scc-01-2014.html>

⁵ <http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/scc-1-2016-2017.html>

p.246)). Some of these technologies were addressed in the Network theory and institutional theory approach to the European GN on SC. The design, framing and management of the network, the construction of a narrative and a directive roadmap for the network, and the establishment of the EIP-SCC lighthouses calls.

Furthermore, additional perspectives arose in the discussion of the EIP-SCC as a meta-governor with the interviewees. The first interviewee did not agree with the verb 'to impose' that was used to make the question. Nevertheless, he expressed that EC is being too normative about the model being developed and defined with other words (dynamising, facilitating, structuring) the agency of the EIP-SCC. The interviewee 2 thought that I was asking only about the marketplace, but later he refers to the High-level and the Sherpa groups as the front runners setting the framework that was going to be developed by the different levels. And the interviewee 3 highlights the influence that the EIP-SCC has had from the EC to the urban level.

Igor Calzada: "I think the verb you used was 'imposing'. I think is too harsh to talk about imposing. One thing is to dynamise, to facilitate... maybe is not that they are imposing but they are not having a critical perspective about it. Surely the platform has tried to formalise, structure, relate different actors to dynamise a market. Until then I think the idea is not bad, I think is positive because nation-state barriers are surpassed, different regional leaders start to interact. Other thing is that they are (EC) trying to be too normative regarding the economic development model. Then, the Smartmentality that you propose is taking place at different times in different places and the EIP-SCC is making coffee for everybody." (Author translation)

Juan: Do you consider the EIP-SCC a metagovernance body regarding the Smart City initiatives in Europe. By metagovernance I refer to a group of people, legitimate actors that in a way try to conduct where different governance networks are leading.

Gerben Wedekind: "No, I don't think that it will be the way to identify the EIP-SCC, is a marketplace, bringing people together, to do stuff, it is not these people, are not consciously setting the governance structures for SC in Europe, you have the Sherpa, you have the high level advisory group, these kind of guys that are working with the set plans but also in the EIP-SCC but they were present a couple years ago, and these are the people that are the frontrunners that set the framework. But the marketplace itself, no."

Is evident that the EC and the High-level group are directing their efforts to structure and conduct the present and the future of the European SC. So far, the EIP-SCC and the lighthouses call encompass the two principal realms to get involved in the European SC community. However, the materialisation of the SC will not only be an outcome of the stakeholders' interaction at the European level. The policy development and the built environment transformation will happen at the urban level. In this sense, urban actors will be also part of the negotiation and will be part of the equation that will assemble and materialise the SC.

In the following section two cities with 'lighthouses' projects will be presented. Valladolid and San Sebastian had developed more than 4 SC projects in their urban area. Furthermore, they developed a Smart City plan in order to guide and direct their efforts in the SC context.

13 The Smart City Urban Governance Network

In order to enquire in the urban assemblage of the SC, two case studies will be developed. The selection of the case studies was explained in section 9. Each of the cities will have a brief introduction to its contexts and to its political realm. After that, the processes and the stakeholders behind the current and past SC projects will be explored.

1) San Sebastián

San Sebastián or Donostia (in Basque) is a Spanish city located in the north of the autonomous region of the Basque Country. Its population is 185.137 (2010) in the urban core and 436.000 in the metropolitan area. The city is one of the top touristic destinations of the country. Arts, culture, gastronomy and its particular landscapes had positioned San Sebastián as one of the main spots to visit within Spain.

Furthermore, San Sebastián was one of the European Capital of culture in 2016. The vast amount of cultural and artistic events resulted in a big influx of tourist during the last year.

Regarding its economy, San Sebastian relies mostly on the service sector (83.2% of its PIB). In this regard, the municipality is mainly focused on tourism (19.3% of its PIB) and has developed policies in

order to generate more overnight stays in the last decades (an increase of 29% between 2001 and 2009) (Ayuntamiento de San Sebastián, 2011, p.32).

Furthermore, creative industries and entrepreneurship in research and development are also part of San Sebastian development policies. The city has around 120 businesses in the Media sector and 153 in R&D. Moreover, the technological park of Miramón and the entrepreneurial park or Zuatzu are located in the surroundings of the city. These tech and entrepreneurial hubs host 180 creative industries with around 5.000 employees.

In the political realm, San Sebastian has had three different parties in the government in the last three decades. From an ideological perspective, the 'Partido Socialista de Euskadi-Euskadiko Ezkerra' (the socialist Basque party (PSEE)), Bildu (Basque nationalist and leftist party) and 'Partido Nacionalista Vasco' (nationalist and Cristian Basque party(PNV)) have different conceptions of development. But in the practice, both Bildu and the PNV followed the economic, social and urban planning guidelines settled in 2004 and in 2010 by the PSEE in two strategic plans:

1. Plan estratégico 2004-2010
2. Plan estratégico E2020SS

Both documents set major guidelines for the economic, social and spatial development of the city. Furthermore, both plans already conceived Urumea, the area where the REPLICATE 'lighthouse' project is being developed, as a space for innovative urban development.

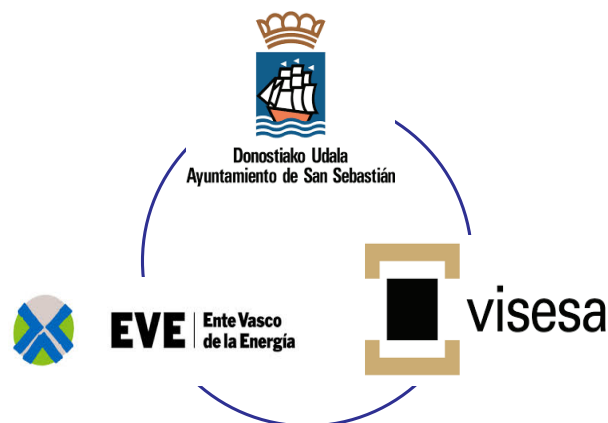
(2) Smart San Sebastián

The approach of San Sebastián to the 'Smart' sphere started in 2005. The municipality was part of a project called TETRAENER, partially funded by the CONCERTO initiative under the sixth framework programme of the EC (FP6). The objective of the project was to create the first green neighbourhood of Europe, equipping the community with renewable energy sources and implementing a monitoring programme to reduce overconsumption.

The project was supposed to take place in 'Antondegi' a hilly sector located in the south of the city. The EC expected to subsidise 2.7 million EUR of the 20 million budgeted for the development. The companies involved in TETRAENER were the public companies of energy and housing of the Basque country (EVE and VISESA) (European Commission, 2011). However, the economic crisis had a strong effect on the Spanish economy and the municipality decided not to continue with the project. The 4.030 housing units (a big percentage were social housing) were not build and the plans are still on paper. In 2015 the PNV mayor explored the possibility of giving another change to the development, however, the final decision was to leave it as it was, on paper.

In addition to TETRAENER, another process helped to build the pillars of the SC. The director of the development agency of the city mentioned that San Sebastián was one of the few Spanish cities with a structured plan to implement renewable energy sources in public buildings. According to Mr Sesé (interview 4), Spanish regulation obliged big energy operators to buy this kind of energy from generators, hence, the availability of funds allowed the municipality to reinvest the money in similar projects between 2005 and 2012. Furthermore, different initiatives of other departments also favoured the conception of the 'Smart' Donostia. The first electric bikes and the first electric buses of Spain were rolling in the Basque coast.

Figure 10. TETRAENER network



Source: Author

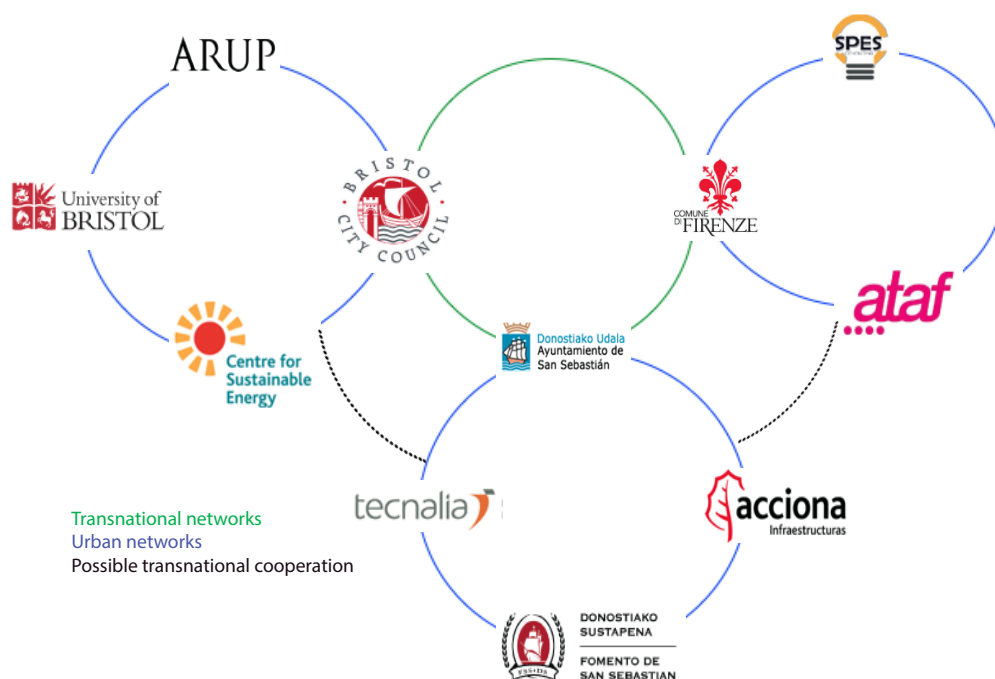
i STEEP

After the unsuccessful experience with the TETRAENER, San Sebastián was involved in another EC initiative. In this case was the STEEP (Systems Thinking for Comprehensive City Efficient Energy Planning) developed between 2013 and 2015. In this project, the involved actors used systems thinking methodology to co-create an energy master plan for the city. Academic, private and public stakeholders from Florence, Bristol, and San Sebastian were part of the development of the project. The assigned budget for STEEP was 2.6 million EUR, out of which, the EC financed 2.2 million (European Commission, 2014b).

STEEP settled the foundations for the development of the SC plan of San Sebastián. According to Mr. Sesé (interview 4), the STEEP coordinated stakeholders producing initiatives that could be considered Smart. "I think it was essential the fact of starting coordinating each other. To coordinate what we were doing on the topics of mobility, energy, and ICT in order to have a common umbrella, the Smart City" (Interview 4, author translation). STEEP project brought together actors and created the proper environment for the development of the Smart San Sebastián. The stakeholders engaged particularly in San Sebastián process were the municipality, Fomento San Sebastián (the development agency of the city), Acciona (a big Spanish company of the renewable energy sector) and Tecnia (the largest private research and development group in Spain).

The Smart Networks in San Sebastián started to build-up. Not only public sector organisations were involved at the urban level. Tecnia and Acciona, two private actors were key partners in the project. Additionally, SC networks started to go beyond than the urban scale. San Sebastián started a synergy in SC topics with the cities of Florence in Italy and Bristol in the UK.

Figure 11. STEEP Networks



Source: Author

ii Plan Smart Donostia/San Sebastián

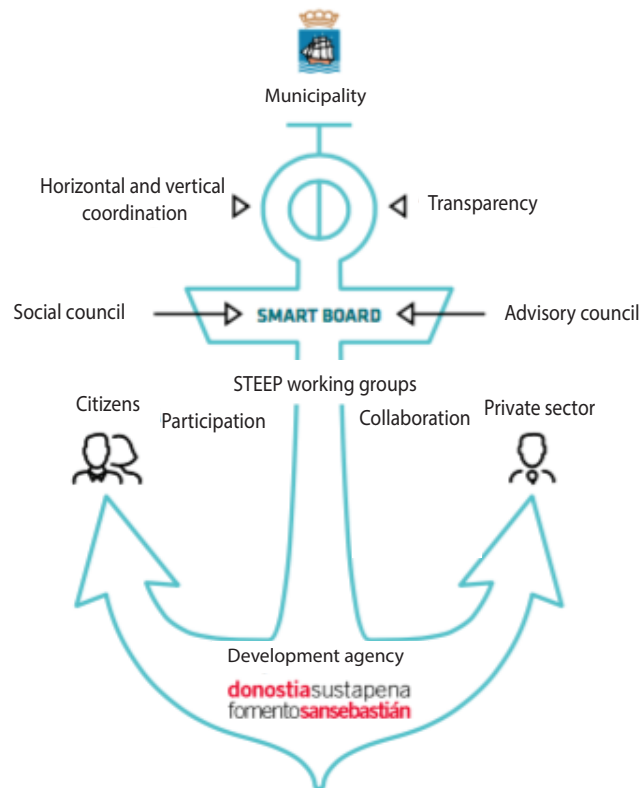
The development of the SC plan was leaded by Fomento San Sebastián. The main purpose of it was to establish shared strategic objectives between the SC actors in the city. Furthermore, it also proposed a coordination between municipality departments in order to capitalise funding opportunities in the regional, national and European level.

The process involved more than 207 representatives of all kind of organisations. The plan highlights the participation of two relevant organisations for the city, Tecnia and Idom (an engineering consultancy). It is important to say that most of the process was developed within the STEEP.

There are two interesting points to highlight in the plan. First, there was a reinterpretation of the Smart concept. The Smart Specialisation Strategy of European Union (RIS3) served to identify local advantage sectors to develop (audio-visual, Smart energy, assistive technologies, surf, fashion and agro-alimentary). Thus, the implementation of 'Smart' technologies would be more focused in actions that could trigger local economic growth and local actors' involvement in those sectors. And second, the

plan was the platform to diffuse the new approach to urban governance. The proposition was supported in the EC publication 'European Governance: A White Paper' (2001) (Ayuntamiento de San Sebastián and Fomento San Sebastián, 2015, p.38) and it aimed to involve private stakeholders and citizens in city decision making. In this case, governance was conceived as a fundamental factor in order to develop Smart projects and to transition to a Smart City.

Figure 12. Governance structure of San Sebastián SC



Source: modified from Ayuntamiento de San Sebastián and Fomento San Sebastián (2015)

Regarding the outcomes of EC influence to the plan, it is possible to identify similar assumptions about the benefits of the SC (in the economic, quality of life and environmental dimension) implementation and the direction of policies and developments (in this case mobility, energy and construction) (Ayuntamiento de San Sebastián and Fomento San Sebastián, 2015, p.13). Furthermore, the most influential actors in the plan are the ones that took part of the STEEP project. Even though there are 96 different public, private and citizens' organisations, in the structure of the network the STEEP

working groups have a priority position. This argument will be complemented also with the REPLICATE project.

iii The 'lighthouse' project: REPLICATE

REPLICATE is one of the H2020-EIP-SCC-2015 project calls. With the initiative of San Sebastián development agency, three cities and other 35 stakeholders developed a proposal. The project got selected and 25 of the 29.3 million EUR are being financed by the EC.

REPLICATE (REnaissance of Places with Innovative Citizenship and TEchnolgy), is a comprehensive project that aims to implement Smart City technologies in the fields of energy, mobility, and infrastructure in a city district. In this case, SC technologies are conceived as the combination of the provision of urban services with ICT. The project will be developed from 2016 to 2020 in the cities of San Sebastián, Florence, and Bristol. In addition to the reduction of energy consumption, other principal challenges are to demonstrate and validate the replicability, interoperability, and scalability of benefits for citizens, the financial and the business models.

All three cases have a different approach for the development. In San Sebastián's case, the project is conceived as the Urumea Riverside district. The process expects to redevelop the residential areas of Tzomin, Antzita and Martutene, the polygon 27 industrial park and the Ametzagaina green park (Fomento San Sebastián, 2016a).

In specific, the actions to develop in the Urumea Riverside district are (REPLICATE, 2016):

In energy consumption reduction:

- The improvement of isolation heating conditions for 156 dwellings and 34 commercial locals.
- The construction of a district heating system for 1.500 new properties and 156 existing dwellings.
- A system to monitor residents' energy consumption in order to promote a sustainable behaviour.

In sustainable mobility:

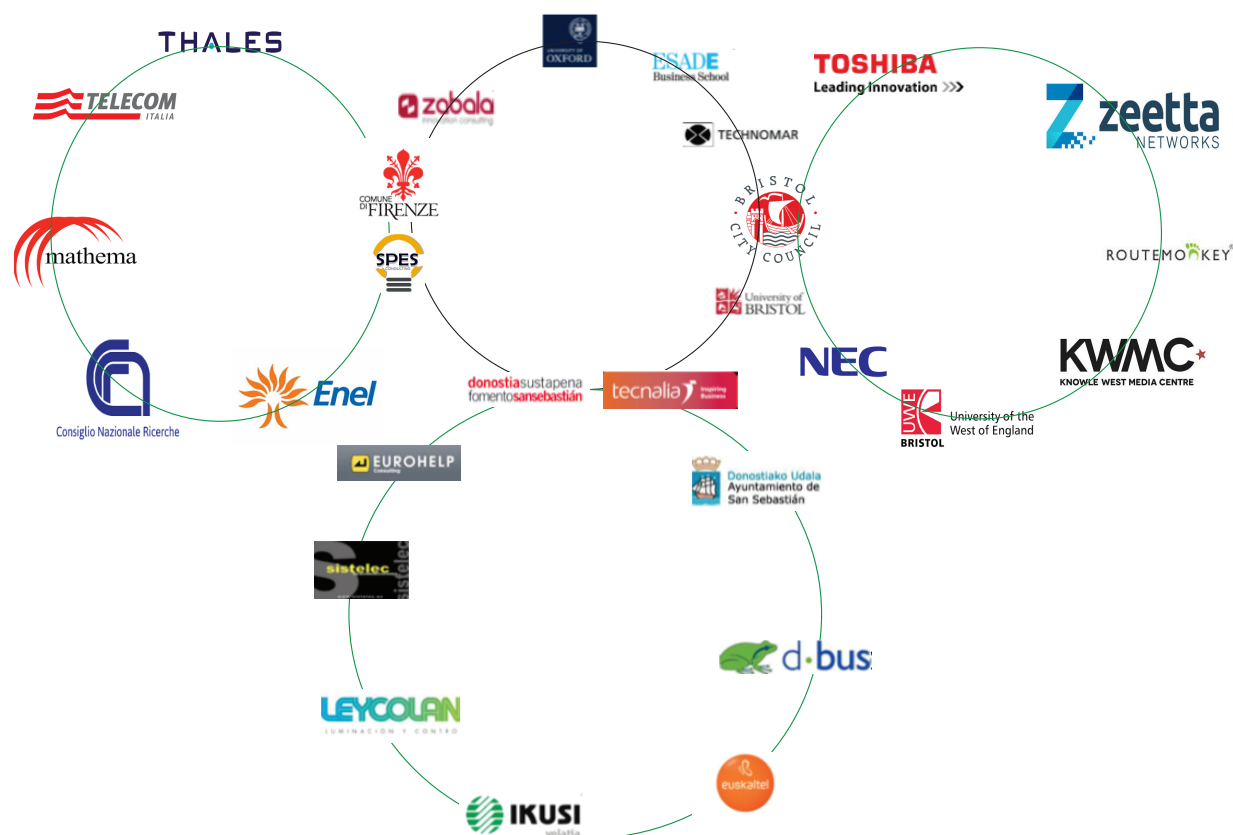
- Two electric and two hybrid buses to link Urumea with the city centre.
- 10 electric vehicles for the municipality.
- 44 private electronic vehicles (taxis)
- Charging infrastructure development

In ICT systems:

- A platform for ICT integrated services.
- Open data platform.
- High-speed connectivity network deployment for all the city
- A Smart Lighting system for polygono 27.

In regards to project networks, there are 9 partners in the local consortium and 7 partners providing transversal support to the 3 cities. The local ones are the municipality; the development agency, that also is the coordinator of the whole REPLICATE project; Tecnalía; Leycolan, a Smart illumination company from San Sebastián; IKUSI velatia, an electronic and ICT multinational also from San Sebastián; Eurohelp a Spanish consultancy in the ICT industry located in Bilbao; dBus the public company managing the transportation system in San Sebastián; Euskaltel a telecommunication company mostly operating in the North of Spain; and Sistelec a Spanish company providing resources for the telecommunication industry. These partners are mostly concern with the development taking place in the Urumea Riverside, on the other hand, the supporting partners are in charge of developing and validating the replicability, scalability and business model of the projects in the 3 cities. Tecnomar, Tecnalía, the University of Bristol, Zabala consulting, SPES and the University of Oxford were appointed with this task.

Figure 13. REPLICATE networks



Source: Author

iv San Sebastián Discussion

Looking backwards to the processes that have established what is now the 'Smart San Sebastián plan 2020', the influence of EC funds and guidelines had had an important conditioning to the vision and the Urban Governance Networks of the city. Projects as STEEP and REPLICATE have involved actors that in other conditions would not have been part of the actual and future conception of San Sebastián. Furthermore, the SC plans and projects have enhanced from an urban to a transnational level the governance networks of the city.

In the interview Mr. Sesé is clear regarding how funding can empower relational capital among stakeholders in any initiative. Municipality and other SC actors have established a win-to-win relationship supported by EC funds. San Sebastián get funding and get projects that position it as a

relevant city in the interurban competition (Harvey, 1989), and the SC actors get businesses, get a possibility of testing their technology and a more relevant role in urban governance networks. city.

Juan: Regarding the actors being part of Smart projects, Tecnalia, Acciona, did you work with them before in city projects? Or they started to participate from the development of Smart Projects?

Euken Sesé: With Acciona no, but with other partners, yes. With Tecnalia we have a close relationship, we are partners in different projects. It has been a difficult task, sometimes this technological centre 'breath' through financing and we don't have the money and we are not Madrid to get easy funding. I think after the crisis has been relevant for us to collaborate closely, the win to win with these centres. And, in a certain way, they used the city as a test-bed, that has been a relevant path. Specifically, in the industry sector we have a small cluster with more than 100 SMEs in the Smart sphere, and they have collaborated and some of them had been benefited for example, with a part of the Replicate consortium.

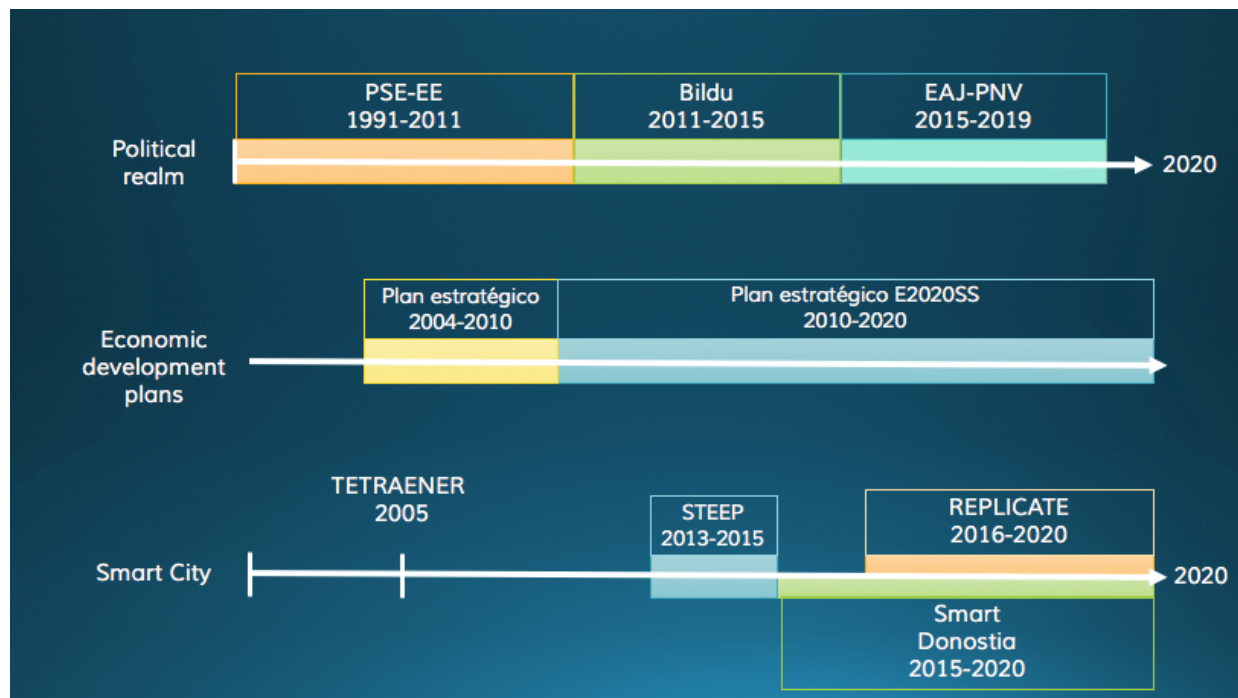
Juan: In this case, funds are a relevant part to generate a network between the city and these organisations? And the research centres?

Euken Sesé: Yes, I think that has been the European policy and in that sense I agree that the funds are determinant in the first phase. But when the networks start to consolidate, on top is the relational capital and the possibility to address projects that sometimes are not funded by the European Union.

What it seems is that EC funding and SC European governance networks are intentionally creating and sustaining those win-to-win situations between SC related corporations and San Sebastián. It is true that the city gets funds to do projects that in other situations would not be able to develop. However, the EC is narrowing down the ways on how the money should be used, and is in some way enforcing cities to involve ICT corporations in their urban governance dynamics. This narrowing down of options of future urban imaginaries are the output of Metagovernance mechanisms (as project funding) applied from the European level.

In addition to partly setting the guidelines of future developments for the city, Metagovernance is configuring different urban governance dynamics. As we saw in the networks of the projects, Tecnalia had a leading role in most of them, and now is considered as a key partner by the main person of the development agency of the city. It seems that in order to sustain the entrepreneurial mindset, San Sebastian is forced to engage actors in the urban governance with the know-how to conceive and develop SC projects from an EC approach.

Figure 14. Smart San Sebastian - Timeline



Source: author

2) Valladolid

Valladolid is a city located in the North-West of Spain, capital of the province of the same name. It has 303.905 inhabitants with an area of socio-economic influence that gathers around 600.000 people. The city had an important role during the beginning of the Spanish Empire in the XVII century.

Nowadays, the economy of Valladolid is mostly relaying on the services (72.7%) (mostly small commerce), industry (15.4%) and construction (11%) sectors (Caja España, 2009). Additionally, big car factories are located in the outskirts of the city (IVECO and Renault).

In the political realm, Valladolid had the conservative Christian party (Partido Popular (PP)) 20 years in a row from 1995 to 2015. In the last elections, the socialist workers' party (Partido Socialista Español (PSOE)) elected the mayor with the support of other two parties (Sí Se Puede Valladolid and Ciudadanos Valladolid). Most the SC related projects and the initiative of conceiving Valladolid and Palencia as a joint SC were conceived by the PP government. However, the PSOE continued with the

deployed agenda and complemented it with the INNOLID 2020 development plans and the REMOURBAN 'lighthouse' project.

(1) Smart City Valladolid

The initial approach to the Smart City from Valladolid was much later than the case of San Sebastian. Everything was triggered by the possibility of conceiving urban development in a broader scale annexing the city of Palencia. This city is located at 47 kilometres in the Northeast direction from Valladolid and it has 81.551 inhabitants (Ayuntamiento de Palencia, 2013). Regarding the economy, the commerce sector represents almost the 80% of the employments and the automobile sector is also present with a Renault factory.

The initial idea was to conceive Valladolid and Palencia as the 'Linear City of industry and Knowledge' (Ciudad linear, industrial y de conocimiento). The cooperation opportunities were drawn on the transport corridor they share, the university they share and of course the company that is present in both cities. Finally, this proposal was materialised in the initiative 'Smart City VyP' (Smart City Valladolid y Palencia) in 2011. Both municipalities, a research centre (Cartif), the energy public regional entity (ERIN) and 5 other partners founded the programme (Telefonica, Grupo lince, Acciona, Iberdrola, GMV).

However, the processes taking place in the last years showed that most of the SC projects happening in both cities are not run together. For example in Valladolid, the running projects are CommONEnergy, Remourban, R2cities, Storm Cloud, Campus 21, livecity, intelcity and blue parking. In Palencia are intelligent lighting system and CleanFleets. And together they are only running a mobility management platform for handicapped people (is not shown online) and recarga VyP, where they distributed 40 charging points for electric vehicles (30 for Valladolid and 10 for Palencia). Taking into account this, the case study will only focus on the initiatives developed in Valladolid and mostly on those with EC influence. Nevertheless, any interesting dynamics regarding other projects will be mentioned.

i CommONEnergy

The CommONEnergy project (re-conceptualise shopping malls from consumerism to energy conservation) is an initiative funded under the FP7 programme that aims to shift from a single action

refurbishment to a systemic energy performing retrofitting in buildings. The purpose is to reduce the energy consumption in commercial and marketplace buildings that represent around the 28% of not residential consumption in Europe (CommONEnergy, 2013).

The project started in 2011, involving the cities of Valladolid, Trondheim (Norway) and Modena (Italy). It was partly funded by the EC with 9.1 million EUR of the 13.9 million EUR needed. In the case of Valladolid, the market of Val was the building to be retrofitted. From 2013 until the end of 2016 the market has been through a series of redevelopments in order to achieve a better energetic performance. The partners involved in the local network were the municipality (with an assignment of funds of 331.740 EUR), Acciona (with an assignment of funds of 399.770 EUR) and Cartif, a research foundation (with an assignment of funds of 231.760 EUR) (European Commission, 2016b).

Figure 15. CommONEnergy local network



Source: Author

ii R2Cities

The project R2Cities started in 2013 under the FP7 programme. The project expects to develop technology for nearly zero energy building renovation for districts and cities. 30 buildings in the cities of Kartal (Turkey), Genoa (Italy) and Valladolid will be refurbished. The main focus is to reduce thermic energy consumption, the implementation of ICT energy consumption control systems and the use of renewal energy in buildings communal areas.

The target is to create a replicable model for designing, constructing and administrating nearly zero energy large scale renovations. The project was partially funded by the EC with 9 EUR million of the

14.8 million EUR needed. Valladolid local partners are Cartif, as the project coordinator; the housing department of Valladolid municipality (Sociedad municipal de suelo y vivienda de Valladolid), Acciona; and ONYX solar energy, a Spanish company producer of photovoltaic glass.

Figure 16. R2Cities local network



Source: Author

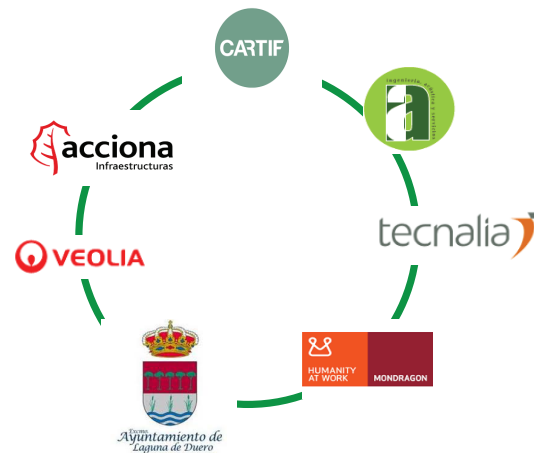
iii CITYFiED

The project CITYFiED goes a step forward on the EC vision of the SC. This project funded under the Smart-Cities FP7 programme, aims to develop a strategy in order to transform European cities into Smart Cities. According to the project guidelines, this will be achieved reducing the energy demand, the green house gases emissions and increasing the use of renewable energy (Cityfied, 2015). The plan will develop three district renovations at Laguna de Duero-Valladolid, Soma (Turkey) and Lund (Sweden). The estimated cost of the project is 48.6 EUR million out of which EC will finance 27 EUR million.

In Valladolid, the project is taking place in the Laguna del Duero Municipality in the metropolitan area of the city. The Torrelago district will have the redevelopment of 31 buildings including façade renovation, a new district heating, a new pumping system, a smart grid and a monitoring platform for consumption (Cityfied, 2015). The local network of the project is structured by Cartif, that also performs as the coordinator (1.2 million EUR); Acciona (0.6 million EUR); Laguna del Duero Municipality

(0.2 million EUR); Tecnalia (0.3 million EUR); Dalkia now as Veolia Spain (1.2 million EUR), a branch of a transnational French company; Mondragon cooperative corporation (1 million EUR); and 3IA an acoustic engineering Spanish company.

Figure 17. CityFied local network



Source: Author

iv REMOURBAN

And finally the 'lighthouse' initiative, REMOURBAN. Going towards the same direction as the other SC projects that took or are taking place in Valladolid, REMOURBAN will develop and validate a model of integral and sustainable urban redevelopment, implementing new technologies in energy transportation and construction fields. Besides the urban transformation that is supported in the three pillars of the SIP (low energy districts, sustainable mobility and integrated infrastructures), the actions are also focused on the replicability and scalability in followers' cities. For this, organisational processes and financial viability are the main challenges to address.

Valladolid, Seraing (Belgium) and Nottingham (UK) are the lighthouses cities. In addition, Eskisehir (Turkey) and Miskolc (Hungary) will be active participants and followers. The estimated cost of the project is 23.8 EUR, out of which the EC will finance 21.5 EUR million under the H2020 programme. Regarding the urban network of the project in Valladolid, the participants are Cartif, again performing as the coordinator of the project (0.9 EUR million); The municipality of Valladolid (4 EUR million); Xeridia, a Spanish consultancy company located in León (0.5 EUR million); Iberdrola, a Spanish

company of energy distribution (1 EUR million); Acciona (0.5 EUR million); Dalkia now as Veolia Spain (0.4 million EUR); and GMV (0.4 EUR million).

The actions of the project include the refurbishment of 398 flats on heating, thermal isolation, rooftop solar panels and the installation of monitoring systems in Sofasa-delicias neighbourhood. Additionally, 60 electric vehicles will be included in the public transportation system.

Figure 18. REMOURBAN local network



Source: Author

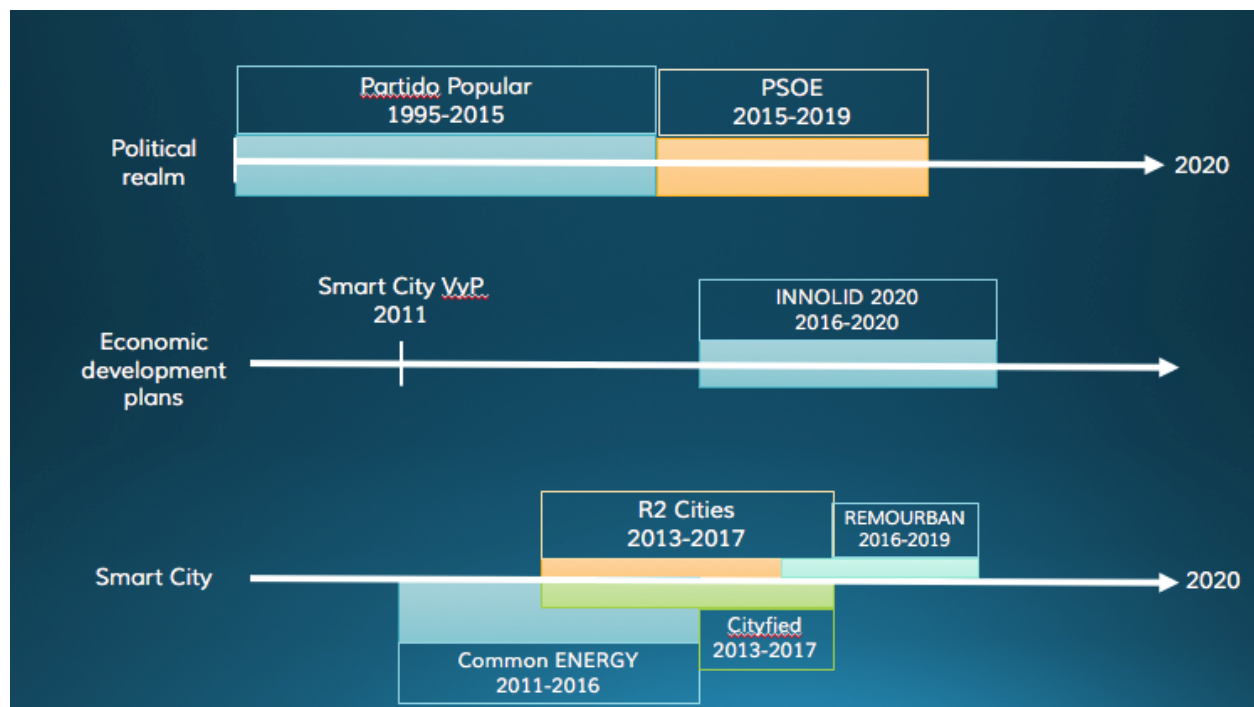
v Valladolid discussion

After reviewing many of the projects structuring the actual Smart City strategy of Valladolid, and with the conditioning of not being able until now to interview any of the urban network stakeholders (two appointments were scheduled with the head of SC project of the city and finally she did not show up. Additionally, the project manager of REMOURBAN project did not wanted to be interviewed), there are some points relevant to discuss. First, even though there are many 'Smart' initiatives taking place at the moment in the city, there is not an overarching plan or framework direction the developments in Valladolid. The initiative 'Smart VyP' ran together with Palencia, does not show any joint SC vision of a metropolitan area.

Second, there is not a disruptive innovation regarding the projects taking place in the city. From CommONEnergy to REMOURBAN, Valladolid and its 'Smart' stakeholders had become experts in urban refurbishment. Most of the SC project develop or being developed are only focusing in the

energy optimisation sphere. There is not an integral approach to the SC (taking into account the three pillars of EC concept). Even REMOURBAN seems like a subsidy policy for flats renovation. In its webpage, the section of FAQs (preguntas frecuentes⁶), is dedicated to the explanation of why and how they are going to make the renovations, and how much it will cost the inhabitants if they accept to participate of the project. It looks like there was not a citizens' involvement in the process, but only a top-down approach to it.

Figure 19. Smart Valladolid - Timeline



Source: author

Third, the municipality has adopted a comfortable position that constrain the elaboration of a coherent SC vision. From 2014 there was the initiative to create a Smart development plan for the city. INNOLID2020 arose as the convergence between municipality, private actors and citizens towards a "SUSTAINABLE, HEALTHY AND INNOVATIVE" (Ayuntamiento de Valladolid, 2014) Valladolid. Nevertheless, the plan is still in the clouds and there is not an establish date for its implementation.

⁶ <http://es.remourban.eu/Recursos/Preguntas-Frecuentes.kl>

Third, Cartif have gain momentum in Valladolid Urban Governance. Their performance as promoters and coordinators of SC projects had signified four large scale urban redevelopment projects for Valladolid.

In conclusion, SC projects subsidised by the EC had configured new governance dynamics in Valladolid. Cartif is part of what I conceive the Smart City urban regime. The city had relied the responsibility of getting funds for urban development to the tech centre. However, the regime seems unstable and dependant of future subsidies and projects from external sources.

DISCUSSION

Reviewing the processes of the EIP-SCC and the experiences of San Sebastián and Valladolid, there are interesting insights about the European Governance Networks on SC and its interaction with the networks at the urban level.

14 The European level

The EIP-SCC is directing all its efforts in order to structure a cooperative network between European SC stakeholders. ICT companies, research centres, professionals, academics and mostly cities are being engaged.

In essence, the network has interesting outcomes. It creates knowledge sharing, cooperation between projects, guidance in relevant topics and reinforce the basis of working together towards a common objective of European Union (Interview 1, interview 2). Nevertheless, it also has problems that arise when the interpretation of future urban imaginaries is limited and do not embrace other cities' possibilities.

The technocratic SC interpretation by the Metagovernors (the EC and the High-level group) constrain European cities urban futures and imaginaries to one suit fits all with all the problems that this could carry on. Furthermore, the arbitrary actions and mechanism taking place in order to deploy the SC is triggering intended or unintended consequences at the urban governance level. Cities are willing to reconceive their development plans and urban development plans in order to be able to fund urban redevelopments.

There must a possibility of exploring other ideas. Up to know, the European SC model is totally dependent of external subsidies. Not many citizens will agree with their municipalities spending millions of Euros in order to be able to see in an app how much energy they consumed today. Not many municipalities can afford to renew their light systems to a smart one.

The fact is that the SC EC model is being deployed through Metagovernance mechanisms as the EIP-SCC market place and the 'lighthouses' projects. Transnational and local SC networks are structuring and are affecting directly urban governance dynamics. In the next section this topic will be addressed.

15 The local assemblage of the Smart City

The two case studies addressed in this research developed a different approach to the SC. On the one hand, San Sebastian integrates the three pillars of the EIP-SCC SIP in its urban development, and also, structures a comprehensive plan to align different city initiatives to the SC sphere. On the other, Valladolid specialised in buildings energy efficiency and the plan that they developed did not embrace specifically the SC.

However, there are also similar processes in both cities. the European funding programmes were fundamental in order to create and to establish a Smart Governance Network. In San Sebastian the SC projects built a network that shifted from local public partners, to mostly local and transnational private partners. In Valladolid, the SC projects included new private actors that were key for future European funding acquisition.

Another interesting process refers to the SC Governance Network leadership at the urban level. In San Sebastian was a shared responsibility between the development agency that coordinated Replicate and the Smart plan, and Tecnalía, that assumed the coordination role of two other projects and performed as the key partner for EC applications. On the other hand, in Valladolid Cartif had the protagonist role in all of the SC projects developed in the city and Acciona had also a key participation for the development of EC applications.

In the interview with Mr. Sesé (Interview 4) from San Sebastian, he expressed that the outcome of the SC projects is conditioned by who is assuming the leading role, if it is a private company or if it is the city itself:

"The leadership should come from the public sphere, it should be more dynamic, more loose, inviting to participate, with low profile of control... if not the cities could be subject of a process of public space colonisation". "We should start identifying the city needs and then implement technologies"

What is interpreted from the previous quote is that if a city relies on external stakeholders to develop SC projects, the outcomes won't reflect its needs. In this regard, the interviewee brings the concept of 'space colonisation' referring to the use of the city spaces for purposes that do not belong to the general interest its inhabitants.

However, the result of this research shows that middle size cities involved in 'lighthouses' projects are not only giving their spaces to other purposes. Cities are compromising their future imaginaries embedding SC related projects in their development plans or structuring their own Smart City plan. Cities are allocating a huge amount of financial and human capital to get funding and to develop current projects. And finally, cities are opening up leading spaces in its governance dynamics to actors as ICT companies and research centres.

Industrial stakeholders are not anymore the most attractive actor to form a coalition with. Industrial jobs are not acknowledged as an asset for many cities in the new era of urban entrepreneurialism. Financial, technological and creative industries are the most valuable for cities in order to attract high-skill individuals. Taking the previous into account and understanding that European middle size cities do not count with the resources to invest in big urban amenities, San Sebastian and Valladolid understood the kind of coalition they need in order to keep up with the inter-urban competition.

Tecnalia and Cartif arose as the partners needed in order to guide cities throughout their Smart transformation. They had the know-how and the technological resources to apply for SC EC funding that the municipalities were lacking. On the other hand, they also recognise the potential of investing in a coalition with Valladolid and San Sebastian. The possibility of getting funds through the EC and the opportunity to establish themselves as makers of the future of the cities were their main motivations to structure the coalitions.

An agenda was settled and both municipalities and ICT corporations mobilised, exchanged and invested resources in order to deploy the Smart City regimes.

CONCLUSION

The Smart City model is opening its ways throughout many cities around the world. In Europe, the European Commission has visualised this model as the future of the urban. Actions are taking place in order to materialise this belief. Assumptions of city imaginaries and benefits are being deployed in the forms of Metagovernance, Governance Networks, and funding opportunities. However, the interpretation of the Smart City will occur between the interaction of the European, where the ideals are being conceived; and the local, where the realities are being negotiated and embodied.

This research enquired in the processes of appropriation of the SC model in order to research if urban governance changes were taking place. The developed case studies showed that Metagovernance mechanism are configuring new urban governance dynamics. Research centres, ICT corporations and consultancies are assuming new roles in the SC GN. In San Sebastián case, Tecnalia stands now as a fundamental partner to achieve win to win relationships with the city. In Valladolid case, Cartif is driving the majority of urban investments and redevelopment for the city.

In both cases, it is possible to say that a 'Smart' Urban regime is configuring. There is a common vision about the future of the city. The municipality is putting the willingness to negotiate policy restrictions and future plans and the ICT actors are providing the resources and know-how in order establish the Smart City. However, the SC regime is dependent upon external resources. So far, EC funds had been and will be necessary to maintain the regime. If the regime is unable to locate another source of resources, the regime will not have the capability to maintain itself. New urban dynamics will take place.

Will the Smart City Regime continue?

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ANNEXES

16 Anex 1: interview with Dr. Igor Calzada

The interview was made the 26th of July of 2016 via Skype. It took around 60 minutes and the interviewee agreed on make public his name and in the recording of the discussion. In the text the I is an abbreviation for Dr. Igor Calzada and the J is an abbreviation for the interviewer Juan Sebastian Orozco. The interview was developed in Spanish, native language of both participants. Dr. Calzada appointed that all his answers represent his personal point of view. Only the relevant parts of the interview were transcribed.

Dr. Igor Calzada is part of the Advisory board of the city of San Sebastián and had a leading role in the development of the Smart City plan of the city. In addition, he is a Lecturer, a Researcher and Fellow & Senior Policy Adviser at the University of Oxford.

Juan: revisando el plan Europa2020, mi lectura del mismo es que las ciudades inteligentes son un elemento clave para desarrollar los tres pilares que se plantean, Smart Growth, Sustainable Growth e inclusive growth. quiero saber tu opinión al respecto

Igor: la respuesta sería no, al día de hoy cuando planteas tema transversal sí es un tema transversal, pero qué hay detrás de la palabra growth. ¿Crecimiento de qué? ¿De qué tipo de negocio? ¿De qué tipo de modelo económico? yo tengo mis dudas no lo veo claro, no es mi posición. Quiero desde la economía política, entender cuál es el modelo de Desarrollo Urbano que se intenta fomentar y no hay elementos más allá. Sí diseccionamos las palabras de growth growth, growth en Smart, sustainable and inclusive, hay que hacer un trabajo más profundo, pero no veo que hay dentro de las cajas.

Juan: lo que yo entiendo por el tópico de Smart growth, se refiere al deployment de la economía basada en el conocimiento, , en este ámbito la ciudad inteligente también se ve como una posibilidad para desarrollar la economía basada en el conocimiento en Europa?

Igor: , sí pero, que hay detrás, desde el Plano Urbano. Me has hablado de 4 ciudades para ir al tema del Máster. cuál es el la dispersión geográfica del tejido empresarial en la Comunidad Autónoma Madrid. El hecho de incorporar nuevo tejido empresarial, ¿cómo afectaría la diversidad de usos que puedan haber en diferentes distritos? a mí esas son las preguntas que me interesan, seguramente con los tres componentes de growth, la palabra crecimiento para mí es un poco trampa, creo que le hace falta un poco, de hecho directamente no me dice nada, son palabras muy vacías, los tres componentes atienden a tres vectores estratégicos de un supuesto desarrollo urbano pero, pero ese desarrollo urbano está entendido como crecimiento, ¿cómo es ese crecimiento? es mucha teoría económica, que ya escuelas heterodoxas qué están poniendo en duda ese crecimiento. me da la impresión de que sin decir qué tipo de crecimiento queremos, se está yendo a un crecimiento absolutamente desproporcionado, yo creo que trabajaría mucho más al respecto.

Juan: el tema es que, creo que el plan o la visión es muy ambigua la definición de los conceptos no es clara en los tres aspectos que menciona la Unión Europea. sin embargo, si hay elementos que de alguna otra manera apuntan a que se busca incluir formas de desarrollar el tema. Es decir desde el enfoque totalmente económico de la visión Europa 2020, eso fue lo que entendí y lo que percibí cuando leí el plan. Igualmente cuando uno va a los documentos de la EIP tanto como el plan estratégico como el primer draft público creo que la ciudad inteligente se concibe más como un elemento que va ayudar al crecimiento económico de las ciudades europeas y que alguna otra manera un efecto secundario será el hecho de alcanzar los objetivos medioambientales y energéticos que se han planteado. Entonces quería preguntarte si lo ves de esa manera, si se busca más crear un mercado para soluciones inteligentes, si se busca ser líderes en este mercado o por el contrario se le está dando una prioridad mayor al hecho de utilizar las tecnologías para mejorar temas medioambientales y energéticos.

Igor: sí yo creo que la palabra clave y era lo que antes te quería decir, yo creo que el gran problema es la palabra mercado. yo cuando leo y escucho la gente del EIP tienen el concepto de un gran bazar de tecnologías, sin entender quién las compra, porque las compra, donde las compra, dónde queda el know how. estuve trabajando más de 10 años en un grupo cooperativo

industrial qué es el grupo Mondragón, el grupo Mondragón son más de 100.000 personas a nivel internacional es una multinacional pero a la vez, no es una multinacional porque no tiene un modelo neoliberal, es decir entonces mi pregunta sería, ¿la Unión Europea qué tipo de crecimiento quiere crear? ¿Qué tipo de empresas? la palabra clave para mí es que se está hablando en fomentar un mercado, pero un mercado son mercadeo por eso hay una demanda de una oferta, pero, ¿dónde está el cliente? ¿Entonces el cliente quién es? ¿la ciudades? ¿la ciudadanía? ¿es el propio mercado? por eso digo ahí es donde falla el concepto y las políticas de Smart Solutions. da la impresión que el mercado está muy desconectado de los problemas reales que tiene muchas ciudades.

Juan: creo que concuerdo contigo y creo que también, uno de los objetivos que se plantea la EIP es tratar de generar lineamientos para el desarrollo del mercado. Generar estándares, compartir el know-how, sentar una líneas de desarrollo, imponer una visión de alguna otra manera de lo que debería ser la ciudad europea el futuro, tanto con la plataforma, cómo generando que algunas ciudades asuman compromisos de la implementación de tecnologías de la información y comunicación, tanto con los proyectos lighthouses. y quería preguntarte si el objetivo de esta plataforma es imponer lo que será o lo que es la agenda de las ciudades europeas respecto a el uso de Smart Solutions en ciudades, a involucrar compañías de tecnología de la información y comunicación en la gobernanza urbana etcetera. quería saber tu opinión al respecto.

Igor: yo creo que el verbo que has utilizado es imponer yo creo que es demasiado duro hablar de imponer una cosa es dinamizar, facilitar. yo creo que de ahí a imponer a un salto muy grande, tal vez no está imponiendo pero lo que no está haciendo es una visión crítica de eso. seguramente la plataforma ha tratado de formalizar, de componer, de relacionar a diferentes agentes para dinamizar la creación de un mercado dinámico. hasta ahí yo creo que la idea no es mala, creo que eso es positivo porque se superan barreras entre Estado Nación, se ponen en relación a diferentes líderes regionales que de otra manera no serían tan visibles.

Juan: lo que entiendo es que es del ámbito académico no existe esa posibilidad....

Igor: . desde el ámbito académico y la posibilidad existe. la posibilidad no estás dentro del encuadre la Unión Europea, el objetivo es absolutamente Ejecutivo, uno que tiene que ser. pero hay muy poca capacidad, hay muy poca cintura para asumir esa complejidad. de proyectos diferentes se está pasando el mismo rodillo a proyectos muy diferentes, y los agentes y los partners y las instituciones están siguiendo asumiendo que va a ser mecánica la solución en todos ellos. Desde la Academia no lo vemos así, pero hay poca capacidad. es decir las soluciones complejas se ven como imperfectas, todos sabemos que no deberían ser, es como una especie de no complique usted demasiado las cosas porque esto ya digo yo que funciona, pues ya veremos a ver si va a funcionar o no. bueno algunos vemos que ya no va a funcionar, algunas cosas sí funcionan otras no. por eso te digo que la visión cuando se están planteando Soluciones Smart ciudades siguen el mismo patrón.

Juan: entonces desde tu perspectiva es muy difícil concebir la posibilidad de que será exitoso crear soluciones plantilla cómo lo expresa la EIP? De alguna otra manera se estado obviando el contexto el entorno, como otro tipo de proyectos de la Unión Europea aborda muy bien cómo RISE, ¿lo ves esa manera?

Igor: en la gestión de los proyectos puede haber soluciones plantilla, yo no me opongo. La cuestión es que no todos tienen que ser soluciones plantilla, si no todos están hechos de la misma manera, entonces hay una especie de narrativa oficial muy instaurada, que choca con lo que desde la literatura y la investigación se está produciendo. Hay un gap inmenso.

Juan: Te iba a preguntar sobre el mercado, es algo difícil pensar algo al respecto, sin embargo quería saber en términos de horizonte de tiempo y viabilidad económica.

Igor: la respuesta creo sería que sí, se trata de utilizar el contenedor de cada uno de los proyectos seguramente para identificar quién está haciendo las cosas de manera novedosa y ponerlos en comunicación en conexión, si sería posible lo que pasa es que muchos agentes que están generando cosas novedosas están excluidos de los procesos, entonces los proyectos financiados no dejan de ser la manera en la cual se legitima visiones aparentemente eficientes,

innovadoras que a la larga están siendo copy paste de muchas que se están haciendo en otros lugares porque les falta entender el contexto. por eso yo quería hablar contigo sobre Latinoamérica el contexto es muy relevante en cada uno de los casos. aquí muchas veces el contexto se obvia. se piensa que Europa es un mercado único, entonces como mercado único urbano también funciona. una cosa es que sea un mercado único económico, de movilidad personal y de flujo de capitales, hasta ahí está bien. pero pensar en un mercado de soluciones urbanas cuando las ciudades están teniendo contextos políticos e institucionales muy diversos y cambios políticos son muy drásticos como pasa en el Reino Unido en España en Italia también en el centro Europa. entonces hay un miedo y una incapacidad de abordar los que es esa transformación urbana que está ocurriendo en muchas ciudades dentro de los proyectos, se ve como algo ajeno, el ámbito económico es una cosa es el motor, que yo no me opongo a eso de hecho en el ted lo digo clarísimo, es el motor pero, ¿qué pasa con los demás elementos? esas partes se dan por supuestas, es el ingeniero que solo ve la máquina y no el organismo.

Juan: la visión que planteas se está propagando, crees que las compañías TIC, han influenciado esta visión de lo que se concibe como las ciudades Smart, o es la Unión Europea quién construye esa visión y se ha encargado de difundirla y expresarla tanto en las plataformas como en los proyectos?

Igor: la respuesta es ambos, es decir es un win to win, osea la Unión Europea provee fondos ya han venido una serie de consultoras que dicen bueno yo voy a apostar por ello. hasta ahí nada nuevo, el mercado requiere una financiación pública, y eso funciona. ¿qué ocurre? que no hay incentivos, las consultoras de por si no son buenas ni son malas. hay buenas y malas, cómo instituciones públicas hay buenas y malas, como políticos hay buenos y nefastos. la cuestión es que no hay un mercado alternativo que se salga esa rotonda que estaba comentando, todos los consultoras hablan de Smart growth, Inclusive growth y sustainable growth, y nadie sabe verdaderamente a lo que se están refiriendo cuando están haciendo un proyecto. eso no quiere decir, que no haya agentes trabajando de manera interesante.

Juan: de alguna otra manera los llamados de la EIP no expresan el hecho de involucrar otro tipo de organizaciones que no sean las de desarrollo urbano o compañías TIC, por ejemplo organizaciones sociales, o iniciativas ciudadanas

Igor: no creo que haya que ser ingenuo, por eso yo igual ahora mismo me estás leyendo mi pasado, porque yo hablo así y porque es mi perspectiva, porque yo creo en un modelo económico diferente, sí creo que las ciudades pueden generar un modelo económico diferente, soy relativamente optimista.

el incentivador que tiene que ser la Unión Europea no está haciendo innovador, pero no es su razón de ser. el asigna fondos, y pone los criterios. qué pasa? que está circunscribiendo especialmente hacia un enfoque que es usted cumpla con los resultados y deje de darle vueltas a esto, entonces lo que está haciendo es que la ciudades que son para mí dónde se depositan los fondos, no están involucrando a otra serie de agentes que podrían ser muy interesantes. en el artículo Unplugging deconstructing the Smart City, hace 3 años nosotros ya habíamos una posible transición que está sucediendo en los proyectos, ese artículo es así de una manera un poco tentativa desde luego, incluso en la Unión Europea eso está ocurriendo, poco a poco. pero no es la responsabilidad de la Unión Europea, es de las ciudades. entonces ahí en la ciudad es donde hay mucho loro que recibe todo lo que dice la Unión Europea y no hay ningún ápice de matiz, y hay otras que lo intentan plantear con muy poco avance. es un tema de paradigma de gobernanza urbana de perspectiva. si los tres pilares Smart se consideran como Totems únicos apaga y vámonos.

Juan: Cómo entender esa transformación de San Sebastián apostándole un proyecto Smart, con proyectos financiados por la Unión Europea y también proyectos financiados por el Gobierno Local? entendiendo que la ciudad es conocida por el ámbito cultural, de turismo. cómo entender ese cambio?

Igor: yo creo que es como el carro y los bueyes, a la pregunta hay que darle la vuelta. el contexto es muy favorable, desde luego, el proyecto de la capital de cultura es uno de los proyectos que

más admiro yo. porque conozco la realidad cercana, estuve en el inicio en la definición. pero creo que si algún proyecto ha leído bien la realidad sociopolítica socioeconómica de una ciudad de una región, y lo ha metido en una convocatoria, la Unión Europea. el diagnóstico fue muy oportuno, fue real, en un momento de post violencia política y llegó a la UE. respecto al Smart City el contexto existe estuvo el STEEP y ahora viene el REPLICATE. se está llevando a qué no sea algo que se pierden el tiempo, pero digamos que no es que llegue el proyecto Smart City y se desarrolla todo un sector, no creo que te diga algo nuevo cuando te digo que los agentes sociales son totalmente escépticos con la marca Smart. algún día alguna tesis doctoral tendrá que trabajar eso, cuánta gente se ha bajado del carro porque ha escuchado la palabra Smart. el caso de San Sebastián seguramente será el mismo, de Smart City se habla muy poco, seguramente de los agentes alguno no tiene ni idea. si hay una serie agentes económicos empresas centros tecnológicos, el Ayuntamiento que están ahí, en esa corriente.

Juan: el contexto favorable en términos de los agentes presentes en el País Vasco. creo que Tecnalía es uno de los líderes del proyecto REPLICATE y creo que Fomento San Sebastián se ha empeñado en desarrollar el eje Smart teniendo en cuenta el contexto.

Vi que en el plan Smart de San Sebastián uno de los ejes sobre los cuales se desarrolla es tener en cuenta los lineamientos de la Unión Europea con el objetivo de obtener fondos para desarrollar proyectos. ¿Esto es muy influyente y se tiene mucho en cuenta o es algo es un complemento a lo que se desarrolló en el plan?

Igor: evidentemente Fomento San Sebastián es muy activo en las convocatorias europeas y básicamente en el tema Smart se ha posicionado como líder. seguramente más que el interés de captar fondos, que de hecho lo es, fue una necesidad real qué es un distrito que se llama Urumea y el proyecto piloto que se planteó fue el river side, qué es por un tema medioambiental, el cauce del Río supera muchas veces cuándo es mucha lluvia lo que es el Delta entonces se generan inundaciones en el distrito de Martutene. entonces fue responder a esa necesidad de hecho el alcalde previo estuvo con los vecinos, entonces parte de una definición del proyecto excepcional en cuanto a lo que es un riesgo medioambiental y luego

partir de ahí entraron los fondos del STEEP y del REPLICATE. en cuanto a al impacto en la ciudad en los beneficios del Ciudadano en el ámbito político y en el segundo plano el interés que algunas empresas locales podrían tener con el tema Smart, yo creo que fue de manera ordenada, es decir primeramente se capto que había un problema urbano con consecuencias medioambientales sociales y económicas que llevo de alguna manera a un liderazgo natural de la Alcaldía partir de Fomento San Sebastián han sabido mezclar habilitar a sus agentes locales.

Juan: respecto al proyecto replicate el proponente que fue San Sebastián fue quien tomo la iniciativa o varias compañías empezaron a a proponerle al fomento que aquí estaba la oportunidad?

Igor: Fue fomento

Juan: todos los compañeros que hacen parte del plan Smart tiene algún rol activo en algún proyecto Del Smart serio compañías que solo hicieron parte de la definición del plan y no tienen participación en proyectos?

Igor: yo creo que más allá te lo explico de la Unión Europea. no hay muchos proyectos con financiación externa.

Juan: generalmente entonces los fondos vienen por parte del ayuntamiento. te quería preguntar cuál fue tu experiencia en el diseño de este plan y cómo es el tema de la influencia de compañías TIC en el diseño del plan. ¿Trataron de empujar una visión estuvieron de acuerdo en cuál debería ser la visión de San Sebastián en ese tópico?

Igor: yo creo que aquí fue continuidad del steep. teniendo en cuenta que estaban Bristol Florencia y San Sebastián creo que el desarrollo del proyecto fue la continuidad hacia un proyecto bastante más ambicioso de alguna manera, yo creo que el valor añadido que tiene los dos proyecto, el fp7 y el h2020. que no todos los proyectos lighthouses tienen.

Juan: encontré que algunos puntos definidos respecto al proyecto Replicate porque aún no hay información completa. esos puntos que se han definido respecto a temas de movilidad, a temas de energía, cómo fue el proceso definición, quiénes estuvieron involucrados? cómo fue el proceso?

Igor: básicamente TecNALIA los ha ido trabajando.

17 Anex 2: interview Gerben Wedekind

The interview was made the 19th of August of 2016 via Skype. It took around 30 minutes and the interviewee agreed on make public his name and in recording the discussion. In the text the G is an abbreviation for Mr. Gerben Wedekind and the J is an abbreviation for the interviewer Juan Sebastian Orozco.

Mr. Gerben Wedekind is the manager of Sustainable Districts and Built Environment cluster in the SCC-EIP Marketplace. In addition, he is a Programme Management Officer at the research and innovation department of the Imperial College of London. All his answers represent his personal point of view and not of the EC.

G: I am part of the secretary of the EIP that have been subcontracted by the European commission to manage the EIP and to ensure the development of the roadmap that has been set up by the European commission. Whenever I give answers, there are personal answers or as an action cluster manager maybe, but it is important to point that we are part of the external secretariat and we cannot speak on behalf of the EC.'

J: Why do you think EU decided was necessary to create the EIP in order to gather the stakeholders related to SC?

G: there are a couple of dynamics here, the easiest answer here is that at a certain point within the field of SC there was a huge proliferation of initiatives, projects, stakeholders everyone was doing something, basically, but, perhaps there was nothing of coordination or collaboration between different initiatives, so what EC decided to maybe bring all these people together, because obviously if you bring people together from north, south, west and east, all working on SC you may have some interesting collaborations coming in, you counter duplication, I think that is very important, and there is another deeper reason in my view, and that is a trend you can see trough out Brussels. Over the past years, EC has reduced in size enormously, it was a medium size body, but now we are moving towards a very lean EC, very very limited numbers of functionaries are working there. In order to listen pretty well to external stakeholders, the EC is

increasing relying on networks, platforms, stakeholder's bodies etc., etc. in which all views of Europe are gathered in a very straight forward and relatively easy way. So I think that is another reason why EC has created the EIP-SCC.

J: One question regarding Europe 2020 plan. Do you think that the SCs is a transversal component in order to achieve different goal of the plan? Job creation, deployment of KBE, environmental challenges

G: Well, directly no. Indirectly yes, because the EIP-SCC roadmaps link into the set plan a big overarching energy strategy of the EU, an obviously that strategy does link in the Europe2020 strategy, and obviously whatever is going on at EU level is linked to the Europe2020 strategy.

J: Do you consider the EIP-SCC a metagovernance body regarding the Smart City initiatives in Europe. By metagovernance I refer to a group of people, legitimate actors that in a way try to conduct where different governance networks are leading.

G: No, I don't think that it will the way to identify the EIP-SCC, is a marketplace, bringing people together, to do stuff, it is not these people, are not consciously setting the governance structures for SC in Europe, you have the Sherpa, you have the high level advisory group, these kind of guys that are working with the set plans but also in the EIP-SCC but they were present a couple years ago, and these are the people that are the frontrunners that set the framework. But the marketplace itself, no.

J: Regarding the composition of the marketplace and also the Sherpa and high-level group, do you think all interested groups are represented equitatively or there are not?

G: I am not sure; I would say yes. Because it is an open platform, everyone is able to participate. I am just thinking very hard, because the EIP is also a large body, with different levels, programmatic side, initiatives, clusters, you have the stakeholders, I think overall, there is a good representation of industry, of local authorities, although is never enough, it could always

increase. and a good representation of other stakeholders. I think what could be enhance it is citizen representation.

J: Even though you have an action cluster totally dedicated to citizens.

G: It is difficult, I think the citizen cluster is very small and at European level there is always a tendency, now is getting less and less, towards technocracy, a solution is considered to be Smart when is technologically smart and innovative. For many years, the citizen aspect and the adaptation of certain technological solution has been quite ignored I would say. You may want to have a look at that more critical, I found it difficult to answer. Citizen involvement may be strengthening.

J: I have seen the platform has developed different points that gather what they consider as a SC or which are the points that should be address in order to be a SC. Do you think there is a consensus among the stakeholders related to these points?

G: we are getting there. But the platform is so large and Europe is so diverse that there is no consensus between the actors yet on what a SC is. And you may want to ask yourself a question. Is there a need for a consensus? Obviously you need certain definition, but when you see the different stakeholders within the EIP have different and different focuses so they are smart in different ways. Some are smart in transport, on buildings. it really depends.

J: I want to ask you about the last assembly held in Eindhoven, there was any strategic shift regarding the platform or any new outcomes after the gathering?

G: let me think, no I don't think so. we continued the way we have been working. The EIP as a whole has been getting to those (not understandable word) is pretty large, and quite a lot of stakeholders and how to manage, lets call it beast it is a challenge. But I don't think there has been any major step change, I think there were refinements.

J: regarding the clusters, which are the main actions or objectives of the clusters. For example, the cluster you belong to, is there any development of policy recommendations, standards?

G: The main objective here is to counter duplication; we want to bring people together to do stuff. That will be our main objective. Within the cluster we do not have generally to develop policy, we have the objective to generate impact, and impact you achieve by bringing people together, counter duplication, focus on concrete project outcomes. Those would be the main objectives.

J: reading the documents is clear that there is an aim of creating a market of Smart solutions in Europe, and also try to export these SS to other parts of the world. Maybe to Asia, North America, do you think it is possible? Are you optimistic about the possibility of creating a market for SS?

G: Yeah, I think it could happen, but obviously it won't be one market, it would have different markets, the idea is that this marketplace SCC will bring about different groups of people, procurers of solution, solution providers, that come together, do things, and also this could be of interest of external people. this could occur but it won't be one market. It would be hopefully as many as possible initiatives.

J: regarding the lighthouses calls, besides this in a way networking way of creating SS or testing SS do you think is the best way to proceed in order to deploy of SC? I read different opinions regarding the topic, some experts had said, stop lighthouses, let's implement the real solution. I want to know your opinion about this.

G: you need to have then both, I don't have a strong opinion here. I am not in a position to counter experts. But you need to have both. Initiatives that are the vanguard of innovation and really of SC, they need to think years and years ahead. but simultaneously you need to acknowledge that not all cities can be like that. But I don't think you should do away with very ambitious initiatives. You always need to have a couple of frontrunners that try to catch the future basically.

J: what do you think are the main challenges for Europe or for the EIP in order to try expand the concept of the SC or try to bring different medium size cities to the platform in order to engage, develop new plans related to Smart Technologies.

G: As with any kind of initiatives is about added value. You need to ensure that you add value and as you know from your studies, there quite a lot of network in this field, and it is a challenge to position yourself in such a way that you have clear scope a clear view a clear added value for the stakeholders, which are supposed to contribute predominantly in kind.

J: from citizens' perspective, do you think they are supporting the implementation of this kind of technologies?

G: It truly depends where you are. In everything if you involve citizens from the start on, then you would get hopefully solutions that are more acceptable.

J: regarding stakeholders and urban governance, do you think with the development of the SC and the participation of the EC and also the platform of EIP that stakeholders as ICT companies, research corporations are having much more participation in urban governance than before?

G: I cannot answer that, I don't know. I hope so. I don't have a view on that.

J: there are a couple of case studies about Stavanger and Turin that said that some of the projects were rebranding of previous renewal projects of the city, that they only rebranded the projects as Smart and the got the funding, do you think this could be a motivation for cities to get funding, just to rename to what they planned before?

G: could be, I cannot answer this question also. I am not aware about the initiatives.

G: It is important to see the EIP as a marketplace, no so much as a policy development body, there may be policy recommendations coming out of the EIP, because is a bottom up initiative,

and the EC is closely involved and they see what is going on and what is relevant in the stakeholder level. But I think it will be bridge to far regarding the EIP as a policy making body entity.

J: regarding the guidelines, the framework, where the marketplace is settled by the Sherpa group. When you check the composition is mostly industry, ICT industry and some local governments participating. So you start to understand to which way are the policies leading, in a way, I don't know if them are the ones doing all the strategic plans for the platform.

G: No, so what it is going on now, it is fairly open. so the framework has been set. In my view it fully allows interested stakeholders to come forward. So if you are stakeholder with an idea that is not ICT, mobility or whatever, you can still do it within the marketplace, you can still come forward, you can still be one of the frontrunners, because is bottom up is open, it really depends of what the stakeholders put in, in the market place.

J: regarding the h2020 calls EIP-SCC is the EIP involved in those calls regarding the guidelines

G: The EIP, specially the secretary or whatever is not involved. those are drafted in a commission level. we are at stakeholders' level and supporting level. as I say, the EC is present in the EIP, they monitor what is going on, they provide the framework, they provide the conditions, as to ensure that we link to the set plan, roadmaps, this kind of things. They may get inspiration of what is going on in the EIP, because in the end, calls are being drafted not for the sake of the commission but for the sake of being relevant.

18 Annex 3: Interview Juan Cristóbal García

The interview was made the 19th of August of 2016 via Skype. It took around 30 minutes and the interviewee agreed on make public his name and in recording the interview. In the text the C is an abbreviation for Mr. Juan Cristóbal García and the J is an abbreviation for the interviewer Juan Sebastian Orozco.

Mr. Juan Cristóbal García is the Coordinator of the EIP-SCC Marketplace management team. In addition, he is a R&D consultant in Zabala innovation consultancy. All the answers given represent his personal point of view and not of the EC.

J: ¿Cómo está compuesta la EIP-SCC?

C: Un grupo de alto de nivel, un grupo de sherpas. Y otro grupo que es la plataforma para la participación activa de todos los interesados. El grupo de alto nivel donde debería estar la industria, las ciudades, la investigación, las asociaciones es un grupo definido por la Comisión Europea, son quiénes definen el plan estratégico de implementación, después el sherpa group define el plan operativo, y se alinea digamos la stakeholder platform que es el market place con estos planes.

J: ¿Por qué zabala?

C: pues porque había una licitación para prestar el servicio de gestionar y dinamizar la plataforma, nos presentamos en competencia y se nos escogió por el consorcio, por el plan que presentábamos, por los costes.

J: Otra pregunta referente a lo que estábamos tratando, ¿considera que las SC son un eje transversal para alcanzar los objetivos propuestos para el plan Europa2020?

CI: Sí, tengo entendido que sí. Especialmente porque trata de los desafíos medioambientales, de la nueva economía, y como decía, nace del plan de Durao Barroso para preparar Europa para el futuro. Osea que en principio sí, empleo, medioambiente y conocimiento.

J: De alguna otra manera este grupo se puede considerar como una entidad u organismo que trata de generar políticas o mecanismos para meta-gobernar las iniciativas de Smart Cities en las ciudades Europeas?

C: yo creo que no, no es un organismo en sí, no define normativas, no da financiación, simplemente pone a trabajar juntos a quiénes trabajan el tema en Europa para hacer las cosas que consideran que quieren hacer conjuntamente. Metagobernanza, otra cosa es que sea influyente, muy influyente y pueda incidir en la comisión, en los estados miembros, en las empresas, en las ciudades en la hora de hacer las cosas, pero no lo veo como una entidad ni si quiera un organismo.

J: La EIP hace parte del diseño de los llamados que buscan crear proyectos lighthouses en diferentes ciudades? o quién diseña esos proyectos.

C: Los proyectos lighthouse están en el programa h2020, si bien el programa h2020 lo redacta la comisión Europea y el redactado el texto lo elaboran los officers de la comision europea que están en la EIP son iniciativas separadas. Las ciudades y empresas que deseen presentarse a las convocatorias se auto organizan libremente, se presentan y se agrupan como ellas deciden, no se interviene para nada desde la EIP en eso, otra cosa es que luego una vez que esos proyectos están lanzados participan dentro de la EIP dentro del marketplace, para difusión, para compartir experiencias, pero la EIP no interviene ni en la elaboración ni en crear consorcios. Ni en la selección, de hecho estaba indicado en el texto que participar en el marketplace no aportaba ninguna puntuación extra para la convocatoria lighthouses.

J: respecto a la composición del highlevel group y el sherpa group cree que están representados todos los actores involucrados en el tema de SC o cree que hay algún actor que no esté representado equitativamente.

C: pues no sabría decir, en principio creo que buscan una composición bastante equilibrada, pero no tengo una opinión sobre el tema.

J: Estuviste en la última asamblea en Eindhoven, hubo algún cambio en términos de visión estratégica o lineamientos de la EIP respecto al futuro cercano?

C: bueno los dos temas que más se mencionaron por parte de los ponentes de alto nivel fue financiación y ciudadanos. es decir que no se habló prácticamente de los temas tecnológicos. pero yo creo que lo que vendría a traducirse, porque al final esto viene de ejes de direcciones generales de la comisión europea que son tecnológicas que las SC son herramientas para los ciudadanos y hay que considerar integrar a los ciudadanos en el diseño de las SC y que la financiación es un elemento crítico. Parte de la preocupación para el despliegue de las SC van por ahí.

J: hay 2 roadmaps que se encargan de esos 2 aspectos en específico. ciudadanos y modelos de negocio y financiación. de alguna otra manera lo que se busca es empoderar estos dos roadmaps o brindarles más herramientas en este momento?

Cristóbal: básicamente, pero es una interpretación mía y habría que analizarla. Ahora mismo, lo que interpreto por cómo está el panorama de implantación de SC, digamos que hay muchas ciudades en proyectos de SC o haciendo acciones parciales pero que no se atreven a hacer un plan más ambicioso, porque les cuesta vender el concepto de SC a los ciudadanos, las ventajas y los beneficios y por otra parte porque se encuentran con un problema importante de financiación. Que tiene que ver con cómo venderlo y cómo involucrar a los ciudadanos en la participación. En ese sentido digamos que el objetivo de la CE desarrollar rápido el mercado de SC en Europa para que esto genere economía, mejora en la vida en las ciudades y de los ciudadanos y además genere nuevos puestos de trabajo y se pueda exportar tecnología europea

en Asia y en América latina. No se está haciendo esa implantación rápida en Europa, o no tan rápida como se quisiera, porque los ciudadanos no están motivados, no se llega a motivar o a convencer a los ciudadanos y la financiación es complicada para las ciudades. Especialmente en algunos países. Entiendo que va por ahí, pero es interpretación mía.

Juan: es difícil considerar la implantación de una solución Smart de cualquier índole, es difícil ver el costo beneficio porque son a largo plazo en términos energéticos o de contaminación, promedios de tiempo de viaje.

Cristóbal: difícil de convencer al ciudadano, que el ayuntamiento se va a gastar 2 millones de euros en una plataforma de gestión cuando a lo mejor pues lo que quieren es un centro de salud más cercano a su domicilio, o quieren parque.

Juan: en este aspecto cuáles son las acciones de la EIP o de los clúster de la EIP para de alguna u otra manera difundir el concepto de la SC como el futuro de las ciudades Europeas, o ayudar a las ciudades para que puedan convencer a los ciudadanos a que esto es una alternativa?

C: Tenemos en marcha dentro de los 6 actions clusters ahora está el trabajo organizado por iniciativas, dentro de las iniciativas está la de enfoque a ciudadanos donde se está trabajando y compartiendo experiencias sobre cómo conseguir impulsar la participación ciudadana mediante co-diseño, co-creación de forma muy ambiciosa. es un tema que les interesa mucho mucho a las ciudades, se están compartiendo experiencias se están haciendo muchos webinars con participación muy numerosa de más de 100 personas en los últimos webinars que se han hecho en cada uno de ellos. Y luego por otra parte hay un action cluster relativo a financiación, modelos de negocio y dentro de ese AC se ha generado una guía que está online, la hemos implantado, una guía sobre herramientas de financiación para ciudades, pero también se comparten nuevos modelos de negocio. Desde crowdfunding hasta considerar el impacto social o las externalidades positivas que se pueden generar en la valoración de los proyectos por parte de las ciudades. O herramientas que a lo mejor se están utilizando poco por parte de las ciudades porque les puede costar más utilizarlas, como las del banco europeo de inversiones o medios

cómo JESSICA o por ejemplo herramientas cómo el project development assistance, que son poco conocidas por algunas ciudades porque son más difíciles de utilizar para ciudades medianas pequeñas. Digamos que la mayoría de ciudades en Europa no tienen más de 1 millón de habitantes, solo hay 21 ciudades de más de 1 millón de habitantes y creo que hay 300 ciudades más de 100.000 hab. Sin embargo a las ciudades que más les puede costar acceder al banco europeo de inversiones son esas ciudades que van de 100.000 a 500.000. De hecho hay una iniciativa que se llama Small Giants específica para ciudades de 100.000 a 300.000 habitantes para ayudarles a compartir experiencias y a centrarse a las prioridades que tienen.

Juan: Hay algún motivo en específico además de la posibilidad de acceder al banco de inversiones europeos por la cual se está haciendo énfasis en estas ciudades.

C: La mayoría de ciudades europeas tienen menos de 1 millón de habitantes y más de 100.000 y tienen equipos técnicos en los ayuntamientos pequeños, luego aparte el banco europeo de inversiones suele tener unos límites para inversiones no demasiado grandes. No suelen resultar interesantes para el banco, entonces que estas ciudades se agrupen, compartan experiencias, para hacer licitaciones o concursos es muy positivo. Y se han agrupado voluntariamente, la iniciativa surgen por el interés de los participantes.

J: es optimista respecto a que se pueda crear un mercado de soluciones Smart en Europa y que sea posible exportar estas soluciones a otros ámbitos del mundo?

C: Yo creo que sí, de hecho las ciudades de Latinoamérica o de Asia cuando buscan referentes mayoritariamente van a buscar modelos de ciudades europeas, las ciudades chinas, o indias antes van a mirar primero a las ciudades europeas antes que las de Norteamérica, de Japón, de Corea, que tengan ejemplos positivos pero digamos el concepto urbano es más parecido al de ciudad Europea. Por otra parte les interesa más eso que otros modelos de SC, como pueda ser el de los países del golfo pérsico. En cuanto a tecnología, la competencia es dura, es evidente que hay empresas tecnológicas en Japón y en USA que están haciendo avances importantes pero también se encuentra que muchas veces lo tienen más fácil para desarrollar esos proyectos y

evolucionarlos en Europa que en USA. Es más difícil exportar un modelo que sea válido en Japón que exportar un modelo que sea válido en Europa.

Juan: el urbanismo test-bed aquí en Europa creo que se ha difundido, el hecho es que muchas iniciativas europeas como por ejemplo los lighthouses busquen implementar nuevas tecnologías para hacerlos replicables en otras ciudades o contextos.

C: Una cosa importante, viendo la audiencia del marketplace, nos encontramos con que entre los 10 primeros países por visitas están India y USA. Entonces, por ejemplo superan a países como Francia, no quiere decir que Francia no tenga interés sino que existe un interés muy grande respecto a qué se hacer en Europa y lo están siguiendo.

J: Cree que los programas de lighthouses son una o es el camino correcto para generar este desarrollo respecto a que sea viable económicamente y a que sea viable replicar soluciones Smart?

C: No lo sé, hay por ahí, pero es opinión personal, hay discusiones, hay quiénes han lanzado el mensaje, ya son varios gurús fuera de la EIP que piden que no hayan más pilotos pero piden que se vaya a implantaciones reales. Por ejemplo la convocatoria de algunas ciudades inteligentes de red.es era para implantaciones que no fuesen pilotos, tecnologías probadas. Hay un experto del ayuntamiento de Barcelona que en sus presentaciones habla de no more pilots, eso también hace eco Graham Colclough, es digamos una tendencia que hay por ahí. Por otra parte en la convocatoria 2014 se presentaron 19 proyectos para lighthouses, en la de 2015 se presentaron 37 y sin embargo en la convocatoria de 2016 se han presentado sólo 9. Quiere decir que a lo mejor el marco no resulta tan interesante para las ciudades.

J: eso tiene que ver con otra pregunta que tenía. Hay algunos académicos que tomando el ejemplo de Turín o de Stavanger en Noruega es que estas iniciativas lo que están haciendo de alguna otra manera, motivar a las ciudades, a hacer un re-branding de algunas renovaciones

urbanas o planes anteriores para obtener esa financiación Europea. Entonces quería saber si compartes esa opinión.

C: En principio, yo por la experiencia personal que tengo, lo que conozco, es que cuando una ciudad decide intervenir en un barrio frente a otro tiene unos planes que suelen llevar muchos años de maduración y una necesidad clara. Por tanto escoger un barrio en el que quieren intervenir, muchos aspectos suelen tener problemáticas diversas. De movilidad, sociales, de vivienda, y por lo tanto aprovechan. Lo que hay que decir es que la financiación de h2020 es para hacer cosas que no serían habituales, es una financiación adicional sobre otras () es decir que las líneas que son financiadas del proyecto lighthouses son pocas de las muchas que la ciudad quiere hacer en ese distrito. otra cosa es que son muy visibles, o que le ayudan a movilizar otros fondos, y le ayudan a movilizar fondos privados. eso es positivo en ese sentido. pero tiene que partir de un plan urbano, si una ciudad decide hacer una actuación grande en un distrito, tiene que partir de una estrategia o de un distrito.

J: las últimas preguntas son referentes al tema de nuevos actores participando en la toma de decisiones urbana o la gobernanza urbana. en este sentido me refiero a compañías relacionadas con tecnologías smart, consultoras referentes a tecnologías, o corporaciones de investigación. Cree que el desarrollo de la visión de la SC en Europa está involucrando estos actores en la toma de decisiones de ciudad?

C: Pues, no lo sé. Si que hay consultoras o hay organizaciones que se están postulando y están trabajando con algunas ciudades en la elaboración de planes de SC, pero también es verdad que no es tan visible, hay algunas que lo están haciendo pero no es algo que se pueda generalizar. Sobre todo mucho centro tecnológico es el que está cumpliendo ese rol y algunas consultoras. digamos que son más los centros tecnológicos lo que están haciendo.

J: ¿la plataforma está logrando un marco coherente y estandarizado para lo que se considera una SC?

C: los comités de normalización funcionan fuera de la marco de la EIP. Ya sea en ISO, EXI, y en este tipo de entidades lo que si sucede es que dentro de la EIP se consigue tener en el marketplace tanto a ciudades como a empresas, como a centros de investigación y son el germen a veces de esos grupos o de esos comités de normalización. Por ejemplo la iniciativa de urban platform a lanzado una especificaciones comunes de plataformas para que puedan compartirlas las ciudades. O por ejemplo lanzó un memorándum of understanding con urban platforms en el cual varias empresas del sector en Europa, varias ciudades se comprometían para lograr una interoperabilidad. Luego en esa misma iniciativa, si se entra en el sitio web se ve como re-direccionan a los sitios de estandarización. Es una germen, si bien no definen estándares, el hecho de escribir una especificación común y compartirla pues puede representar un germen de standard o puede ser un estándar de facto si más de 2 o 3 ciudades la apropian.

19 Annex 4: Interview Euken Sesé

Euken Sesé is the director of the development agency (Fomento San Sebastián) of the city San Sebastián. He is the head of the coordination of Smart projects in the city. The interview was made through Skype the 30 of August of 2016. Mr. Sesé agreed on recording the interview and using his name in the publication. In the document the E represent Euken and the J, Juan Sebastián Orozco the interviewer.

J: ¿Son las ciudades inteligentes un componente transversal del plan E2020?

E: generalmente desde cualquier administración pública, unas son las estrategias, unos son los planes, la financiación para poder desarrollar ese tipo de iniciativas es una firme muestra de la voluntad que existe en el desarrollo del tema de las SC. Yo creo que por lado habría dos componentes, yo creo que podríamos integrar probablemente dos factores, dos sectores, en este momento las políticas de la comisión, por parte de la propia Unión Europea. En primer lugar está el ámbito de las 'cities', está el ámbito de las ciudades, que si que es verdad en los últimos años ha estado digamos que en boca, o lo a estado digamos planteado y promovido de la Unión Europea (UE) pero con escasísima consistencia digamos a nivel financiero. Es verdad que se habla del futuro, estamos viviendo el siglo XXI, que es la época de las propias ciudades, pero la realidad en la Europa comunitaria ha sido que la canalización tanto de los fondos estructurales como de las diversas iniciativas no llegaban directamente hacia las ciudades. A excepción de alguna iniciativa significativa que se tomaba la decisión directamente en Bruselas y no pasaba por ese filtro mediático e ideológico que tienen los estados a la hora de trasladar esos recursos a las ciudades. Era la iniciativa URBAN y que cuando fue adoptada entraron entre 15 ó 20 millones de EUR con un grado de co-financiación en función del territorio, de la región digamos sobre 50% hasta un 80%. Realmente en este nuevo periodo de programación por parte de la UE nos encontramos que las ciudades tienen más peso, a nivel de poder acceder directamente a ciertas iniciativas y esto en cierta manera también tiene el ámbito Smart como uno de los posibles elementos detonantes para que las ciudades puedan tomar un rol determinante. Y más concretamente en lo que puede ser la programación H2020, y en este sentido lo que han sido los antecedentes del H2020, ya no hablando solamente de Cities sino ya hablando más de temas

SMART, parte de unas líneas de financiación que tanto en el FP6 como en el FP7 estaban muy orientadas a procesos de investigación, en algunos casos hasta investigación pura y no aplicada. Directamente yo creo que la EC para la programación 2014 - 2020 se plantea claramente que quiere realidades, que quiere trasladar digamos ese conocimiento, que se encontraba, que se encuentra en los centros de investigación, centros tecnológicos, trasladarloS a la realidad y que se tome como un programa las propias ciudades. Yo creo que esto ha sido el detonante de encontrarnos hoy en día con los proyectos lighthouses y otro tipo de iniciativas con una dimensión importante y que realmente da una mayor credibilidad a ese discurso por parte de la propia dirección que el futuro también pueden ser las ciudades en la distribución territorial y en la distribución de los recursos.

J: Y respecto a San Sebastián, ¿cómo nace la idea de crear un plan Smart? Conozco que ustedes participaron del proyecto STEEP, con otras dos ciudades, con Firenze y Bristol. No sé si este fue como el punto de partida o fomento San Sebastián ya tenía una idea previa al respecto.

E: No, nosotros empezamos, partimos prácticamente en el año 2005. Empezamos a posicionar la ciudad en dos aspectos. En el ámbito energético y al amparo de lo que podían ser las ayudas que existían por parte del estado, especialmente en la obligatoriedad de que las grandes operadoras eléctricas tenían de comprar energías renovables. Fuimos de las pocas ciudades que hicimos un plan en el que analizamos todos los edificios públicos y se hizo un despliegue fundamentalmente de instalaciones de placas al aire fotovoltaicas con una generación urbana, y eso consiguió que nuestros ingresos los pudiéramos invertir en edificios bioclimáticos sostenibles. Se empieza a experimentar con diversas energías, geotérmica, solar, solar-térmica, empezamos a incorporar el desarrollo de la biomasa. Desde el sector público, desde fomento San Sebastián, nuestro interés era trasladar especialmente a la iniciativa privada de incorporar lo que podría ser las nuevas energías, energías renovables por encima de la exigencia del código que la constitución imponía. Era un paso más, digamos que el sector público tenía que andar más en ese aspecto. De los edificios que realmente construimos en aquella época 2005-2012, una de las grandes preocupaciones fue la monitorización, es decir, tener un sistema real de cuales eran los números tanto en generación como en los consumos. Yo creo que es un elemento

básico y también aprendimos mucho, ese fue un proyecto Europeo con otras ciudades, que especialmente estaba enfocado en el ámbito de la medición de edificios. Tanto que creo que fue un momento inicial. También intentamos profundizar, fue el rol que podíamos desempeñar como ciudad de cara a las operadoras de comunicaciones. Desde un principio que no es ideológico, es el principio que las redes de telecomunicaciones sean de prioridad pública, y en cierta manera los operadores puedan competir libremente en una mejor calidad del propio servicio. Algo que en sector de la eléctrica ya están haciendo muchas ciudades alemanas, como Berlín que está republicando las redes de conducción. Esos son los elementos que nos fueron aproximando al concepto emergente en aquel momento Smart. También, algo que hicieron los departamentos municipales, el ámbito de la movilidad. De hecho las primeras bicicletas eléctricas que se ponen en todo el país fueron en San Sebastián. Los primeros autobuses eléctricos. Por eso empezamos a generar una especie de ecosistema que nos llevaban a ese concepto nuevo que era el concepto Smart. Yo creo que también podemos ser conscientes, que podemos relativizar, estamos en una especie de pandemia, colectiva, conceptual respecto al término Smart. Hoy en día todo es Smart. Entonces yo creo que sobre eso es interesante reflexionar y profundizar si estos conceptos pertenecen más a ámbitos de city planning o realmente lo que estamos haciendo es realidades para mejorar la calidad de vida de nuestros ciudadanos incorporando fundamentalmente nuevas tecnologías.

J: Entiendo el tema de las energías renovables y la aplicación de nuevos métodos en términos eléctricos. Creo que el concepto Smart llega después del 2005, seguramente ustedes no lo catalogaban de esa manera, pero quizá ya los proyectos entran a ser lo que se considera Smart.

E: Hay un trabajo muy interesante del año 2006 ó 2007 que lo plantea Alfonso Vergara y un profesor de Valladolid, donde empiezan a hablar de territorios inteligentes. De cierta manera no tenía un componente tan tecnológico pero sí un poco como los territorios podían posicionarse adecuadamente. Además hacían una defensa del rol de las ciudades. Ellos hablaban que en este momento compiten las ciudades sobretodo en la nueva economía, y eso es una realidad y nosotros como ciudad no estamos compitiendo con el país vasco, ni con Francia ni con Alemania. Una de las últimas operaciones quizá una importante, una afamada universidad de americana

para instalar un centro de investigación aquí en Europa, estábamos compitiendo con Barcelona, con París, con Berlín, y realmente pues los países en ese caso concreto tienen un escaso rol y cuando ya no se pueden dar subvenciones porque afectarían el principio de libre competencia (not understandable). Con lo cuál la importancia de las ciudades en el ámbito de capacidad, captar talento, tecnologías, etc...

J: Respecto a su relación con la EIP-SCC, quería preguntarte si están involucrados en el market place, además ahora que llevan el proyecto REPLICATE, ¿es una colaboración conjunta? ¿De alguna u otra manera comparten la experiencia de lo que está siendo el proyecto con la plataforma?

E: Cuando Europa se inunda del concepto Smart yo creo que también en términos conceptuales hay mucho (not understandable) hay un concepto nuevo que surge y realmente sobre eso nos vamos apoyando todos y también las ayudas están canalizadas, yo creo que también tenemos que darle una cierta dosis de relativismo, en este caso Smart, yo creo que todavía mucho más. En el tema de REPLICATE, los antecedentes son claros. Como tu planteas yo creo que a través del programa de STEEP se ha desarrollado un plan SC, un plan de ciudad realmente en el ámbito Smart. Y yo creo como proceso fue interesante pero no suficiente, yo creo que nuestras bibliotecas públicas están llenas de planes estratégicos que nunca se llevaron a la práctica. Y en este contexto yo creo que fue algo imprescindible empezar a coordinarnos de lo que hacíamos de una manera (not understandable word) en el ámbito de la movilidad, energías, ICT poder darle una cobertura, un paraguas único que era el tema Smart. Y a partir de ahí empezar a plantearnos causas de participación de los diferentes stakeholders en un proyecto común. Ahí hay una pregunta desde el ámbito público, quién tiene que liderar este tipo de procesos, y yo creo que esto es crítico, en el caso nuestro por lo menos tenemos claro que el liderazgo tiene que ser más público que privado. Un liderazgo nuevo, un liderazgo más dinámico, más movilizador, de participación, de bajo perfil de protagonismo, porque si no las ciudades podemos estar sujetas a un proceso de colonización del espacio público por parte de grandes empresas multinacionales o hasta los propios centros de investigación que quieren en cierta manera aterrizar en la ciudad para ocupar. En nuestro país tenemos una experiencia promovida por movistar, en la cual hay

una ciudad que la ciudadanía no la vive de cerca. Entonces yo creo que el tema del liderazgo es crítico, de cómo se puede crecer en ese sentido y sobretodo plantear una especie de convivencia en este proceso de integración en los que son las necesidades de la ciudadanía, de los empresarios, de los emprendedores y de la cobertura que podemos tener por parte de los proveedores en este momento de carácter tecnológico. El proceso es sencillo, es un proceso emergente y seguramente alguna experiencia en proyectos de pequeña dimensión. Creemos por lo menos en términos teóricos que tendríamos que distribuir los targets de la propia ciudad y a partir de ahí trabajar en la identificación de necesidades y luego incorporar la tecnología, sobretodo para que el nivel de socialización sea muy rápido, sea muy ágil en función de cubrir las demandas de la ciudadanía y no colonizar la ciudad con productos que no son necesarios y que no mejoran la calidad de vida. Yo creo que es uno de los grandes retos de la Smart City.

J: En el tema del Replicate, ustedes tenían un desafío medioambiental en el Urumea riverside, la aparición de estos proyectos y el hecho de que hubiesen fondos disponibles se vio como una oportunidad para concebir desde el plano Smart la remodelación del distrito o desde antes ya se había planteado una aproximación tecnológica al proyecto?

E: la lógica secuencial, es que después de haber hecho el STEEP que era el plan Smart de ciudad, lo pudiéramos llevar a cabo. En ese contexto el apoyo de la comisión fue decisivo y se respetaron los socios del proceso. Lo que hicimos fue identificar una zona degradada de la ciudad y de la cuál se tiene un componente importante, que era uno de los últimos desarrollos urbanísticos de la ciudad con 1400 nuevas viviendas. A partir de ahí, nosotros planteamos una reforma de vivienda de vestimento energético. Un proyecto enorme para esas 1400 viviendas, realmente el camino no está siendo sencillo, dado que el lobby que están haciendo las grandes operadoras de gas no nos interesa para nada, sobretodo sistemas de gestión próximos a la propia ciudadanía y en la cual obviamente se incorpora como energía no renovable. Entonces estamos teniendo enormes luchas para desarrollar esta pequeña parte del proyecto en términos de calefacción. Las líneas de autobuses serán 100% eléctrico. Hay desarrollado un Smart Grid junto al agua como modelo pedagógico universitario. Nos gustaría posicionar Urumea como un distrito tecnológico pero sobretodo en la cual los vecinos y las personas que allí vivan sean Smart persons. Creo que

es un proyecto muy importante. No en el ámbito del Replicate nosotros tenemos una calle, Smart Kalea. Este proyecto se alinea mejor con el concepto que hablamos previamente. Tiene un alto componente de bottom-up, trabajamos con los comerciantes de la zona desde un diagnóstico energético. También incorporamos sistemas para reducir su consumo energético y de agua.

J: Respecto a los actores urbanos que hacen parte de los proyectos Smart, Tecnalia, acciona ¿ya habían trabajado antes con ellos en proyectos de ciudad o han empezado a ser parte desde que los proyectos Smart se han empezado a desarrollar?

E: Con acciona no, pero con la mayoría de socios sí. Con Tecnalia tenemos una relación muy estrecha y somos co-participes en varios proyectos. Ha sido una labor difícil también, a veces estos centros tecnológicos respiraban a través de la financiación y nosotros no tenemos dinero, ni somos Madrid para dotarnos de financiación. Yo creo tras la crisis ha sido muy importante para nosotros la cercanía para colaborar, el win to win con estos centros, y que en cierta manera tomara como base de experimentación la propia ciudad y ese ha sido un camino importante. Y concretamente en el ámbito de las empresas tenemos un pequeño clúster con más de 100 empresas locales vinculadas al ámbito Smart y ellos han colaborado y algunos de ellos han sido beneficiados por ejemplo con alguna línea del proyecto Replicate dentro de la construcción del consorcio.

J: En este caso los fondos son una parte importante para que se genere la red entre la ciudad y estas empresas y centros de investigación.

E: Sí, yo creo que esa ha sido la política Europea y yo en ese sentido estoy de acuerdo en plantear que los fondos son determinantes en un primer momento. Pero en la medida en que se van consolidando las redes, yo creo que por encima está el capital relacional y la posibilidad de abordar proyectos que a veces ni están financiados por la Unión Europea.