



–European Policy Brief–

Innovation environment and innovation capacity in the public sector

**LIPSE: Learning from Innovation in
Public Sector Environments
(Work Package 1)**

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This policy brief presents the findings of the first work package (WP1) of the “*Learning from Innovation in Public Sector Environments*” (LIPSE) project. LIPSE is a research program under the European Commission’s 7th Framework Programme as a Small or Medium-Scale Focused Research Project (2013-2016). LIPSE focusses on studying social innovations in the public sector. Full reports can be downloaded via www.lipse.org.

1 Innovation environment and innovation capacity in the public sector

Social innovation in the public sector has become an important focus for governments around the world over the last decade, as they try to solve intractable policy problems. The pressure on governments to do more with less in response to shrinking budgets and expanding community expectations and obligations has led to a much greater focus upon how the public sector manages change and innovation. This heightened focus has created a need to understand the social innovation capacity of public sector environments.

In Work package 1 of the LIPSE project on social innovation, the innovation environment has been studied through an examination of four municipalities in different nations. The aims were to:

- Map, analyse and compare the innovation capacity of public sector environments, using social network analysis theories and methods;
- Identify relevant drivers and barriers that explain the innovation capacities of these environments;
- Provide policy recommendations and guidelines on how structures can be created that exploit social capital, trust and the type of leadership that is needed to stimulate social innovation; and
- Disseminate the research results and policy recommendations among involved policy makers and within the academic community.

2 Studying innovation environments for social innovation

Four municipalities were compared. These were Copenhagen in Denmark, Rotterdam in the Netherlands, Barcelona in Spain and West Lothian (which is adjacent to Edinburgh and is used as a proxy for it) in Scotland. Several methods were used to gather information on the innovation capacity of these environments:

- *Document analysis* of the organizational structure of the municipalities (databases, websites, local media) was employed to develop an inventory of the numbers and structures of staff in the municipal governments, and for development of the sampling framework for the survey.
- *Survey of administrators and politicians* in each of the municipalities, administered as an online survey in all except West Lothian (paper-based). 175 responses to the survey were received for Copenhagen (173 administrators and 2 politicians); 171 responses were received for Rotterdam (162 administrators and 9 politicians); 73 for Barcelona (66 administrators and 7 politicians); and 52 for West Lothian (all administrators).
- *Interviews with community-based innovators* were conducted with individuals who had been nominated through the survey.

With the information gathered, the analysis centred on the innovation challenges and drivers in each municipality and their (self-rated) innovativeness (section 3); the networking activities of people in the municipalities (section 4) and their work and strategic information networks (section 5); important leadership skills for stimulating innovation (section 6); and, the views of people from outside the municipalities on the innovation context and each municipality's innovativeness (section 7). Each section includes numbered dot points/policy recommendations in regard to enhancing social innovation – 15 in total.

3 Innovation context: challenges, innovations, drivers and ratings

Innovation capacity is related to the innovation environment. For municipalities, this includes national governance structures and societal traditions, the local socioeconomic context, and formal organizational structures.

What are the main socioeconomic challenges in the four municipalities according to the respondents and what five innovations do they rank as most important? What are the main drivers of and barriers to innovation? Respondents were able to nominate any challenges and innovations, and the researchers grouped these into categories. The drivers/barriers were chosen out of a list of 18. Table 1 provides an overview of responses to these.

There are some striking similarities in the socioeconomic challenges that are mentioned (e.g. demographic changes, economic growth, unemployment, health care and educational problems). In regard to the innovations, Barcelona nominated more internally driven innovations and concrete products. In the other three municipalities, more externally driven innovations were mentioned, particularly public/citizen engagement. In West Lothian and Copenhagen there was more emphasis on service delivery innovations. Governance innovations were mentioned in all municipalities except Barcelona.

Each of the municipalities nominated different drivers for innovation. West Lothian and Copenhagen tended to emphasize internal factors (the corporate plan, administrators and meetings, while Rotterdam nominated outside factors (the pressure from national government, media, economic crisis), and Barcelona nominated political factors (elections, politicians and citizen engagement) as well as internal factors. Overall, Copenhagen had the most positive view of the municipality's structures, procedures and context as being helpful to innovation.

Table 1: Socioeconomic challenges, innovations and drivers of innovation

City	Main current and future socioeconomic challenges (most nominated)	Innovations (5 most nominated)	Drivers (5 most nominated)
Copenhagen	<ol style="list-style-type: none"> 1. Financial (cuts) 2. Demography (growth in size, aging population) 3. Environmental (infrastructure, pollution, securing green areas) 4. Political (inclusion business, citizens, users etc.) 5. Social equity (poverty, and social isolation) 	<ol style="list-style-type: none"> 1. Organization development (trust based management, i.e. Getting rid of time-taking) 2. Citizen outreach (empowerment, involving citizens) 3. IT and organizational development (digitalization) 4. New service (after hours) 5. New services (empowering weak citizens, e.g. rehabilitation of elderly) 	<ol style="list-style-type: none"> 1. Municipal election Campaigns 2. The municipality statutory committee meetings 3. The municipality advisory committee meetings 4. The business elite of the city 5. Pay and promotion system
	<ol style="list-style-type: none"> 1. Unemployment/poverty 2. Education attainment/youth (mismatch, school dropout) 3. Diversity/segregation (multiculturalism, social segregation) 4. Physical environment (housing, pollution, etc.) 5. Organization of health care (decentralization, budget cuts) 	<ol style="list-style-type: none"> 1. Digital public service (incl. Use of social media) 2. Uniform digital management (internal) 3. Citizen engagement and consultation 4. Collaborative governance (new role for government) 5. Organization of public health care 	<ol style="list-style-type: none"> 1. Contact with and involvement of citizens and community groups 2. The current economic crisis 3. The business elite of the city 4. Media attention 5. National government pressure on municipalities
Barcelona	<ol style="list-style-type: none"> 1. Assistance to vulnerable persons 2. Unemployment 3. Exemplary management of public administrations 4. Economic revitalization 5. Consolidation of the Barcelona brand 	<ol style="list-style-type: none"> 1. New services (sustainable public procurement, payment within 30 days) 2. New service (bus network,) 3. New services (smart city) 4. Organization (co-responsibility tables) 5. Recognition (international events) 	<ol style="list-style-type: none"> 1. Quality of proposals coming from local politicians 2. Municipal election campaigns 3. Pay and promotion system 4. Values and culture of executive management (not politicians) 5. Contact with and involvement of citizens and community groups
	<ol style="list-style-type: none"> 1. Social justice (reducing poverty, welfare benefit cuts etc.) 2. Austerity/budget reductions 3. Ageing population 4. Educational attainment 5. Employment (increasing number of jobs, supporting business growth, etc.) 	<ol style="list-style-type: none"> 1. User-led service integration (community healthcare, citizens led inspections) 2. Public engagement/consultation (involvement of users, front line staff briefing to public) 3. Early years intervention (nursery school free meals etc.) 4. Smart housing (affordable) 5. Localised projects (projects designed with local people) 	<ol style="list-style-type: none"> 1. Quality of proposals coming from administrators (not politicians) 2. The municipality's corporate plan 3. Values and culture of executive management (not politicians) 4. The municipality statutory committee meetings 5. Organizational structure of the municipal government
West Lothian	<ol style="list-style-type: none"> 1. Social justice (reducing poverty, welfare benefit cuts etc.) 2. Austerity/budget reductions 3. Ageing population 4. Educational attainment 5. Employment (increasing number of jobs, supporting business growth, etc.) 	<ol style="list-style-type: none"> 1. User-led service integration (community healthcare, citizens led inspections) 2. Public engagement/consultation (involvement of users, front line staff briefing to public) 3. Early years intervention (nursery school free meals etc.) 4. Smart housing (affordable) 5. Localised projects (projects designed with local people) 	<ol style="list-style-type: none"> 1. Quality of proposals coming from administrators (not politicians) 2. The municipality's corporate plan 3. Values and culture of executive management (not politicians) 4. The municipality statutory committee meetings 5. Organizational structure of the municipal government

1. The types of innovations and the innovation drivers are contextually determined and different municipalities will need to encourage innovation at the point where it is able to have the greatest impact. In one municipality this might mean focusing on politicians and the political system, while in another it might mean focusing on internal structures and procedures and in yet another, innovation is likely to be externally driven.

Innovativeness ratings

Table 2 shows that Copenhagen rates the highest of the four cities on both the European Commission’s innovation scoreboard and the Innovation Cities index. Barcelona rates lower than the others on the first of these (economic conditions), while Copenhagen rates the highest and the other three are substantially lower and all quite similar on the second. These figures should be treated with caution because they are very broad and imperfect measures.

West Lothian rated itself as the most innovative, followed by Barcelona, with Copenhagen and finally Rotterdam rated itself as the least innovative. The rank order of innovativeness, as seen from those outside the municipality, is more in line with the innovation city scores than self-rated innovativeness: Copenhagen is ranked the highest, followed by Barcelona and then Rotterdam.

Table 2: Rank order of municipalities on innovation measures

Ranking (out of these 4)	Copenhagen	Rotterdam	Barcelona	West Lothian
Innovation city index*	1	4	2	3
Self-rated innovativeness	3	4	2	1
Innovativeness (community rated)	1	3	2	N/A
Innovation drivers	1	3	4	2

* Edinburgh used as a proxy for West Lothian

Municipalities rated their own innovativeness differently to what could be expected based on socioeconomic conditions, international innovation rankings, and the perceptions of those outside the municipality. The self-rated innovativeness of these municipalities relates to positive orientations to their work rather than to the local environment. For Copenhagen (externally rated as the most innovative), the outstanding difference is having a positive view of the drivers that help the municipality to innovate. In addition, viewing the municipality’s

procedures as helpful to innovation is related to seeing the municipality as innovative, in all cases.

2. A good way to gauge a municipality’s innovativeness might be to assess the drivers and barriers to innovation based on its procedures and structures and local contextual factors, rather than using internal perceptions of innovativeness.

4 Networking activities: differences and similarities

Informal networking activities are seen as crucial to innovation, because they provide the means for overcoming the ‘hard wiring’ of formal structures, allowing people to meet in more open and informal spaces, inside and outside an organization. Openness is important for innovation and boundary spanners who can bridge the gap between different sub groups in a network to improve information flows are also important.

With whom do administrators in the municipalities have the most contact? How much boundary spanning is occurring? External contact varied by municipality in regard to the types of organizations most contacted, with no clear pattern emerging across them. If we sum up the external contact with 13 different potential organizations (see Figure 1) we see that Barcelona reports the most external contacts by a substantial amount, while the differences between the other three cities are hardly visible. This level of external communication is positively correlated with self-rated innovativeness (internal), indicating that people who have more contact outside the municipality also see it as more innovative.

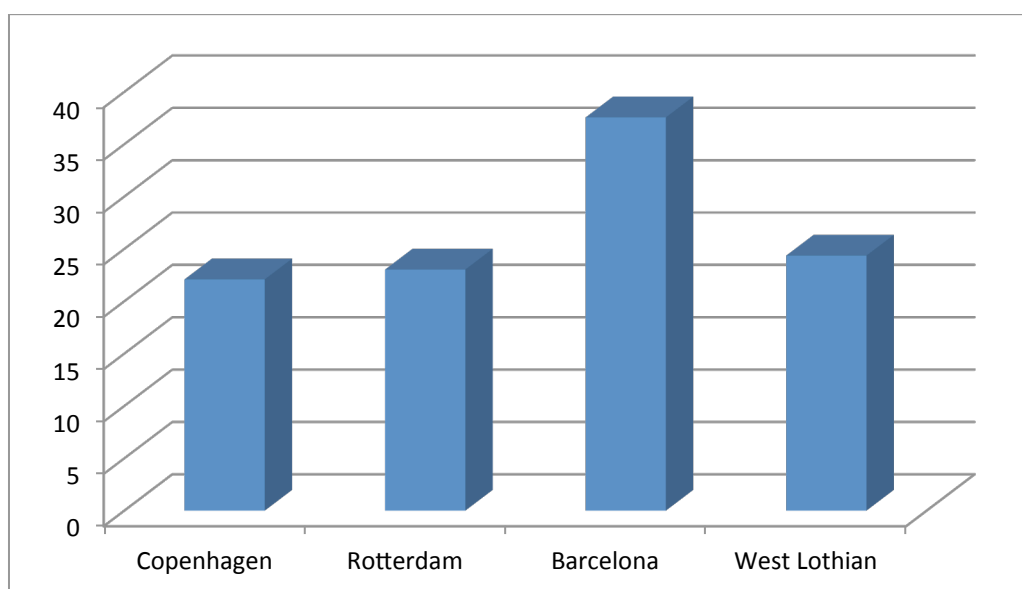


Figure 1: Level of external communication by municipality

3. The amount and type of external communication is also context dependent and linked to self-rated innovativeness, suggesting that municipalities with a stronger external focus see themselves as more innovative (perhaps because of this focus).

Barcelona stands out as having the most external contact and doing the most boundary spanning. Across the municipalities, respondents who see their municipality as more innovative also judge that they have more external contact and do more boundary spanning. This again suggests a more positive work orientation in some municipalities.

4. Boundary spanning follows a similar pattern to external communication, suggesting that municipalities that do more of this see themselves as more innovative (perhaps because of this).

5 Work and strategic information networks

Social networks play a key role in shaping the innovative capacity of governments. Innovation is enhanced by the presence of weak ties (to diverse contacts) that provide new information and ideas. But strong ties to others are also necessary because they enhance trust between actors and facilitate risk taking and the flow of valuable information. Social network theory suggests a blend of weak ties to generate new information and ideas, and social capital and trust to support smooth exchanges, are important for innovation.

In each of the municipalities, the informal networks are shaped by the formal organizational structure. Formal hierarchical structures tend to be slow in sensing changes in the environment, whereas informal networks are more dynamic and so, are crucial for innovation.

5. In order to increase innovation capacity, the organizational structure should be the focus, because getting the right structure shapes the informal networks which are crucial to innovation and its operational efficiency.
6. The informal structure needs to support the creation and use of both strong and weak (or bonding and bridging) ties, so that there is enough internal support from peers, and enough openness to gain new information from different actors within and outside the organization to support innovation.

The most well connected actors in work networks (people who are able to quickly gather information and transmit ideas) are at different levels in different municipalities – managers in Copenhagen, directors in Rotterdam, and politicians in Barcelona.

7. Increasing the innovative capacity of any municipality will depend on gaining the support of the ‘go to’ people. They might be politicians in some cases, directors in others, and managers or other individuals in other cases.

Brokers play an important function in innovation through their capacity to act effectively because of the diverse sources of information they can draw upon. The brokers in the strategic information networks tend to be at different levels in different municipalities. Two types of brokers were observed – one with an entrepreneurial structure of ties (diversity) and one with ties that are linked to each other (closure). This second type of broker has more cohesion and support through immediate relationships than is seen to be optimal in the private sector innovation literature. Both types of broker were found in each of the

municipalities, and this is shown for Copenhagen in Figure 2. Person 170 has diverse ties while person 25 has ties that are linked to each other (closure).

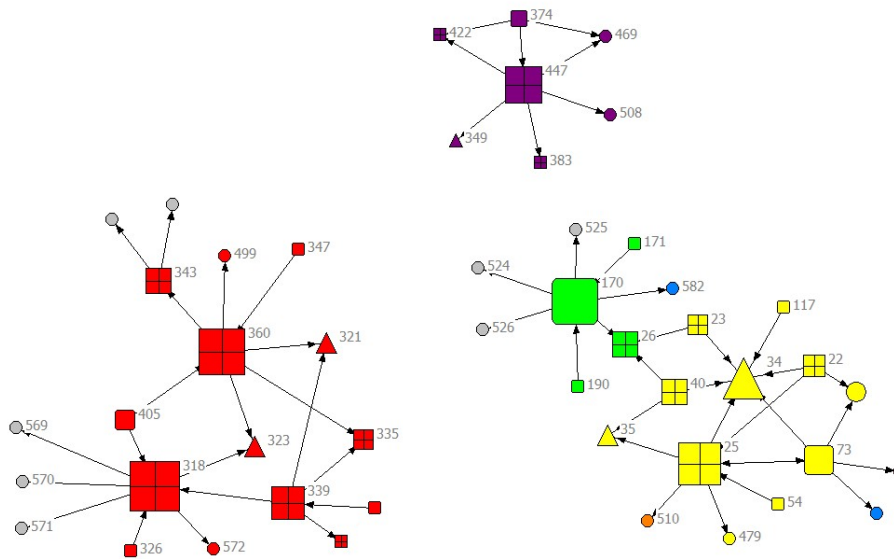


Figure 2: Ego-networks for Copenhagen

8. Two different types of brokers appear to be important in the municipalities. Some of these brokers might be acting inefficiently (due to redundancy in their ties). Alternatively, these ties might be necessary in a public sector environment, where cohesion and support are required to get things done within the organization.
9. Further research is needed to determine whether the observed mixture of diversity and closure around the brokers is more effective for innovation than the traditional entrepreneurial view of brokerage.

6 Leadership styles

Leadership is important to innovation capacity, since leadership styles have an influence on any individual's scope to put forward new ideas within an organization. There is a leadership type that appears in each municipality in slightly different forms (and is split into two parts in Rotterdam and Barcelona) which combines skills in motivation, collaboration and risk-taking. This was labelled the 'motivator risk-taker'. This leadership type is also strongly associated with self-rated innovativeness.

10. A clear set of desirable attributes for leadership to support innovation are apparent. This set of qualities is focused on motivating people, managing the connections between people, and being willing to take risks and to tolerate mistakes from employees.

11. Public sector organizations need some degree of rule-following, hierarchy and agreed procedures. Municipalities that are better able to provide a safe environment for risk-taking and motivating others will do better in terms of social innovation. This likely translates into less emphasis on hierarchical control and more freedom for individuals and groups to initiate ideas.
12. Leadership provides a counterpoint to organizational structure and informal networks: While these are crucial, leadership adds a focus on individuals and how they are motivated, which is equally important in supporting innovation.

7 Innovation from the inside and the outside

The outside perspective on the innovation capacity of these municipalities was different to the internal view. The socioeconomic challenges nominated by the community were very similar to the nominations from people within the municipality for Copenhagen and Rotterdam, but some different challenges were mentioned in Barcelona. There was also substantial agreement on the significant innovations nominated by those inside and outside the municipality in Copenhagen and Rotterdam, but less agreement in Barcelona. Those outside Copenhagen saw it as more innovative than the municipality itself did, while the opposite was true for the other two.

13. Involving the community in both defining socioeconomic challenges and aligning innovations with these should prove beneficial. The amount of overlap between the inside and outside view suggests at least some degree of agreement in each municipality, while the differences highlight the possible additional richness to be gained from an outside perspective.
14. The community's rating of a municipality's innovativeness seems likely to be a more accurate measure than the municipality's rating of itself.
15. Further research and more detailed analyses are needed to more firmly establish the links between structures, networks, leadership and innovation.

8 Project identity

Project Name

Learning from Innovation in Public Sector Environments (LIPSE)

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For More Information about work package 1

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