

Summary and recommendations

“Smart Cities study in Belgium: Qualitative analysis of 11 projects”

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I. SUMMARY

- The scientific study presented in this report is based on a qualitative analysis.
- 11 multifaceted “Smart City” projects were studied on Belgian territory.
 - Geographical diversity — an initiative for each province and Brussels.
 - Thematic diversity — each dimension of Smart City is represented at least once (Smart Economy, Smart Mobility, Smart Environment, Smart People, Smart Living, Smart Governance).
- The results of this study are primarily based on an analysis of the content of the data collected during face-to-face interviews on the subject of each initiative (2 interviews with key stakeholders for each initiative).
 - A wide variety of stakeholders were questioned (private, public, parastatal agencies...).
- Analysis of this research was twofold:
 - The Intrinsic characteristics of projects
 - Six “Smart city” dimensions.
 - Incorporation of projects into their respective territory, their temporality and strategy.
 - Six areas resulting from the literature:
 - Stakeholder dynamics
 - The development and management of the project
 - Use of technology
 - Sustainability
 - Funding
 - The legal framework

1. Intrinsic characteristics of the projects

- The projects are part of a specific territorial reality:
 - Project design and implementation must be specific with regard to what happens in other countries (in France, Germany or “Smart City” leaders such as London, Barcelona or Vienna).
 - The projects must comply with Belgian territorial reality.
- Few “Smart City” projects are incorporated into European or regional strategic vision.
- They are mostly incorporated into local strategy.
- The majority of “Smart City” projects are developed within the dimensions of environment, mobility and economy.
- Identifying a project as “smart” is a quite a complex concept:
 - Confusion between Smart Living and Smart People dimensions.
 - Smart Governance is a simplified dimension, it is often summarised in terms of the relevant stakeholders and involvement of citizens in a project.
- Projects are in different phases of maturity:
 - Courtrai and e-governance since the 2000s.
 - Ghent and the Opendata Hackathon is currently in its fifth edition (2010).
 - More recent projects: SmarTournai, Plug R, the creative hub of Liege.

2. Stakeholder dynamics for the project

- Policy often plays an initiating role:
 - Instilling a vision or strategy.
 - With assistance or impetus from the administration.
- Stakeholder ecosystems are key for certain projects.
Creative hub, Hackathon or CPE projects
- A majority of projects are developed according to a Top-Down approach where policy is predominant.
- Bottom Up projects come from private companies or associations.
- The “4 helix” model (universities, companies, public authorities and civil society) is poorly represented. Universities are the least involved stakeholders.

- Except for two projects (with a B to B focus) the initiatives studied include participation by citizens even if this participation is still often passive.
- With regard to complex ecosystems;
 - The assistance of an integrator or project facilitator is a service that is often used.

3. The development and management of the project

- A specific expertise for the partners is observed in each of the ecosystems studied.
- The difficulty is to manage large stakeholder ecosystems or get them around a table or on board for a project.
 - International companies and large groups are perceived as stakeholders that are particularly difficult to reach.
- Few projects are based on a real diagnostic (of the territory or subject in question).
 - On the other hand, the internal or external brainstorming method, workshop processes and networking generally contribute to the launching of projects.
- All projects have checking and monitoring systems for results which have varying levels of efficiency.
- Two types of risks have been identified by the individuals interviewed:
 - Those linked to the positive or negative development of the project.
 - The risk of failure and not getting a positive result.
 - More traditional risks such as those of a financial or technical nature.

4. Using technology

- ICT technology is an essential ingredient in the projects.
- The collection, processing and sharing of data remains a major challenge.
 - Only two projects (Hackathon and Courtrai) are developing a system for the implementation of the data collected (Open Data).
 - Data processing is essential, even if this requires the services of personnel who are specialised in the area.

5. The sustainability of the project

- Certain projects are an integral part of one of the “3p” pillars of sustainable development (people, planet, profit).
 - Many projects are not automatically linked to these three pillars.
- When the question of sustainability is put to stakeholders, they seem to underestimate certain aspects:
 - Improvement of the immediate public environment.
 - Use of technology leading to economic benefits.
 - The development of less polluting technology.

6. Funding the project

- All projects are financed by public bodies or subsidised by a public authority.
- Certain sources of revenue for these projects are new:
 - Purchase agreement with right to housing developed in the Ecocampus project in Landen.
- Necessity to have new methods of funding and business models.

7. The legal status of the project

- The majority of projects are part of procedures or traditional legal formats:
 - Public markets and conventional legal formats (NPO, LLC, PLC...).
- The Fix My Street and CPE projects in Antwerp are innovative:
 - Convention for the first point above .
 - Individual agreement between stakeholders for the second point above.

II. RECOMMENDATIONS

- Three types of recommendations:
 - General recommendations
 - Aim to achieve a better implementation of projects into their respective environment.
 - Specific recommendations
 - Aim to deliver a message to a certain number of stakeholders within the “Smart City” dynamic.
 - Overall recommendations
 - These are recommendations which emerge from the overall study.

A. General key recommendations

- It is necessary to take account of the reality of Belgian national territory.
 - The fundamentals and characteristics of the socio-economic situation of Belgian towns must be taken into account.
 - Implementing a “copy and paste” approach without taking into account the context of a Smart City project that has already been applied to other towns is not ideal.
 - What is happening in France, Germany and the Netherlands and in leader towns in “Smart City” areas can serve as a source of inspiration but must be adapted to suit the reality of the Belgian situation.
- “Smart Governance” is not yet considered as a real priority by many public stakeholders (this is the case in Wallonia in particular).
 - There is a necessity for the authorities to be “smarter” in the services they supply to citizens.
 - E-governance and the participation of citizens in political decision-making must be incorporated into this notion of “Smart Governance”.
 - The modernisation of public services can only be done through the installation of new transducers and technologies in towns.
- It is necessary for the “Smart City” stakeholders to develop awareness about the Smart Living and Smart People dimensions.
 - These concepts are still too blurred and underused.
- Many stakeholder ecosystems are being created which are sometimes very complex.

- To streamline communications within these ecosystems and achieve a successful conclusion to projects, a project integrator or facilitator, whether he or she be from the public or private sector is an asset.
- While the dynamic set in motion by the European institutions is long-winded, the question of incorporating Smart City projects on a Europe-wide scale needs to be addressed.
 - In the projects studied, the European context is underestimated or given little consideration.
- The link with the concepts underpinning sustainable development and sustainability (3 Ps) is not always clear for individuals questioned.
 - No direct link with the projects and the three pillars of sustainable development.
 - The concept of the three Ps must be taken into consideration during the design of projects and no longer be an element taken into consideration after the event.

B. Key recommendations per stakeholder

Political authorities

- Public policy has the role of instilling life into projects.
 - It is at the centre of the dynamic and must implement all the conditions necessary (vision) to support this dynamic (directly or indirectly)
 - It is a model and source of inspiration for the other stakeholders in the town
 - It stimulates ideas and projects
- The opening up of administrative services and practices is necessary to effect brainstorming for finding the right approach among other things.
- New sources and modes of funding and financial participation in Smart City projects are lacking in public services.
- The legal frameworks used are relatively conventional (public markets, legal entities).
 - “Smart City” projects require flexibility and complexity which is no longer present in the models currently being used
 - Innovation is therefore an essential ingredient

Administration

- Administration has a role to play with regard to stimulating projects and monitoring what develops.

- The agencification phenomenon can be seen in the context of « Smart City » projects as an opportunity to develop specific projects.
- This administration must evolve:
 - Apply itself to new technologies and Smart City concepts
 - Opening data is a major challenge

Companies

- The business community is a key actor in “Smart City” projects:
 - It can supply valuable expertise and an economic vision at local level necessary for the successful functioning of Smart Cities.
 - It must sometimes act in a piecemeal way.
- The forging of relations between stakeholders is essential in order to develop new commercial opportunities.
 - The appointment of a project integrator and creation of meeting points for businesses.
- International companies seem less concerned with “Smart City” projects.
 - Genuinely innovative projects are nonetheless being created.
 - These projects represent potential business opportunities for them.

Citizens

- Passive participation by citizens is not sufficient in the context of open decisions and transparency on the part of local and regional authorities
 - A process of co-creation and involvement of citizens and users whether by means of associations or not, is necessary.
 - Civil society must be perceived as (1) a client to be satisfied, (2) a source of innovation and (3) a partner to the project.
 - Workshops and other initiatives facilitating a Bottom-Up process in an urban area, open to all types of stakeholders, appears to be an interesting alternative.
 - More targeted approaches involving training and apprenticeships could be implemented.
- The citizen and urban user must also be stakeholders in their town and become actively involved in it.

Research centres and universities

- Research centres and universities are barely represented in “Smart City” dynamics.
 - It is essential that the expertise and ideas emanating from knowledge centres are meaningfully deployed in projects.

- Researchers, teachers, like students, must become resources for creating projects.
- They are “Smart City” Project facilitators
 - They could play a unifying role with regard to the stakeholders in projects.
- They are also facilitators within projects
 - They possess expertise which they can make available for the successful completion of projects.

C. Overall recommendations

- With regard to the size of Belgium and its urban and territorial reality, collaborations between towns seen necessary in order to give more weight to the construction of large-scale “Smart City” projects.
 - Collaboration between towns are necessary in order to ensure that local solutions are not too in-house and costly.
 - Another option is to work on a different “Smart City” scale with a view to creating more of a “Smart Region” dynamic in order to reach a sufficient critical size.
- The opening up of data by public authorities is a challenge and represents a development opportunity for the private sector, associations and citizens.
- Lastly, support for creativity and innovation (technological but also legal, social and managerial innovation) is necessary.
 - “Smart City” dynamics require the development of new business plans and business models, new means of funding as well as new corporate vehicles.