Smart City Pamplona

by Pablo Branchi / 🕐 2016-06-29 10:21:29 / Espagne / 👁 11460 / 🏳 ES

Urban renewal

Address 1 - street : 31001 PAMPLONA, España

Gross density : 24.67 alojamiento/ha
Population : 196 166 hab
Starting year of the project : 2014
Delivery year of the project : 2015
Key words : Smart Cities, Urban infrastructures, New technologies, Assessment methodologies, Social implications

2355 ha

ID CARD

We are facing a revolution of digital and communication systems, where the role of technology will keep growing up exponentially. It is transforming society, and has high impact on infrastructure, transport systems, buildings and in public spaces. Urban areas are rebuilding the traditional technological scenario, with systems that create new needs, discovering new realities, and seeking new solutions. The aim of this Case Study was to establish a methodology to set an assessment tool for different technologies in terms of their usefulness and consequences, and to consider the impact of their applications. With it, policy makers and influencers can evaluate the advantages of each initiative, the virtues of the available technologies and systems towards their application in Smart Cities.

In a Smart City (SC) Strategy, many initiatives can arise, but their real impact are virtually impossible to foresee until the strategies are fully implemented. Using a dynamic tool that provides assessments, can significantly improve planification during the long road that involves all urban strategy.

The study of urban realities and the potential impact of systems or technologies on the city should not be simplified, and that's why all SC should use such a tool to assess its realities, from both top-down and bottom-up angles, and take into consideration both objective and subjective aspects. This methodology attempts to capture the largest number of relevant criteria and variables that should be considered.

Thanks to the agreement signed with the City Council, we were able to jointly evaluate already implemented systems in the strategy of Smart City of Pamplona [http://www.pamplona.es/verDocumento/verdocumento.aspx?idDoc=264537]

The premise of this methodology is to study all types of technologies and systems for Smart Cities and their implications. Therefore, the study focused on initiatives devoted to ICT projects such as the development of web applications for citizen information; combined systems which improve infrastructure management systems (auto-adjustable lighting, citizen cards); or less technological but equally efficient initiatives in areas of SC, such as the promotion of bicycle use.

For the development of this study, analytical principles were used to obtaining an objective score based on the sum of indicators, both quantitative and qualitative, considering the various overlapping elements which interact in a city. It has been useful to assess that some systems work better than others in some areas, while some of them may have a greater overall impact on the strategy because they affect more than one aspect of SC.

After this analysis, we were able to confirm that the methodology allows for objective and comparable scores, regardless of their nature and complexity, in the aggregate value for each technology and also in its weighing when applied in each SC area: mobility, energy and quality of life (m, e and q), as well as in an overall score for an SC strategy. The results showed relatively high specific scores. However, applying the (m, e and q) correction coefficients the score provides more variability, which demonstrates that this methodology could be useful for decision-making.

Programme

- Public facilities and infrastructure
- Public spaces
- Others

Project progress

- Management phase

Prescriptions and zoning

- Heritage protection area

Key points

- Governance
- Quality of life
- Mobility
- Smart city
- Energy /Climate

Approaches used

- Others

Data reliability

Self-declared

TERRITORY

Type of territory

Pamplona is located in the middle of Navarre in a rounded valley, known as the Basin of Pamplona, that links the mountainous North with the Ebro valley. It is 92 km (57 mi) from the city of San Sebastián, 117 km (73 mi) from Bilbao, 735 km (457 mi) from Paris and 407 km (253 mi) from Madrid. The climate and landscape of the basin is a transition between those two main Navarrese geographical regions. Its central position at crossroads has served as a commercial link between those very different natural parts of Navarre.

The historical centre of Pamplona is on the left bank of the Arga river, a tributary of the Ebro. The city has developed on both sides of the river.

The climate of Pamplona is normally classified as oceanic with influences of mediterranean of a semi-continental variety. Precipitation patterns do not vary much over the course of the year as is typical of marine climates, but both classifications are possible due to the Mediterranean patterns of somewhat drier summer months.

Climate zone

[Csb] Coastal Mediterranean - Mild with cool, dry summer.

KEY FIGURES

Total investment costs (before tax)

Total investment costs (before tax) : 20 000 000 € HT

GOVERNANCE

Project holder

Name : SUR Smart Urban Regeneration

Type : Private company

General description :

This is a private methodology, tested with an agreement between Pamplona City Council and Navarre Public University

Project management

Description :

Thanks to the agreement signed with the City Council, we were able to jointly evaluate already implemented systems in the strategy of Smart City of Pamplona

Project stakeholders

SUR Smart Urban Regeneration

Function : Urbanism agency

sur.branchi@gmail.com

Construction21 company page :

SOLUTIONS

- Urban project governance

QUALITY OF LIFE

SOLUTIONS

- Promotion of cultural/ historical identity
- Security
- Air quality
- Noise exposure
- Other

ECONOMIC DEVELOPMENT

TRANSPORT

SOLUTIONS

- Soft transportation
- Electric vehicles
- Parking management

SMART CITY

Smart City strategy

Upon contact with the city council, the city of Pamplona already had a Smart City strategy drafted by an external consultant, and had begun to implement some of the systems that were collected there. However, when talking to their city managers, they recognized that they were not following very orderly steps, especially because that strategy merely listed some options and alternatives, but did not mark a clear path and precise indicators for implementation.

Thus, the presentatiton of the assessment tool that we developed throughout research, they saw its potential to assess and validate by objective instruments the results of those technologies and already implemented systems, or to select more accurately those who were yet to be implemented.

It should be noted, in any case, the great work has beendone by the RECI platform (Spanish Network of Smart Cities), which is a forum in which the various cities attached to the platform share their experiences on a regular basis, which serves to evaluate and compare the various initiatives of each other and improve as a whole. Thanks to the relationship with the RECI, Pamplona, we were able to access many of its members and consult about their impressions of available assessment tools and monitoring strategies, all of them showing great interest.

It is for this that we believe it is a great opportunity for the cities to have such tools both to compare and evaluate the acquisition and implementation of the different systems in advance, as well as to monitor and correct their results once they have been implemented.

Here are outlined some details of these tools. You'll also find attached a video of a conference on the presentation of some of the results here mentioned was performed.

SOLUTIONS

TAM (Technology Analysis Matrix) y SCM (Smart City Matrix)

Description : Thanks to the TAM (Technology Analysis Matrix) tool, you could assess 30 actions outlined in the Smart-City Pamplona strategy, obtaining a target parameter comparison of the impact of each one on the mobility variables, Energy and Quality of Life (M, E and Q).

Similarly, with the second tool called SCM (Smart City Matrix) 30 results could be transfered from TAM into a large dashboard in which it is evaluated, in which degree each one of them is implemented in varying degrees, in which area of the city it influences, what percentage of the population benefits from it and, above all, how the different technologies and systems interrelate in order to obtain a balanced strategy in the three above areas M, E and Q.

After analyzing all the results it has been concluded that there are very fine technologies in themselves, ie, they work very well in the abstract (with scores ranging from 3 to 5, the maximum score), but to analyze them in as for its actual impact on the three areas of study and the globality of the urban environment, these scores are often revised downwards, with ratings that, in some cases, not even come to a point. Furthermore, it has been shown with urban agents, that Pamplona has already implemented been very low cost technologies with great success such as TelPark or Your Villavesa applications; traditional systems managed very efficiently with an excellent image for citizenship and an excellent score in the TAM and SCM tools such as Pamplona NBici; or, on the opposite side, very complex and expensive systems whose impact is minimal so far by the low level of implementation, as is the case of Carsharing Pamplona, a system of electric cars for sharing that, until today, only affect less than 0.1% of urban trips in motor vehicles.

- Infrastructure
- Digital services
- Other

https://www.esmartcity.es/videoteca/pablo-branchi-upna-i-congreso-ciudades-inteligentes

Company :

Company :

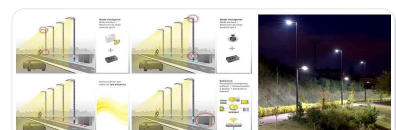Company :

RESOURCES

SOLUTIONS

- Water management
- Waste management
- Citizen-awareness

ENERGY/CLIMATE

SOLUTIONS

- Renewable energies
- Urban Lighting
- SmartGrids

Building candidate in the category
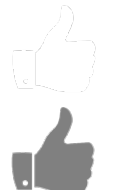
Ciudad Inteligente

Green City
Solutions Awards 2016
powered by Construction21.org

Gran Premio : Ciudad Sostenible

Premio des los usuarios

Leaflet | Map data © Open
Mapbox

Date Export : 20230420002625