From Smart City Utopia to Reality: Santander use case

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Introduction

¿Do a city need to be special to become Smart?
1. Introduction

- Located on the north coast of Spain, Santander is the capital of the Region of Cantabria
- 180,000 inhabitants, occupying a land area of 33 km²
1. Introduction

• Transport
  • Port (406,108 Tn), goods and touristic connection to UK
  • Airport (875,000 passengers/year, 2015)
  • High capacity roads (horizontal and vertical axes)
  • Train (horizontal and vertical axes)
  • Urban public transportation (buses)
1. Introduction

- Knowledge and Technical resources
  - University of Cantabria (13,500 students, 1,250 academic staff)
  - Cantabria Scientific and Technological Park
  - ICT sector
1. Introduction

• Urban lab
  • Political determined & continuous support
  • R&D: University of Cantabria
  • Implementers: Innovative companies
2. Santander’s strategy
Be active, learn and act …
2. Santander’s strategy

1. Santander Smart City
2. Santander open innovation
3. Public body modernization
2. Santander’s strategy

- EU projects
- Private partners agreements
- Innovation projects
- Procurement IT requirements
- Technical
- End-users (citizens)
- Municipality workers
- Private companies
- Pilots
- Experiments
- City projects
- Lessons learned

Active innovation

Ideas in action

Lessons learned

City projects
2. Santander’s strategy

**Ongoing (8 projects)**

- Energy and environmental
- Mobility
- Technology and citizenship participation

**Ended (13 projects)**

- NETfficient
- Storage for Life
- WISE IoT
- FIESTA-IoT
- ORGANICITY
- SYNCHRONICITY

- EMPower
- Interreg Europe
- URBAN WASTE
- SETA
- Clout
- sociotal
- FESTIVAL
- MobiWallet
- Streetlight-EPC
- RADICAL
- burba
- Butler SmartLife
- OUTSMART
3. Use cases

From Utopia to Reality
3. Use cases

- Case 1: Smart water
  - Joint venture with private company

- Case 2: Waste management
  - Including IT requirements in public procurement for waste management service

- Case 3: Street light
  - Private investment (ESCO model)

- Case 4: Urban platform
  - Municipality self investment
3.1 Water supply: Smart Water project

- **Phase 1:**
  - Network new
  - Young people
  - Specific problems

- **Phase 2:** downtown
3.1 Water supply: Smart Water project

- App:
  - Consumption
  - Reports (breakdown, leakages, …)
  - Invoices

Citizenship information

Profile comparisons
3.2 Waste management

- Public procurement including IoT requirements
- More than 1,000 devices deployed
- Measurement of status including fill level
- Identification: RFiD & NFC tags
- GPS/GPRS location
- App: information about waste pickup, schedules, report events
3.2 Waste management

- Supervisors and Intermediate controls
- Support apps for the operation
- Fleet of vehicles
- Specific sensory
- Assets deployed
- Workers
3.3 Street light

Street light renewal

- 23,000 luminaries refurbished
- Point to point regulation
- 65% energy saving
- Private investment 15M€ / 15 years contract
3.4 Urban Smart City Platform

Smart City Platform

Communication & Relation
- Webs Apps
- Public Information
- Big Data Patterns
- Other processes
- E-administration
- Incidences Resolution

Services & Management
- Waste Management
- Mobility
- Smart Destination
- Energy
- Water
- Street Lightning
- Other Platforms Legacy Systems

Open Data

Integral City Management
Multichannel Contact Centre
Entrepreneurs Ecosystem
Final thoughts and conclusions

What we could have done better?
Which are the main obstacles encountered?
4. Final thoughts and conclusions

- How to manage expectations sensibly and honestly?
  - Internally and externally
- How to communicate effort, results and evolution...?
  - Internally and externally
- How to involve citizens?
  - Citizenship
  - Associations
  - Other stakeholders…
  - And how about to obtain significant participation...
- How to manage change…?
  - Internal: in a public body
  - External: externalized services (private companies)
Thank you very much