



IoT Week Bilbao 2018
4-7 JUNE 2018, BILBAO (SPAIN)
EUSKALDUNA CONFERENCE CENTRE



From Smart City Utopia to Reality: Santander use case

Bilbao, 7th June
Juan Echevarría





Contents

- 1. Introduction**
- 2. Santander's strategy**
- 3. Use cases**
 - 3.1 Water supply : Smart Water project**
 - 3.2 Waste management**
 - 3.3 Street light**
 - 3.4 Smart City platform**
- 4. Final thoughts and conclusions**

01 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 ...

02

2. Santander's strategy

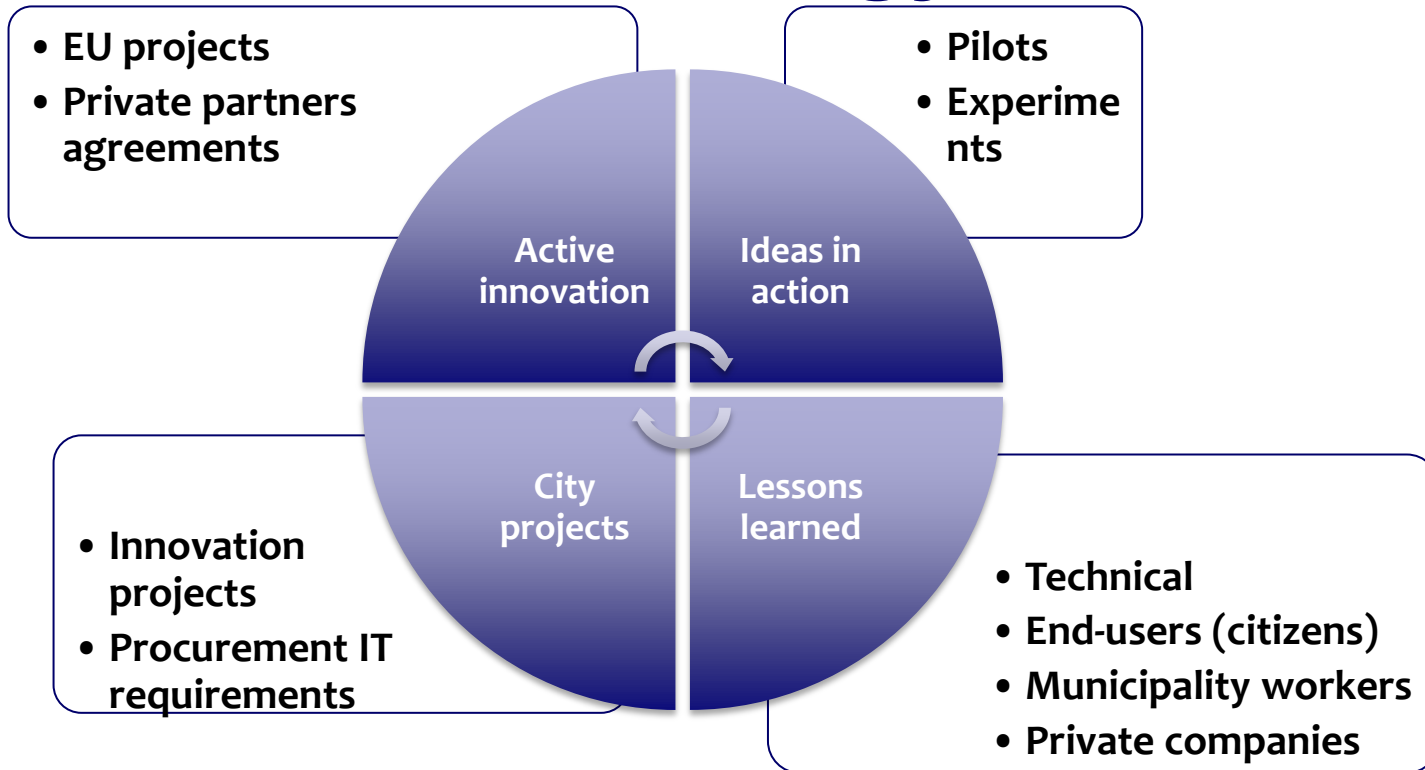


1. Santander Smart City

2. Santander open
innovation

3. Public body
modernization

2. Santander's strategy



2. Santander's strategy



Ongoing (8 projects)

Energy and environmental



Mobility



Technology and citizenship participation



Ended (13 projects)



MobiWallet



03

3. Use cases

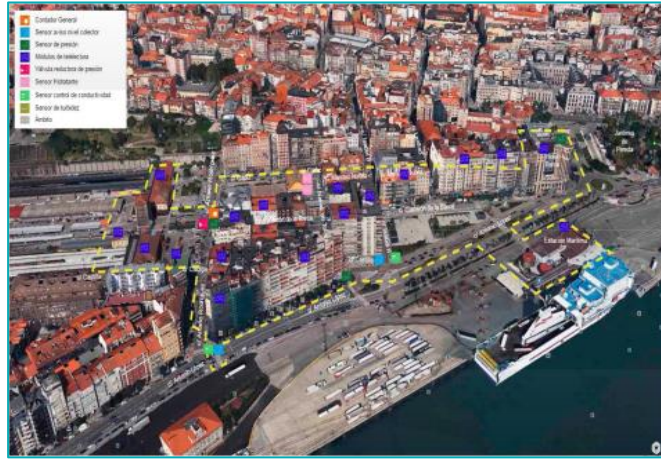
From Utopia to Reality

3. Use cases

- Case1: 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

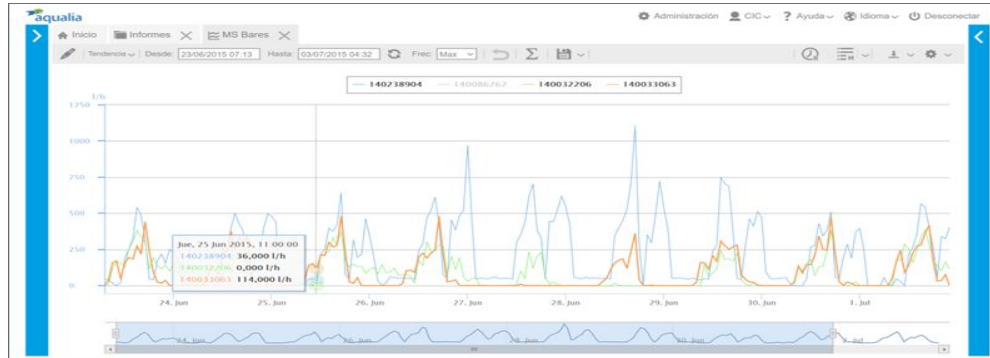


3.1 Water supply: Smart Water project

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

Citizenship information

Profile comparisons



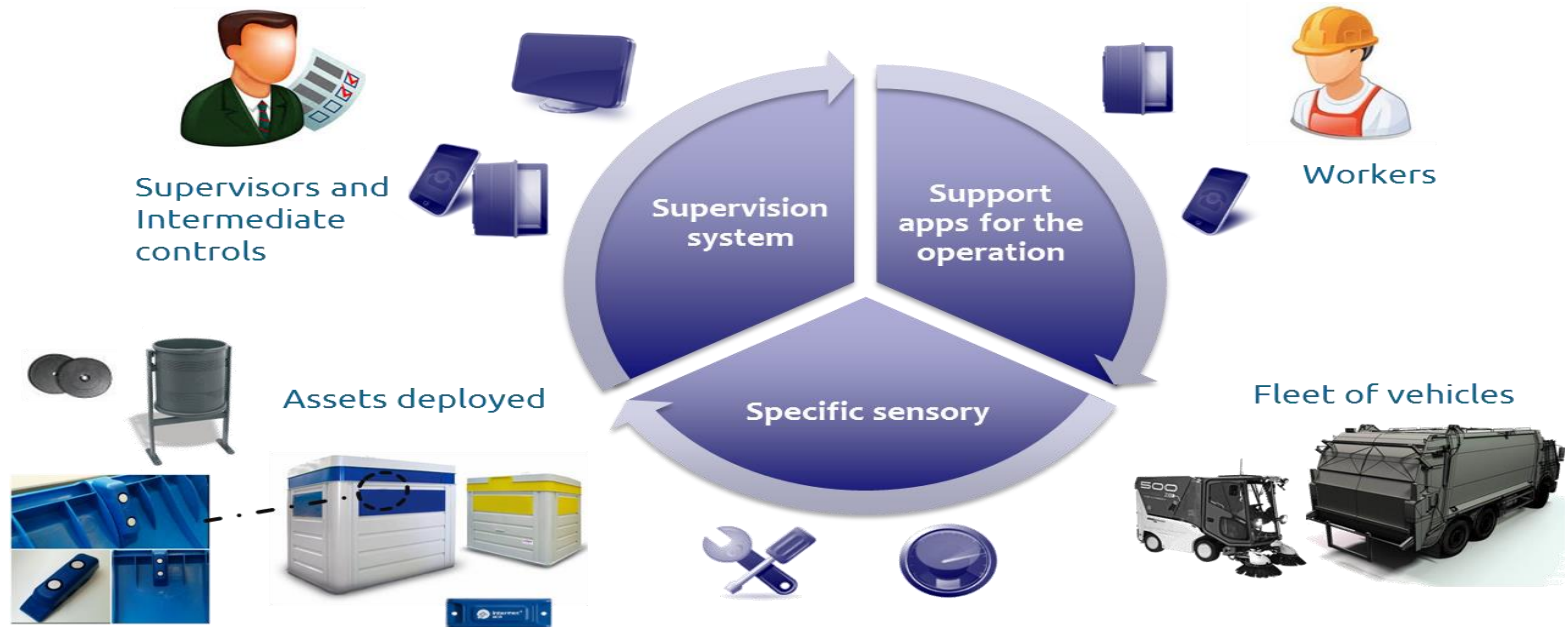
3.2 Waste management



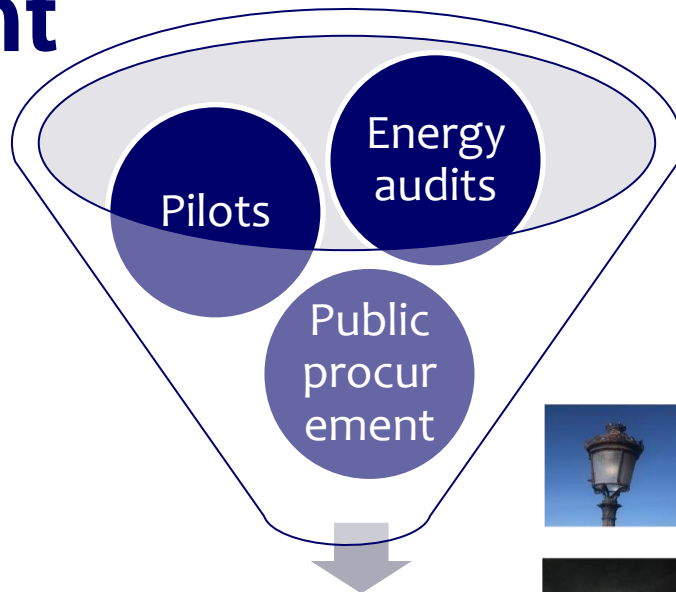
- **Public procurement including IoT requirements**
- More than 1,000 devices deployed
- Measurement of status including fill level
- Identification: RFiD & NFC tags
- GPS/GPRS location
- App: information about waste pickup, schedules, report events



3.2 Waste management

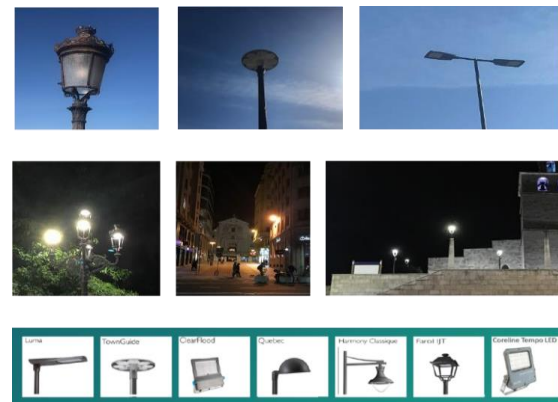


3.3 Street light

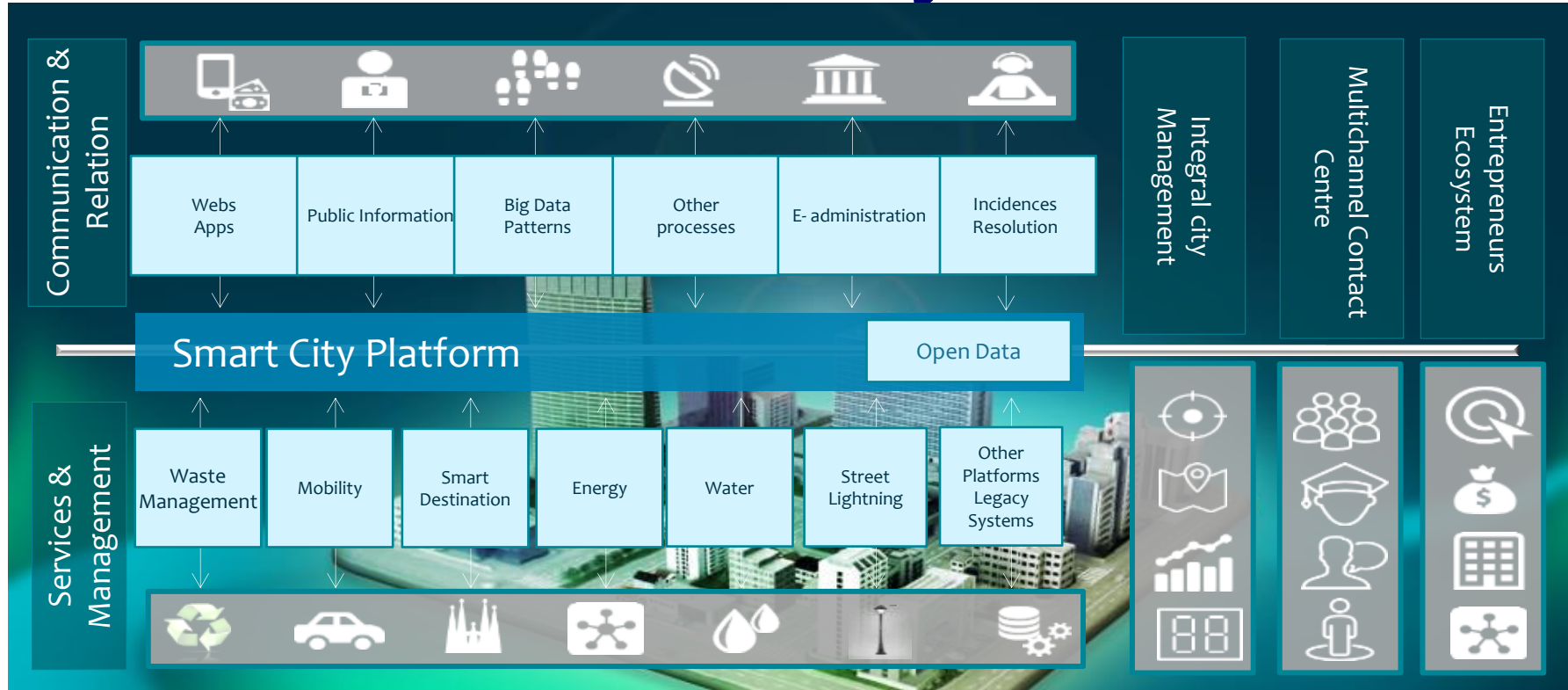


Street light renewal

- 23,000 luminaires refurbished
- Point to point regulation
- 65% energy saving
- Private investment 15M€ / 15 years contract



3.4 Urban Smart City Platform



04

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)

An aerial photograph of a coastal town. In the foreground, a large, multi-story building complex with a grey roof and white walls is situated on a green hill. The complex is surrounded by lush greenery and a winding road. To the left of the hill, there is a sandy beach and a body of water. In the background, more buildings and a larger beach are visible. The ocean is blue with white waves crashing against the shore.

Thank you very much

SAN
TAN
DER

Smart
City