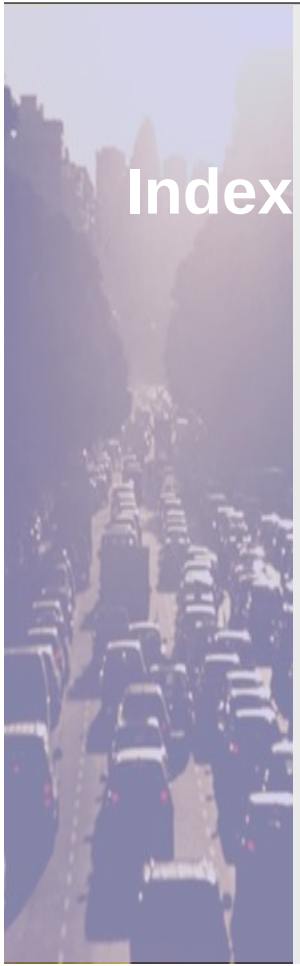
Introducing the Smart City approach and its challenges

Fernando Tomás, IDOM



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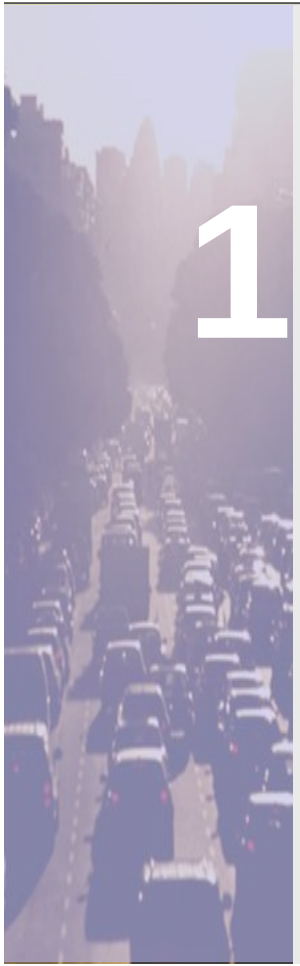
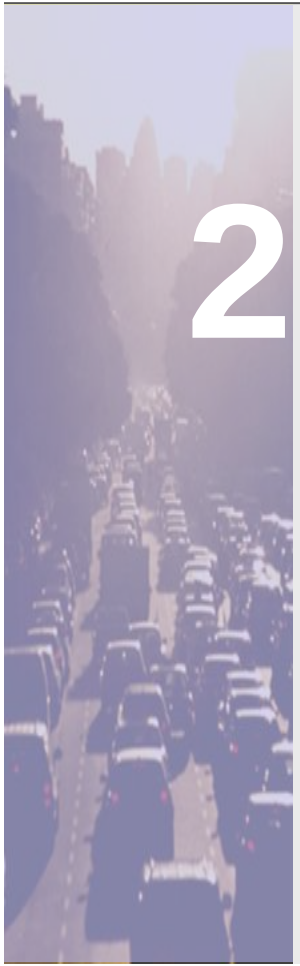


1 City needs

1. City needs


Energy
Mobility
Information Management
Strategy
Telecomm. Networks
Town planning
Sewage Management / Water supply
Security/Safety
Waste Management



2 Smart City model

Our own definition of a Smart City

A Smart City is the one who can take advantage of the data generated daily in order to create new information which should allow the city to ***improve his management*** and be more ***sustainable***, more ***competitive*** and offer a better overall ***life quality***, thanks to the ***cooperation*** and ***involvement*** of the whole ***citizenship.***

IDOM's Smart Cities Practice website:
www.smartcities.es

Source: BBVA Innovation Centre

2. Smart City. Types of cities

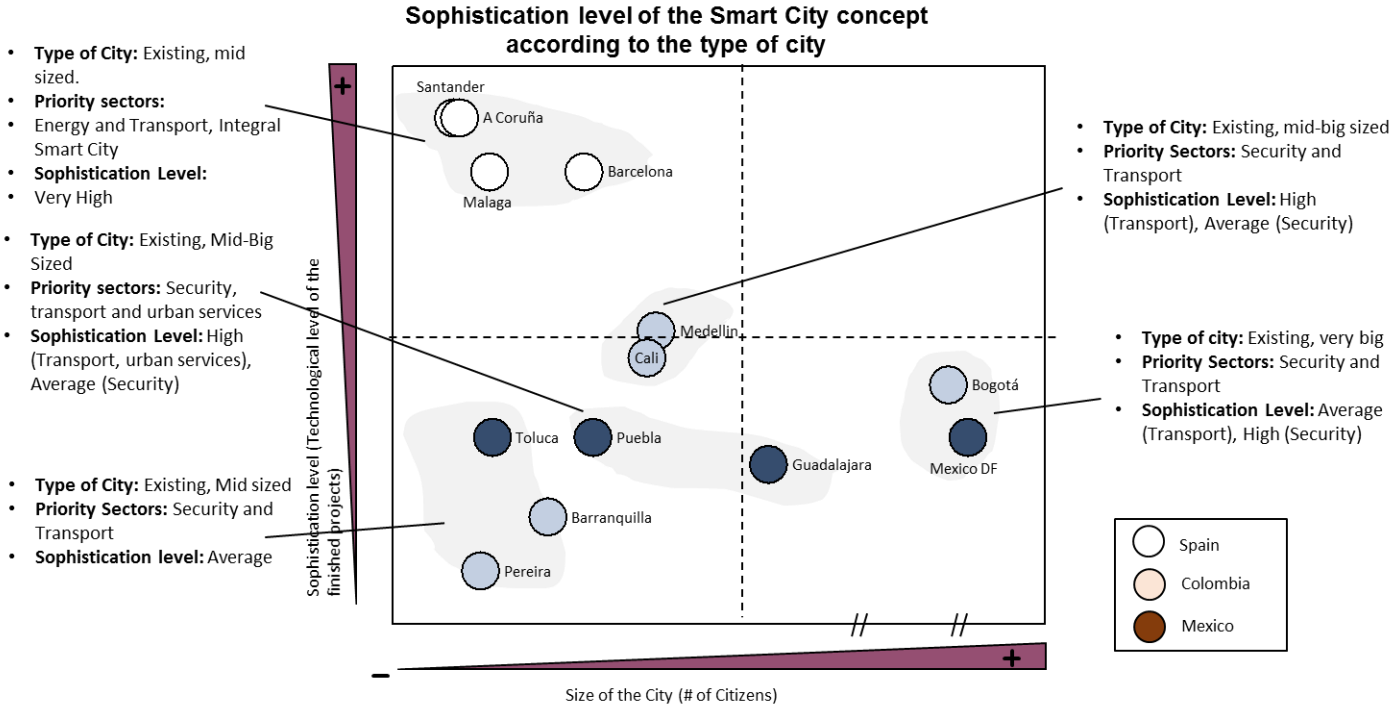
Cities show different typologies according to some parameters such as size, town planning development,… each city must design its own “Smart-Ness”.

MATURITY	Government	Buildings	Mobility	Energy and Environment	Services
LEVEL 3 Connected	• Inclusive government • Conditional adapted information • Skateholders-Centric Colaboration	• Zero Energy Building (ZEB) acquisition	• Private and public mobility with low emisions	• Intelligent Networks • Prosumers pervasive	• Predictive security • Integral Emergency service management
LEVEL 2 Integrated	• Participative government • Online value information sharing • Cooperation among public entities	• Increasing penetration of intelligent buildings.	• Traffic optimization platform	• Sensors / smart meters • Increasing use of renewable energy • Client management programs	• Monitoring and control systems • Rich E-Services platforms
LEVEL 1 Dispersed	• Transparent government • Availability of data online • Limited collaboration between public entities	• Energy class and construction standars compliancy	• Traffic congestion management • Initiatives to lower the emissions (carpooling, electric vehicle charging stations, bicycle sharing, etc.)	• Partial development of Smart Metering / Grid • Limited use of renewable energy • Action plan to lower emissions • Environment protection	• Partial citizenship security systems • Segregated web portals for eCommerce, eTourism, eEducation.

Source: IDC. Ranking Smart Cities

2. Smart City. Tech level

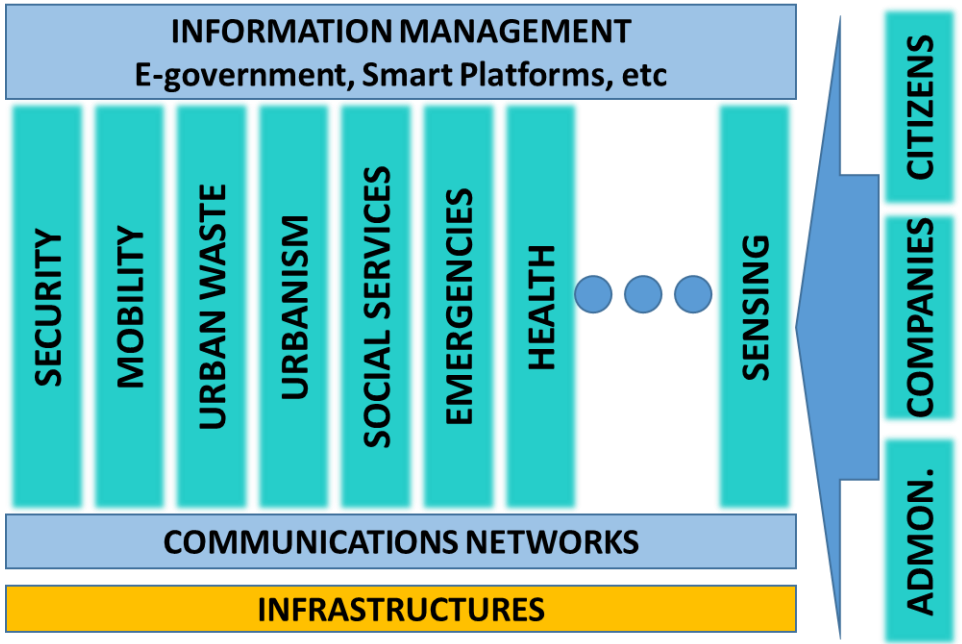
The tech level of the Smart operations in a city, must be associated to its current status and long-term strategy



Source: benchmarking performed by IDOM in Spain, México and Colombia

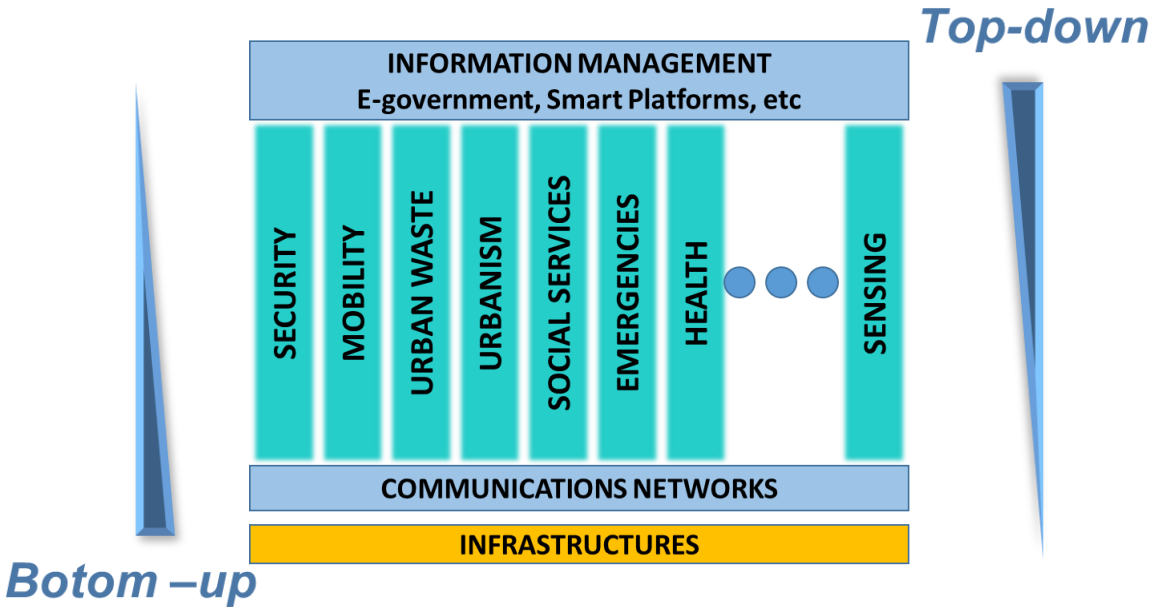
2. Smart City. Model

The implementation model of a Smart City comprises several **vertical services** which must be supported by the intensive use of Information and Communication Technologies, providing value to the **Administration**, the **Citizenship** and the **Companies**.



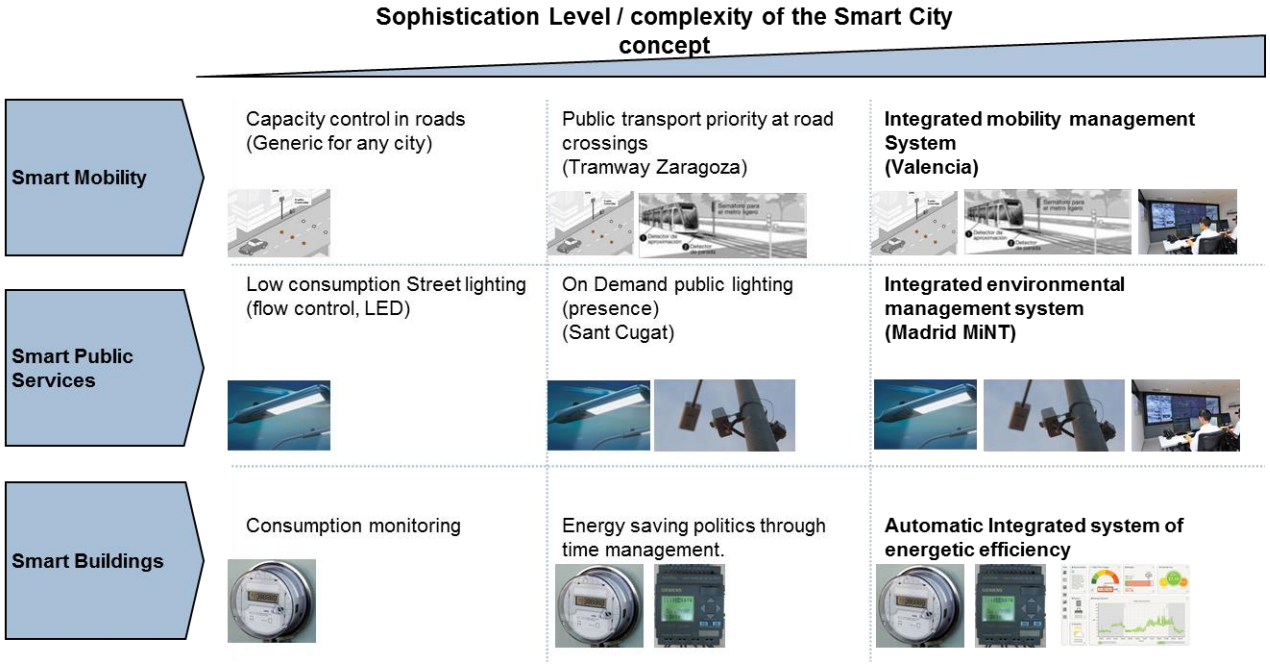
2. Smart City. Implementation

The different approaches to the model implementation can be tackled from the top-down where there is an investment in the information management, or from the bottom-up where the vertical services are developed with the use of the technology.



2. Smart City. Different solutions

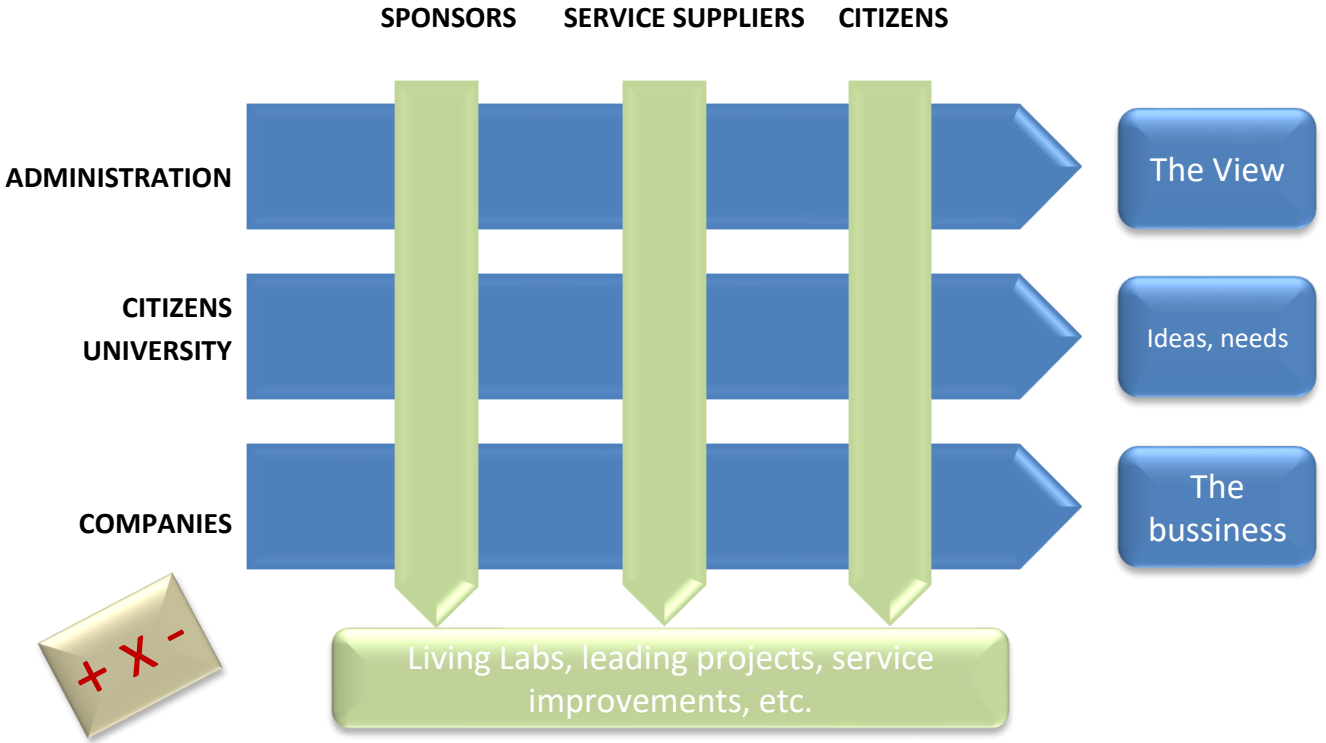
“Smart City” can be considered any project ranging from simple or partial components of a whole higher-level Project, to a holistic, more complex and sophisticated one…



Source: Sectorial Analysis performed by IDOM in Spain

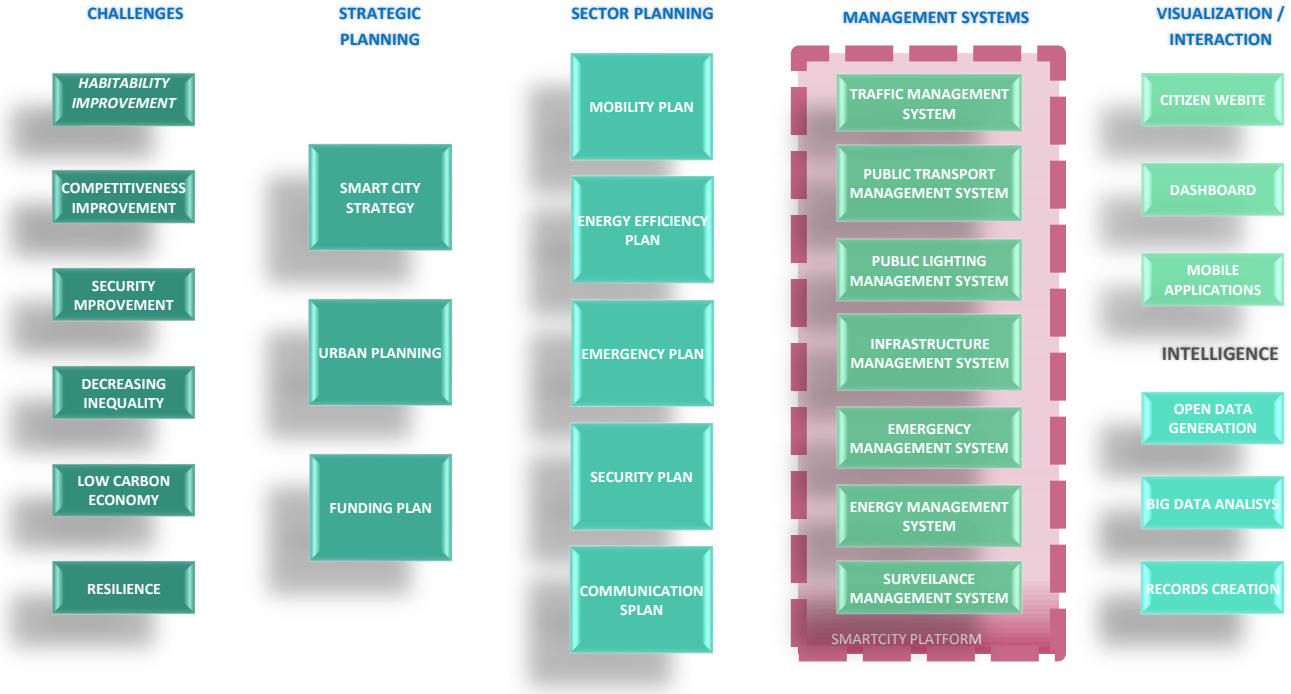
2. Smart City. Ecosystem

A Smart City Integral Project requires a certain Ecosystems which allows to search for and find coordinated impulses: Sponsors, city service suppliers, the citizen…

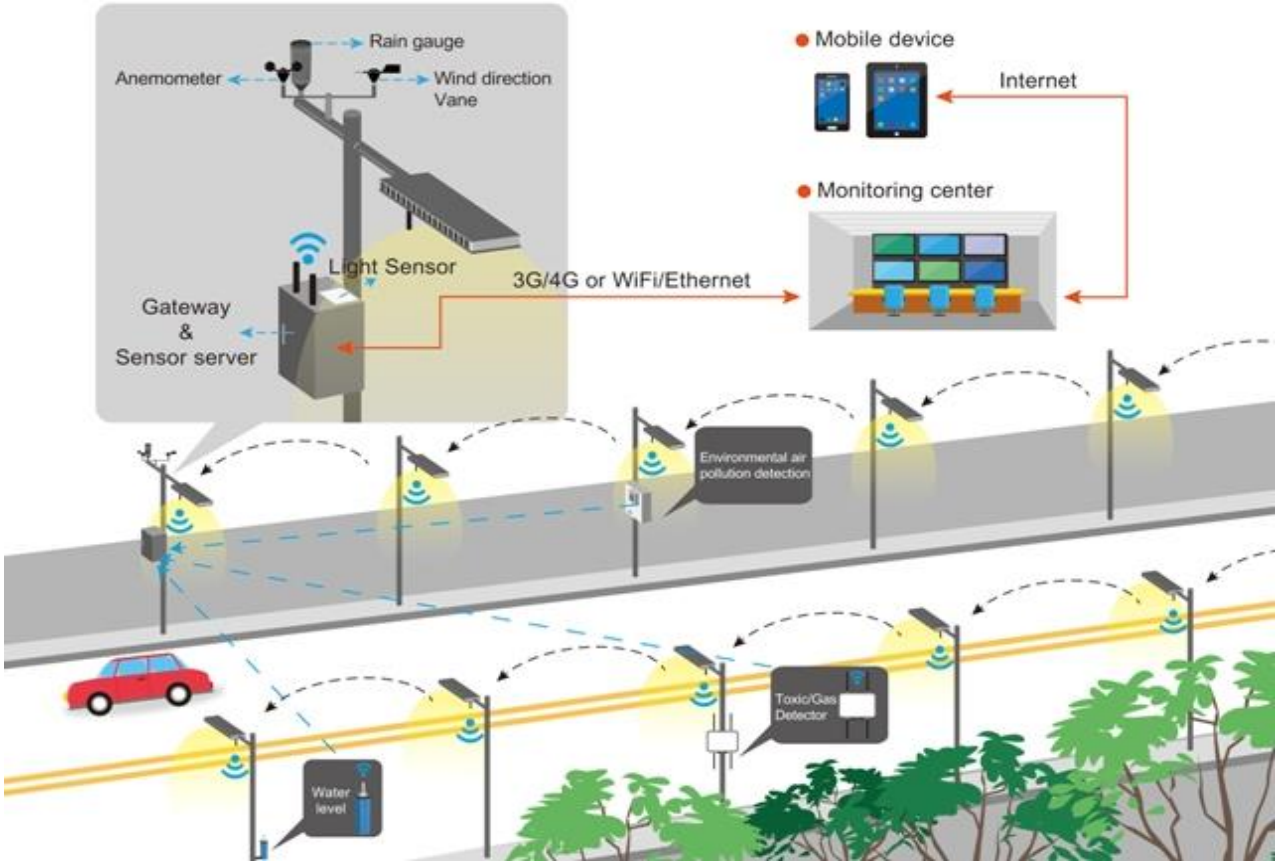


2. Smart City. Functional Scheme

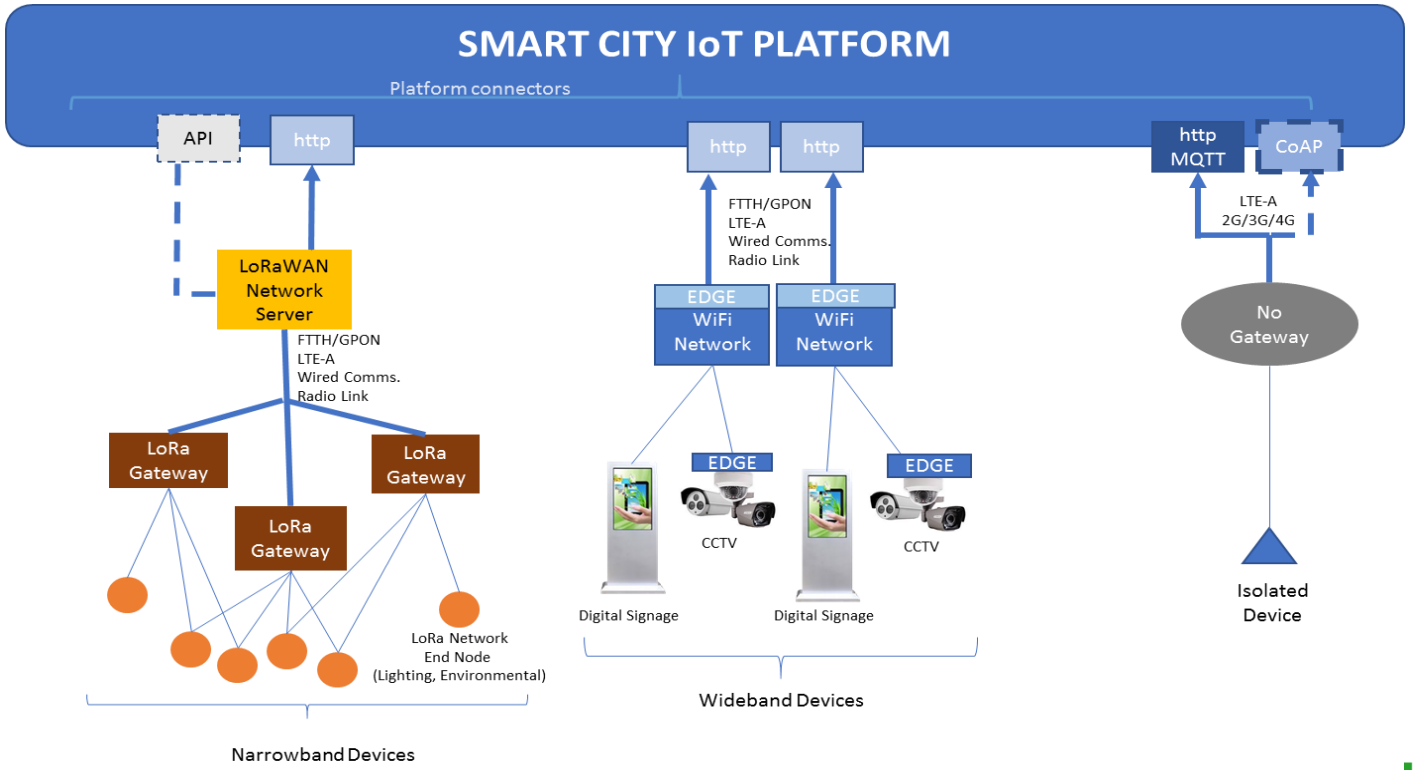
Integrated and global point of view of Smart Cities. From the planning stage up to the implementation.

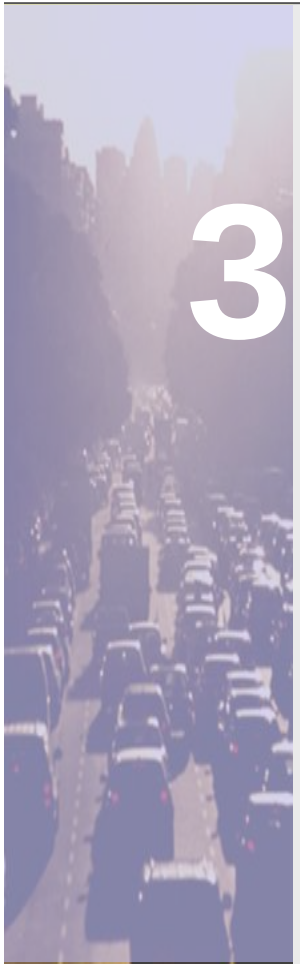


2. Smart City. Technology



2. Smart City. Platform Integration





3 Inclusion Challenges (and some mitigation strategies)

Smart Cities IDOM. Fernando Tomás

3. Inclusion challenges

- **Digital gap**
  - Availability of the connectivity
  - Capacity of the devices

3. Inclusion challenges

- **Capacitation gap**

3. Inclusion challenges

Thank you!

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UMEÅ KOMMUN

UMEÅ, Sweden

- towards a gender equal and smart sustainable city

UMEÅ KOMMUN

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Vision for Umeå

200,000 residents in 2050

Climate city contract 2030

Co-creating climate neutrality by and for the citizens

The gendered landscape

Challenging power

Open data

What data is relevant for what decisions?

UMEÅ KOMMUN

Travel habit survey

What if men travelled like women?

Consumer habit survey

Responsibility for unpaid housework

Solar panels

Who do we target?

Electric cars

Who is the user we visualize?

Autonomous vehicles

Who feels safe in a shared environment with nobody in charge?

Challenging power, identity and norms is just as important as introducing new technology to reach climate neutrality