



SMART CITY: AN INNOVATION ECOSYSTEM

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Smart city: The present



Smart traffic & parking

This block illustrates smart traffic and parking solutions. It features a 3D diagram of a street with sensors on the ground, a close-up photograph of a sensor installed in a manhole, and a photograph of a parking sign with a 'P' symbol and the text 'Zona C/ Gandara'.

Smart lighting & environment

This block illustrates smart lighting and environmental monitoring. It includes a photograph of a modern street lamp at night, a close-up of a smart lighting control unit with various sensors and wiring, and a photograph of a street with smart lighting fixtures.

Smart parks

This block illustrates smart parks. It features a diagram of a park area with trees and sensors, and a photograph of a smart sensor unit installed in a trench in a park setting.

Mobile env. monitoring

This block illustrates mobile environmental monitoring. It includes a diagram of a bus equipped with sensors, a map showing various monitoring locations across a city, and a photograph of a person installing a sensor on a ceiling.

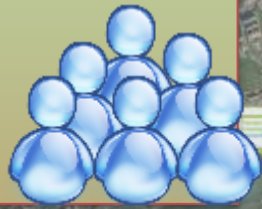
Smart buildings & energy

This block illustrates smart buildings and energy management. It features a diagram of smart buildings and energy systems, a floor plan of a building, and a photograph of smart sensors connected to a central unit.

Smart City: Paving the way for co-creating

Service Provision

- Mobility
- Environmental monitoring
- Park & gardens
- Participatory Sensing
- Augmented Reality
- Energy



Co-creating

- New urban services
- New applications
- ...relying on the citizen

Massive deployment of IoT devices

- Fixed nodes
- Mobile nodes
- Citizens as sensors
- Citizens Apps



Smart cities and tools for co-creating

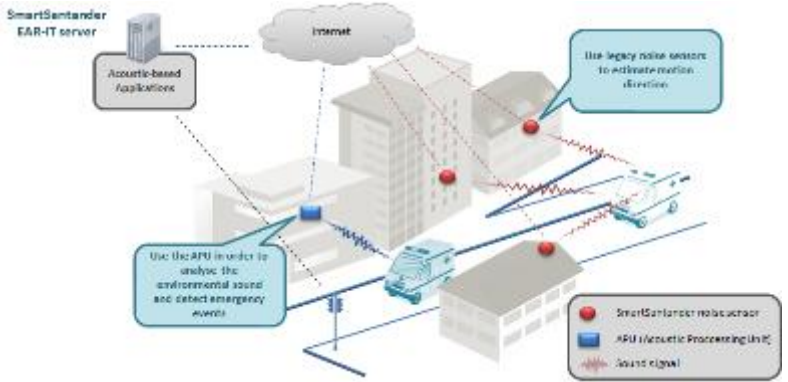
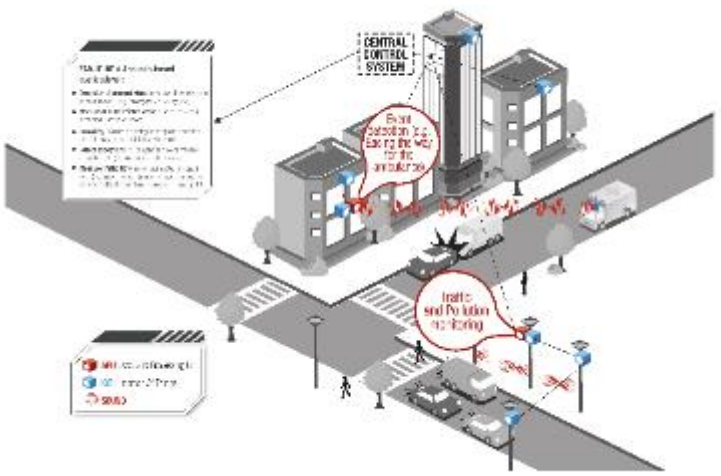
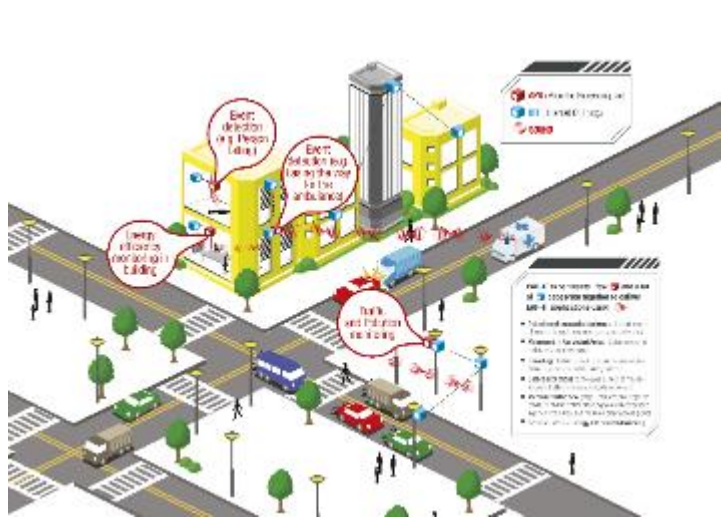
- Build an experimentation facility for the co-creation of urban services and knowledge from urban sensor data, IoT infrastructure and social data streams generated by citizens
 - The citizen is key and has to be engaged in a participatory approach to contribute to the co-creation of knowledge and services
 - The platform has to provide tools to empower citizen participation and ease the co-creation process
 - Bottom up from citizens not top down from city/tech firms!
- Federation of cities through such a common platform allowing the rapid adoption and propagation of developments tools. This will facilitate the replication of innovation communities.



Smart cities and tools for co-creating: Big data

- Big data will be one of the pillars for building **autonomic cities**.
- Big data alone is not enough. The engine which is able to learn and create knowledge is needed: The **city brain**
- The city brain requires a **holistic view**: Transversal cooperation among services versus the traditional silos perspective.
- The city of the future has to operate in a **predictive (proactive)** mode instead of reactive one.
- Big data might become one tool for enabling smart cities **to organically** grow. Hence, stimulating citizens to participate more actively in the design of the forthcoming services and technologies to be adopted by the cities.

Co-creating relying on the sounds in the city



EAR-IT Traffic Monitoring in SmartSantander

