Sustainable connected lighting to enhance safety and mobility

Smart solution 8

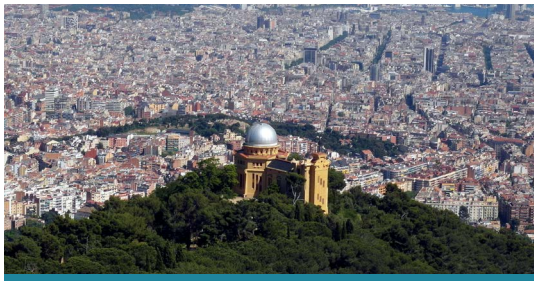
Big open data platform

Measured impacts

IMPROVES
interoperability between different management systems for municipal services

SECURES
API's to manage smart lighting infrastructure

ENHANCES
SmartLighting applications and services



Barcelona

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What is it?

Smart sustainable connected ligthing provides a smart solution to efficiently link the lighting management systems with other city services and infrastructures. This is done by developing an API (Application Programming Interface) for smart lighting systems implemented in the municipality to connect the lighting management system with other applications (e.g. traffic management, weather systems) and software platforms in order to exchange data between systems.

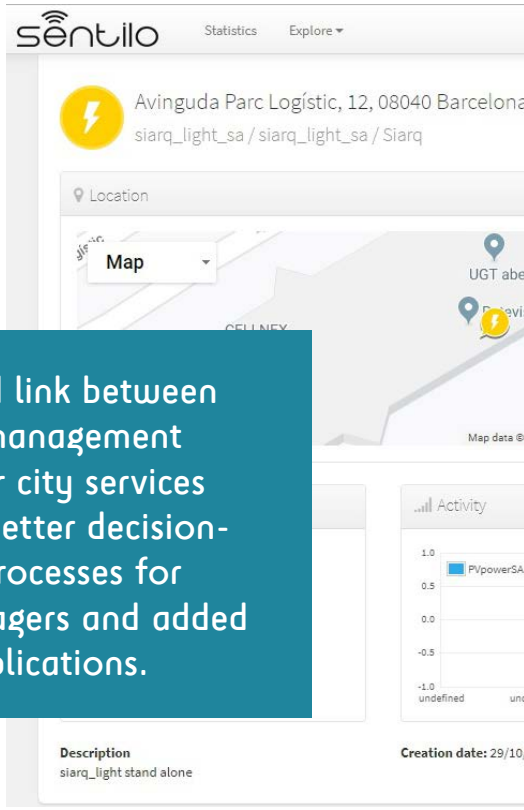
What did GrowSmarter do?

Typically, street lighting poles are managed by their own lighting management systems following a vertical/silo solution. This makes it difficult to get an integrated view and to create a common lighting management system for all. The Smart Lighting measure uses the two smart towers for lighting and wireless communications located on

Cellnex' premises as a part of their work in GrowSmarter.

A customized module developed by Cellnex Telecom, makes remote real-time management compatible with the Smart City platform Sentilo.

The lighting management systems will seamlessly connect to different software platforms available in cities using the API based on open standards. This means that lighting will be influenced not just by the decisions of the lighting system, but also by other systems managing other assets. Barcelona's showcase of what intelligent public lighting can do for cities when they become more interactive, can serve as a motivator for changing views on what intelligent public lighting can do for cities in terms of creating a base for novel services.



A secured link between lighting management and other city services enables better decision-making processes for city managers and added value applications.

Lessons learnt

The Smart Lighting API should be a requirement defined by a municipality's own street lighting service management. This avoids mistrust when external actors propose the deployment of horizontal solutions to get interoperable management of several systems, even when the solution is based on secured interfaces for systems interconnections. It is also recommended to implement city street lighting systems that allow remote management solutions through web services or APIs, in order to facilitate interoperability with other urban service management platforms.

Upscaling & replication potential

It is important to involve all stakeholders (the owners of the lampposts) early, but an up-scaling should be easily implemented if all parties agree to the implementation.

How did the measure work?

Technical feasibility

The Smart Lighting API offers interoperability to enable an integrated view of all lighting systems in the city.

Economic feasibility

The Smart Lighting API offers lighting management as a Service, enabling the creation of added value Smart Lighting Applications and Services.

Replication potential

Adaptations to each specific Lighting System should be developed to provide the Smart Lighting API.

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