

Success story



Ayuntamiento
Cartagena

www.cartagena.es

Smart lampposts in Cartagena to
measure air quality and noise

signify

eit Digital

Intro

In addition to having a rich past in historical and cultural heritage, Cartagena has focused on promoting the digitization of the city with a dozen European projects to shape its future. Among them is Intersight, a project in which Libelium is a technological partner.

Intersight combines Libelium and Signify technology to turn regular lampposts into smart nodes with connectivity, air quality and noise level monitoring.

This fulfils the local government's goals:

- To have KPIs of goals that were difficult to measure in the past, such as air and noise pollution.
- To promote intelligent decision-making based on transparent data.
- To promote citizen participation by empowering their decision-making.
- To reuse existing elements of the city for more efficient use, since the technology uses the same energy supplied to the lamppost.



The challenge

CARTAGENA WALKS TOWARDS THE SMART AND INNOVATIVE CITY

Cartagena was selected for the Challenge of the 100 Smart Cities by the European Commission, which aims to combat climate change by improving the quality of life of its citizens. In this context, one of the municipal strategic lines is to improve public lighting by optimizing energy efficiency, promoting habitability and connectivity of the city, as well as monitoring different data related to air quality and, then, reporting citizens about this data.



PROJECT DETAILS

Client

Cartagena City Townhall

Location

Cartagena, Spain

Sector

Smart City

The solution

AIR QUALITY AND NOISE MONITORING INTEGRATED INTO THE CITY LAMPPOST

Libelium's technology has been integrated into 20 Signify lampposts, creating a network of air pollution and noise sensors that maps the city's air quality and noise levels, detecting the most sensitive areas for citizens' well-being. The data is treated and integrated with Business Intelligence and Big Data systems to make it understandable and accessible to both citizens and decision-makers.



SOLUTION DETAILS

Vertical

Smart Cities

Solution

Libelium Smart Spot

Parameters

Noise level (dB) and
Air Quality

Connectivity

4G/5G

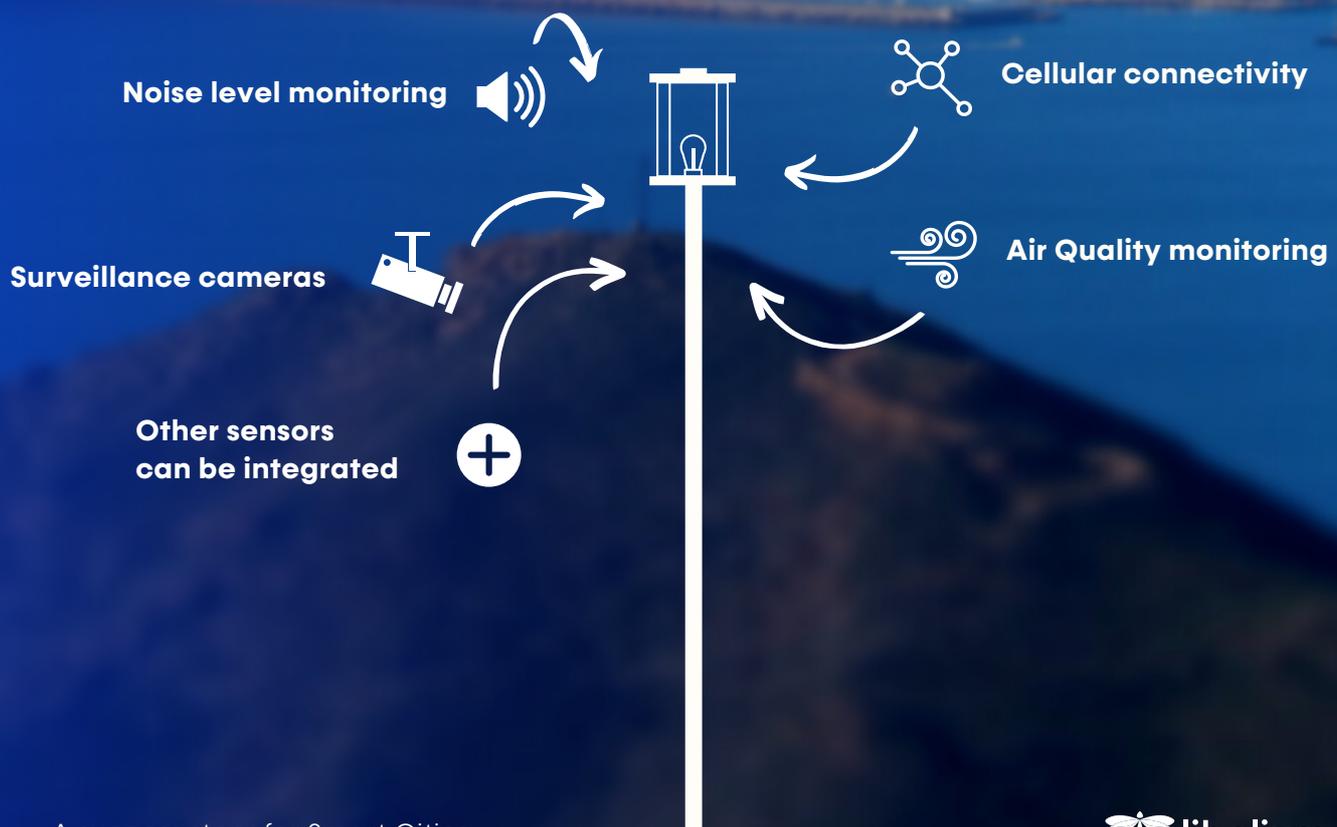
Behind the change

The local government of Cartagena aims to contribute to these objectives by making the city more habitable, functional, competitive, and modern.

These lampposts combine Libelium's intelligent solutions for measuring air quality and noise level with Signify's lampposts that turn light sources into data points to connect more devices, places, and people.

These "smart poles" are nodes for 5G/6G tech and IoT devices that turns Cartagena into a smart city.

Since other technology can be integrated in the lampposts, such as sensors or security cameras, the solutions is so modular, sustainable and scalable as the city-council wanted.



Beyond the challenge



The information provided by the solution allows the government to design and manage an innovative Low Emission Zone.

"We have led one of the first LEZ regulations that is not restrictive or prohibitive but facilitates sustainable mobility, and we have been able to do so because the data supports it," says Cristina Mora, Councilor for Sustainable Development and Environment of the Cartagena City Council.

With knowledge and innovation as fundamental pillars, this platform will allow Cartagena to leap into the future and lead the way towards a smarter and more connected city with its citizens.

As technological partner, Libelium goes beyond and provides a complete solution to the city at three levels:

Sensors

Capture of air quality and noise data.

Artificial Intelligence

Algorithmic modeling applied to air quality data with CHIMERE, using data from AEMET and the Surveillance Network.

Smart Cities platform

All the data and insight are transferred to the platform that brings together, in addition to the air quality and noise data, data from various data sources with which to continue enriching the algorithm.

|| We are aware that a sustainable city is a smart city, and that a smart city is a sustainable city. And to build it, it is essential to have the best technology. ||

Cristina Mora, Councilor for Sustainable Development and Environment of the Cartagena City Council.



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