



An European urban transition project towards more sustainable cities through innovative solutions, in the fields of mobility, energy and digital.

Smart City

Global project

Coordination: Cartif
European grant: 18 M€
30 partners, 6 countries
Period: Dec.2016 - Nov.2021
Demonstrators: Nantes, Hamburg, Helsinki

@mysmartlife_EU
<https://mysmartlife.eu/>

Nantes demonstrator site

Coordination: Nantes Métropole
European grant: 4,5 M€
10 partners

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Energy



Action leaders
ENGIE, Nantes Métropole

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ACTION OVERVIEW



Smart Lighting Concept

This action was implemented by ENGIE, in collaboration with Nantes Métropole. A full report (D2.15), written in English in November 2018, is available at <https://mysmartlife.eu/publications-media/public-deliverables/>.

► OBJECTIVES

- › To adapt the lighting system to the urban transformation of the neighbourhood
- › To reduce the energy consumption
- › To increase comfort and safety for residents
- › To remotely control the lighting to adapt to temporary needs

► IMPLEMENTATION



CHALLENGES

Nantes Métropole has an assets of nearly 95,000 lighting points representing an annual bill of €5.5M and an electricity consumption of 37GWh. Reducing public lighting consumption by a third by 2020 is one of the commitments of its roadmap for energy transition.

Moreover, adapting street lighting to urban changes has become a challenge, and technological developments are now making it possible to develop new services that need to be tested before wider deployment.

SOLUTION

The system installed on the western tip of the Ile de Nantes is based on the deployment of communicating sensors and a supervision platform.

It includes 65 lights equipped with communicating nodes for public lighting control, nine of them with presence detection, and meets different needs:

- **Remote management of the lights** allowing to obtain information related to each luminous equipment and to control them remotely

- **Presence detection** with the possibility of regulating the intensity of the lighting to limit both light and sound pollution by encouraging the users of the area to use the light path.
- **Guiding the inhabitants** thanks to a luminous path established between the festive sites (gobo* projectors indicating the path with arrows on the ground), the lighting of the pedestrian footbridge or the lighting of the pedestrian zone of the inter-dock

MONITORING

The controllers installed on the lights send the data to a gateway via a LoRa network. The gateway transmits the data to a network server using IP communication or a mobile data network (SIM). Then, the data is accessible from the Flashnet's intelliLIGHT Streetlights control web supervision platform and is uploaded into the data platform developed by Engie and Nantes Métropole.

The main key performance indicators are the following: the total energy consumption of the lights and the avoided greenhouse gas emissions. These indicators will be aggregated with those of all the actions of the Nantes-based mySMARTLife demonstrator in order to give a consolidated result of the overall impact of the project.

► BENEFITS

Users and inhabitants

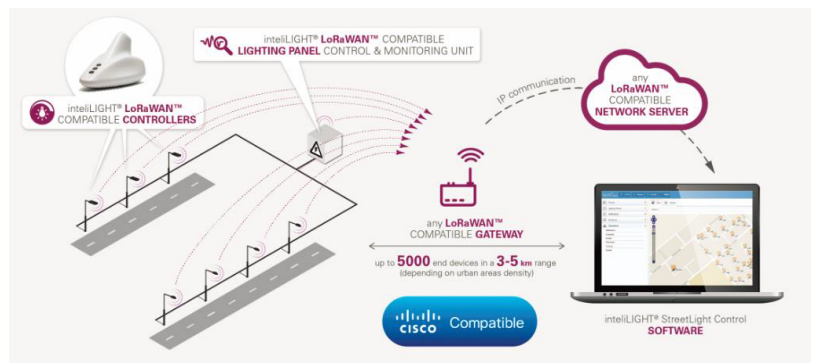
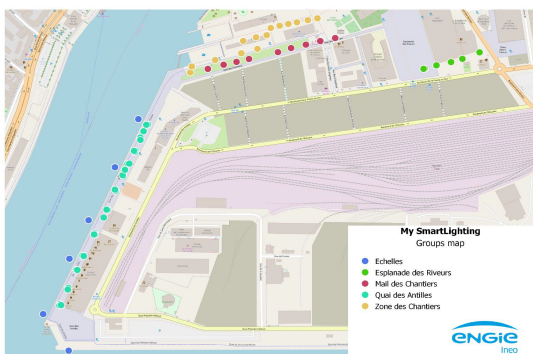
- › For technical services: remote switching on/off and dimming of lighting, network knowledge and optimization, preventive and curative maintenance planning, predictive maintenance
- › For users, more pleasant travel and the reduction of light and noise pollution
- › Faster maintenance interventions and the possibility of adapting lighting to site events.

Economic

- › An objective of 120 00 € of total savings (energy and maintenance) after 15 years.

Environmental

- › Increase in the number of high energy performance renovations in the territory
- › Lower energy consumptions on Nantes Metropole area
- › A 78% energy and CO2 savings target



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