



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**

Coordinator:  
benoit.cuvelier@nantesmetropole.fr

[metropole.nantes.fr/mysmartlife](http://metropole.nantes.fr/mysmartlife)

## Mobility



Action leader  
**Nantes Métropole**

Contact  
**Cedric.mahe@nantesmetropole.fr**

## ACTION OVERVIEW



### Smart charging stations for electric vehicles and e-bikes

This action was implemented by Nantes Métropole in collaboration with Effia . A full report (D 2.13), written in English in November 2019, is available on <https://mysmartlife.eu/publications-media/public-deliverables/>

#### ► OBJECTIVES

- › to develop alternatives to the use of combustion vehicles
- › to set up electricity recharging infrastructures for electric vehicles in car parks
- › to deploy recharging points for e-bikes

#### ► IMPLEMENTATION



#### CHALLENGE / CONTEXT

The development of electric mobility is one of the 33 commitments of the energy transition roadmap adopted in 2018. In order to accompany the change to electric vehicles and e-bikes, Nantes Métropole is committed to deploy charging stations on its territory that allow the recharging of these modes of travel.

#### SOLUTIONS

65 connected charging stations for electric vehicles have been set up in the fifteen car parks buildings in the city center of Nantes in 2019.

At term, each car park will be equipped with a minimum of 2% of parking spaces equipped with charging stations with electric vehicles (EVs), i.e. 185 spaces in the car parks buildings.

Each car park will be equipped with 7kVa and 22kVa charging stations, i.e. a total of 161 slow and 24 accelerated stations in the car parks of the city center and the railway station.

For e-bikes, all car parks are equipped with bike charging plugs. Nantes Métropole has also deployed 72 charging plugs in the bicloo lockers. In 2019, 225 plugs were installed around the perimeter of the Metropole.

## MONITORING

The charging stations for electric vehicles are operated by car park managers. The charge data is fed back to a monitoring platform via the open OCPI protocol and then via an API, transferred automatically and anonymously for user data to Nantes Métropole urban data platform (see dedicated action sheet).

The main key performance indicators (KPIs) are: annual energy delivered per charge point, annual number of charges per charge point, charge time per charge operation.

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 residents

- › Development of the use of carbon-free transport (electric vehicles and e-bikes).
- › Support to behaviour change and allow city center residents to reload their vehicles without heavy infrastructure costs in their condominiums.
- › Secured recharging of e-bikes

### Economic

- › Free recharging of electric vehicles in car parks

### Environmental

- › Fight against urban pollution by reducing CO2 and fine particulate emissions emitted locally



Figure 31: Individual boxes with electric socket inside

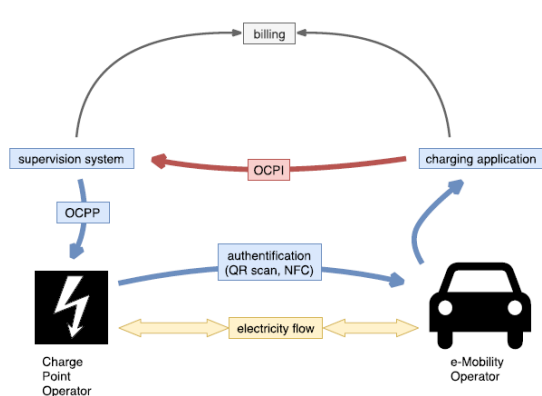


Figure 25: OCPI in the EV charging ecosystem



This project has received funding from the European Union's Horizon 2020 research and innovation programme under agreement n°731297.



2 cours du Champ-de-Mars  
Nantes 44 923 CEDEX 09  
Tél. : 02 40 99 48 48

metropole.nantes.fr