



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

## Digital



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## ACTION OVERVIEW



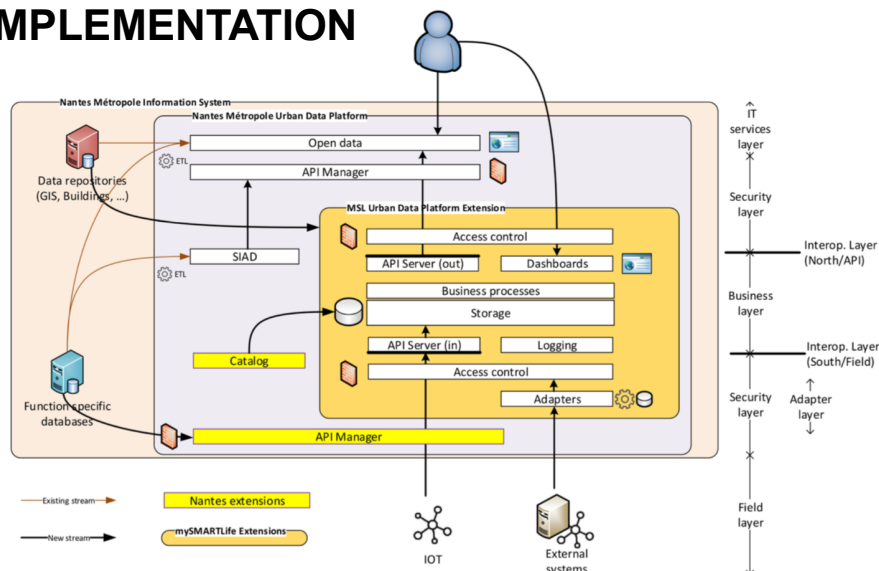
### Urban Data Platform

This action was implemented by Engie and Nantes Metropole. A full deliverable presents the achievements of this action (D2.8), and is available on: <https://mysmartlife.eu/publications-media/public-deliverables/>.

#### OBJECTIVES

- › To integrate data flows within and between different city systems
- › To promote a standard, open, and interoperable data model and API.
- › To monitor the project
- › To develop new use cases for data

#### IMPLEMENTATION



#### CHALLENGE / CONTEXT

In Smart City projects such as mySMARTLife, data is central. With the development of measurement and collection infrastructures, typically the Internet of Things (IoT), being able to integrate these city data in a transversal, standardised, interoperable and open way is a major challenge.

It is with this ambition, at the crossroads of mySMARTLife's actions, that Nantes Metropole and Engie have collaborated to design and develop an extension to Nantes Metropole's Urban Data Platform. This extension corresponds to the need to access the measurement data of this European project, notably to ensure the monitoring & evaluation of the project, but also to valorise these data by experimenting new use cases.

#### SOLUTIONS

The extension is developed on the basis of a common architectural framework, co-constructed and defined by each of the three lighthouse cities (Nantes, Hamburg, Helsinki). This framework of open specifications enables the three cities to share their information and developments through interoperability at three levels.

Three-level interoperability can be broken down into : (1) integrating all types of input data into the SensorThings API data model, (2) exposing output data through this same SensorThings API, (3) and finally, reusing, replicating, a service at specifications level from one Urban Data Platform to another. Within the framework of mySMARTLife, developments have integrated data from different project sources such as :

- › public equipment load curves, from the energy data lab developed by Enedis (see dedicated action overview)
- › data from electric vehicle recharging sessions from public car parks in Nantes Metropole
- › project evaluation indicators, collected and measured for each mySMARTLife action, in order to give an overall view of the project's impacts.

Finally, thanks to the available data, several services have been experimented within Nantes Metropole and with regional partners, for example: an algorithm for optimising electricity contracts; a tool for diagnosing the most important opportunities for energy reduction in public buildings; a tool for detecting typical consumption profiles of buildings (see the action overviews on use cases).

## MONITORING

The Urban Data Platform of Nantes Metropole plays several roles in monitoring:

- › The monitoring of its own indicators: average response time, number of sensors recorded, number of data accesses, etc., in order to assess the performance and relevance of the developments.
- › The test of interoperability between the PUDs of the 3 lighthouse cities, i.e. the capacity to replicate services between platforms, which will be the subject of a specific evaluation procedure (see deliverable summary of D2.17).
- › The aggregation and monitoring of the performance indicators (KPI) of all the actions of the project, over 2 years, until November 2021 to feed a comprehensive evaluation of the project.

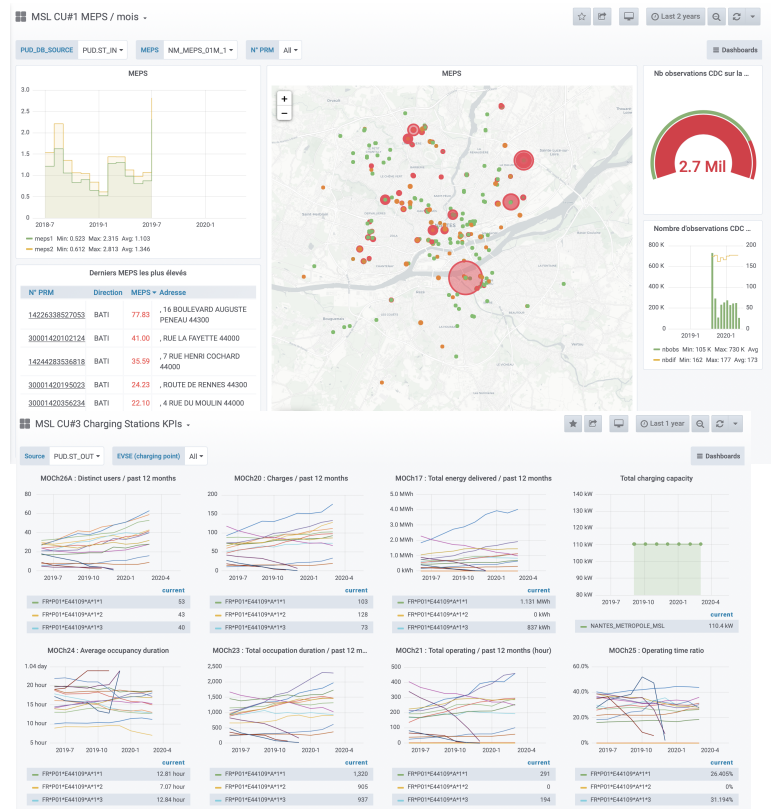
## ► BENEFITS

### Nantes Metropole

- › Support for the implementation of public policies, in particular thanks to the city's data interconnection and availability capacities.
- › An additional resource in the Information System, in line with today's data challenges and themetropolitan data strategy.
- › Potentially, contribution to improving and/or developing new services with data/

### Users and citizens

- › Better handling of the city's spatio-temporal data.
- › Contribution to the development of a project dashboard of the evaluation KPIs, which will be published in open data.



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