my SMART Life

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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ACTION OVERVIEW

Nantes Métropole

Energy Datalab

This action was implemented by Enedis and Nantes Metropole, with the contribution of Atlanpole. A full report on this action (D2.11) is available on https://mysmartlife.eu/publications-media/public-deliverables/.

► OBJECTIVES

› To foster innovation in digital energy services and to develop new usages of data for energy

› To contribute to Nantes Metropole's energy master plan, the design and the evaluation of public energy policies thanks to the data

► IMPLEMENTATION
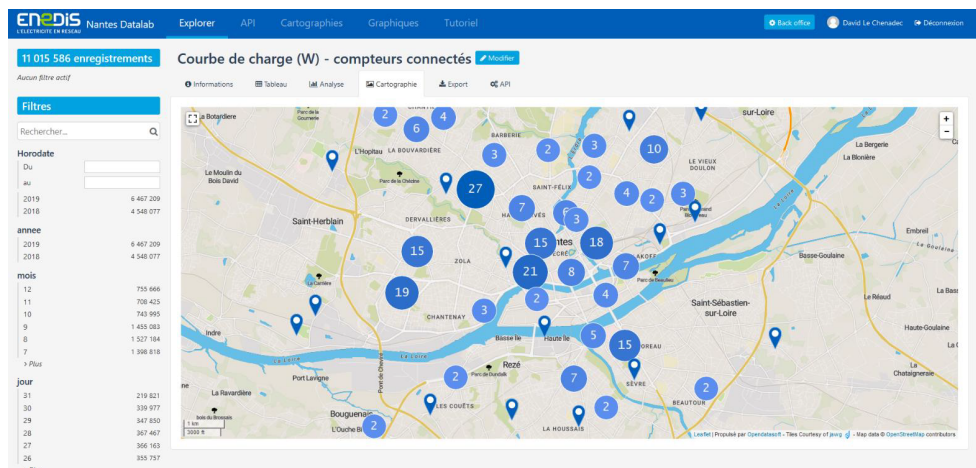
CHALLENGE / CONTEXT

The development of smart energy meters opens the way to new forms of energy management. Load curves, which provide the energy consumed every 10 or 30 minutes, make it possible to know more precisely the consumption profiles of equipment. Nantes Metropole, with Enedis, by making information from its public buildings (offices, technical workshops, conservatory, etc.) and public lighting available, opens up opportunities to experiment with new energy services based on the data.

SOLUTIONS

The electricity data from 300 connected meters is provided through an OpenDataSoft portal by Enedis. The meters measure the electrical energy used by public lighting, for 70 of them, and public buildings, for the 230 others. This portal enables Nantes Metropole to take advantage of the data internally, through the Urban Data Platform for instance; externally, this allows the development of new services in collaboration with regional companies thanks to the joint animation of the innovation ecosystem with Atlanpole and Enedis. Some fifteen use cases were identified.

MONITORING

The success and relevance of the Datalab Energy are monitored and evaluated on several themes:

› Monitoring of public equipment: the Energy Datalab provides a more precise knowledge of the consumption profiles of public equipment.

› Evaluation of experiments: the experiments are monitored with defined success objectives, the interest must be demonstrated.

› Evaluation of the platform: number of data, user access, security level, ...
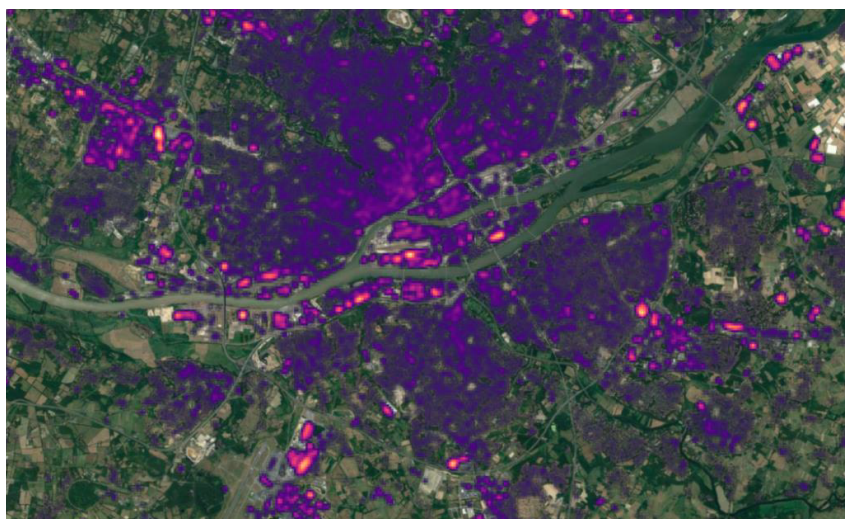
► BENEFITS

The joint animation of the local innovation ecosystem, in the sectors of digital and energy, coupled with a search for opportunities within Nantes Metropole, has fostered the emergence of several experimentations:

Internally

› Detection of public lighting breakdowns: the Datalab Energie enables Nantes Metropole to receive notification of breakdowns the very next day thanks to load curves, which make it possible to detect changes in the regular consumption profiles of public lighting.

› Optimisation of electricity contracts: the load curves make it possible to assess more closely the adequacy of electricity contracts with the actual consumption of public facilities.

› Contribution to public energy policies: the data contribute to the definition and implementation of public policies, such as the deployment of solar power plants in public buildings.

Externally

› InteractiveDataLight, an urban experiment in connected public lighting, based on presence detection and lighting dimming, this project used data from the Energy Datalab to measure energy savings.

› Experimentation of learning algorithms to establish daily profiles of the electrical consumption of public buildings: this mass processing makes it possible to obtain a quick view of the profiles on a large panel of buildings.

› Detection and analysis of irregularities in the consumption heels of public buildings: the prototyped tool allows the categorisation and prioritisation of energy saving sources.

ATLANPOLE
Land of innovation

Cerema

ENEDIS
L'ÉLECTRICITÉ EN RÉSEAU

ENGIE

IMT Atlantique
Bretagne-Pays de la Loire
École Mines-Télécom

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NANTES
MÉTROPOLE
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semitan

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