



# Démonstrateurs industriels pour la ville durable

*Des solutions pour l'avenir des villes !*

Innovations for sustainable cities

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MINISTÈRE  
DE LA TRANSITION  
ÉCOLOGIQUE  
ET SOLIDAIRE

MINISTÈRE  
DE LA COHÉSION  
DES TERRITOIRES



# \_ APPROACH

Challenge : stimulate innovation to contribute to the ecological transition, while allowing the economic development and the attractiveness

- A **call for projects** from the State, targeting urban projects:
  - Integrators of urban functions for greater environmental, economic and social performance
  - Working on traditional models of city design, construction and management
  - Improving the quality of services provided to users and meeting new expectations
  - Constituting references to the international
- An approach addressed to **business groups** in **partnership with local authorities**

# \_ APPROACH

21

**Industrial demonstrators (16 en 2015)**

166

**Members** - including 118 companies and 13 associations

## \_ Individual support

Lift the locks to the realizations

A national and local referent for each project

## \_ Collectiv support

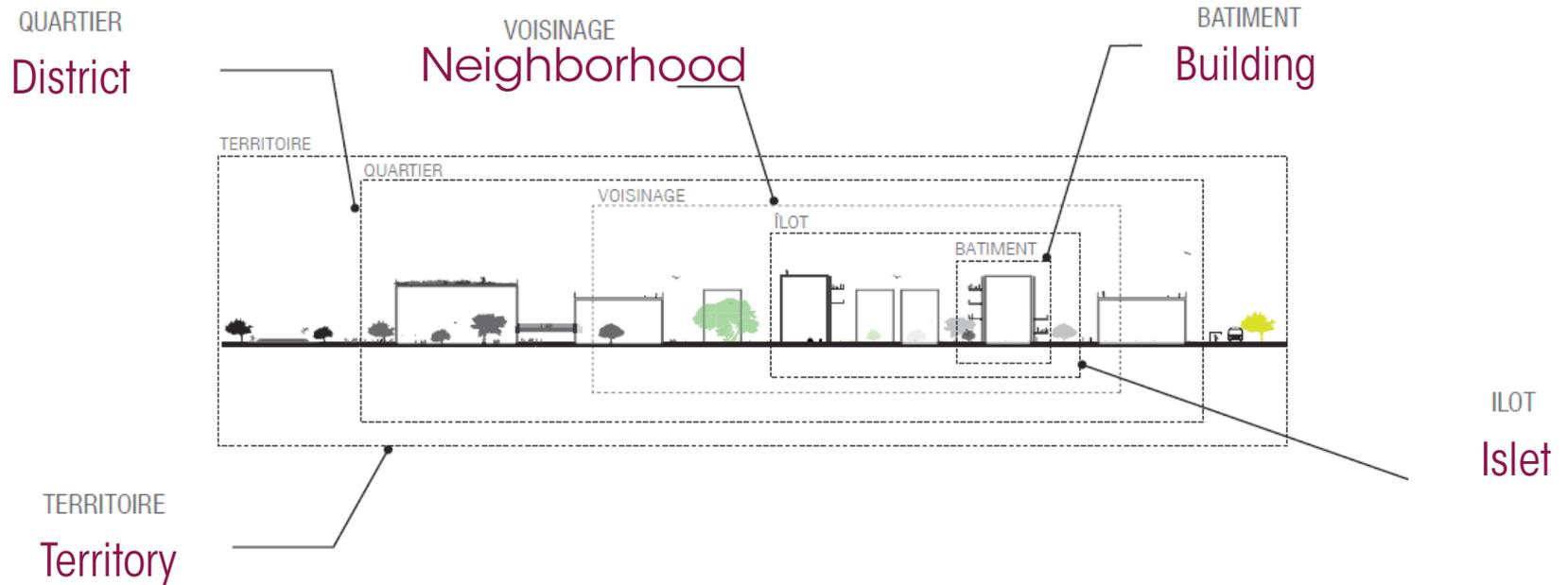
Work together on locks  
Share solutions

## \_ Mobilize services on state

To find and support solutions

€3 millions for engineering assistance

# \_ DIVERSITY OF SCALES



**stocktaking of projects :**  
Several scales are involved

- > From building to territory
- > Interlocking

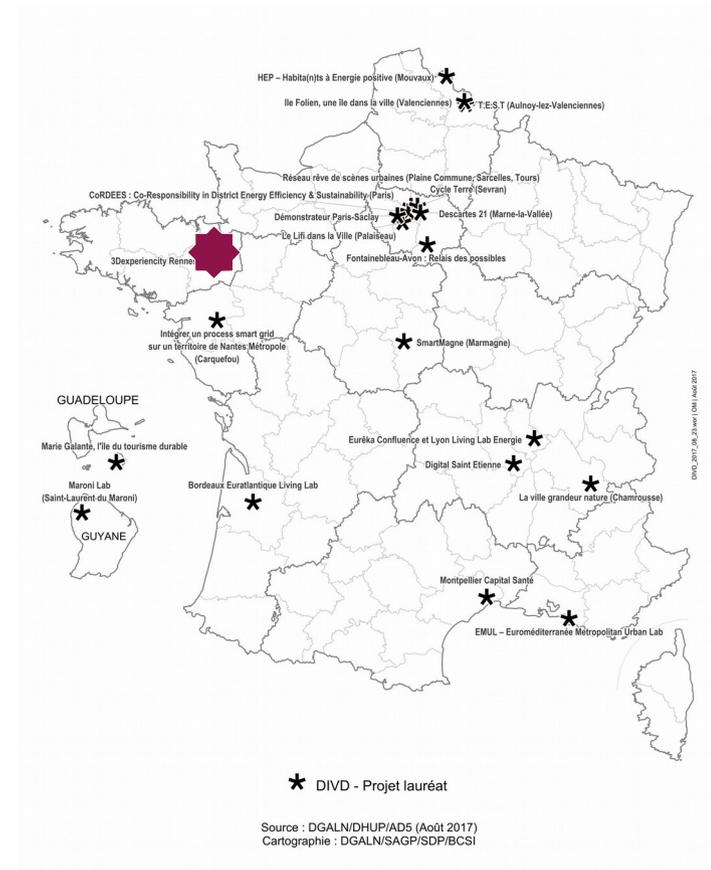
# \_ 3D Experiencity Rennes

## « Pôle Images & Réseaux »

3D systematic territory model

-  
collaborative platform

-  
Urban design



# \_ 3D Experiencity Rennes

« Pôle Images & Réseaux »

// Create a city's "digital twin" for citizens, urban managers and public policy makers

Pool the data



**Digital platform :**  
Development of new uses(practices) of the city  
(innovations by companies)



The companies are accompanied by the **Competitiveness Cluster « Image & Réseaux »** for metropolis



Crédits : Rennes Métropole et Dassault Système



## Services

- For citizens
- urban managers
- elected officials

# \_ Cycle Terre Grand Paris

## Industrialize a new building process

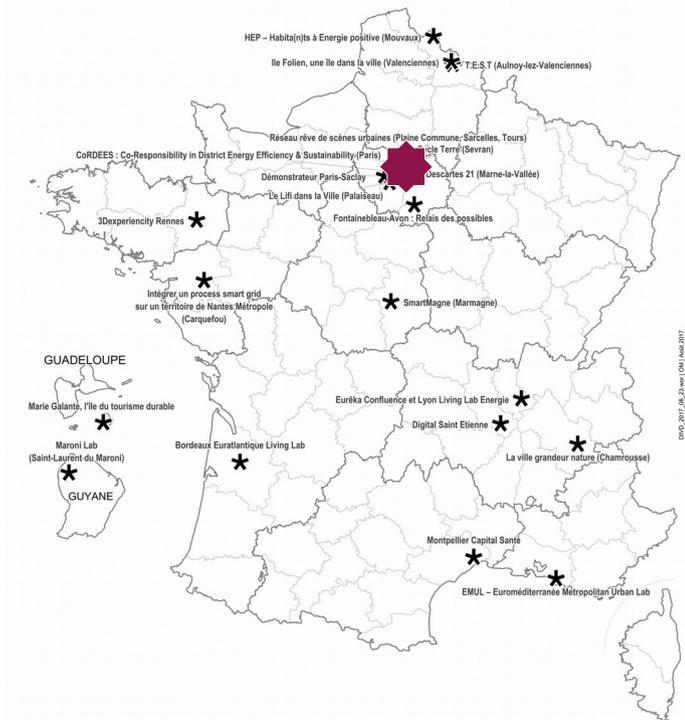
### Circular economy

-

### Material transformation

-

### Sector development



\* DIVD - Projet lauréat

Source : DGALN/DHUP/AD5 (Août 2017)  
Cartographie : DGALN/SAGP/SDP/BCSI



N°



# \_ Cycle Terre Grand Paris

## Industrialize a new building process

// From excavation to building material : Reinvent the urban metabolism



- **PROJECT** -  
Experimentation:  
Processing unit  
(mobile plant)

Innovation:  
Propose an  
industrial solution

> **Complete  
production line**

**Stakes ?** Reduce the **impact of urban planning** on the environment

**How?** Use the **excavated soil** of « Grand Paris Express » to **produce construction materials**

Construction of 2 stations = 116 000m<sup>3</sup> of excavated soil  
Serving a vast development project : 3000 housing units, 100,000 m<sup>2</sup> of activities

# \_ Lyon Living Lab

## Energy territorial operator

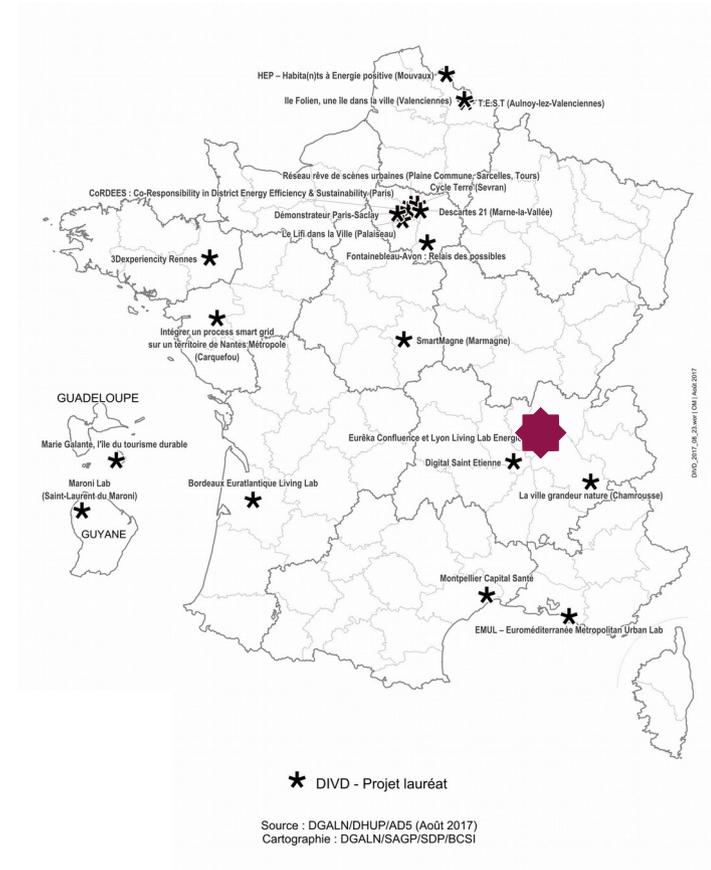
Multi-energy data

-

Energy optimization

-

Metropolitan scale



**GRAND LYON**  
la métropole



**ALSTOM**

# \_ Lyon Living Lab

## Energy territorial operator

// Create a neutral territorial operator for multi-energy data and energy optimization



**How ?** Fostering **energy centralization** :  
Create **operational tools** for the deployment of technologies

### Innovations:

- > Facilitate the evolution of networks
- > Rethinking governance
- > Optimize services (flexibility, prices)
- > Plan to reduce investments and optimize financial assets

# \_ LiFi (Light Fidelity) Palaiseau

## 3rd generation communication network

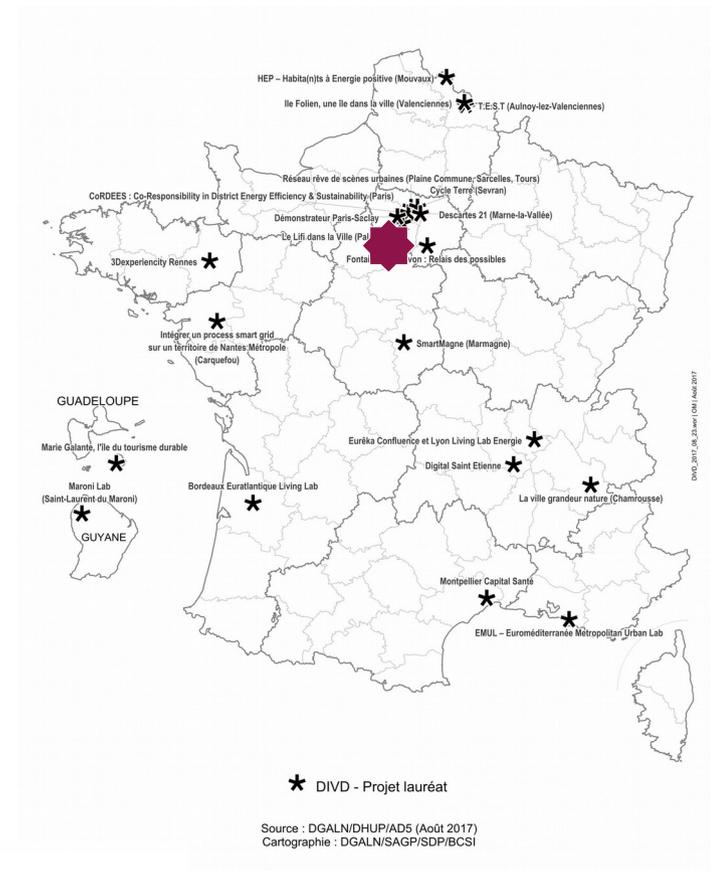
### LiFi technology

-

### Public health

-

### New digital service



# \_ LiFi (Light Fidelity) Palaiseau

## 3rd generation communication network

// Smart public lighting for new urban services



**Why ?** Create new services from a technological innovation (local news, pedestrian route...)

### Innovations:

- No harmful electromagnetic pulse (as WiFi)
- Secure information

### - PROJECT -

Experimentation on a housing area

- Deploy a new communications network based on LiFi technology

> Exchange data by light signal (LED lighting)



# \_ Eurêka Confluence Lyon

# \_ Digital Saint-Etienne

## Become a global operator for urban services

performance guaranteee

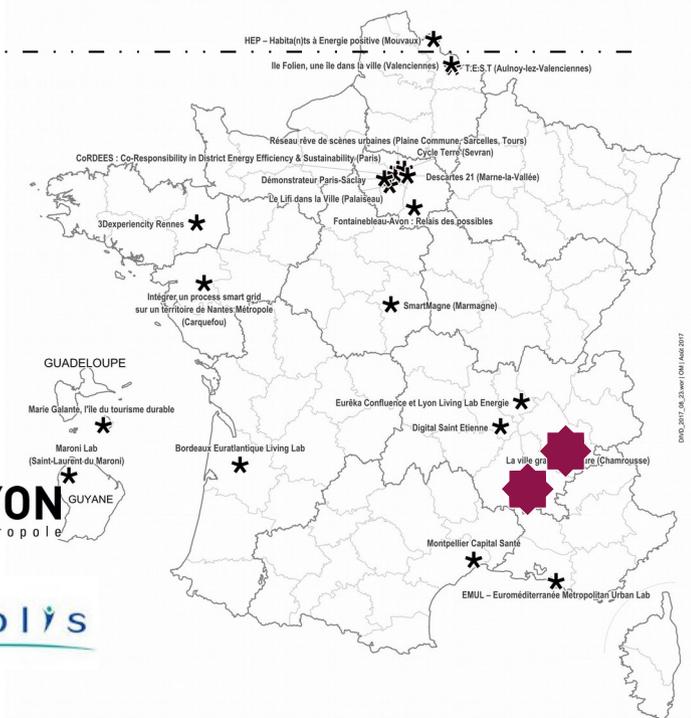
New urban services

Digital platform and data

## Eurêka Confluence



## Digital Saint-Étienne



★ DIVD - Projet lauréat

Source : DGALN/DHUP/AD5 (Août 2017)  
Cartographie : DGALN/SAGP/SDP/BCSI



Des solutions pour l'avenir des villes !

# \_ Eurêka Confluence Lyon

# \_ Digital Saint-Etienne

Become a global operator for urban services

// Ensure efficient, innovative and sustainable urban services

## Eurêka Confluence

- > **Energy blockchain** : Make self-consumption readable (sensors and actuators)
- > **Mobility** : carpooling lines, free-floating
- > **health** : Development of a health center, actimetry
  - keeps seniors at home
- > **Proximity** : Neighborhood social network, shared spaces, co-working

Experimentation in Lyon Confluence : **REPLICATE** on 3 islets ?



## Digital Saint-Étienne

Create an **open and scalable digital platform** for the collect, analysis, storage and provision of **urban data** (mobility, quality of life, urban services, infrastructures, etc.)

### DECISION MAKING TOOL

- Determine the priority projects,
- improve the management of infrastructures,
- consultation instruments etc.

