

Smart Grid for Smart City

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THINK SMARTGRIDS BRINGS TOGETHER A FULL ECOSYSTEM AND DEVELOPS INTERNATIONAL COLLABORATIONS







Schools, Research centers and Labs:
Centrale Supélec, Ecole des Ponts ParisTech,
Ecole Polytechnique, L2EP Lille, LNE, SEE,
SNCF Cluster, Université de Montpellier,
LNE...

Associations: Promotelec, UFE, Gimelec,
OFATE, Smile...

The challenges of the smart city



- « The smart city is a human smart city » Carlos Moreno
- The goal of the smart city is to provide a desirable living environment to its inhabitants, emphasizing the need for sustainability which is attained by putting energy at the core of its development.
- Yet, due to a silo organization of cities services, energy projects cannot be managed efficiently.
- lack of innovative business model inclusive of all actors partaking in the transformation.

Smart Cities' services framework highlight the importance of Energy Transition for a given territory

Governance and innovation strategy

Civic Tech / inhabitants involvement (participative budget, popular consultation, crowdsourcing, crowdfunding, call for projects)

Innovation ecosystem

eAdministration (citizen relations management, reporting, online procedures)

Mobility

New services

Soft & shared mobility On-demand transportation Digital services

Autonomous and connected vehicles

Electromobility and new fuels

Urban logistic

Flow management

Smart Parking

Energy

Renewables energy

Energetics grids

Storage

Electric meters and services

Smart public lighting

Auto-consumption

Heat recovery unit

Environment

PollutionAir quality

Noise

Nature in the city Vegetalisation

Fresh areas
Biodiversity

Natural and industrial risks management

Waste production

Water and sanitation

Building / Housing

Energy performance

Smart building

Building Information Modeling (BIM)

Phycoremediation

Hybridization, modularity and building reversibility

Inhabitants services
Concierge services

Urbanism

Conception and city pilotage

Publics spaces management and landuse planning

People and goods safety

Economy, Social & Well-being

Third places Coworking

Circular economy

Silver Economy

Tourism & culture

Urban agriculture

Digital infrastructures

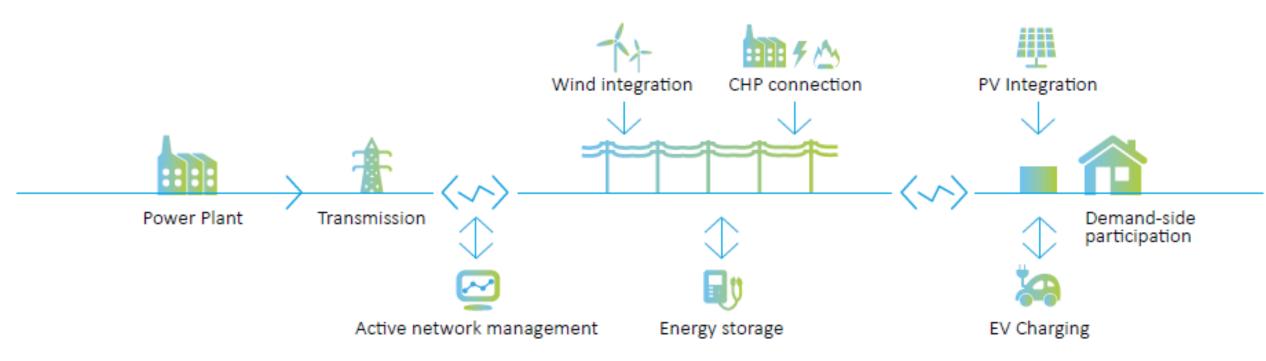
Urban data platforms (Open data / API)
Internet of Things
Data centers

Connectivity (Wi-Fi / 4G), Very high speed network

Credits. CapGemini, a Think Smartgrids member



Smart grid for Smart City, a wide range of services to be developed



Smart grids intervene in ...



Renewables

- Impulse/Support solar, wind, methanisation ...
- Green energy supply
- Own consumption at different mesh sizes
- Positive energy territory
- Energy autonomy



Energy efficiency

- Drastic reduction inn consumption (50%)
- Monitoring/Alerting



Waste management

- Waste reduction
- Offshore waste management
- Waste recovery



Low-carbon mobility

- Electric mobility
- Electrified public transport
- V2X
- Car sharing plan

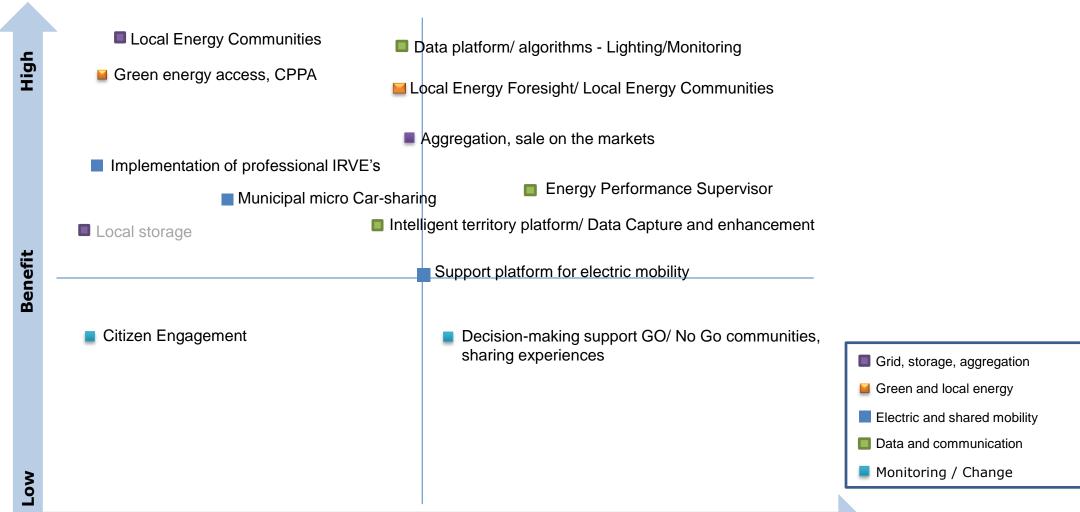


Others

- Heating networks
- Renovation of public lighting
- Network Resilience
- Storage
- Ability to attract large consumers
- Seize opportunities linked to national plans (hydrogen, research centres, etc.)



Selection of offers seized for smart cities



Complexity



High

Credits Think Smartgrids

Low

Thank you for your attention!



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Description

IssyGrid is a demo-project led by Enedis and some 10 industrial partners for a large range of smart grid usecases that have been scaled up to a whole urban district: flexibility, storage, integration of local solar power, smart EV charging, smart lighting, as well as applications for power consumption optimisation in households and office buildings.

Application Areas

e-mobility, smart meters, smart homes, integration of renewable energies, flexibilities, storage.



Appendix

THINK SMARTGRIDS BRINGS TOGETHER A FULL ECOSYSTEM

France is spearheading global smart grids sector, through a comprehensive ecosystem, internationally recognized:

- From fundamental research to industrial applications
- From start-ups to large companies, through associations and public authorities



+121 Smartgrids
demos in France



€130 M in large-scale deployment (Smile, Flexgrid, You&Grid)

The French sector is organized through an association, *Think Smartgrids*