



# Pilot experiences in European projects

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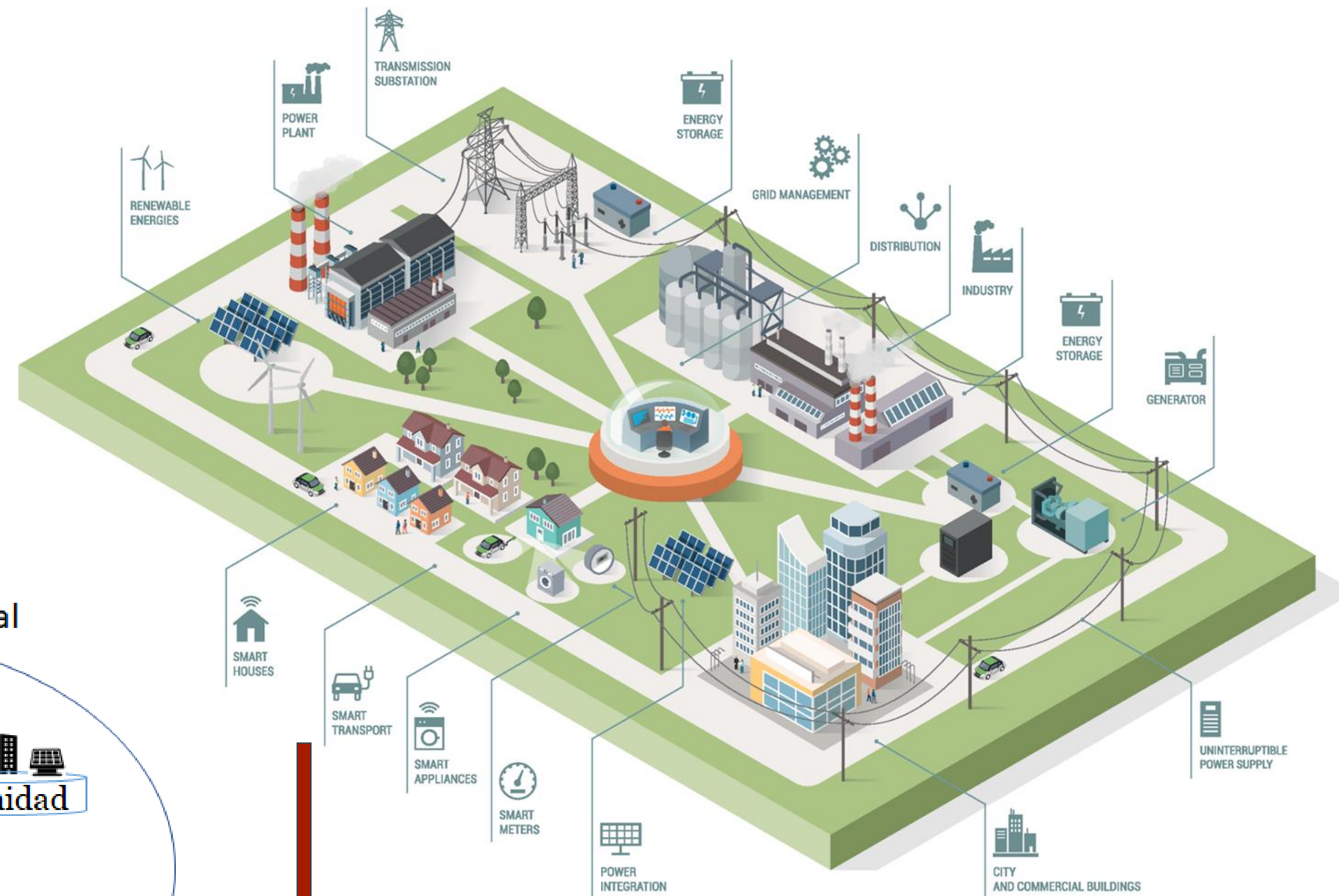


# What is an Energy Community?

A legal entity based on the open and voluntary participation of different actors.

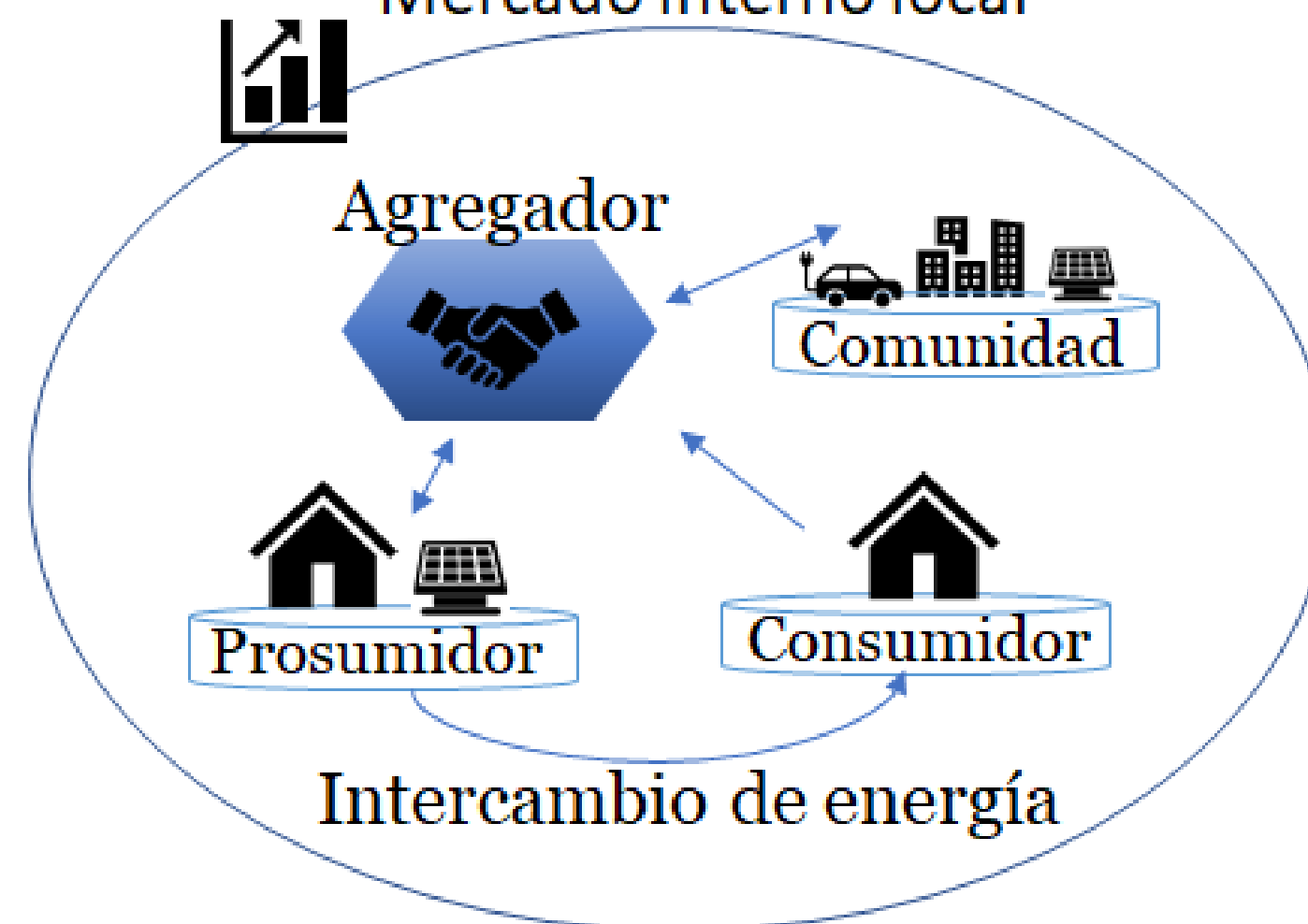
They can carry out the activities of generation, storage, consumption and sale of energy.

They can also participate in markets in a non-discriminatory way.



## Concept

Mercado interno local





# Pilots on energy communities

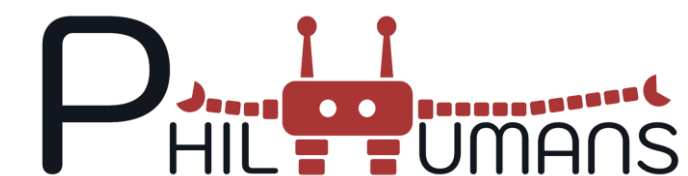
## “Connecting Ideas to Opportunities”

**In projects** - we take care of exploitation

**In the market** - we take things from zero to one



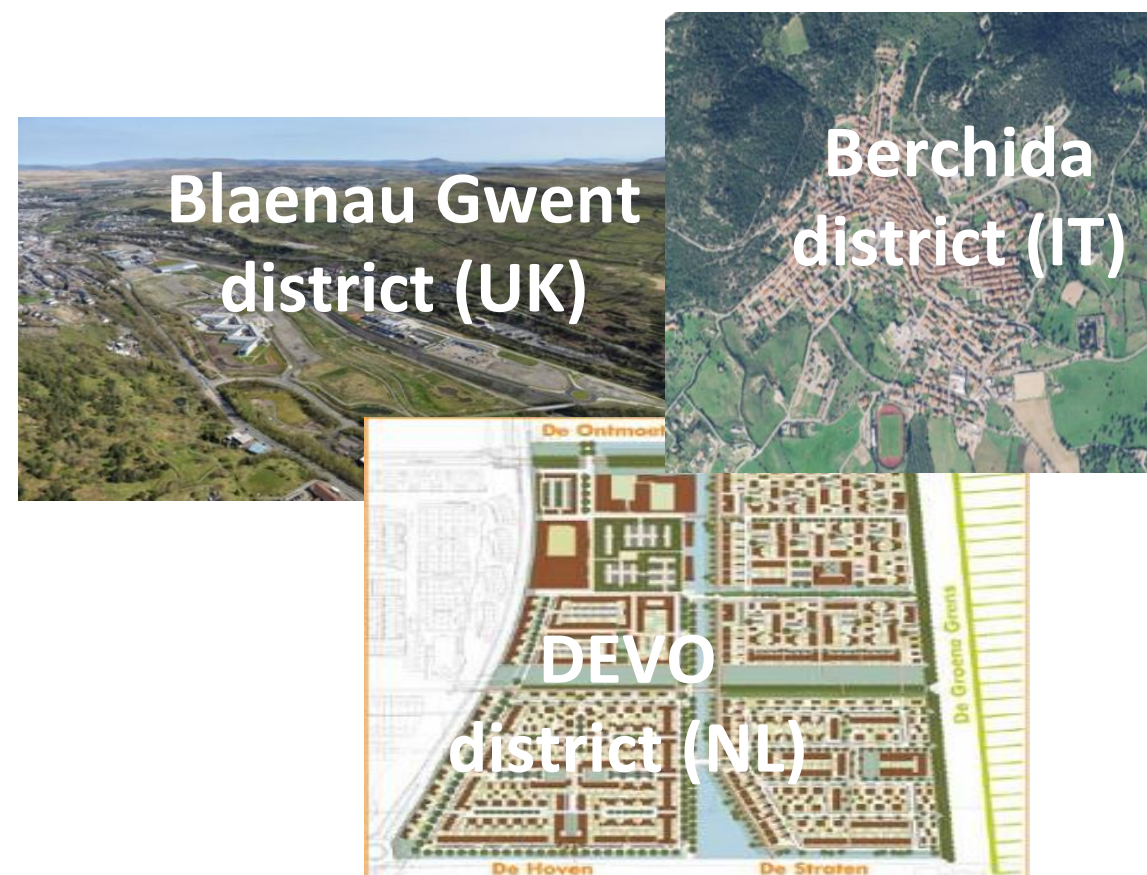
Horizon 2020  
European Union funding  
for Research & Innovation



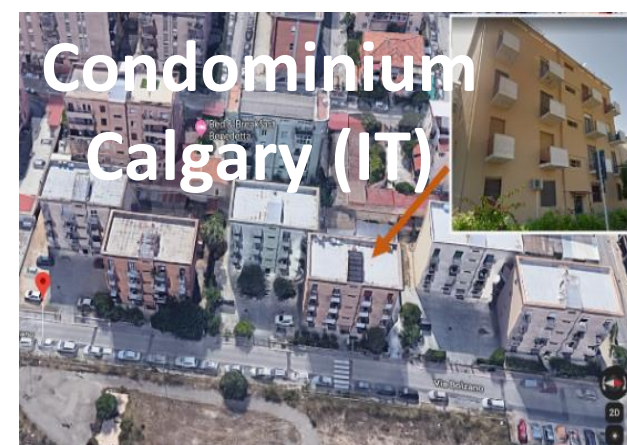


# Energy Community Profiles

## 2° District Energy Communities



## 3° Residential Energy Communities



## 4° Tertiary Energy Communities



## 1° Geographical islands



## 5° Industrial Energy Communities





# EU Pilots

## District Energy Community of Worden



**WORDEN District (Netherlads)**

- 39 houses. Community battery + individual batteries + PV
- Prosumer-aggregator(rate optimization, peak smoothing ..)
- Community social commitment

## Industrial Energy Community in Slovenia



CREATORS

- Community centered around a steel mill (5MW solar + 22.2MWh storage)
- Use of 25MW of heat (residual from the steel mill) to integrate into the district heat network.
- Integration of energy vectors (H2)
- Provision of heat+electricity to residential users



**Jesenice (Slovenia)**

## Residential Energy Community in Italy



- 32 Private end-users
  - 20kWp PV
  - Split heating and cooling units
- Scope
- In-house and CEC optimization
  - Smart Contracts
  - Virtual P2P trading
  - ToU, Peak shaving



**Cagliari (Italy)**



# From EU pilots to National

## 1 Local Energy Community (Municipal)

### **CEC in the C. Madrid.**

- Driving force: the local council
- CEL users: approximately 50 families from the municipality
- Renewable generation: photovoltaic solar energy on municipal rooftop for self-consumption of the CEL
- Storage: community battery that will service the CEL
- Energy management platform

## 2 Local Energy Community (Industrial)

### **CEC in Castilla la Mancha**

- Driving force: Local industry
- Industrial park (6 industries): Manufacturing (cheese, doors), services (catering), etc.
- 64kW PV (self-consumption) + 400kW for disposal
- Vehicle loading, 40kWh storage
- H<sub>2</sub> generation (under evaluation).
- Integration of residential users (VPP).

## 3 Local Energy Community (Residential)

### **CEC in Barcelona**

- Driving force: Community of neighbors
- Residential block of apartments (20 neighbors + common spaces)
- Geothermal, community thermoelectric, heat pumps
- 20kW PV + 20kWh storage will be installed



# Thank you

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