



# Energy Local Storage Advanced system

Energy Storage based on 2nd Life Batteries

6 Pilots in 4 EU Countries

Energy Local Storage Advanced system

Duration: April 2015 – Dec 2018 (45 Months)

Total costs: 13 114 250 €

EU grant: 9 861 614 €

Call: H2020-LCE 08-2014

Topic: Local / small-scale storage



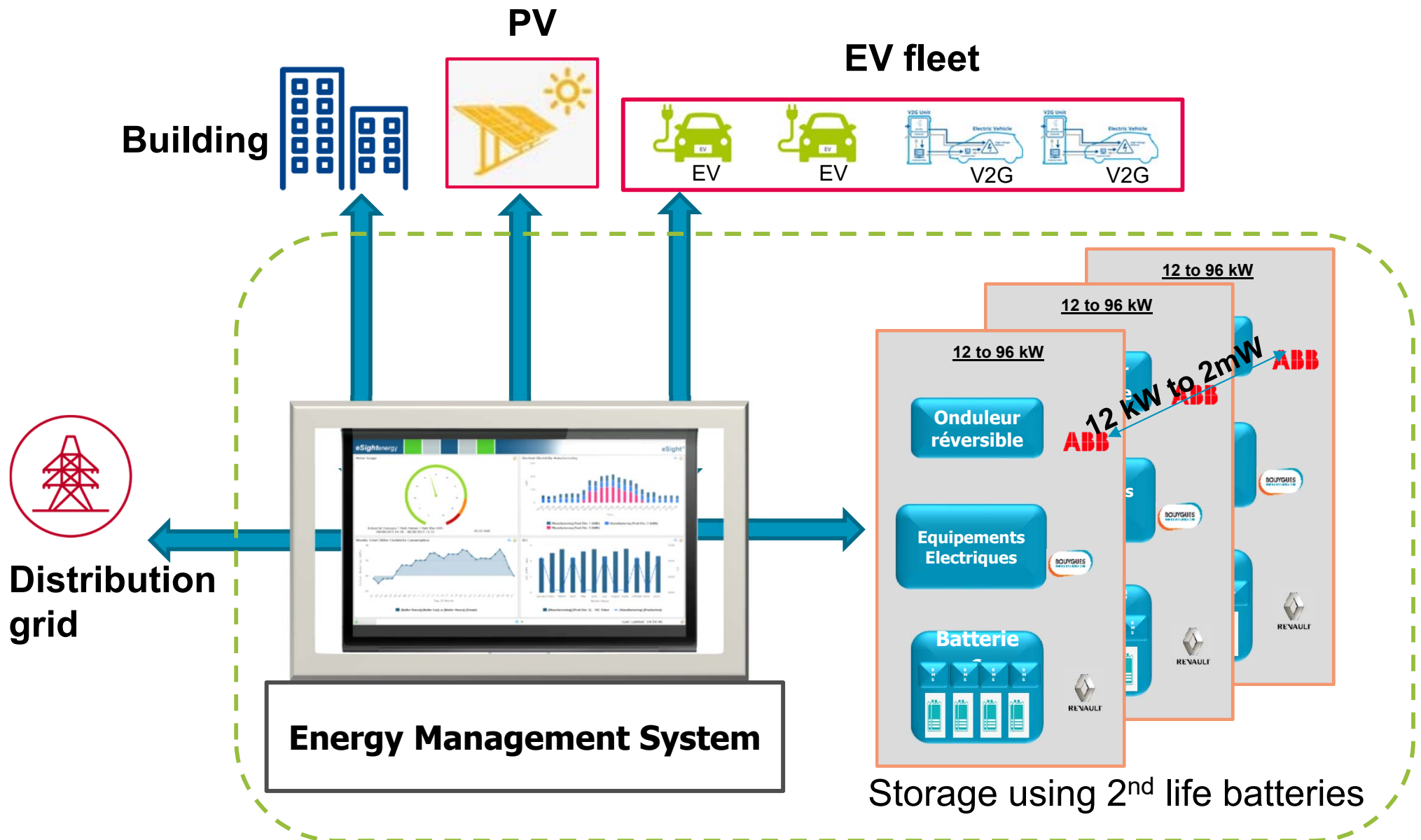
**NISSAN**

**RWTH AACHEN  
UNIVERSITY**



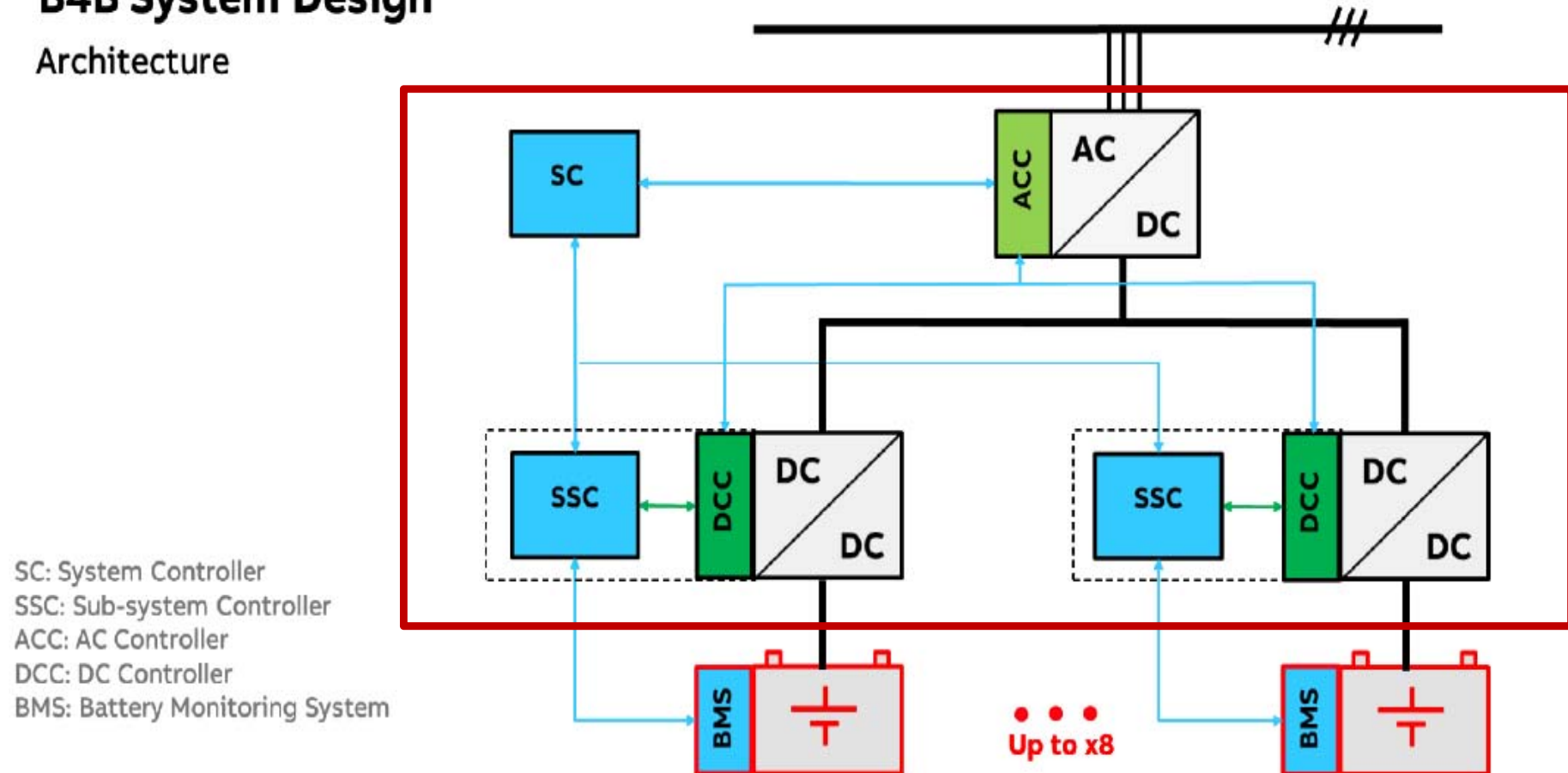
**GATESHEAD  
COLLEGE**



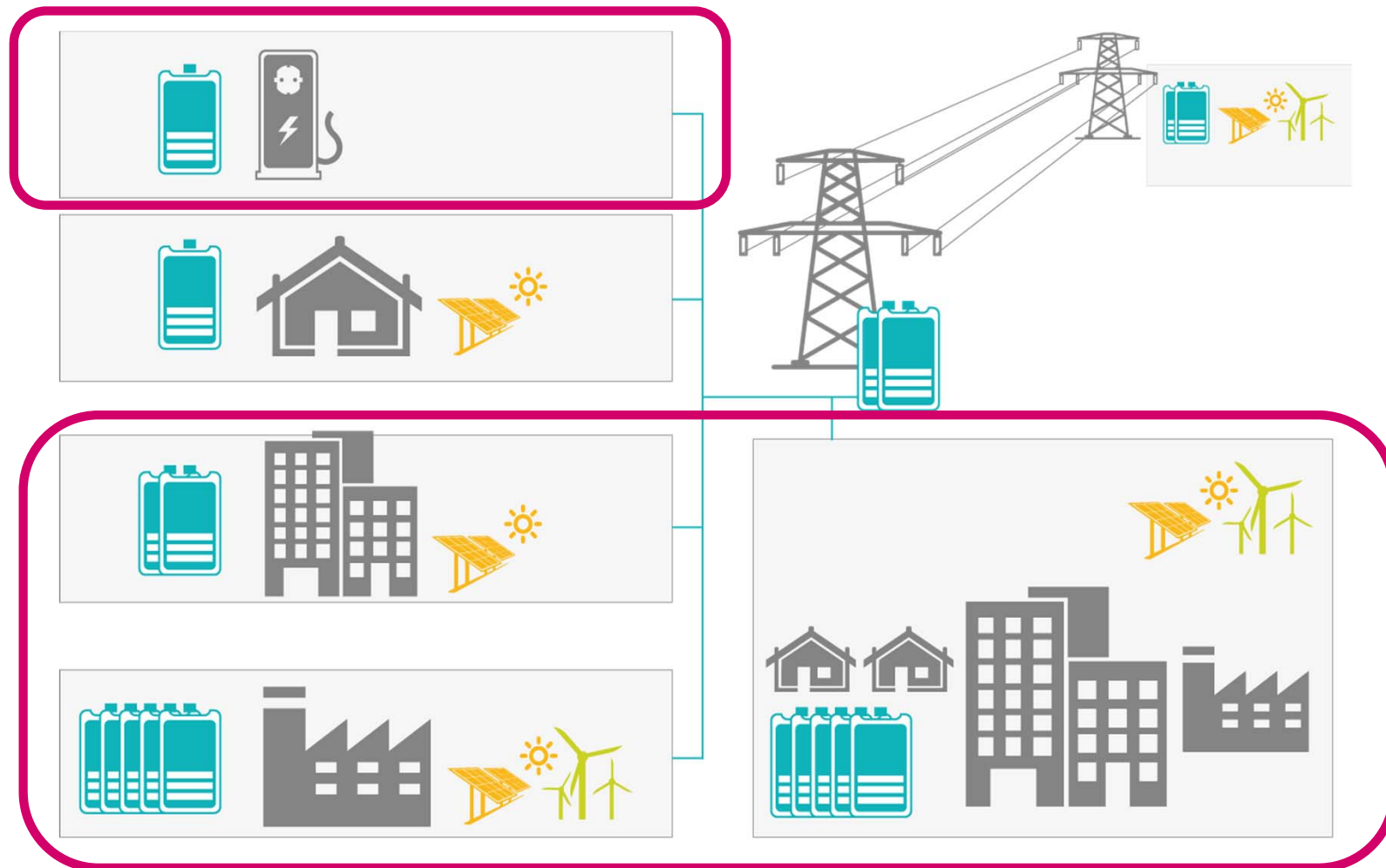


## B4B System Design

### Architecture



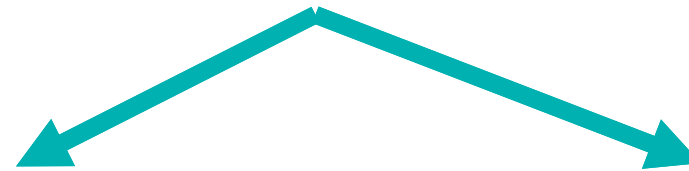
- Mid-size systems for commercial and professional buildings and quick-charge EV stations
- Bigger systems for large shopping centers, low CO<sub>2</sub> industrial process, Districts...



**Services for  
building &  
district**



**Services for  
the grid**



**Decreasing costs  
and increasing  
self-consumption**



**Optimizing local  
grid operation**



**Maintaining stability  
of electricity system**

**Combining use cases: Necessity to stack services for better ROI**

6 demonstration sites representing several use cases for storage as a service, such as

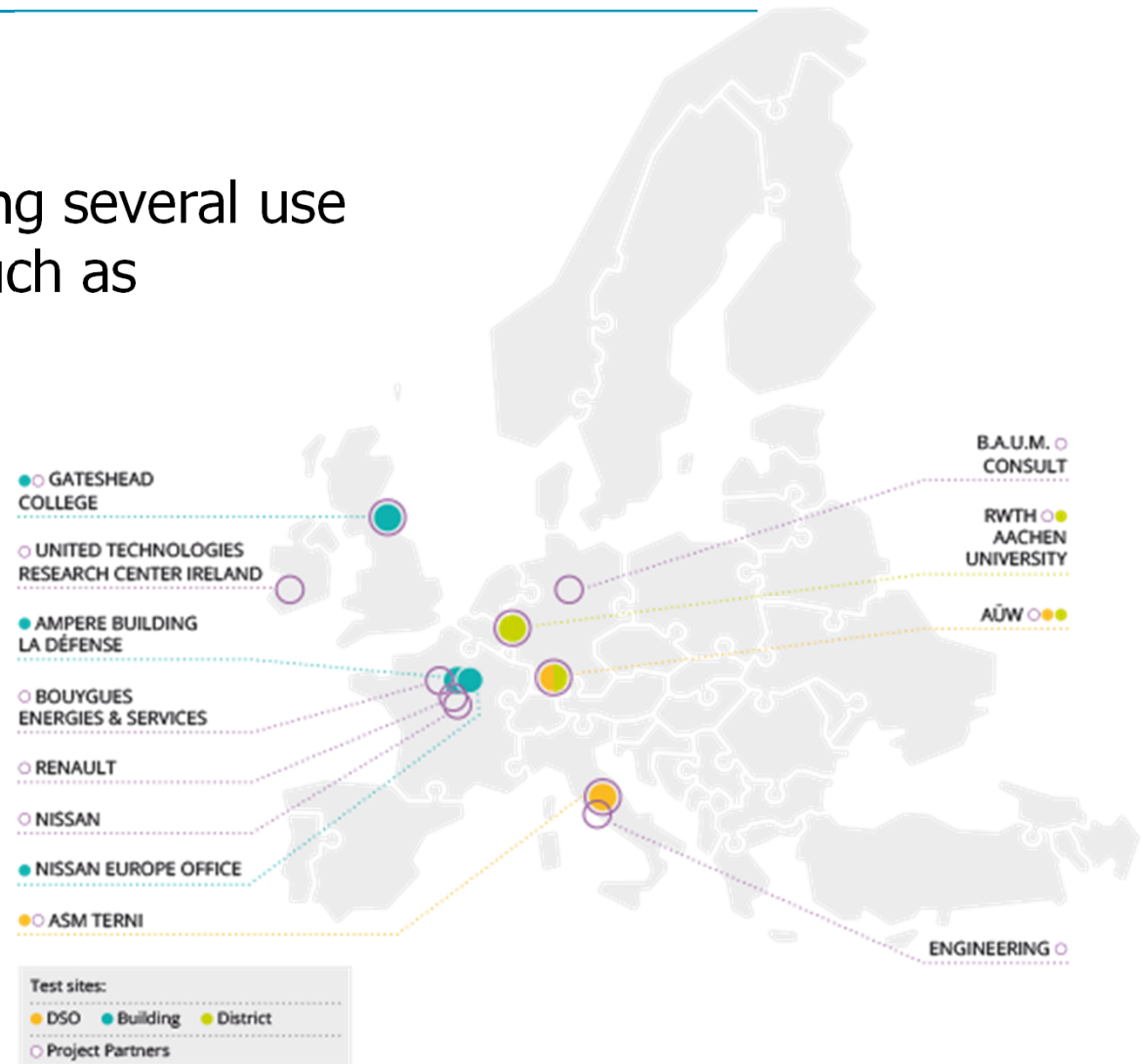
grid congestion relief

local grid balancing

peak shaving

voltage support and regulation

optimization of self-supply

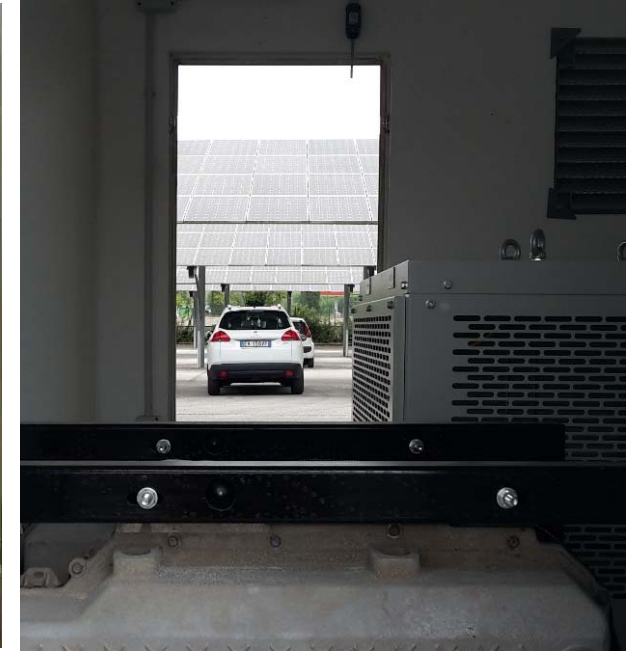




RWTH Aachen University - District

6 Zoe batteries - 72 kW – 66 kWh

Services: PV Power Smoothing, Peak shaving,  
Demand Response



Terni – District + Grid Services

6 Zoe batteries - 72 kW – 66 kWh

Services: PV Power Smoothing, Peak shaving, Reactive power compensation, frequency regulatuion



Paris La defense - Ampère E+ smart Building

8 Zoe batteries - 96 kW – 88 kWh

Services: PV Power Smoothing, Peak shaving,  
Demand response, Time shifting



Kempton – Residential District

6 Zoe batteries in substation - 72 kW – 66 kWh

Services: Selfconsumption maximization at district level, PV Power Smoothing



Sunderland – Building

3 Nissan Leaf batteries - 36 kW – 33 kWh

Services: PV Power Smoothing, Peak shaving,  
Demand Response



Nissan Headquarter – Building

12 Nissan Leaf batteries – 6 X 24 (144) kW – 132 kWh

Services: Peak shaving, Energy Arbitrage, Demand Response

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