

# First ELSA stakeholder workshop

Stakeholders' needs and expectations regarding  
small- and medium-scale storage solutions

Aachen, 2-3/5



*local Electricity retail Markets for Prosumer smart grid pOWER services*

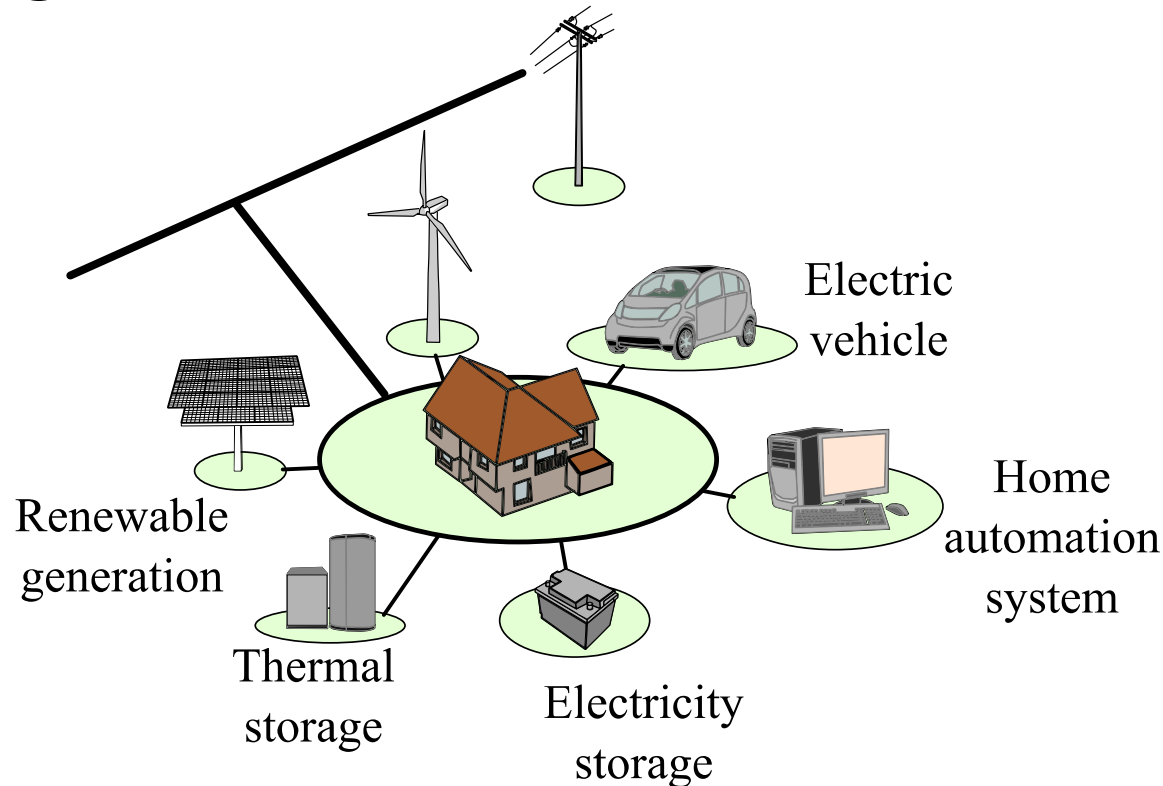
The vision of Empower H2020 project:  
Storage needs of Smart Energy Service Providers.

Pol Olivella-Rosell, Smart Innovation Østfold



This project has received funding from the *European Union's Horizon 2020 Research and Innovation programme* under Grant Agreement No 646476.

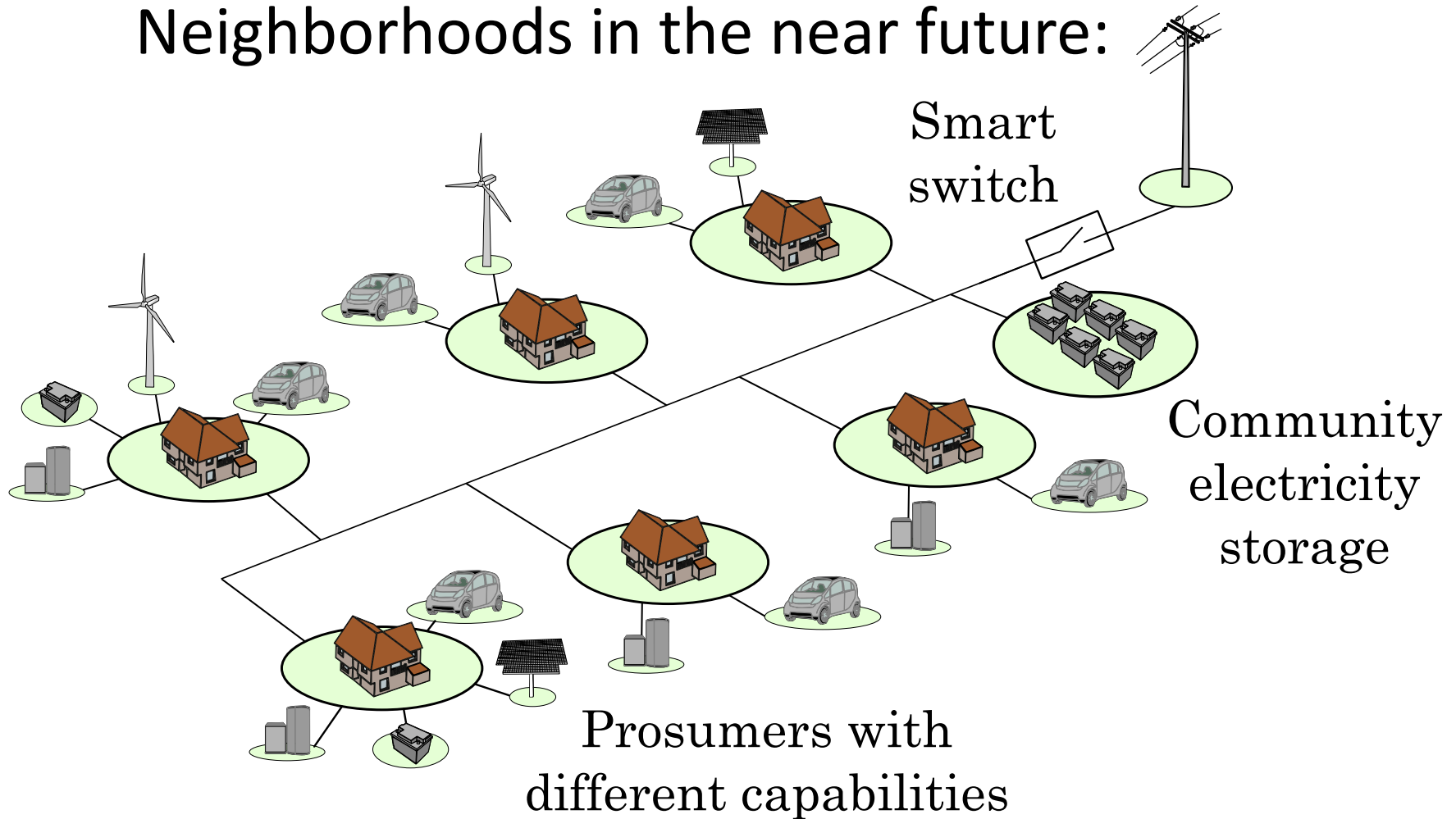
# Prosumers are coming and they are game changers:



What is coming?

EMPCWER

## Neighborhoods in the near future:



What is coming?

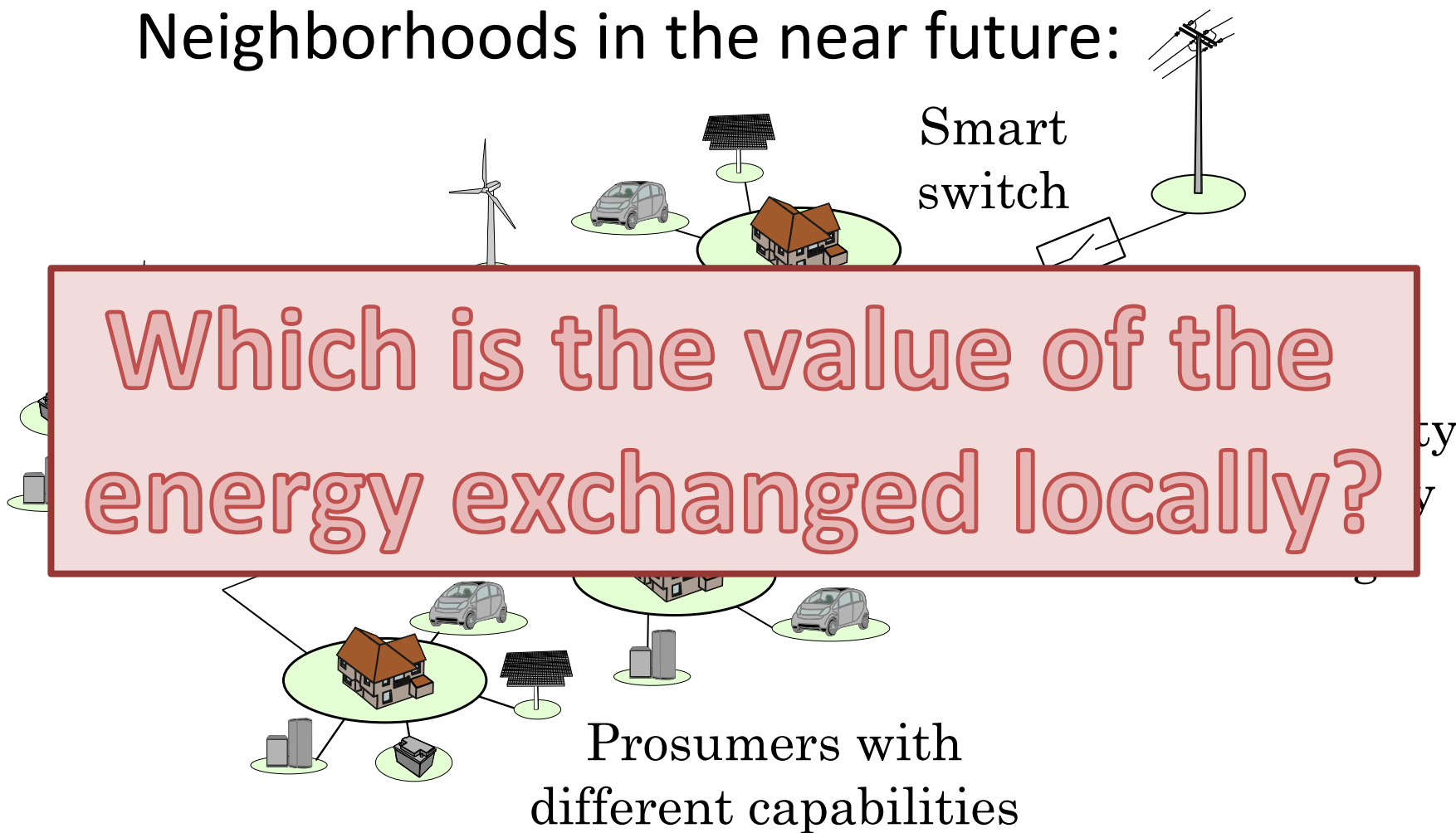
EMPCWER

Neighborhoods in the near future:

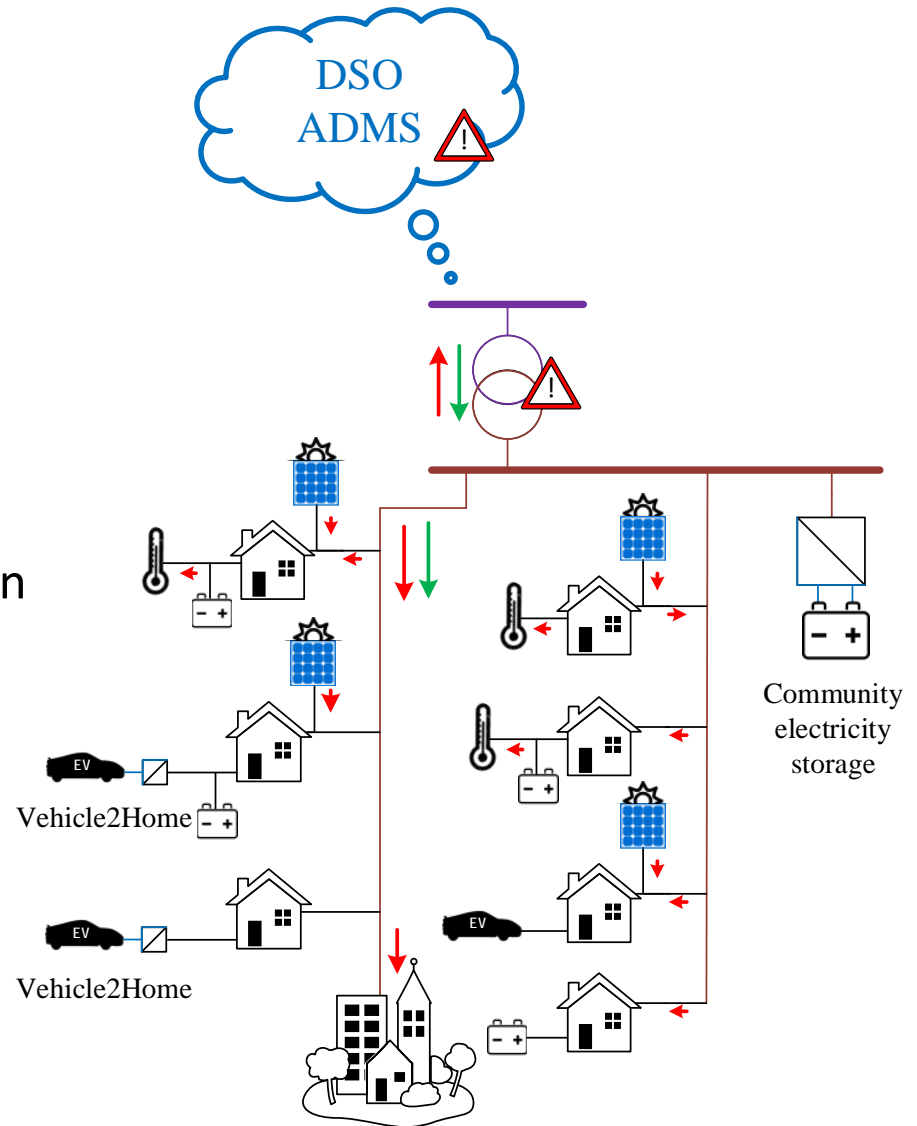
Smart  
switch

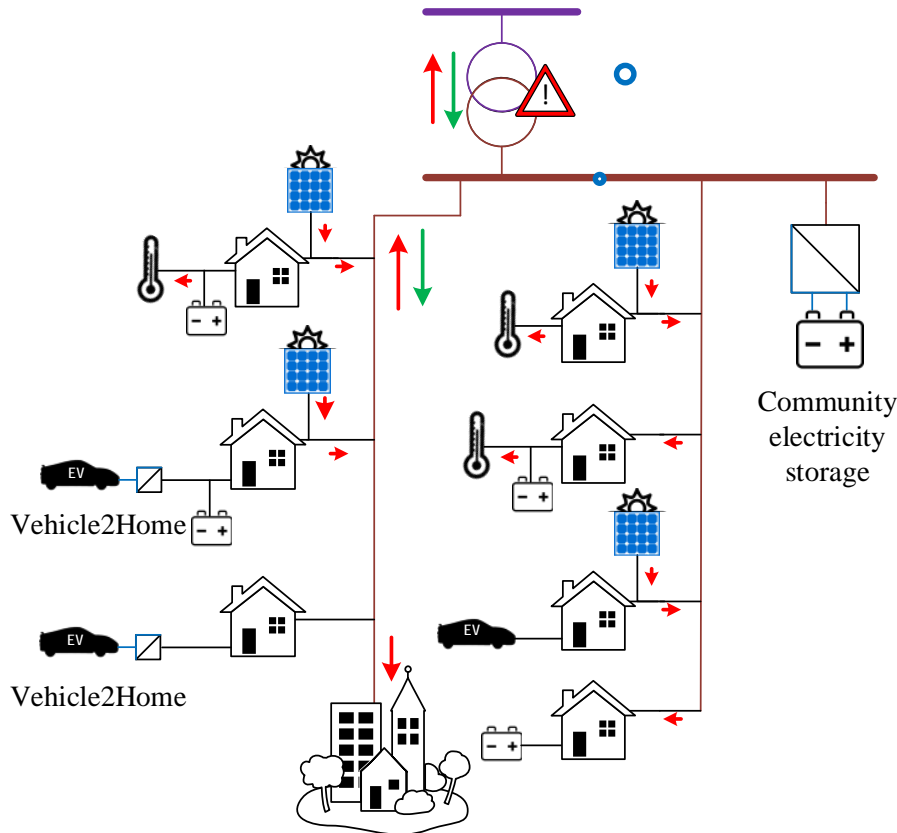
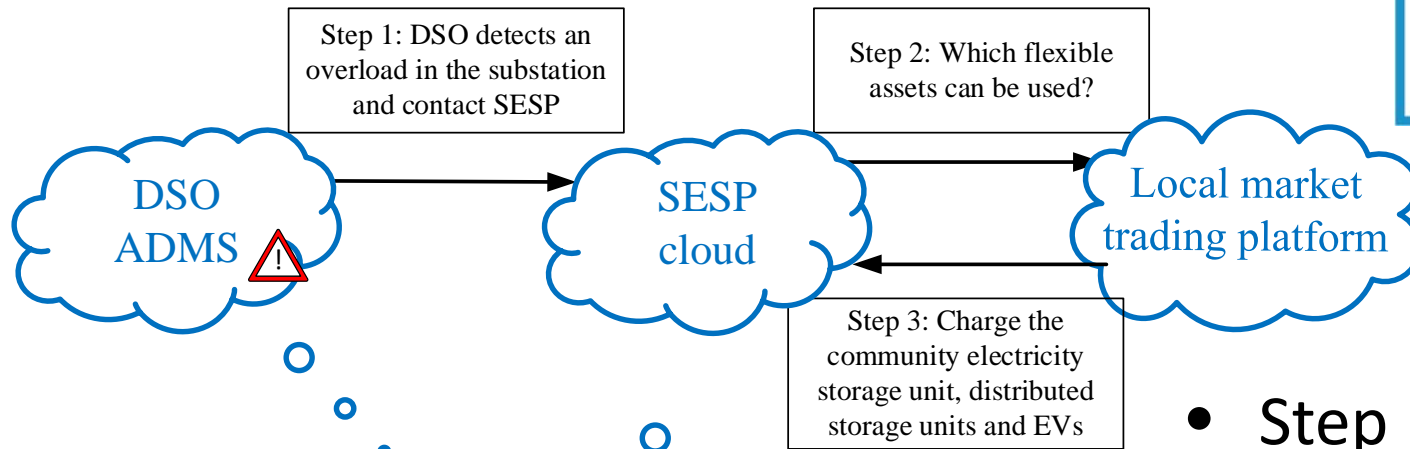
Which is the value of the  
energy exchanged locally?

Prosumers with  
different capabilities

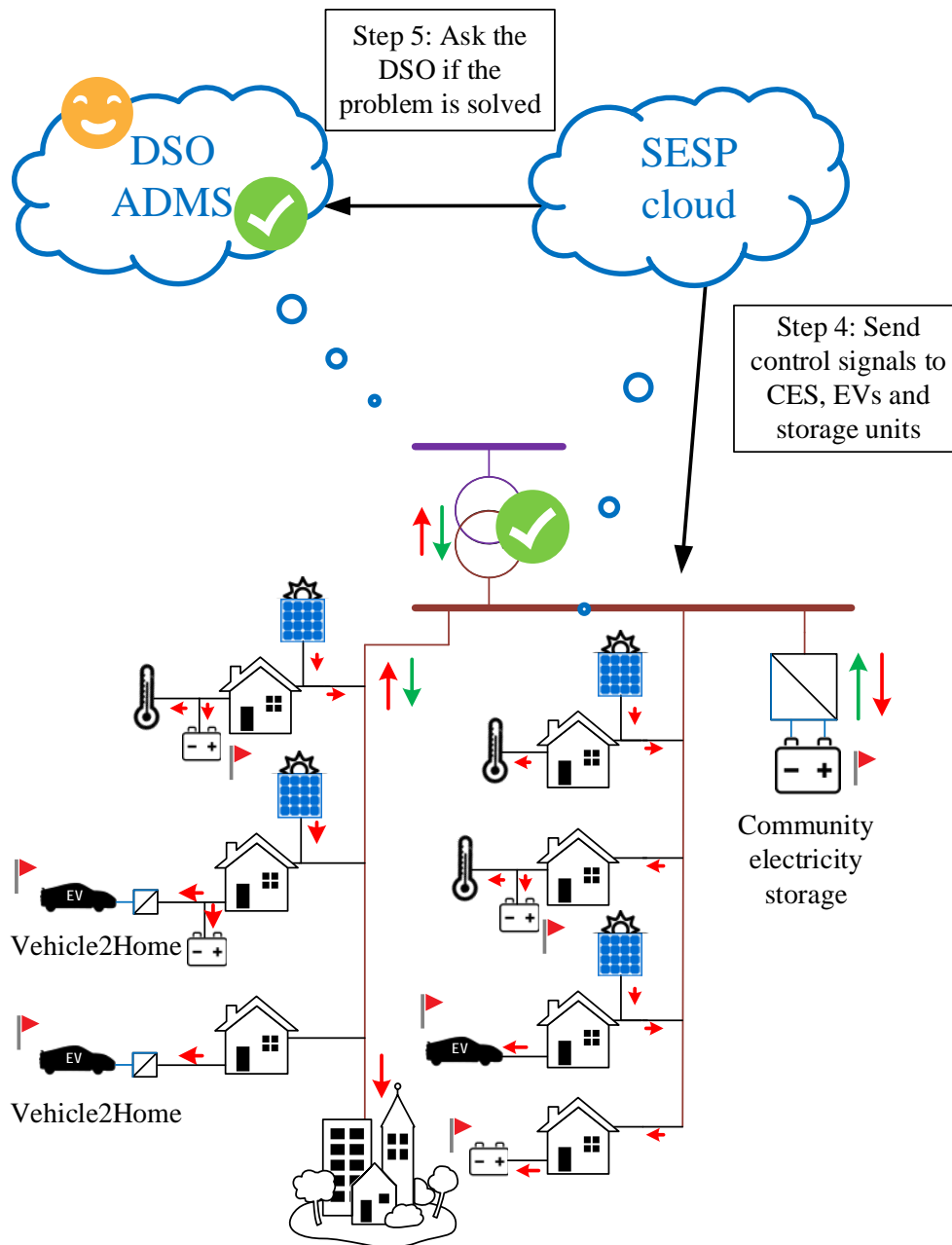


- SESP: Smart Energy Service Provider
  - Role of aggregator: SESP manages a portfolio of prosumers and flexible assets
  - Role of local market operator: SESP manage the trading platform
  - Support the DSO in distribution grid operations for grid reinforcement deferrals
- Exemplary case: During a peak PV production the substation is reaching its maximum capacity



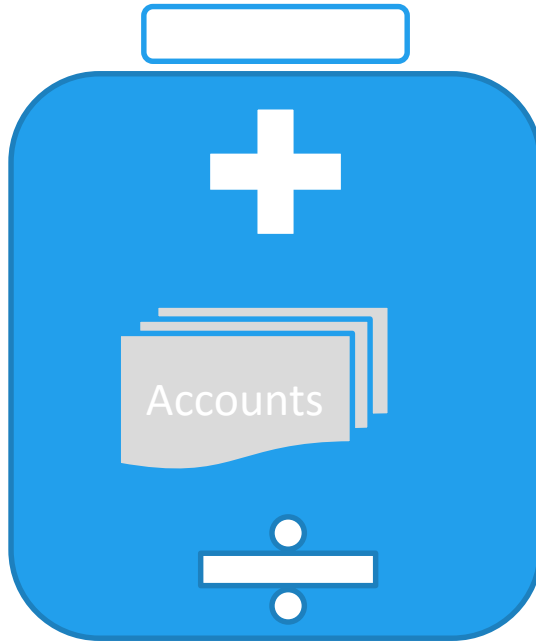


- Step 1: DSO detects a problem
- Step 2: Check which flexible resources are available
- Step 3: Take the decision in the local market trading platform



- Step 4: Send control signals
- Step 5: Ask the DSO if the problem is solved

- Potential benefits:



### **Vault**

(Deposits and Withdrawals)  
E.g: Strombank example case,  
some people is willing to pay  
a fee for this



### **Balancing**

(Prediction Inaccuracy Capacity)  
E.g: EPEX intra-day market price  
spikes during 10-13h due to  
forecasting errors



Can we trust in not-network solutions  
dealing with grid problems?

By Prof. Goran Strbac – Imperial College  
London

We need pilots to test them!

## Consortium partners

**EMPCWER**



[www.empowerh2020.eu](http://www.empowerh2020.eu)



*local Electricity retail Markets for Prosumer smart grid pOWER services*



This project has received funding from the *European Union's Horizon 2020 Research and Innovation programme* under Grant Agreement No 646476.

Develop and verify:

- A new local electricity market based on a **local trading platform**.
- Innovative prosumer oriented business models
- Operational methods to **encourage local generation**
- Operational methods for **exploiting the flexibility** created for the benefit of all connected to the local grid
- An ICT based monitoring and management system
- To test the trading platform in three pilot sites:
  - Norway, Hvaler
  - Germany, Wolpenhausen
  - Malta, Gozo island