



# BUSINESS MODELS FOR DEMAND RESPONSE RELATED TO SMALL- AND MEDIUM-SIZED PROSUMERS – NEW STAKEHOLDERS AND THE ROLE OF DSOs

Guntram Pressmair, Klemens Leutgöb, Christof Amann  
e7 energy innovation & engineering, Austria

Dimitrios Tzovaras, Dimosthenis Ioannidis  
CERTH/ITI, Greece

## FLEXIBILITY MARKETS FOR DR

### Wholesale Market

- Perspective: power generation/consumption

### Ancillary Services/Balancing Market

- Perspective: grid imbalances on TSO level

### Local Flexibility Market

- Perspective: constraint management for DSO

### Retail Market

- Implicit DR through dynamic supply/grid tariffs

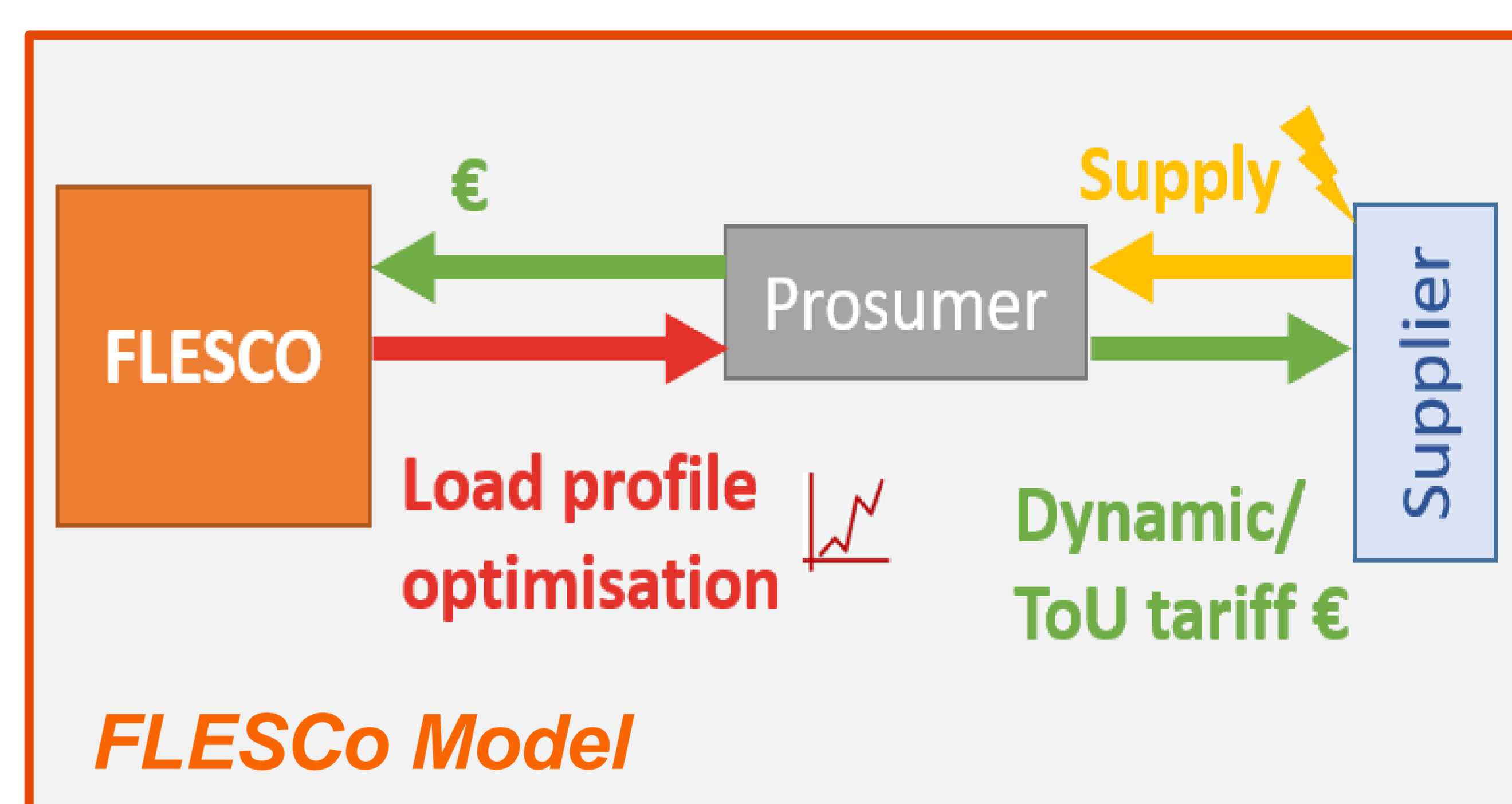
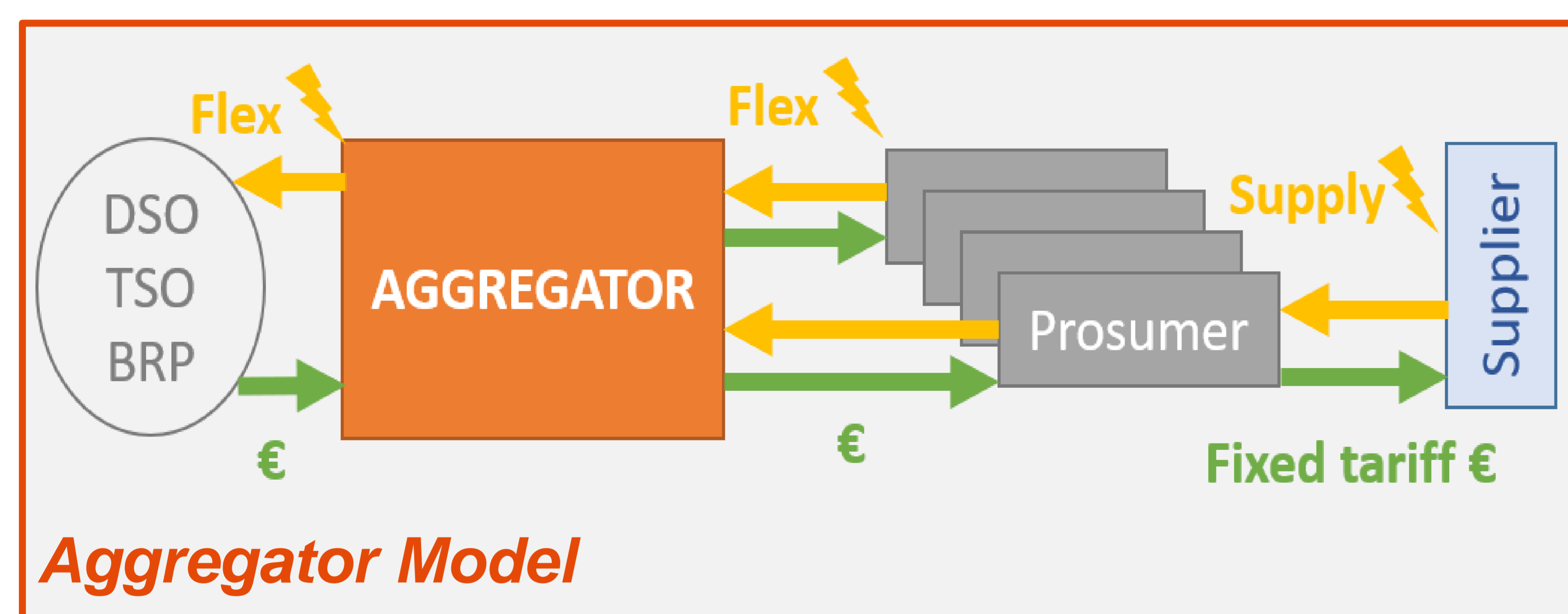
## DEMAND RESPONSE BUSINESS MODELS

### Generic Models

- Explicit DR – Aggregator
- Implicit DR - Flexibility Service Co. (FLESCo)

### Promising service bundles

- DR & Energy Efficiency Service
- DR & Electricity Supply
- DR & Equipment Provision
- Microgrid Management



## IMPLICATIONS FOR DSOs

- High degree of demand side flexibility provision on different markets can lead to grid **constraints in the distribution grid**
- Increasing **need for flexibility** at DSO level
- DSO procuring flexibility **market-based**
- Emergency situations: traffic light approach
- DSO as **meter data** provider, privacy issues
- Future regulatory perspective: dynamic and locally varying **grid tariffs**

## CONCLUSION

### Small prosumers = small profit margins

- Minimise transaction costs!
- Integration of DR service into service bundles

### DSO: increasing need for local flexibility

- Procuring flexibility
- Providing data
- Market facilitator (e.g. new tariffs)



The DELTA project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 773960



Download the full report on the DELTA Business Models [here](#)