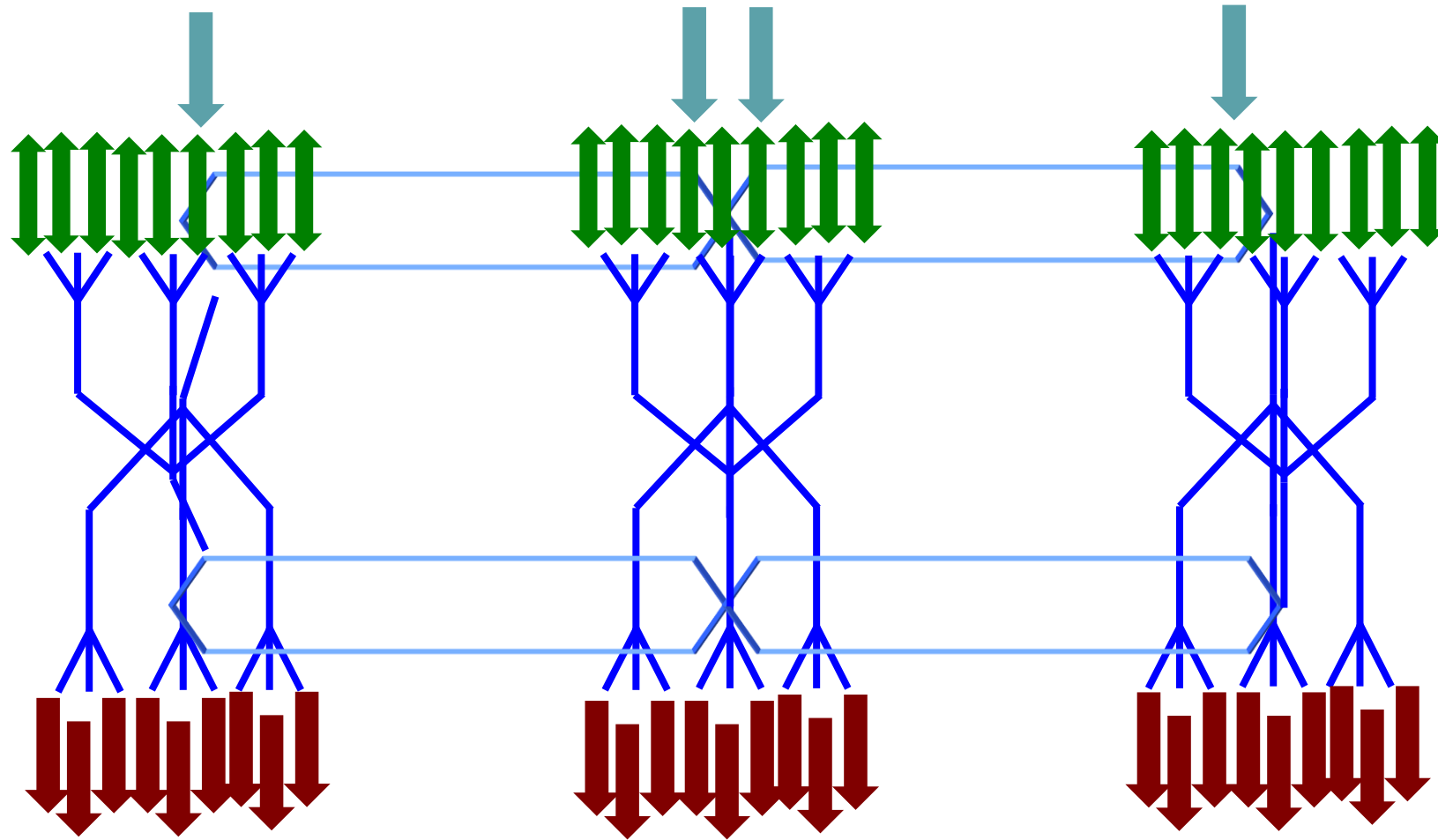


Interoperable platforms and data exchange for energy services: practical experience from the BRIDGE projects

Alexander von Jagwitz| GOFLEX| Utility week – Vienna – 06/11/2018

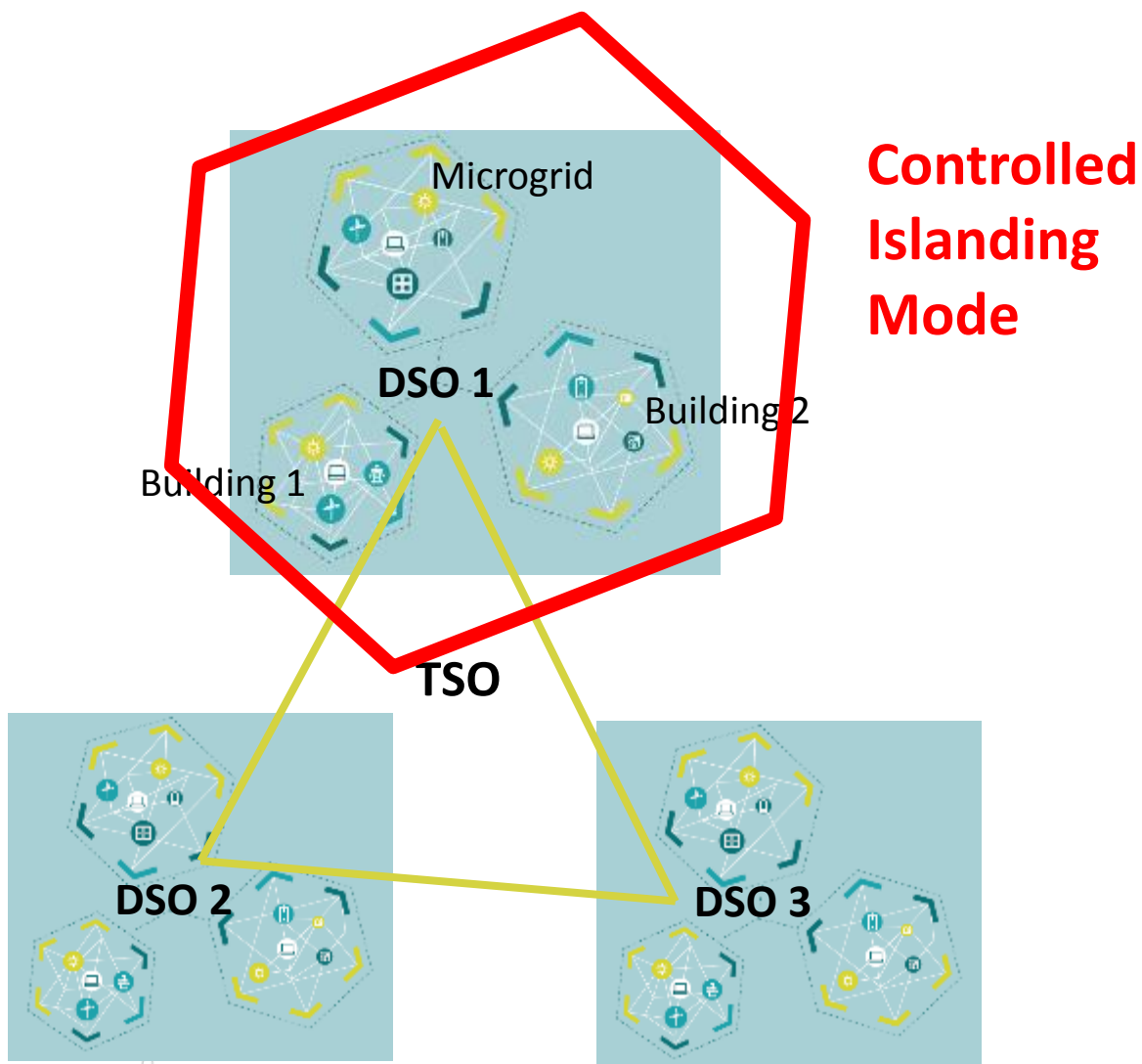
Challenges for DSOs and TSOs: The Grid (R)evolution



-> >90% of Renewables feed into the distribution grid

-> TSOs lose their spinning reserve (less turbines in the HV grid)

A cellular energy system

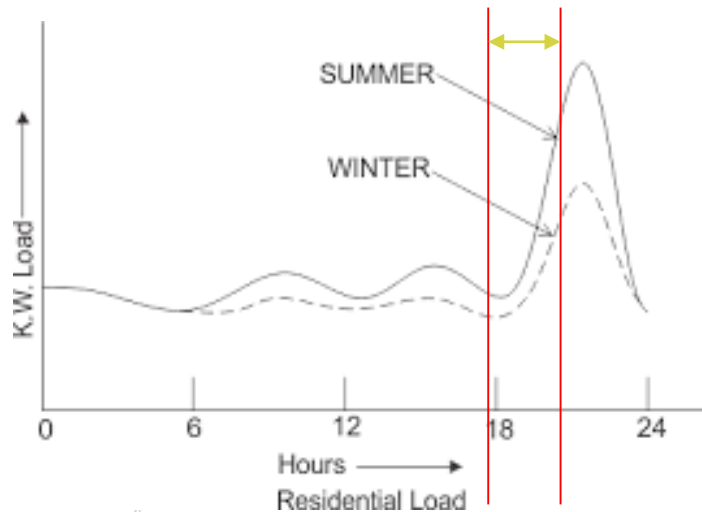


- Each cell aims to reach energy self sufficiency AND exchanges flexibility with the other cells and cell levels
- Higher cell level acts as the „safety net“ for the lower grid levels
- Each cell level performs the same functions
- Each cell is able to perform a controlled islanding mode.

Energy and Flexibility: Two different products



Energy $W = P \cdot t$ in kWh

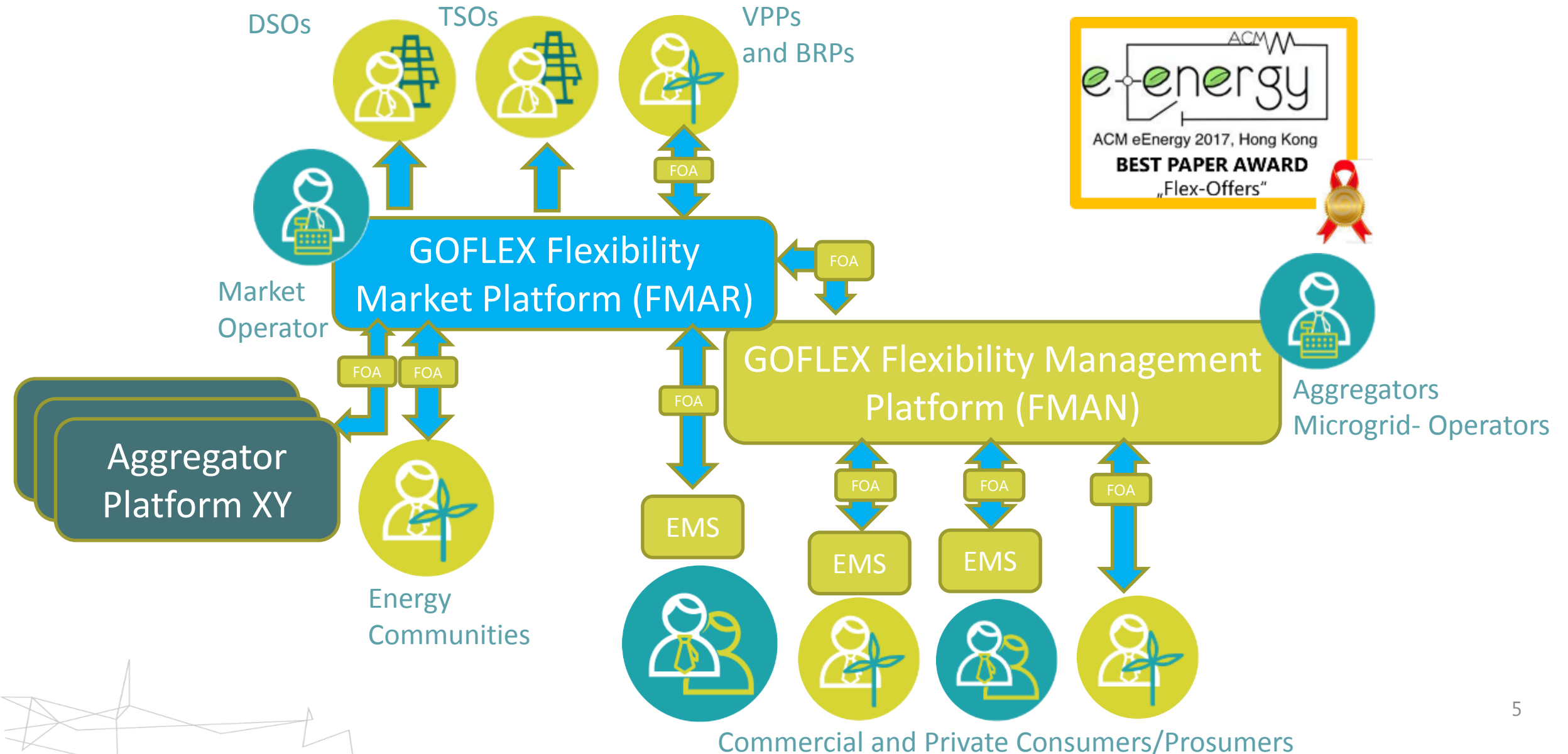


Flexibility $F = \Delta P_1(\Delta t^*); \dots; \Delta P_n(\Delta t)$ in kW

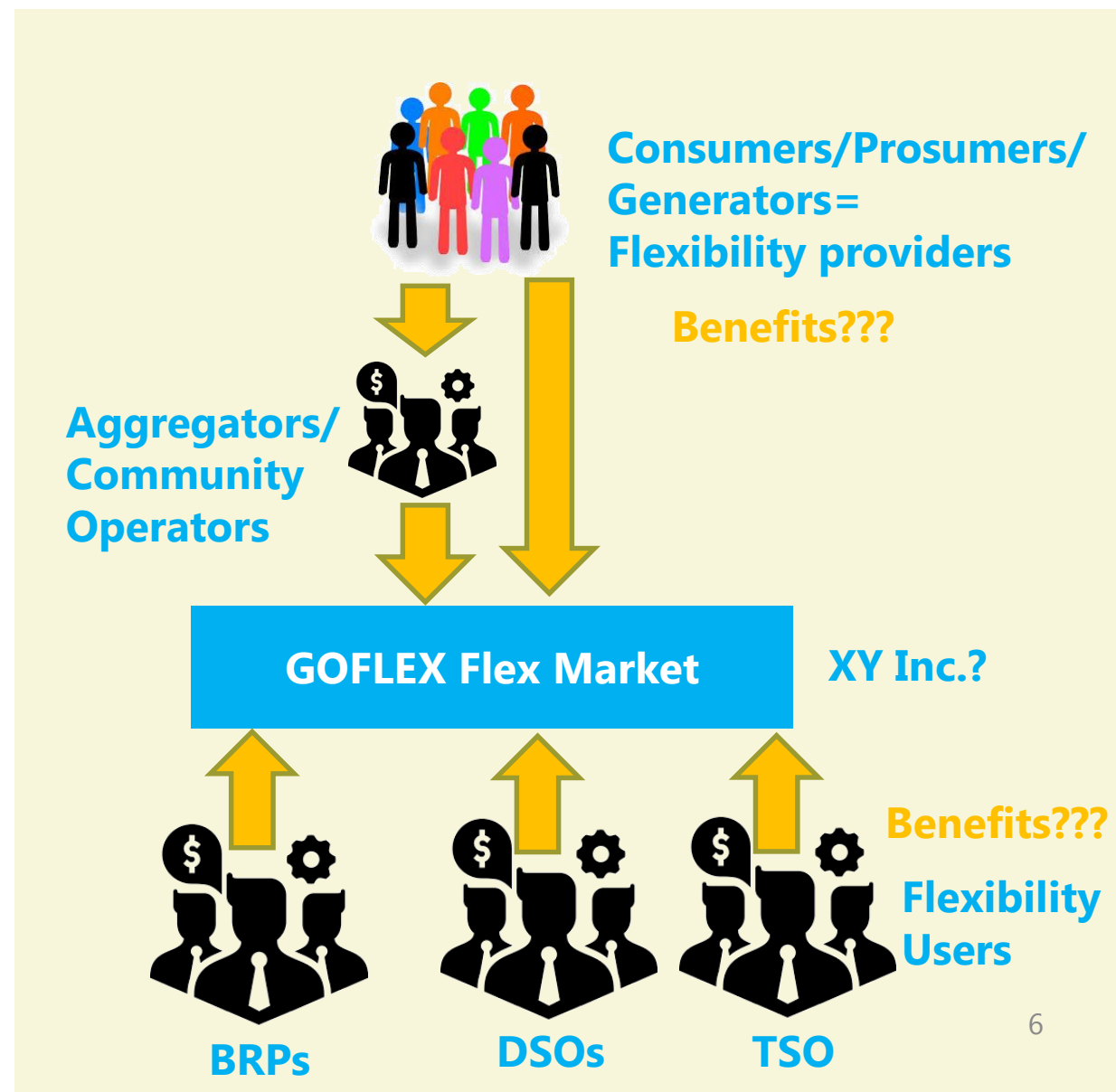
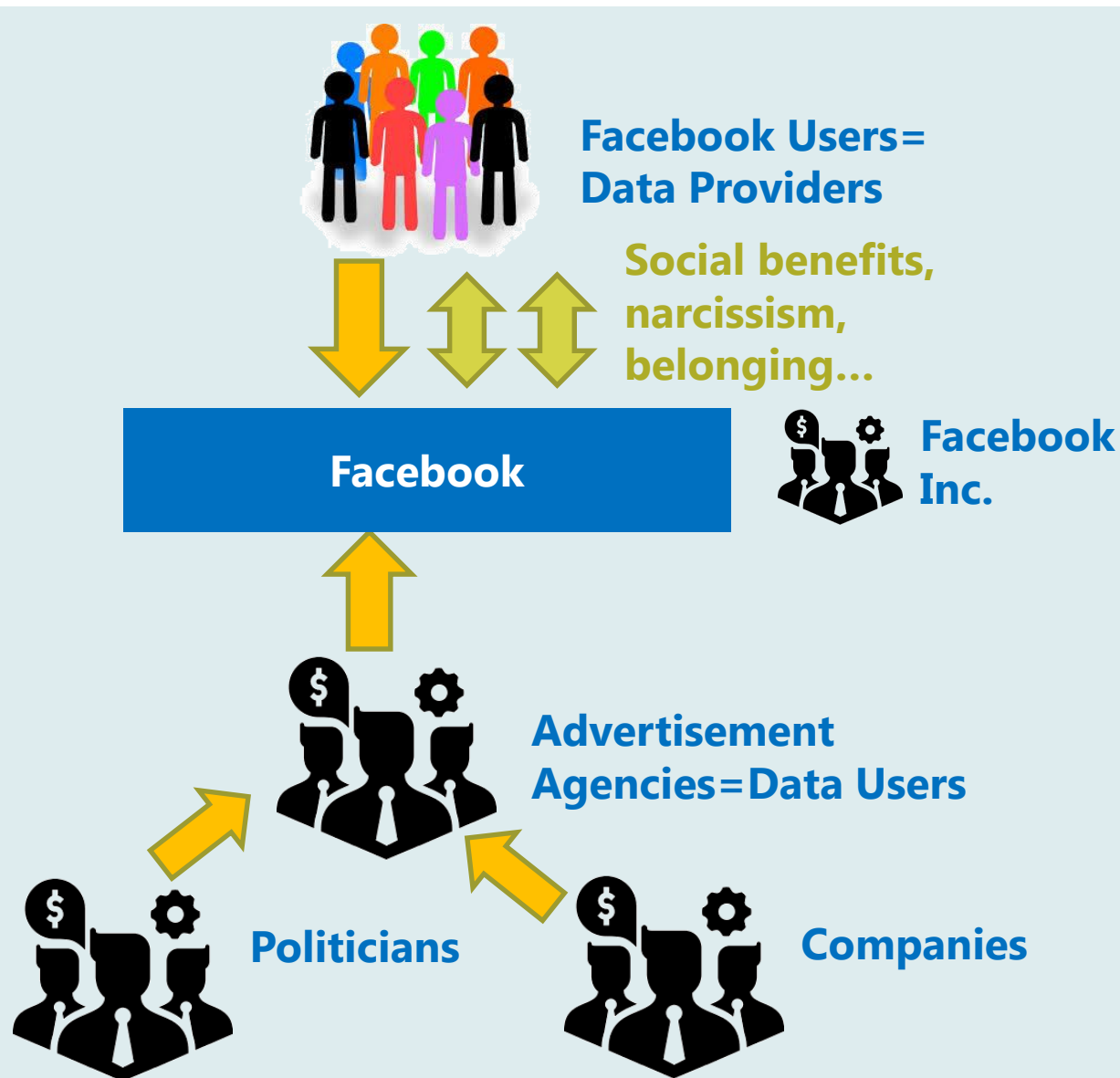
* $\Delta t = 15$ min interval

= „FlexOffer“

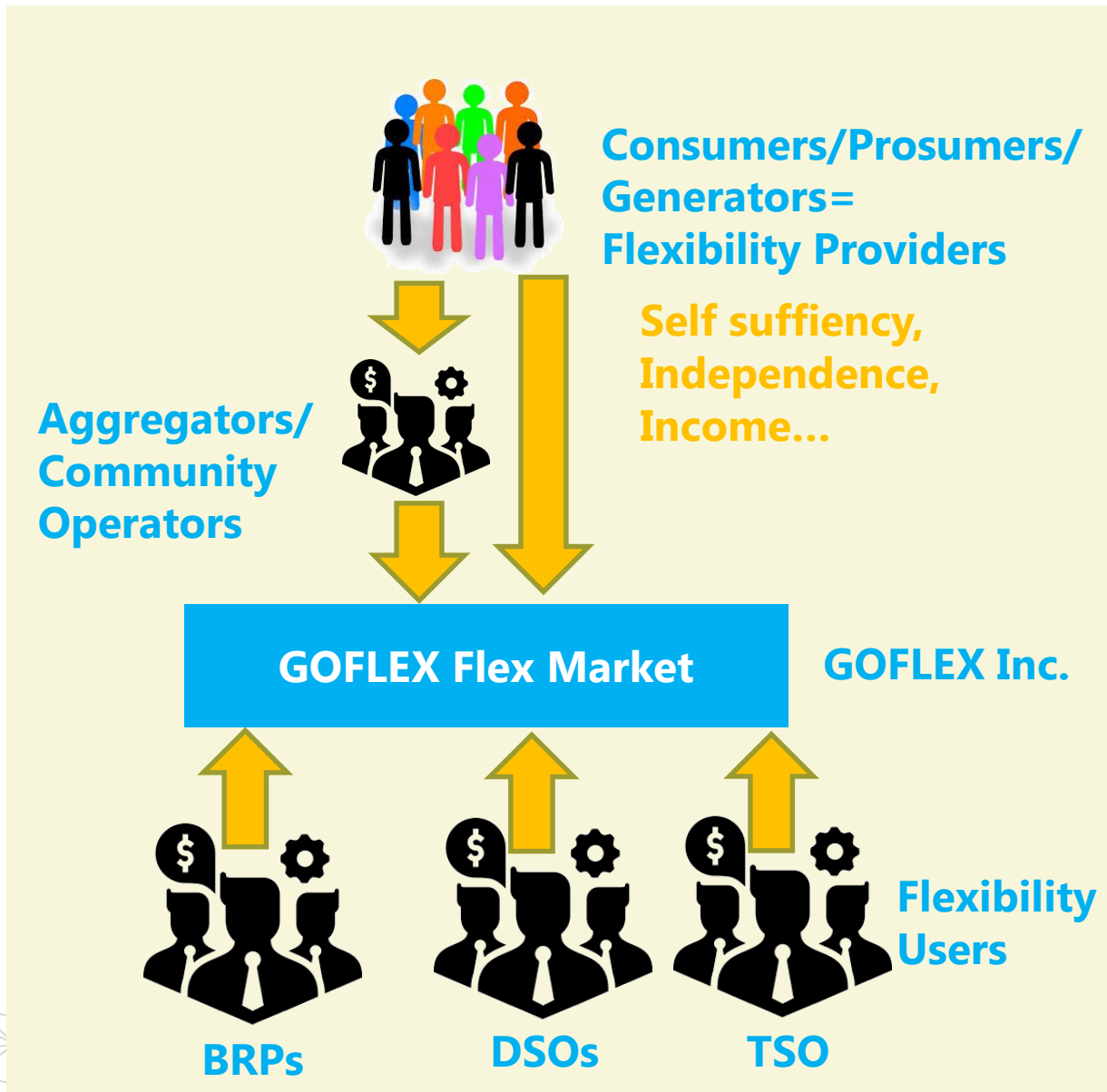
GOFLEX Automated Flex-Offers



Local Flexibility Market: A multi-sided platform



Local ecosystem for a local flexibility market



- **Local Energy Community Operators, local VPPs or independent Aggregators** can aggregate dispersed flexibility to balance their own portfolio or to sell it on the reserve or local flexibility market for **TSOs**
- **DSOs** will get more management responsibility and face more challenges with higher shares of renewables and can use flexibility to avoid costs
- (Local) **BRPs and VPPs** can purchase local flexibility to balance their portfolio
- **Flexibility** provision can become an integrated service in the context of a smart energy contract

Local energy supply via local renewable virtual power plants



FichtelgebirgsStrom

echt regional. echt regenerativ.



NORDGRÖÖN
Mein Strom kommt von hier.

EBERstrom

en NatürlichEnergie
Eifel · Mosel · Hunsrück

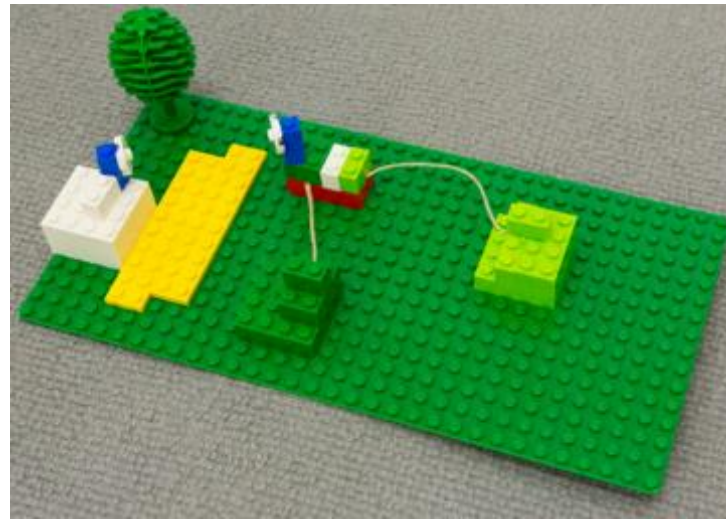
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New business prototypes co-created with customers

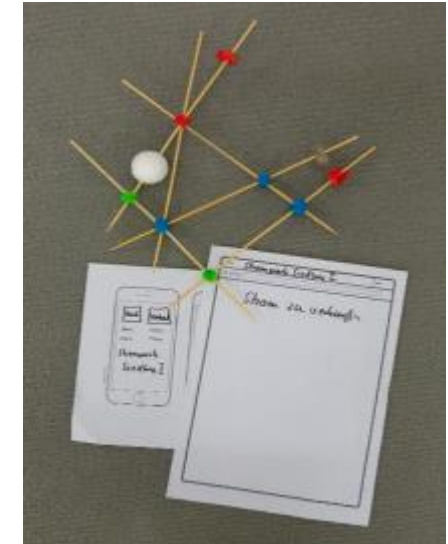
(Design Thinking Workshop, Wunsiedel March '18)



„Self-sufficient prosumer“



„Energy Community“

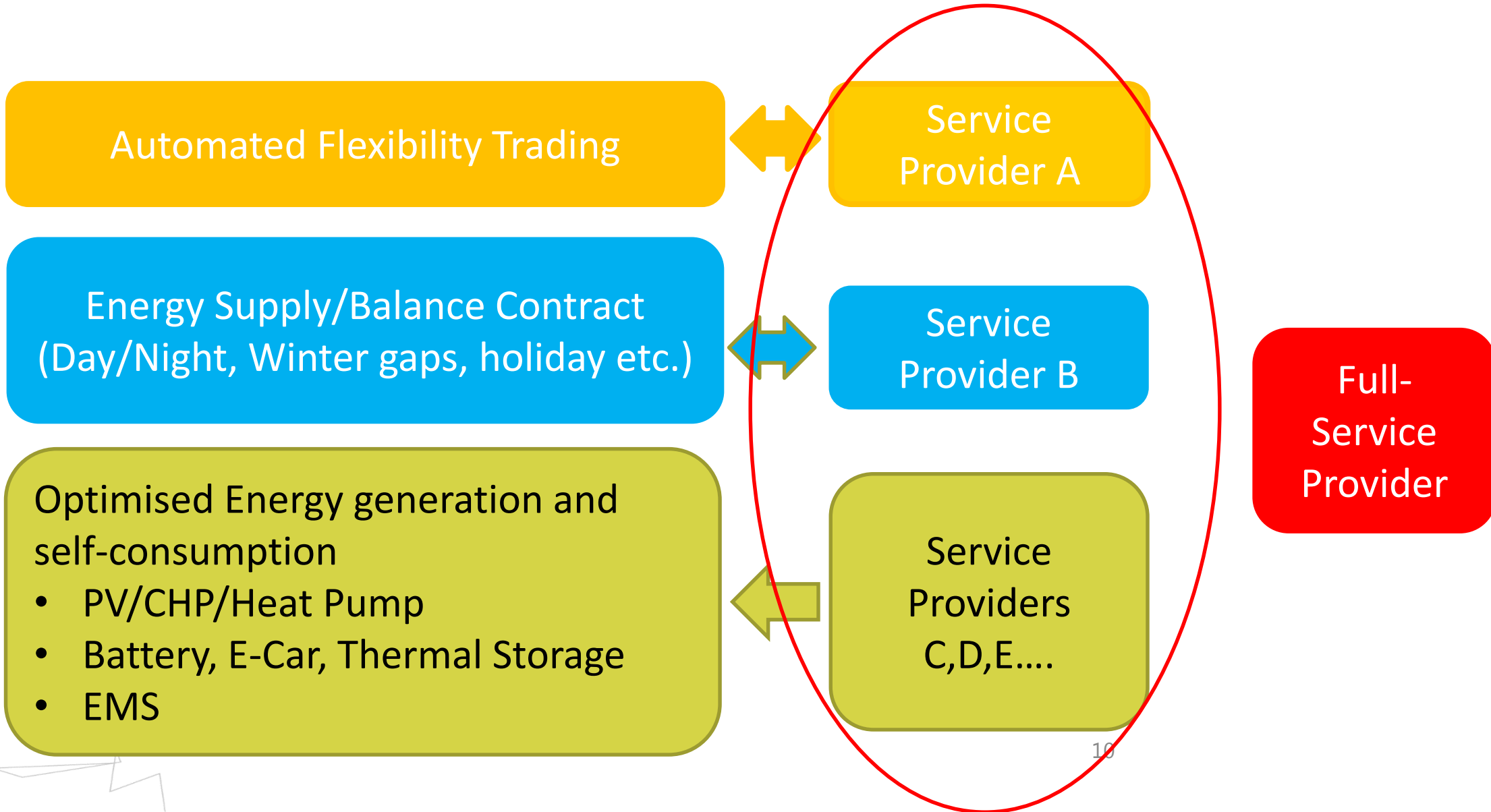


„Energy Community with Trading App“

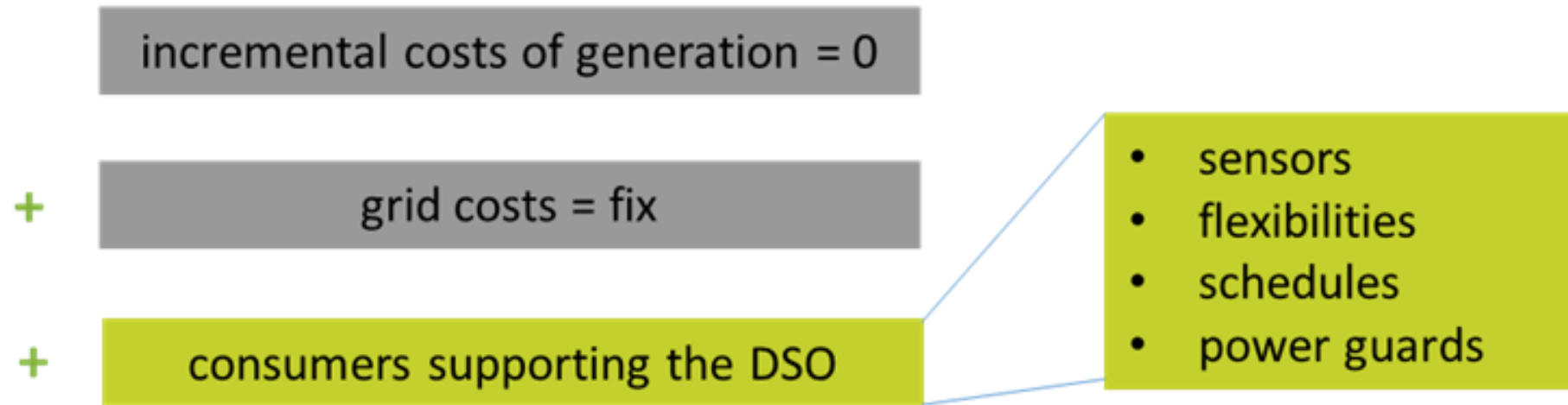


Impressions from the Design Thinking Process

Prosumer Business Model: Integrated Flexibility Provision



Consumer Business Model: Flatrates



Marco Krasser,
CEO SWW Wunsiedel

Business Strategy for Consumers and Prosumers



Consumer
using any
supplier



Consumer using
local renewable
supply



Prosumer with
Feed-in tariff



Prosumer using
self-consumption



GOFLEX Project Trials

Trial Site Wunsiedel, Germany



“We take the next step towards a 100% self-supply with regional and green energy for Wunsiedel “

Dipl.-Ing. Marco Krasser, CEO SWW Wunsiedel

Trial Site University of Cyprus



“The electricity grid of the island of Cyprus is a very weak one, making the flexibility offered by the GOFLEX demonstration sites doubly important”

Dr. George Elias Georgiou, Director of FOSS

Trial Site Sion, Switzerland



“The possibility of trading the operational flexibility available from various types of prosumers is at the core of our approach.”

Georges Darbellay, ESR, Director for strategy and development projects

Workshop “Commercial utilisation of distributed flexibilities in local energy systems”

When?

Wednesday, 7.11.2018 / 9:30-13:00

Where?

Meeting Room Schubert 3 - Hall B (1st Floor)

Who?

- Mark van Stiphout (DG Energy),
- Roberto Zangrandi (EDSO),
- Layla Sawyer (smartEN),
- Gunnar Braun (Bavarian association of municipal co-ops),
- Prof. Antonello Monti (RWTH Aachen)
- Hans de Heer (USEF)
- Elies Lahmar (EPEX Spot)
- and the GOFLEX project partners (IBM, INEA, University of Aalborg, B.A.U.M. and others)





Keep posted! Join the GOFLEX Community! www.goflex-community.eu

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