SET-Plan Action 4
WORKSHOP on PV Self Consumption: International exchange of R&D Project Leaders and Living Lab Initiatives

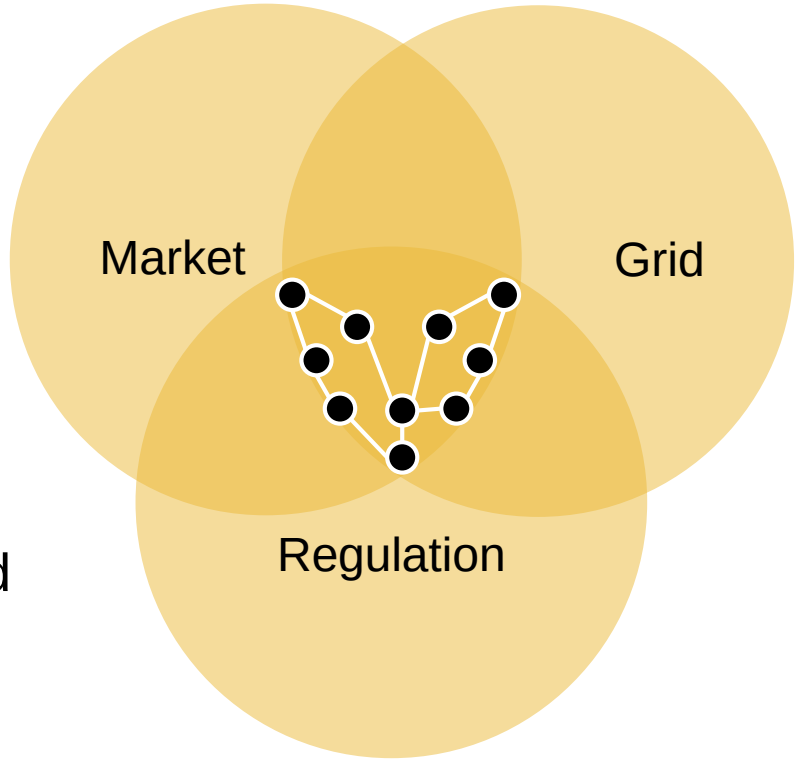
PVProsumer4Grid project meeting
Brussels, 23.10.2018

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 764786

PV Prosumers4Grid - Objectives

- **Increase the market share** and market value of **PV** by enabling **consumers** **to become PV prosumers** in a system friendly manner.

- **New management and business models** to combine PV, storage, flexible demand and other technologies into a commercially viable product. These will be assessed, improved, implemented and evaluated.



- PV Prosumer of the Future

PV Prosumers4Grid – Project partners

- **Target countries:** Belgium, Germany, France, Italy, Netherlands, Austria, Portugal, Spain
- **Start:** 01.10.2017
- **Duration:** 30 Months (March 2020)
- 12 Partners
- **Coordinator:** BSW-Solar
- EU-Horizon 2020
  Coordination and Support Action

AMBIENTEITALIA
RICERCA, CONSULENZA E PROGETTAZIONE PER LA SOSTENIBILITÀ

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LNEG
Laboratório Nacional de Energia e Geologia, I. P.

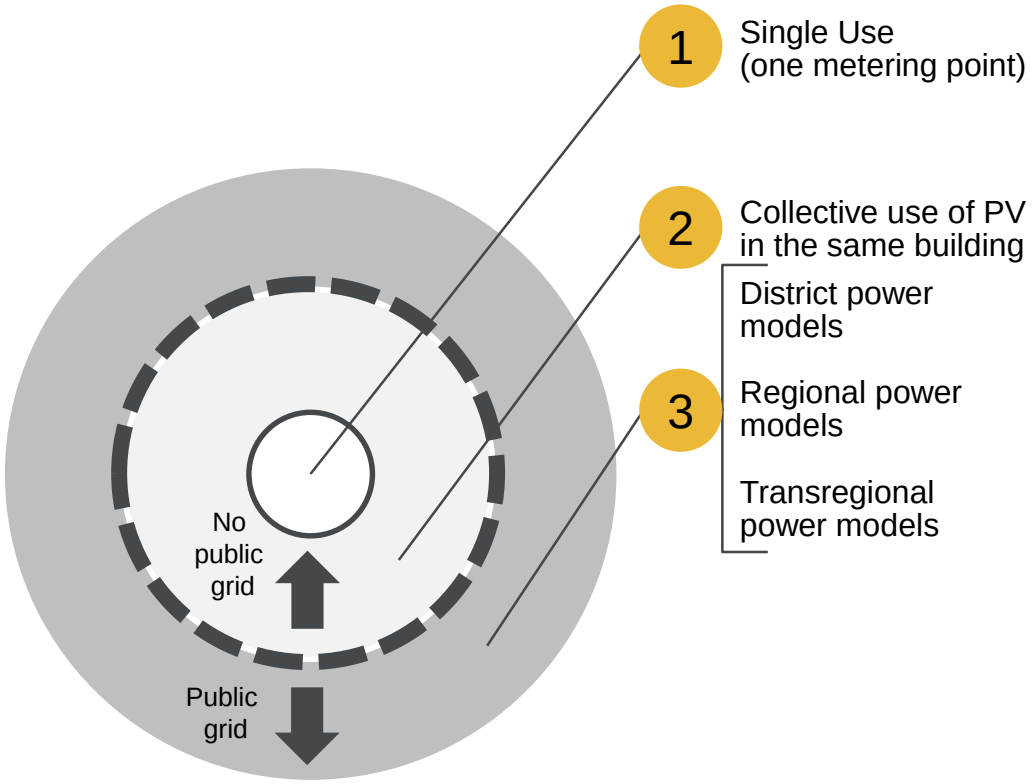
TU WIEN

UNEF
Spanish Photovoltaic Union

Utrecht University

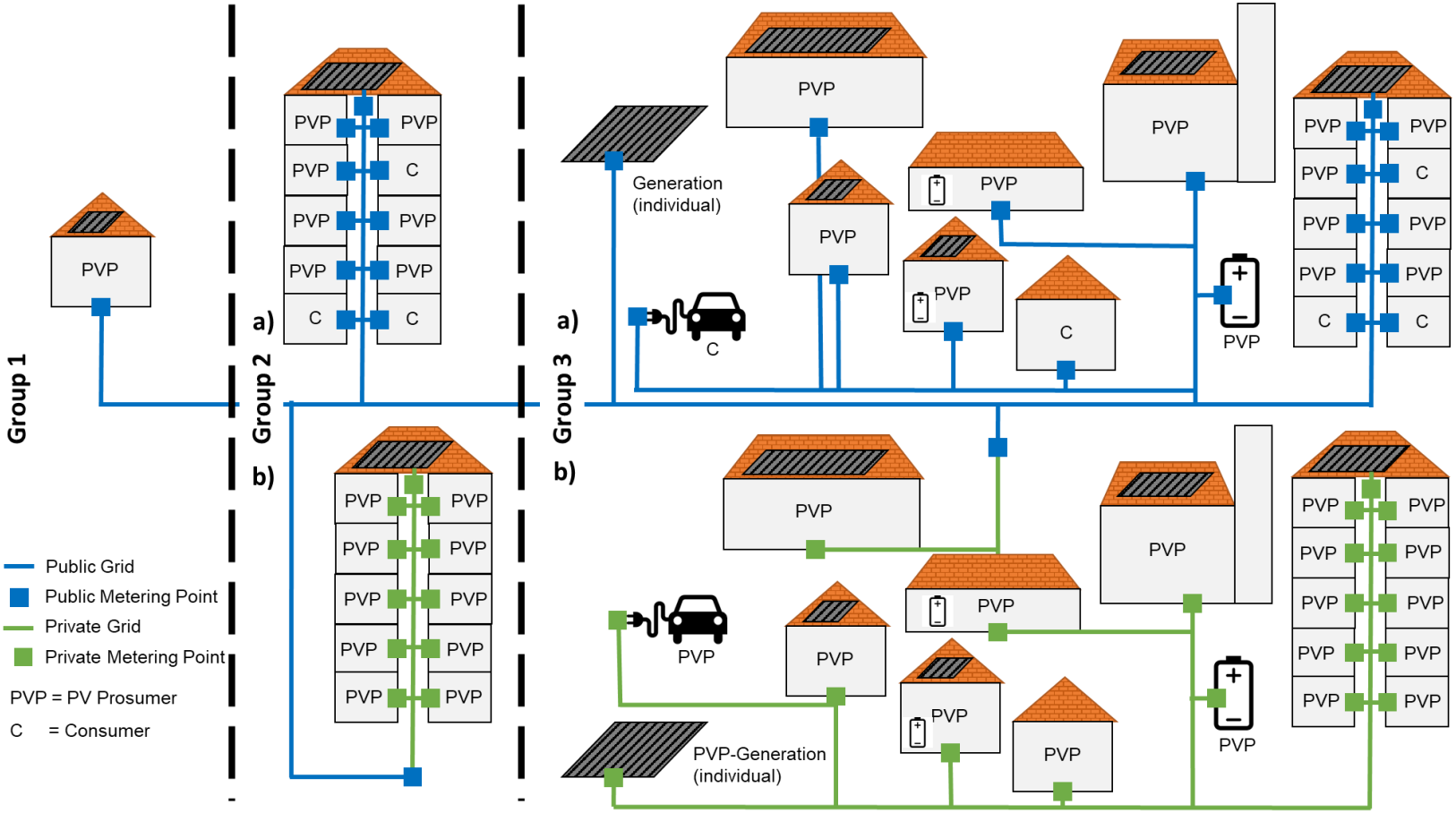
Classification of current PVP4Grid concepts according to WP2

- **Group 1: private local (on-site) self-consumption** where only one actor aims at consuming PV electricity at one place.
- **Group 2: collective self-consumption** where a group of actors aims at consuming electricity from a shared PV system.
- **Group 3: virtual self-consumption** where generation and consumption of PV happens at the same time but different locations.



Source: Lettner G., Auer H.,, et al. “D2.1 - Existing and Future PV Prosumer Concepts”, Public Report, 2018.

A more detailed view on the three groups

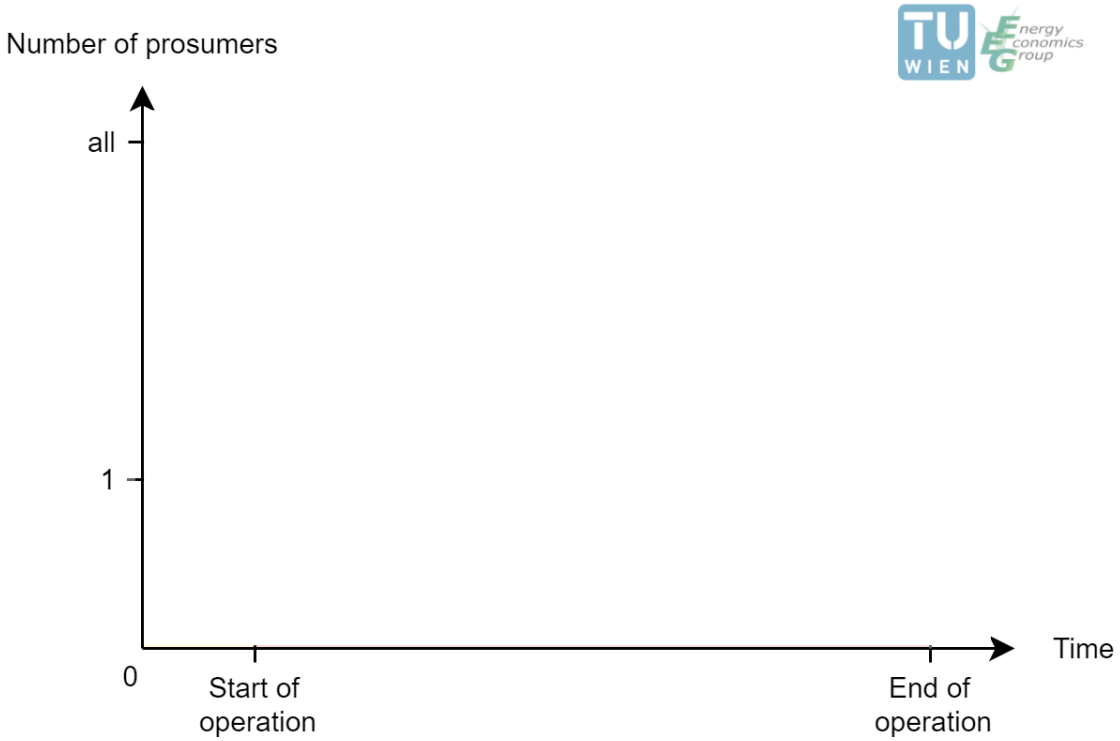


Source: Lettner G., Auer H.,, et al. “D2.1 - Existing and Future PV Prosumer Concepts”, Public Report, 2018.

Framework in PVP4Grid target countries

Country	Group 1	Group 2	Group 3	Comments
Austria	YES SC+market price or FiT	YES 2a) e.g. Multi-apartment buildings Not yet in commercial / office buildings	YES, allowed, although strong barriers for its implementation	Storage is promoted with financial support in CAPEX
Belgium	YES, 2 options: Pure SC Net-metering	NOT allowed yet, except for some exceptions at reginal level	NOT allowed yet, except for some exceptions at reginal level	Example for industrial park near Mery (demonstrative)
France	YES SC+fixed FiT+financial support	YES, designed as VPN embedded in the public network	Limitation to the same low voltage station, but allowed	Example of shared SC: Gironde Habitat/Les Souffleurs in a multidwelling
Germany	YES Very common SC+FIT	YES, Mieterstrommodelle" (neighbour solar supply model) PPA also possible	Allowed, however, hardly found due to condition of "consumer identity"	
Italy	YES SC+PPA or NM (or NB, as it exchanges money, not energy (*Scambio sul posto*)	NOT allowed	NOT allowed	Battery storage costs can be included for tax reduction purposes The last reform of the residential electricity bill, flatten the energy costs, making SC less convenient
Netherlands	YES Net-metering ("saldering")	YES. Well developed for apartments buildings	YES Postal Code Rose Policy	Analysis of optimal PV orientations and tilt for maximized SC (UU). Subsidy support scheme SDE+
Portugal	YES SC+ % of MIBEL)	YES, allowed, although strong barriers for its implementation	YES, allowed, although strong barriers for its implementation	Subsidies to investment for building renovation POSEUR
Spain	YES SC1: no remuneration for excess; SC2 + Market price No NM	NOT permitted yet. Collective self-consumption is not regulated yet	NOT permitted yet. Collective self-consumption is not regulated yet	Sun tax in force: charge for the electricity self-consumed. Storage is allowed

Classification of improved PVP4Grid concepts



Classification of improved PVP4Grid concepts

Individual concepts

- Individual investment
- Single metering point
- Virtual metering

Consumer specific

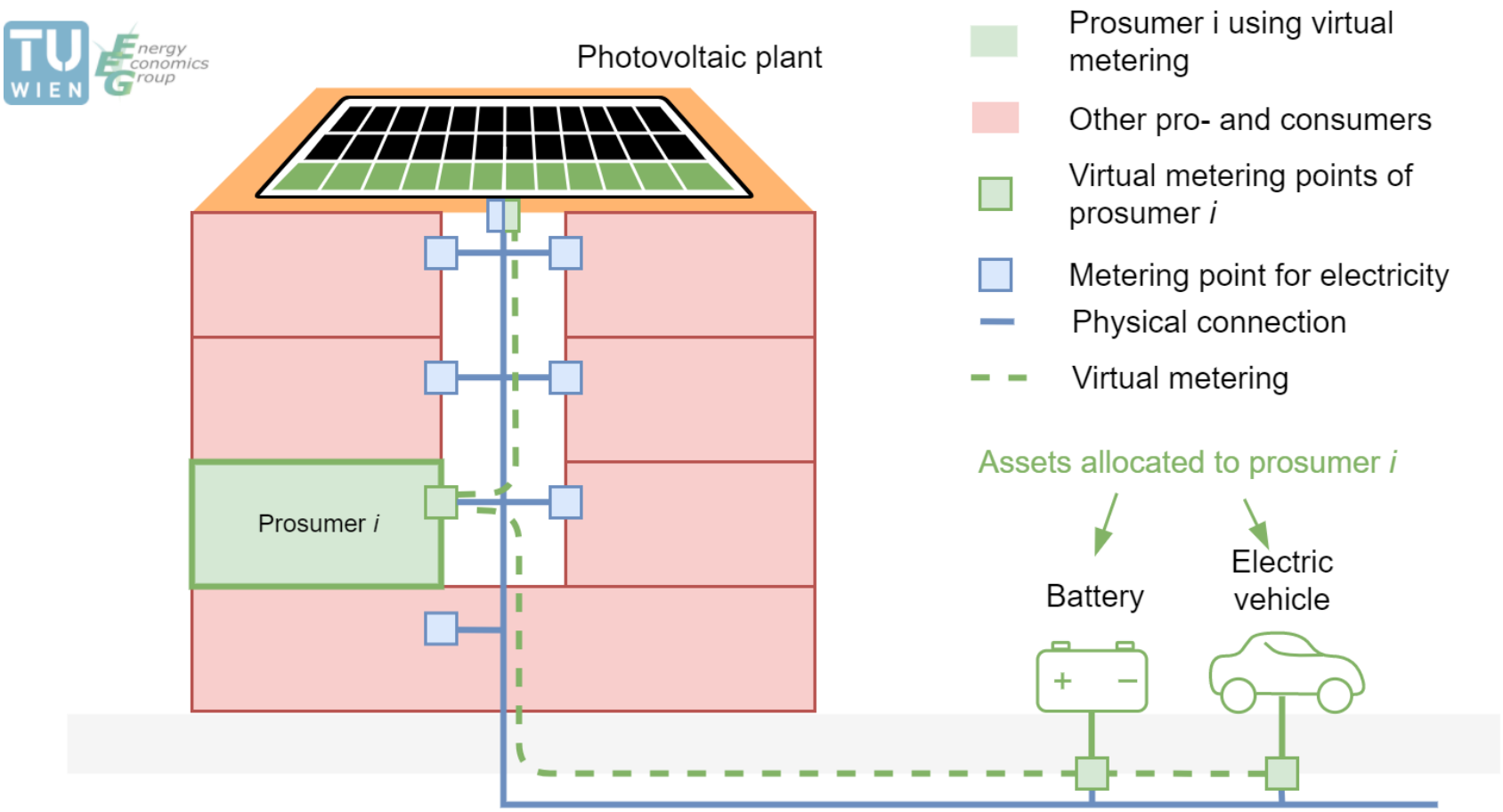
Community concepts

- Joint investment
- Peer-to-peer trading

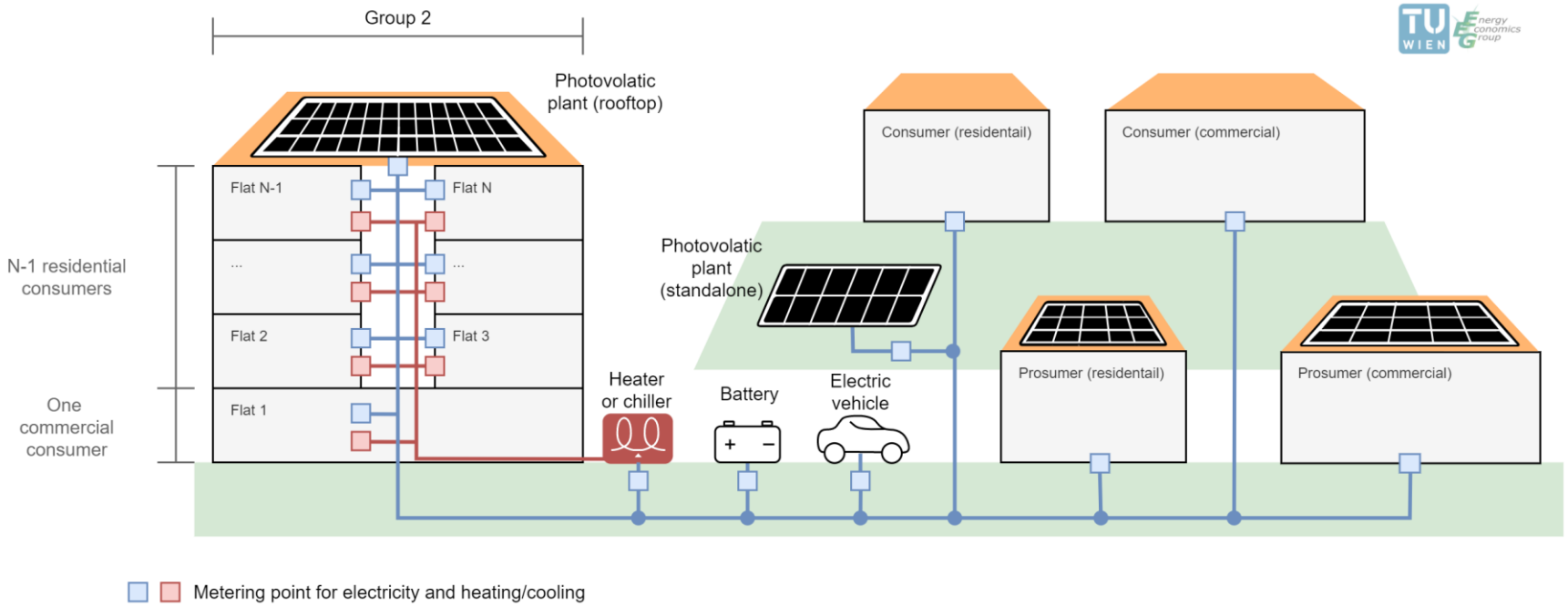
Group specific

Classification of improved PVP4Grid concepts

Individual concept - Virtual metering

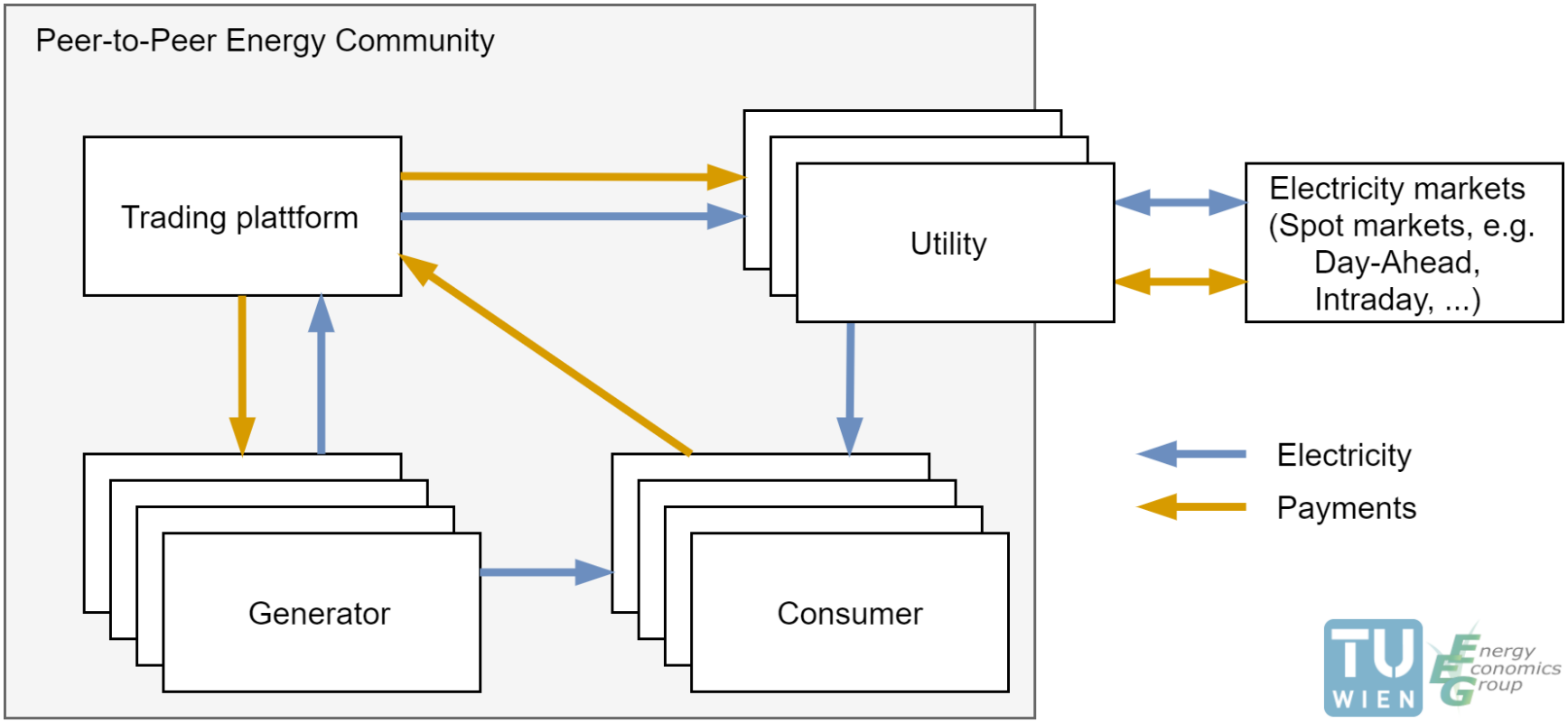


Prototype for group 3



Classification of improved PVP4Grid concepts

Community concept - Peer-to-peer trading



Adopted from: Hall, D.S., Roelich, D.K., 2015. Local Electricity Supply: Opportunities, archetypes and outcomes.

Results, Questions, Next Steps

Results:

- Overview of target countries framework
- Online Cash Flow Model: Calculation tool available free-of-charge via the project website. At present, in beta version, see: www.pvp4grid.eu/cmt

Research Questions:

- What are the benefits by sharing energy generation and flexible units?
- How to share benefits?
- Which barriers have to solve? (especially on prosumer and distributions system operators side)

Next steps:

- Identify novel prosumption models
- Testing of different concepts
- Elaboration of recommandations for prosumer, DSOs and policy makers

Follow and participate!

Twitter: twitter.com/PVP4Grid

Website: www.pvp4grid.eu

PVP4Grid Calculator: www.pvp4grid.eu/cmt

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