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Entity ENERCOUTIM

TOWARDS EVOLVING P2P ENERGY MODELS



BY&FORCITIZENS
European Conference on Smart,
Sustainable and Resilient Cities

H₂IBERIA

**SOLAR
LAB**

8 | **SOLAR
SYNERGY
GROUP**

PEARLS

ENERCOUTIM
ALCOUTIM SOLAR ENERGY ASSOCIATION

VICINITY
2020

RE
Resilient
Energy

**DEMONSTRATION
PLATFORM**

SHAR-Q

<p>RESEARCH & INNOVATION H2020</p> <p>VICINITY 2020 SHAR-Q</p>	<p>PILOTING DEMONSTRATION</p> <p>SOLAR COE</p>	<p>INFRA AND SERVICES 42HA 4MW</p> <p>DEMO PLATFORM</p>	<p>DEVELOPING HYDROGEN ECONOMY ECOSYSTEM</p> <p>H²IBERIA</p>
<p>FOCUS DER RES</p> <p>ENERGY INNOVATION DIGITAL ENERGY SOLUTIONS IOT ENERGY STORAGE</p>	<p>PLUG & DEMONSTRATE TECHNOLOGY INFRASTRUCTURES</p> 	<p>TEAM EXPERTISE</p> <ul style="list-style-type: none"> - RES SYSTEMS DEVELOPMENT OPERATIONS AND MANAGEMENT - RESEARCH & INNOVATION - SCIENTIFIC COMMUNICATION AND BRANDING 	<p>THE FUTURE OF DIGITAL ENERGY IS HERE</p> <p>COLLABORATE</p>

The 5 Ds of the Energy Transition

Why P2P models in the Energy sector matter

DECENTRALISATION
DECARBONISATION
DEMOCRATISATION
DEREGULATION
DIGITALISATION

Consumer Positioning Progression

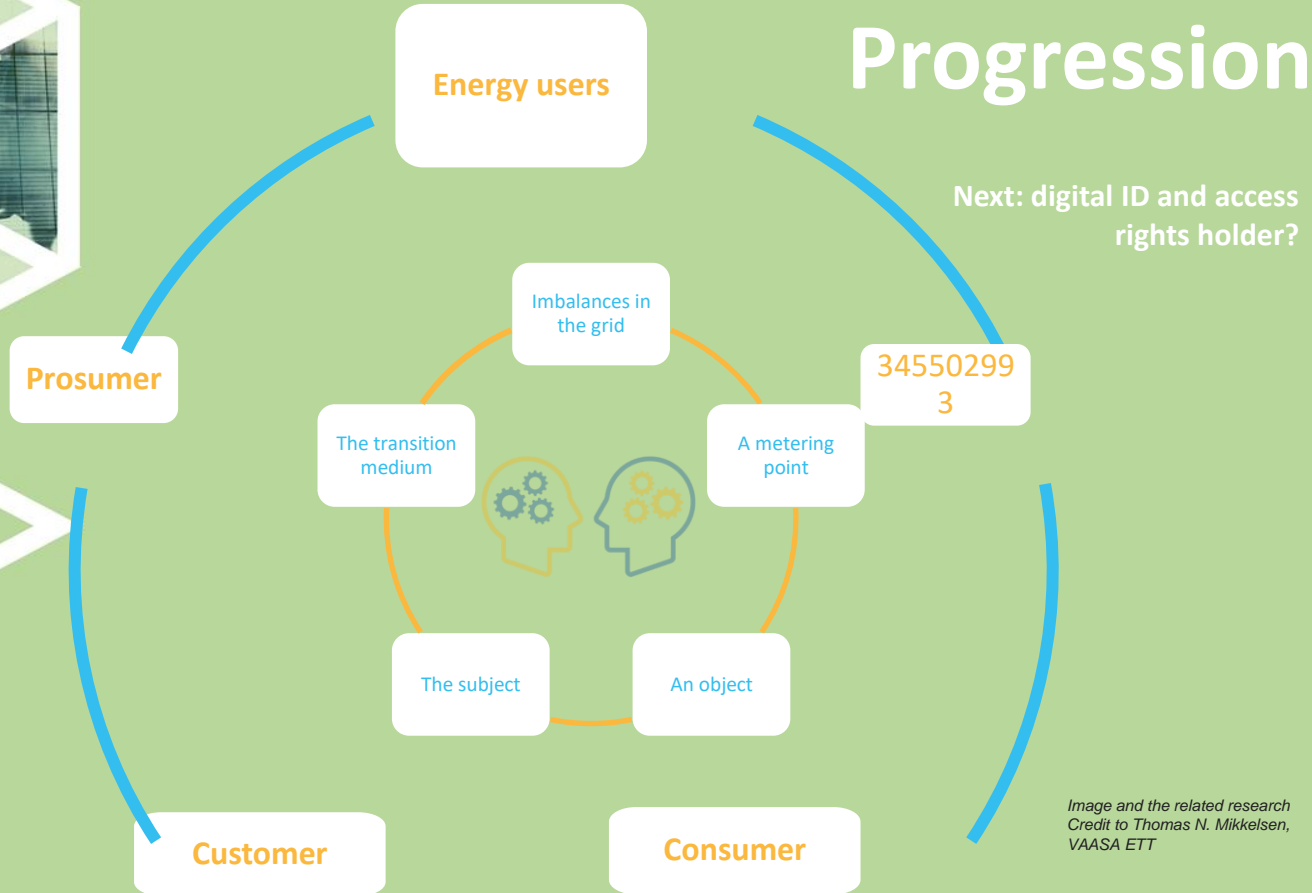
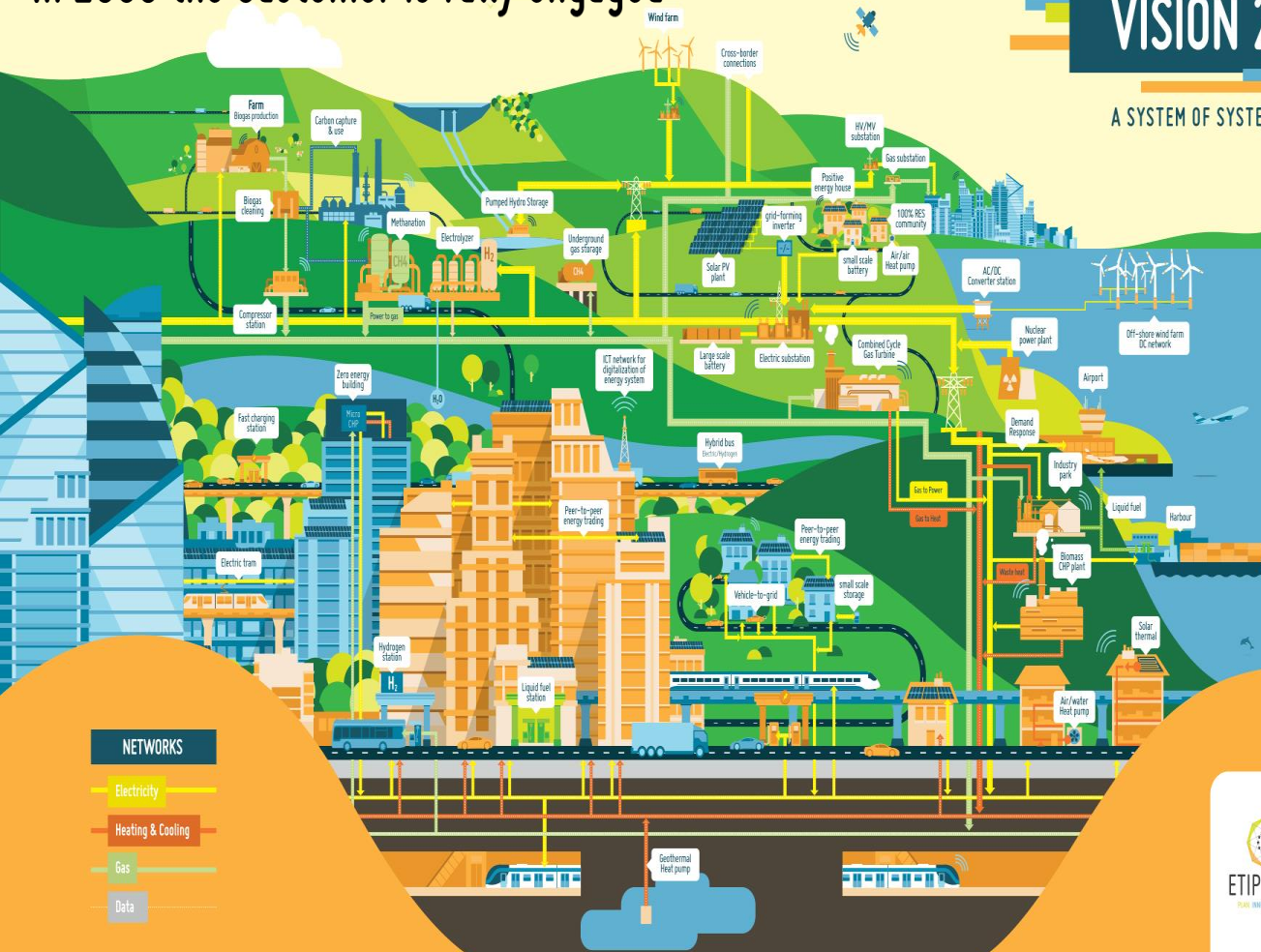


Image and the related research
Credit to Thomas N. Mikkelsen,
VAASA ETT

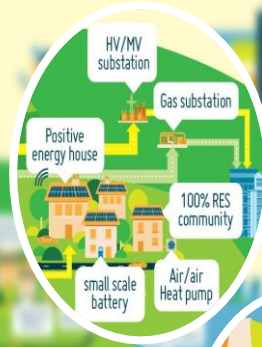
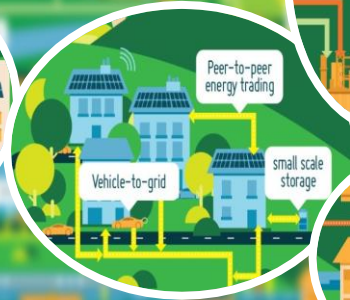
In 2050 the Customer is fully engaged

VISION 2050

A SYSTEM OF SYSTEMS



In 2050 the Customer is fully engaged



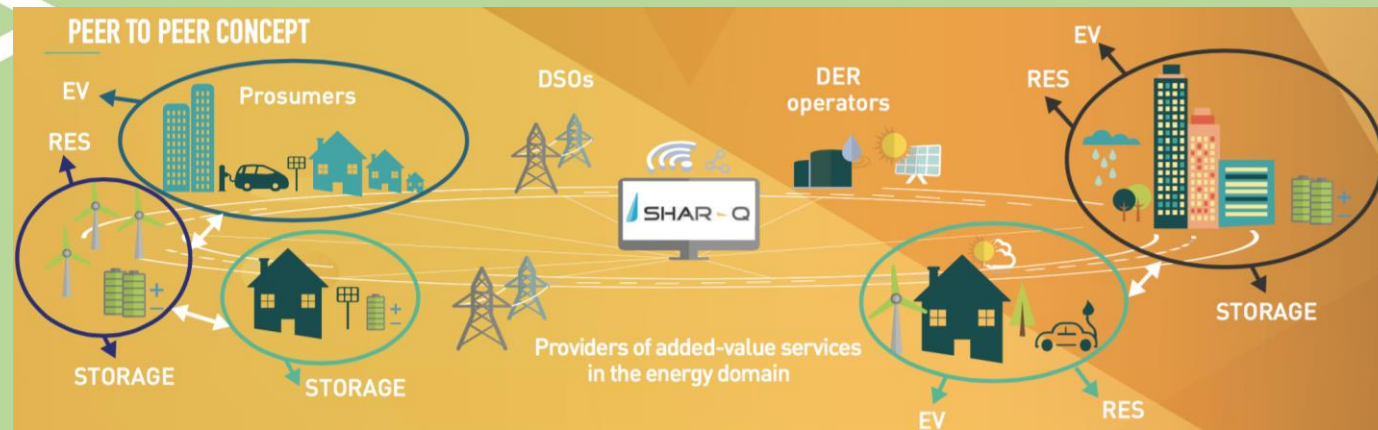
VISION 2050

A SYSTEM OF SYSTEMS



Energy System in Transition SHAR-Q and VICINITY approach

- ① Decentralised and smarter system
- ② Low carbon energy generation
- ③ New modes and levels of interaction and management
- ④ New transmission, generation and balancing technologies and services





VICINITY project

www.vicinity-h2020.eu

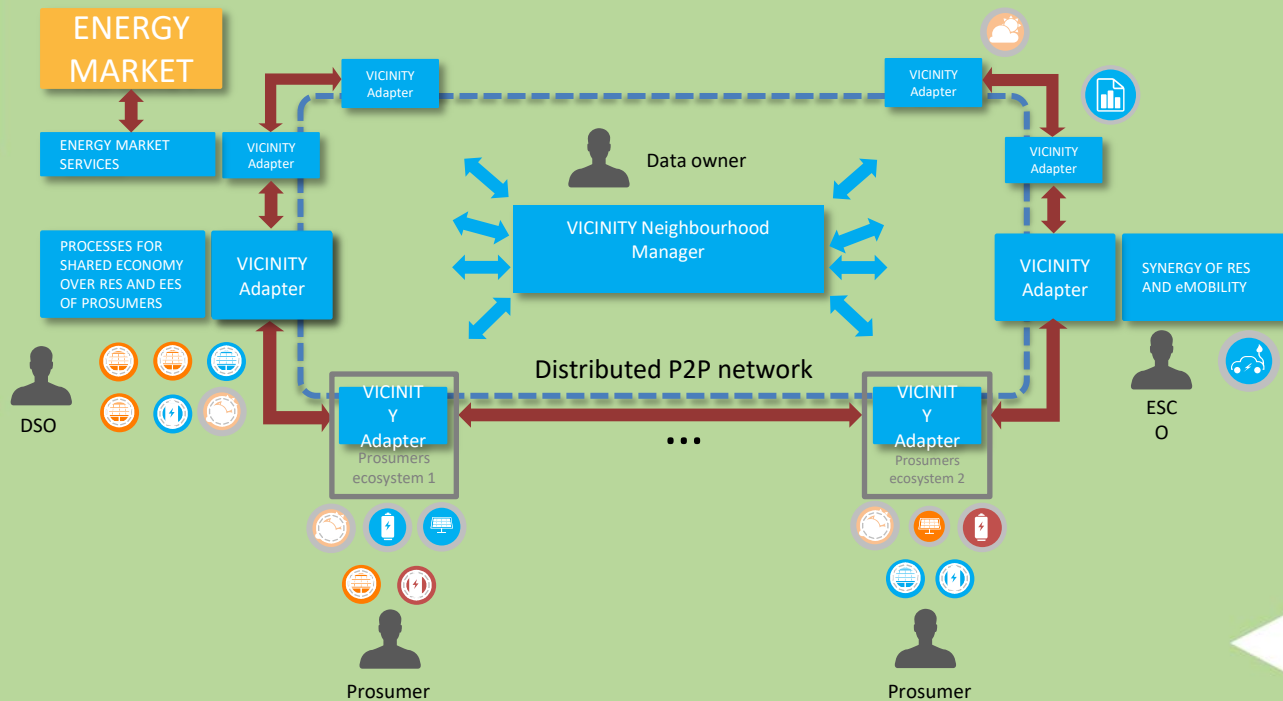


Service for semantic cross domain interoperability

- Common ontology model based on existing standards
- Standards being updated/maintained in the cloud
- Open integration API
- Transparent ecosystems - virtual neighbourhood
- Value-added services; 3rd party, AI algorithms – monitoring – data mining, prediction, optimizing



Peer-to-peer network integration of ecosystems and value-added services in DER



Communication setup based on sharing rules



Operational data



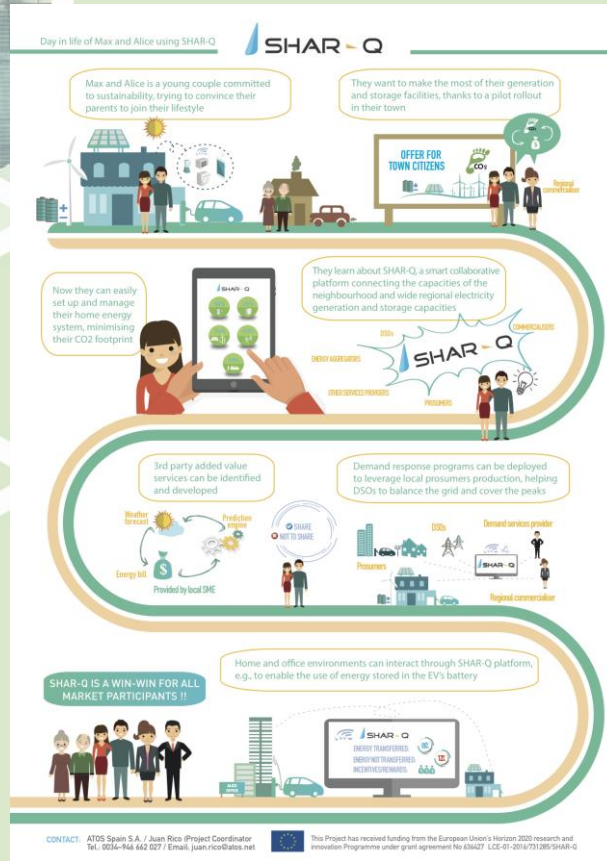
SHAR-Q project

www.sharqproject.eu

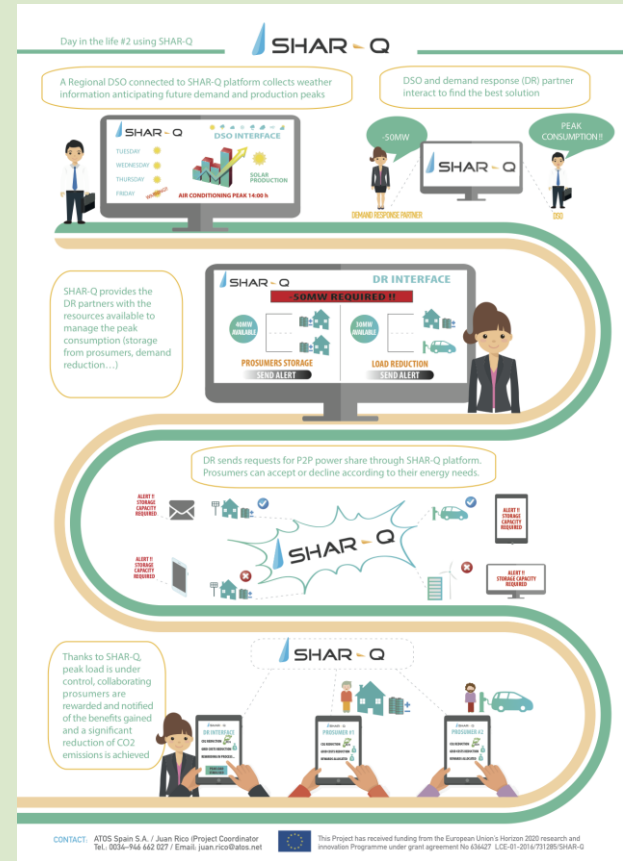


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DILO PROSUMER perspective



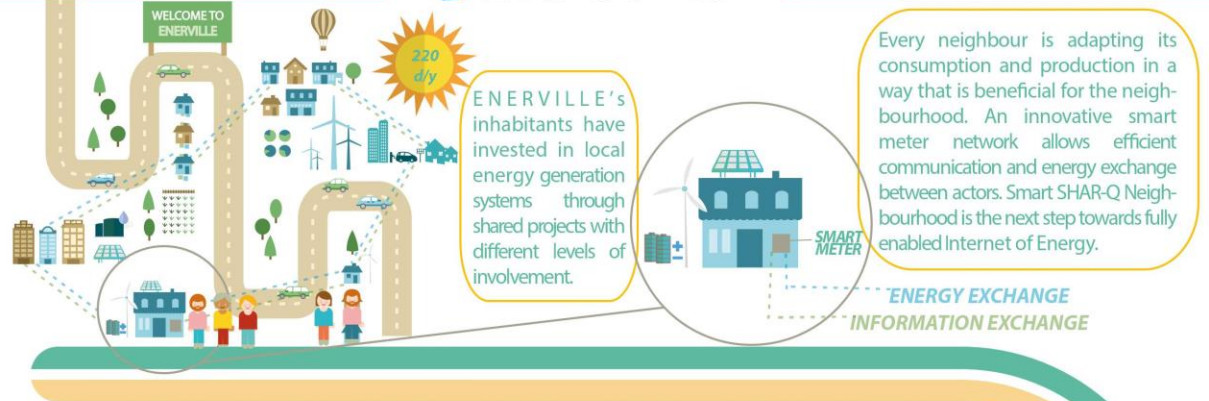
DILO GRID OPERATOR perspective



DILO

Smart Neighbourhood

Day in the life of a Smart-Neighbourhood



FAMILY B: Using the SHAR-Q Peer-to-Peer energy trading system they can store the excess energy of Family A. Possibility of optimisation of self-consumption or provision of electricity to neighbours/grid.

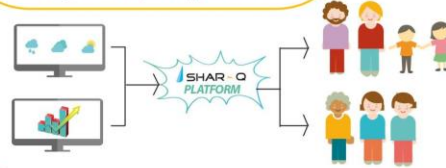
FAMILY A: Production for own needs + possibility to inject energy into the smart grid



DILO

Smart Neighbourhood

SHAR-Q provides optimisation of consumption patterns thanks to accurate weather prediction services and consumption estimations. The platform communicates when it is beneficial for the neighbourhood to use large consumption appliances.



FAMILY C: EV charging system enables to supplement the storage capacity by using V2G technology.



SHAR-Q collaborative enables the optimum utilisation of DER assets in both environmental and economic terms.



An innovative, responsive, smart and active neighbourhood is created thanks to SHAR-Q.

SEE YOU SOON
ENNERVILLE



Four types of IoT Business models:



1. Anything as a Services

2. Multi Sided Market

**3. Partnerships / Barter
/Reciprocity**

4. Freemium



Natalie Samovich

THANK YOU FOR YOUR ATTENTION!