

# Universal Smart Energy Framework

How working along a new common standard enhances value creation

A solid foundation for smart energy futures



More variations in energy flows causes more complexity

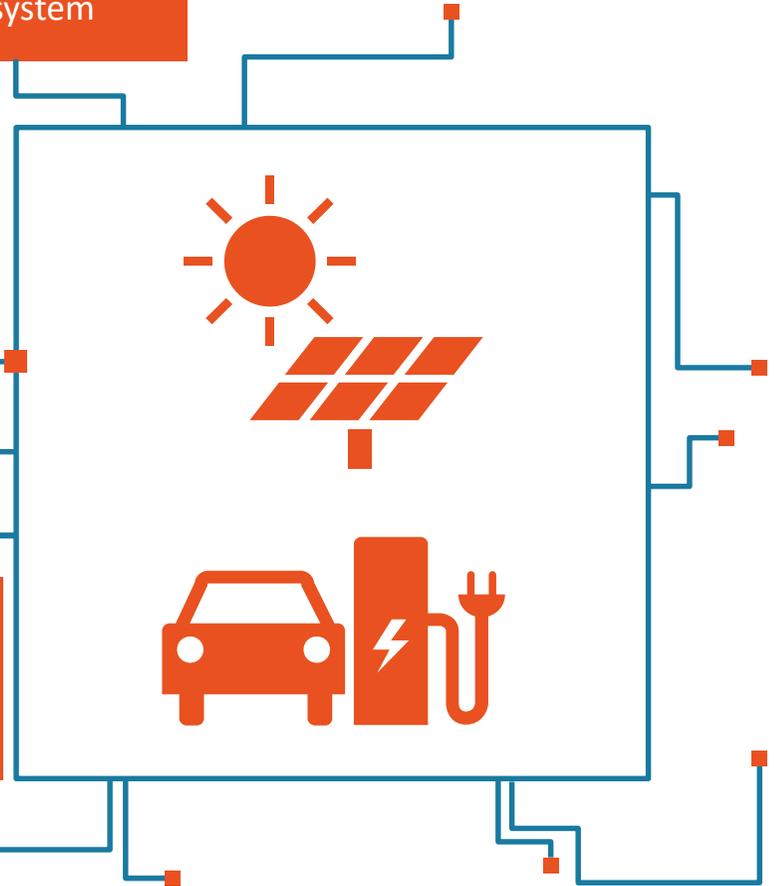
More local production

More local players

And more up-and downloads of energy anywhere in the system



Energy System



Yet our current market system is not designed to facilitate more interaction

# FLEXIBILITY

To make the energy market truly sustainable – green, reliable and affordable- our system needs more flexibility. We already utilize energy flexibility on a wholesale level, to avoid imbalance and transmission congestion. Yet we need the flexibility of prosumers to keep overall system costs low.

USEF is an extended market model revolving around localised flexible energy use. It fits on top of most market models and enables the active market participation of all players, new and traditional.

**One integrated smart energy market**



**One common standard with specifications & rules**



**Many benefits for all in the system**



**Addressing the challenges of one integrated system**

FOUNDING  
PARTNERS:

USEF, a non-commercial partnership, was founded in 2013 to design a scalable solution that recognizes the different stakeholders and their role in a coherent and commercially viable smart energy system and to accelerate its development.



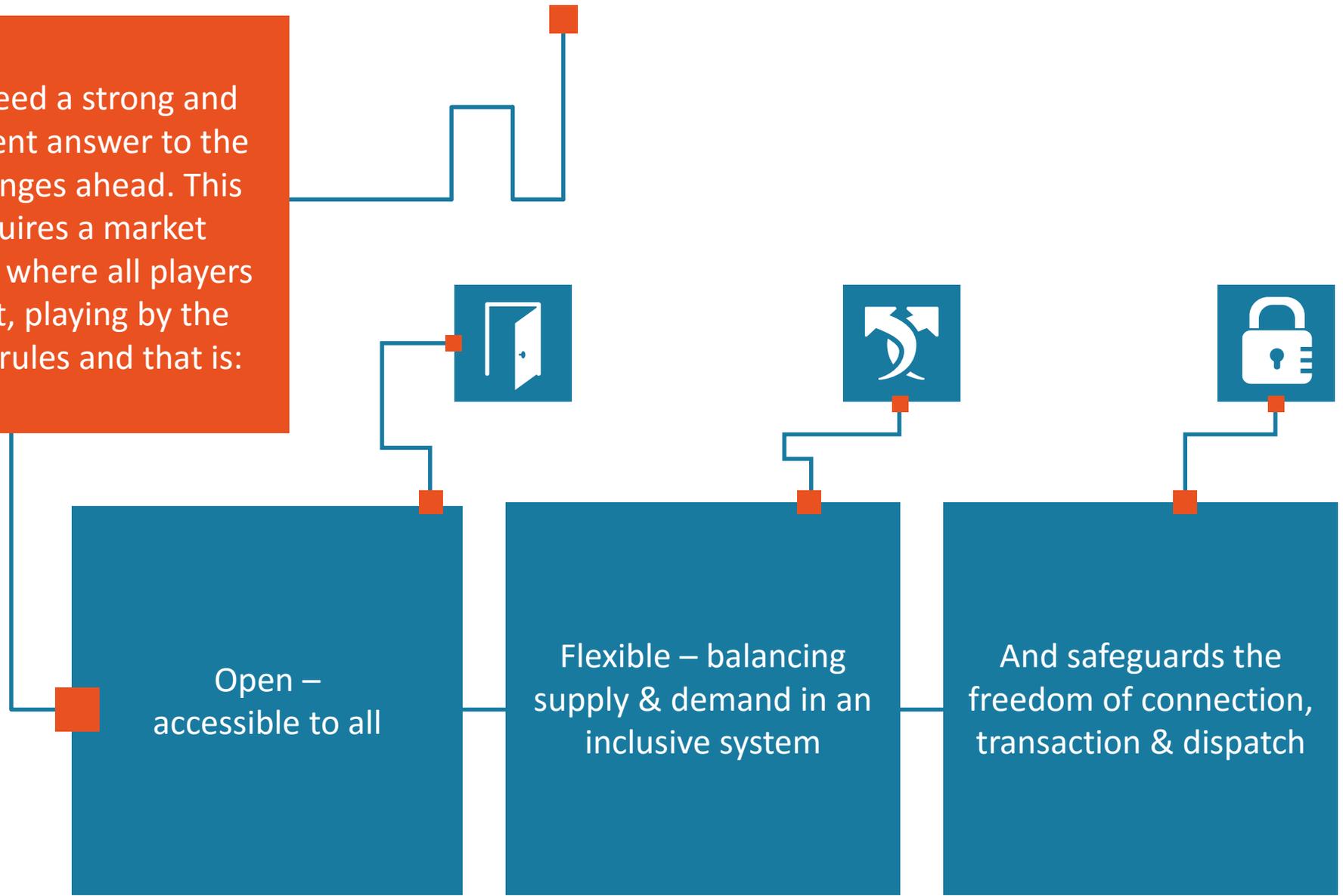
We believe that opening up an integral market for flexibility enables smarter solutions for energy exchange to the benefit of all in the system.

Plus, we believe that in order to create such a market, we need to work together, along one common standard, joining forces across roles and boundaries.

# ONE INTEGRAL MARKET



We need a strong and coherent answer to the challenges ahead. This requires a market design where all players profit, playing by the same rules and that is:



Traditionally the supplier has a one-way relationship with the consumer. *"This is what you have used. Here's the bill."*

For a more sustainable system, USEF recognizes the importance of bi-directional relationships and enables the interaction between the prosumer and the traditional energy players when it comes to energy flexibility.

By clustering the available flexibility and offering this to the market, the aggregator (intermediary) alleviates pain for all parties involved.

USEF enables the uniform exchange and use of information across roles and organisations.

USEF is a framework, with roles, responsibilities and agreements. And with very clear processes for effective interaction. The key process of contracting, planning, validation, operation & settlement are comparable to the existing BRP wholesale process. But we also add usage prognoses for the individual consumers.



USEF describes the interaction in a market with three variables:



Demand



Supply



Flexibility



Capability



Intention



Realisation



Compensatio  
n



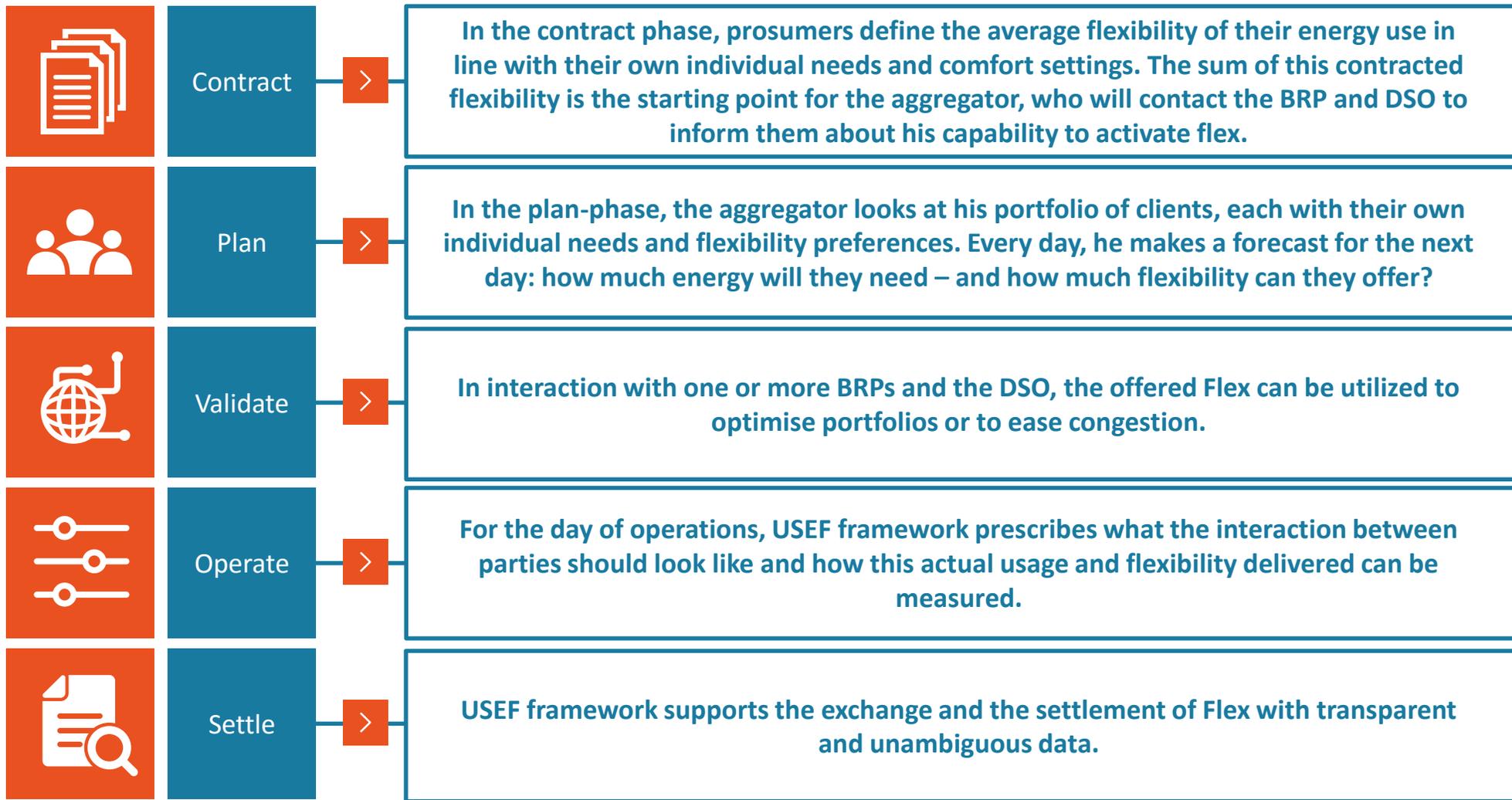
The flexibility market revolves around four basic steps, as part of the known processes:

**Capability:** When and how stakeholders are informed about the capability to activate

**Intention:** When and how stakeholders are informed about the intention to activate

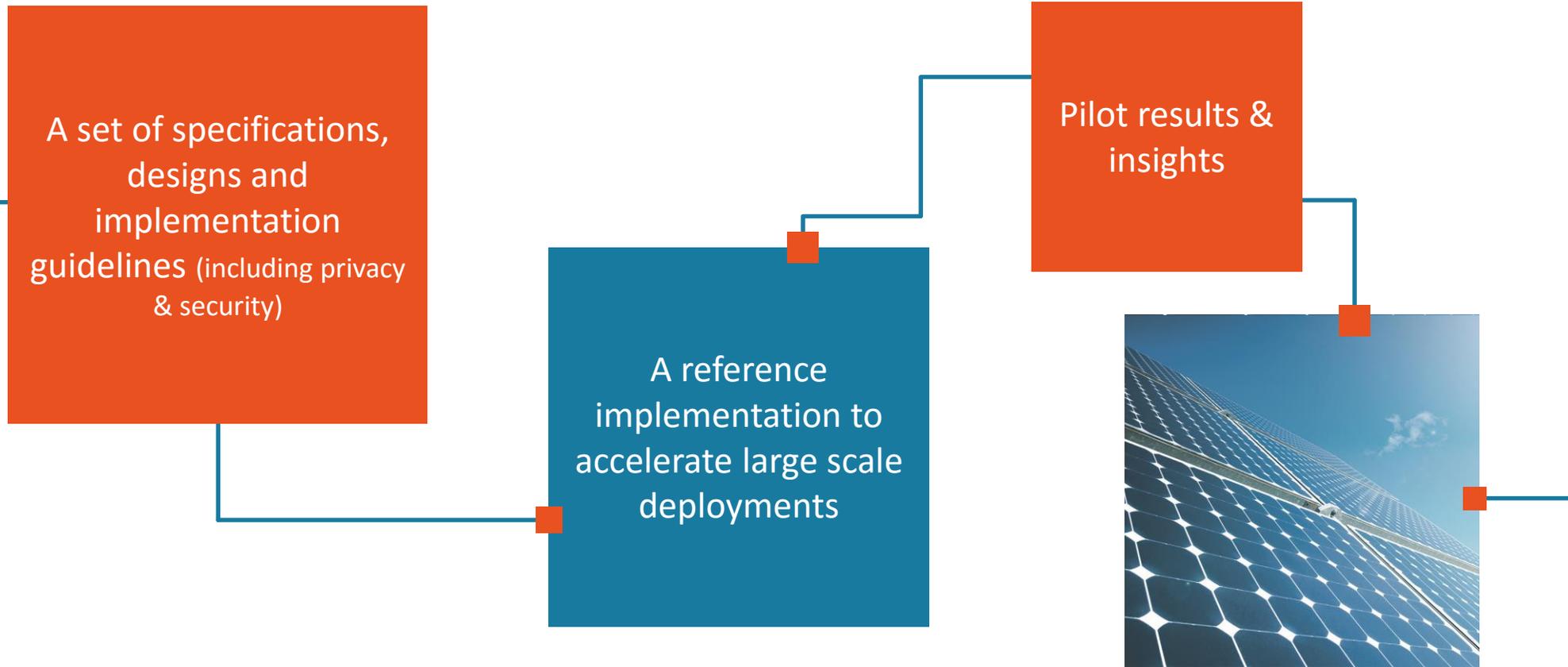
**Realization:** When and how stakeholders are informed about the realisation of the activation (based on measurements)

**Compensation:** When and how stakeholders are compensated (through settlement)



The end result? More sustainable, more effective and thus more profitable use of the energy infrastructure.

USEF describes the market for flexibility and provides free access to

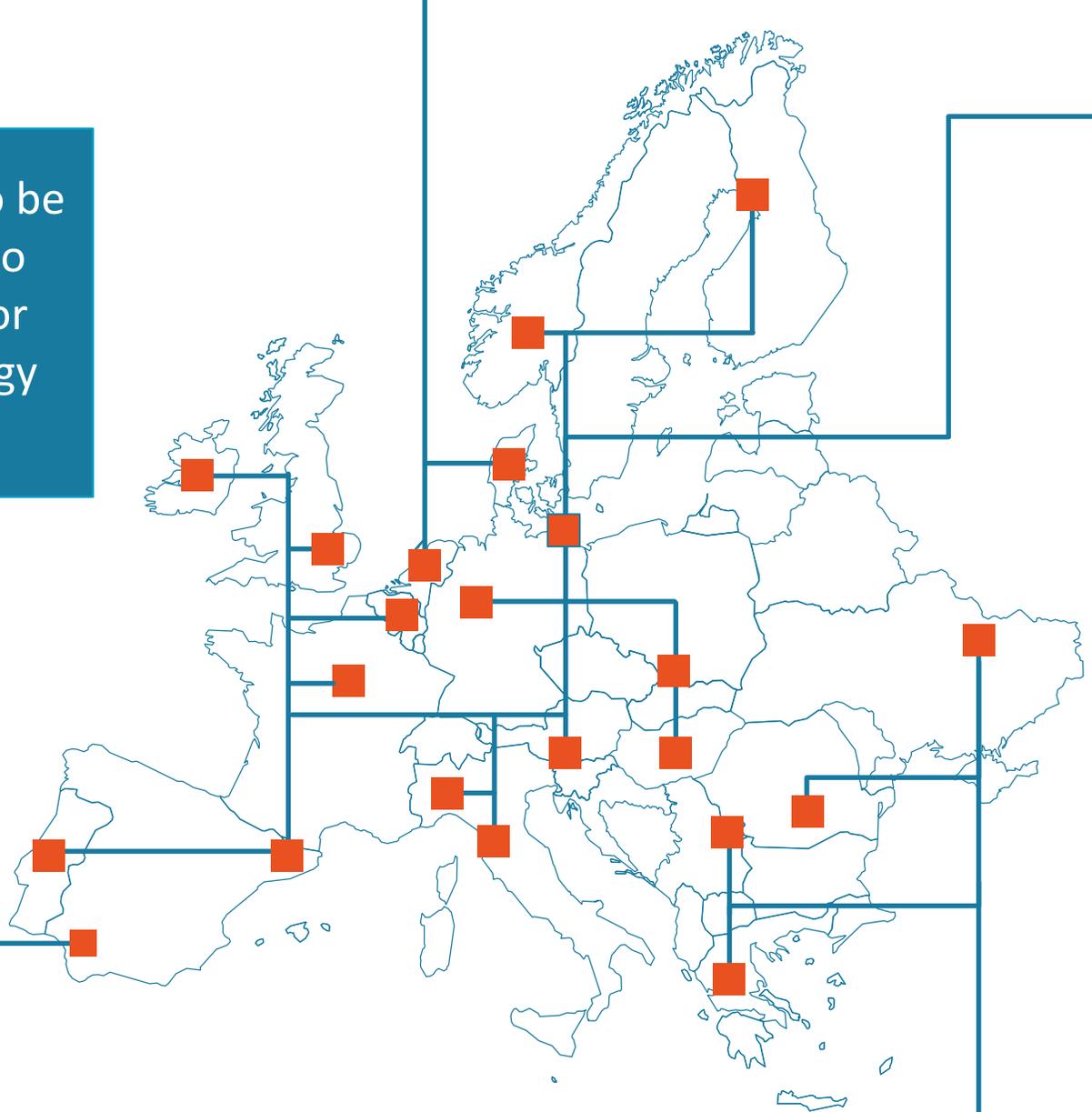


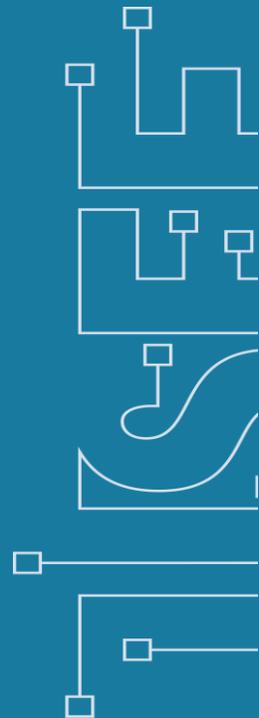
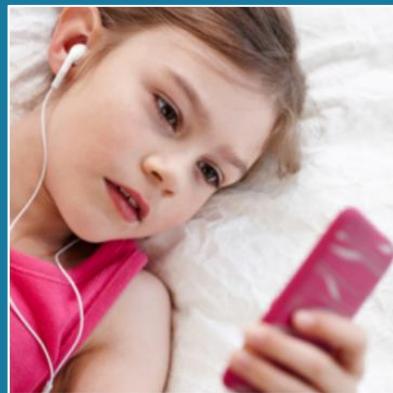
USEF market control mechanism creates the commercial conditions for large scale implementations, enhancing value creation.

Ambition

USEF aims to be the de facto standard for smart energy systems.

In 2020 we want to be part of 25% of all smart energy systems in at least 5 different markets.





# Join us

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**A solid foundation  
for smart energy  
futures**

