

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

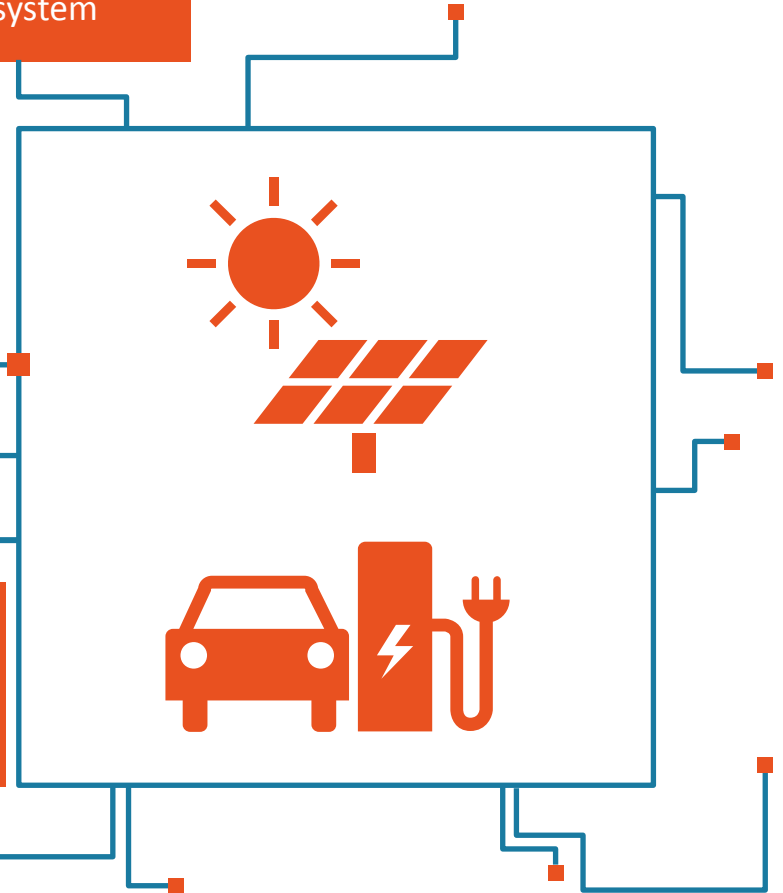
More local
production

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:

Open –
accessible to all

Flexible – balancing
supply & demand in an
inclusive system

And safeguards the
freedom of connection,
transaction & dispatch

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.





Capability



Intention



Realisation



Compensation



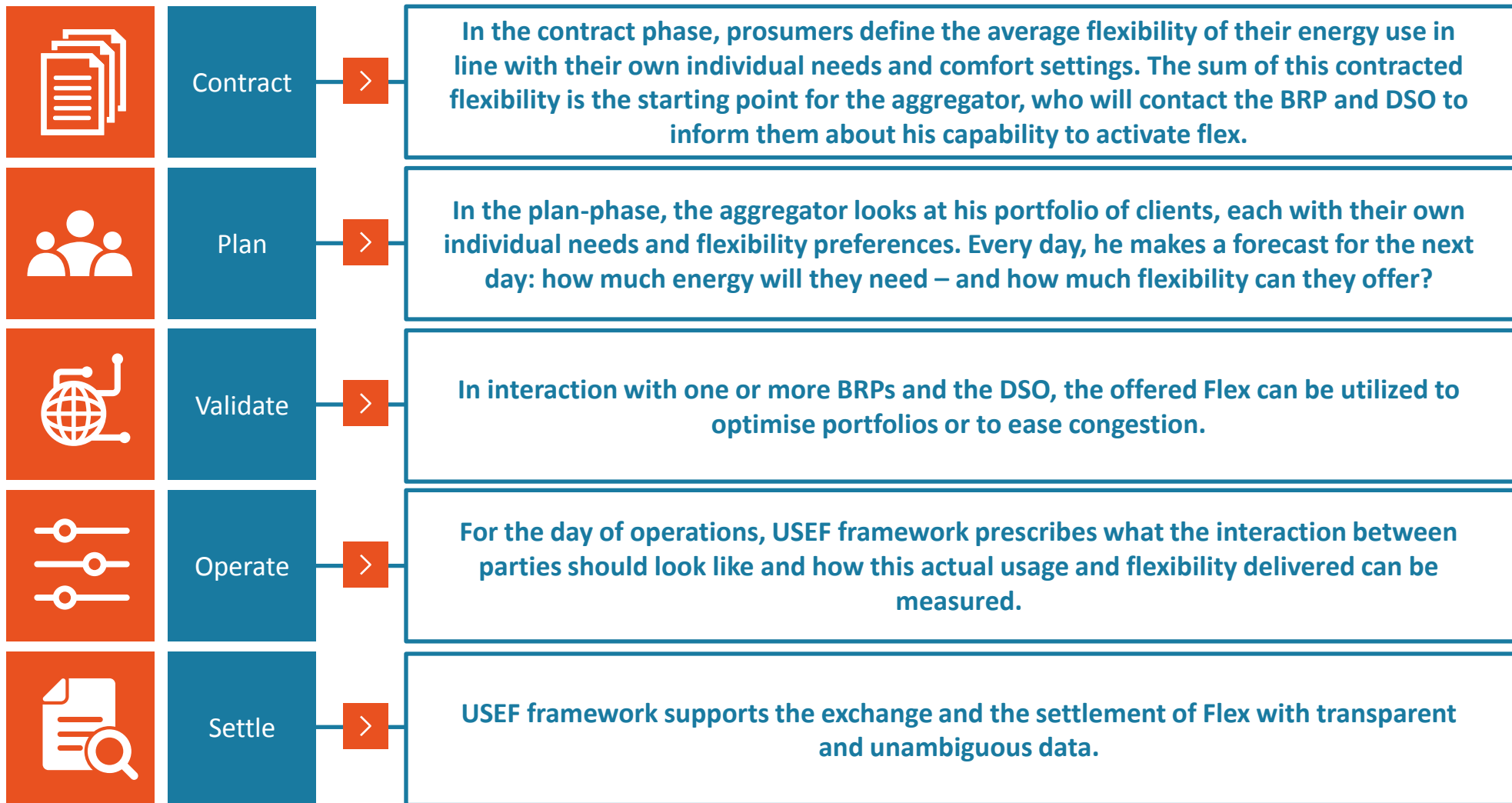
The flexibility market revolves around four basic steps, as part of the known processes:

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

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

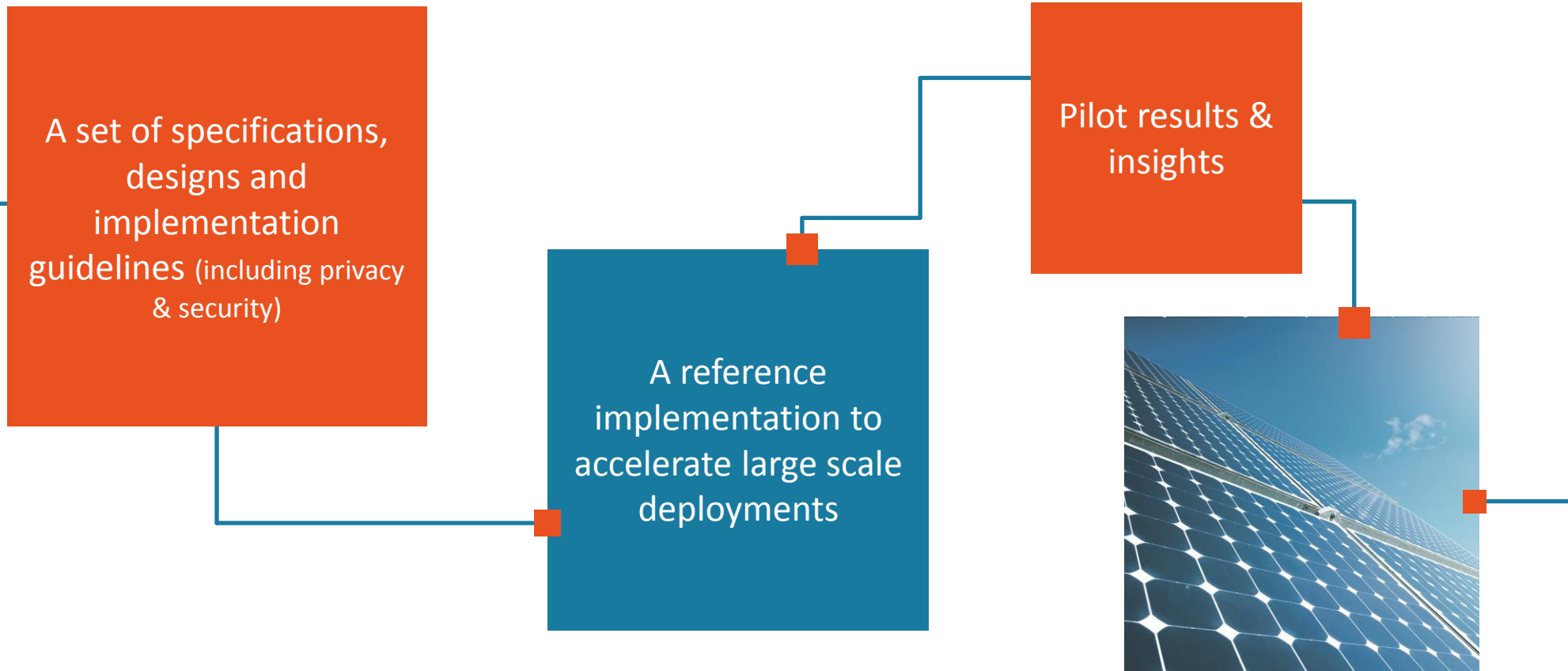
Realization: When and how stakeholders are informed about the realisation of the activation (based on measurements)

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

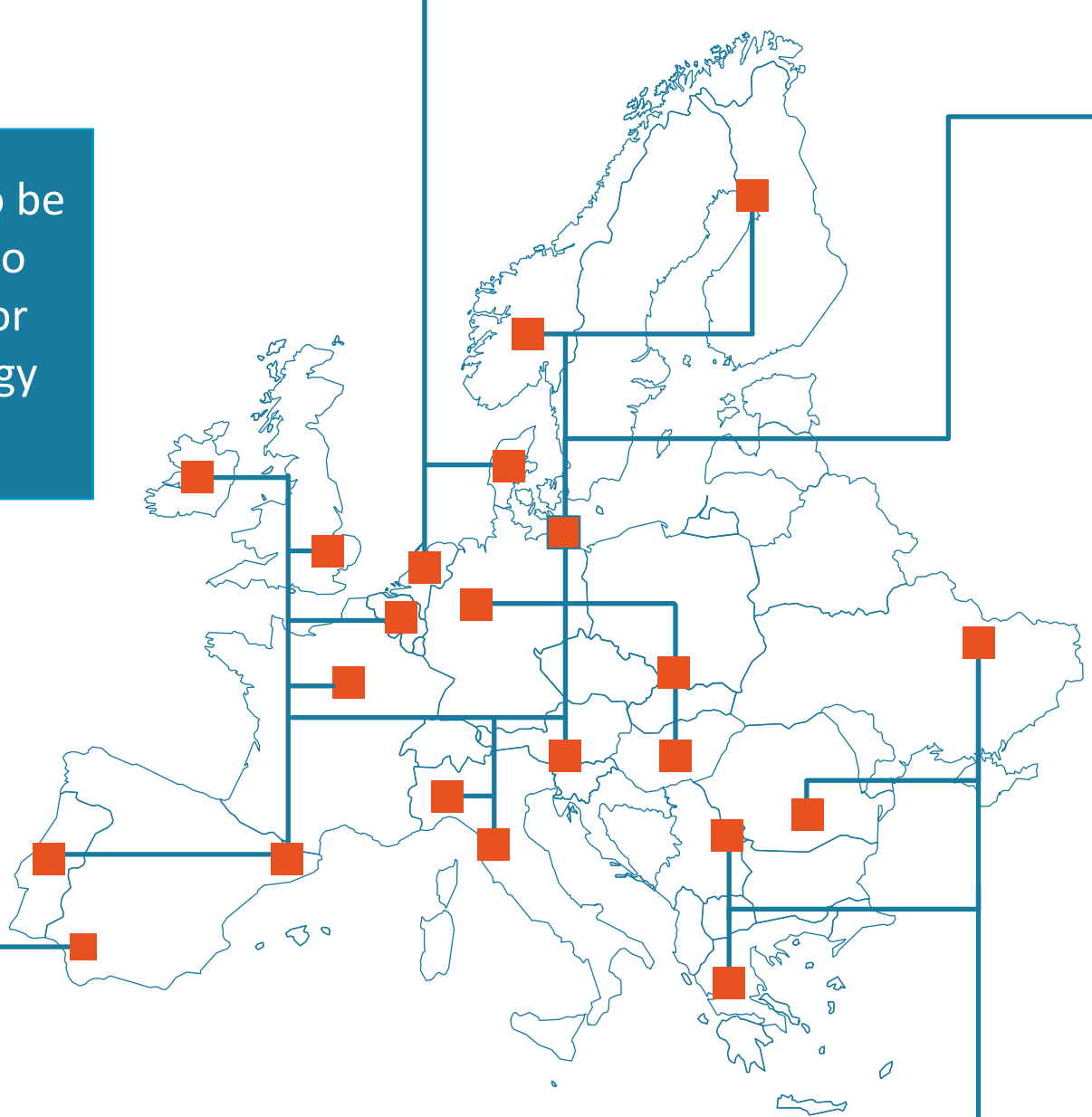


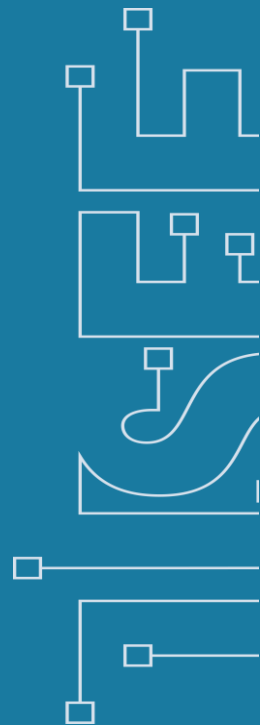
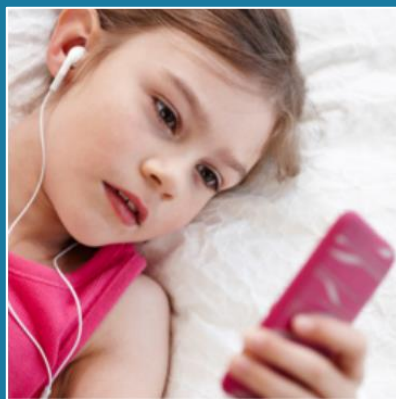
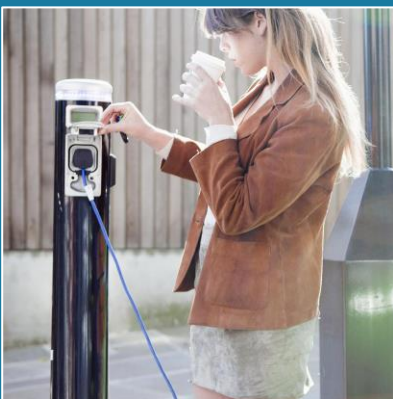
USEF market control mechanism creates the commercial conditions for large scale implementations, enhancing value creation.

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**

