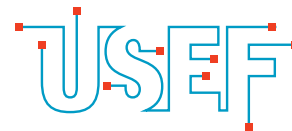


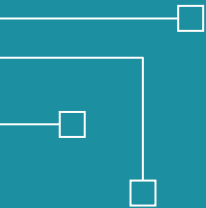


A solid
foundation for
smart energy
futures

UNIVERSAL SMART ENERGY FRAMEWORK

Unlocking the market
for flexible energy use





More variations
in energy flows
causes more
complexity

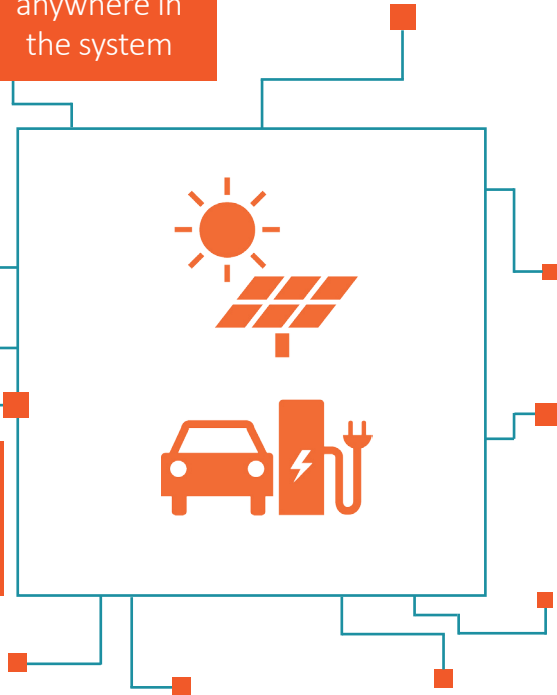
More local
production

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.



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.

alliander

STEDIN^{NET}

IBM

-essent

ABB

ICT⁺

DNV·GL

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.



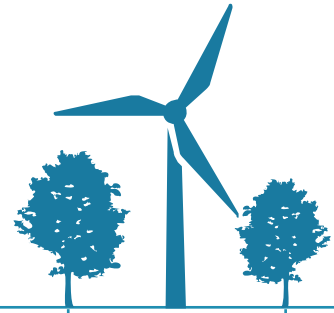
And safeguards
the freedom
of connection,
transaction and
dispatch.

Traditionally the supplier has a one-way relationship with the consumer.
“This is what you have used. Here’s the bill.”

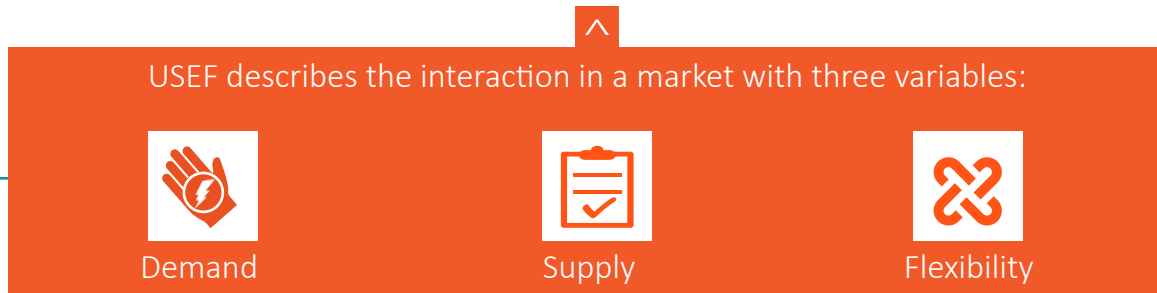
For a more sustainable system, USEF recognizes the importance of bi-directional relationships and enables the interaction between the prosumer and the traditional energy players when it comes to energy flexibility.

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 is comparable to the existing BRP wholesale process. But we also add usage prognoses for the individual consumers.





Capability



Intention



Realisation



Compensation



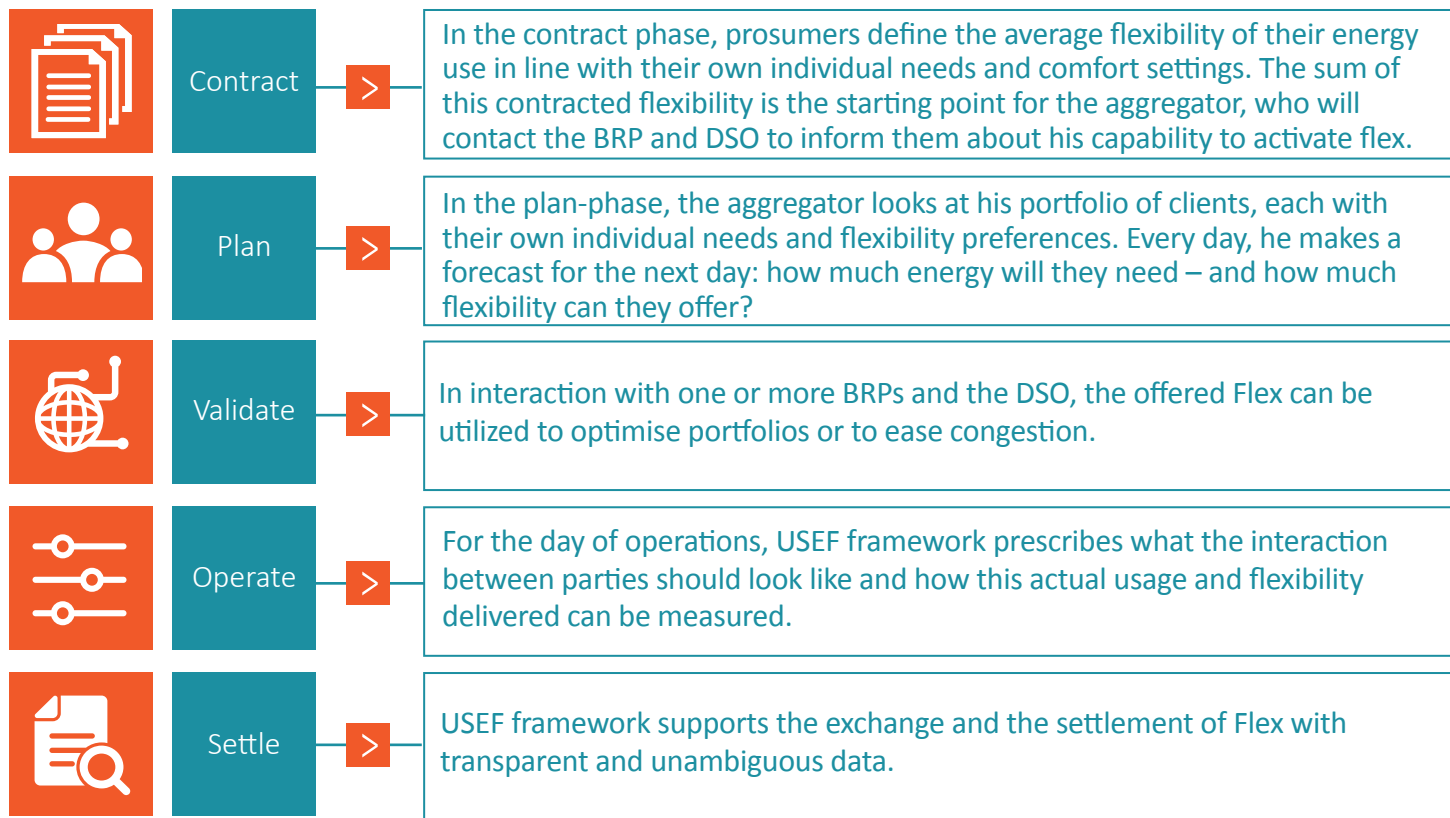
The flexibility market revolves around four basic steps, as part of the known processes:

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

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

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

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



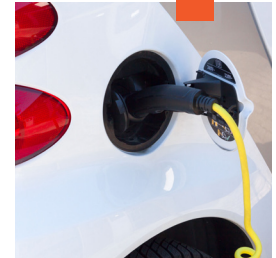
The end result? More sustainable, more effective and thus more profitable use of the energy infrastructure.

USEF describes the market for flexibility and provides free access to

A set of specifications, design and implementation guidelines (including privacy & security)

Pilot results & insights

A reference implementation to accelerate large scale deployments

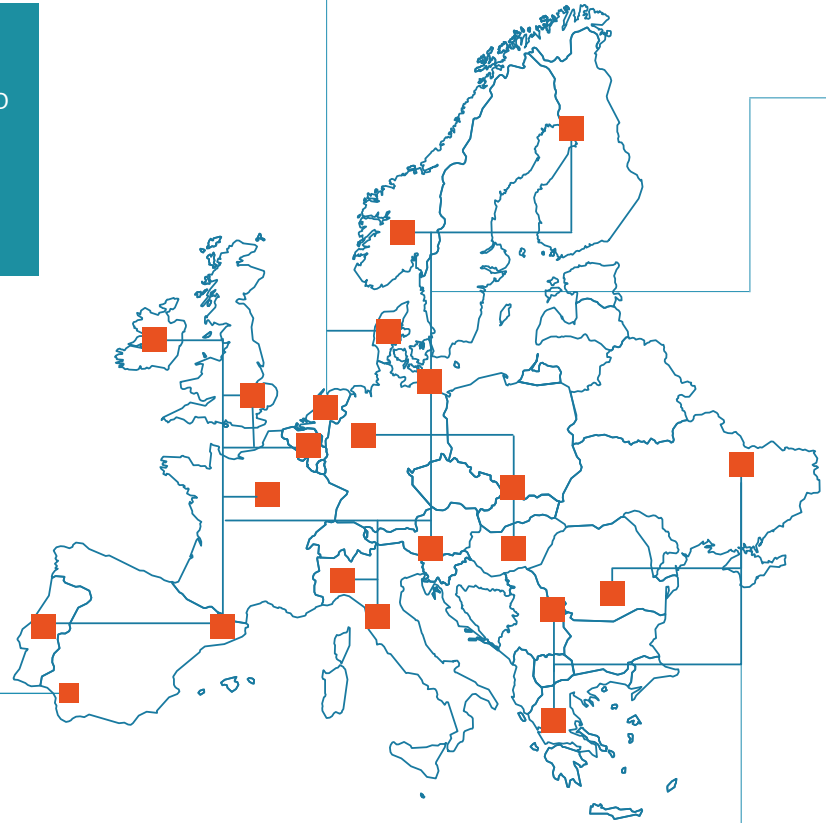


USEF market control mechanism creates the commercial conditions for large scale implementations, enhancing value creation.

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.

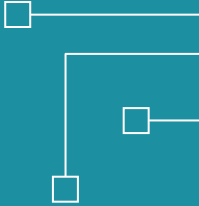


JOIN US

With existing detailed specifications and the first real-life pilots in the market, USEF is perhaps the most comprehensive, advanced initiative of its kind. Yet we look to expand our cooperation because we believe that working together across roles and boundaries is the fastest route to a fair and sustainable market.

By getting involved with USEF, you can help to shape the future integrated smart energy system.

WWW.USEF.ENERGY



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