



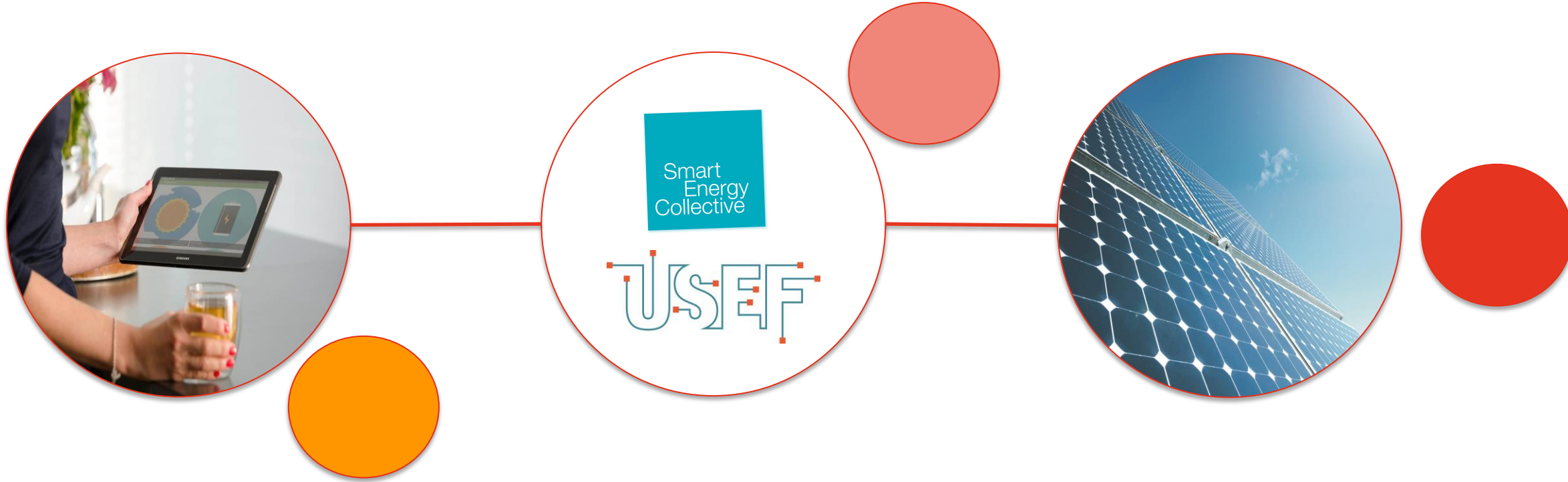
Empowered customers on an open smart energy markets
How to accelerate the energy transition

Frits Verheij, Member of the Board of TKI Urban Energy
European Utility Week, October 4, 2017

Are you empowered? And your neighbour?



Outline



- Role of consumers in smart energy markets
- The importance of an open standard for a smart energy design
- Next step: implement standardized flexibility market mechanisms



Objectives Dutch Innovation Consortium (TKI) on Urban Energy

1



Accelerating
Energy Transition
in Built
Environment



2



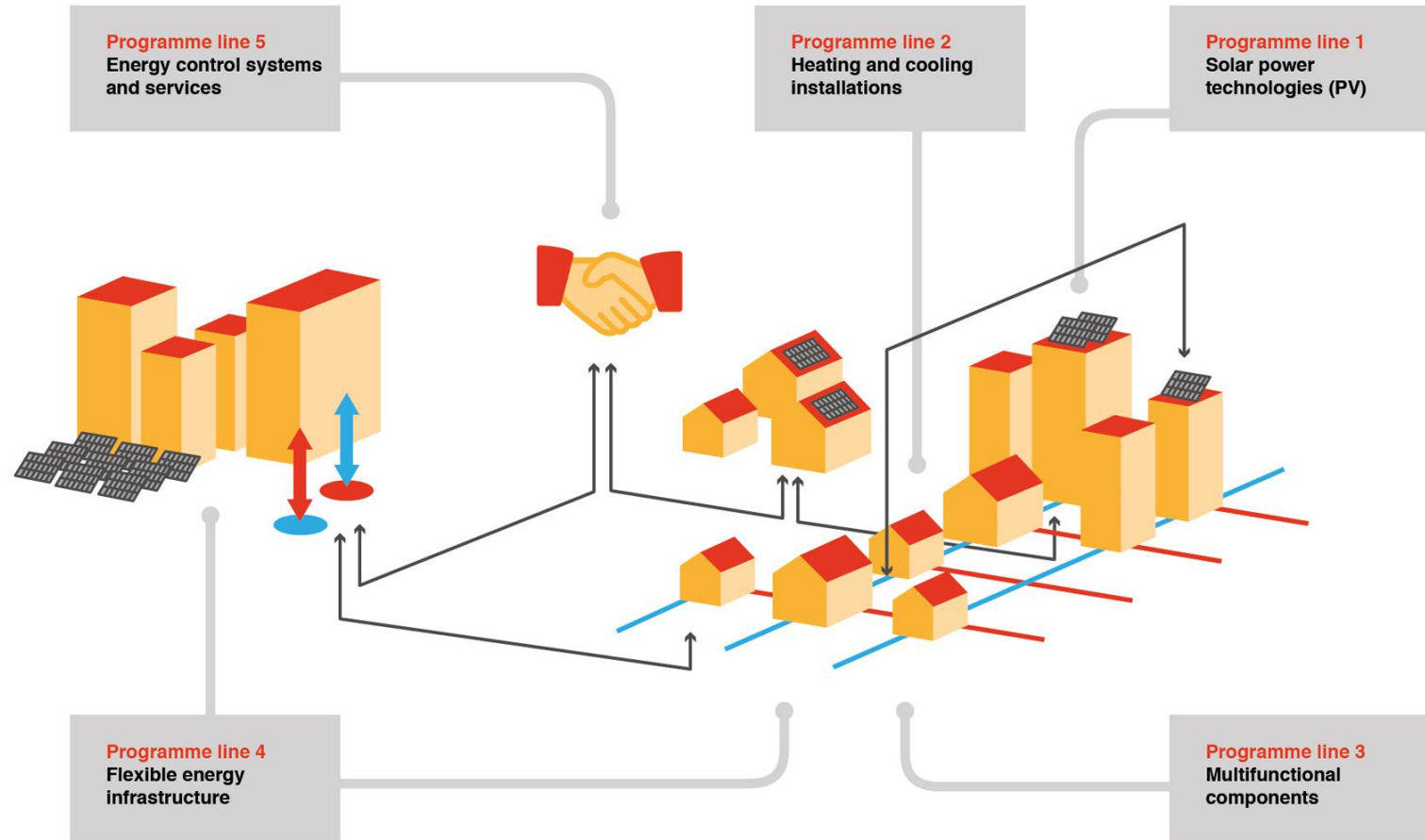
Strengthening
economic
growth, export
and jobs



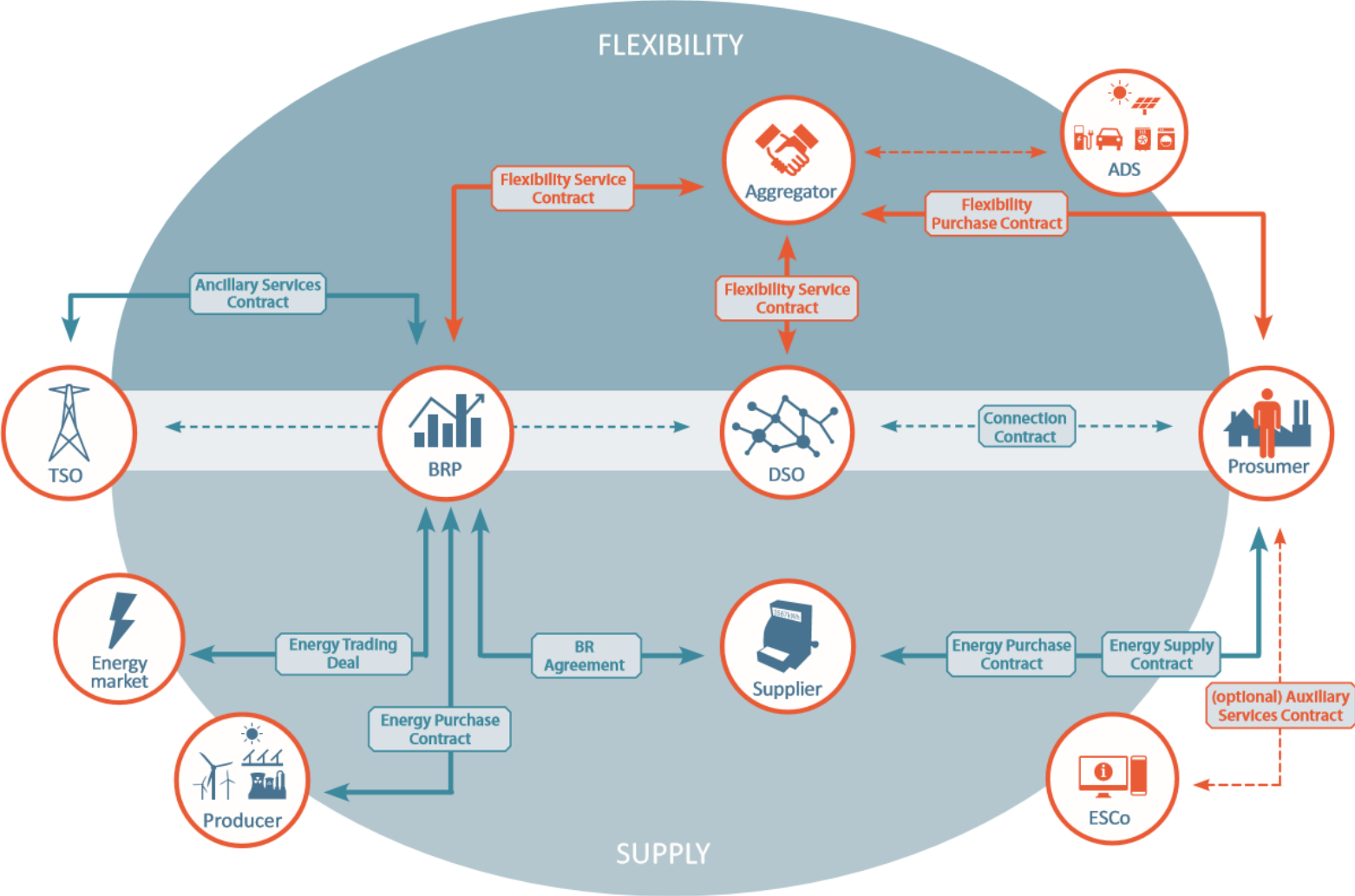
Empowering the
New Economy!



Our Program lines



Roles in a smart energy market



Empowering the customer



Enabling a new market



How to develop a smart energy standard?



Smart
Energy
Collective



BUILT ENVIRONMENT

Energiekoplopers

ALL-ELECTRIC NEWLY BUILT

Hoog Dalem

OFFICES

Eneco

HEAT SUPPLY & STORAGE

Goes

USEF

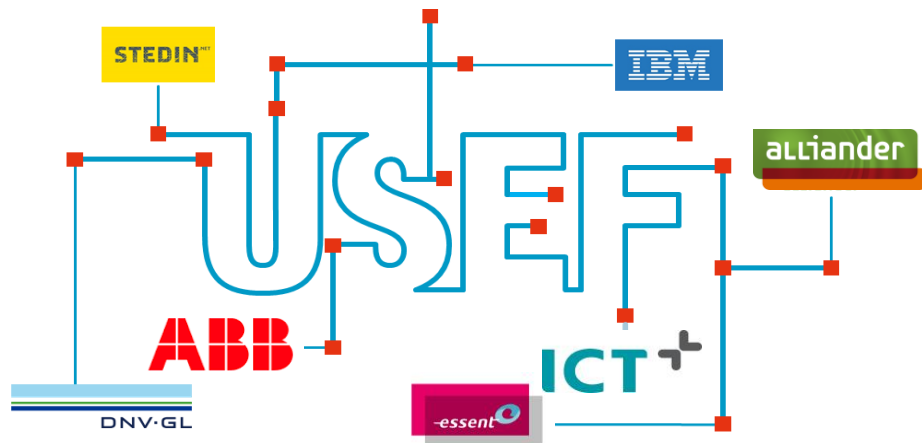
The Universal Smart Energy Framework

Working with one set of open standards to create value for all players in the smart energy chain

Smart Energy Collective



Building further on the outcomes of SEC



Basic principles:

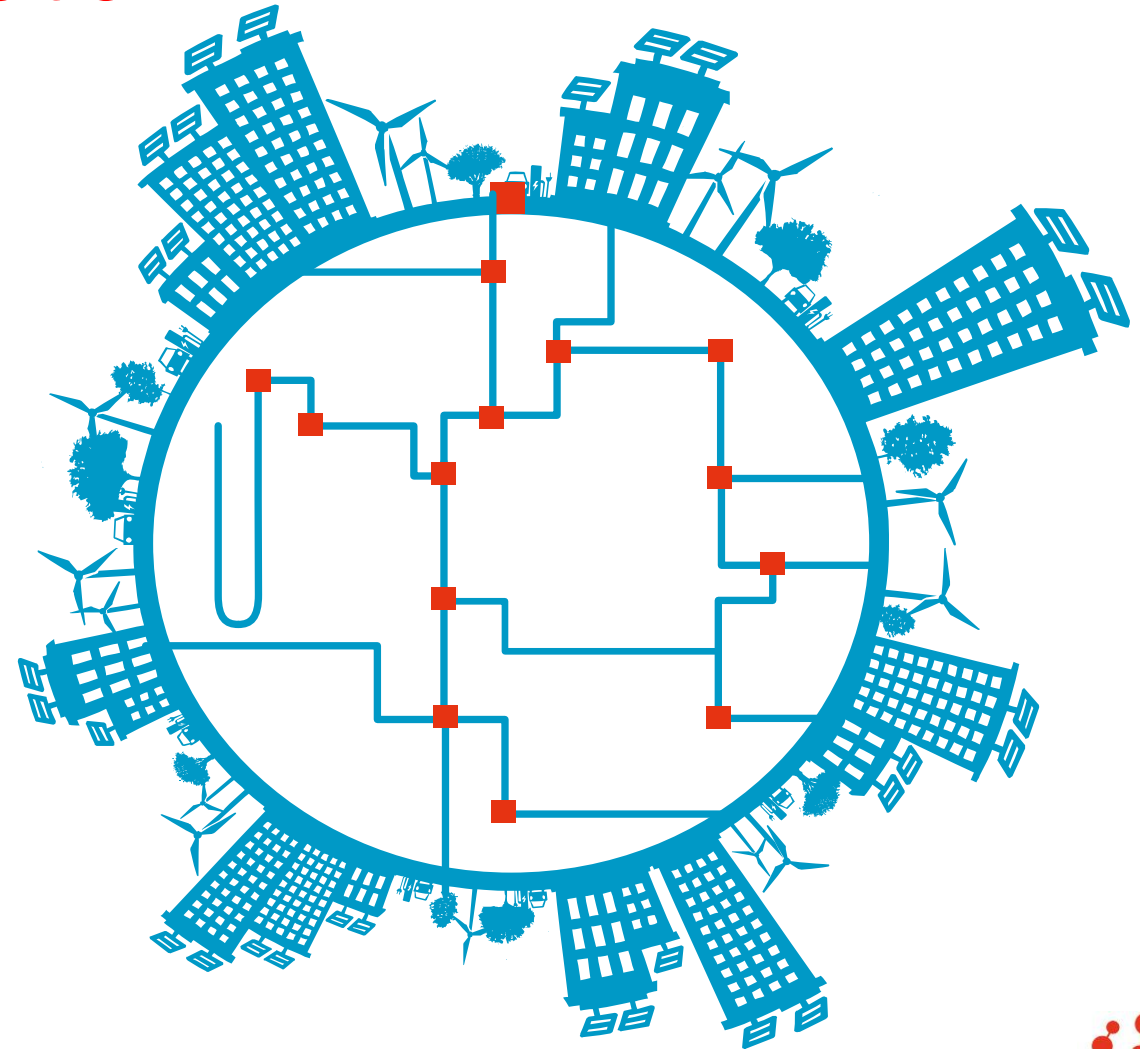
- Distributed flexibility is activated on a market based approach
- USEF's ambition is to facilitate one overall energy system instead of one single party or industry
- USEF describes roles, in which the Aggregator has a central role
- Freedom of choice to participate in flex markets is guaranteed
- USEF aims at interoperability between roles, and across borders



Standards accelerate the transition

Fully implemented, USEF delivers all interaction process models for an integrated flexibility market. As well as communication protocols and even exemplary coding to accelerate software development.

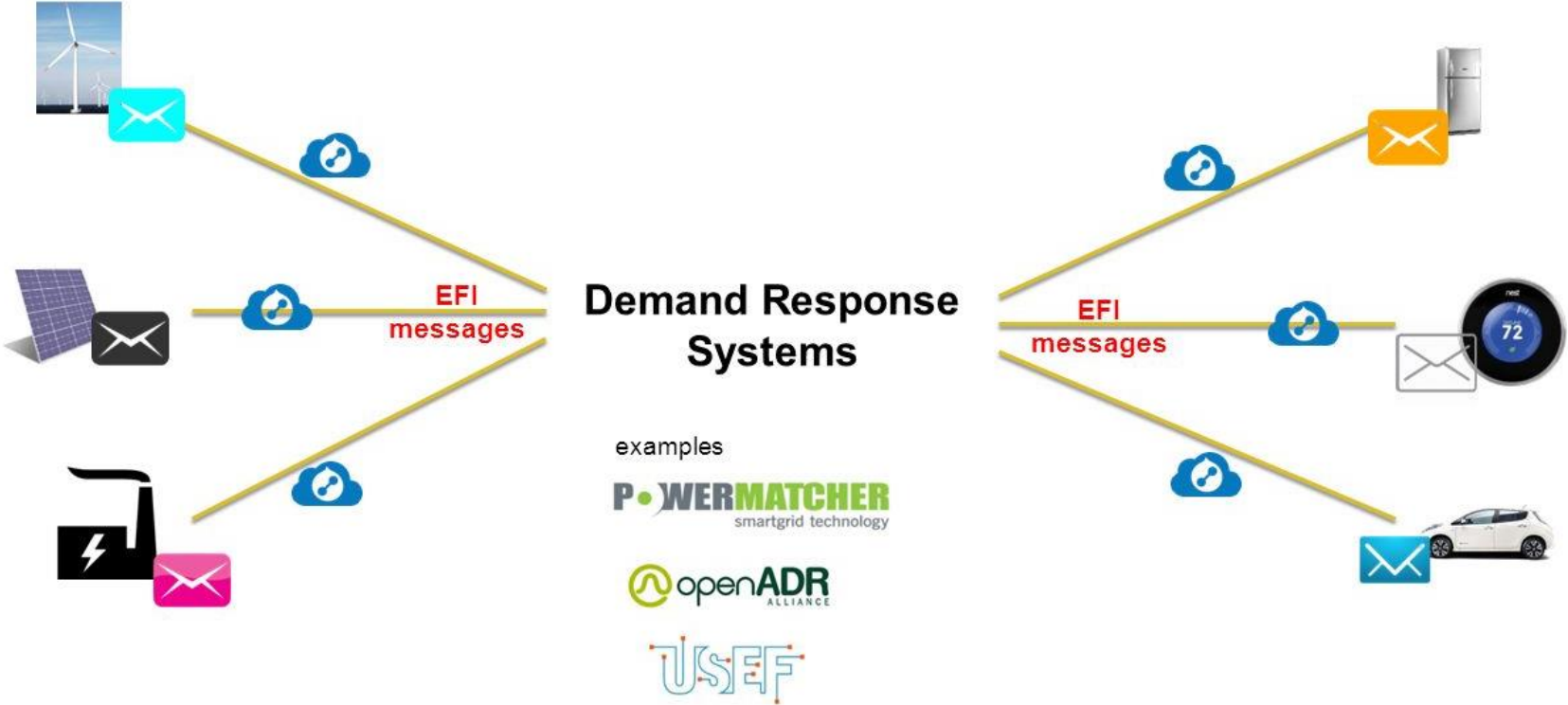
As a result, implementations accelerate, solutions are rapidly scalable and future connectability is ensured.



Criteria for an optimal flexibility market



Can we harmonize existing standards?



 = device specific API

 = EF-Pi translating device specific API to EFI messages



A solid foundation for smart energy futures?



Requirements:

- Regulation should be clear and should fit the modern, sustainable and smart energy market
- Social innovation should be an integrated part of technology and techno-economic developments



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