



Flexi-Sync

Flexible energy system integration using concept development, demonstration and replication



Smart
Energy
Systems
ERA-Net

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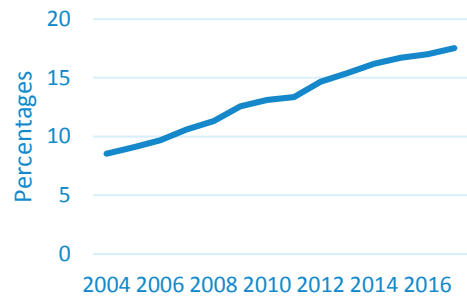




What is Flexi-Sync really about?

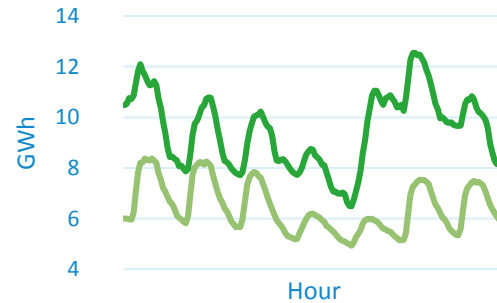
Increasing share of renewables
in the electricity system

Share of renewable energy in gross
final energy consumption, EU28
(Eurostat)

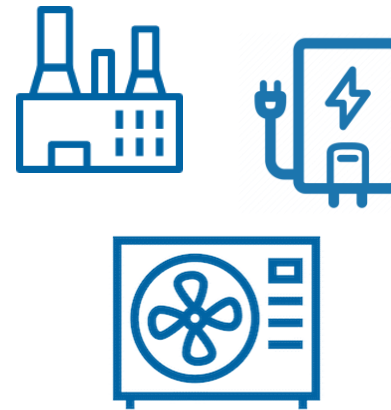


Challenge to balance variable
electricity supply and demand

Hourly electricity supply from wind
power and electricity demand in
Sweden July 1-7, 2020 (Swedish TSO)



Sector coupling points provide
flexibility that can support balancing
and improve efficiency

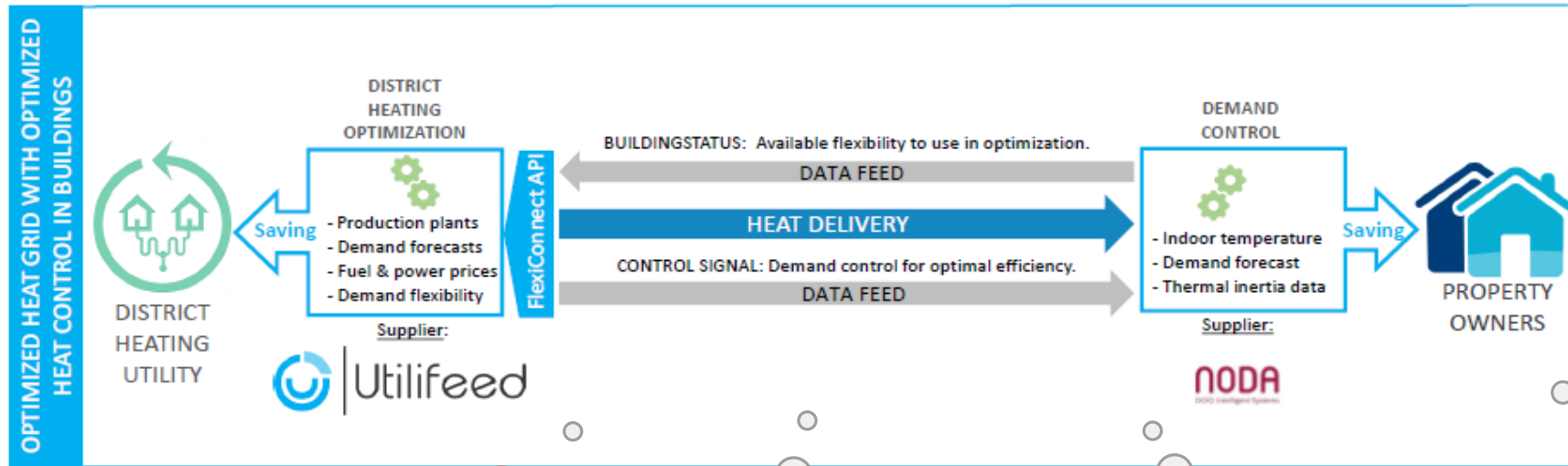


How can district energy
flexibility be optimized?





A service for co-optimized flexibility



What could the business model look like?

How do we enable operational flexibility?

Which optimization approaches can be used?

What is the cost-efficient flexibility potential at city or regional level?

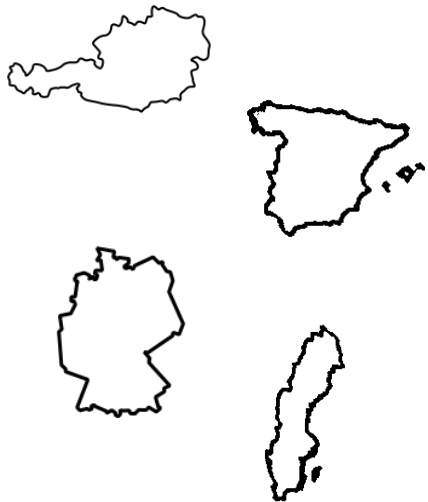
How do we adjust the solutions to ensure climate resilience?





Efficiency in flexibility exploitation

Knowledge to overcome barriers to flexibility exploitation



Austria and Spain: How to prepare for **increased flexibility and a transition towards sector coupling** in less mature district energy systems.

Germany and Sweden: How to **increase flexibility** in district energy systems where sector coupling already exists to a larger extent.

System perspective ensures efficient use of flexibility



Co-creation by multiple stakeholder: district energy companies, district energy customers, academic scholars, service providers



Addressing multiple dimensions of flexibility: implementation, optimization, societal cost efficiency, climate resilience, business models

