

# StoREgio Energiespeicher- systeme e. V.

Wachstum durch Innovation – EFRE



Rheinland-Pfalz



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## Network of Energy.



# StoREgio is a non-profit association supporting the application of energy storage systems

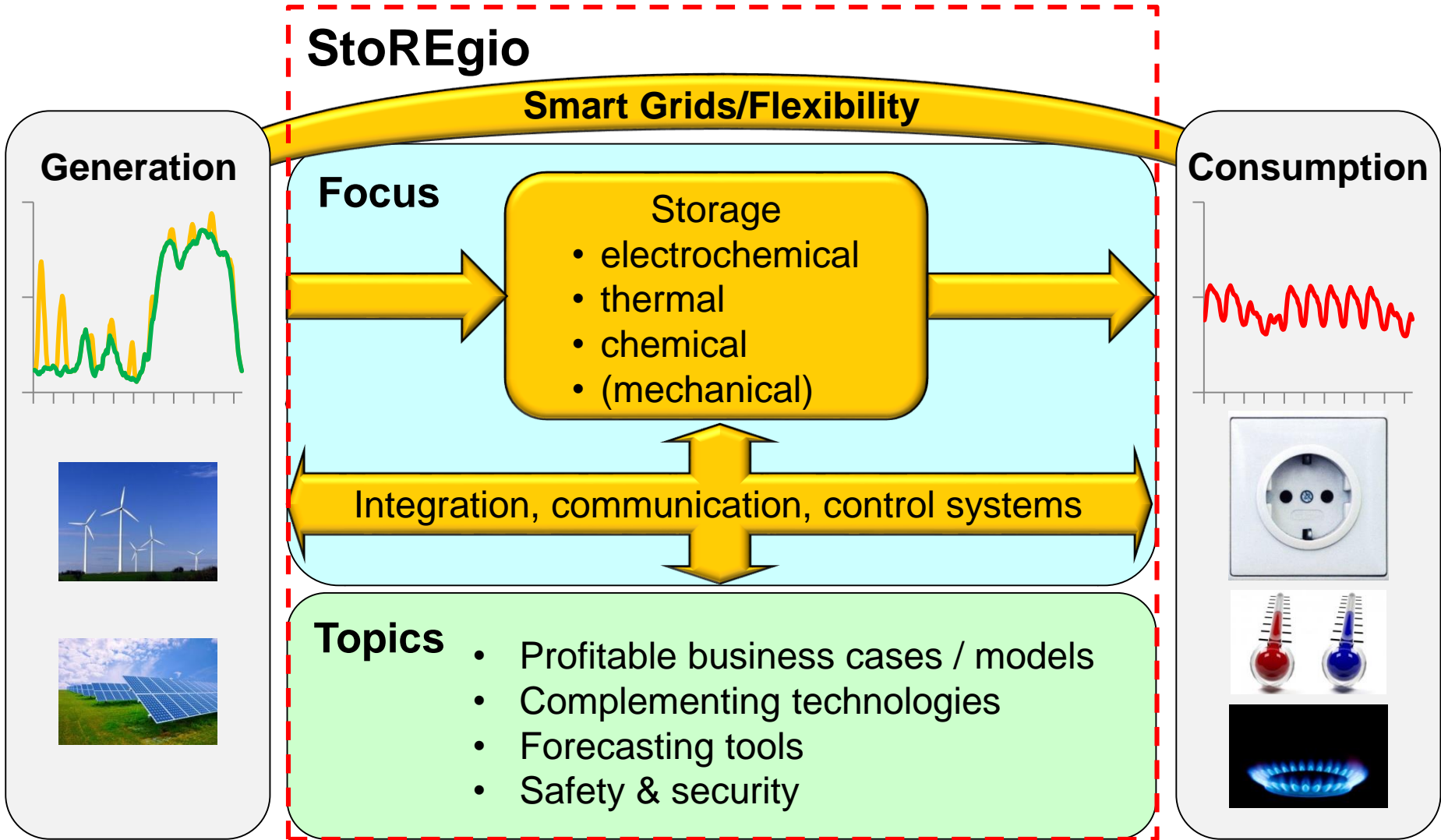


- Association established March 2013
- Open also to foreign companies with a registered office in Germany
- Financially supported by the state of Rhineland-Palatinate
- 20 full members, 60 associated partners

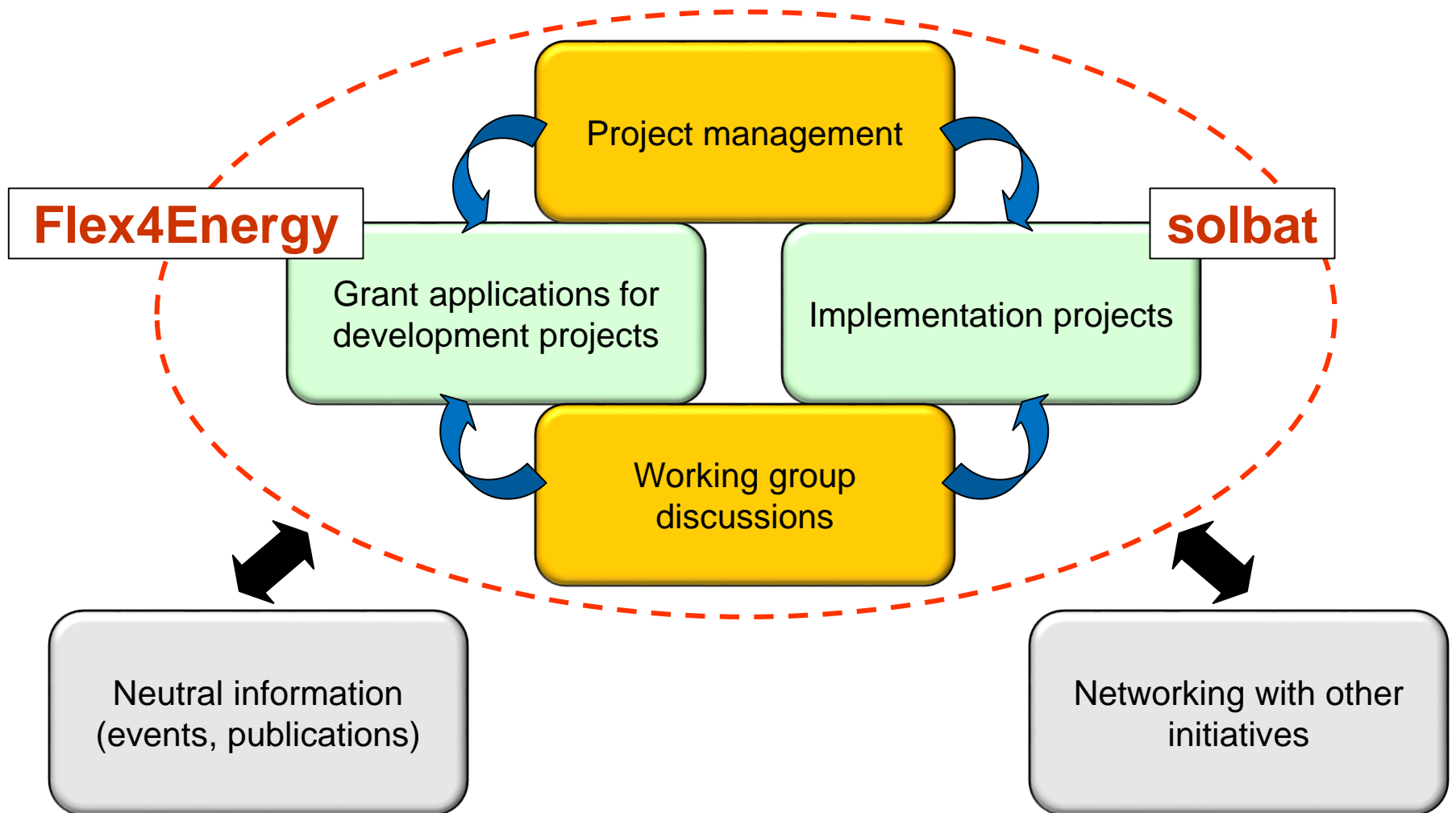
**StoREgio supports the „Industrialization and application of stationary energy storage systems in smart grids“**



# Storage systems provide flexibility, helping to integrate fluctuating renewable energies



# StoREgio supports its members organizing working groups and offering project management



**Challenge:** Growing self generation with PV-storage combinations

**Threat:** Decreasing energy sales, increasing grid problems

**Objective:** Development of innovative business models

## Partners

- 10 utilities
- 3 academic partners
- Telekom
- Energy agency RLP
- StoREgio
- Schaeffler consult

## Work program

- Business model options
- Economic evaluation
- Legal evaluation
- Challenges to the organization

# Three business models have been evaluated

## »Storage service provider

- Lease of combined PV – storage packages combined with service contract



## »Residential energy package

- Combination of heat and power
- > 90 % from local generation



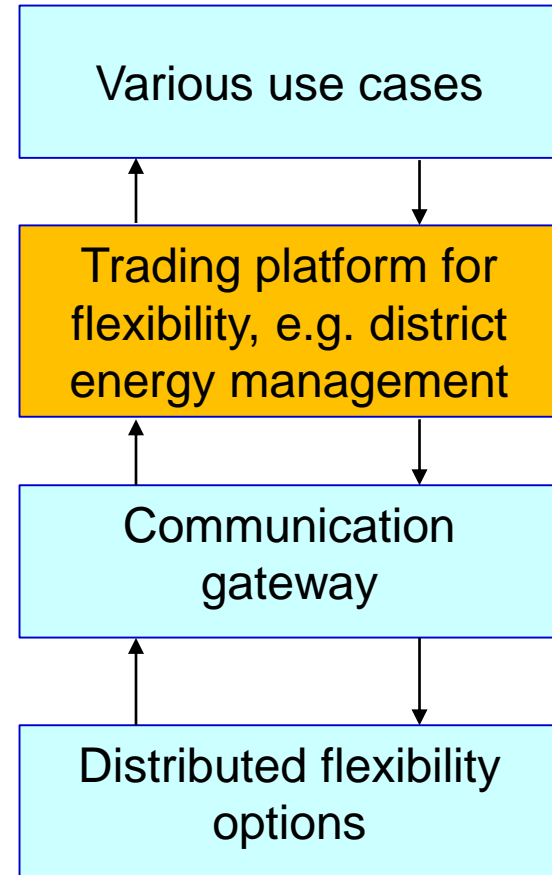
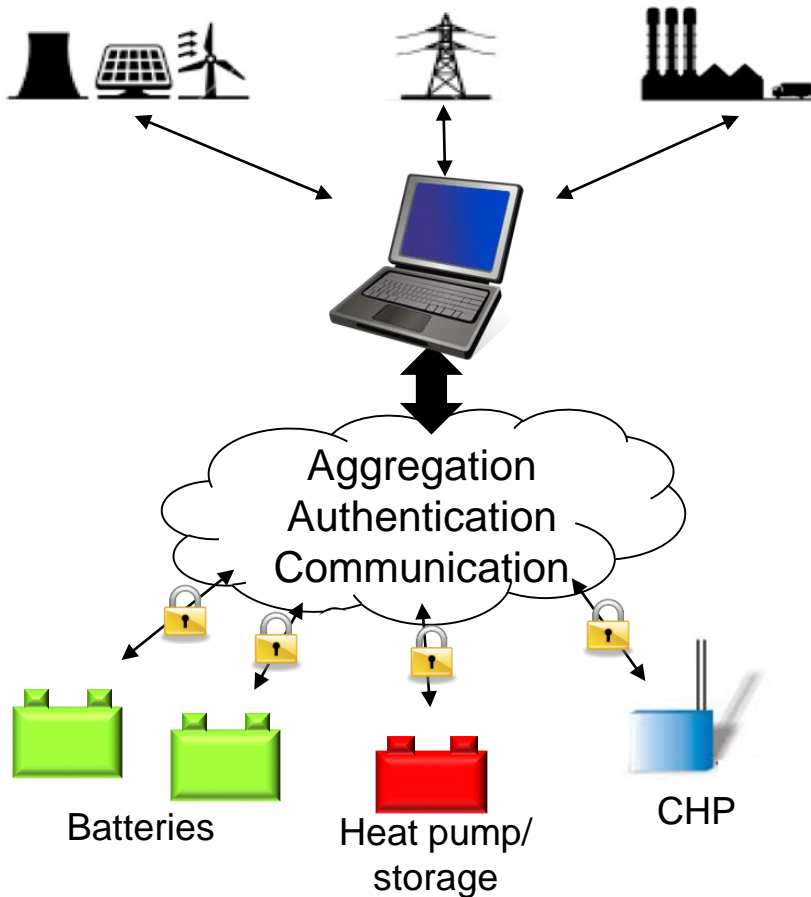
## »District energy supply

- District storage system as „energy account“ for PV-households
- Balancing energy generation and supply within urban districts



# Project „Flex4Energy“: Managing distributed flexibility networks

Project to be started Jan. 2015



**Thank you for  
your attention**

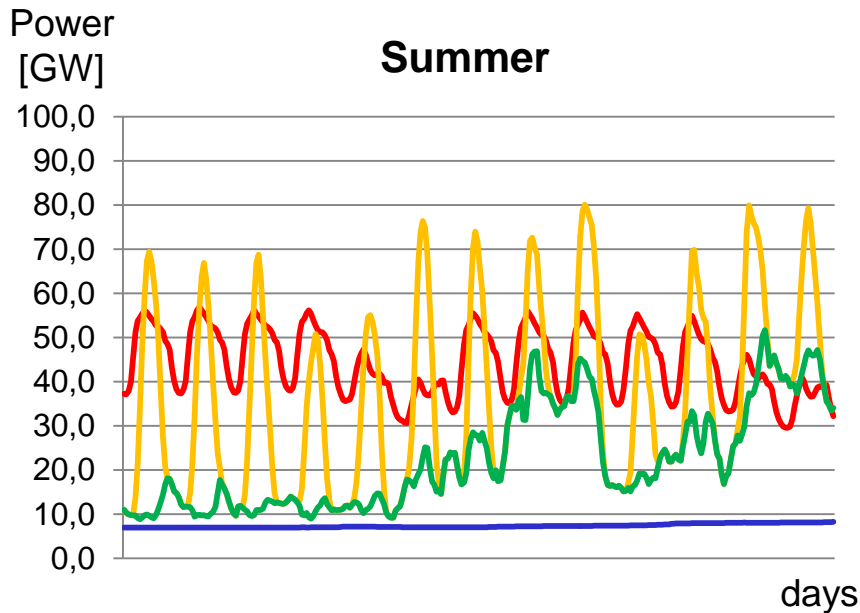
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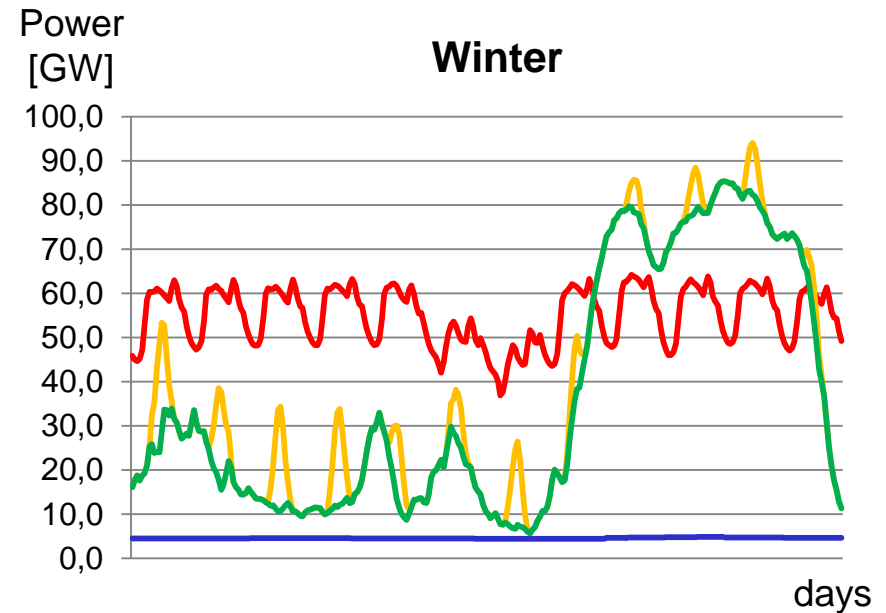
# Flexibility – key requirement for energy systems based on renewable sources

## 2025 – 2030: 50% Renewable Energy in Germany



— Load — PV

- High peak power
- Frequent steep power gradients  
~ 4 GW/15 min
- Day-night shift



— Wind — Water

- Longer periods with over- or underproduction of electricity
- Seasonal shift

# Working group topics are defined by the members

## Current working group topics

- Experiences from storage projects
- Innovative business models for utilities (e.g. solbat)
- Examples of profitable storage applications
- Safety & security (technology, data, system)