



Stationary Applications
Fuel Cell R&D at E.ON Ruhrgas

Gas Utilisation Competence Centre

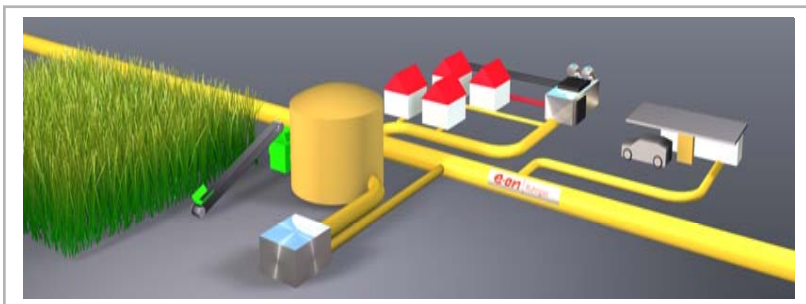
Gas heat pump and domestic appliances



Micro-CHP and process technologies



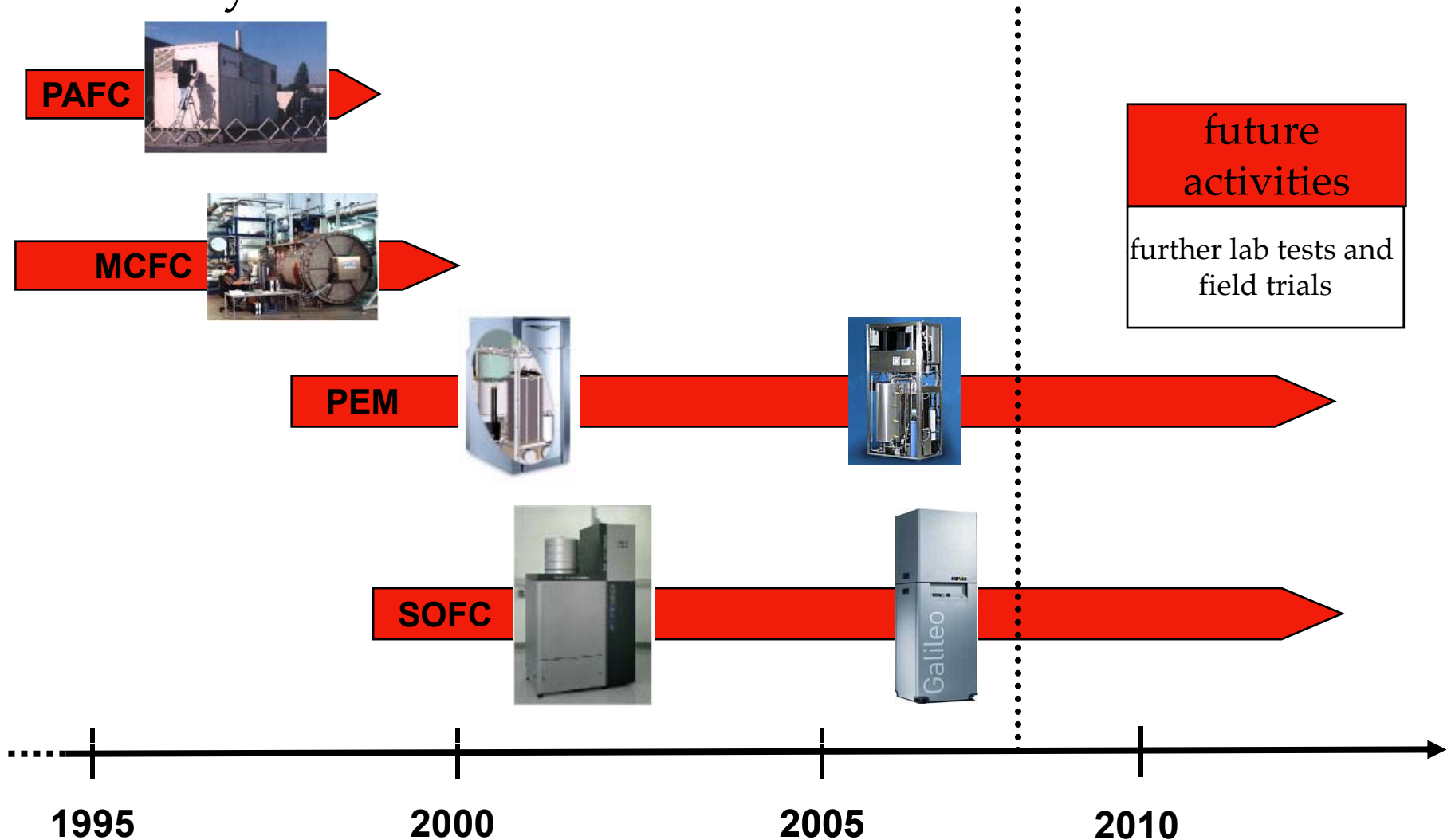
Biogas and alternative energies



Sensor and systems technologies



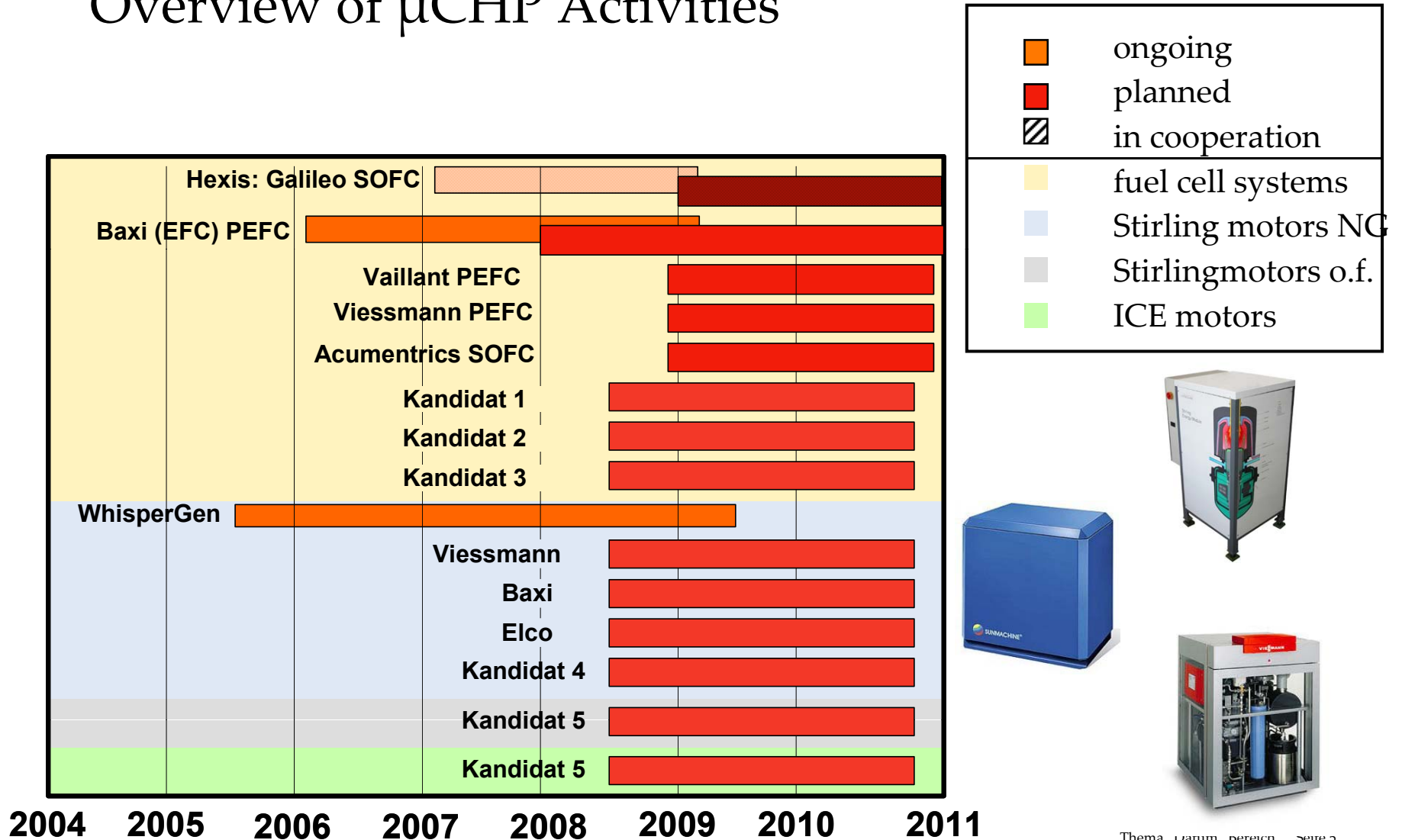
History of Activities



Key Elements of mCHP - Strategy

- **no manufacturing activities – no exclusive cooperation**
role as technology user
- **testing of a variety of pre-commercial systems**
under realistic conditions
- **transforming operation experience into forecasts**
gas/power demand and generation scenarios
- **assessment of grid implications**
regarding safety issues and power/gas distribution
- **practical experience as basis**
for sound assessment of technology,

Overview of μ CHP Activities

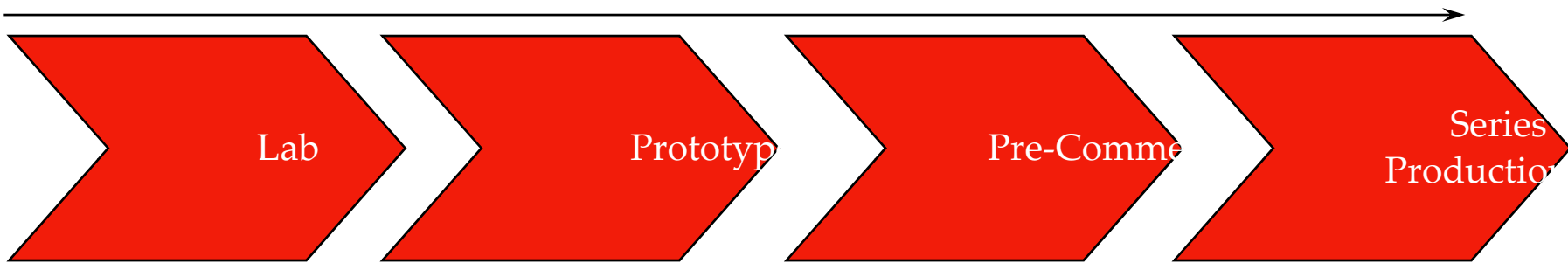


- ongoing
- planned
- in cooperation
- fuel cell systems
- Stirling motors NG
- Stirlingmotors o.f.
- ICE motors



E.ON-wide technical Cooperation

Process of Market Introduction



Laboratory tests of manufacturers

Prototype-Testing

Field trials

Market

Example: Fuel Cell



e-on | Ruhrgas

Gate

e-on | Ruhrgas

thuga
DIE ENERGIEGRUPPE
ERG Kunden

e-on | Energie

e-on | Bayern

e-on | Avacon

e-on | Hanse

⋮

e-on | UK