

Anergy2Plus

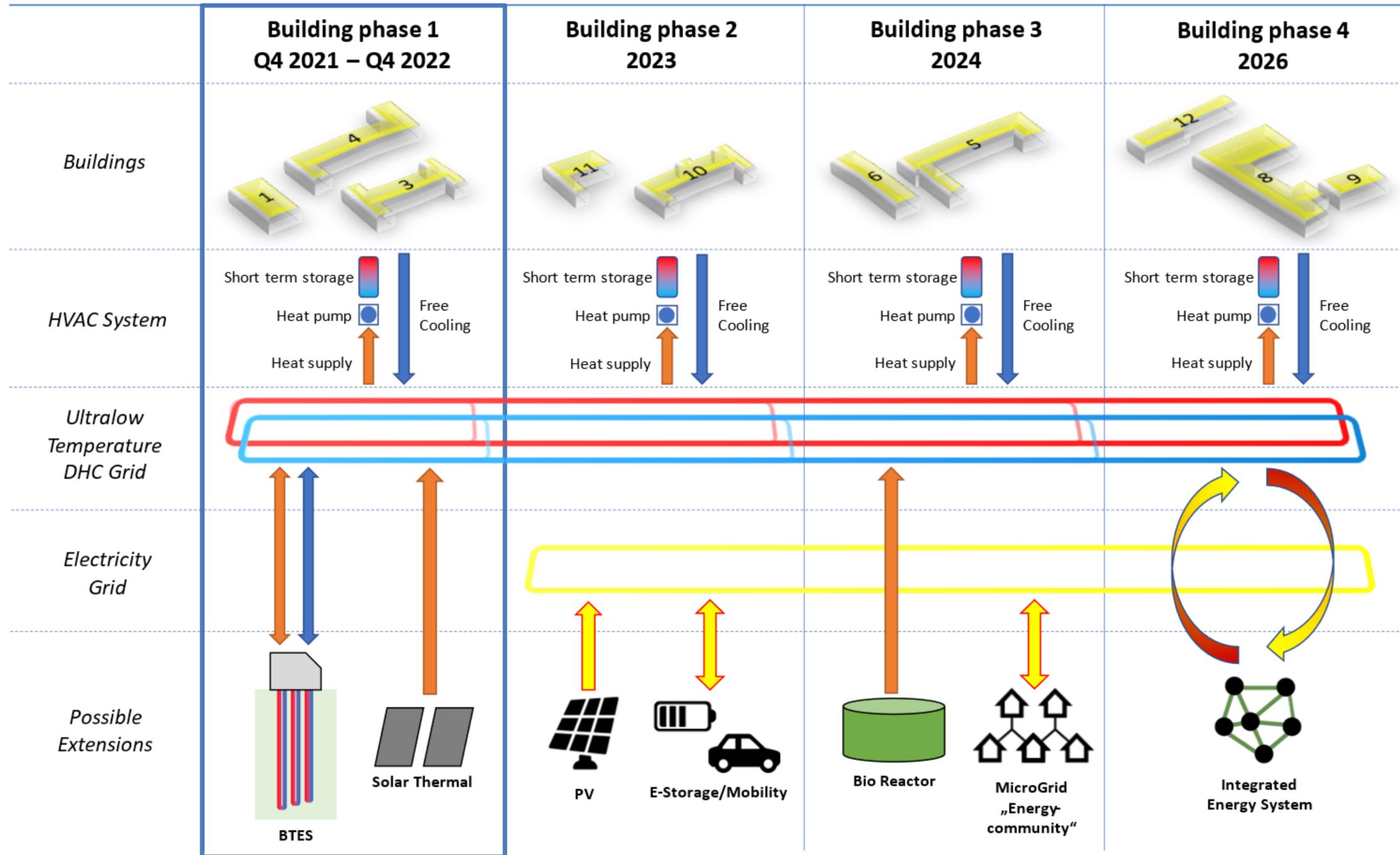
Demonstration and expansion of an anergy network as part of a holistic energy concept and plus-energy district

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Motivation – Community

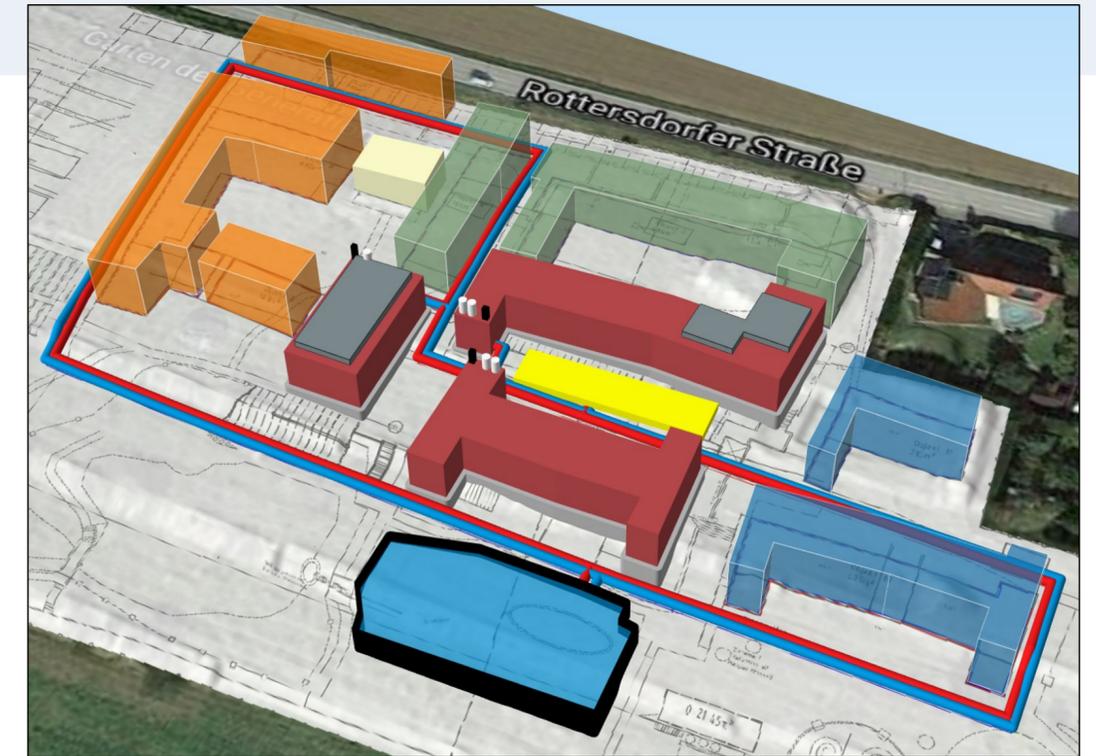
- „Garten der Generationen“
 - Building project in Herzogenburg (Lower Austria)
 - Several consecutive building phases
 - Core concept of the association is to think in „circles“ and in „cycles“
 - Financial, energetic, biological, ...
- Vision
 - Sustainable heating, cooling and electricity based on local resources
- „Heart piece“
 - Anergy grid in combination with heat pumps & long-term thermal storage
- Long-term Goal
 - Further innovative expansion towards a PlusEnergy quarter

Energy System Building Phase1



Building Phase 1: Numbers and Facts

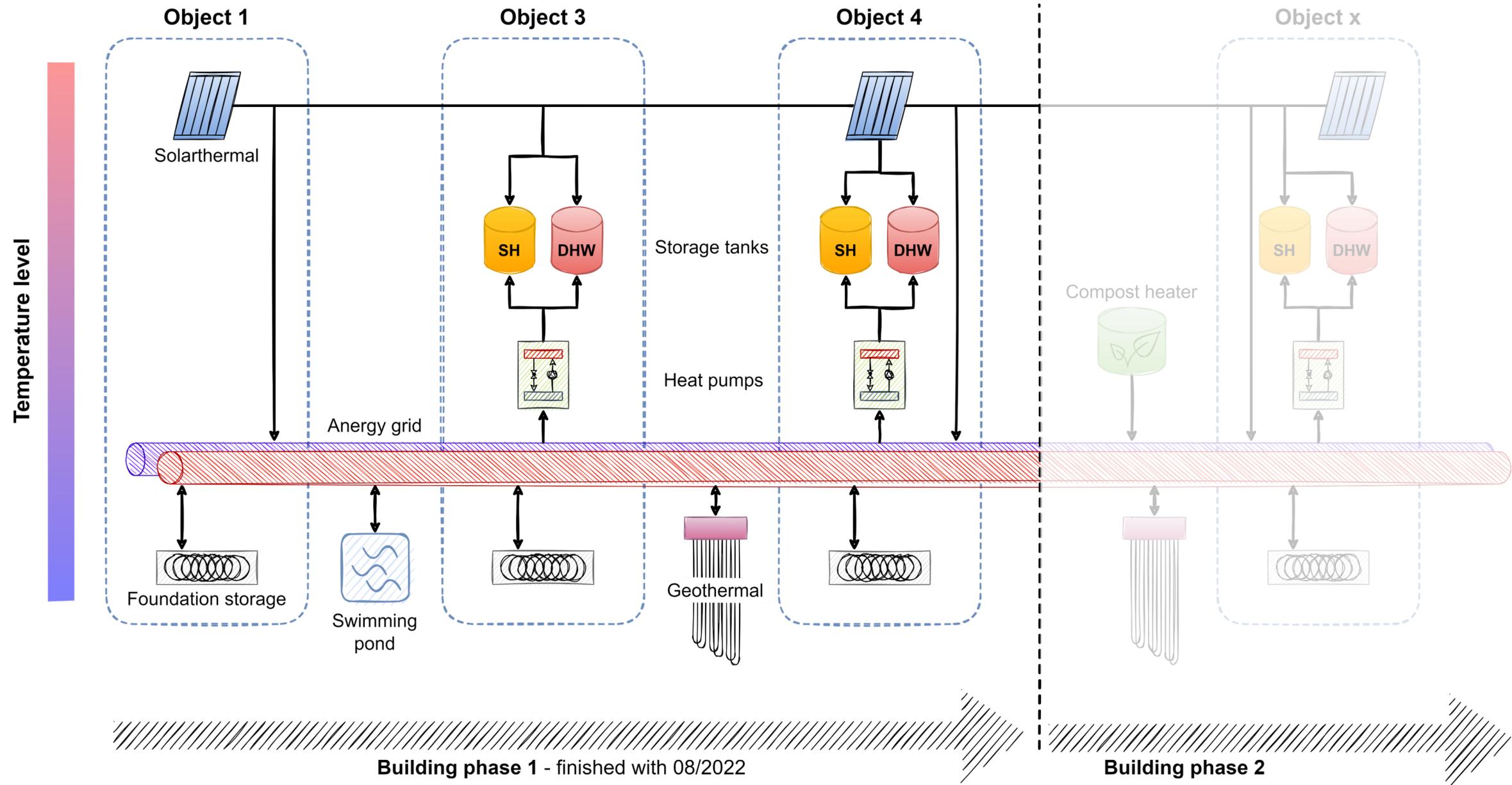
- **First Building Phase:**
 - 3 Buildings:
 - 2 Residential buildings with mixed use
 - 1 Community house/kitchen
 - Around 10.000 m² gross floor area
 - 19 residential units
 - 4 assisted living flat-sharing rooms
 - 1 coworking space & 1 guest room
- **Technical elements**
 - Anergy grid system
 - Decentralized heat pumps for SH and DHW
 - Boreholes and foundation storage for seasonal heat storage
 - Solar thermal collectors 100 m²



Building Phase 1



Energy System Building Phase 1



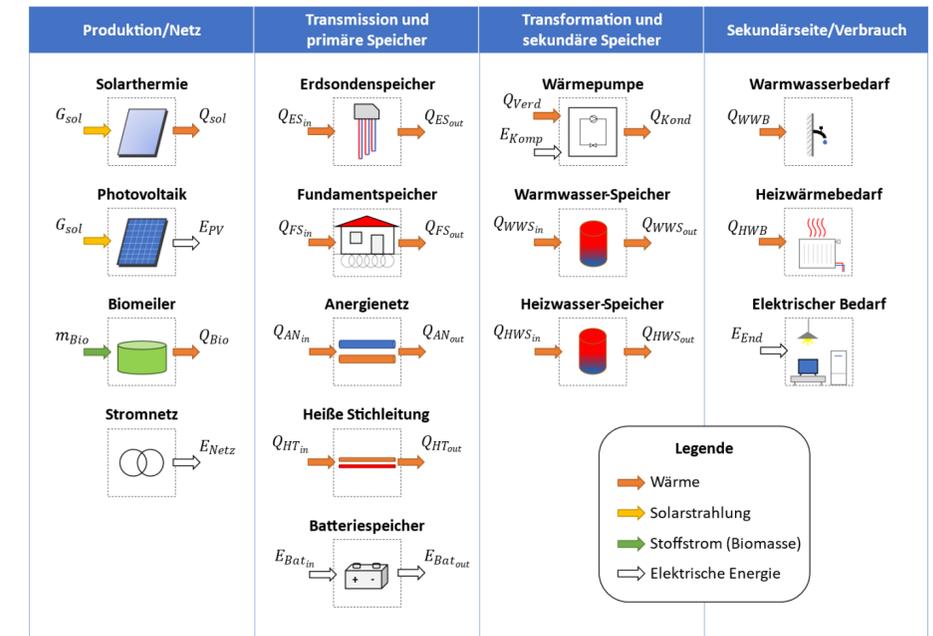
Outlook Further Construction Phases

- Planned system extensions:
 - Additional buildings
 - Solarthermal expansion
 - Tank storages
 - Heat Pumps
 - Grid connection
 - 30kWp PV System with electrical storage
 - Electricity for heat pumps and appliances
 - E-Mobility concept (EV-charging station installed)
 - Compost heater
 - Batch-wise heating supply

User Integration and Monitoring

- System-wide monitoring installed
 - Monitoring and optimization of the system during operation
 - Balancing of energy in system
 - Gathering experience for further expansions

- User integration
 - Processing of results for residents via Info screen (recommendations for action)
 - Accompanying dialog and workshop series
 - Construction progress
 - Supply and monitoring concept
 - Operational management strategies for the entire neighborhood





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IDEA TO ACTION

Thank you!

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