

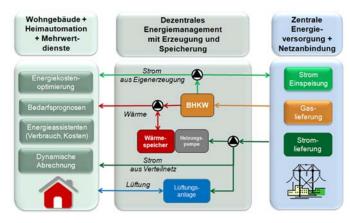
ProSHAPE @ Connected Energy

Objective: develop service-oriented home automatization platforms to optimize energy efficiency and allow flexible energy supply to buildings

The ProSHAPE project builds on work of the SHAPE project (Service-oriented home automation platform to increase energy efficiency). The decentralized energy management system and home automation platform to increase energy efficiency developed under SHAPE are extended to include hardware and software solutions, as well as agent-based value-added services to minimize energy costs in buildings.

ProSHAPE has the following goals:

1. Development of a technical solution that uses the decentralized energy management system for energy cost minimization (heat and electricity) in multi-storey residential buildings supplied with thermal cogeneration units. Various optimization questions need to be answered (e.g. self-supply of the building with heat and power vs. feeding into the network, external procurement and storage of energy from the grid within the building vs. feeding into the network). This focus on decentralized control of the energy infrastructure (heat and electricity) in multi-storey housing is unique and highly innovative. These questions have yet to be examined by other research projects.



- 2. The decisive factor for optimization is the cost for the operators and residents of a building. In future, variable gas, electricity and energy prices, and feed-in from the local cogeneration unit into the grid must be weighed against each other. To solve this problem, the Connected Living approach to integrated home and building automation is extended to include agent-based value-added services that reflect these conditions and optimize overall costs. Business models for these services are being developed and tested in laboratories and field trials.
- 3. A central goal of the project is practical testing of the developed hardware and software technology and related value-added services. These are to be tested in field trials with partners from the housing and energy sectors. Practical application in multi-storey housing can be demonstrated, while important insights into the successful implementation of products and business models can be gained.

Key data:



The objective of the Connected Living e.V. Innovation Center is promoting and developing innovative solutions across industries and manufacturers for intuitive and intelligent home networking.

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