

HeatReserves

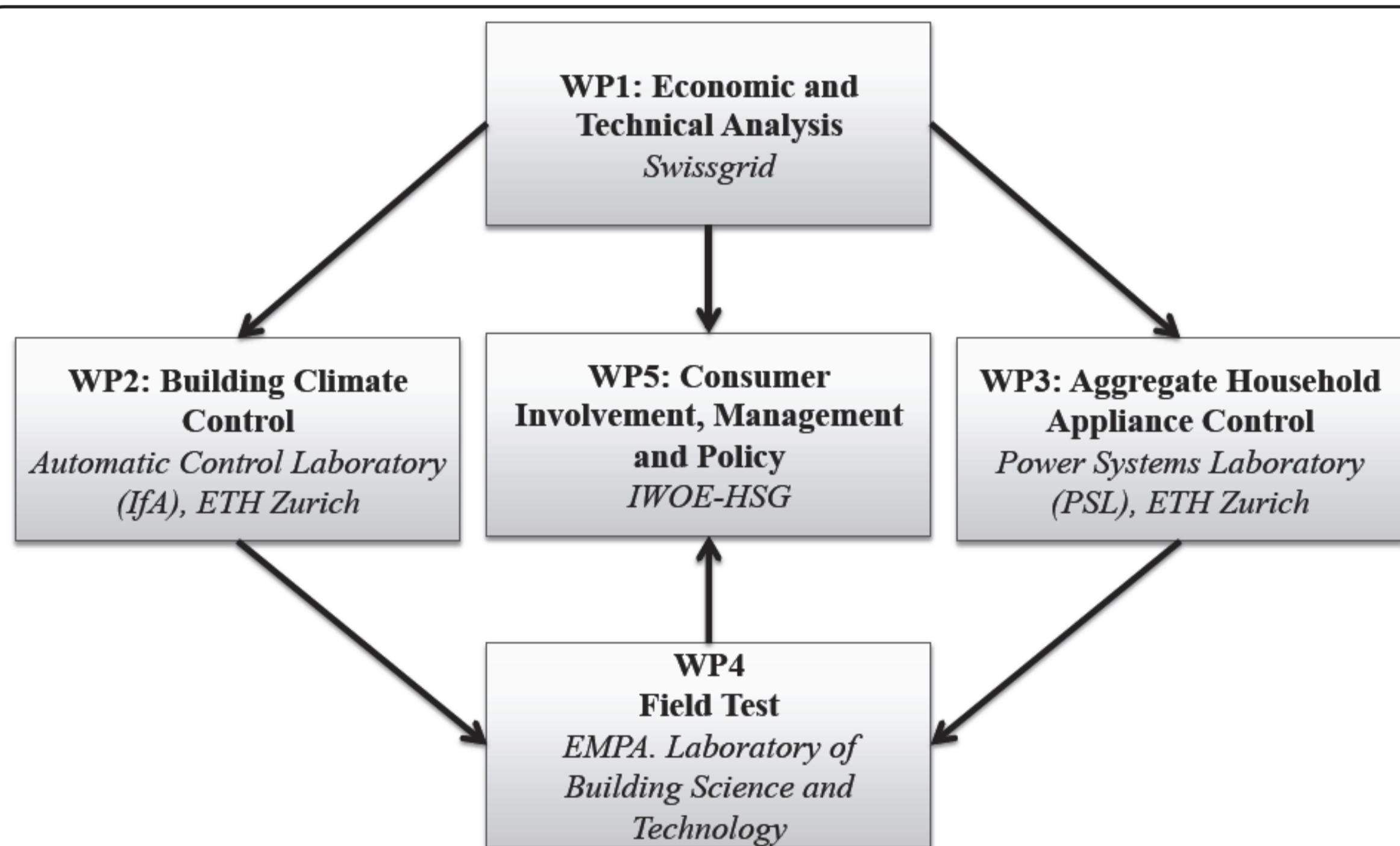
Business Participation in Demand Response

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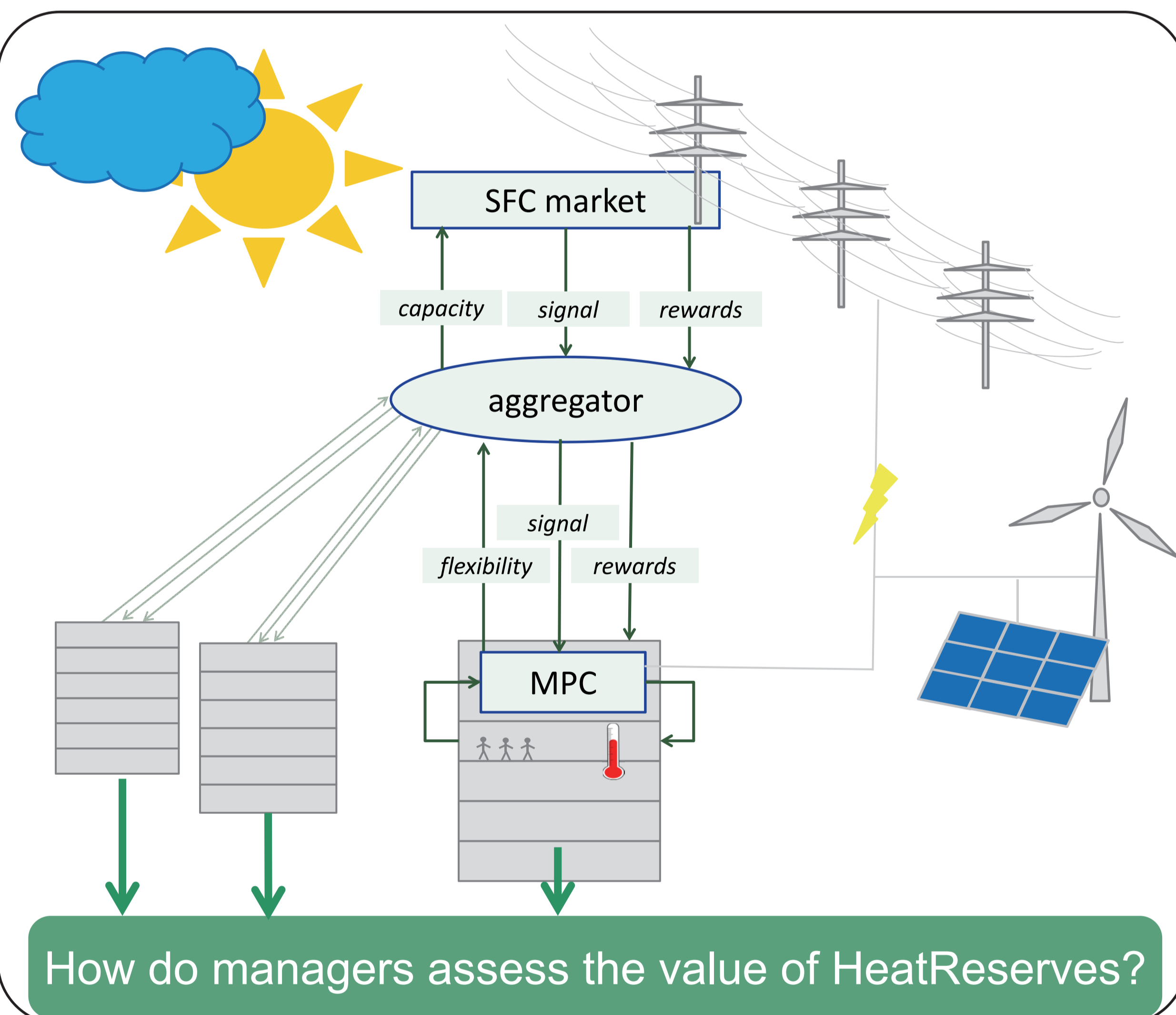
HeatReserves – Project Structure and Research Objectives



In WP5 we explore consumer preferences and attitudes towards participation in the demand response scheme developed in WP 2 and 3. We broadly review and test different psychological theories that propose a wide range of insights into how to influence consumer decision making regarding participation in demand response programs. Based on our findings, we develop implications for demand response contract design, incentive schemes, business model design, and energy policy. Our WP is divided into three tasks:

- Task 1 - completed: Behavioral experiments – focus end consumer
- **Task 2 – current task: Design phase – focus large business consumer**
- Task 3 – following task: Field experiments – focus implementation

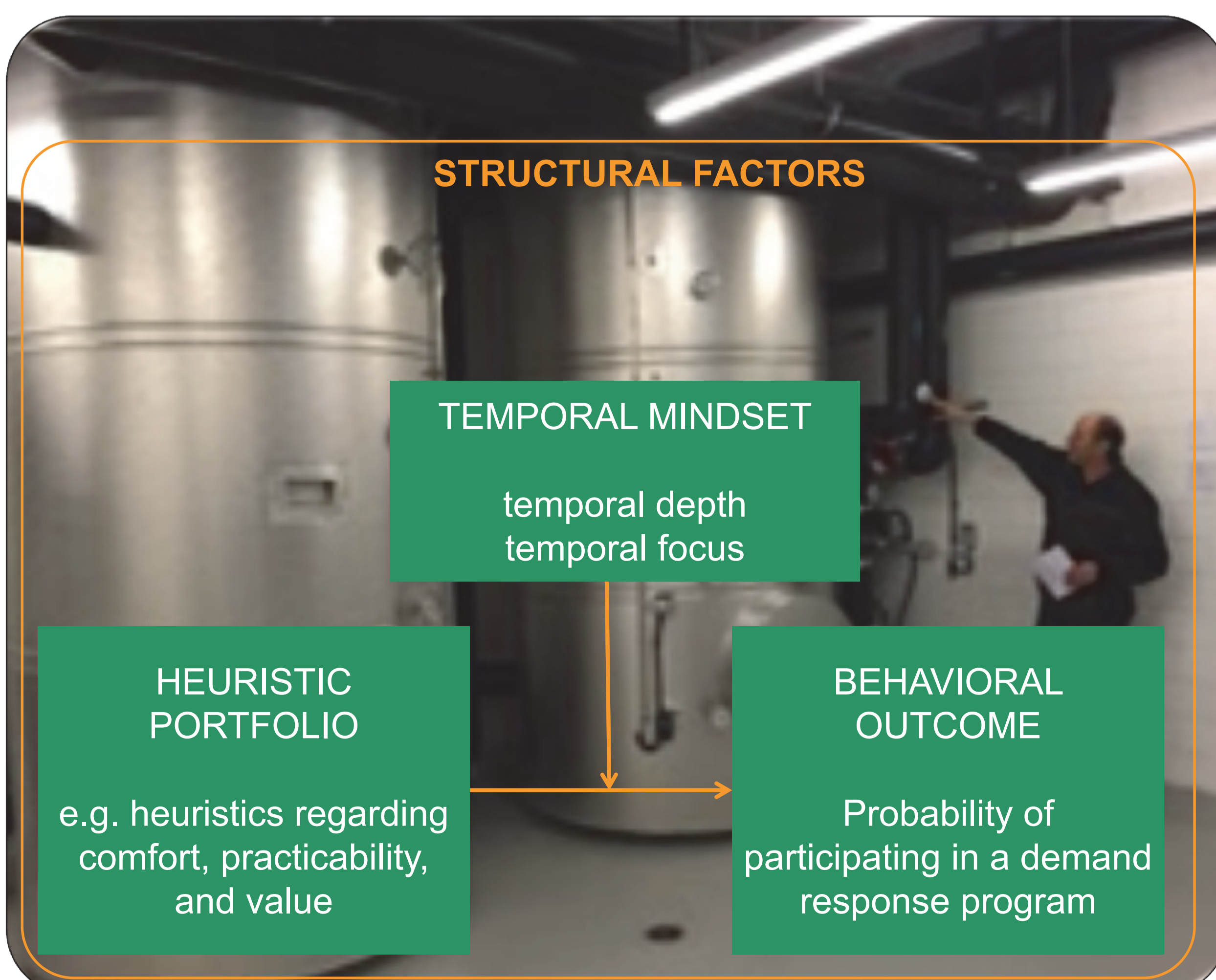
Exploring Building Managers' Cognitive Processes



An organization's behavior is contingent to structural factors and cognitive conditions of the decision maker. Therefore, the potential participation in a demand response program depends on a variety of factors, ranging from the energy management system in place to temporal oriented mental models and decision heuristics of the facility's manager. Heuristics can be understood as "efficient cognitive processes that ignore information" (Gigerenzer & Brighton, 2009: 107). Thus, heuristics facilitate fast decision making in complex situations by taking into account structural factors in the decision environment. We expect that building managers use a variety of heuristics in their working environment that influence the evaluation of demand response programs and the probability of participation. Furthermore, we expect temporal models of the decision makers to moderate this effect. Exploring building managers' heuristic portfolio and their temporal models will help to develop business models that are likely to be broadly accepted. Moreover, the study will advance theory regarding the adoption of sustainable technologies and innovation in a business-to-business context.

Gigerenzer, G., & Brighton, H. (2009). Homo heuristicus: why biased minds make better inferences. *Topics in Cognitive Science*, 1(1), 107–143.

Method and First Insights



To shed light on structural and cognitive factors that shape building managers' decision processes, a qualitative research design is needed. We adopt an inductive research approach using multiple case studies (Eisenhardt, 1989). First steps have been taken:

- Interviews with project partners to understand the technical background.
- One interview with a technical manager of a complex of large buildings to understand the real life settings of building managers.
- Development of a semi-structured interview guide and an additional questionnaire for further interviews.

First insights: The interview showed the importance of the following structural factors: the use of the buildings (defines energy use), the energy management software (restricts technical possibilities), ownership structure (influences objectives), architecture (affects wellbeing). These factors are related to the learning of heuristics regarding the residents' comfort, the practicability of innovative technologies and the evaluation of their economic, ecological and social value.

Eisenhardt, K. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.