

## 2017 Alpbach Technology Symposium

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Konflikt, Kooperation oder beides: Wie entsteht Innovation

### Abstract

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Future customers should be involved in innovation processes beforehand. Customer centricity in the innovation process leads to better solutions by identifying and understanding underlying customer needs as a starting point for innovation. Client involvement in innovation can be better addressed with reference to a formalised, structured process with separate and sequential stages, which is likely to characterise larger companies that allocate dedicated resources to research and development programmes.

Energy consumption is not an isolated activity, it is part of a higher level every-day task. In order to complete this task energy-related solutions tend to become part of a higher-order solution platform – smart (home) products and services. Smart solutions are facing the same market entry challenges as all other offers. To understand the underlying customer needs is therefore also crucial for energy innovations.

There are psychological structures that influence the adaptation of innovative technologies or products like emotions, motives, knowledge, behaviour routines, opinions and personal values. Values stay the most stable over a longer period of time. Values are an important part of personal lifestyle and sociocultural affiliation. Understanding the underlying values of different types in a population provides valuable input for sustainable innovation development. All these key factors are considered and implemented in the research design of the research project described below.

#### Case Study "User Integration/Seestadt Aspern":

In this ongoing project research focuses on flexibility options in electricity systems, the active management of the low-voltage grid, and the investigation of ICT options to interlink buildings and the low-voltage grid. The involvement of occupants living in a new energy efficient multi-unit residential building is a key component of the project as well as researching the effects of innovative control and monitoring functions available for the users.

User-Interaction activities are part of the entire project. At the beginning, residents are assigned to various user groups. This method serves to divide the rich variety of individual users' behaviour into manageable behavioural patterns as a basis for the subsequent development of communication measures as well as technical solutions, especially in the field of building automation control systems. On the one hand, users are being regularly tested by means of social-scientific methods regarding their changes in knowledge, information behaviour and user behaviour. On the other hand, measures are being implemented during the entire progression of the project, in order to enable the residential users to actively utilize the control features of the intelligent building technologies. The results are currently integrated into the development of the user interfaces for building controls and user feedback systems. After the implementation of these technical features, users' acceptance will be researched in upcoming surveys. The focus will be on the impact of the user interfaces, the user feedback systems, and the effects of the increasing knowledge through various communication measures on user behaviour.