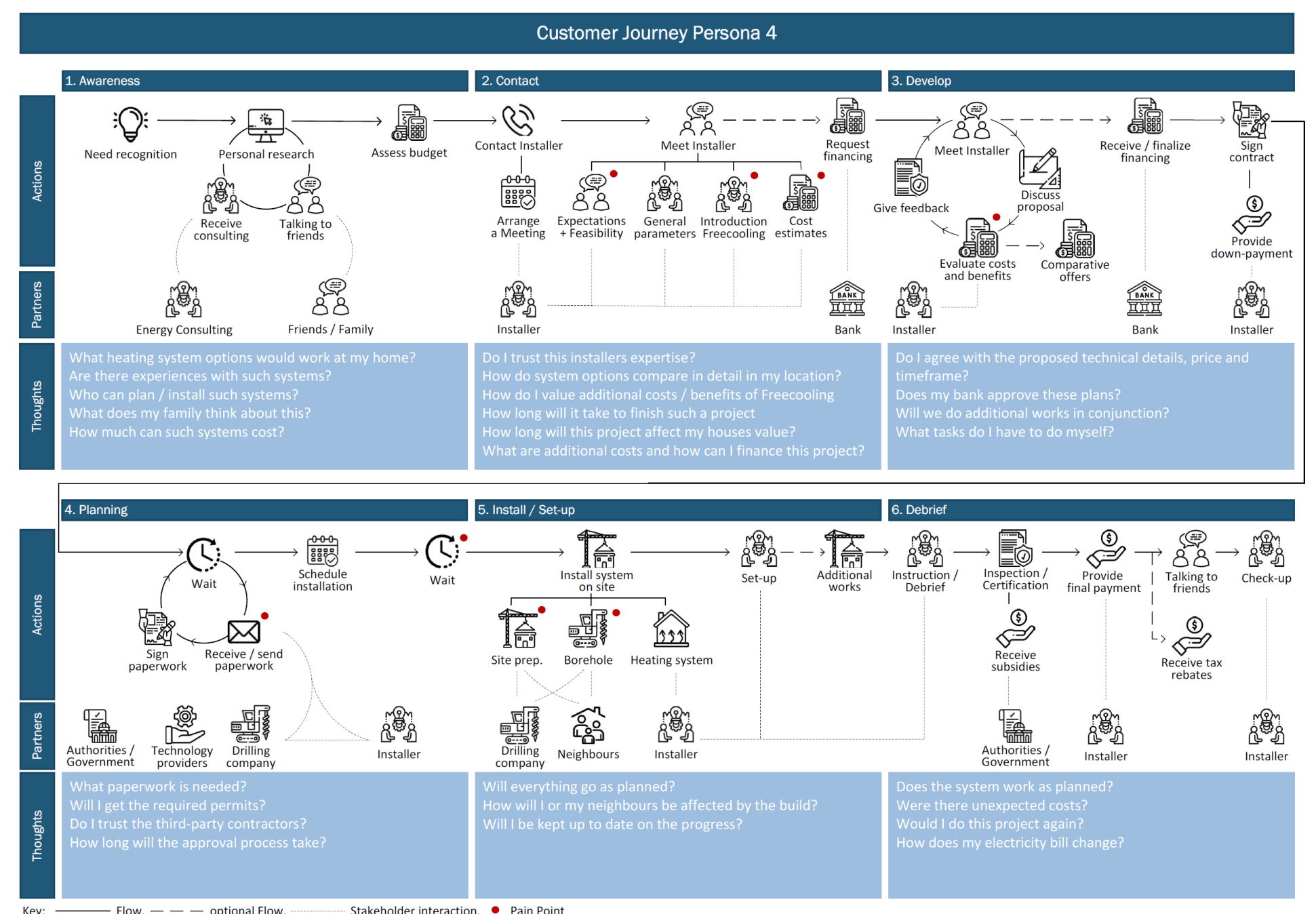
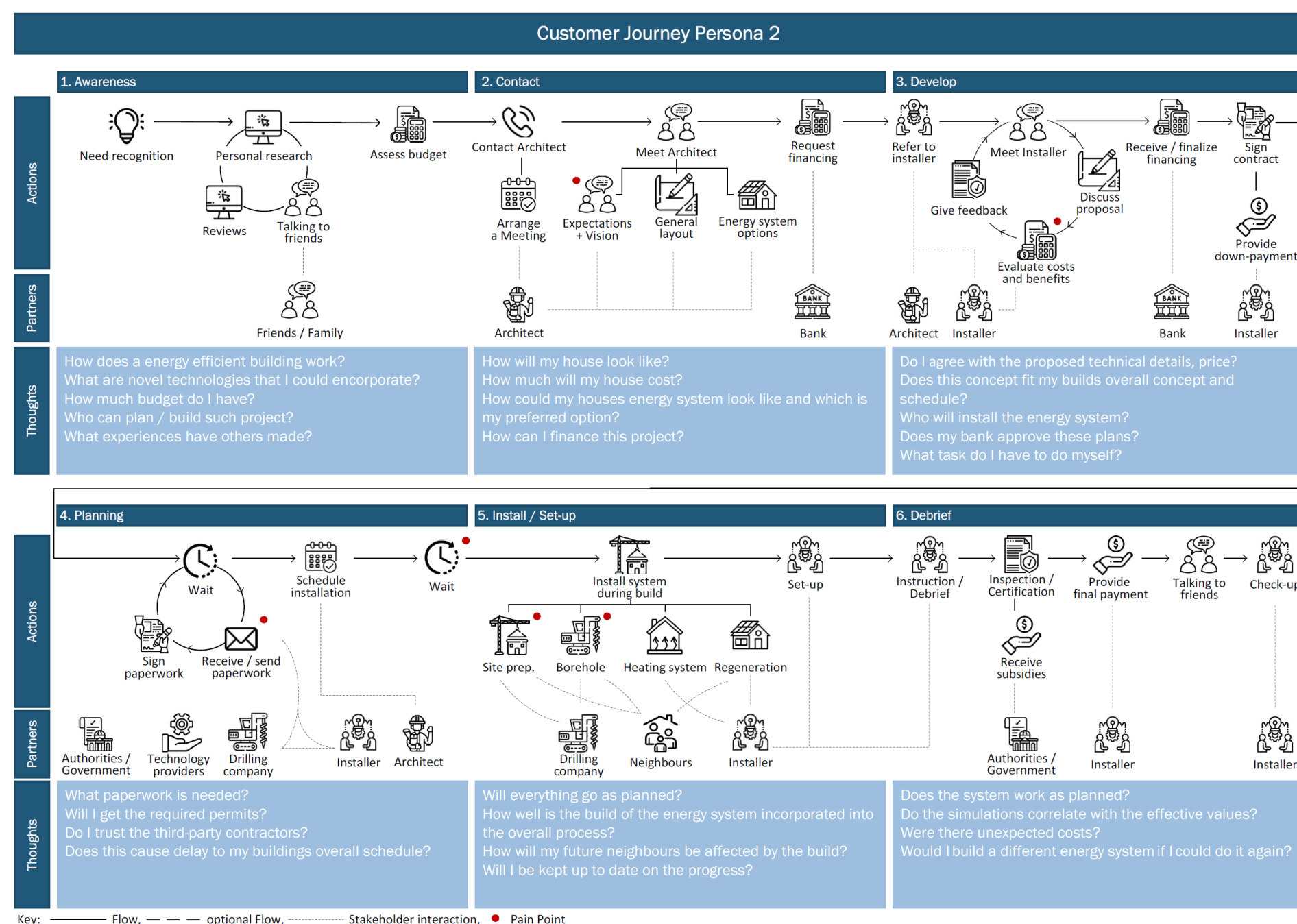
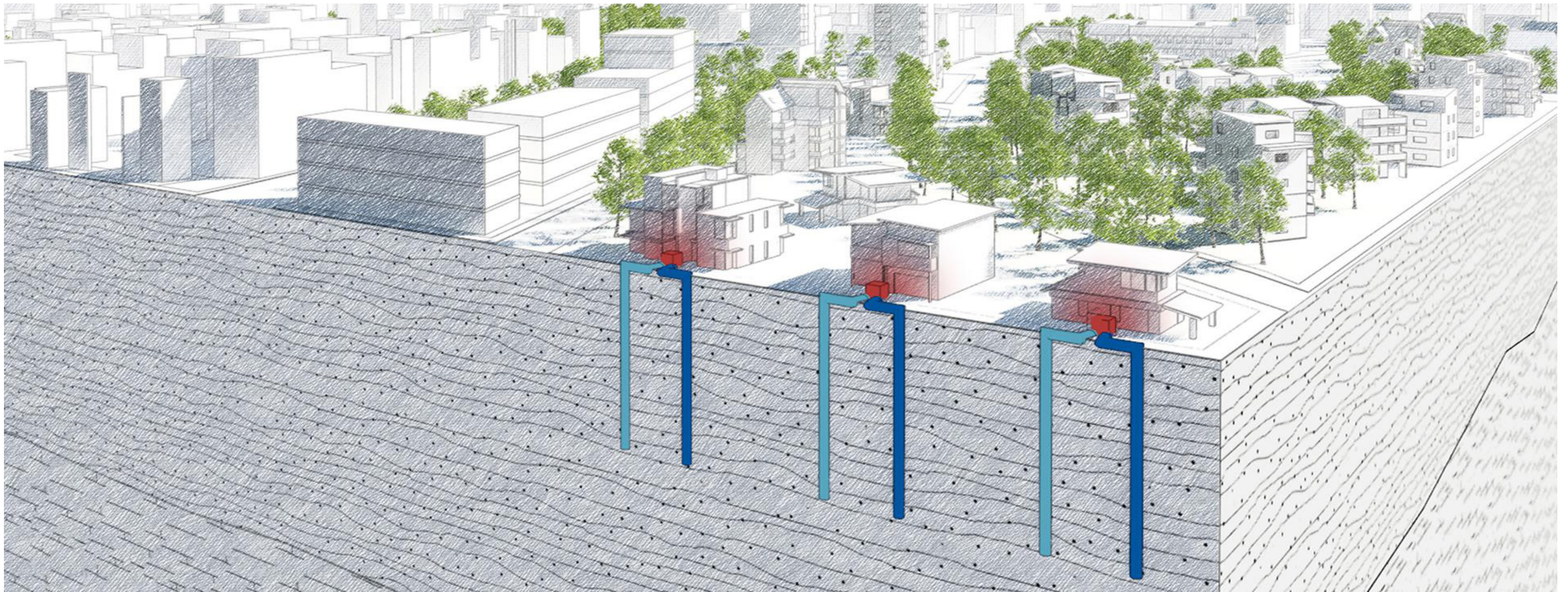


Bachelor's Thesis in Energy and Environmental Systems Engineering

Customer Journeys of Small Scale BTES owners in Switzerland

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Seasonal Thermal Energy Storage (STES) systems are thought to enable sustainable, carbon free heating systems while simultaneously addressing the emerging electricity supply gap in winter. One STES technology that promises significant potential in Switzerland is borehole thermal energy storage (BTES).

Based on multiple expert and stakeholder interviews this project developed the customer journeys of people implementing BTES, on the single-family house scale in Switzerland. Four customer personas were identified that currently implement BTES on the relevant scale.

Personas 1 and 2 (left graph above) are already very knowledgeable and interested in the technology and are specifically interested in the storage aspect of the studied technology. Personas 3 and 4 (right graph above) on the other hand do not have to be interested in BTES from the beginning and are primarily motivated to operate Freecooling with their GSH-system to increase comfort in summer.

The customer journey was subdivided into six temporal phases. For each phase of the process the customer's relevant steps were modelled as well as interactions with other stakeholders and pain points in the process identified. To better emphasise with the customer key thoughts were listed in all phases of the process.

The results showed that customer personas 1 and 2 are marginal and limited mainly by the size of the addressed customer segment. In case of personas 3 and 4, where Freecooling is the main driver, the implementation rate is already high. This suggests that the process for BTES implementation is not the key limiter.

Over time BTES can be to increase in importance based on the changed regulations that mandate regeneration of GSH-systems in certain areas. Big potential lies in addressing new, wider customer segments such as the self-sufficiency and independence driven customers.

Dominic Bigler

Project Coaches:
Prof. Dr. Jörg Worlitschek & Richard Lüchinger

Project Expert:
Dr. Kai Lieball

Industrial Partner:
HakaGerodur AG