

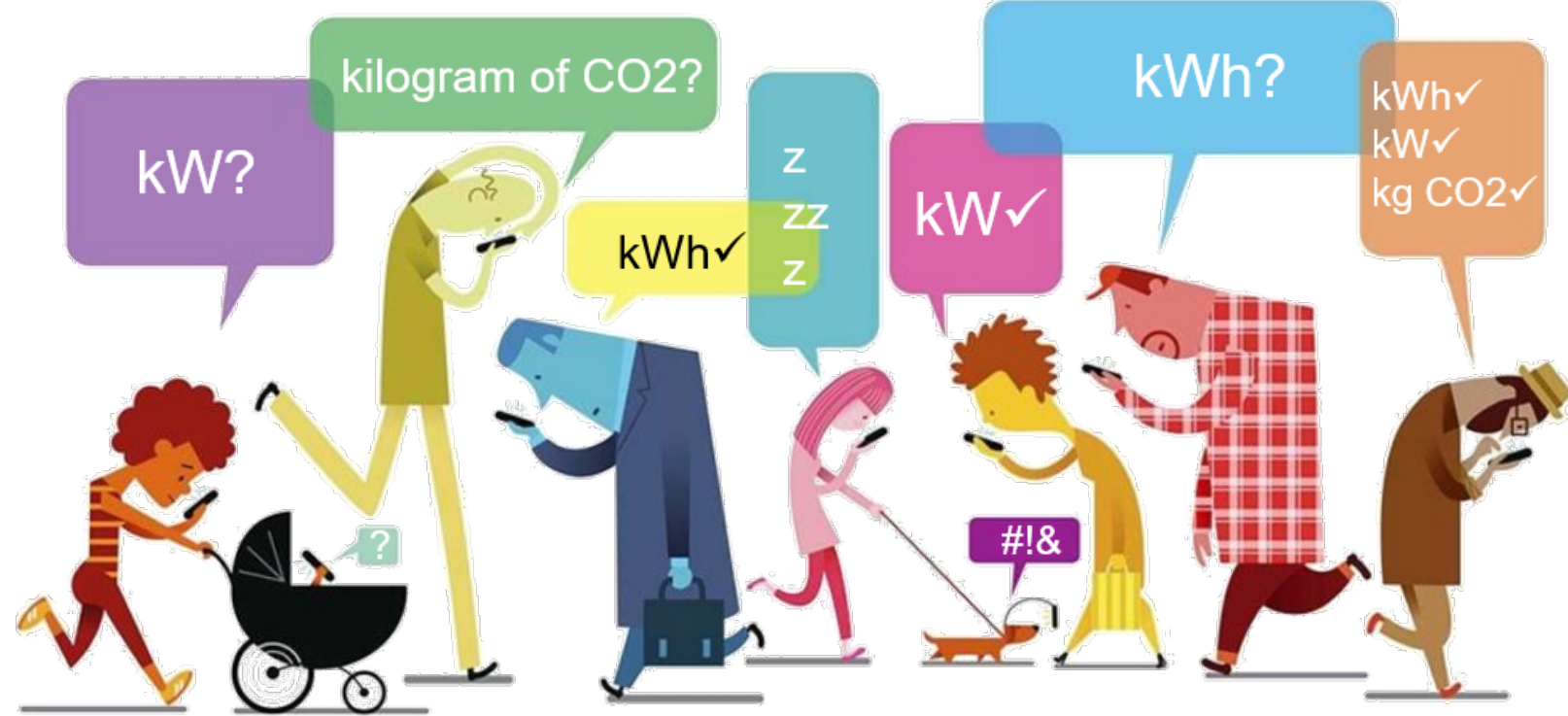
A Usability Design Approach of Tailored Visualizations for Mobile Applications

Masterstudium:
Business Informatics

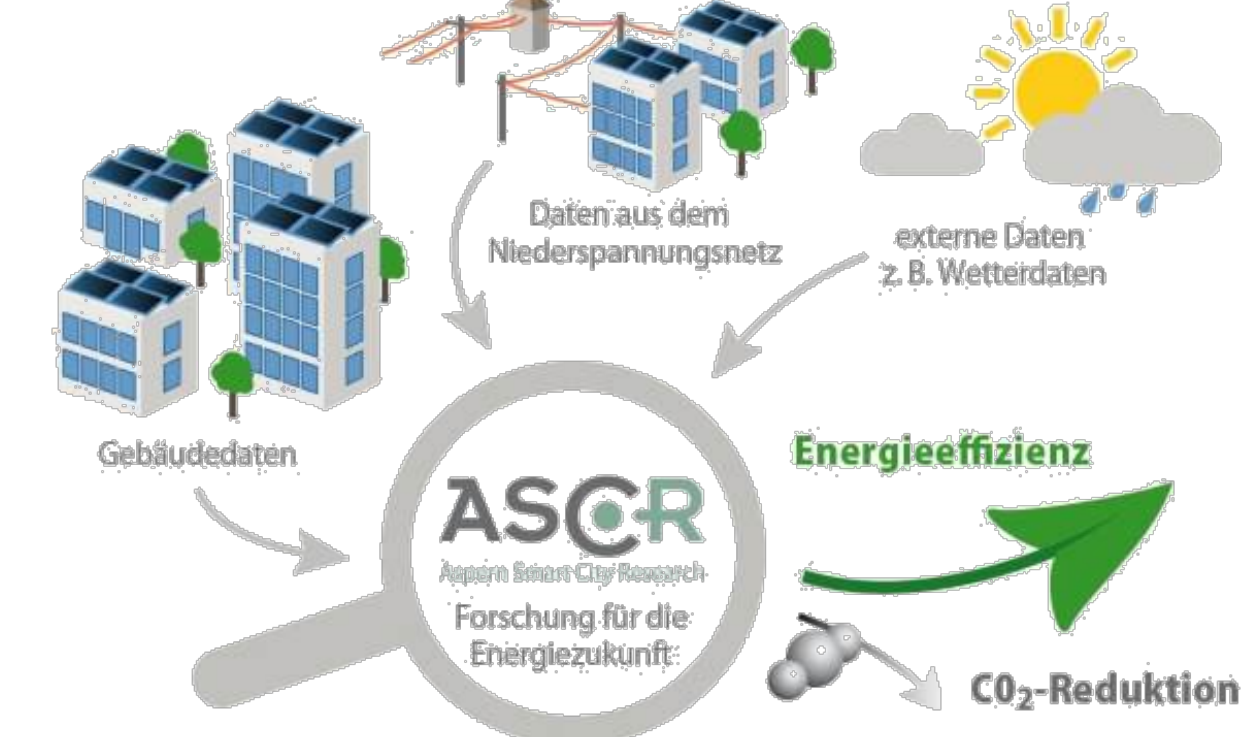
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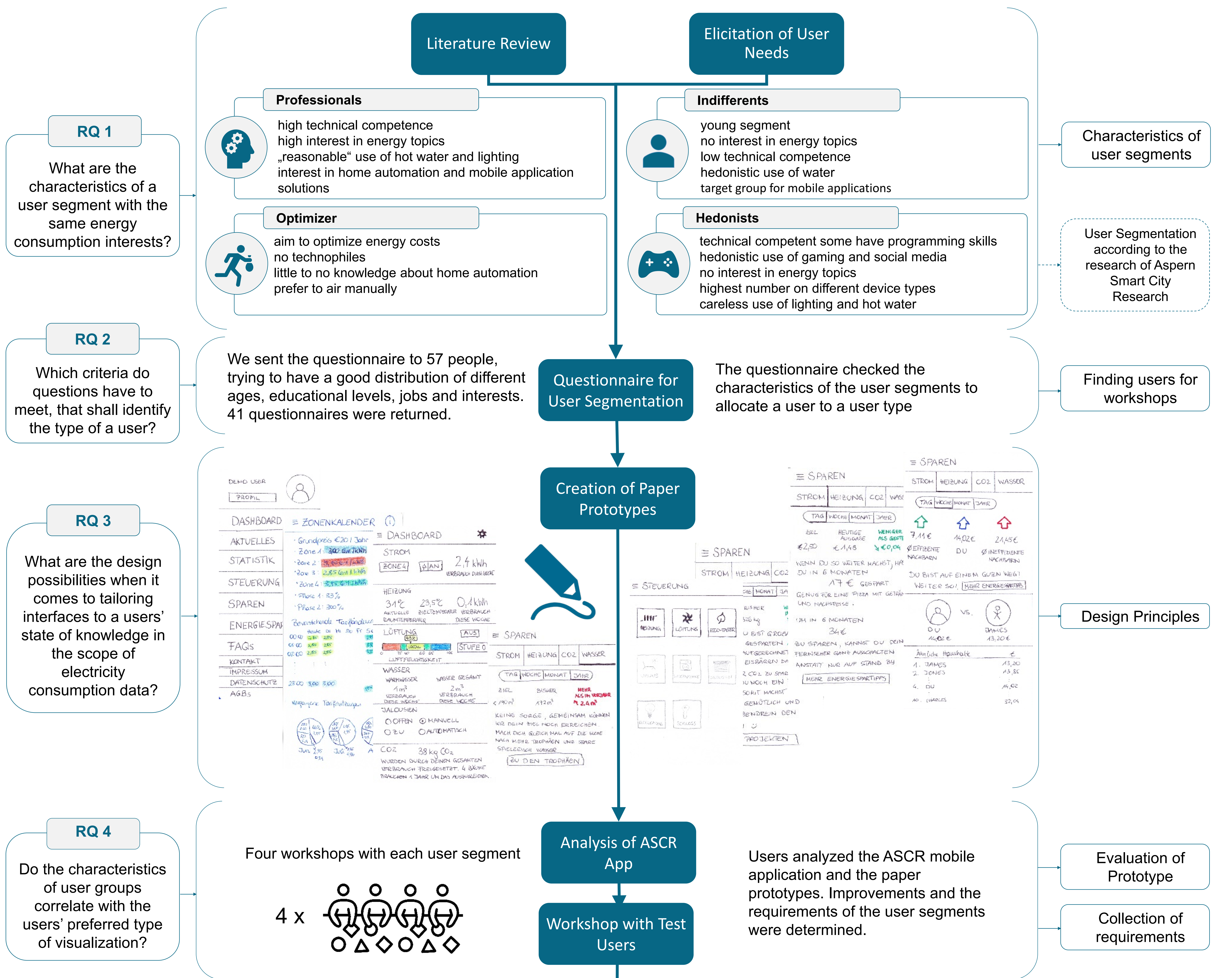
Motivation



A lot of mobile applications that help at saving energy can be found on the Web. The problem is that there are a multitude of users with different knowledge and characteristics. Not all users are familiar with energy units of measurements such as kWh.



Methodology



RQ 1

What are the characteristics of a user segment with the same energy consumption interests?

RQ 2

Which criteria do questions have to meet, that shall identify the type of a user?

RQ 3

What are the design possibilities when it comes to tailoring interfaces to a users' state of knowledge in the scope of electricity consumption data?

RQ 4

Do the characteristics of user groups correlate with the users' preferred type of visualization?

Results

- G 1: Adapt navigation drawer to requirements of user type
- G 2: Use units of energy for Professionals and Hedonists and monetary units for Optimizers and Indifferents
- G 3: Use the thrive of Hedonists to program and provide projects for them
- G 4: Provide diagrams to monitor the consumption rate for all users
- G 5: Provide the possibility to compare with others for Professionals
- G 9: Provide optimizers with the information of how much money can be saved when following an energy-saving tip
- G 6: Avoid to present comfort limiting energy-saving tips to Hedonists

Refinement of Design Principle Catalogue

- G 7: Provide deeper information for an energy-saving tip for Professionals
- G 8: Avoid motivating a Professional with gamification elements
- G 10: Reward an Indifferent with game progress for applying a target behaviour
- G 11: Use gamification elements to sensitize Indifferents to energy-topics
- G 12: Provide a hotline for trouble shooting for Optimizer and Hedonists
- G 13: Provide FAQs for Professionals and Indifferents
- G 14: Use concrete instructions and avoid detailed information for Optimizer
- G 15: Use praise to motivate all energy-users