TOWARDS A USER FEEDBACK APPROACH FOR SMART HOMES: AN EXPLORATIVE INTERVIEW STUDY

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SMART HOME DEFINITION

Smart home is "a generic descriptor for the introduction of enhanced monitoring and control functionality into homes" (C. Wilson at al.)

WHY: BACKGROUND

- Smart home environments is a fast growing and promising area

- Lack of information about feedback cycle in smart home environments

WHAT: RESEARCH QUESTIONS

RQ1. What factors influence users' attitude and behavior in providing feedback about smart homes?

RQ2. What are key features for a satisfying tool supported feedback approach in the smart home context from the perspective of feedback senders and receivers?

HOW: INTERVIEW STUDY

- Semi-structured interview

- Face to face or Skype call

- 45-75 minutes

HOW: PARTICIPANTS SELECTION

- Personal network via e-mail

- 4 smart home-residents

- Heterogeneous background

HOW: INTERVIEW DESIGN

- **6 key sections of the interview questions to get the first qualitative insights**

- **4 scenarios covering different interaction techniques for smart home systems**

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HOW: SCENARIO #1

Appliances controlled by a mobile acoustic user interface.

HOW: SCENARIO #2

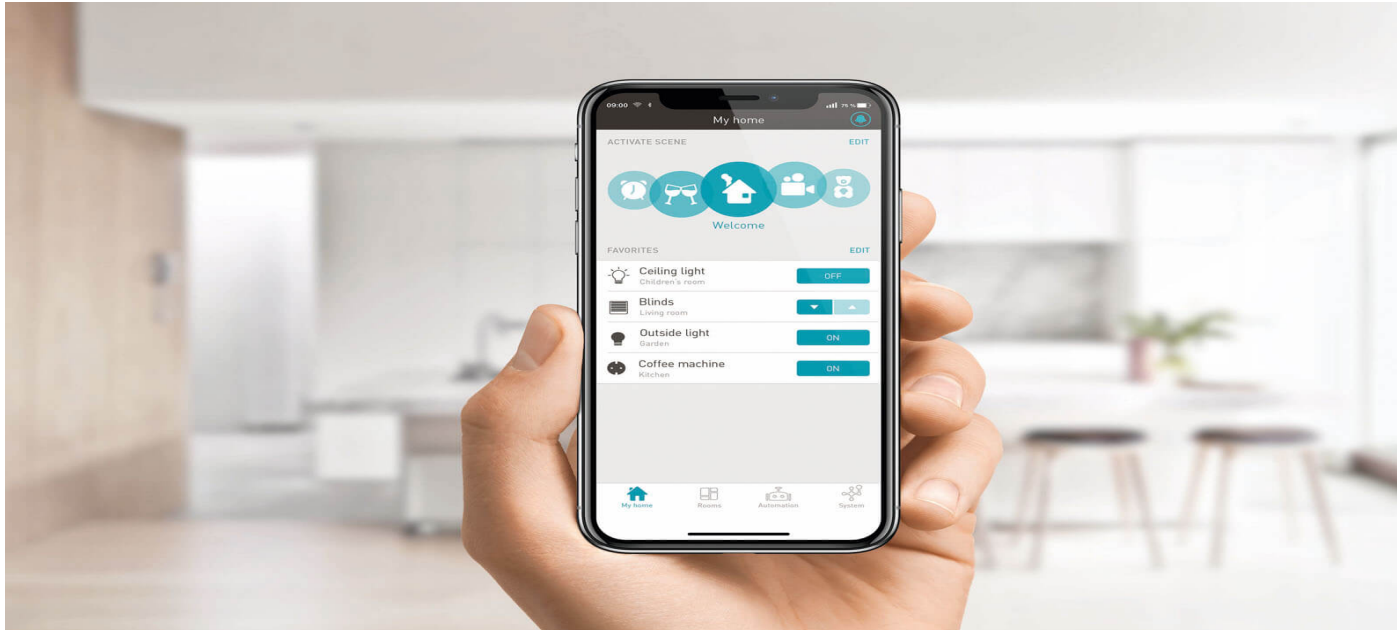**Appliances controlled by a mobile tactile and acoustic user interface.**

HOW: SCENARIO #3

Appliances controlled by a fixed touch user interface integrated into the appliance.

HOW: SCENARIO#4

Appliances controlled by a mobile touch user interface accessed through smartphone or tablet apps.
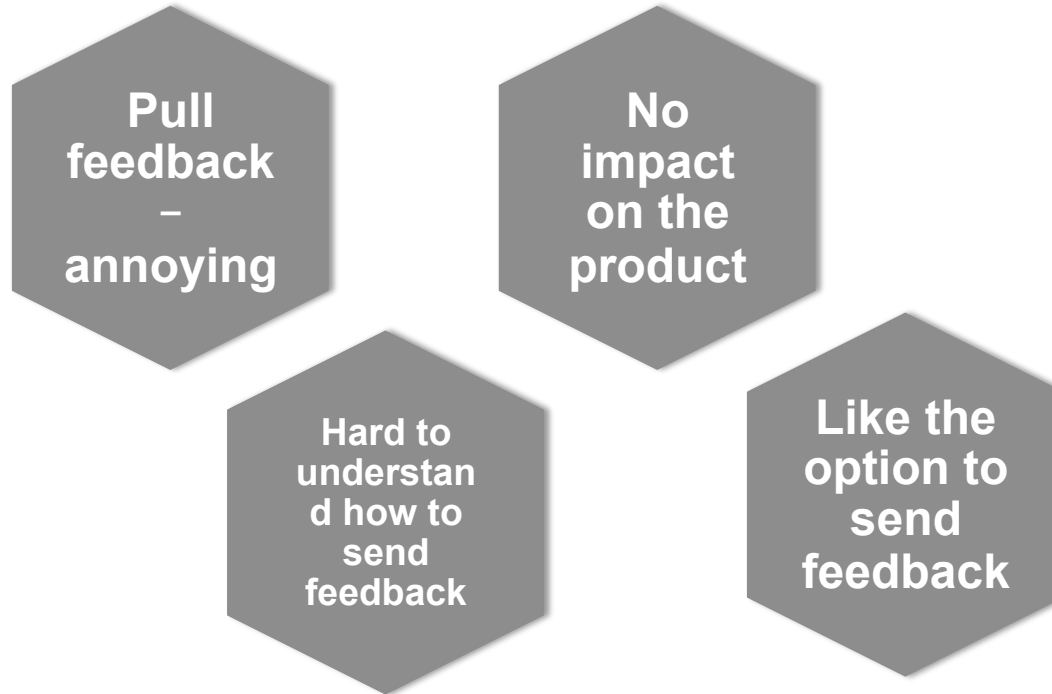
KEY FINDINGS : GENERAL ATTITUDE TOWARDS FEEDBACK

Rating (star) format was doubted

Textual feedback is too time consuming

Lack of the video format feedback channel

Voice recording feedback channel is the best

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KEY FINDINGS : GENERAL ATTITUDE TOWARDS FEEDBACK

Pull feedback – annoying

No impact on the product

Hard to understand how to send feedback

Like the option to send feedback

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KEY FINDINGS: ATTITUDE TOWARDS FEEDBACK WITHIN SMART HOME ENVIRONMENTS

Send feedback by voice

Predefined list of feedback senders

No proper communi cation channel to send it

Exited about feedback option

KEY FINDINGS: ATTITUDE TOWARDS FEEDBACK WITHIN SMART HOME ENVIRONMENTS

The ideal feedback channel might depend on situation

It should be obvious that I can send feedback

There is no need to reinvent the wheel for smart home app

It is important to see the status of the feedback

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CONCLUSION: ANSWER RQ1

The list of factors, which influence end-user attitude and behavior to send feedbacks within smart home environments:

- **Lack of information about feedback channel for smart home environments**

- **Different smart home devices = different feedback channel**

- **Personal experience with existing feedback processes**

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CONCLUSION: ANSWER RQ2

Key features for a satisfying tool supported feedback approach:

- Voice recording is the preferred way of giving feedback

- Replay feature to listen the feedback before sending

- Starting the feedback communication needs to be easy

- Have an option to determine who can send the feedback

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NEXT STEPS

- Online survey

- Feedback receiver perspective

- Persona creation, and prototype development

- Prototype in real-world environment

THANK YOU!

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