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SEnerCon

YEFF Deliverable 3.1: Report containing evaluation of target group demands regarding usability and design framework

Project: YEFF – Young Energy Efficiency

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regarding usability and design framework**

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1. Target-Group Survey with existing tools

Facts for the interviews with the target group and the process

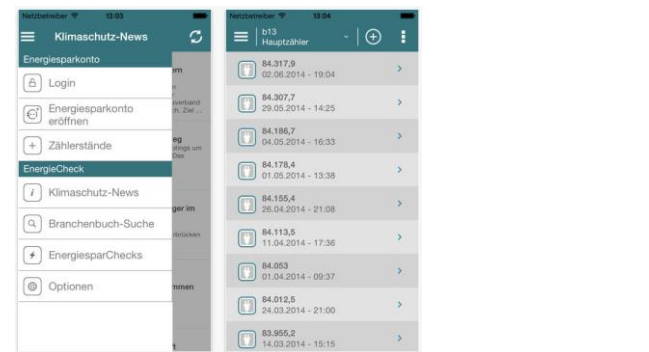
25 students from Germany take part for a testing of existing tools and gave their feedback. The participants inspected/used 5 tools/apps with energy topic concerning demands and requirements for 5-15 min. In the interviews think aloud protocols were realized: Participants were asked to say whatever they are thinking or feeling as they worked with the apps. Additionally they had to rate several aspect if the apps (e.g. design, contend). After that started the data-analysis e.g. via content-analysis of the think aloud protocols and via calculating statistical values for the ratings.

This following five apps were tested:

HEA Energiespartipps



EnergieCheck



Con Adison Ways to Save



Mein Stromverbrauch



Energiesparen 2.0



Central results: General Feedback for using an energy saving tool

Participants generally showed little interest in using an energy saving tool or app. The key features for the use of tools/apps is communication, games, information procurement, sports. The most important criteria for the use of tools/apps are usefulness, clarity, suitable for everyday applications and appearance.

Central results: Recommended points to consider for the EIT

The following points should be considered for the EIT Usability and the design framework:

- Good structure/set-up
- Easy operation
- Short and effective advice
- Suitable for everyday applications and comprehensible computers
- Available to all operating systems (Android/iOS)
- Information menu (from where does App gather information?)
- References to the costs (expenditure, savings) of tips
- More modern and clever design of tips
- Comparison function with other households
- Animation / visualisation of tips
- Game, where e.g. Tips are applied
- Option to control household devices

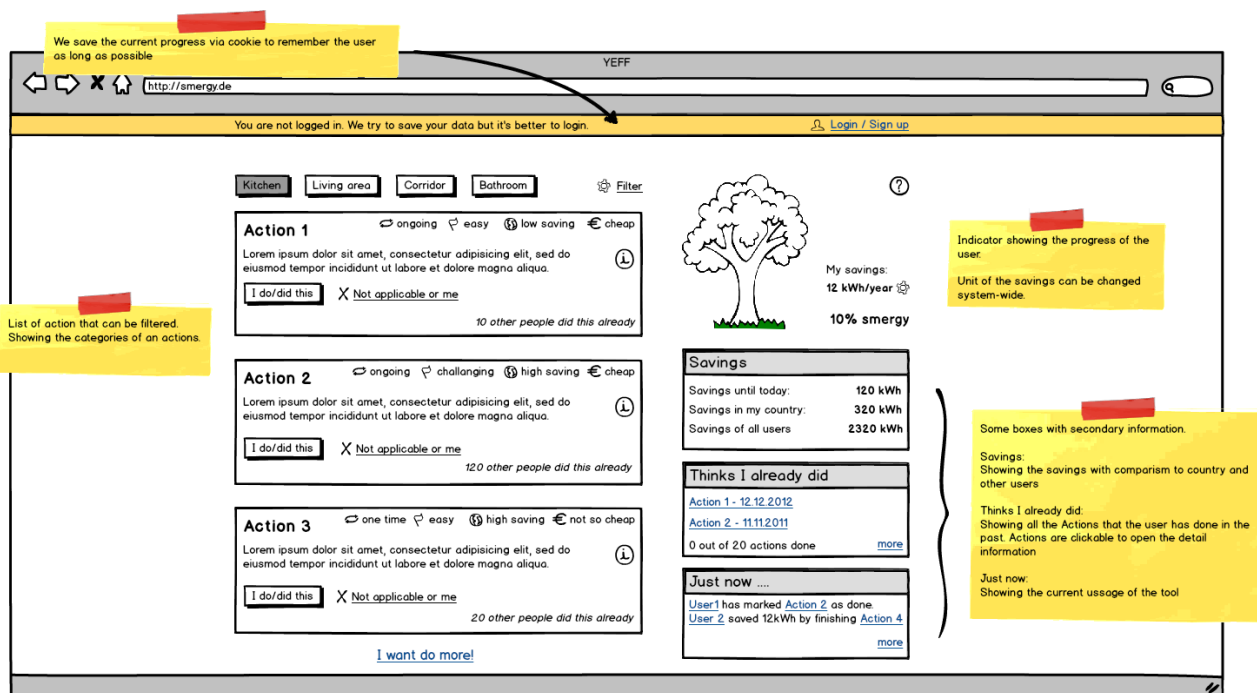
Central results: Points to avoid for the EIT

During the testing of existing tools could be collected some points that should be avoided for the EIT. For example a simple/artless design, the stringently necessary to be connected to internet, only available in English, trivial advice/tips, no animation, imprecise calculations, no visual support.

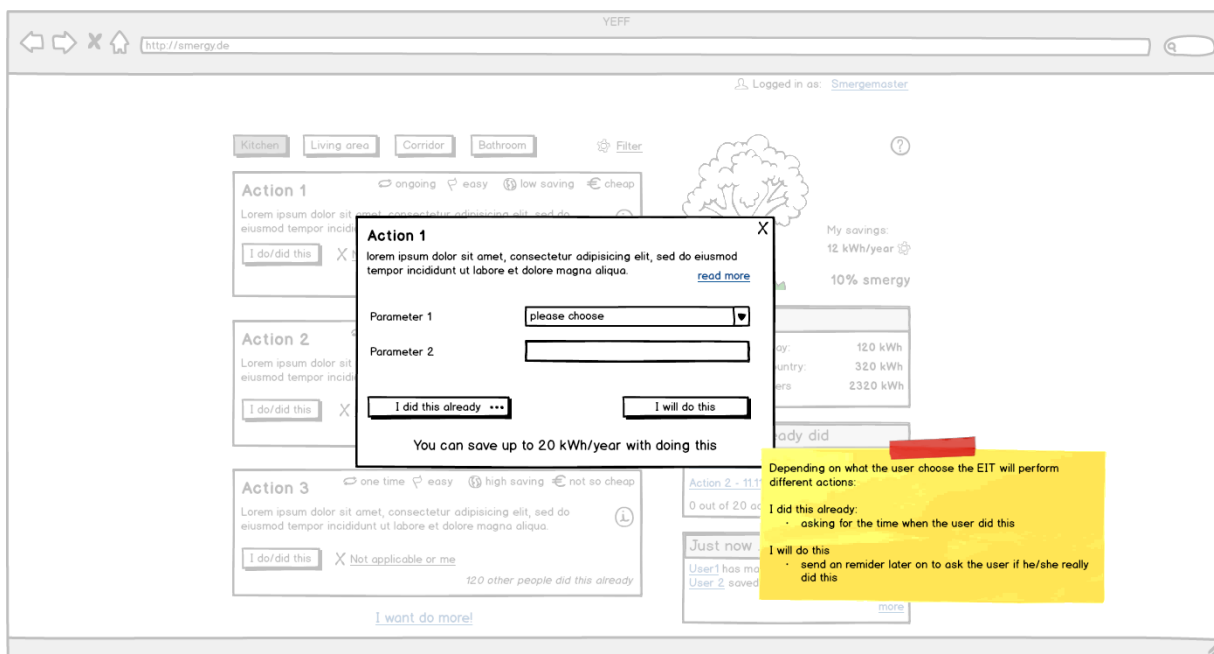
2. Target-Group Survey with first mock-ups from the EIT

For this survey two German focus groups were organized. One group with 8 participants (7 students, one trainee), second group with 6 participants (7 students). The duration for the focus groups was about 2 hours.

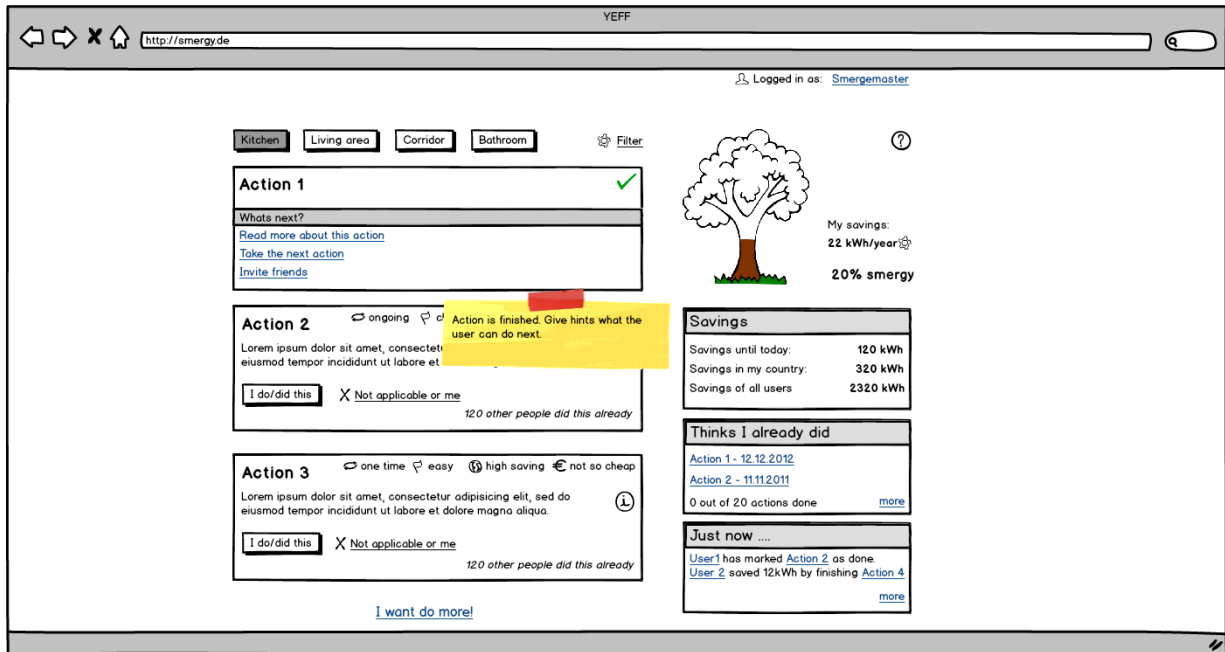
The focus groups started with an introduction of the Online-tool with a presentation. Additionally the focus groups had some mockups (see pictures below) presented that were clickable and gave them an idea of how the usability of the EIT would look like. After that the features were evaluated and the negative/positive comments were documented on a flipchart. An overview of the central results for the first mock-ups of the EIT are also in the following chapter:



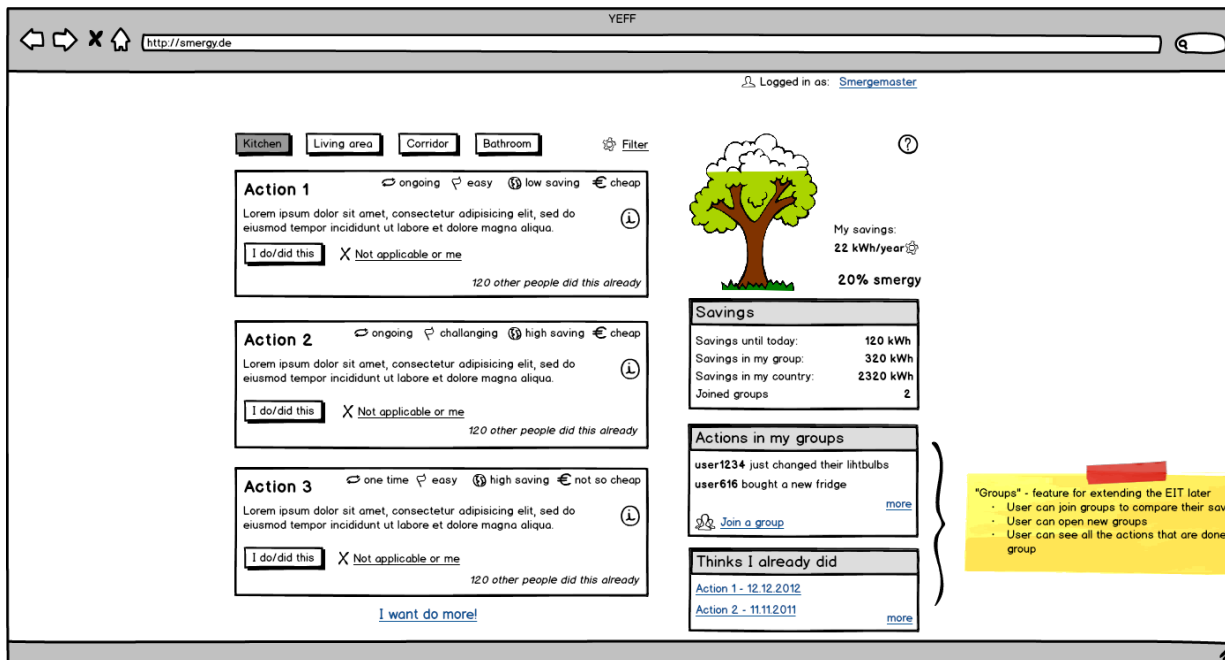
Mock-up 1: Action Overview and description of the functions



Mock-up 2: Description of the action, the user has to complete something and to decide "I did this already" or "I will do this"



Mock-up 3: The action is finished. The user get hints what he can do now



Mock-up 4: If the user has done some actions then he get a better level (currently the tree will get more green leaves)

Categorization

- Should be personalized (own room/devices)
- Benefit not obvious

Tipps/Actions and Filter

- Too many clicks
- There is not enough motivation to insert/select things

Login

- Privacy protection
- Is account meaningful?
- Ranking should be there

Classification and self-appraisal

- Difficult for beginners, external appraisal desired
- Social desirability, (Ranking & fraud)
- The whole purpose not clear

„Groups“ and News

- Basic idea positive
- Ranking: Battle → Social desirability/fraud
- Without Ranking → meaning?

Checklist

- High „costs“ → motivation?
- Self-deception (risk)
- Selftracking (positive option)

Savings

- Cost factor interesting
- Competition negative , ranking positive

Energy Tree as an indicator for the participant's level of the activities that he did.

- Positive!
- Can the tree „fade away“

Why should young adults use the EIT?

- Only if there is a benefit (planting trees...)
- On recommendation of others

Participants rather not motivated to use the EIT in “real I