

# Exploring User Attitudes Toward Future Agent Assisted Energy Management Through Sketching

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## Aims

- Explore user perceptions and attitudes toward *current*, *near-future*, and *future* energy management technologies
- Sensitise and investigate user understanding of the notion of agency and handing over control
- Use animated sketching to facilitate participant cognitive placement within a complex heterogeneous energy system

## Study Design

- Participants with differing experience of home energy monitors
- Study grounded in existing technologies (U-switch/Agent-Switch)
- Progressively build 'big picture' sketch of energy systems
- 3 sketches envisage *current*, *near-future* and *future* technologies
- Opposing fictional futures at end to elicit responses

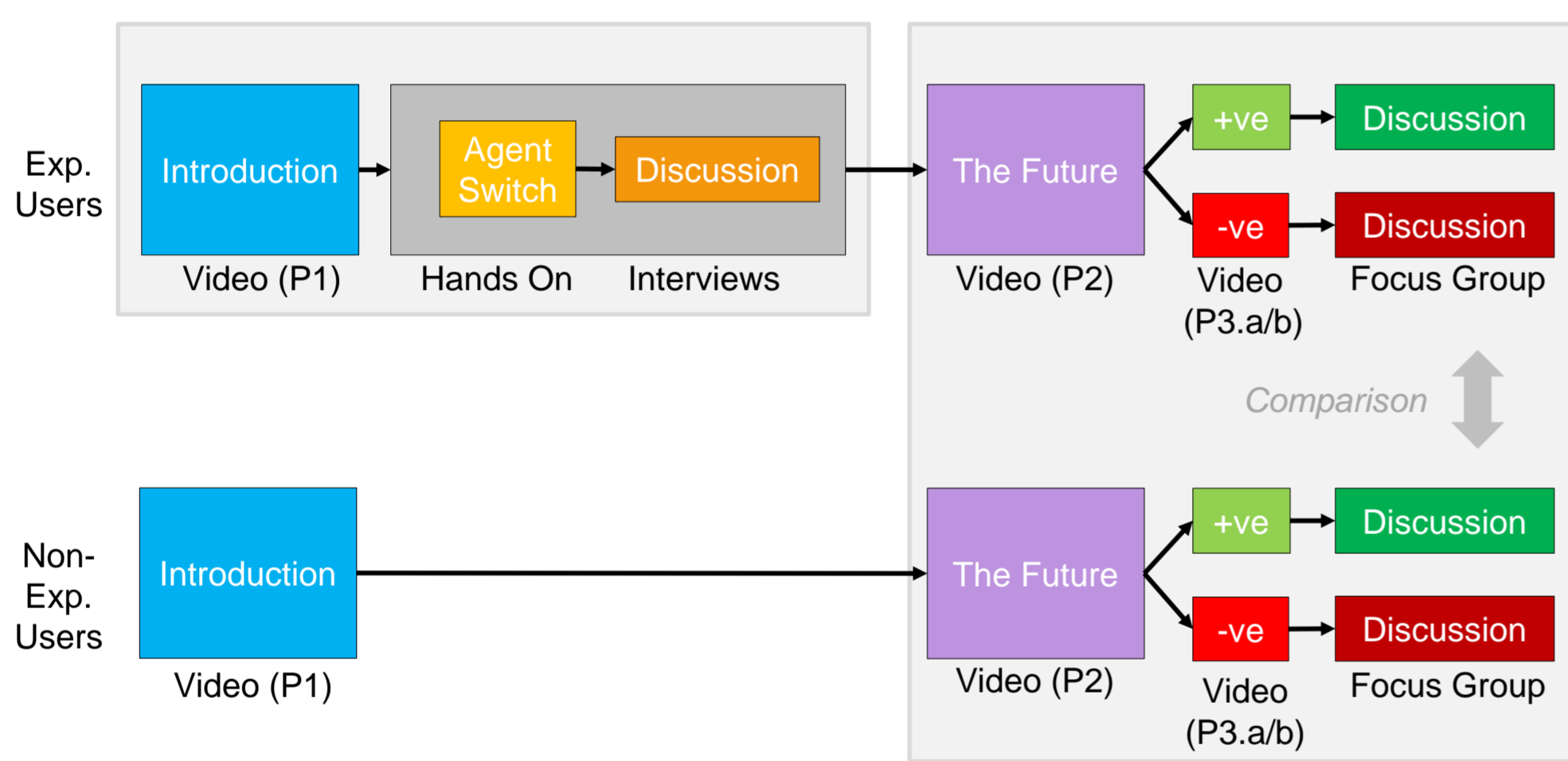


Figure 1: Different paths for groups in study

## Results



*"Eon sent me out an energy monitor...I did use it...then I stopped using it... just another thing using electricity".* [Familiarity]

*"I'm not really bothered about saving too much money on electricity".* [Attitude]

*"I think you have to be a mathematician half the time to understand these figures...and I'm not".* [Understanding]

*"This is just part of the future that we'll adhere to...it's cleverer, it's more efficient, it keeps us informed...it's just people, whether they want to go with it or not, because there's a lot of people who won't use that sort of thing".* [Usefulness]

*"I think access to the data would be quite important, and um, especially if the idea is that they are going to be able to make tariffs even more specific as to the time of the day".* [Access]

*"I don't know... I think if a machine tried to tell me when to put the washing machine on I'd probably break it... I can see the benefit of it, but I think it might be a step too far".* [Control]

*"As far as technology goes, you have to trust in the fact there's going to be sufficient regulation, who ever monitors the data or collects the data, that it is going to be secure as it can be".* [Trust]

*"It wouldn't bother me to be honest, I mean my energy consumption, I don't class... I suppose it is personal, but not personal-personal".* [Privacy]

## Video Design

### Peak Levelling:

Power companies balance energy production based on estimated/actual peak user consumption times

### Smart Meter:

Near future technology which collects real-time data and shares with both power companies and users

### The Cloud:

Energy use data will be stored in the cloud

### Power Companies:

Energy consumers have a number of different power companies and tariffs to choose from

**Access Points:**  
Consumer data can be accessed from the cloud, and represented, in different ways

### Software Agent:

Future technology which aims to help users manage dynamic tariffs and consumption periods

**Consumers Home:**  
Main source of consumption for the user, it is here that much of their interaction with an agent will take place

