REACTOR

“Feel the power”

Exploring Interactions

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REACTOR / Design Goal

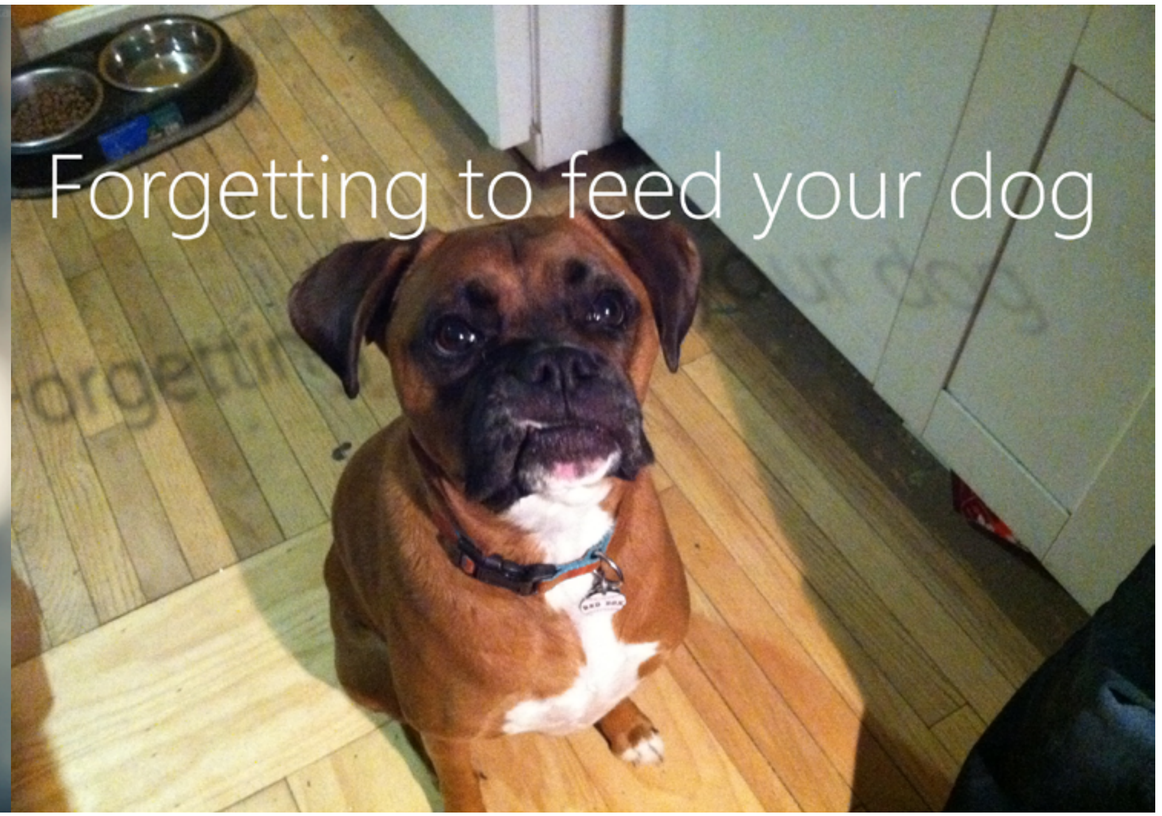
- What?
  Make the consumption of electrical energy a more intuitive and tangible part of the users' lives.

- How?
  Allow the user to interact with electricity, by embodying its properties in a physical object.

- For who?
  Families living in urban environments, both parents work.

REACTOR

Interaction Vision



/ Research Findings

- Coach role
  Usually played by one family member, is uncomfortable in this role.
  Feels like efforts are ineffective and affecting relations negatively.

- People have little understanding of electrical quantities
  But do understand physical quantities very well!

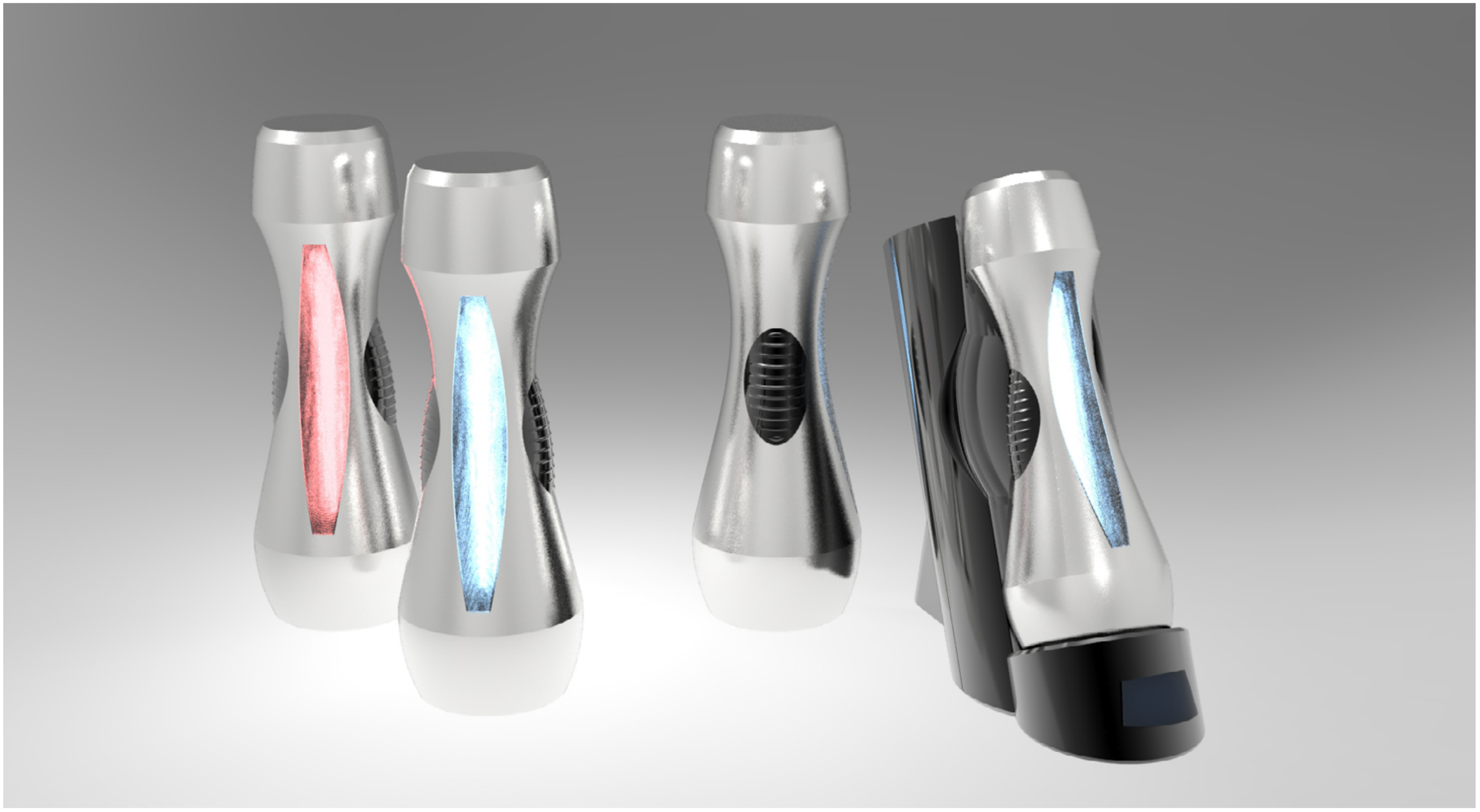
- Sustainable behaviour is:
  “A responsibility/lifestyle” (coach)
  “Something you don’t think of” (offenders, often children)

REACTOR / Research Findings

- Limiting a resource makes people more aware of it.
- Information about consumption is out there, but...
  Not in terms users understand
  Almost entirely hidden away

REACTOR

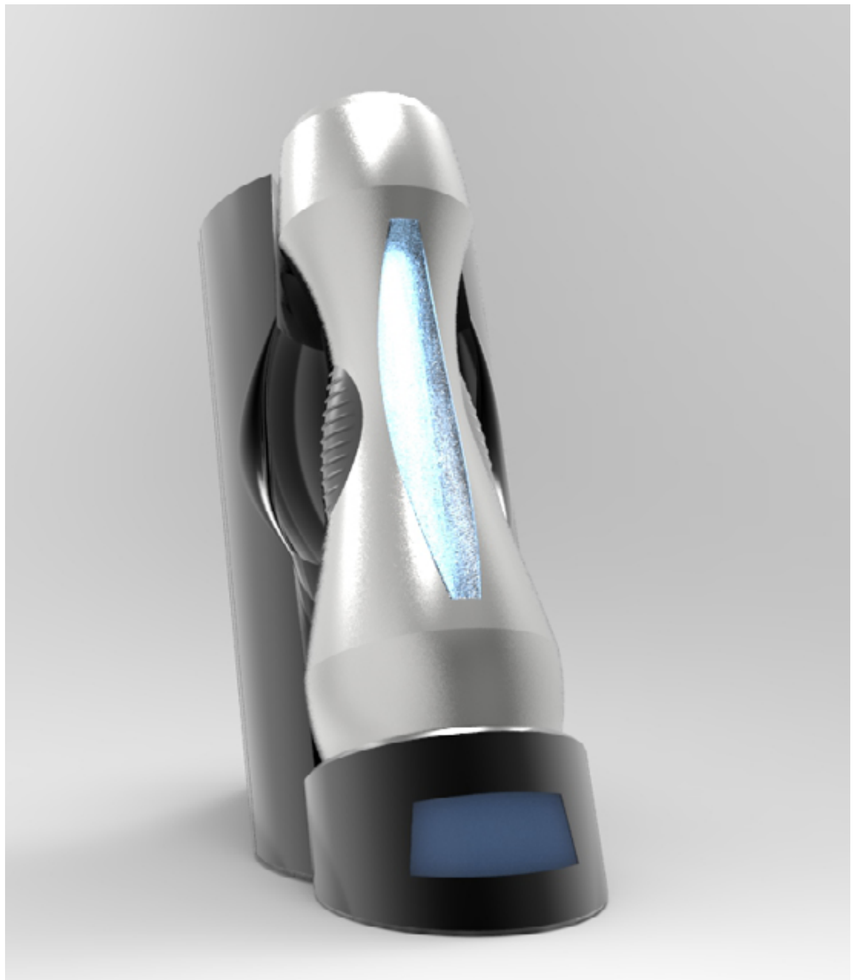
/ Final Design



REACTOR

/ Functions

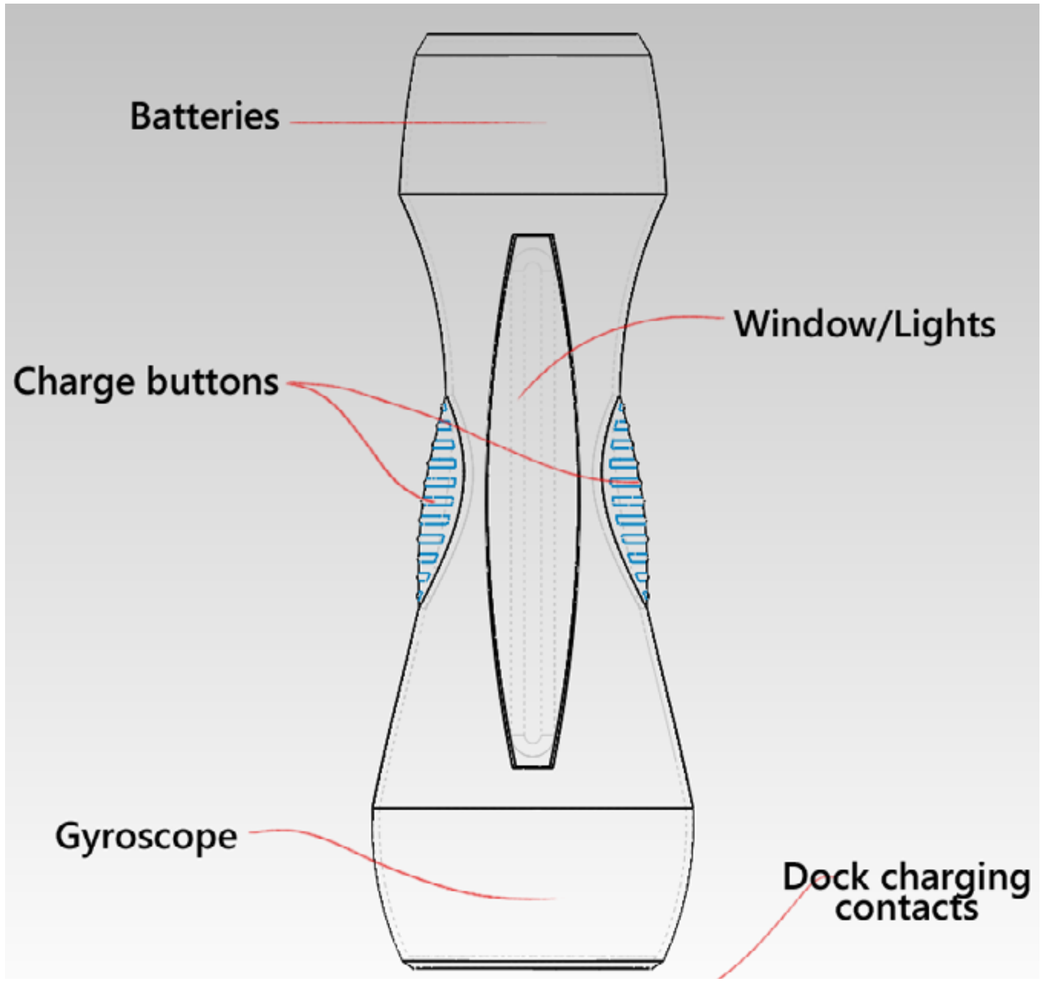
- Take already available information and present it to the user.



- Connects wirelessly to existing Smart-Meter systems.
- Acts as an extension of this Smart-Meter.

/ Functions

- Cultivate intuitive insight into electrical consumption.

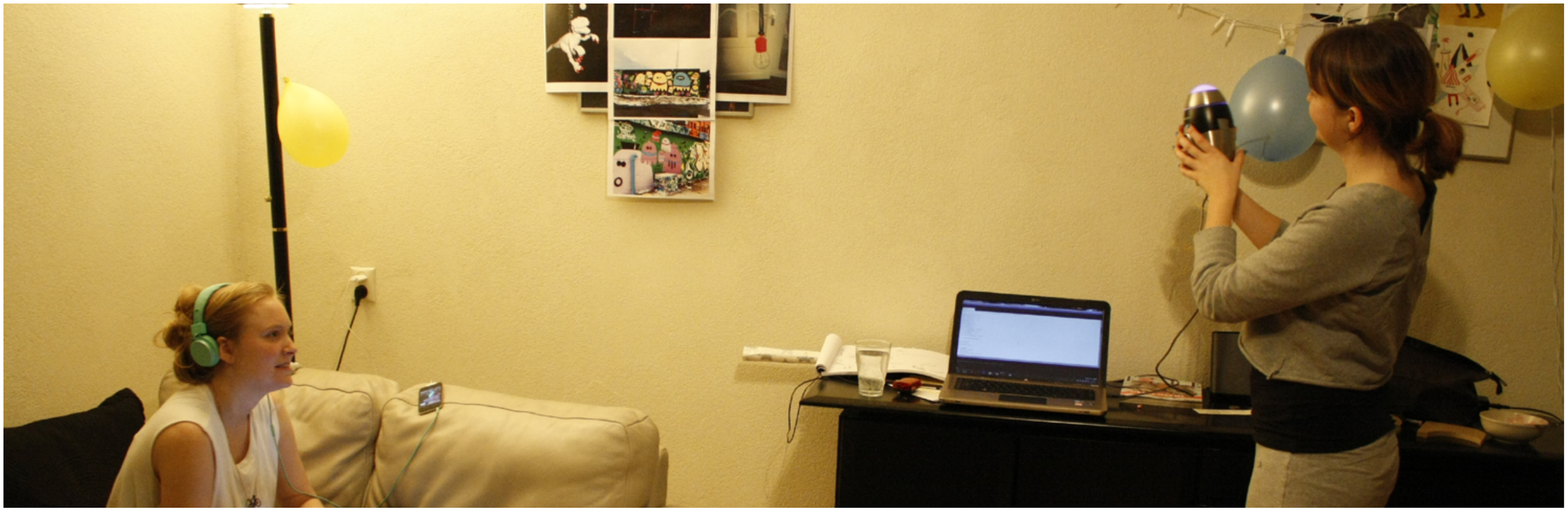


- Sound, lights and gyroscopic forces instead of numbers.
- Consumption rate
- “Charge” - make energy into limited resource!

REACTOR / # Functions

- Allow “coach” to delegate this role to objective and informed other (Reactor).

  Confrontation with Reactor sheds light on family members’ consumption as well.



REACTOR / Functions

- Allow for budgetting/setting goals.
  Fosters motivation and cooperation towards a goal.

- Dock shows:
  Number of charges that week (bottom).
  Percentage of that week's target (top).
- Target can be set by user or be last week's consumption.

/ Test results

- Users were fairly good at reading charge level.
  Even without gyroscopic forces!
- Very positive about “rate change sound”!
  Most direct form of feedback. Strengthens “power supply” metaphor.
- Charging up needs a “100%” cue. Unclear when Reactor is 100% full.
  Already present in video.
- Missing long-term feedback.
  “How many trees were saved?”

/ Test results

- Users became aware of eachothers' consumption.
  "Main offender" had to do the recharging.
- One charge needs more energy.
  Too fast.
- Characterized as:
  "Neutral", "Passive" and "Comforting" when full.
  "Annoying", "Intrusive" and "Confronting" when empty.

REACTOR / # To-do

- Test with children.
- Test long-term.
- Design/specify how dock screen works (buttons?)
- Stimulate checking Smart-Meter for detailed info.

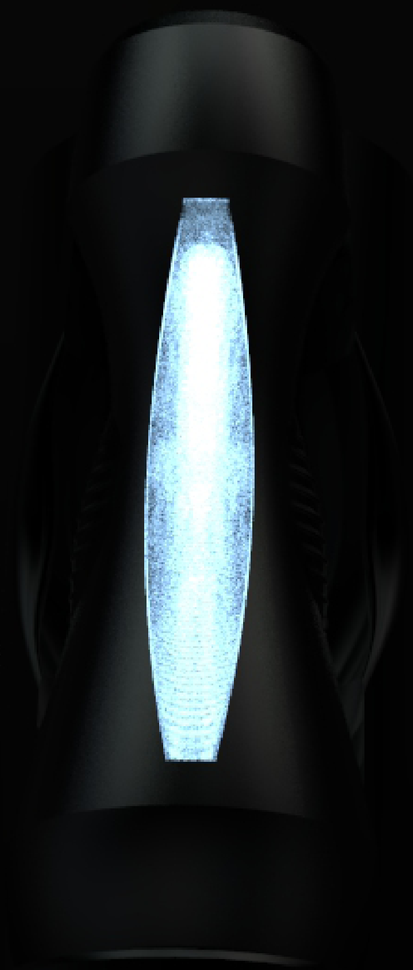
REACTOR

/ Contribution

Reactor provides a new way to think about electricity. It makes people understand and more aware, and therefore more sustainable.

It helps overcome the main social hurdle in making your family environmentally responsible; targeting a root cause instead of a symptom.

REACTOR



Thanks for watching