

Design of an interface for visualizing the energy impact of digital in a household

Context and Objective

The digital is ubiquitous in Swiss households, but its environmental impact remains difficult to perceive.

Our daily usage (e.g., streaming, cloud services, social media) relies on an energy-intensive infrastructure.

This project gives shape to this impact by developing an interactive physical object that reflects, in real-time, a household's digital consumption.

The objective is to make our usage more visible and understandable, to stimulate reflection on our digital practices.



Figure 1: Photo of the functional prototype implemented (height 30cm, diameter 11cm)

Approach

The project follows a user-centred approach inspired by the principle of research through design (*Research through Design*).

Main Steps:

- Literature Review
- Ideation Workshops and Concept Creation
- Iterative Prototyping
- User Testing and Continual Improvement

Operation

The flower follows a weekly cycle and resets its health every Monday.

It wilts gradually according to the amount of data used by the household, compared to a defined threshold.

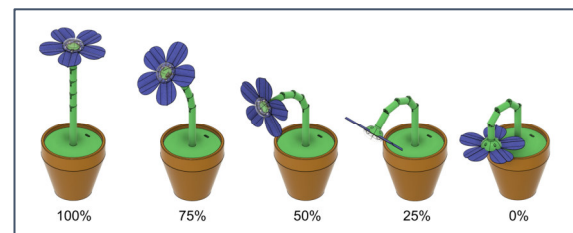


Figure 2: Health states of the flower

The flower's core lights up briefly at regular intervals to signal the intensity of real-time consumption.



Figure 3: Light indication of instantaneous consumption

The flower thus reflects both the cumulative consumption over the week and the instantaneous rate.

Results, Impacts, and Perspectives

The prototype was positively received and made visible a household's weekly digital consumption. It sparked awareness and encouraged users to reflect on their habits. The tests identified improvements such as adding a web interface to see usage or a system of good deeds to help the flower regain "health".

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