

Case Study

OfficeWise



S3C related keywords:

- Understanding the target group
- New products and services
- End user feedback
- Project communication
- Scalability/replicability

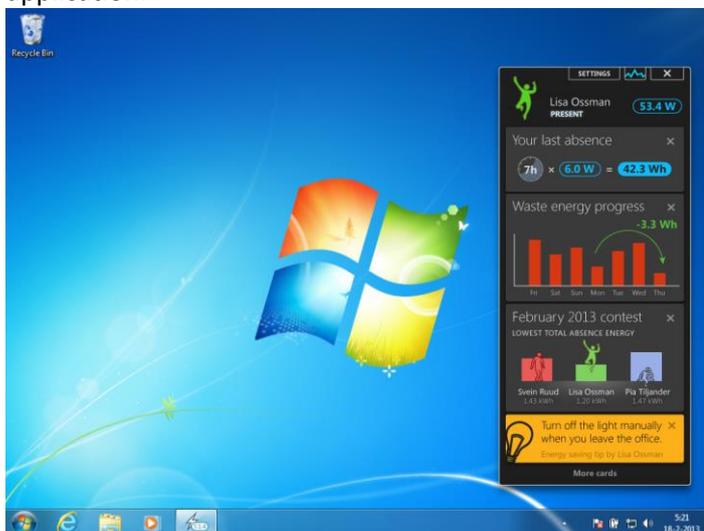
Co-creation on energy use in the workplace

Project Summary

The project OfficeWise was initiated in 2010 by one of the S3C consortium partners, SP Technical Research Institute of Sweden, when a new floor was planned in one of the company office buildings. The new offices enabled detailed measurements of energy use, both on individual and collective basis. SP took the opportunity to team up with the IT and design research institute “Interactive Institute” when developing an energy feedback system targeting office workers in order to address the fact that people tend to show less interest in energy at work than at home.

The project aimed at developing prototypes for individual and aggregated energy feedback and to design organizational strategies for how to incorporate energy-feedback in workplace routines. The goal was to minimize the so-called absence energy (or waste energy), for instance energy that is used when no one is present in a room. A system of three prototypes addressing different types of feedback was developed within the project:

1. **InstantEnergy:** a PC application for feedback on individual electricity use on workroom level, providing feedback on individual electricity use, room temperature and presence/absence. At a pilot evaluation stage, 15 out of 30 new office rooms were equipped with the PC application.



Screenshot of the InstantEnergy PC application.

2. **SuperGraph:** an ambient, artistic visualization of current total electricity use in the office building, situated in the lunch room. The chandelier moves vertically as the collective electricity use increases or decreases.



The SuperGraph chandelier in the lunch room of SP. The counter weight is designed as a ruler.

3. **ReflectoGraph:** touch screen based feedback on total current and historical electricity use in the office building.



The ReflectoGraph visualisation is placed in the reception area.

The project had a high share of co-creation elements and has involved the employees to a large extent. Some examples of this approach are the initial workshop on visualization concepts together with employees, focusing on how the employer should encourage energy efficient behaviour and what data would be interesting to display. Next, the feedback interface was improved in a design workshop, where employees were encouraged to draw, cut, paste and describe their ideas for a visualization screen concept. Furthermore, an inauguration event was organized to install the ambient visualization, the SuperGraph, where all office workers were invited to contribute to the chandelier by mounting a personal avatar.

What sets this project apart from other Smart Grid projects?

By the time this project was initiated, energy visualization had mainly focused on households, while there were very few projects on energy feedback in office workplaces. This project can thereby provide valuable and novel insights into energy feedback in workplaces.

What happened?

Even though the project experienced a few technical drawbacks, there are benefits and lessons to be learnt. As an example, employees have experienced increased consciousness on energy behaviour due to the instruments provided. Discussions on how energy feedback can be used in organizational management and how the management should address and work with energy issues together with employees have also been initialized.

Another successful element from this project is the co-creation approach that has been highly appreciated by participants and led them to be more engaged with the project. In addition, the project has been recognized for its unusual and creative ambient visualisation of energy use by the SuperGraph chandelier. A follow-up project will be initiated during 2015.

Further information / Contact

Boork, M., Gustafsson, A., Dijkhuis, S., Katzeff, C. (2015) OfficeWise: Energy feedback in office workplaces. In *Proceedings of ECEEE Summer Study 2015*, Toulon/Hyères, France, 1-6 June 2015.

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