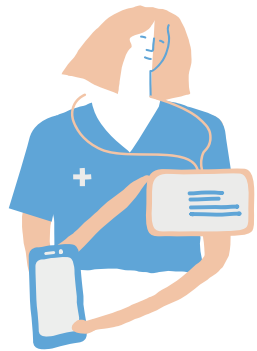


SMART SYSTEM FOR THE MANAGEMENT AND CONTROL OF SHIFT
WORKERS' CIRCADIAN RHYTHM

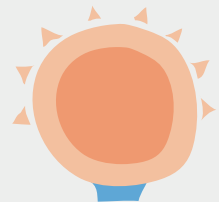
CLOCKWORK



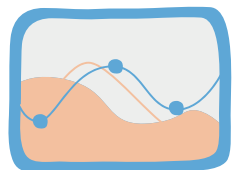
CLOCKWORK SUPPORTS THE EVERYDAY LIVES OF MIDDLE-AGED TO OLDER SHIFT WORKERS, ENABLING THEM TO IMPROVE THEIR CIRCADIAN RHYTHMS



Smart badge & smartphone application



Smart lamp



Analysis system for specialists

Background

Most people work between 8:00 and 18:00 on week days, but some workers engage in work activities in less orthodox schedules. Shift workers, as usually named, represent 20% of the workforce, and are very common in some areas due to shortage of specialised personnel, or the pressure to reduce production costs.

Engaging in shift work has a strong impact in the life of the workers. Shift workers report a worse fit between their work and their family or social life, and face multiple health consequences, including sleep disorders, peptic ulcer disease, or coronary heart disease.

However, it is not possible to completely avoid shifts today. In this project, we will shape technology to support and improve the lives of shift workers in the healthcare setting. The impact of the project will be even greater on middle-aged workers, who embody great work experience but are at risk of early retirement due to issues related with shift work.

Smart badge and smartphone app

Clockwork is developing a smart badge and a smartphone application for shift workers. These devices will monitor activity and light exposure using accelerometers and light sensors. The collected data will be presented to the users so that they can be aware of their body and rhythms, and reflect about their work and lifestyle.

Smart lamp

The consortium is developing a smart lamp that can help users becoming more alert or sleepy. The smart lamp will be controlled by the smartphone and will have personalized light intervention plans for each user.

Analysis system for specialists

The consortium is developing an application for sleep specialists and health and safety technicians. These professionals will be able to analyse data of shift workers, to detect early issues before they become problematic.



clockworkproject.eu

Fraunhofer Portugal AICOS

Rua Alfredo Allen, 455/461
4200-135 Porto, PORTUGAL

Phone: (+351) 220 430 300

E-mail: info@fraunhofer.pt

www.fraunhofer.pt

Partners



Funding entities

