HEALTH

1 BEST: WELLBEING AND MENTAL HEALTH IN THE WORKPLACE.

A gamified app has been designed and implemented in which users can learn and receive advice on stress, anxiety, depression and abilities in the workplace such as time management, the establishment of priorities, and assertiveness.

The app enables challenges to be proposed in six areas: identification of state of mind; breathing; relaxation; sleep; social, cultural and leisure activities; and abilities in the workplace. The project is designed to measure the impact that this instrument could have in improving people's mental health.

In this project, the UPC Research Centre for Biomedical Engineering (CREB) collaborated with the Sant Joan de Déu Health Park.

2 A SYSTEM FOR MONITORING THE ELDERLY BASED ON GAS SENSORS AND ARTIFICIAL INTELLIGENCE

The device, which is entering the pilot phase, is designed to assist families or carers of elderly people who live alone. It can detect hazardous situations such as whether the gas has been left on, the ventilation is insufficient, or food has gone off in the dwelling.

The UPC Research Centre for Biomedical Engineering (CREB) and the company Sensing & Control have launched a new system of artificial intelligence-based gas sensors to monitor elderly people who live alone.

The information gathered by the sensors is processed using algorithms developed by CREB and Sensing & Control's applied artificial intelligence. The sensors have two main functions: they warn of hazards and provide information on the person's pattern of behaviour.

The system consists of two or three devices that are installed in the dining room, the bedroom and the kitchen of the dwelling. The sensors in the devices can detect various types of gases, such as carbon dioxide or hydrocarbons, among others, which reveal whether the person is in the space or not, has left the gas on, or whether there is insufficient ventilation or food that has gone off in the flat.

Conventional monitoring systems, such as video cameras or movement sensors, are often quite intrusive and create mistrust, compromise privacy and have limitations such as blind spots, while gas sensors can detect any activity that generates volatile substances. This solution is more efficient because with fewer systems a larger area can be covered.

For this innovation project, CREB UPC, a center with the TECNIO seal, and Sensing & Control received a grant of 125,000 euros as part ACCIÓ's INNOTEC framework programme (LLAVOR grant).

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