



Project Profile

eWatch

Extensive personal monitoring & watch platform

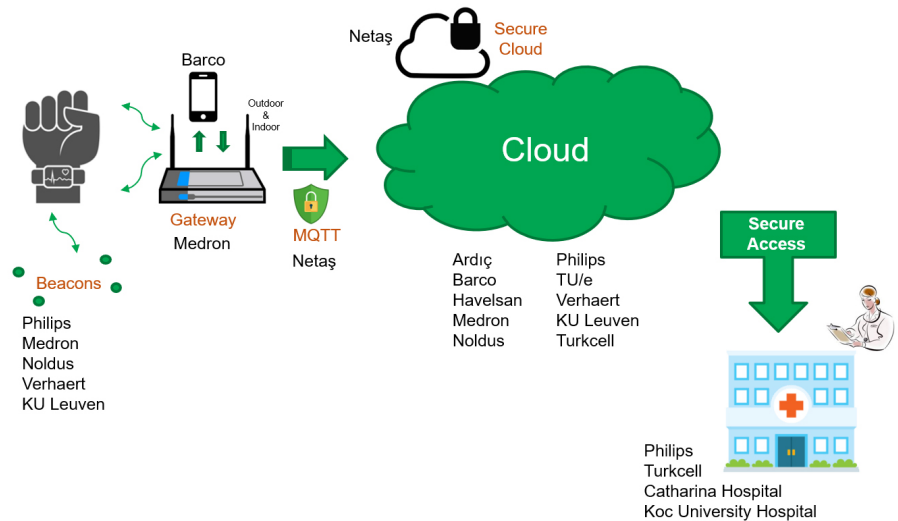
The overall goal of the ITEA project eWatch is to provide an extensive human centric, personal monitoring platform that is scalable and deployable for the mobile health industry worldwide.

ADDRESSING THE CHALLENGE

An ageing population and related increase in chronic diseases put considerable pressure on both the healthcare system and society, resulting in an unsustainable rise in healthcare costs. Being able to monitor heart rate, blood pressure, oxygen saturation, physical activity and other physiological parameters will minimise the costs of treatment and enhance quality of life. Wearable health monitoring systems are a very promising way to allow individuals to closely monitor changes in their signs and provide feedback to enable intervention to maintain or regain optimum health.

PROPOSED SOLUTIONS

The eWatch project will develop an integrated platform focusing on the value of continuous physiological data in managing chronic diseases and monitoring patients' post-hospitalisation recuperation through wearable and/or medical devices. Coupled with the shift in healthcare towards prevention, the project will target the following technologies: pulse oximetry that establish real-time signal processing capabilities to filter out noise in order to continuously correct pulse oximetry data on a wearable, battery powered system; a wound/skin imaging system that allows nurses and patients to reliably image the wound or skin at the patient's home and allow secure, reproducible real-time transmission of the images to a medical



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specialist in the hospital; indoor and outdoor localisation and security. In addition, the project will include data analysis solutions producing reports for doctors to be used in consultancy.

PROJECTED RESULTS AND IMPACT

The project will generate devices and services for continuous, ambulatory measurements of vital signs for early detection of patient exacerbations. The information retrieved from these devices will be transmitted in real-time, for live access, through a secure web-based platform to anywhere in the world. The expected outcome will be a system capable

of tracking vital signs (pulse-oximetry, hyper tension, etc.), detecting motion, activity and monitoring atrial fibrillation and sleep. The impact particularly on the elderly living at home will be enhanced health and wellbeing through prompt intervention and also have a positive effect on healthcare costs and resources.

**Project start**

September 2016

Project leader

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Project website<https://itea3.org/project/ewatch.html>**Project end**

April 2020

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