SERENE-IoT wins PENTA Innovation Award

# with rapid innovation for IoT-based healthcare

Paris, 24 November 2021- SERENE-IoT, a project within the EUREKA Penta Cluster managed by Industry Association AENEAS, was today presented with the PENTA Innovation Award during the EFECS 2021 online event. The award was accepted by Armand Castillejo on behalf of the 18 partners involved in the project.

SERENE-IoT was recognized for its innovations in addressing one of the biggest challenges facing healthcare systems today – how to meet the growing needs of aging populations and people living with chronic disease while keeping costs affordable? The project aimed to develop solutions that would both improve patient quality of life and cut costs through connected healthcare services and diagnosis, based on Internet of Things (IoT) devices. Its work resulted in three clinical prototypes: two for remote care, and one for fall prevention.

In the field of remote healthcare (moving care services from hospital to home), the SERENE-IoT project targeted two uses cases. One was an internet-connected infusion / nutrition pump; the second was rapid, early detection of antibiotic resistant infection. The project partners developed a wearable low-power 'Medical IoT Module', bringing connectivity to infusion / nutrition pump systems in class IIx medical devices, and a post-surgery mobile methicillin-resistant bacteria (MRSA) diagnostic device. For fall prevention, the project prototyped wirelessly connected insoles for gait analysis and fall prediction.

In the course of the three-year project, the partners addressed numerous technical challenges such as low-power and multi-protocol connectivity, end-to-end system security, interoperability, and adequate computing power. The prototypes also underwent clinical evaluation and validation by healthcare professionals. These efforts delivered crucial functional, usability and clinical feedback for manufacturers. And they pave the way for the project partners and third parties to seize commercial opportunities in the global IoT in healthcare market. This market is expected to be worth USD 188.2 billion by 2025.

Significantly, SERENE-IoT achieved this level of innovation in half the time usually required for such projects – cutting the medical innovation cycle from six to three years. This speed is especially relevant as the COVID-19 pandemic has accelerated demand for digital transformation in healthcare. Worldwide, healthcare systems are looking to telemedicine to help overcome shortages in healthcare professionals and budget constraints. Telemedicine, and solutions such as those developed in SERENE-IoT, offer a way to tackle these challenges and to ensure patients can receive high quality care at home.
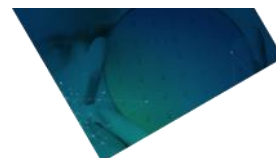
About the PENTA programme

PENTA is a EUREKA cluster whose purpose is to catalyse research, development and innovation in areas of micro and nanoelectronics enabled systems and applications. Guided by the Electronic Components & Systems (ECS) Strategic Research and Innovation Agenda (SRIA) four technology layers, four cross-sectional technologies and six ECS key application areas, the PENTA programme enables the development of electronic solutions to help drive the digital economy through the formation of collaborative ecosystems along the ECS value chain. This creates the opportunity for rapid competitive exploitation and a strong impact on European societal challenges. PENTA supports SMEs, large corporations, research organisations and universities to work together in project consortia by facilitating access to funding, fostering collaborative work and creating consortia in areas of mutual industrial and National interest.

PENTA is operated by the Industry Association AENEAS

More on PENTA: http://www.penta-eureka.eu
More on AENEAS: https://aeneas-office.org

About the SERENE-IoT project:

SERENE-IoT is a RD&I project consortium involving 18 partners from 3 countries. The project partners are: Autonomous University of Barcelona, CEA, CHU Grenoble Alpes, Flavia IT, Fraunhofer EMFT, FRESENIUS-VIAL, Idemia France, Klinikum der Universität München, LCIS / Institut Polytechnique de Grenoble, Maatel, Medtronic - Sofradim Production, Morpho, Orange Labs, SensingTex, SGS-TÜV Saar, Spring Techno, STMicroelectronics, XFAB. National funding support is provided by France, Spain and Germany.

About SERENE-IoT: https://penta-eureka.eu/project-overview/penta-call-1/serene-iot/