

Cofinanciado por:



UNIÃO EUROPEIA
Fundo Europeu
de Desenvolvimento Regional

Project Title | SINATRA - Smart Industrial maiNtenance through AugmenTed ReAlity

Project Code | POCI-01-0247-FEDER-069974

Main Goal | To strengthen research, technological development, and innovation

Intervention Region | North and Center

Beneficiary Entities | Glarevision S.A. (Líder); Associação Fraunhofer Portugal Research; CMPEA – Empresa de Águas e Energia do Município do Porto; Plastaze – Plásticos de Azeméis, S.A.

Approval Date | 2020-12-14

Start Date | 2021-01-01

End Date | 2023-03-31

Total eligible investment | 1.286.732,50 €

FEDER Financial Support | 853.793,74 €

Brief Project Description

The SINATRA project aims to develop a support solution for industrial maintenance technicians, through the exploration of AR tools for hybrid use. Therefore, the project was structured with two main objectives: development of a hybrid AR solution and development of a set of three computer vision modules. The first objective concerns the development of a hybrid AR solution that integrates Augmented Reality glasses and smartphone/tablet to inform and optimize maintenance tasks. Best practices and usable interaction patterns in AR will be explored within the maintenance scope, in order to speed up the adaptation process to the technology. The second consists in the development of a set of three computer vision modules that will be integrated into the mobile application to facilitate equipment recognition, enable automatic reading of digital and analog gauges, and ensure the quality of the images acquired to validate field evidence. The first two modules will be built using incremental learning techniques in order to incorporate new data enabling their scalability. Thus, the mobile solution will not only allow the automatic identification of surrounding equipment for better access to field information, but also facilitate the inclusion of records of readings as well as ensure the quality of the images registered in the system. On the other hand, the augmented reality glasses will allow viewing relevant information for different parts of the process. This solution will be tested in different maintenance environments for validation purposes. A work plan consisting of 7 activities to be developed over 27 months has been outlined to ensure the objectives are met.

The project is promoted by a consortium consisting of Glarevision (Leader), FhP-AICOS, AdPorto and Plastaze, bringing together the knowledge and technical and scientific expertise necessary for the development of an innovative, robust and versatile solution, capable of streamlining and facilitating industrial processes of preventive and corrective maintenance.