



Project Designation | NeWeSt: New generation of cyberphysic Weighing Systems Project
Code | 069716

Main goal | Strengthen research, technological development and innovation

Region | Braga

Entidades Beneficiárias | Cachapuz – Weighing & Logistics Systems, Lda;

Assoc. Laboratório Colaborativo em Transformação Digital – DTX;

Universidade do Minho;

International Iberian Nanotechnology Laboratory (INL).

Approval date: 10-12-2020

Start Date: 30-12-2020

Conclusion Date: 29-06-2023

Total Eligible Cost | 1.314.170,87 €

Financial support from the European Union | 892.537,41 €

Project Goals

NeWeSt aimed to promote a paradigm shift in terms of weighing systems, technologies used and business models, through the development of: • Cloud platform that aggregates data and services, with the acquisition of IoT data and programming interfaces (APIs) with different access levels for creating new business applications within the Cachapuz ecosystem;

- Smart devices, which incorporate: (i) digital load cells with innovative sensors, IoT devices and firmware; (ii) Smart Boxes, open source OS and intelligent weighing and communication functionalities and (iii) Smart Devices with intelligent aggregation, data processing and communication functionalities;
- A secure and reliable data communications system that uses secure Firmware Update Over The Air and supports multiple types of communications: BLE and Wi-Fi for industrial environments (short range), LoRa and NB-IoT for cell solutions individual loads with secure and scalable connection through the telecommunications operators' network infrastructure;
- New nanofabricated magnetoresistive sensors and other piezoelectric sensors.

Results

NeWeSt achieved good results, despite some limitations due to the COVID-19 pandemic and difficulty in hiring resources. The project's technological developments have reached different stages of maturity. Preliminary conversations are currently taking place on forms of future work with the partners, to evolve the project's deliverables. The industrial "productization" of the new load cells will allow the Bilanciai Group to have a renewed offer, which responds to market demands and positions itself in an important position compared to the competition's offer. The development stage reached in terms of the remaining sensing and electronics technologies, the IoT Cloud platform and services available, promotes the creation of a new innovative and differentiating offer which, combined with the opportunity to generate a new business model, were the main project objectives.

NeWeSt reinforced Cachapuz's recognition in its technological and innovation aspects. Of particular note is the contribution to the repositioning of the solutions developed by Cachapuz in the face of competing solutions on the market, such as LOGIQ® from Schenck Process and VAS® from Axians.