IoT-NGIN

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EU H2020

Next Generation IoT as part of Next Generation Internet

The project has received funding from the European Union's Horizon2020 research and Innovation programme under grant agreement N°957246. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

About IoT-NGIN

IoT-NGIN is an EU funded, collaborative project aiming at acting as the "IoT Engine" which will unleash the power of Next Generation IoT as an essential dimension of the Next Generation Internet (NGI). The major challenge in the evolving IoT world is the fragmentation of vertically oriented, closed systems where interoperability is still only a dream. The IoT-NGIN strategy is to achieve interoperability through technology-agnostic, secure, open federation.

First Open Call

The Open Call has been organized in order to increase the IoT-NGIN Community and enhance public awareness. The First Open Call, with a total fund of €750K, started in October 2021 and remained active until the end of year 2021.
IoT-NGIN invited IoT devices manufacturers, embedded software and FPGA/soft core SMEs to join the IoT-NGIN consortium. Among many proposals, five were selected, representing SMEs from Romania, Cyprus, France, Ireland and Spain. The open call winners have been working on the following projects.

Deploying Machine Learning models on Drone Microcontroller system (ML Drone)

ML Drone, by ACCELIGENCE, works on manufacturing IoT devices and implements its own UAVs and robotic systems. Developed devices respond to various needs. ML-DRONE will be a toolkit facilitating the development, programming, and acceleration of TensorFlow(TF) -based ML applications.

ML-DRONE targets to develop:

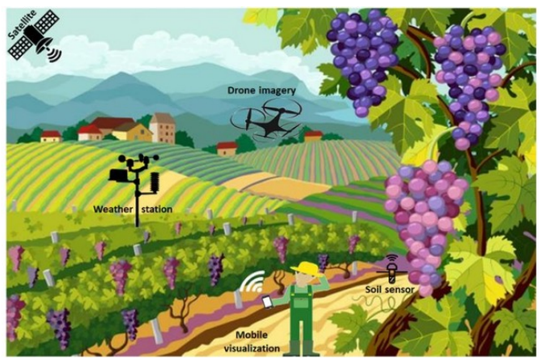
- on-device intelligence in order to become an integral part of the IoT device to achieve data sovereignty
- transparent IoT-Edge Cloud communication to offer additional resources to IoT devices
- open APIs and modular design to facilitate easy utilization of AI models
- IoT applications high penetration to adopt and use the technology in demanding real-time conditions

Smart Viticulture Management system for better environmental sustainability (SmartVIT)

SmartVIT, by BEIA, will move European wine farming one step ahead in the efficiency and technification of wine production through several innovative approaches.

The objective is to:

- implement and integrate a multi-sensor platform for predictions of vine and grape quality
- develop artificial, intelligent models for evapo-transpiration and soil-moisture



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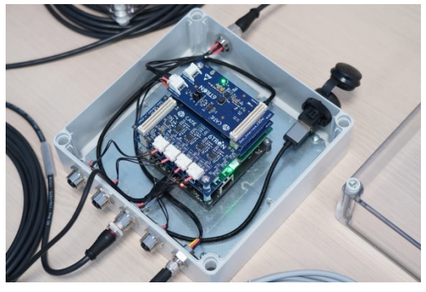
Development Environment of Professional solutions in the field of Industrial Internet of Things (DEEP IIoT)

DEEP IIoT, by CATIE, works in the field of investigation for new, professional solution for an environment development. The process created 6TRON, the only technological and methodological toolbox offering a project leader, being free of charge, and in complete independence. The device:

- allows to go with the realization of a tailor-made industrial object
- takes up the hobbyist concepts of "Do It Yourself" (such as Arduino or Raspberry Pi) to professional functionalities and an industrial approach
- creates a bridge to the integrated and optimized object that does not exist today in the market

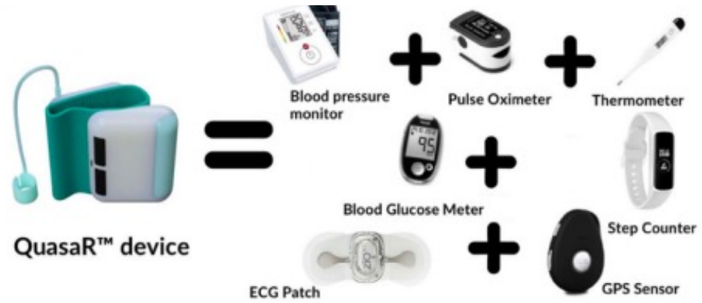


Next Generation Conversational Wearable Medical Device for Chronic Disease Prevention (QuasaR-NGIN)

QuasaR-NGIN, by Think BioSolutions, aims to develop world's first voice-based conversation medical device, that can adjust to patients' multiple health conditions and, which can treat different patient personas.

The objective is to:

- improve dignity, independence, and wellbeing of at-home patients
- improve affordability of preventive care
- improve patients and carers access to disease-specific communication packages informing about a disease and the proposed treatment



Electric Grid Monitoring by Open-Access IoT (EGMOI)

EGMOI, by Energiot, is a unique solution for grid operators, that consists of smart self-powered wireless sensors nodes integrated in a SaaS (Software as a Service) platform enabling to detect unpredictable events that affect power losses and operational costs. Instead of batteries, devices harvest residual ambient energy to power sensors, gathering data about grid status.

It aims to:

- manufacture a battery-free smart grid monitoring IoT device, that uses the patented piezoelectric energy harvester
- manufacture a device, that costs five times less than current technologies