



Open Source Applications for Industrial Automation

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About OpenIN

- The **OpenIN** Project is a three year duration Project funded by **the European Union Erasmus+ Strategic Partnerships Programme** started in October, 2016 and it involves 4 partners across Europe.
- The development of professional automated industrial systems nowadays is still a “*proprietary technology*” at high costs, which in a way impede its development and makes its implementation complicated.

About OpenIN



- This project **aims at helping higher VET and HEIs institutions, Technical Universities as well as enterprises** using automation systems (especially SMEs) to cut costs and embrace innovation by **providing** them with **Training Courses** for both students and teachers on free open source hardware and software for designing automated systems.

Activities And Indicators Of Achievement

OPENIN Course for students in Industrial Automation using Open Source Applications concerning the following topics:

- **Industrial Sensors**
- **Industrial Communication**

OPENIN training course for teachers and employers with the purpose to prepare them for **applying** open source **applications** in their **schools/ companies**.

Activities And Indicators Of Achievement

The quantitative indicators that will test the level of success of the project are the following:

- A minimum of **2 Training modules** developed for EQF students level 5 and above
- At least **8 teachers** participating in the training activity in Portugal
- At least **20 teachers** and employers per partner country piloting IO2
- At least **50 students** per partnering organization piloting IO1
- At least **2 other educational centers or industrial enterprises in each partner country** showing an active interest in the project result.

Overall Impact

The partners of **OPENIN** project are all committed to the promotion free open-source software as an effective way to modernize target organizations and promote innovation.



Overall Impact

ON STUDENTS:

- Students from EQF level 5 and above will be taught how to use free open source automation software and hardware
- They will be more competitive when looking for a job as being already acquainted with automation software and hardware

ON TEACHERS/ TRAINERS:

- Their everyday work will be facilitated by the implementation of the project outputs
- They will increase their opportunities for professional development
- Will be more motivated and confident regarding their professional skills
- Gain access to free and open source automation software/hardware

Overall Impact

ON PROJECT PARTNERS:

- They can modernize their education methods and use the latest technology
- The OPENIN project will foster the cooperation between high level VET/ HEI institutions and enterprises thus strengthening the “knowledge triangle” education, research and business

ON HIGHER VET CENTERS/ HE INSTITUTIONS/ INDUSTRIAL ENTERPRISES:

- Will have the opportunity to implement the free open source automation software/ hardware cutting overall costs.
- Have a methodology for training students and implement the free open source software/ hardware to modernize their organizations

Expected Results

Part of the Training programme will be the **creation of 3 Prototypes** using **Arduino development platforms**:

- Prototype adjusting voltages
- Prototype using different industrial sensors
- Prototype adapting different signals

All the materials will be made available **online** and **free** to access so that high level VET and HE learners, schools and companies **across Europe** will **benefit** from them.

Innovative Character

- The innovative character of this project is the development of a **free automation platform**.
- All the target groups of the project, and especially **teachers** in higher VET and HE institutions, are facing difficulties in students/employers' **training** due to budget cuts, which makes access to new technologies expensive. Therefore, it is necessary to be **innovative and develop materials that suit their needs** and improve the overall performance.

OpenIN Partners

- **Coordinator:** Politeknika Ikastegia Txopierri, Spain
- **Partner:** APRO Formazione, Italy
- **Partner:** Insituto Superior de Engenharia do Porto, Portugal
- **Partner:** Technological Educational Institue of Crete, Greece





Thank you!



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