DICYSTECH

ABOUT US

Launched in April 2021, this Erasmus+ KA2 Strategic partnership project aims to **develop an open access training modules** and **linked cybersecurity virtual laboratories for cybersecurity education** that serve to meet Industry 4.0 needs and to provide **innovative educational practice in the digital era**, **supporting the uptake of innovative digital technologies for teaching and learning in HVET**.

The project partners are **PIT TXORIERRI** (Coordinator) from Spain, **INSTITUTO POLITECNICO DO PORTO** from Portugal, **IDEC** and the **HELLENIC MEDITERRANEAN UNIVERSITY** from Greece and **EUROPEAN DIGITAL LEARNING NETWORK** from Italy.

#DICYSTECHproject

OUR AIMS

The **Fourth Industrial Revolution** is creating a mismatch between available workers and the skills necessary for open jobs, especially concerning **cybersecurity**: indeed by 2022, the global cybersecurity workforce shortage will reach upwards of 1.8 million unfilled positions and the most acute shortage are for highly skilled technical staff.

The DICYSTECH project aims to tackle this mismatch **by providing a digital training course and linked cybersecurity virtual labs for high education students and the retraining of ICT technicians in LLL courses**.
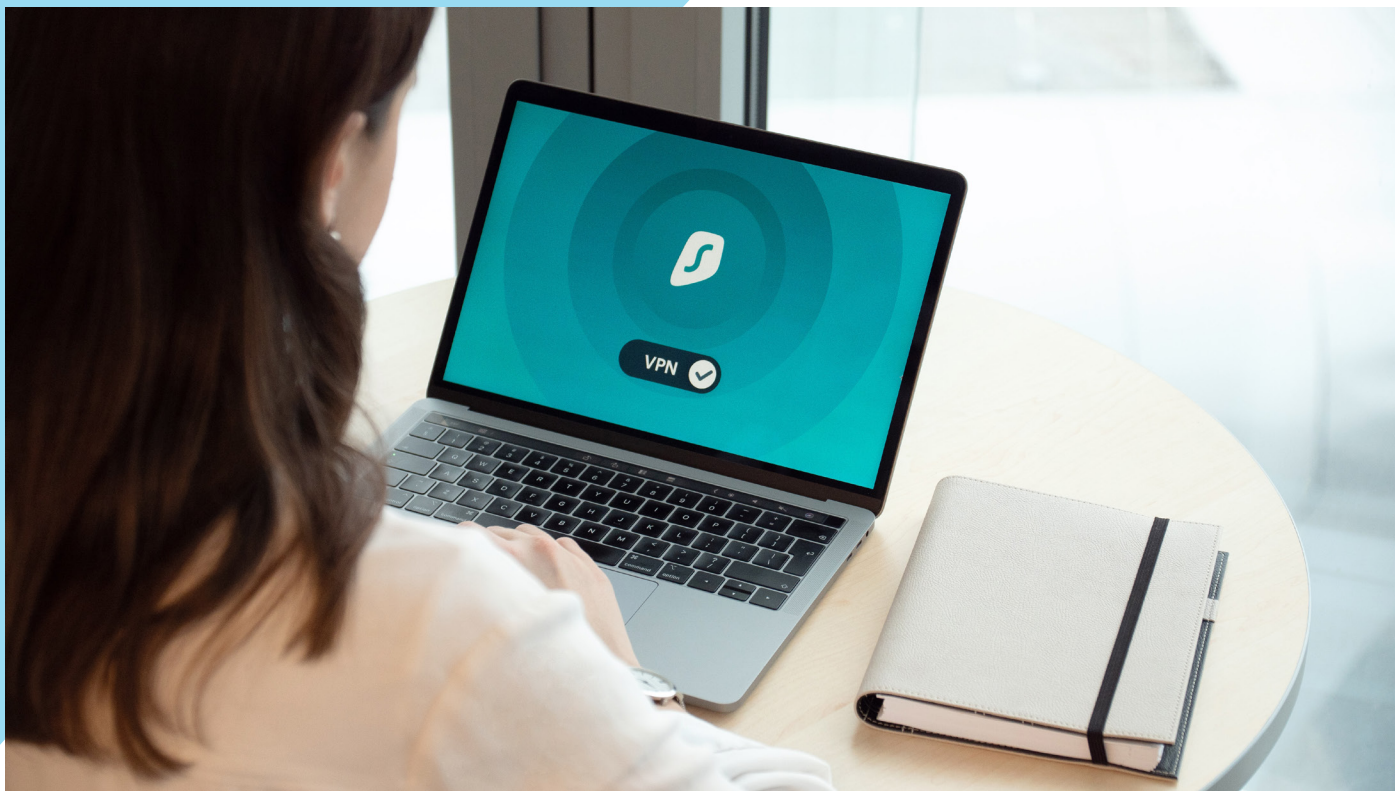
Training materials will include:
- Modules in baseline skills and computer fundamentals as well as penetration testing, secure system design, incident response, and tool development within industrial control systems ICSs.
- A module in soft skills development specifically oriented for future cybersecurity technicians
- Hands on practical learning opportunities through access to remote cybersecurity labs via an online DICYSTECH hub

The DICYSTECH project is innovative in its integral, digital, open educational approach to updating educational curricula on cybersecurity for ICT students to close detected skills gaps, supporting both educational and training providers and companies.

The project and its activities are addressed directly to HE/HVET ICT staff and students as well as Industrial stakeholders (SMEs) and workers (CVET/LL learners), but thanks to its aims all educational, industrial and other sectoral stakeholders with an interest in the training and certification of cybersecurity technicians will benefit from it.

THE RESULTS

During its lifetime (24 months in total), the **project Consortium** will be involved in the development of the following 2 **Intellectual Outputs**:

- «**DICYSTECH Digital Training Course for students**», an innovative and ready to use digital training package for HE/HVET ICT staff with IT students at EQF 5+ in formal education and with adults in upskilling/reskilling training initiatives. The project will deliver 5 modules in both technical and transversal competences for cybersecurity students in Industrial environments, available via an open attractive e-learning platform, covering topic such as Industrial Networks, Equipment and Network Protection, Forensic (security) Analysis of these networks and countermeasures to threats, and Soft Skills necessary for cybersecurity technicians. Each Module will offer learning challenges and digital tests to support learning upon completion of the learning activities.

- «**DICYSTECH HUB of Cybersecurity Virtual Labs**", offering **users remote access to three fully developed partner cybersecurity virtual laboratories** in which learners can view and experiment with high end enabling IT technology and cybersecurity measures in simulated industrial contexts. Users will be invited to register and use the virtual labs remotely for practice and the development of learning challenges provided in the training modules. The DICYSTECH HUB of Cybersecurity virtual labs will be highly innovative in its collaborative focus and will use of modern digital pedagogy/technology to improve access to hands on cybersecurity equipment. It will support the uptake of innovative digital technologies (such as VLEs) for teaching and learning in HVET.