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BE-Digital

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BE-DIGITAL IoT Pilot: Pioneering Digital Supply Chain Training

The BE-DIGITAL project aims to drive digital transformation across Supply Chains through innovative training programs for vocational schools, universities, and professionals.

As part of this initiative and within the overall Work Package aimed at developing testing sessions for all the realized modules, ECOLE organized the first intensive pilot course foreseen titled "**Internet of Things (IoT) for Supply Chain**" from October 29–31, 2024, at its headquarters in Cinisello Balsamo, Milan, Italy.

This pilot session was designed to test and refine training materials and methodologies on the Internet of Things while equipping participants with the skills needed to navigate the evolving landscape of digital technologies in supply chain management. By bringing together students and trainers from multiple countries and educational backgrounds, the program sought to foster collaboration, mobility, and knowledge transfer across borders.

Event Highlights and Program Overview

The pilot training was attended by 26 participants, including 16 students from Italy, Portugal, Cyprus, and Greece, along with their tutors and trainers. The three-day program featured a rich blend of theoretical insights and practical applications, ensuring a comprehensive learning experience. Key elements of the program included:

- **Introduction to IoT and its role in the digital Supply Chain**, covering foundational concepts such as smart factories, smart warehouses, and logistics. Participants also created simple IoT dashboards, gaining hands-on experience with data visualization.
- **Exploration of advanced IoT architectures** based on the ISO 30141 framework, alongside practical applications in industrial contexts. A standout feature of the programme was a study visit to the IRMAP SERVICE laboratory, where participants engaged in real-world demonstrations of communication protocols like IO-Link and OPC-UA on Siemens PLCs.
- **Practical skills development in web application** creation and logistics automation, using technologies like Azure IoT. The session concluded with interactive activities, including the BE-DIGITAL serious game, designed to simulate IoT applications in supply chain scenarios.

The training leveraged state-of-the-art tools such as Siemens TIA Portal and Kawasaki Astorino software to enhance learning, complemented by the Be Digital Moodle platform for course materials and interactive exercises.

Outcomes and Strengths

The course received overwhelmingly positive feedback, with over **70% of participants rating the experience as excellent or good**. Participants reported significant growth in their understanding of IoT and its applications, particularly in the context of supply chain optimization. Highlights of the program included:

- **Hands-On Learning:** A strong focus on practical exercises allowed participants to bridge the gap between theory and real-world application.
- **Diverse Perspectives:** The presence of students and trainers from various countries and disciplines enriched discussions and collaborative activities.
- **Engaging Format:** The combination of lectures, lab visits, and interactive tools created a dynamic and stimulating learning environment.

This pilot session exemplifies the BE-DIGITAL project's commitment to innovation in education and training. By empowering students and professionals with cutting-edge digital skills, the initiative is shaping the future of supply chain management across Europe.

For future courses, recommendations and suggestions emerged from trainer and tutors include:

- Expanding even more practical exercises and industrial visits.
- Refining course materials with detailed documentation for programming and setup.
- Introducing more ice-breaking activities and a clear project overview at the start of sessions.

Next challenges

The IoT pilot course under the BE-DIGITAL project has set a strong foundation for transformative learning experiences in digital supply chain management. Through its innovative approach and cross-disciplinary collaboration, it empowered participants to embrace the possibilities of Industry 4.0 technologies.

But this is just the beginning....

In the coming months, the BE-DIGITAL journey across Europe continues with pilot courses exploring **Automated Guided Vehicles (AGVs)**, **Augmented and Virtual Reality (AR/VR)**, and **Data Analytics**. Each session will dive into cutting-edge technologies, equipping participants with the expertise to lead the digital evolution of Supply Chains.

Stay tuned as we expand horizons, spark innovation, and prepare the next generation of professionals to thrive in a digitally connected world.

Join us on this exciting path to shaping the future of Europe's Supply Chains.

