5th ARTICLE

BE-Digital

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Piloting the Future:

Be-Digital AR/VR Training in Nicosia

From February 4 to 6, 2025, Frederick University, in Cyprus, hosted the Be-Digital AR/VR Pilot Training, an initiative set to revolutionize digital learning in supply chain management through immersive technologies. Organized as part of the broader Be-Digital project, this three-day training aimed to equip participants with fundamental and advanced knowledge in augmented reality (AR) and virtual reality (VR) applications within the supply chain industry. With a well-structured agenda comprising lectures, demonstrations, hands-on activities, and interactive assessments, the pilot training was designed to foster engagement and innovation. Dr. Achilleas Achilleos, Dr. Christos Markides and Dr. Savvas Pericleous from the Electrical Computer Engineering and Informatics Department of Frederick University, provided insightful information to the students through interactive presentations, demonstrations, and practical-based programming examples to realise how to apply AR/VR for the benefit of the digital supply chain.

Day 1: Laying the Foundations of Digital Reality

The first day of the training introduced participants to the core concepts of digital supply chains, including strategic frameworks and digital reality applications. Beginning with an overview of the Be-Digital project, the day progressed with ice-breaking activities, preparing participants for an immersive learning experience. Key topics included an introduction to the digital supply chain, followed by fundamental concepts of AR and VR and the students then dove into building their first digital reality web application.

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Practical demonstrations followed, such as AR remote assistance, which allowed participants to experience these technologies firsthand. The afternoon sessions delved into AR applications in supply chain management, highlighting case studies from IKEA and DHL, as well as the practical development of their first AR experience – a minimal IKEA-like web application. The day concluded with a quiz, reinforcing the knowledge acquired, and assigning research-based homework.

Day 2: Advancing Skills with VR Training Scenarios

On the second day, the focus shifts to demonstration of virtual reality training scenarios for enabling the digital supply chain. Participants then engaged, with the help of a step-by-step guide, in constructing VR-based safety training modules: "Safety in Manufacturing Factories" and "Operating Heavy Machinery," using a VR Training Platform. These hands-on sessions allowed learners to build and run realistic VR training scenarios, enhancing their understanding of AR/VR's role in the digital supply chain. Afternoon sessions introduced advanced digital twin concepts, guiding participants through a step-by-step guide to construct a simulated digital twin of an industrial robot arm. The day concluded with a broad overview of various AR, VR and digital twin use cases from leading industrial companies (e.g., Siemens, Coca Cola, DHL) highlighting the significance of AR/VR and digital twins integration in logistics and manufacturing.

The dissemination event of the Be-Digital project was successfully held on Day 2, bringing together key stakeholders, industry professionals, and educators to discuss the future of advanced technologies in supply chain management. This event served as a vital channel for showcasing the training outcomes, sharing best practices, and exploring potential collaborations to further integrate AR/VR and digital twin technologies into professional and academic training programs. Experts engaged in discussions on the transformative impact of digital reality in logistics and beyond, emphasizing the potential of these technologies to drive efficiency and innovation. Attendees had the opportunity to learn about the Be-Digital Moodle-based platform, courses and the Serious Game, gaining firsthand experience of the interactive training tools developed as part of the project. Participants were informed that they could contact the project to enroll in the offered courses. The event concluded with a commitment from participants to advocate for the adoption of AR/VR in educational and industrial settings, ensuring that the knowledge and innovations from the Be-Digital project continue to have a lasting impact. The positive reception to the dissemination event highlights the growing recognition of digital transformation in supply chain education and the need to sustain momentum in developing and refining these cutting-edge learning solutions.

Day 3: Practical Exploration and Closing Reflections

The final day of the training included a visit to CYENS, a research and innovation center specializing in interactive media, smart systems, and emerging technologies. This field trip offers participants a deeper insight into cutting-edge developments in AR/VR. Afternoon sessions were conducted again at Frederick University, covering AR in warehouse operations and further exploring VR benefits in supply chain management. The training concluded with an introduction of the Be-Digital game to the students and the evaluation of both the e-learning platform, courses and game, allowing attendees to provide valuable feedback. Finally, the certificates of participation are awarded, and a course project was assigned, encouraging participants to apply their newly acquired knowledge.

The piloting of the Be-Digital AR/VR Training was highly successful, exceeding expectations in terms of participation, engagement, and learning outcomes. Attendees actively took part in hands-on activities, demonstrating a notable ability to grasp and apply AR/VR technologies in real-world supply chain contexts. The structured approach, which combined theoretical learning with practical applications, ensured that participants left the training with a solid foundation and the skills necessary to integrate AR/VR and digital twin solutions into logistics and supply chain management. The interactive demonstrations and scenario-based learning played a crucial role in reinforcing key theoretical concepts, making the training not only educational, but also highly engaging. Feedback from participants highlighted the effectiveness of the course materials, the clarity that the practical demonstrations, examples and exercises offered, and the relevance of the skills acquired to modern industry challenges. The success of this piloting session underscores the importance of continued investment in digital learning methodologies, setting a strong precedent for future implementations of the Be-Digital training program.

The Be-Digital AR/VR Pilot Training represents a significant step forward in integrating immersive technologies into supply chain education. By combining theoretical knowledge with hands-on applications, the initiative ensures that participants gain both the expertise and confidence to leverage AR/VR for enhanced operational efficiency. This pilot program in Nicosia is a testament to the growing importance of digital transformation, preparing the workforce for the future of logistics and supply chain management.

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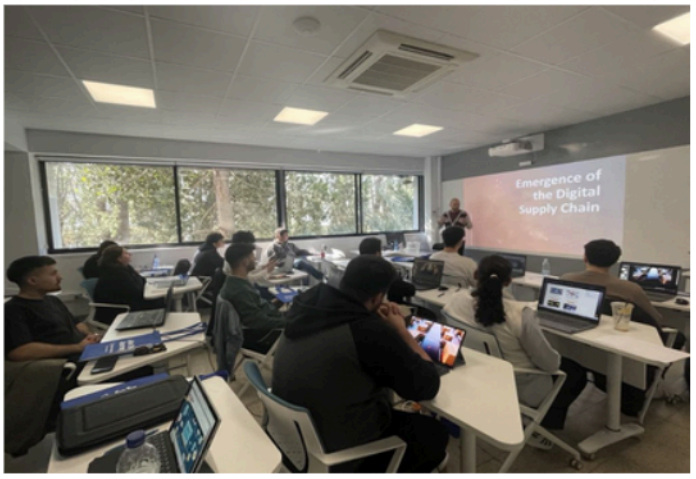

Picture from the visit to CYENS

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