



PLC-CENTERED VR-TRAINING FOR INDUSTRY 4.0

Working with PLCs is becoming an even more important skill for shop-floor workers in the context of digitalization and Industry 4.0. In this project an international consortium consisting of Ruhr-University Bochum, Łukasiewicz Institute for Sustainable Technologies, and LINPRA, the engineering and technology industries association of Lithuania, builds a workshop format for up-skilling of these workers on virtual PLC techno-educational stands to make them and their companies ready for the digital transformation.

MOTIVATION AND CONCEPT

EIT Manufacturing operates a Skills.Move, a learning platform covering a wide range of topics, including AI, robotics, and digital twins, targeting workers, managers, and students. To teach young workers and apprentices the fundamentals of PLC programming, the VR-PLC workshops integrate a full-featured Virtual Learning Environment within Skills.Move.

For the projects, experts from different fields work together to combine benefits of VR learning with traditional e-learning approaches. VR experts, VET trainers, and sociologists create a unified workshop format consisting of interactive learning nuggets, tutorial videos, and VR exercises. In the virtual learning environment, learners can use immersive VR headset, like the Oculus Quest or the HTC Vive Cosmos, or just experience the environment using 2D in their web-browser. Learners get to know the environment to better understand a given problem and can then observe how their PLC program works in different situations.

This project showcases how VR can be effectively integrated into existing and new training and e-learning courses



MAIN PROJECT RESULTS

- 3 Institutions
- 3 countries
- over 35 learning nuggets

“Thanks to EIT we can offer practical E-Learning courses with VR directly in Skills.Move.”

PROJECT TIMELINE



Co-funded by the
European Union



JAN LUCA SIEWERT
Ruhr-University Bochum
Activity Leader

www.ide.rub.de/vrplc
jan.siewert@rub.de