

## TEX 4.0: Enabling Industry 4.0 Skills in Textile SMEs

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### ABSTRACT

*This press release presents a short overview and links to the results from the European Project Tex4.0. During the project, learning materials for twelve IT related technologies are developed and integrated in online learning platform.*

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### Communication

Consortium of six partners — Chair of Development and Assembly of Textile Products, ITM, TU Dresden (Germany), KAINOTOMIA (Greece), UPB-CAMIS (Romania), Lottozero textile laboratories (Italy), IDL - Institut de la Mode (France), and CAMARABELUX - Chamber of Commerce Belgium-Luxembourg – collaborated for two years within TEX 4.0 Erasmus+Project 2023-1-DE02-KA220-VET-000154009 [1] co-funded by the EU. The project aims to:

- develop a curriculum based on the needs of VET trainers & learners in the field of new technologies
- equip VET trainers and textile stakeholders with the tools to support the digital skills acquisition of their learners
- offer VET learners an innovative training package on Industry4.0-related skills
- produce attractive training material to make the textile sector more appealing to youth

All developed learning materials are freely accessible on the online platform [2] (<https://camis.pub.ro/tex40/>), allowing anyone — from vocational learners and teachers to small business

owners — to explore the materials, earn certificates of completion, and apply new skills directly in their professional practice.

The training suite is available additionally to the moodle platform as normal open access ebook [3] oder creative common license. The TEX4.0 Training Suite consists of three different spaces:

- E-Learning platform with 12 modules on Emerging Technologies in the textile industry addressed to VET learners: Automating tasks and processes, Augmented Reality and Virtual Prototyping, Additive Manufacturing, Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM), Robotics, Internet of Things (IoT), Smart Textiles & Fabrics, Social Implications of Textile 4.0, Artificial Intelligence, Big Data, Digital Product Passport, Supply Chain Management.
- Trainer's Corner with modules in presentations (PPTX) format and self-assessment quizzes in a raw format, addressed to VET trainers and textile stakeholders;
- Textile4all space with a set of 18 case studies on the different applications of Industry 4.0 technologies in the textile industry, addressing all target groups. 6 case studies were developed using Augmented Reality (AR) technology to make them more engaging for learners.



Fig.1. Presentation of the learning platform

During the national piloting activities in Germany at the Institute of Textile Machinery and High Performance Material Technology the platform and materials were presented to various type of users. One group is related to people with some textile knowledge, which acts as educators and multipliers of the knowledge: professors - colleagues from other universities of textiles and clothing, research assistants, students. The other group of people are such without any current connection to textile and often without education background in the direction, but which could get interested in professional qualification in this area. Over 40 participants took part in the piloting. Participants expressed interest in the TEX4.0 project, acknowledging its potential to enhance digital competencies for both learners and trainers and to promote innovation and emerging industry technologies within the textile sector. All IT-and robotics newbies reported, that they often listen the modern technology words such as ChatGPT and robotics, but never got the real understanding how these technologies are getting integrating in the clothing and textile production.

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