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Pitch competition for the students

Deliverable D4.3

RTU

Version 1.0
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1.0	Consolidated report	02.02.2026	RTU	Consolidated report

Quality assurance

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1	February 2026	1.0	LNTU

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1 Summary of the Report

The Pitch Competition for Students was implemented as the final activity of the DIGITRANS Student School, hosted by Riga Technical University (RTU) from 12 to 16 January 2026. The event constituted Deliverable D4.3 of the ERASMUS+ CBHE DIGITRANS project and aimed to strengthen students' digital, technological, entrepreneurial, and transversal competences in line with Industry 4.0 and sustainable engineering education principles.

The five-day program combined lectures, laboratory work, site visits, and project-based learning. Students from partner universities collaborated in interdisciplinary teams to design and prototype innovative solutions addressing real-world challenges. The Pitch Competition served as a structured framework for presenting these solutions and evaluating both technical and communication skills. In total, 22 students participated in the Pitch Competition (18 students was planned according to the GA).

1.1 Training Content and Learning Approach

The Student School addressed a broad spectrum of topics relevant to digital transformation in engineering education. Core thematic areas included:

- **Digital transformation in engineering education**, including curriculum innovation and project-based learning approaches.
- **Programmable logic and embedded systems**, introducing students to modern hardware platforms and digital control concepts.
- **Cybersecurity and digital resilience**, with a strong emphasis on practical applications, including simulations, table-top exercises with AI-supported tools, and social IT security (scam and phishing detection).
- **Energy efficiency and sustainable technologies**, such as energy-efficient LED lighting systems and intelligent transportation systems for smart cities.
- **Robotics and automation**, including hands-on laboratory sessions with robotic systems (e.g., KUKA robots) and applied demonstrations such as robot test flights.
- **Electric mobility**, covering the history, classification, and technological evolution of electric and hybrid vehicles.
- **Digital soft skills**, supporting students' ability to work in interdisciplinary teams, communicate effectively, and engage with real-world engineering challenges.

The programme integrated **theoretical lectures with extensive laboratory work**, primarily conducted in RTU laboratories. Students worked in teams on project topics defined at the beginning of the week and progressively developed prototype solutions throughout the training.

Practical Exposure and Innovation Focus

A distinctive feature of the Student School was its strong emphasis on **hands-on learning and real-world exposure**. Students participated in:

- laboratory-based prototyping and experimentation,
- site visits to innovation environments (e.g., Sky LAB design factory),
- applied demonstrations of advanced technologies,
- guided coaching sessions focused on pitching and innovation communication.

This approach enabled students to connect theoretical knowledge with practical implementation, reinforcing the DIGITRANS objective of bridging university education and industry-relevant competencies.

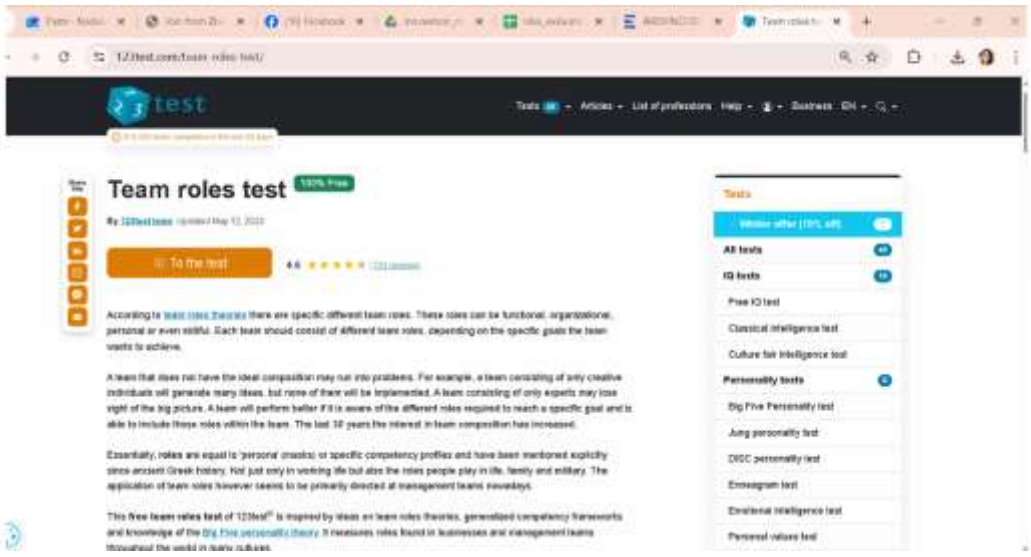
1.2 Student Projects and Final Pitch Session

The training culminated in a **Student Pitch Session**, during which teams presented and defended their innovative prototypes developed during the week. This final session assessed not only technical quality but also creativity, feasibility, and clarity of presentation. The pitch format strengthened entrepreneurial thinking and communication skills, which are key components of sustainable university–enterprise engagement.

The Student School concluded with a formal closing session and the **awarding of Certificates of Attendance**, recognising students' active participation and learning outcomes.

2 Preparation session

A preparatory online session was conducted on 10 December 2025 via Zoom. The session introduced the objectives of the Student School and the Pitch Competition, outlined expectations for prototype development, and assigned preparatory tasks to students. This ensured a common understanding of goals and facilitated efficient use of laboratory time during the on-site activities in Riga.



Screenshot from the introduction session.

3 Method and the arrangement of the Pitch

The Pitch Competition was organised in a professional academic setting with appropriate infrastructure for presentations and prototype demonstrations. A suitably equipped venue was provided, including audiovisual equipment, laboratory access, and technical resources necessary for project development.
Students were divided into six teams, primarily based on their university affiliation, while encouraging interdisciplinary collaboration. Their main requirements included access to laboratories, electronic components, integrated circuits, 3D printing facilities, and technical support. Students demonstrated high engagement and motivation, dedicating all allocated time to the development and testing of their prototypes.

4 The results of the Pitch session

The Pitch Jury consisted of academic staff and project representatives. Six student teams presented functional prototypes addressing societal, technological, and sustainability challenges:

- **Team KhNAHU:** Developed a productivity-support device aimed at individuals with ADHD. The prototype operates as a reward-based beverage dispenser activated after a phone-free focus period, promoting concentration through positive reinforcement.
- **Team CPNU:** Designed a smart navigation cane for people with visual impairments. The device uses sensors to detect obstacles and provides auditory feedback, offering a cost-effective alternative to existing solutions.
- **Team LNTU:** Presented an integrated heating system for vehicle license plates to prevent snow accumulation and maintain visibility during winter conditions.
- **Moldova Team 1:** Proposed a sustainable manufacturing concept for automotive covers using recycled materials and organic biomass, reducing environmental impact.
- **Moldova Team 2:** Developed an adjustable bicycle parking station compatible with various bicycle types and equipped with a secure fastening mechanism.
- **Moldova Team 3:** Introduced an enhanced smart cane concept capable of identifying obstacle distance and type, providing differentiated audio signals to the user.

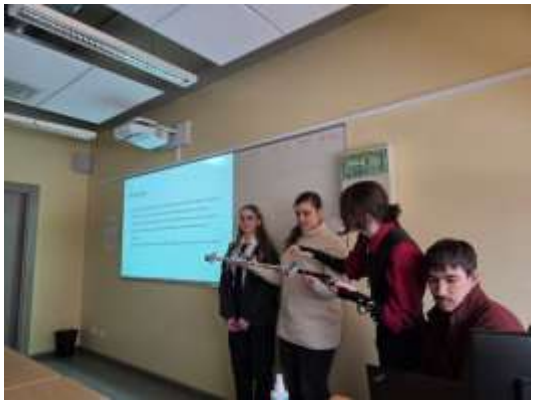
All teams delivered high-quality presentations supported by live demonstrations of their prototypes.

Team KHNAHU

The prototype was designed as a tool for individuals with ADHD and those who struggle with task persistence due to smartphone distractions. The device functions as a beverage dispenser that provides a reward upon the completion of a timed focus period. The process is initiated when the user places their smartphone into a dedicated compartment, which triggers the countdown and encourages phone-free productivity through positive reinforcement.


Team CPNU

The prototype was designed for individuals with visual impairments. It consisted of a navigational white cane equipped with sensors that provide auditory feedback to the user. The primary advantage of this device is its cost-effectiveness in comparison to existing market alternatives.




Team LNTU

The prototype consisted of an integrated heating system for vehicle license plates, designed to prevent snow accumulation and ensure visibility. By utilizing controlled thermal energy, the device effectively clears the plate's surface, maintaining its legibility during adverse winter weather conditions.



Team Moldova 1

The project proposed a sustainable manufacturing methodology for automotive covers, utilizing recycled materials and organic biomass, such as grass and other natural fibers. This approach focuses on reducing environmental impact by integrating upcycled components into the production of vehicle accessories.

Team Moldova 2

The prototype was a bicycle parking station featuring an adjustable height mechanism, allowing for compatibility with a diverse range of bicycle models. It incorporated a robust fastening system designed to maximize the security and protection of the vehicle.

Team Moldova 3

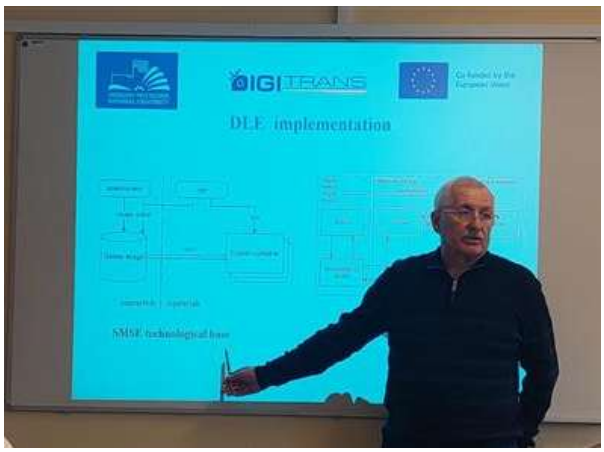
Introduced an enhanced smart cane concept capable of identifying obstacle distance and type, providing differentiated audio signals to the user.

Photos with the comments


First general meeting of the student teams on January 12, when the project coordinator introduced the training school program and the terms of the Pitch competition



Teams from Ukrainian universities

Prof Volodymyr Kazymyr presents the Digital Learning Ecosystem (DLE): Online concept for engineering education


Students visited the laboratory of Robotics

5 Conclusion

The Pitch Competition was successfully conducted and met all planned objectives of Deliverable D4.3. Students demonstrated strong technical competence, creativity, and teamwork, as well as the ability to communicate and defend their solutions effectively. The event contributed significantly to the DIGITRANS project goals by fostering innovation-oriented learning and strengthening links between higher education and industry-relevant skills development.

All participants received Certificates of Attendance in recognition of their active involvement and achievements