Robintech

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“ROBINTECH-Towards Networking and Collaborative Teaching Materials in the Field of Industrial Robotics”

is an ERASMUS + cofounded project launched in November 2024. The project partners are 5 VET education and training organisations: **Tartu Rakenduslik Kolledž** from Estonia, **Koulutuskuntayhtyma OSAO** from Finland, **IES Bernat Guinovart** from Spain, **FORAVE - Associação para a Educação Profissional do Vale** from Portugal and **ROC Mondriaan**, from the Netherlands.

ROBINTECH will develop networking of partner VET schools and companies to share knowledge and increase the quality of **automation and robotics training.** We specifically aim to connect robotics and automation teachers with practitioners in industries to **improve teachers’ professional competencies** and create and test **new teaching materials** in the fields of industrial robotics and automation and put them into practice to streamline training in VET education.

A **main project activity** involves organizing **short-term company internships** for teachers. These placements are designed to allow teachers to **improve their technical competencies** in automation, robotics, and their industrial applications. By connecting teachers with industry practitioners, the project supports the **direct transfer of up-to-date knowledge** from companies back to VET schools, thereby strengthening the link between daily industrial challenges and essential skills training.

During the first **short-term company internship**, which took place in September 2025, **ROC Mondriaan**, from the Netherlands, hosted two mechatronics teachers from **Tartu Rakenduslik Kolledž** (**Tartu Vocational College)**.

Throughout an inspiring week, the team from Tartu explored how robotics is embedded in Dutch vocational education – from foundational skills to real-world applications.

High-tech company visits provided teachers with valuable input, emphasizing that robotics requires creativity rather than being a “plug-and-play” solution. The industry also stressed that **vision systems and AI** are essential tools, and creating **realistic learning environments** is crucial for bridging the gap between education and industry demands.

COMPANY VISITS

ROBO HOUSE

A fieldlab working on different solutions to apply robots in a socially responsible way. The company offers students a chance to work on projects inspired by real-life challenges in a way where robots empower the experts, not replace them.

PROMOLDING
CREATING | POLYMER | SOLUTIONS

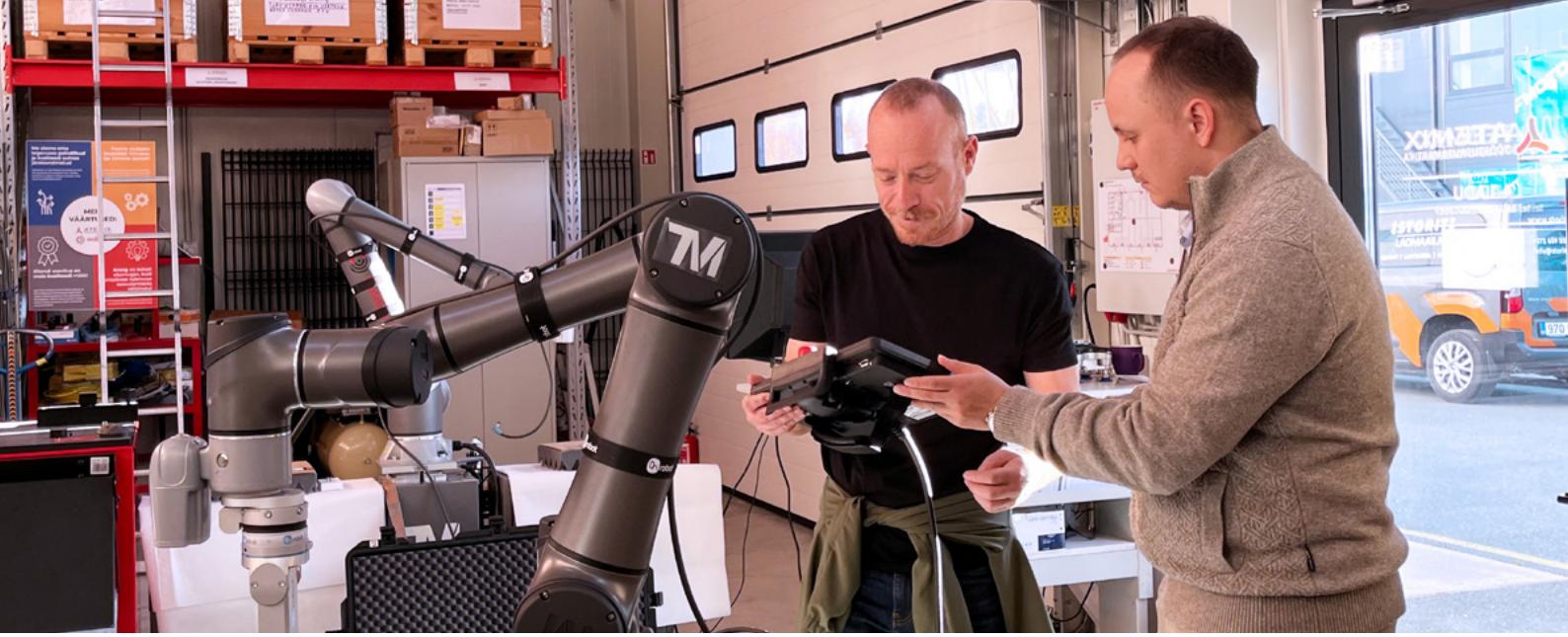
A company specializing in mold injection plastic components with a big focus on medical equipment.

SAM XL

A fieldlab specializing mainly in aviation related challenges. A lot of emphasis is placed on carbon fiber-based materials used in the aviation industry along with the help of different types of robots (Cobots, gantry, articulated) from different producers and 3D printing. The company works closely with both universities and government agencies to create solutions and prototypes that can be used in real life applications with the input by the field experts themselves.

A company producing compound materials for aerospace and aviation industries. An example from **Airborne** technology is a large KUKA robot which is used for laying thin layers (ca 0.2mm) of laminate to create the composite, using in-house solutions for robot workhead, programming and HMI visualization.

Leading producer of pneumatic components in the world as well as various motors, robotic grippers and robot solutions. In addition, **FESTO** is focused on didactic materials and solutions for vocational and higher education, creating various learning stands for all kinds of fields in mechatronics and automation.



The project second **short-term internship** took place in Tartu, Estonia, in October 2025. **VOCO team** hosted robotics and industrial automation teachers from **Spain's IES Bernat Guinovart**.
The activity goal was to strengthen connections with industry leaders and bring relevant knowledge about current, real-world industrial technologies directly into our classrooms.

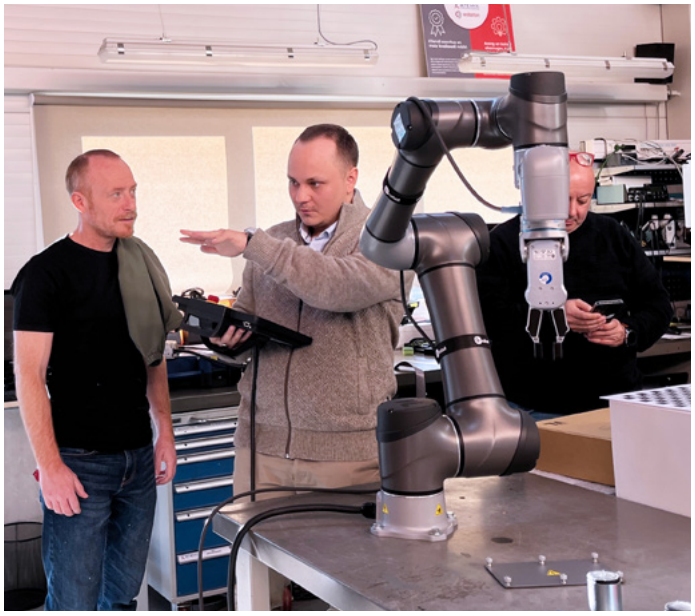
During the week, the Spanish team gained **hands-on experience** with the latest technologies, equipment, and cutting-edge practices during insightful visits.

There were great examples of **industrial robotic systems** for welding, bending, cutting, lifting, stacking as well as **automated systems** for operating full processes in industries.

After an overview of the Vocational Education and Training system in Estonia and a guided a visit to the school facilities, equipment and resources in the areas of Information Technology (IT), Vehicle Maintenance, Mechanical Manufacturing, Mechatronics, Electricity-Electronics, and Logistics, the teachers visited several high-tech companies.

METEC

A manufacturer of high-precision metal products, supplying key industries such as Automotive, Medical, and Food. The plant operates with a high degree of automation and extensive implementation of Industry 4.0 principles, particularly notable in the deep integration of the corporate Manufacturing Execution System (MES) and Enterprise Resource Planning (ERP) systems. Robotic systems are deployed to automate various processes, including, but not limited to, welding, folding, and polishing.



PARTNERS

TARTU RAKENDUSLIK KOLLEDŽ
TARTU VOCATIONAL COLLEGE
OSAO
IES Bernat Guinovart
escola profissional
rorave
roc MONDRIAAN

A Beverage Production Plant, established in 1807, which is Estonia's oldest brewery and the largest domestic beverage producer. The **A. Le Coq** facilities present an outstanding level of automation. All machinery units are interconnected via an isolated internal intranet, which is shielded from external access for cybersecurity reasons. This configuration enables centralised monitoring and control from the main control room. The filling, packaging, and palletizing lines are fully automated, operating at prime technological and production levels.

Tiksoja Puidugrupp specialises in the manufacture of a broad spectrum of wood products with a high degree of automation. The process involves intensive use of robots for the palletizing and depalletizing of raw material (wood) at each stage of the production cycle: cutting, sanding, drilling, etc. A distinctive factor is the large scale of the robots, which is a functional requirement necessitated by the dimensions of the manufactured product.

A company which presented multiple automation projects and practical case studies, which operational context is defined by a highly collaborative work environment and a philosophy of complete in-house project development. Here a practical exercise was performed involving pick-and-place manipulation using a collaborative robot (Cobot) equipped with artificial vision.

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Contact: Kaire Mets kaire.mets@voco.ee