

Successful R & I in Europe 2025

12th European Networking Event

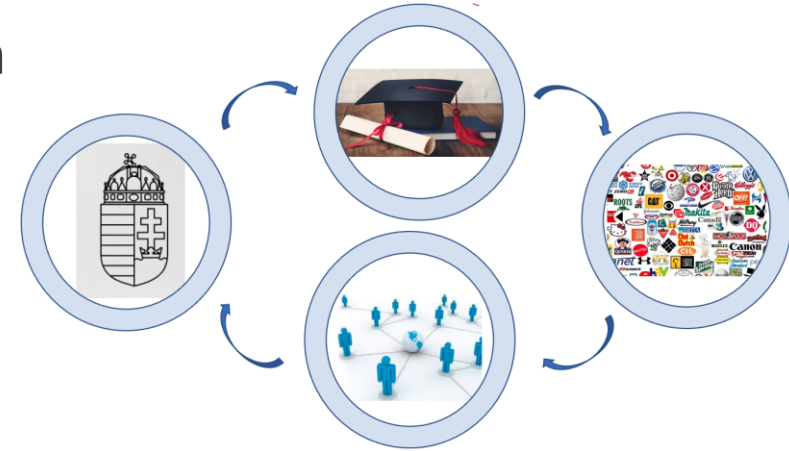


Scientific Association for Mechanical Engineering
a knowledge transfer organisation

6-7. March 2025, Düsseldorf

GTE –Decades of excellence in machinery industry

- a unique 75-year history – traditional values, modern approach
- renowned technical experts, traditions yet modern approach
- national coverage with a regional outreach
- 23 divisions, 1000 members
- quadruple helix cooperation model
- international links and platforms (e.g. ManuFuture)
- 8 regional and international conferences and conference series yearly



MISSION STATEMENT

*“Reinforcing **technical competency** and liaising with members nationally and regionally in mechanical and processing engineering by focusing on the **future manufacturing industry** is our mission. It is reinforced by accelerating the industrial twin transition by catalysing the economy, interface with **academia – universities**, knowledge centres, research organisations – and the everyday cooperation of the **business sector**”.*



Partner Profile & Call for Collaboration

- Seeking Partnerships with:
 - Robotics Manufacturers
 - Research Institutions
 - Technology Providers
 - Manufacturing Companies

Objective: Building a Sustainable HRC Innovation Ecosystem



In cooperation with Technology Transfer

What do we do in Manufacturing?

Data to Knowledge

Data-display

Real-time, direct information in AR

Analytics

Anomaly detection in large datasets

MI stock

Flexible optimization of stock level

AR

Augmented reality for knowledge database

Grey to Green

Zero waste

Recycling module design, operation

Solar energy

Solar panel, batter operated system

AI-on-the-edge

Local solution with green application

Smooth Operator

Distributed

Integration of physically distant plants

Robotics

Customized gripper with complex application

Quality Control

Neural network-based image recognition

Mini Me

Digital mR Twin

Digital clone with remote operation

Digital Twin Platform

Open-source framework for fast customization

Controlling

Real-time financial monitoring

Key Focus Areas of cooperation

- Optimising Human-Robot Collaboration (HRC)
- Operator 5.0 Framework: Integrating Human Adaptability with Robotic Precision
- Innovative Interaction Models for Seamless Integration
- Smart Materials Enhancing Robot Adaptability
- Human-Robot Communication and Trust

Research Base & Vision for NRW Expansion

- Operator 5.0 Research Achievements in Hungary
- Collaborations with Industry and Manufacturing Companies
- Strategic Goal: Expand Research and Company Involvement to Horizon proposals
- Opportunities for Cross-border Knowledge Transfer

Collaboration & Funding Opportunities

- Teaming Up for Horizon Europe and Other Funding Schemes
- Focus on Manufacturing, Robotics, and Upskilling Initiatives
- Joint Demonstration Projects and Pilot Implementations
- Didactic Factory Environment for HRC Training in Western Transdanubia Region
- Cross-border collaboration

Thank you for your attention!

krisztina.bardos@gteportal.eu

digital@pbn.hu

+36 70 6362860



/krisztinabardos