# **Pilot Actions**

### **NET-Automation**

Prototype development of a Sweat Glands Module Simulator



# **CLEAN CAP**

Prototype production of silicone caps for aluminum drink bottles with 3D technology.



## AM-CAP

Within this pilot action, a 3D prototype with a dosing capability was created in addition to a market analysis.



## Alpok-Tech

Development of a demo process for automatization of the resistance measurement on a specific type of motherboard.



## AL-MIR

Automation of indoor logistics processes with mobile industrial robot aimed to make the indoor movement of goods more efficient integrating MIR100 robot and to replace manual manpower.





for Liszt and potential analysis of 3D Printing



## **High Prec**

The aim of the development is to identify virtual methods in production plant planning to achieve increasing in efficiency in the production of zinc diecast parts in the future. Using digital twin means the selection of the most appropriate tool for the optimisation of the processes which leads to reduced development time, costs and ensuring a higher quality.

#### Everaoal

An eye-tracking study was carried out for the application of the company Evergoal to find out how user-friendly the software is. Based on this, optimization potentials were defined and suggested.

Forsports An eye-tracking study with emotional analysis wa carried out for the company ForSports to find out whether their products can improve the performance of athletes. The product was tested also with the involvement of a humanoid robot (Pepper) and the company received a mascot produced with 3D animation.

# or 12 Tage

# Oncolab

company.

Functional optimization of a filtration unit (previously purchased but no longer available) was implemented as well as was prepared for additive manufacturing with poliamvd12. As an additional service provided by network partner an advertisement concept and lavout for further marketing steps were carried out for the



#### ER2OC

Implementing a mockup application where the extended reality system of the company is redesigned and a frontend for displaying the interactions was included. / Robotics and aviation experts are involved into the process to give feedback on critical bottlenecks to increase passenger well-being and safety in the field of autonomous driving.



#### APF

Investigation of SPS based parameters for calculating the remaining unit lifetime via predictive maintenance algorithms.



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European Union – European Regional Development Fund

# **IMPROVE!**



# **T4 DIH Network**



# Thematic Working Groups



Within the project, **5 thematic groups** were established. These are:

- Predictive Maintenance
- Digital Marketing
- Digital Agriculture
- Ambient Assisted Living
- Advanced Manufacturing



# **Teaching and Learning Factory**



The teaching and learning factory simulates a highly automated smart factory, including Industry 4.0 technologies, advanced manufacturing concepts and the reality of the connected enterprise. Through the teaching factory purchased in IMPROVE! project and installed at am-LAB in Szombathely, digital factory cloning, data science-based production mass production and management, unique simulation for exceptional needs become understandable. The cyber physical factory offers you the possibility to test your developments or plan your production system.

# Contact:

Pannon Business Network – am-LAB Digital Innovation Hub www.am-lab.hu/en/ New functions developed for the TLF:

- Real time data display
- Production data analysis
- Implemented connected AR functionality
- Digital twin virtual factory with AR function
- Machine learning with camera integration

# Training materials tested by 5 (2 Austrian and 3 Hungarian) companies

# Future developments

- cybersecurity
- smart material
- connecting different TLFs



