

# Newsletter

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## **Save the date!**

 *Friday 15th October 2021*

 *13:00 – 16:15 CET*



Co-funded by the  
Erasmus+ Programme  
of the European Union



## **Final conference invitation Talentjourney project – Platform for IoT vocational excellence**

**15th October 2021  
from 13.00 CET to 16.15 CET  
Online**

**Don't miss it out!**

Make sure to register at this [link](#).

## Final conference **Talentjourney project** – Platform for IoT vocational excellence

📅 *Friday 15th October 2021*  
🕒 *13:00 – 16:15 CET*

### **Don't miss it out!**

Make sure to register at this [link](#).

The final conference of the Talentjourney project will take place online on **Friday 15th October.**

The event will be organised around presentations of project's results, its main findings, and will give recommendations according to the experience gained through the Talentjourney project.

The final part of the conference will be connected with the closing event of the international COVE hackathon with two key speakers:

### **Mr. João Santos**

Senior expert in the Directorate General for Employment, Social Affairs, and Inclusion at the European Commission.

and

### **Jernej Česen**

General manager at Outfit7, a worldwide and successful company with a dynamic force in mobile gaming.

The winners of the Hackathon will be announced.

This event will be hosted on Zoom. A link to the virtual room and full agenda will be sent a few days before the event.

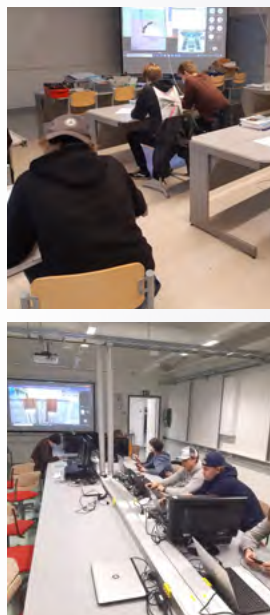
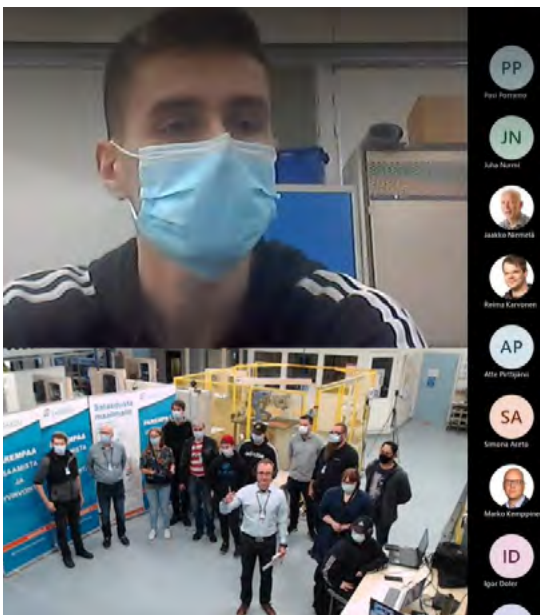
The event will be in English.



Sataedu:

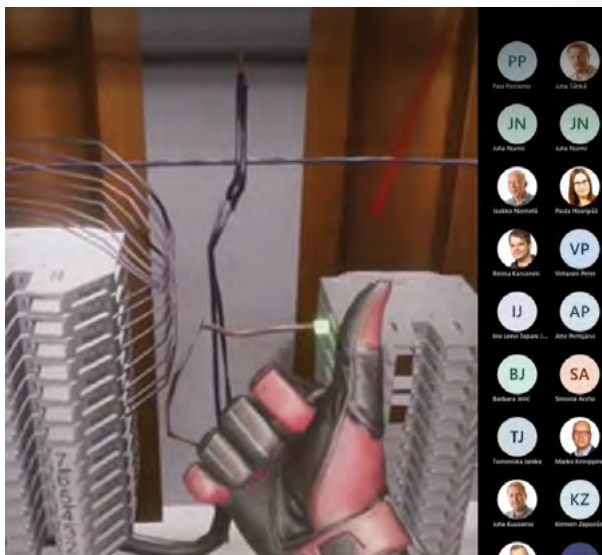
# Robotics Engineering EQF4 (3 years) Piloting

On 7th of October Sataedu organized a piloting session for the new joint curricula module Robotics Engineering EQF4 (3 years) level, Piloting VR robot cell in conjunction with a real Robot cell.



Webinar was held using MS Teams and we had gathered three VET schools to participate and follow our piloting. We were testing two parts of the module; using a robot cell and performing maintenance and service. We re-used the robot cell to check the influence of changes. Robot cell provided a problem solving, critical thinking and knowledge retrieval during the piloting. Robot cell had an error due to shortage of wooden blocks. We wanted the robot to find out with

proper sensor to sense when the blocks are out and to have the robot stopped by itself when out of blocks.



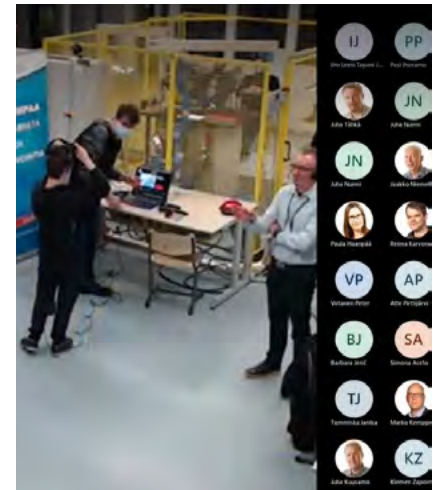
Student used VR robot cell to be able to safely go inside the robot cell and to determine a proper sensor that will work with wood. Student chose a capacitive sensor which worked fine with the robot in VR application.

After the VR tutorial & sensor installing the student made a real sensor installing to the real robot cell. Modifications were done and the robot cell was tested with the capacitive sensor and the student found out that it is working as he planned.

Student was interviewed about the VR experience and shared that it is both fun and educational.

We had two other students piloting the VR and doing the installation of the sensor. First piloting student worked as a mentor for the other students.

We also had Pasi Porramo from Ade company sharing the latest insight into VR that is now in use in different schooling systems. He also showed their latest inventions and what to be expected in the field of VR.



## Benefits of Virtual Education

Virtual trainings brings benefits to all parties from students to teachers and institutions.

- Interesting way to learn
- Faster way to learn than on site practice.
- Repairs done rarely can be easily trained also by senior staff
- More efficient training sessions
- More practical training hours
- Safe environment for trainings
- Training session possible which are difficult to organize in real life
- Easiness of grading and learning recognition
- Competence identification
- Ready training episodes, less preparing for lessons, frees resources from routine work
- Cost savings
- Standardized grading and reporting
- Risk to damage equipment is reduced
- Green and sustainable way to learn and educate

A person wearing a VR headset and a blue and yellow uniform, standing in a warehouse-like environment. The person is looking up and to the right, holding a controller. The background shows a large industrial space with high ceilings and structural beams.

With Re-use the robot cell to check the influence of changes, all changes were success and the students managed to upgrade the robot with the help of VR robot cell. Learning new things with VR-application with VR-glasses is according the students both fun and educational. We're very happy that we started VR-application co-operation with ADE during the Work Package 4 in TalentJourney. We hope that the latest technology will bring us more talented and above all enthusiastic new students.

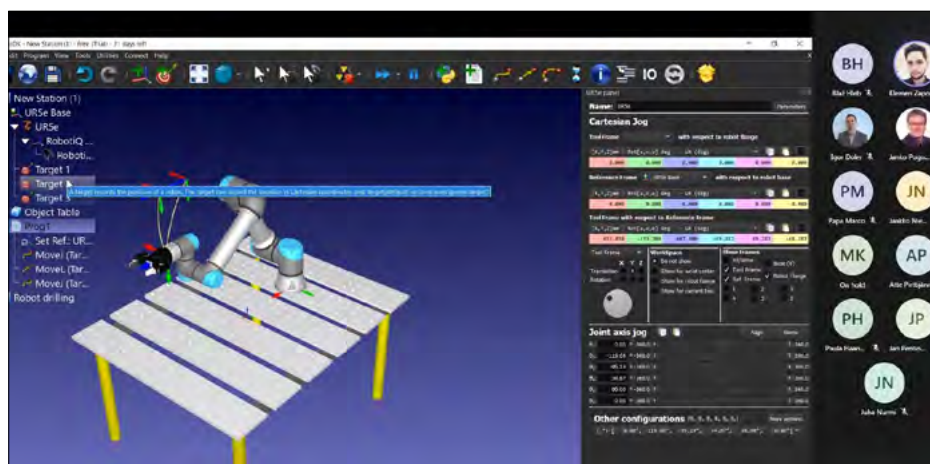


School Center Velenje:

# Joint curricula piloting Robotic EQF4

**Slovenia,  
Robotics,  
Piloting, IoT,  
Automatization**

Thursday, 7th of October was dedicated to piloting of the modules in the field of robotics, presented to the panel of listeners through MS TEAMS. Separate presentations from ISIS Malignani and SATAEDU were followed by presentation of School center Velenje.



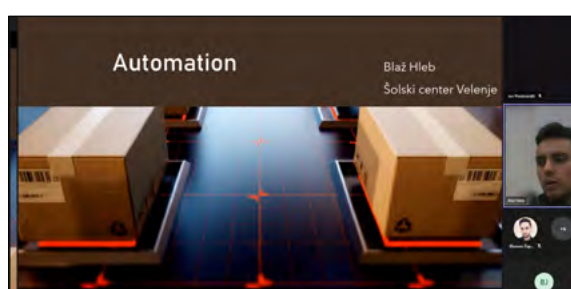
Teachers from VET school Electro and computer engineering school of School center Velenje covered the topics of making the installation and commissioning of the robot and IIoT computer network equipment as well as application maintenance,



service of robot and computer network equipment. The piloting covered basic understanding of robotic manipulation and preparing the installation of robotics and computer network equipment, using a robot in a robot cell and using robotic cell design methods, understanding the basics of SCADA, OPC and data acquisition.

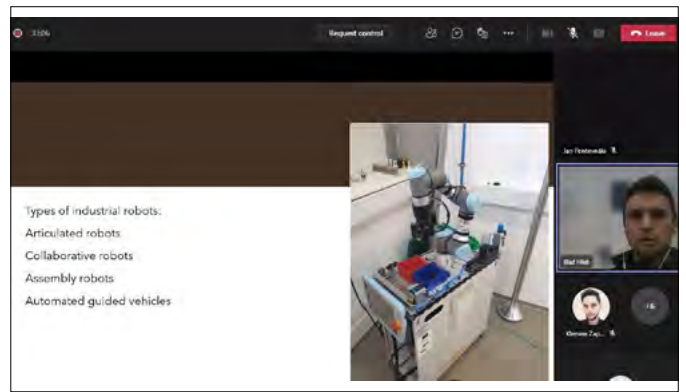


First Klemen Zaponšek introduced robotics and robotic cell design and it was followed by Blaž Hleb and basics of automation technology.



In a recorded lecture Rok Urbanc presented digital technology and telecommunications as well as IoT in automation and robotics.

Klemen Zaponšek jointly with Blaž Hleb demonstrated IoT implementation in School center's existing automation system.



## IoT in robotics

Robot Development

IoT in robotics – cloud robotics

Robot and machines colobration

## IoT Implementation In our automation system

- Robot cell
- Labview

## UR collaborative robot

Local access

IoT app

World wide access

## Labview



ECIPA Scarl:

*Good news in the Data driven innovation field:*

## **Ecipa Hub is now part of the EUH4D federation of Data Driven Innovation Hubs!**

**EUH4D,  
innovation,  
data, hubs,  
data science,  
manufacturing,  
opportunities,  
digital  
innovation,  
competitiveness,  
networking**

As emerged through TalentJourney Skills Data Collection, Data driven innovation through intelligent use of data is already exploding, tied into the growth of AI and automation. VETs need to address the oncoming 'Fourth Industrial Revolution' through education and skills to equip future employees whilst re-equipping the current workforce.

Ecipa, TalentJourney partner, has been selected among the new Digital Innovation Hubs to be the part of the federation of Data Driven Innovation Hubs within H2020 EUH4D project (<https://euhubs4data.eu/>). This is an important achievement for Ecipa Hub ([www.ecipa.eu](http://www.ecipa.eu)) and its partners ConsultArea and Interreg CE S3HubsinCE RIS3 Champion 42bit.

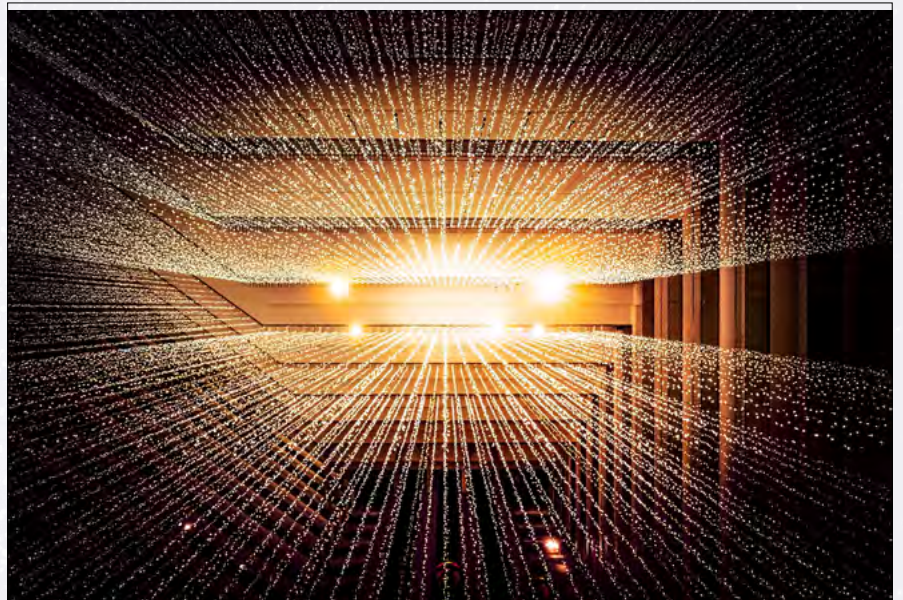
One of the main challenges that EUH4D wants to address is in fact that most of Europe's SMEs lag behind in data-driven innovation. To tackle this problem, it considers necessary to build a European federation of Data Innovation Hubs, based on existing key players in this area and connecting with data incubators and platforms, SME networks, AI communities, skills and training organisations and open data repositories.

Ecipa being part of EUH4D community can become a valuable asset to





TalentJourney and its network, as it is an opportunity to strengthen collaboration with industry. This collaboration is absolutely vital in the establishment of excellence in VET in the field of Industry 4.0/ IIOT in smart manufacturing, to provide user oriented, user friendly and eco-friendly solutions.



**Piloting, curricula,  
Robotics  
Engineering EQF4,  
VR**

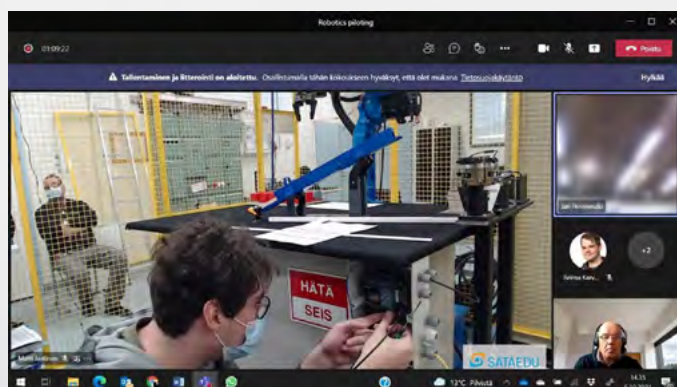
Sataedu:

## **Robotics Engineering EQF4 (3 years) Piloting rehearsal**

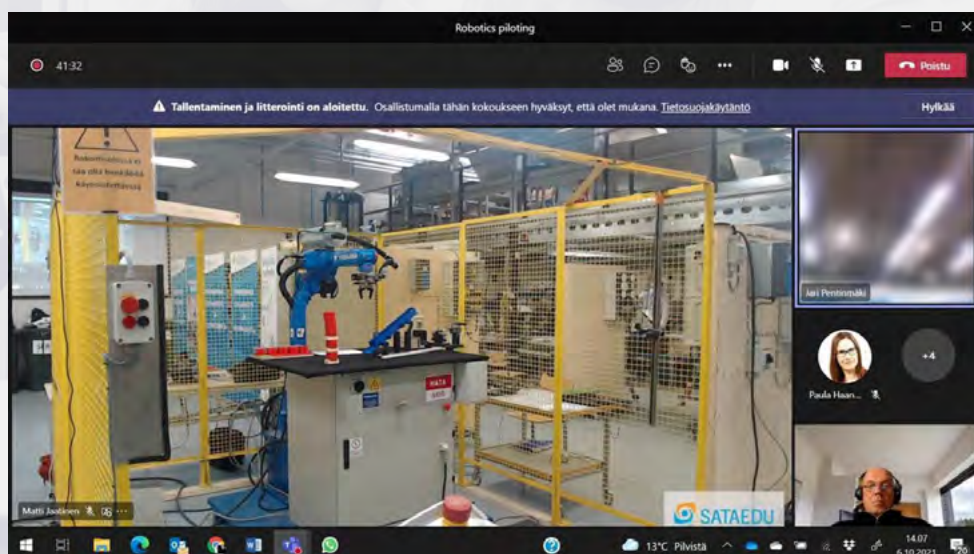
Last rehearsal before the 7th of October Sataedu piloting session for the new joint curricula module Robotics Engineering EQF4 (3 years) level included Piloting VR robot cell in conjunction with a real Robot cell.

We were testing all the software and hardware to be used in the real live piloting session. We tested all the cameras, microphones, placed the hardware so that the MS TEAMS' participants would see and follow easily. We also tested and clocked the robot using VR-application and the wiring of the real robot. We were testing different movement speeds for the robot and tested the remote link with Logo! Everything needed to be tested so that the piloting day would work as planned.





We found things that needed to be done differentially and adjusted the timing and how everything looked in MS TEAMS. Our robotics team, including students, worked really hard and it seems that this was a pleasant experience for everyone as the work was done quite unsolicited.



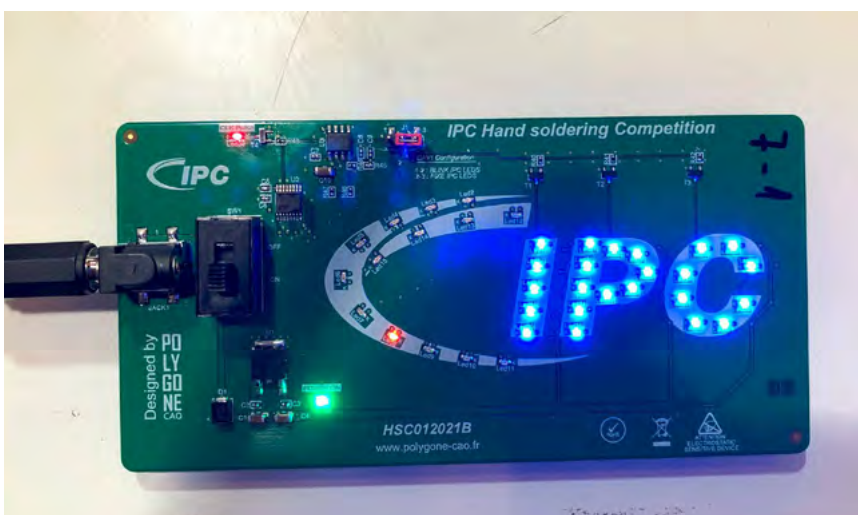
# Estonian Electronics Industries Association: **The Estonian champion in hand soldering electronics took home the title for the third year in a row**

## **Competition, Hand soldering electronics, Estonia**

Annual Estonian Open Hand Soldering Championships have been taken place at the Industrial and Technology Fair Instrutec. The winner was for the third year in a row, Timmo Antso, who uses his skills on a daily basis at Scanfil's Pärnu factory. The second place belonged also to Scanfil employee - Ivo Ellik. With the victorious duo, the team victory and the cup of the competition thus went to the same factory. Karin Andressoo from Enics Eesti won the third place.

The competition was initiated by Estonian Electronics Industries Association and international electronics organization IPC. According to Arno Kolk, Managing Director of the Estonian Electronics Industry Association, the level of the hand soldering competition was extremely strong. 26 competitors had to solve a difficult task. The participants had a very diverse background, being specialists from electronics factories, students of Pärnu County Vocational Education Center and

doctoral researchers from the Taltech Institute of Electronics. As a competition task, the participants had to assemble an electronic board from electronic components using surface mounting and through hole technologies. The hand-soldering task, which requires precision and dexterity, was supervised by





judges from Tallinn Polytechnic with IPC master trainer certificates, who assessed the performance and quality of the finished circuit board based on international IPC standards.

Although the soldering competition at Instrutec is a preliminary round of the IPC World Championships, and the winner would have made it to the World Championships, the World Cup will unfortunately be canceled this year due to corona restrictions.



Arranging hand soldering competitions is part of educational and skills promotion activities of Estonian Electronics Industries Association with the aim of maintaining and raising the competitiveness of the electronics industry.





Sataedu:

# Demolab under construction

## **Demolab, construction, VR**

In Sataedu's Ulvila site a demolab is under construction.

Sataedu's Mechanical Engineering and Production Technology will have a demolab soon available for students to use. Sataedu VR-glasses and the computers will be placed in demolab where the students can use the VR Robotic Cell by themselves and all the other VR applications that Sataedu will provide for the students. VR-application can educate the students without an actual robot moving in the robotic lab. Students can learn independently how robotic cell f.ex. works. There will soon be other VR-applications available for the students to try.

Demolab will provide students a platform and educational relaxing area where they can learn new things in fun and educational way with VR-application.





Estonian Electronics Industries Association:

## **A robot visited the Ouman factory for trial days**

The electronics factory Ouman tested a transport robot in production to evaluate the robot's efficiency in the factory's daily work. The supplier company Demec CNC first provided the robot to test it, the trial period lasted a week and turned out to be very successful.

The MiR100 robot for parcel transport is of Danish origin, and the purpose of the trial period was to get an idea of the robot's performance. "In Ouman, there are situations on a daily basis where technical components have to be sent from warehouse to production or, vice versa, it is necessary to bring something from the production side to the warehouse. This means that the warehouse worker takes the trolley and transports the necessary components to the ordered place. The distance to the other side of the building will be a good 100 meters," explains Rando Kubits, the CEO of Ouman. "Sometimes you have to move back and forth 20 or more times a day and it takes a considerable amount of time from the employee's day. That's why we tested the robot to see if it would be worth leaving parcel transport on the robot in the future to save people footwork."

The robot that worked at Ouman can carry a load of up to 100 kg at a time, but there are also MiR robots that carry a weight of up to 300 kilograms at a time. In order to work, the robot needs a map of the area to be set up with the marked points between which robot has to move. If there is an obstacle on the road, the robot will wait a while and if the obstacle does not disappear, the robot will choose another route. When the robot is not working, it goes to the charging station by itself. In Ouman it took about half an hour to make the necessary settings.

Everybody in the factory was sure that the robot proved to be an extremely effective helper, allowing to save one person's salary costs per month. Thus the procurement of the robot was added to the budget plan.

For the start, Ouman Estonia will acquire one transport robot and no one has to worry about losing their job - the MiR100 is not intended to replace human labor, but to support it. Already during the trial days, it could be seen that the factory family warmly welcomed the robot colleague - there was a lot of excitement, the robot was given a lot of pet names.

## A little more information about the MiR100 robot

Manufacturer:	Mobile Industrial Robots A / S
Load capacity:	up to 100kg
Length:	890mm
Width:	580mm
Height:	352mm
Weight:	70kg
Movement speed:	1.5 m / s





ISIS Arturo Malignani:

# Quick balance of the Talent Journey Project seen from our side

## **A balance on the Project Journey**

Since this is our last article, it is a good opportunity to make a balance of our experience of the Talent Journey project.

To make a balance on the experience we used the technique of the interviews largely used in the design thinking approach to acquire insights from people. We kindly asked one another very simple open questions: “what TJ did teach you?”; “what is the most useful thing you learnt from this project?”; “what is the less attractive thing you got from it?”; “how is your teaching life changed after being part of the project?”.

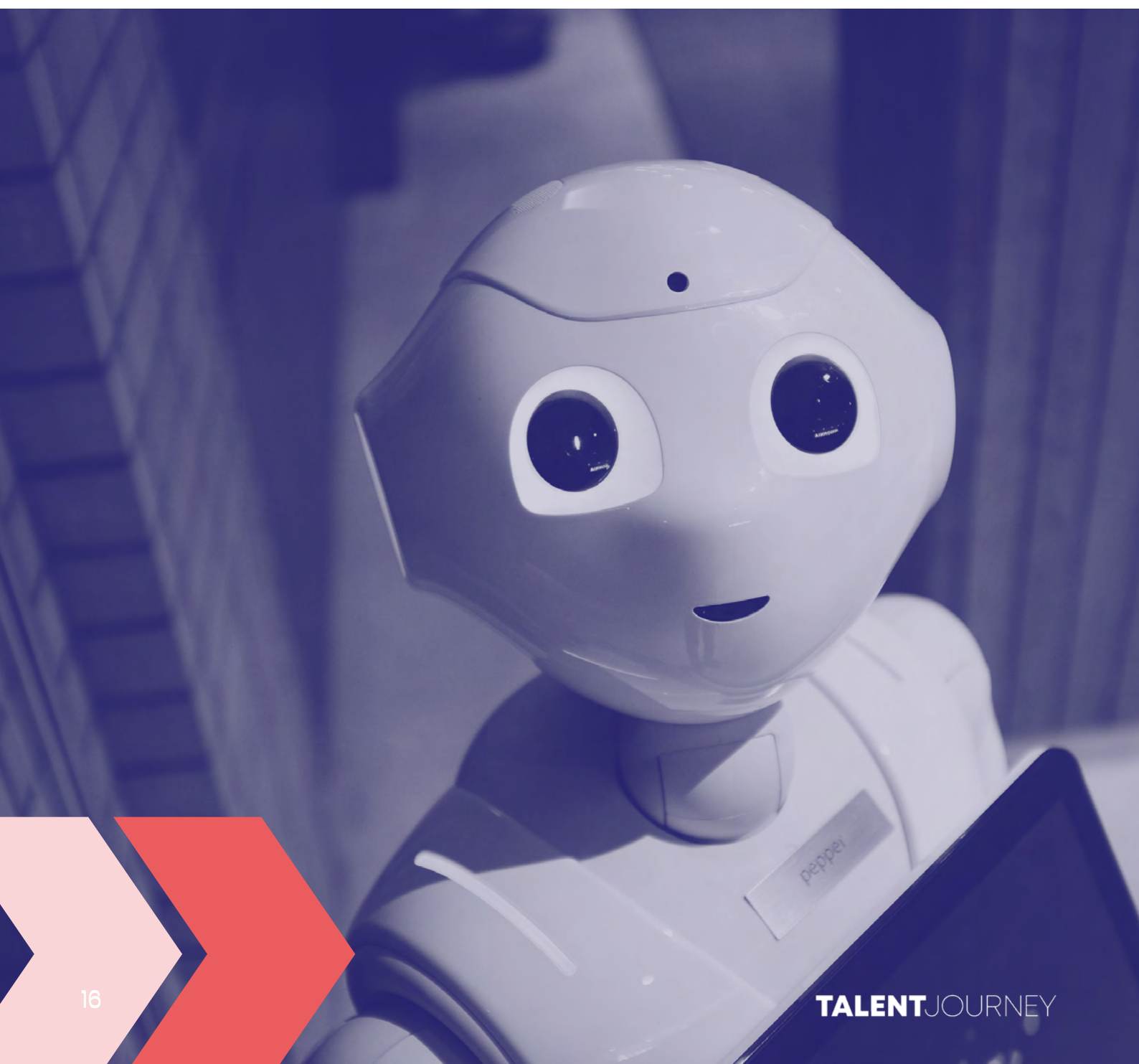
We also would like to use this little article to ask you, our partners and new friends, to do the same and participate to write a new chapter of the European learning book.

At the end of the interviews, we carried out to each other in the last few days, it is possible to mention, among others, the following aspects: “TJ project (TJp) was a chance of compare actual high school educational curricula to the current industrial need”. “TJp let us analyse our own way of teaching and compare it to others, in other systems in other countries”. “TJp allowed us share the best practice of our system and acquire knowledge from others”. “TJp renewed the desire for exploration, putting new topics and ideas in our school programs”. “TJp made clear it is necessary to update curriculum to keep pace on the economic growth and community needs”. “TJp was the way to re-focus the vision of the own teaching profession”. “TJp was the opportunity to test new ways of learning (for example design thinking)”. “TJp confirmed the idea that strong co-operation is needed among all stakeholders in the digital transition (VET providers, industry, policy makers and learners)”. “During TJp we observed high interest from companies involved and started noticing benefits in terms of collaboration especially in the LLL training area”.

Among less positive aspects: communication and temporal problems related to language, culture, and various academic systems, which are also caused by isolation for the Covid without reports from partners, stakeholders, students and teachers. But in a way or another we made out of it. Thanks all!

At the end of the Talent Journey fair the Project met our expectations; the experience balance

can be undoubtedly considered very positive especially because we had a precious chance of collaborating and talking to others with the same passion and profession as ours. We were able to introduce new concept of teaching (or rather, learning) to our profession especially when we had a great chance to start teaching, with company professionals to the Long Life Learners.










# Enhanced Manufacturing Operations **with IoT**

*Do you want to get involved in the project? Send us an **email**.*

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 <https://www.linkedin.com/groups/13792304/>

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JOURNEY