

Newsletter

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School Center Nova Gorica:

Talentjourney – New and holistic approach to the contents

Talentjourney partners from Italy, Germany, Finland, Estonia and Slovenia aim to narrow and close skills' gap in IoT in smart manufacturing, to innovate and improve the responsiveness of VET system to the needs of industry 4.0 and new era society. We also want to bring VET stakeholder collaboration to the excellence in content and ways of VET provision. All developed Talentjourney services focus on user-oriented, user-friendly and eco-friendly solutions.

How to achieve excellence? What are the key steps we need to take to make a difference?

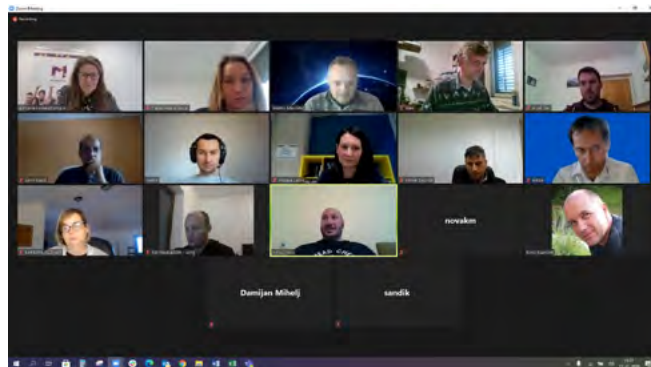
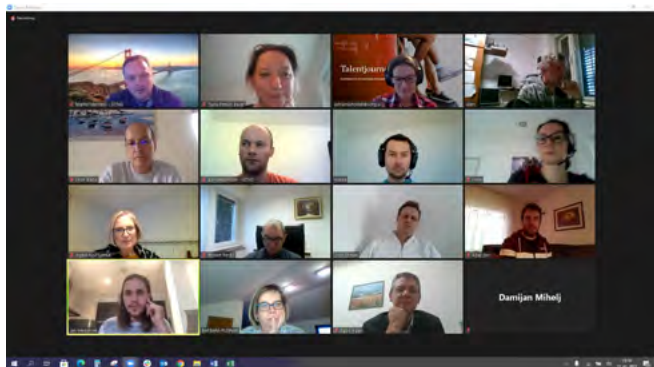
Talentjourney, VET, AI, IIOT

We believe that the first and one of the most important moves is to include the main stakeholders. We have done a lot of promotion of Talentjourney initiative between companies related to IoT and invited them to participate. Companies are the generator of development, innovations take place there and when questions such as “what awaits us in the near future in the field of work” arises, they are the key interlocutor. Companies can help us in designing answers in the form of new programmes/ curricula of what kind of employee profiles they need today and what is emerging soon.

The Nova Gorica School Center has organized, in the last two months, two extremely interesting workshops with representatives of companies from the field of AI and Cybersecurity. On one hand, the purpose of the workshops was to exchange opinions, knowledge, experience, proposals for the development of modules in the field of AI and Cybersecurity.

Teachers and experts from companies had the opportunity to exchange opinions and views on new approaches to learning. They debated about the contents that future employees should get acquainted with during their schooling and that they should know when they perform in the company. In particular, they emphasized the importance of comprehensive insight into the company, the IoT and the ability to think ethically, to work in a team, communicate and resolve conflicts.

On the other hand, this is the beginning of establishing sustainable cooperation with companies, which is very important for education at present. For successful, efficient and quality operation, schools will have to respond quickly to all changes in society and the economy, so that knowledge can be constantly circulated and updated. To do this, schools will need to establish quality networks of VET stakeholders at various levels, including members of smart specialization chains, the circular economy, and organizations actively involved in environmental protection and climate change.



Zoom Meeting

Recording

WP4/ Module Template
Sataedu and CPI

Joint curricula IIOT

↑

module no. 02

CYBER SECURITY

Level: EQF 5

Time frame: 150 h (100-200h)

Responsible partner: School Centre Nova Gorica

↑

Field Specific IIOT Studies (each Partner prepares field specific IIOT orientation training for the module)

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21.01.2021

My First Board: Online Whiteboard

miro.com/app/board/o9J_lbc7Vkpkn/

My First Board

TALENT JOURNEY

ARTIFICIAL INTELLIGENCE

CYBER SECURITY

GREEN SKILLS

SOFT SKILLS, META SKILLS

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Talentjourney designs completely new educational paradigm and environment, an open and innovative space, networking and sharing ecosystem, where everyone can be able to discover their potentials, develop them to knowledge excellence and professionalism and personal satisfaction. Such a person is the best creator of innovation and excellence.

Talentjourney also combines various stakeholders and experts at the local, regional, national and international level into the industrial IoT platform. Everyone, who is going to enter the Talentjourney platform, will be on a constant journey of discovering and developing their potentials: the learner, the tutor/teacher, the company expert, the researcher or anyone interested to share or gain knowledge, skills, experiences or ideas in IIOT field. The regional and European ecosystems of stake-

holders have been joining the forces to design the services needed to skill IIOT experts and create the environment to foster innovation and new IIOT business solutions. In that way, we can efficiently support the European Union in its transition to digital and green Europe.

It is a very complex process indeed. But in this complexity, the change of the mindset is hidden, which is the most challenging issue. Facing new perceptions of how to be educated, lifestyle and its values, as well as how we work and what value has the work.

Talentjourney project is co-financed by Erasmus+ programme. There are 13 partners included; the coordinator and some of the partner's organization are members of EU-proVET association.



Satakunta University
of Applied Sciences (SAMK):

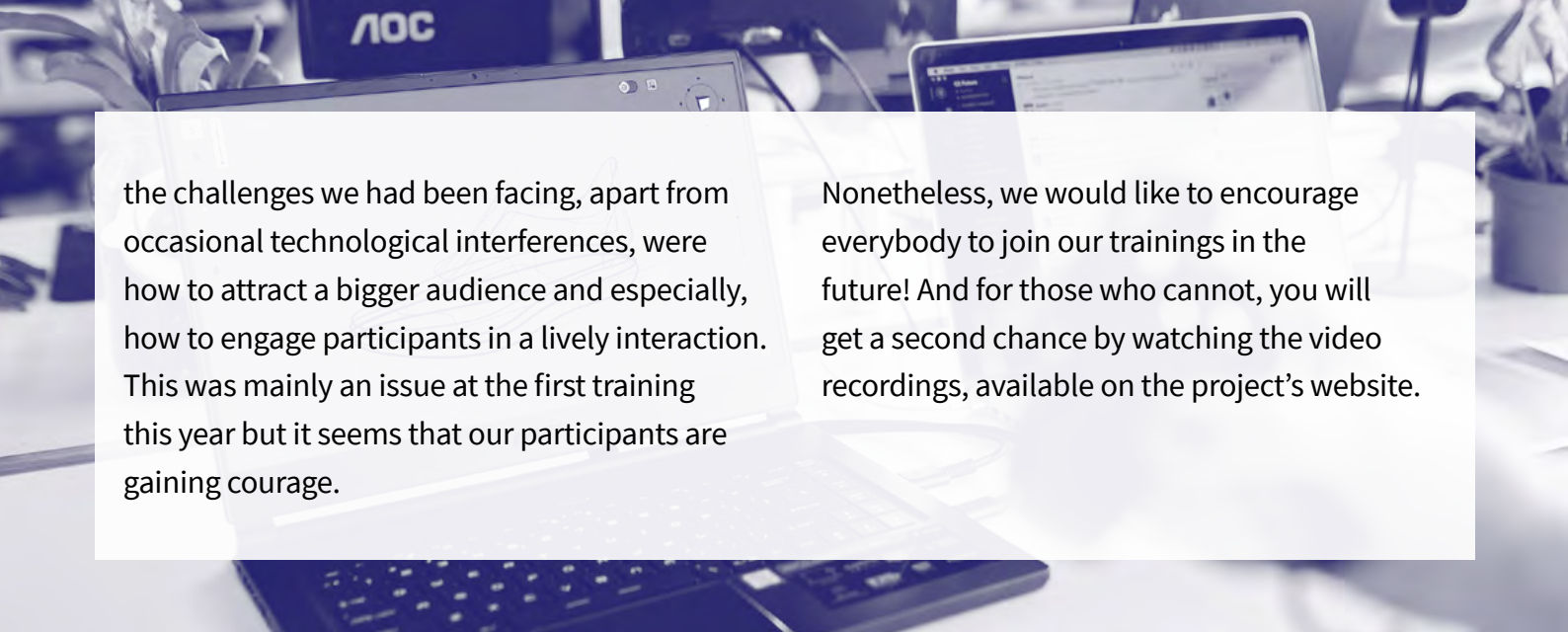
Start of the IoT in Smart Manufacturing series of trainings

Good quality trainings are an important part of the TalentJourney project. January began with the series of topics related to IoT in Smart Manufacturing. The article describes the flow of these trainings organized by Satakunta University of Applied Sciences (SAMK) as well as some of the challenges we have been facing.

**Trainings,
IoT, Smart
Manufacturing,
online**

Although our first training named Soft Skills was held already in December 2020, the active implementation of the busy trainings' schedule really started in January 2021. Soft Skills can be seen as a teaser for the upcoming trainings, which we are offering during the first part of the year. January started busy as the Holistic View to IoT training was implemented, led by Peter Virtanen. With that training, Peter really broke the ice, which started forming as a result of a cold winter here in Finland. The series continued with interesting Advanced Robotics in Smart Manufacturing sessions, led by Mirka Leino. Due to some problems with the recordings in the first implementation of the Soft Skills training, we had agreed to repeat it. Santeri Koivisto was on stage again, this time in February. Participants had a second chance to develop their soft skills through design thinking process one more time.

The series of trainings are scheduled almost weekly and the upcoming trainings can be followed on the TalentJourney website. We try to include company representatives and different professionals to spice up the content we are offering. We actively communicate with our precious lecturers to enable the best knowledge transfer. Some of



the challenges we had been facing, apart from occasional technological interferences, were how to attract a bigger audience and especially, how to engage participants in a lively interaction. This was mainly an issue at the first training this year but it seems that our participants are gaining courage.

Nonetheless, we would like to encourage everybody to join our trainings in the future! And for those who cannot, you will get a second chance by watching the video recordings, available on the project's website.

School Center Nova Gorica:

Talentjourney – going in the right direction

Talentjourney, VET, AI, IIOT

Talentjourneys' main aim is to narrow and close skills' gap in IOT in smart manufacturing, to innovate and improve the responsiveness of VET system to the needs of industry 4.0 and new era society.

To achieve the aims of project the partners have defined the two following main objectives: establish the Talentjourney Platform of VET excellence in the field of IIOT that will provide user oriented, user- and eco-friendly solutions; and develop trans-national curricula and life-long trainings in the selected field. The main outputs:

- IIoT skills data collection
- methodology for sustainable data provision on needed skills
- joint curricula ideation
- 8 trainings and 4 masterclass trainings for professional development of trainers and their implementation
- Business model for Sustainable and Continuous Professional Development
- Modules for transnational joint curricula at EQF 4 and 5 and life-long train-

“Such a positive response gives us even more energy and impetus to continue our work. We are proud to be part of this story and to create new standards in vocational and professional training and education.”

- ings and the piloting
- six IIoT demo labs (establishment)
- service blueprints for sustainable collaborative ecosystems at regional and EU level (ecosystems mapping, personas, user journeys, vision map)
- memorandum of understanding for partnership
- digital platform for guiding the services of Talentjourney.

The assessment of your report by the Agency resulted in **92 on 100**. Congratulations!

One of the main results of Talentjourney is to anticipate overall skills need, and better match the supply of skills and qualifications with the demand expressed by employers and labour markets. To achieve this and all above-listed outputs we had joined our forces with the main stakeholders, companies... We have established a working environment where opinions, knowledge and information are exchanged. Such a way of working proved to be the most optimal and succesful. Also the European Commission recognized it and has rewarded our hard work, our efforts for change and confirmed that we are on the right track. The interim report, in which we had to present the work on the project in detail in the first year, was assessed with 92/100 points. This confirms that we have set the contents of the project correctly and that we are going in the right direction, which will lead us to the necessary changes.

Such a positive response gives us even more energy and impetus to continue our work. We are proud to be part of this story and to create new standards in vocational and professional training and education.

**Develop
a passion for
learning**
and you'll never
cease to grow



Conclusion of WP5 'Explore' phase

**WP5,
Explore Phase,
Define Phase,
Design Thinking**

The WP5 activities are divided in 4 different phases: explore; define & ideate; consolidate; and deliver. In 2020 there was continuous work and strong effort to deliver the first and most extensive phase, 'Explore'. With the goal to better understand the context and set the right foundation for the next steps, the main activities in the workstream consisted of interviews and workshops.

The first step of the 'Explore' phase was to conduct semi-structured interviews with partners, companies, learner and tutors. In total, 33 interviews were conducted. The interviews were consolidated, and insights were derived from them to further guide the next steps. Personas were also created with the findings and later refined with the support of partners.

After preparing the personas, ecosystem maps were created. An ecosystem is a chain of interaction and relationships between different stakeholders and their environment. Considering that Talentjourney will represent a network of interconnected regional and EU-wide ecosystems with the emphasis on sharing, networking, working in teams and providing information between different stakeholders, it is important to have a thoroughly understanding of the context in which these interactions are present.

Ecosystem maps are an important tool to visualise all the key roles that have an influence on the user, organization and service environment. In order to ensure different perspectives were taken into account, workshops were conducted for each region (Estonia, Finland, Italy, and Slovenia), and the input was used to prepare the ecosystem maps.

Besides preparing the deliverables described, a Design Thinking training was also provided to partners, in order to strengthen learner-centricity throughout the project.

In the last partner meeting in November 2020, organized by the Italian partners, the activities in the 'Explore' phase were successfully finalised, and the activities in the 'Define' phase kicked-off. The preparation of deliverables such as user journeys and mission/vision for Talentjourney were some aspects that were approached.

Once these deliverables are validated, the service blueprint for the platform will be prepared, followed by the memorandum of common understanding and a roadmap. Strong and active collaboration will be key to deliver the WP5 outcomes in October this year.



School Center Velenje:

TalentJourney website

**Website,
Updating,
Brand Identity,
Improving
functionality**

As the project TalentJourney evolves, so does the platform and the website has been growing with it. At the end of the last year we noticed the current form of the website was getting progressively more difficult to navigate and it has become obvious that for the Platform to prosper an update is needed.

For some time now it has been our intention to adapt the website to closer reflect the brand identity; as the project TalentJourney gained full speed the content started to grow exponentially: news, announcements, documents connected to the project – including deliverables needed to be presented in a more structured and user

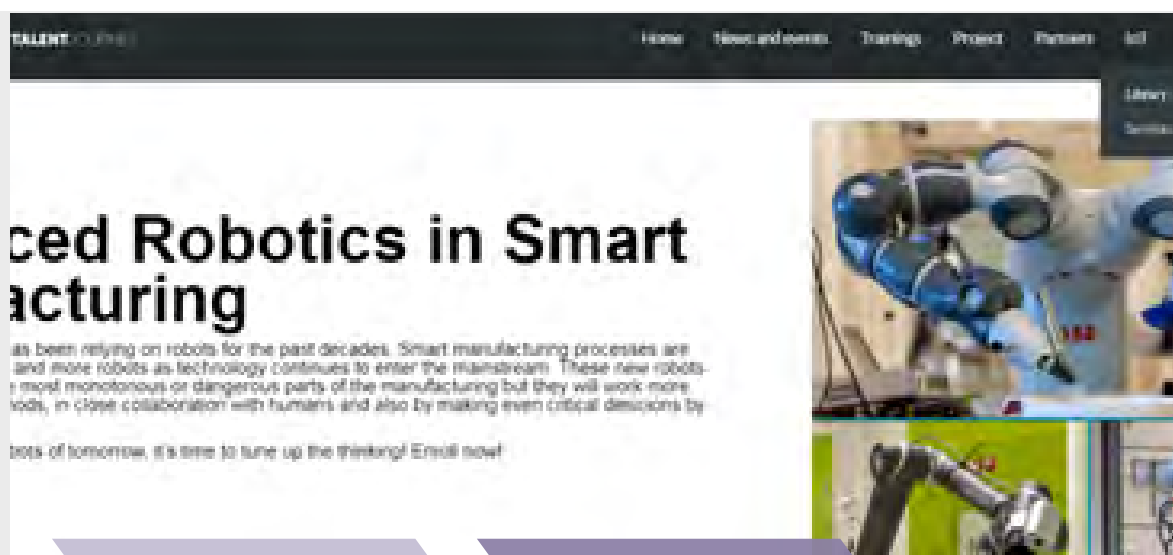
friendly way. Project leader SC Nova Gorica and WP 6 coordinator SC Velenje approached designer Nina Frank that has previously developed the TalentJourney brand identity and engaged her to help with the 'renovation' of our website.

She has come up with suggestions for implementation of the brand identity on websites current template and tasked website administrators to implement the test changes. The website is live and functioning so this changes will come in slowly, after testing on a separte version of the website, not to disrupt the daily life of the platform.

The other aspect of the website is the structure that should offer users a pleasant and easy to use experience. SC Nova Gorica is in charge of providing the structure that will be user friendly and at the same time acomplish the goals of the project in being accessible, expansive and facilitate cooperation of different users of the site.

News and important documents should be easy to find, training info simple to access and the content should attract guests to make repeated visits and become permanent users and with it help our platform flourish.

The transformation is not yet concluded, however we hope you can see the result of it soon and that TalentJourney website can enter the spring in a new fashionable outfit!



ECIPA Scarl:

A use case of Data Analytics and Open Data as drivers of economic and social innovation

**Open Data;
Data Analytics;
Data Science;
Digital Innovation;
Economic and
Social Innovation**

In the digital age, data is a key resource for social and commercial activities. Everything from building a search engine to finding a local post office requires access to data.

In this scenario, Data analytics is of key importance to help optimize business performances! Data analytics is “the science of analyzing raw data in order to make conclusions about that information. The techniques and processes of data analytics have been automated into mechanical processes and algorithms that work over raw data for human consumption”.

Many individuals and organisations collect a broad range of different types of data in order to perform their tasks. Also Government is particularly significant in this respect, both because of the quantity and centrality of the data it collects, and because most of that Government data is public data by law, and therefore could be made open and made available for others to use.

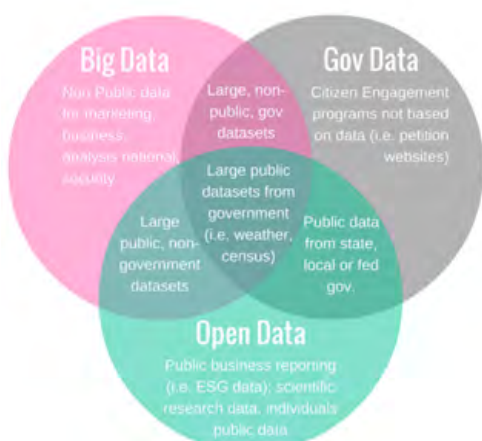
Nowadays digital skills are at the heart of any innovation and may be considered as a leverage to manage any economic and social changes.

Ecipa Nordest Hub is working on these challenging issues, and would like to share a very interesting case it is actually working on: its support to the development of a pilot phase of the +Resilient project (co-funded in the framework of the INTERREG MED programme). +Resilient is an integrated project that establishes a structural approach to policy & practice improvement of emerging dynamics in economic and social innovation through an overarching process based on the intertwined use of Open Data & the creation of a transnational socially-responsive value chain. The role of the Hub is focused on the involve-

ment of key private and public stakeholders in restricted focus groups and in “one to one” interviews in order to define a successful cooperation model for the innovation of a specific regional area in Veneto region, that needs to face the challenge of depopulation. The goal is to demonstrate how data analytics and open data, as well as a digital oriented approach, can be drivers of economic and social innovation.

As mentioned in TalentJourney “Skills Data Collection for Connectivity Devices and Services/CDS (IOT in Smart Manufacturing)” Report, data driven innovation through intelligent use of data is already exploding, tied into the growth of AI and automation. VET need to be able ready to address the challenges of ‘Fourth Industrial Revolution’. Project partnership wants to bring VET stakeholder collaboration to excellence in content and ways of VET provision in order to innovate, act agile and improve responsiveness of VET providers to the needs of industry 4.0 and new era society.

It seems indeed that the key to success to improve the socio-economic context should be a multilevel and functional governance that, capitalizing on digital tools and skills, needs to be shared and turned into a consolidated transforming process with the involvement of all the society players.





School Center Kranj:

Meeting with employers

Production Process Development, Data Science, modul

At SC Kranj we organized third meeting with employers regarding the modules Production Process Development and Data Science.

The meeting was attended by members of the Talentjourney team, teachers, the headmaster of STS, a representative of CPI and representatives from companies Iskra AMS, Iskratel, Sumida, Polycom, and Elektro Gorenjska.

The aim of the meeting, which took place in the Teams environment, was to discuss the modules prepared in cooperation with companies and formulated by the project and didactical requirements.

Data Science

All participants agreed that the module is well designed. The discussion was related to: implementation of the module, points of emphasis (profession, meta-knowledge, green skills), where and in what form companies will be able to get involved in the implementation...

Conclusion: The Python programming language was chosen as the starting environment, because it allows easy transition

to other programming environments (open source tools). Company members emphasized the importance of “Selecting and creating algorithms / models”, which will need to be adapted to the level of knowledge of students.

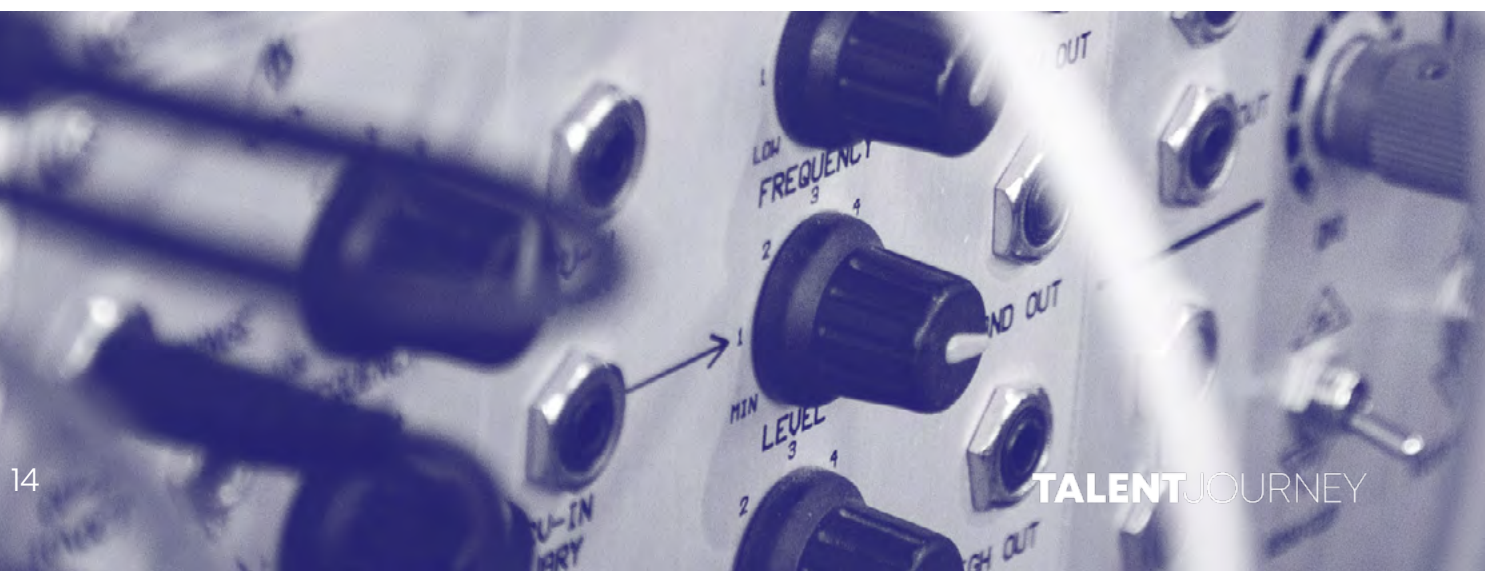
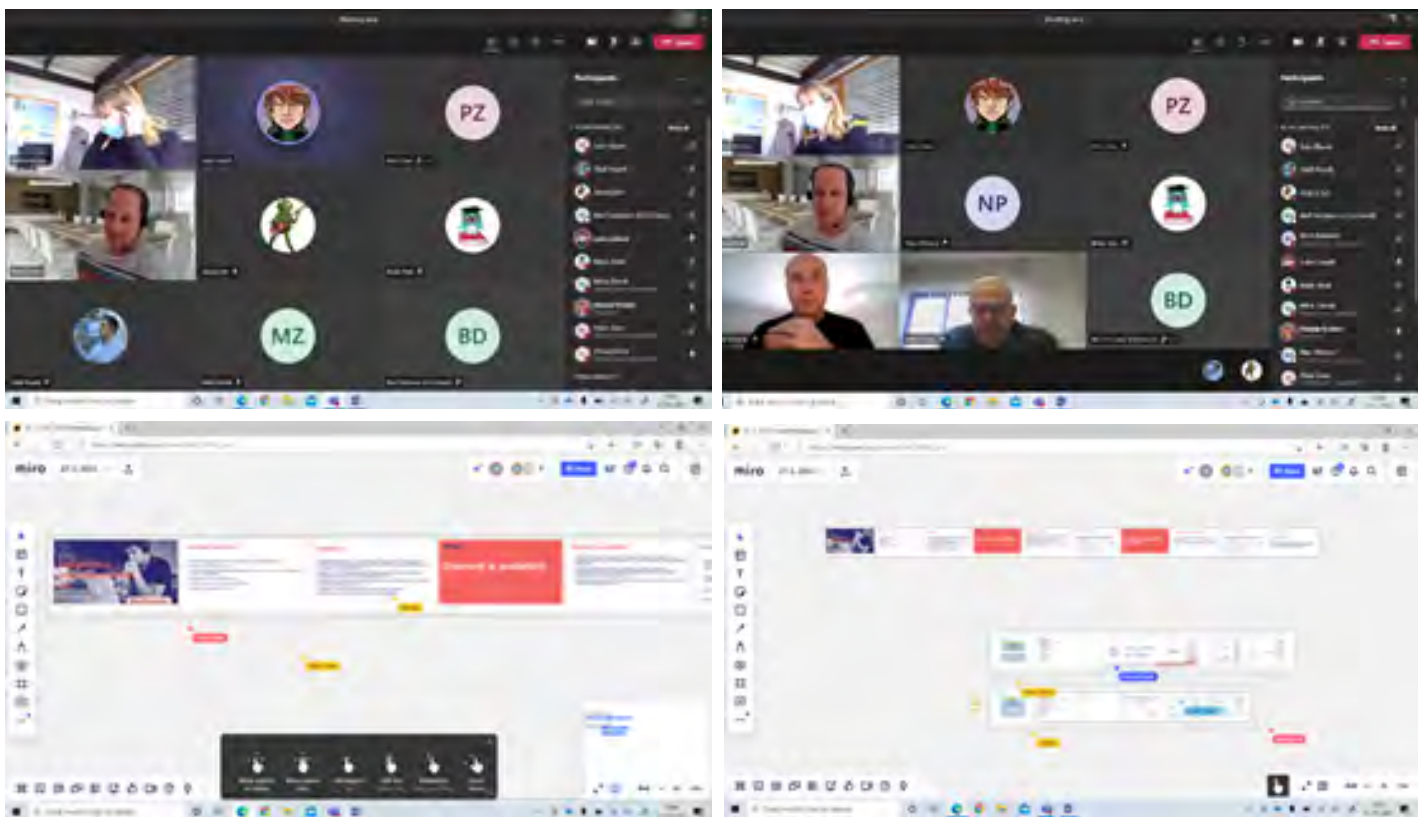
During the discussion we opened important themes: what are the criteria of a good project, evaluation of end solution, distance learning and working, jobshadowing, Green Skills.

Production Process Development

The module is designed according to the DesignThinking method “from idea to product” and enriched with the Canvas method.

Conclusion: We all agreed that the core idea of the module “from idea to product” is

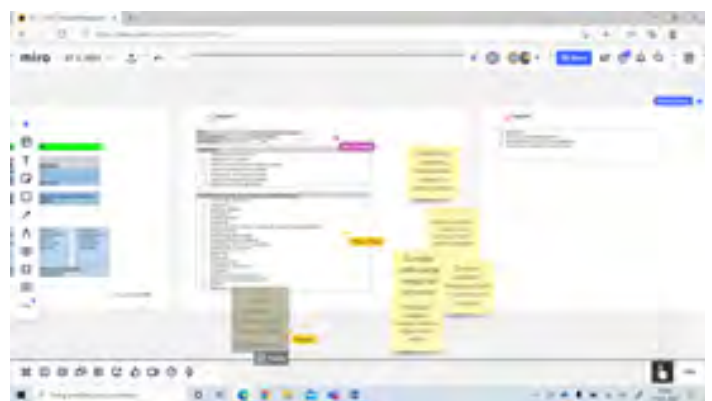
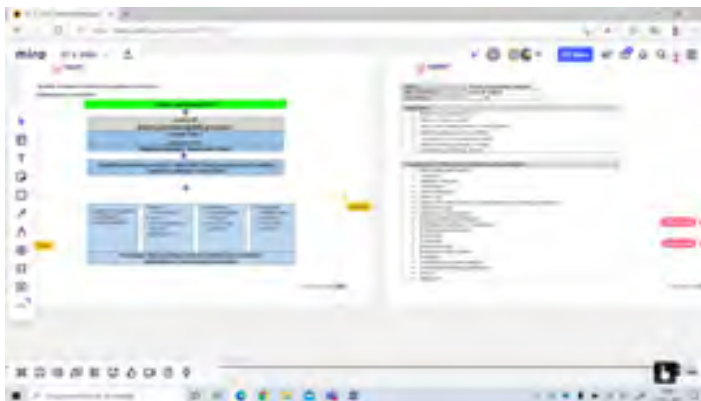
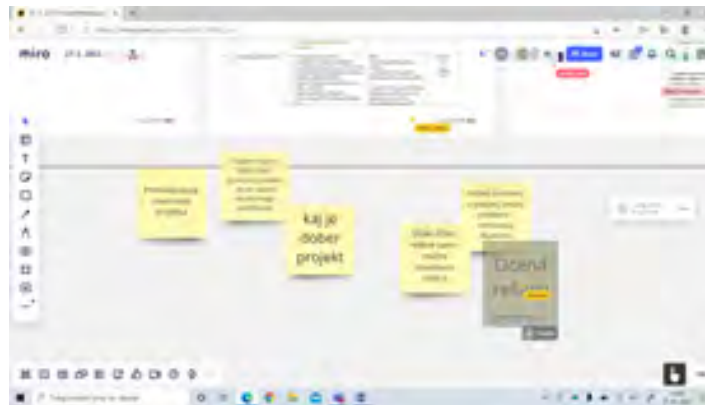
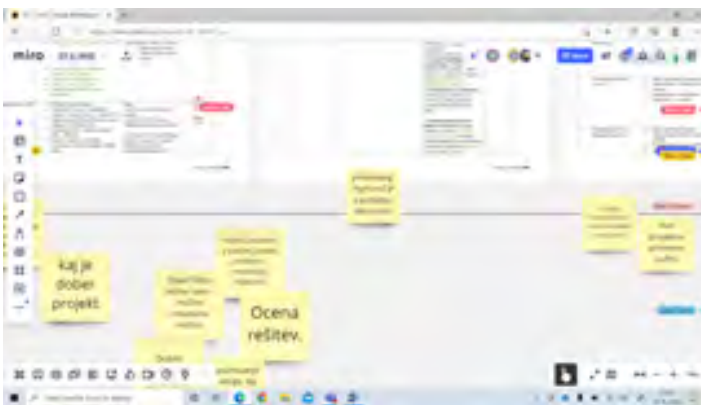
Moments from the meeting:



excellent, as long as it is not set too broadly. Representatives of the companies made an interesting proposal, which we intend to include in the module implementation. They are willing to show students the processes in their organisations. The representatives from the companies pointed out that we have to give more emphasis on the project aspects such as milestones, planning, monitoring of realization, ...

An interesting idea is, for example: we include a student in a certain phase, we give him boundary conditions (resources, material, time, ...) and he has to solve a problem. Such realistic situations are a motivation for students, but at the same time an opportunity for the company to connect with possible future employee.

Moments from the meeting:



ISIS Malignani:

An industrial robot at ISIS Malignani in Udine – ITALY

Robotics, Industrial Robot, COMAU

The Piaggio Foundation of Genoa, who has already allocated considerable funds to the Malignani Institute of Udine, has recently supplied the school with a six-axis anthropomorphic industrial robot model Racer3, produced in Turin by COMAU and engineered with a work cell from CMA Robotics of Pavia di Udine.

The Piaggio Foundation of Genoa, who has already allocated considerable funds to the Malignani Institute of Udine, has recently supplied the school with a six-axis anthropomorphic industrial robot model Racer3, produced in Turin by COMAU and engineered with a work cell from CMA Robotics of Pavia di Udine. COMAU, a Fiat Chrysler Automobiles group, is one of the world's largest manufacturers in the field of robotics.

Industrial robots are and will be increasingly widespread in the world of production, because they can be considered as universal machines: by changing the tool mounted on the wrist they can be programmed to perform very different tasks. Besides, they can perform uninterruptedly for years, 24 hours a day.

The model is the smallest of those marketed by the manufacturer. It has a range of action of 63 cm and the possibility of handling loads up to 6 kg with a speed of 2.5 m/s. It is a machine that works with great precision and has the ability to be interfaced with any other machine that communicates via the main industrial BUSs. It is locked inside an alarmed work cell to comply with the European legislation on industrial machines in terms of safety.

The new machine has become part of a set of educational robots and simulation software already displayed and used at school. It is therefore a sig-

nificant qualitative leap forward: there are few Institutes that can boast such a cutting-edge instrumentation capable of providing concrete skills that can be used immediately.

The arrival of this machine is particularly important for the Talentjourney project, given that the Institute is directly involved, among others, in the drafting of the curriculum on industrial robotics. Obviously, this is a particularly complex machine that requires transversal knowledge and skills in the technical field,



ranging from Mechanics, to Electrical-Electronics and Information Technology and which requires specific training led by the manufacturer. It will be challenging to read the many accompanying documentation and to practice with the machine, sharing the experience with the international partners participating in the project, but it will also be a stimulating challenge to bring to the project the skills that are in great demand from the manufacturing world of the 21st century!

Since 2018, the School has joined a joint project of COMAU with the Pearson Italia publishing house and approved by MIUR: it organizes training courses, held by internal teachers, and exams for students of the Institute and other schools in the area, in the field of industrial robotics. Internationally recognized certificates are also issued by COMAU. The training courses concern the use and programming of robots, I/O communication and FieldBUS; they have the same contents professionals deal with, only remodeled with different times for the use of Higher Technical Education by students.

The arrival of a six-axis anthropomorphic industrial robot model Racer3 is particularly important for the Talentjourney project in the drafting of the curriculum on industrial robotics.

School Center Nova Gorica:

Talentjourney and European platform for urban greening

**CoVE,
green skills**

Talentjourney project participated at the kick-off meeting of a new CoVE project - European Platform for Urban Greening. The Talentjourney project aims and objectives were presented as well as our experiences of the first year of implementation.



Urban Greening project aims to increase the knowledge and skills required to address biodiversity, climate adaptation and well-being in the urban, green living environment, and to broaden the expertise among professionals in Europe. The project

specifically addresses the development of innovative curricula and teaching methodologies in the field of urban green landscaping, in order to rise the quality and adaptability of the skills ecosystem.

Partner organizations come from Denmark, Finland, Romania, Spain, the Czech Republic and the Netherlands, Green Hotspot Houten – part of Wellantcollege.




Plan of future trainings




Service Robots and Exoskeletons

 **8. 3. – 12. 3. 2021**

 Service robots state of the art, mobile robots driving versatile smart manufacturing and factory logistics, Exoskeletons empowering and supporting workers.


VR, AR and gamification in smart manufacturing

 **22. 3. – 26. 3. 2021**

 Virtual and augmented reality tools and gamification in smart manufacturing, application examples, learning by gaming.

IoT

 **12. 4. – 16. 4. 2021**

 Applied IoT project.


IoT and data enabled services

 **26. 4. – 30. 4. 2021**

 Cloud services, IoT and ERP.


AI

 **10. 5. – 14. 5. 2021**

 Data science, data analytics, deep learning, neural networks, AI in Education.

Cybersecurity

 **24. 5. – 28. 5. 2021**

 Cybersecurity elements, threats, benefits, challenges.








*Internet of **Curious** Things*

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

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