ISSUE 2 MAY 2021

# FIT FOR 4.0

Training Teachers and Trainers for the 4.0 Paradigm

## NEWS & FEATURES



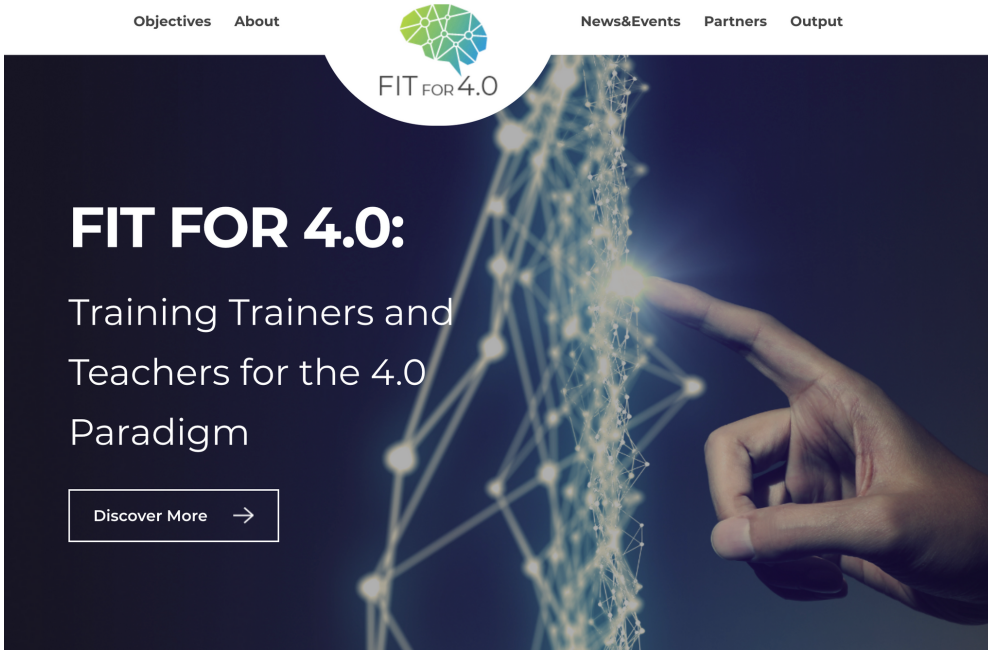
## Peer review process

BY LUCA BOETTI, I.F.O.A.

According to the project plan and discussions held with the partners, it was decided that each of the six TU packages will be developed by a different partner i.e. a lead partner. It was also agreed that the development of TUs will be supported by associated partners, and peer-reviewed by two other partners independently.

The peer-review process was carried out by the partners acting like "critical friends" to offer suggestions and ideas for improvement. The aim of the peer-review process was to ensure the common understanding of the content of the training programme. Each partner was responsible to check at least two TUs developed by the lead partner.

They contributed to the TU development by written comments and/or they arrange an online meeting to discuss improvements. Based on the feedback from the supported partners and peer reviewers, the lead partner adjusted their TU when it was needed. This process deepened the understanding of the overall framework of the training units and to share ideas. The peer-review process continues in the realisation process when the TUs will be transformed as actual MOOC courses.




## The Project Website has been launched!

### BY ELENA BERTOCCHI, I.F.O.A.

The Fit for 4.0 project website is now online! Launched since early March 2021, the website collects the details and the progress of the project, as well as a space dedicated to news and events related to the world of training 4.0. Moreover, it is possible to read and download the outputs of the project, documents that collect the results obtained step by step.

Visit the site at www.fitfor4-0.eu!

## Check the Intellectual Outputs available so far!

### FIT FOR 4.0 WEBSITE >>

**Output 1 – Set of competences for teachers and trainers**
Teaching and training for the 4.0 world does not imply just technology. Didactic, personal and strategic skills are also involved. This output presents a framework and a description of the set of competences teachers and trainers should possess to adequately facilitate learners in complementing their technological know-how and gaining citizenship to the 4.0 labour world.

**Output 2 – Trainers' skills self-assessment tool**
This output is meant to let VET teachers assess their own competence level about the 4.0 "world", i.e. to measure somehow their readiness to co-operate in a 4.0 training and learning environment, with special reference to didactic, personal and strategic skills required to accompany technology and the digital transformation.

**Output 3 – Train-the-trainers programme**
This is the description of a comprehensive training path aimed at supporting teachers and trainers in the development of the competences they should possess to adequately facilitate learners in complementing their technological know-how and gaining citizenship to the 4.0 labour world. It consists of a set of seven training units:

- Introduction to 4.0 and how to develop my own expertise
- My field in relation to 4.0
- Designing learning environments and experiences
- Implementing learning experiences
- Assessing learning experiences

## The partnership

ifoa Sapere utile

Göteborgs Tekniska College

AP UNIVERSITY OF APPLIED SCIENCES AND ARTS ANTW

jamk.fi Jyväskylän ammattikorkeakoulu

EDUGEP

north west regional college Derry-Londonderry • Limavady • Strabane

POLITECNICO MILANO 1863 METID LEARNING INNOVATION

EfVET European Forum of Technical and Vocational Education and Training

bfi Berufsförderungsinstitut OÖ

Z3C

- Innovation: ideas for teaching and learning
- Teaching and training for work placement

Each training unit is described in terms of expected learning outcomes, content, methodological suggestions, assessment suggestions, specific requirements and prerequisites for teachers and trainers.

The other IOs not available yet are:
**Output 4 – MOOC & resource kit for "4.0 teachers and trainers"**
This output is a Massive On-line Open Course (MOOC) delivering the training units for the train-the-trainers programme. It includes exercises, in-depth information, links to open educational resources (OER). All material (video clips, text, drills, quizzes, infographics, examples, web links, etc.) is meant to also provide a base for building further learning activities either face-to-face or for distance learning.

**Output 5 – Guidelines and recommendations for implementing "train-the-4.0 trainer" policies**
This output synthesizes all project activities, assesses and validates outcomes. It includes activities performed, lessons learnt and policy recommendations, aiming at providing Vocational Education and Training stakeholders with a tool to:
- Understand the nature of the 4.0 world, its features, complexity and, most of all, opportunities;
- Support planning, implementation, monitoring and self-assessment of training policies about 4.0;
- References to practical tools and directions to exploit them the most


## The students of the IFTS Technical Course in Industrial Design of IFOA present their final project: M.A.R.C.O - Automatic Robotic Warehouse Hospital Adjuvant

**BY ELENA BERTOCCHI, I.F.O.A.**

The prototype created by Ifoa's IFTS Industrial Designer course, shown during the online event on 13 May, applies the potential of robotics to the healthcare sector to improve patients' living conditions.

"Science is nothing but a perversion, if it does not have as its ultimate end the improvement of the condition of mankind" – Nikola Tesla.

This quote inspired the students of the IFTS Industrial Designers course, to realise their final project.

On 13 May, in fact, on their last day of training, they presented M.A.R.C.O, a human name for an automatic robotic warehouse hospital adjuvant. This year, in fact, the IFOA team, which is in charge of organising the course, decided to assign the theme of robotics applied to the health sector as the focus of the end-of-course project.

Robotics is an area of great relevance and fully consistent with the trends of innovation and Industry 4.0, on which the Emilia Romagna Region has been focusing for some time; declining the applications of the course on the hospital environment, means contributing to technological innovation in support of health workers and citizens.

The pandemic emergency forced the students to live the training totally online: the team working activities were organised via Zoom and the creative laboratory was simulated with dedicated software, making the program even more ambitious.

In this context, M.A.R.C.O. was born, a system composed of an automatic warehouse and a rover, both equipped with robotic arms for the handling of objects. The idea was born to place the storage point in a room used as a ward for patients with limited autonomy, to store personal items (from

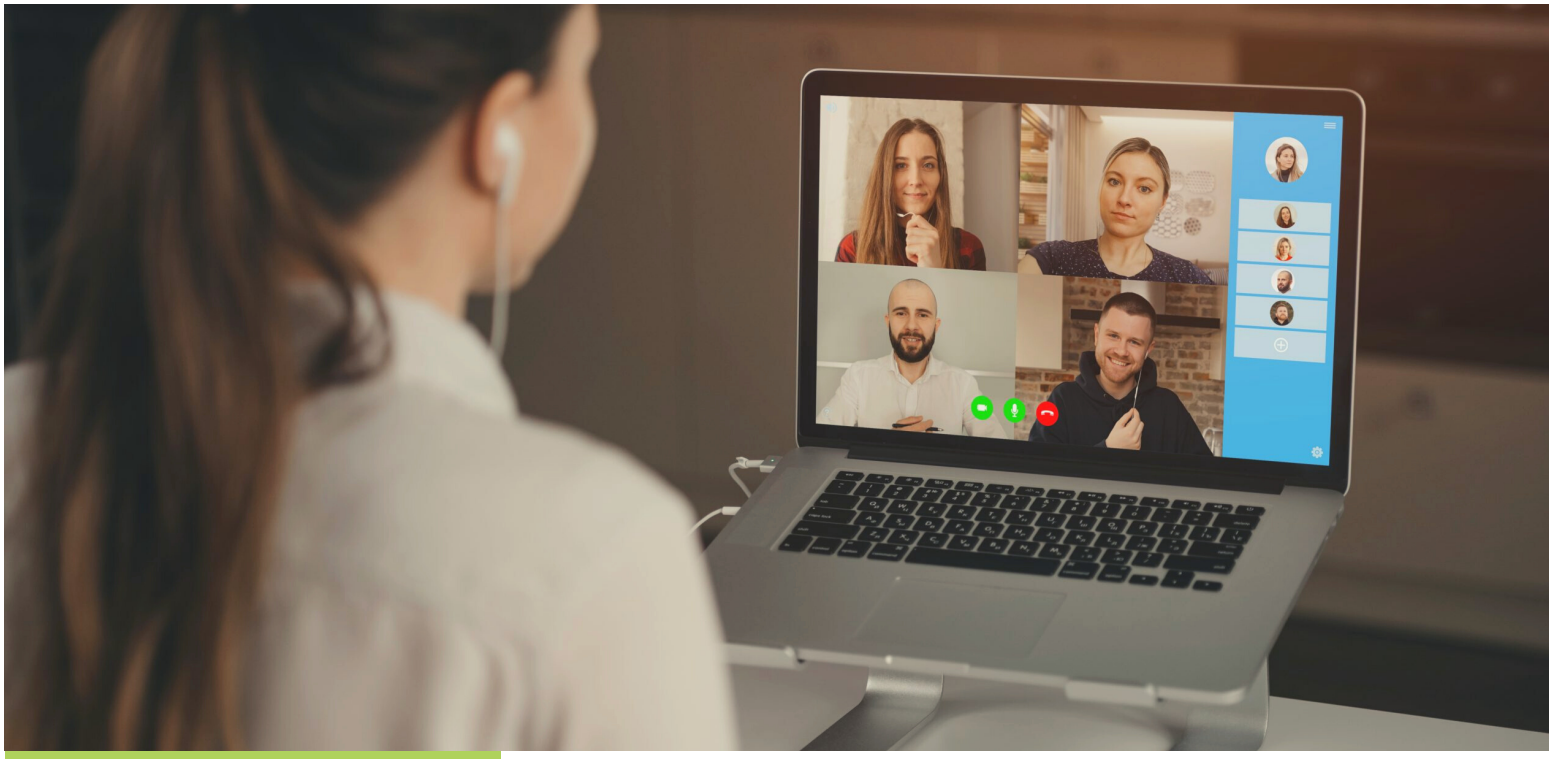
medicines to the telephone, from the bottle of water to the book). A rover is associated to it: a real robot, which can act as a Health Operator, bringing to the patient what he wants. It moves on the input of a simple remote control or, thinking of future developments, through voice-controlled App.

The main idea was to create a product that can meet the needs of users and, at the same time, be able to meet their emotional needs, allowing a greater degree of autonomy to the patient. This would also significantly reduce the need to expose doctors and nurses to biological risks.

M.A.R.C.O. has been designed with a simple, easily sanitised and customisable design. The students have taken care of the mechanical design, the prototype of the body of each element made in 3D printing, the electronic programming with Arduino to manage the movements of the components. They have also hypothesised future developments, with applications in other sectors, and have been responsible for promoting the project for the final presentation and on social media, taking care of graphics and content.

This training course, culminating in the realisation of M.A.R.C.O., reminded us how a moment of crisis can become a great opportunity for growth.

Now the students of the course are ready to start their internship experience in the company, bringing with them new knowledge, technical skills and an innovative point of view.



**FIT for 4.0 is an Erasmus+ funded project n°. 2019-1-IT01-KA202-007766 which gathers 10 Partner Organisations from Austria, Belgium, Denmark, Italy, Portugal, Sweden, and the UK.**

**The project (2019-1-IT01-KA202-007766) run from 01/09/2019 till 31/08/2022.**

**The kick-off meeting took place in Reggio Emilia (Italy) on 08-09/10/2019.**

**The 2nd project meeting was held online on 29/09/2020 - 02/10/2020.**

**The 3rd project meeting was held online on 08-10/03/2021.**

**Project website: www.fitfor4-0.eu**

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



## A MOOC to help teachers to integrate active learning methods in teaching practice

### BY POLIMI

If you are a teacher interested in fostering your student's soft skills, enrol in the online and free course "Active learning for soft skills development" on POLIMI Open Knowledge platform (**www.pok.polimi.it**).

You will discover, thanks to experiences told by other colleagues from European context, how active learning can be implemented to reinforce soft skills.

This MOOC, one of the outputs of the Erasmus+ eLene4life project **www.elene4life.eu**, is mainly for higher education teachers and trainers who recognise the importance of potentiating such skills in students and who want to improve their effective support for students to help them achieve this aim.