

DITMEP

Digital Tools for Manufacturing training and Education Programmes

Project number: 2021-1-DE02-KA226-VET-008289

Newsletter Edition 1, November 2021

Project Overview

In the context of current COVID-19 crisis Education and training systems are facing new challenges regarding online learning, for guaranteeing quality and inclusive digital capabilities. Modernisation and digital transformation of education is a main need at European level, and in particular for vocational education and training schemes in manufacturing sectors, based on face-to-face classes and workshops linked to industry.

In particular, **DITMEP** project will focus on risk prevention modules, within the manufacturing of composites training schemes. This sector is of high interest for different industrial sectors at EU level, thus aiming to reinforce skills training for the EU industry.

DITMEP project aims to improve manufacturing training, in particular Risk prevention courses, generating digital capabilities on the methodology (through e-learning, gamification and augmented reality experiences) for educators and trainees. This will support and help the transformation of manufacturing in this current COVID-19 situation.

The main objectives are:

- Training course deployment in an e-learning platform with a core syllabus on Risk Prevention and Health, prepared for its adaptation to the specific countries regulation.
- Deployment of a common gamification methodology for Risk Prevention training modules
- AR mobile application development to support 2 series of learning experiences proposed as part of the core training (virtual spaces signalisation and emergency drills).
- To reinforce learners and teachers with digital capabilities: guides on how to use the materials, how to complement in-presence teaching and to develop on-line trainings. A common structure in English will translated by the regional partners.
- Providing tools and methodology evaluation through pilot training implementations (3 countries) with included tests for evaluating the procedures from the teachers/learners.

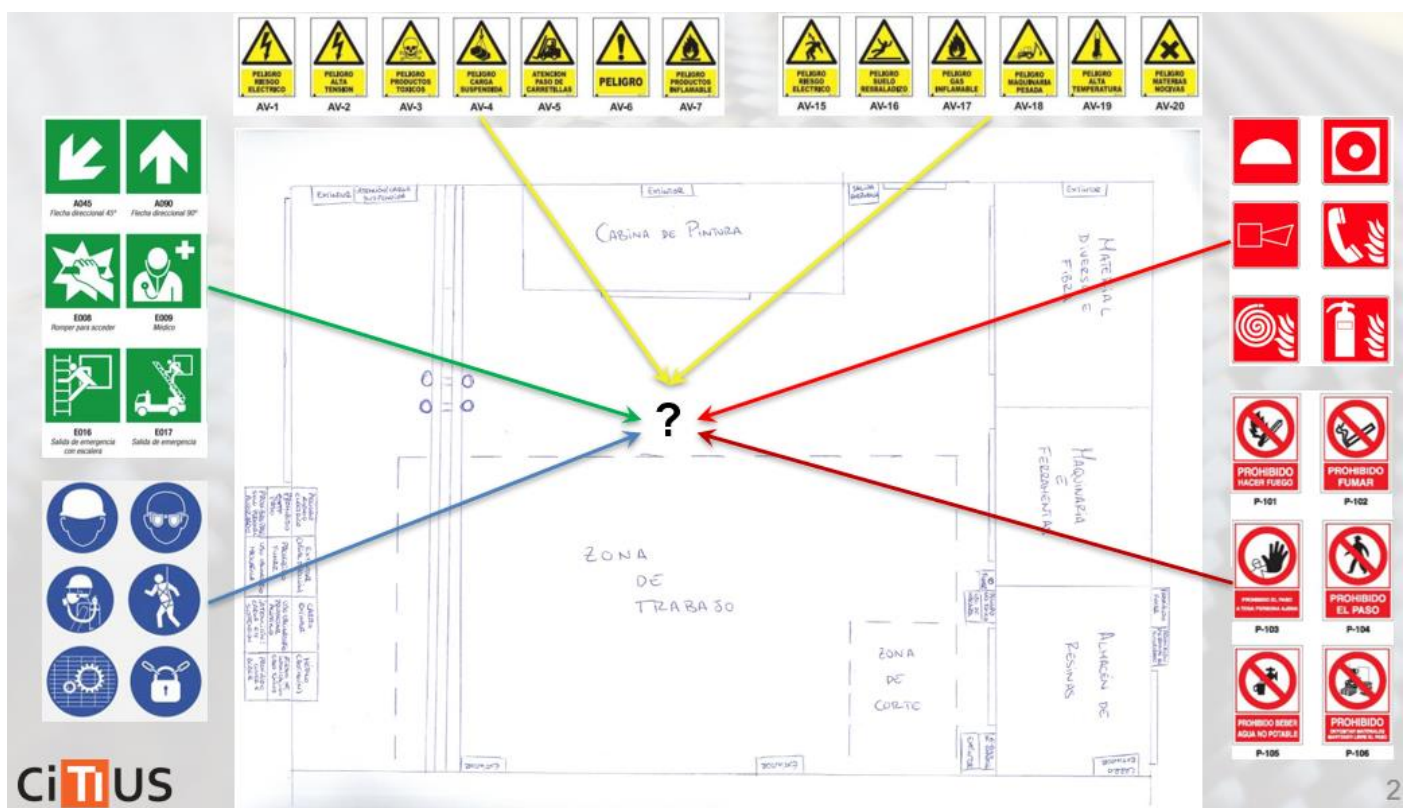
The **DITMEP** project receives funding under the [ERASMUS + programme](#) of the European Union.

Project status

The project started by describing the training contents that will be deployed in a virtual learning space, to promote the blended-learning approach. A programme on prevention of occupational hazards in composite manufacturing has been developed. The overall course is divided into two parts, the blocks “general risks” and “specific risks”. These two blocks are in turn divided into individual modules. The syllabus of all modules can be viewed on our homepage in the "[Intellectual Output](#)" area. The syllabus contain for the individual modules content, objectives, learning outcomes, evaluation method for each learning outcome, materials and activity proposals. Since we focus on digital learning tools in our **DITMEP** project, the consortium is at present addressing the gamification of the program, including interactive activities in all modules, and developing two scenarios of augmented reality, supported with smartphones.

The entire learning content should be made available to the students on a Moodle platform. The corresponding structure will be created as part of this project. The "gamification" is implemented in Moodle via the plugins H5P and Level up!. Augmented Reality (AR) activities are to be developed for the two modules “Signalization of virtual spaces” and “Emergency / Dangerous situations”.

USC has already started development for the “Signalization of virtual spaces” module.



In this module, the teacher will be able to load an individual map of a production facility and select the various areas of the workshop. A code is then created for each area and can be seen on the map. With the corresponding app, the students will be invited to select with the appropriate signs and instructions belonging to the respective area from a list. In this way, the various signs can be learned through play. An initial development can be viewed on our homepage.

Project meetings

KickOff Meeting, online, 26 May 2021

The first transnational project meeting was planned at RSC in Husum. Due to Covid19, the meeting could not take place in person, but had to be held as an online meeting. Although on-line meetings are not the optimal format for the start of the project, which would benefit from a face-to-face interaction, the meeting allowed the start of the activity, and a basic understanding of the interactions that should be established to reach the expected outputs.

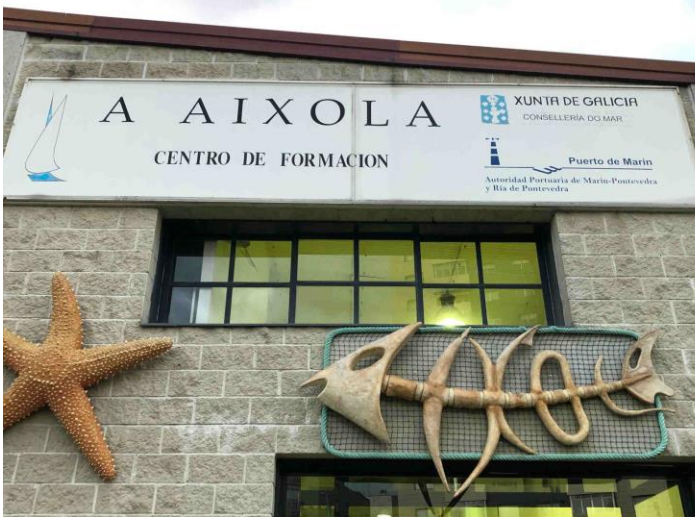
First of all, the meeting discussed the administrative and financial matters that each project partner has to consider during the project. In addition, the topic of dissemination and exploitation was also discussed, as this must also be contributed by all project partners and plays an important role in the evaluation of the project.

Finally, the individual Intellectual Outputs with the associated tasks of the project partners were discussed.

2nd TPM, Vigo, 23 and 24 November 2021

Our second TPM took place on November 23rd and 24th, 2021 in Vigo, Spain. Despite the continuing corona pandemic, all project partners were able to take part in the meeting. The meeting took place at our project partner CETMAR premises.

At the beginning of our meeting, the current status of our project was discussed at the administrative level. Above all, this includes the overarching timeline and the associated work packages and activities. Then addressed the adaptation of training contents in labour risk prevention courses to an online e-learning space with digital blended-learning. The need to adapt the modules to different country specific regulation was discussed. The syllabus that had been drawn up to that point were discussed among the project partners so that they can now be finalized. Partners also discussed the design of ICT tools for innovative blended learning methods in risk prevention training, as the augmented reality exercises. USC presented the first developments and discussed them among the project partners. In the afternoon we visited the Aixola Training Center, (<http://aixola.cetmar.org>) which offers courses in composite manufacturing, and is contributing to the development of the DITMEP materials. Aixola is a training Centre of the Galician Regional Ministry of the Sea, located in the harbour installations of Marin and Ría de Pontevedra. It offers VET (Vocational Education and Training) in the fields of timber, composites, electricity and mechanics on-board, sails, pneumatic boats and net construction. All training actions have a practical orientation focusing on work-based learning by developing projects arising from real needs. The training center emulates the work of companies with a teacher-tutor and a group of apprentices in each specialty. The theoretical training required for the development of specialties is mostly integrated into practice.



At the beginning of the second day of our meeting, we talked about the tasks still to be carried out in our project. This includes designing of the use cases for testing the new risk prevention digital trainings modules and the guidelines for implementation of the blended learning in risk prevention courses. Our meeting ended with the financial part and dissemination issues. Overall, all project partners found our meeting very productive, so we are sure that all partners now have the same understanding of the project goals and the associated tasks.

Project consortium

Universities and training centres from three countries come together, to improve manufacturing learning, in particular Risk Prevention courses, generating digital capabilities on the methodology (through e-learning, gamification and augmented reality experiences) for educators and trainees.

Renewable Skills & Consultant GmbH (RSC), Germany, project leader



Renewable Skills & Consultant GmbH (RSC) is the pioneer of wind energy training with more than 19 years of experience on the market. The RSC network of licensed training providers is the only truly global training network in the field of wind energy training with more than 30 partners on 5 continents. The RSC standard is the world's leading qualification standard for wind turbine technicians and is considered as the benchmark for training excellence in the industry.

Instituto de Soldadura e Qualidade (ISQ), Portugal



ISQ is a private, non-profit and independent technological institution founded in 1965, currently running operations in more than 40 countries across the world (EU, Eastern Europe, Africa, Americas and Asia), offering its experience in technical inspections, technical assistance for engineering projects, consultancy services and Human Capital development - including Lifelong Learning and VET training, supported by transversal research and development activities and by 17 accredited laboratories (e.g.: chemical, bio and agro testing, non-destructive testing, Aerospace, materials and nano technology, electronics, additive manufacturing, IoT and IT etc.). For that propose, ISQ conducts also a Research and Innovation activity (R&Di), promoting projects with national and international partners, both from the public and private sector, aiming at a continuous product, services and process development.

Centro Tecnológico del Mar - Fundación, Spain



CETMAR is a foundation established in 2001 by the Ministry of Science and Technology and the Galician Government. Its scope extends at national, European and international level, being beneficiaries of its activity all the public and private sectors related to the sea and its resources.

CETMAR fosters the coordination of marine research and technology organizations in the region of Galicia, boosting competitiveness of marine and maritime sectors and promoting activities that range from education and training, scientific research and technological development to innovation management. Therefore acting as an interim organization between research and education and training organisations, administrations and industry.

Universidade de Santiago de Compostela (USC), Spain



The University of Santiago de Compostela (USC) is participating in this Project through CiTIUS, the Research Centre in Intelligent Technologies.

CiTIUS is part of the Singular Research Centres Network of the Campus Vida at the University of Santiago de Compostela (USC), which has been recognized as International Campus of Excellence in 2009 by the Spanish Ministry of Education and Science. Since December 2019, CiTIUS is one of the only eight entities credited in the Galician Regional System, in the north-west of Spain, as research centre. This certifies CiTIUS as one of the leaders of the regional research system and the only one focused on Intelligent Technologies.

SGS Tecnos SA, Spain



SGS TECNOS is a leader in certification and regulation. It's also a renowned training company with long experience in vocational training in the energy sector. They work to achieve an improvement in the energy performance of its clients and partners. SGS TECNOS belongs to SGS Group, a multinational company with presence in more than 100 countries and more than 90.000 employees worldwide.

Dissemination and Exploitation of project results

On the project website www.ditmep.eu, all results will be published. There will be also published 4 newsletters during the project. If you are interested in this newsletters, you can register in our database through the link on our website.

Finally the project is located on LinkedIn. Follow „[DITMEP Erasmus+ Project](#) “ and you will be informed about the current project status.

Web: www.ditmep.eu | Mail: info@ditmep.eu | LinkedIn: [DITMEP Erasmus+ Project](#)