A DIGITAL TRAINERS TOOLBOX TO HELP CRANE OPERATORS UPDATE THEIR SKILLS FOR INDUSTRY 4.0 ENVIRONMENTS

CRANE 4.0 aims to up-skill and re-skill the European construction labour force with new skills in order to meet the demand of the labour market for new digital competences.

Applying Virtual Reality (VR) in vocational training and in on-the-job situations involving complex tasks facilitates the visualisation of the activities to be performed, even the riskiest ones, and the transmission of knowledge-intensive skills leading to an increased training quality.

The project aims to improve work-based and initial/continuous learning of crane operators to adapt their skills to the Industry 4.0 requirements. It will do so through the development of a Virtual Reality (VR) application downloadable from partners’ websites, from the project website and from the main platforms for application download.

The innovative use of the VR in the training of crane operators is an added value for all those public and private VET providers who want to offer upskilling pathways to their educators and training.

CRANE 4.0 will develop three main outputs:

- Blended pilot testing - 55 crane operators trained and a Procedural Manual for the implementation of the VR-Labs.

The gap between conventional teaching methods and the everyday work life of trainees, that is shaped by information technologies, is growing and vocational training needs to cope with the pace of digital advancements. CRANE 4.0 develops innovative training paths and methods for teaching, learning and assessing the learning outcomes, through the use of Virtual Reality thus supporting the educators and learners in using digital technologies in creative, collaborative and efficient ways.

This project has been funded with support from the European Commission.
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.
On July 2nd and 3rd, the project partners of the CRANE 4.0 project implemented the 2nd Transnational Meeting. The meeting was originally planned to take place in Greece, but due to the Covid-19 crisis the meeting was held via a web conference.

The conference started with an agenda review by SGS, the coordinator of the project. Then SGS and IBOXC presented the status of IO1: Crane operators 4.0 Curriculum Handbook. IBOX presented the results of the Transnational Report and SGS’s proposal for the course plan: Training skills required for Crane Operators.

After a discussion on the proposed course plan, the modules to be developed were distributed to the project partners. The partners agreed to implement internal calls with SQLearn, the partner in charge for the development of the Virtual Reality tool, so as to develop the modules from the Virtual reality approach.

Besides the information gathered from the Transnational Report, each partner agreed to send a summarized analysis of their country report including the a) Main training needs, b) Effectiveness of the actual training offer perception, c) Most effective training delivery methods, d) Main obstacles preventing access to training, e) Most relevant competences for a crane operator, f) In which area the crane operators need more training or better training offer, g) Among the emerging skills, which are the most relevant.

The meeting continued with SQLearn’s presentation on IO2: Development of the CRANE 4.0 Virtual Reality Application and the next steps to be taken by the consortium. The partners agreed to create a specific scenario for each module and in the framework of this preparation SQLearn is going to prepare a template for these scenarios and assist the partners of filling it with the required material.

The first day of the meeting ended with the project’s dissemination strategy reviewed by SIAV, the dissemination leader. SIAV presented all the activities carried out so far and the actions planned to be taken in the future by all partners so as to keep the interested parties of the CRANE project informed on its actions and progress.

On the second day of the meeting, SGS explained the strategy for the financial management of the project. Following the presentation of the project evaluation plan, the consortium reviewed and summarized its next actions.

The 3rd Transnational Meeting is planned to take place in Bucharest, in February 2021. Until then we will keep you informed of all the advances of the CRANE 4.0 project through the project’s website www.erasmuscrane40.com or via our social media pages on Twitter and LinkedIn.
The next step for the Crane 4.0 partners is the development of the educational Virtual Reality tool in accordance with IO2: Development of the CRANE 4.0 Virtual Reality Application of the project. As a result of the questionnaires and in-depth interviews already carried out by the project partners to relative parties from the construction industry, the educational modules to be developed in the framework of the project have almost been formed.

Each partner will be in charge of developing one module or part of the modules, according to the job analysis conducted and the partner know-how. SQLearn, the technological expert of the consortium, will assist the project partners during the development of each module by offering consultancy and guidance on the context and elements needed so as to transform the modules into VR scenarios. In this context the partner has prepared a template to be filled by the partners with the necessary information.

The development of the Virtual Reality Application is one of the main outputs of the CRANE 4.0 project. The app will be targeted at private and public training centers, construction enterprises, contractors and their professional organizations, construction workers’ trade unions and other organizations (chambers of industry, commerce and crafts, education and training providers, etc.). The VR app will be an innovative tool for these beneficiaries who usually don't dispose of this kind of training support. The VR app thus allows installing an engaging and forward-looking training facilitator that will make the teaching and learning experience fun and attractive while optimizing training and training costs (both in terms of personnel and equipment) for those interested entities willing to adopt the tool.

Upon the project’s completion, the educational tool to be developed will be downloadable for any interested party of the construction industry through the website of the project:

WWW.ERASMUSCRANE40.COM