ITALIAN NATIONAL INFODAY

28th November 2019

Introduction and agenda

Launched in December 2017, SIMULWIND is an ambitious European funded project aiming at developing a maintenance simulator to teach about the main maintenance activities in the wind turbines and more specifically in the nacelle, even before accessing it.

This project follows the wind industry priority for a digital transformation of the sector. It replies to and answers some of the challenges that currently impact the wind farms operation: the need of skilled personnel and new operational modes based on the project useful life extension and the reduction of variable costs.

The agenda of the National Presentation curated By ANEV was structured in two main parts divided by a coffee break, one presenting the SIMULWIND project introducing its context and results and the other presenting the virtual reality tool developed and testing sessions.

14:00h Registration of the participant.
14:15h Simulwind project presentation: objectives and experiences acquired.
15:15h Coffee break.
15:30h Simulwind virtual reality simulation tool demonstration and SimulWind tool beta testing by the participants.
17:00h end of the event

Evaluation

At the end of the meeting each attendee (of a total of 35 participants) was given an evaluation questionnaire that presented some statements about the project and the venue in order to evaluate the key aspect of the project and the impact it may have in the training of the wind energy sector workers. The questionnaire has been filled in by 31 of 35 participants.

It was remarkable the good acceptance of the final version of the simulator by the audience and the enriching debate that took place during the meeting regarding the use of digital tools in training. Thanks to the great variety of attendees to the meeting and the presence of some key institutions in health and safety training in the Spanish Wind Energy Sector the debate reached clear conclusions.

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In Figure 1-3 are presented the results obtained in the evaluation questionnaire of the project. As it can be all the aspects were evaluated near 5 which was the maximum score.

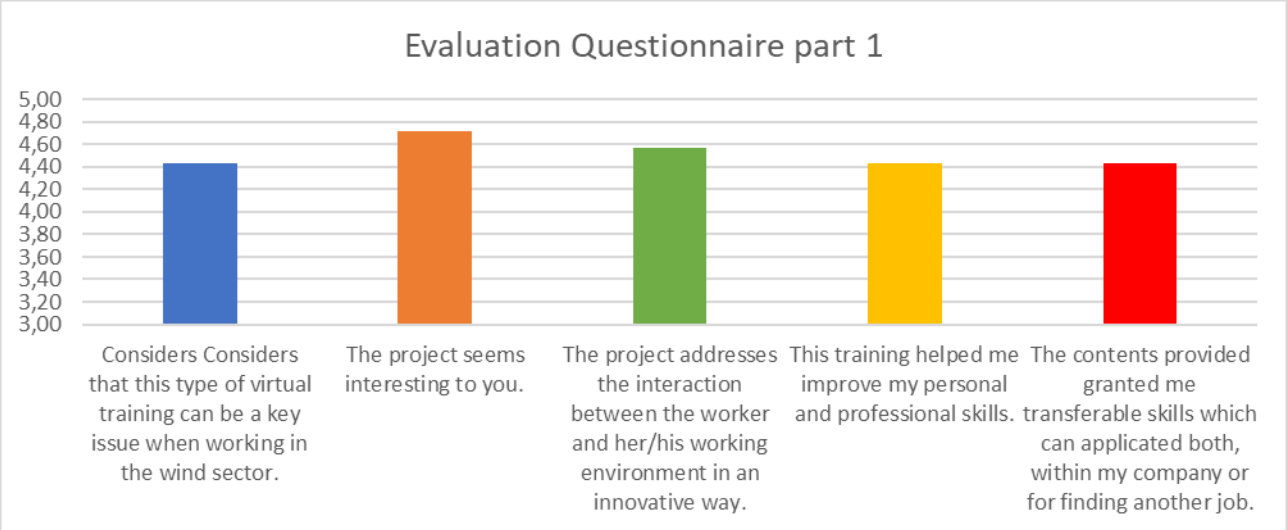

Figure 1. ANEV Multiplier Event Evaluation results (average score from 1 to 5 - N=31)

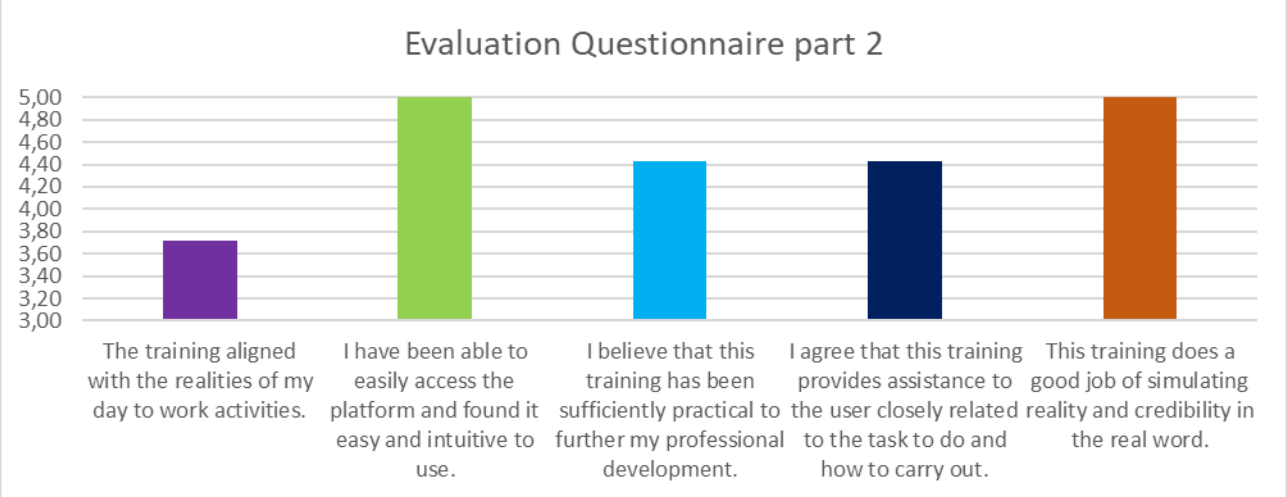

Figure 2. ANEV Multiplier Event Evaluation results (average score from 1 to 5 - N=31)

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Figure 3. ANEV Multiplier Event Evaluation results (average score - N=31)

The majority of the participants considered that this type of virtual training is really an innovation in the wind sector, specially due to its open and public character, and it would be a key issue for the future workers of the wind energy sector, as it would present a real working environment before accessing a real wind farm.

Conclusions

Virtual reality still has a long way to go before it is completely included as a normal part of training in the wind energy sector and in others, but it offers a world of possibilities. The VR simulator developed in Simulwind is a customizable and adaptable tool that can be altered to the need of the training and the type of wind turbine and it results easy to use and realistic to an expert audience.

Many companies are considering the development of similar tools to train their workers, but the great investment needed to do so normally make the companies draw back and continue with more traditional ways of training their workers. Other realities are trying to couple different budget in those initiatives in a way to make the most from this versatile technology instrument. For example, many companies are using VR during exhibitions as an attraction for visitors and also an immersive way to show their work environment with a great impact.

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Simulwind is an innovative tool that would be public for some years and it would help those companies in the sector to get the feel of virtual reality and have a total flexible tool at their disposal.

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