

Press Release

Vienna, 19.06.2023

MED1STMR TRAINING FOR COMPLEX EMERGENCIES: IN PRACTICE THROUGHOUT EUROPE

Starting in July, emergency services across Europe will test the new Mixed Reality (MR) training system developed in the EU Horizon 2020 research project MED1stMR, led by the AIT Center for Technology Experience.

Vienna (AIT): The prototype of the mixed reality training system MED1stMR, which was developed for medical staff and trainers, is ready. Now, in the third year of the MED1stMR project, it is time to test and evaluate the new training system in practice with users and trainers.

Complex emergency situations as a challenge

Aeroplane crashes, train accidents, bus accidents, earthquakes, terrorist attacks or football stadium disasters - complex emergency situations with a high number of injured people are increasingly common. In such situations, medical first aiders have to provide medical assistance under extreme stress, make quick decisions that decide between life and death (triage) and take over the management and communication on site. The MED1stMR solution serves to prepare the emergency services in the best possible way and to train complex scenarios in advance.

Innovative Mixed Reality Training

MED1stMR combines innovative technologies with well-known medical emergency equipment from real life (such as resuscitation bags, resuscitation aids, tourniquets). Mixed reality (MR) means that virtual scenarios are linked and used with real objects in real time. The emergency forces train complex emergency scenarios with the help of VR headsets. Real training manikins are used in a tried and tested manner - in the case of MED1stMR, these are high-tech simulation manikins that were developed in the project according to the requirements of the trainers. This allows a wide range of injuries to be simulated and trained very realistically.

"The project has for the first time brought together research institutions, medical emergency organisations and technical corporate partners at European level for the development of an MR training system that can be used internationally. The AIT contributes many years of expertise from user experience and behavioural research as well as from the field of XR (extended reality). The project also includes the measurement of biosignals, stress measurement and an AI-based scenario control tool - all in all, we have created a groundbreaking and realistic training option together with all partners," says project manager Helmut Schrom-Feiertag from the AIT Center for Technology Experience.

MED1stMR follows a multidisciplinary, agile and end-user-focused approach, covering the needs of seven different international medical response organisations/training centres from all over Europe:

In addition to the Johanniter from Austria and Johanniter International (Belgium), SERMAS - SUMMA (Spain), the Hellenic Rescue Team (Greece), Heidelberg University Hospital (Germany), the Campus Vesta Emergency Training Centre (Belgium) and the Jämtland Härjedalen Region (Sweden) are also involved in MED1stMR. In total, 18 partners from nine countries are involved in MED1stMR.

Field tests: kick-off in Vienna in July

The last third of the project will focus on a total of six field tests in the second half of 2023 until the beginning of 2024, in which around 200 emergency paramedics throughout Europe will participate. The practical test weeks will start at the end of July at the Johanniter training centre in Vienna. The large-scale scenario simulation trainings – for locations and dates see: www.med1stmr.eu/field-trials – will provide insights into the suitability of the mixed reality training solution. In addition, data is collected for the validation of the scientific model and for further development. A team of experienced trainers from the project will train the local trainers according to the principle of "train the trainer" in order to pass on the acquired knowledge and to ensure the application of the proven training methods. Four people per group will each train two different mass casualty scenarios using MED1stMR technology. All training data will be recorded and can be clearly displayed in a dashboard for trainers and trainees. This creates completely new possibilities for training and debriefing.

Goals of the practical tests

- Evaluation of the developed technology under realistic conditions (one-week training with three to five training groups per day)
- Feedback from end-users on their experiences and technology acceptance as input for further development (all participants are active emergency paramedics or work in medical response organisations in their countries).
- Scientific studies (stress, performance, cognitive state, team behaviour, etc.)
- Gain attention on the topic of virtual training in mixed reality environment for medical responders to improve performance and resilience in disaster situations among decision makers.

The project from the perspective of the emergency services

What is special about this comprehensive project is that, in the spirit of co-creation, medical response organisations have played a decisive role in shaping the solution. "It is great to have been involved in the development of MED1stMR from the very beginning. We can use the MED1stMR training system to train large, complex emergency scenarios and prepare ourselves in the best possible way. The greatest advantages of mixed reality training for us are variation and individualisation, the possibility of repeating each training session as often as desired and, of course, the possibility of analysis after the training session," emphasises Daniela Weismeyer-Sammer from Johanniter Research Austria. She is already looking to the future: "We see the MED1stMR project as the starting signal to be able to prepare emergency services even better for medical emergencies in the future with the help of new technologies such as Mixed Reality and Extended Reality. The cooperation with other European emergency organisations and the scientific and technical project partners is also very valuable for us."

MED1stMR was funded by Horizon 2020 of the European Union for Research and Innovation under grant agreement no. 101021775. The project runs until May 2024.

Project website: www.med1stmr.eu

Project partner: <https://www.med1stmr.eu/consortium/>

Video: https://www.youtube.com/watch?v=TIC_E2jtTz8

MED1stMR Practice Training at Johanniter Austria

WHEN: 24 to 28 July 2023

WHERE: 1210 Vienna, Josef-Brazdovics Straße 5, 1210 Vienna

Information and registration: <https://www.med1stmr.eu/field-trials>

Media Days on Wed, 26.7. and Thu, 27.7.2023

Registration for media/press representatives: christine.wahlmueller-schiller@ait.ac.at

More Information:

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