



Case study

# Royal School of Military Engineering modernises learning with MX Reality

Drain the Filter Vessel



# Background

The Royal School of Military Engineering (RSME) is the main training establishment for the British Army's Royal Engineers. RSME recognised that it needed a change in approach to aspects of its training to help accelerate learning, reduce costs and alleviate Covid restrictions.

Innovative technology was needed for numerous challenges which included: - the need to enhance the learning experience for its engineers by replicating 'real-life' scenarios; providing support with Covid restrictions on access to training; reducing training and material costs and ensuring that its learning materials were easily accessible across a range of devices.



RSME equipment



3D wireframe of the site

## Challenges

RSME approached MX Reality, a provider of advanced technology-enabled solutions to deliver interactive self-learning scenarios for its Combat Water Supply System (CWSS) that matched these aims. The training would include equipment familiarisation, guidance on how to install the system and support with fault diagnostics and equipment maintenance.

# Solution

MX Reality developed interactive Virtual Environment (VE) learning scenarios with its platform mXlearn, to provide engineers with critical knowledge about the CWSS through a series of tasks. These tasks included how to unpack the equipment; how to assess the environment prior to installation; how to install the equipment and most importantly, help with learning to observe, diagnose and repair faults.

As part of this project, MX Reality also developed an Augmented Reality (AR) enabled app to provide engineers with 'real-time' field support and guidance outside the classroom with the actual equipment. This meant engineers could interact with real and 3D equipment overlays so they could better visualise parts, processes and workflows all on their smartphones and tablets.

Engineers could then follow visual step-by-step guidance on how to repair or replace components with 3D overlays, troubleshooting faults and completing inspections accurately and consistently.

Dr Majid Al-Kader, Founder and Chief Executive Officer, MX Reality, explains: "Our immersive platform mXlearn and AR-enabled app mXassist have together provided a step-change in how engineers learn and perform fault-finding and maintenance tasks.



Demo video of the water equipment training in VR



# Benefits

Dr Majid Al-Kader, Founder and Chief Executive Officer, MX Reality, explains:

“

Our realistic Virtual Environment scenarios will improve worker skills, competence and knowledge while saving the RSME considerable time and cost in learning delivery as these solutions are easily accessed online, while the app provides ‘real-time’ visual guidance in the field, accelerating learning for engineers..

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These state-of-the-art solutions have been widely welcomed by RSME and have had a great response from the engineers. Work has since begun on additional content. They are currently being used by over 500 military engineers, providing a new and unique learning experience, driving engineer engagement and providing an effective way of delivering learning outside a traditional classroom environment, while alleviating logistical issues due to Covid-19.



Demo video of the VR scenario





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