



Case study

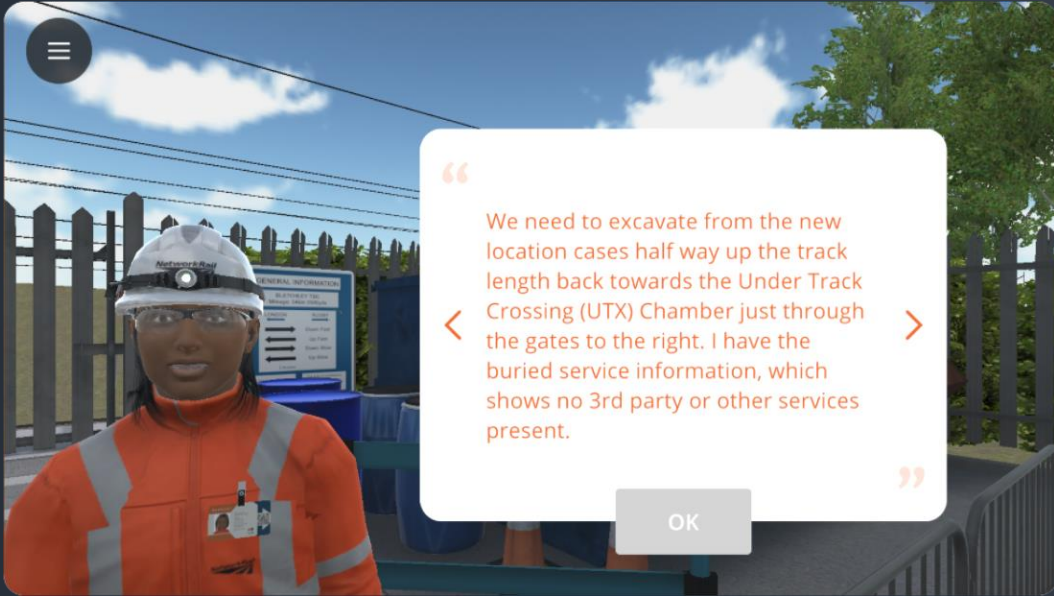
VR learning scenarios help ensure track safety for Network Rail

Background

Network Rail wanted to explore the use of Virtual Reality (VR) technology as an approach to track safety learning for its practicality, innovation, level of realism and training value by commissioning a pilot project with MX Reality, a leading provider of advanced technology-enabled solutions.



3D environment developed for VR



Interactive 3D characters

Challenges

The aim was to be innovative but practical, to enhance user experience and engagement, provide learning without Covid-19 restrictions, training value and save costs on its delivery and be realistic to both the business and job roles including safety managers and inspectors.

MX Reality worked closely with Network Rail to develop with its immersive learning platform mXlearn, a set of Virtual Environment (VE) and Virtual Reality (VR) scenarios to deliver an interactive and engaging learning solution.

A key part of Network Rail is its commitment to safety so ensuring that its employees that work trackside are safe is paramount. Network Rail required a learning solution that allowed employees to familiarise themselves with on-site working practices and any hazards that they may come across and to understand the best course of action.

Solution

The decision was taken to provide half of the scenarios in a Virtual Environment format that would be accessible via a browser on a desktop or laptop and the other half would be delivered in a fully immersive, Virtual Reality format accessible via an Oculus Quest VR headset, allowing Network Rail to explore the benefits of both approaches.

MX Reality delivered fully interactive 3D games-based, virtual environment scenarios for the trial. These scenarios were based on realistic 3D environments where the learner can both learn and be assessed through a series of tasks, questions, animations, character conversations and more.

Some of the scenarios were set at night and others in the day, reflecting realistic working conditions for track workers. Once the scenario is completed, detailed and constructive feedback is given with guidance for further learning.



Demo video of track safety scenario 2

Benefits



This Virtual Reality and Virtual Environment solution has been rolled out across Network Rail's workforce. It has given Network Rail a practical solution with which to make better-informed decisions on how to shape its learning provision and approach to supporting its engineering teams in the future.

It has provided Network Rail with a platform to assess the use of Virtual Reality as a learning solution, provided learning in a safe environment without the logistical issues due to Covid-19 and access to physical sites.

They can gain access to particular KPI's around users' approach to track safety and give employees the knowledge and understanding of potential safety issues when working trackside.

Hannah Bailey, Head of Business Development, MX Reality, said:

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The VR experiences built with our state-of-the-art platform mXlearn were a perfect fit for Network Rail as they created a safe, realistic and controlled environment in which to learn. They replicated 'real-life' work scenarios and introduce risks to help workers feel empowered and able to perform their roles safely and effectively when working track-side.

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Demo video of track safety scenario 1



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