Case Study: XRSim Training Platform

OVERVIEW

As the matter of fact, emergency response acts as the final safeguard against severe safety incidents, facing four primary challenges: a lack of real-life scenarios, high-risk factors, complex drill organization, and significant gaps between training and practical application. Personnel often gain valuable rescue experience only by risking their lives in real emergencies. Additionally, many new employees may spend years in the field without ever participating in an actual rescue operation.

SOLUTIONS

Given the challenges mentioned, Vertechs has developed enhanced training solutions for relevant institutions and personnel. These solutions are built around three core technologies, all tailored to meet the practical need for multi-user collaboration in the same environment:

- High-precision Real-time Rendering
- Virtual Reality Simulation
- Precise Machine Remote Controller

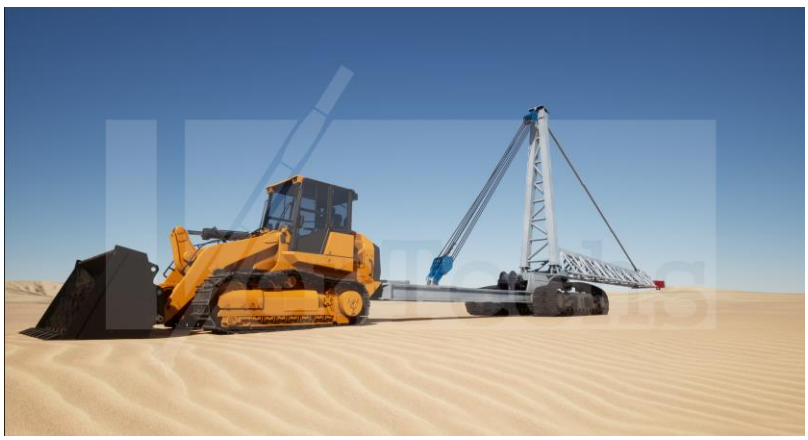
BENEFITS

- Enhanced Engagement
- Personalized Learning
- Risk-free Learning
- Cost and Time Efficiency

APPLICATIONS

- **High-precision Real-time Rendering**

  With the game engine, XRSim Training Platform can achieve highly realistic rescue scenarios, including terrains, environments, well sites, machinery, and personnel simulations.



- **Virtual Reality Simulation**

  To enhance immersion and interaction between the environment and users, the Valve Index headset and controllers are employed, allowing for real-time engagement with the scene.

- **Precise Machine Remote Controller**

  To closely replicate real-world machine operations, XRSim Training Platform has designed a 1:1 replica of a machine remote control system. Users can operate real remote controller to manage virtual machines such as cranes and bulldozers in the virtual reality environment, offering a more authentic experience.

- **Multi-user Collaboration**

  XRSim Training Platform supports up to 16 participants in the same environment, allowing free interaction with tools, functional objects, and machines. In these collaborative scenarios, characters and machines are affected by environmental factors, such as temperature engine to provide realistic affection of environment. However, players can use the water cannon to cool down large areas, enhancing the realism of team interactions and providing a more authentic collaborative experience.