Case Study

VR Construction Safety Training

VR Construction Safety Training Project Overview

Another Reality Studio created a fully immersive virtual reality (VR) environment to reduce workplace injuries and deaths for a Fortune 500 company. Employees enter and explore a detailed virtual simulation of an actual customer construction site to test users' attention to the environment in a fun and memorable way. A non-playable character (NPC) guides trainees through each safety scenario with nine safety rules violations that can be identified in the environment and scored for testing, performance, and continued play.

Key Virtual Reality Features

- Digital twin of a realistic customer site for an accurate representation of equipment, functionality, and layout to best train workers
- Watch workers perform tasks in virtual reality to spot hazards, driver safety, accidents to select unique safety rule violations in real time
- View the correct way to complete tasks
- Site simulates a typical construction site with interactive scenarios for excavation, pipe replacement, pigging, truck driving, drill site, and hydro testing
- Read virtual work permits and authorized signatures to ensure they are correct

Challenges and Core Considerations to VR Construction Training

- Another Reality Studio's product manager and product designer lead a workshop to extract specifications, begin to understand client pain points, and design the project with script flow
- Client training was boring and was not engaging. Replaced PowerPoints and instruction booklets with a fully immersive experience
- Creating large realistic scene requires 3D modeling an optimization to keep visual fidelity in virtual reality

Impact: The ARS Solution

- Created training in VR to make safety training more engaging and memorable
- Reduce the need to be around potential hazards but allowed for muscle memory training and real world experiences
- Gamified scoring to evaluate trainees and set baseline for improvement

Case Study: 22003