Digital learning solutions for industry

Our business – VR training solutions for industry

Established in 2004, our team of 85 employees at Simulated Training Solutions (sts3D) pride ourselves for developing innovative, client-focused training solutions for industry, with superior service and support.

Over the past 18 years we have established 10 VR Learning Centres in South Africa at mining clients such as Anglo American Platinum, Impala Platinum, Sibanye Stillwater, Glencore Alloys, Sasol and Murray and Roberts Cementation – with STS facilitators actively presenting training to some **75 000** mine employees per year.

Extensive international exposure

We have considerable international safety and training exposure, with clients such as Glencore International, the ICMM, Teck Resources in Canada, Koniambo Nickel in New Caledonia, Kazzinc in Kazakhstan, and Debswana in Botswana.

Simulation is the name of our game.

We use simulation to create immersive, interactive and emotionally engaging training solutions. We apply various digital techniques - animation, graphics, gaming simulation, AI, cloud computing, and VR and Mixed Reality - to simulate hazards, incidents, safety protocols, life-like production environments, process flows, machinery and equipment, as well as maintenance and production methods for clients in the mining, metals and energy industries.

From simulation in VR, to VR simulators

We specialise in the visualisation of data. Having mastered the Unity game engine over the past 15 years, we are able to generate interactive content faster than human perception, creating digital twins to curate, organize and display multiple sources of data (both models and information – such as input from sensors) as *lifelike, interactive visualizations.*

Using VR and AI to create digital twins for mining and industry

We use Unity to create digital twins for industry – ie virtual representations of the movements (traffic, ventilation, or hydraulic flow), forces (pneumatic pressure, horizontal and vertical stresses in rock, vibration on equipment, pressure on drilling rods) and interactions (proximity, sliding, falling from height) that people and assets can undergo in the physical world.

This let employees engage with dynamic content – content which is 3-dimensional and responsive to manipulation in real-time (zoom in and out, handle and turn around or upside down, re-position, etc); content reflected in mixed reality vehicle simulators, barring applications, blast walls and stopes; interactive hydraulic and electrical fault-finding schematics; and mine cycle, ventilation, and fire and escape simulations.