



Simulanis Tech Capability Presentation

Presented by
Mr Punit Kumar,
COO, Simulanis
www.simulanis.uk

Accelerated by



Case Study at



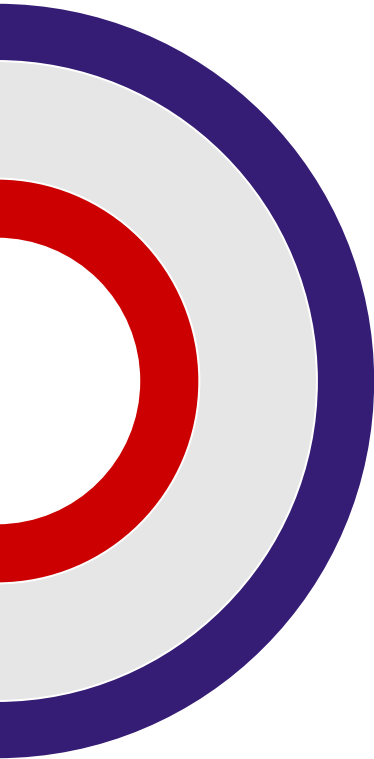
Building with

Stanford | Seed
Stanford Institute for Innovation
in Developing Economies

Winner of



Presentation Structure

- 
1. Simulanis Technology Prowess
 2. Simulanis Use-Case Breadth
 3. Simulanis Use-Cases: Curated
 4. Simulanis Case Studies
 5. Simulanis Deployment Philosophy and Simulanis Uno
 6. Details of Simulanis Generic XR Training Modules

**Simulanis
Technology
Prowess**

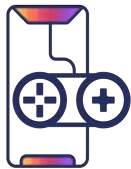
01

Introducing Simulanis Capabilities

Our XR Deep-Tech Stack, built over a decade, leverages a gamut of XR technologies shown below



Desktop
Simulation



Mobile
Gamification



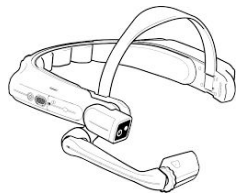
Augmented
Reality



Virtual
Reality



Mixed
Reality



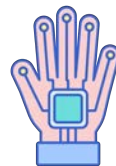
Assisted
Reality



360°
Videos



4D-IoT Smart
Simulators



Haptic XR
Hardware



Deep
Analytics

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Desktop Simulation

Easy to scale, technology which works on a basic desktop without the need for a high-end machine



- ❑ Simple controls using your mouse and keyboard.
- ❑ Powered by our proprietary AI-Analytics SDK (SANALEXA) to capture granular in-game data.
- ❑ Basic operation of the equipment.
- ❑ Cover the detailed explanation of the processes involved.
- ❑ Capture each and every details of the critical aspects of the equipment processes.

Desktop Simulation

Easy to scale, technology which works on a basic desktop without the need for a high-end machine



Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Understanding Mobile Simulation

Simulating SOPs and intertwining the two worlds on a simple, easy-to-use MOBILE interface.



Mobile Simulation

Interactive and engaging way of learning helps users in retaining knowledge better. Runs on mobile, making things easily accessible and scalable.

Scenario based, Interactive and engaging way of learning helps users in retaining knowledge better.

Runs on mobiles, making things easily accessible *in your pockets*, and scalable.

Understanding Mobile Simulation

Step-by-step procedure to learn about fire safety and protocols needed to be followed.



[Click To Play](#)

Scenario based, interactive storytelling on finding faults and solving problems interactively.



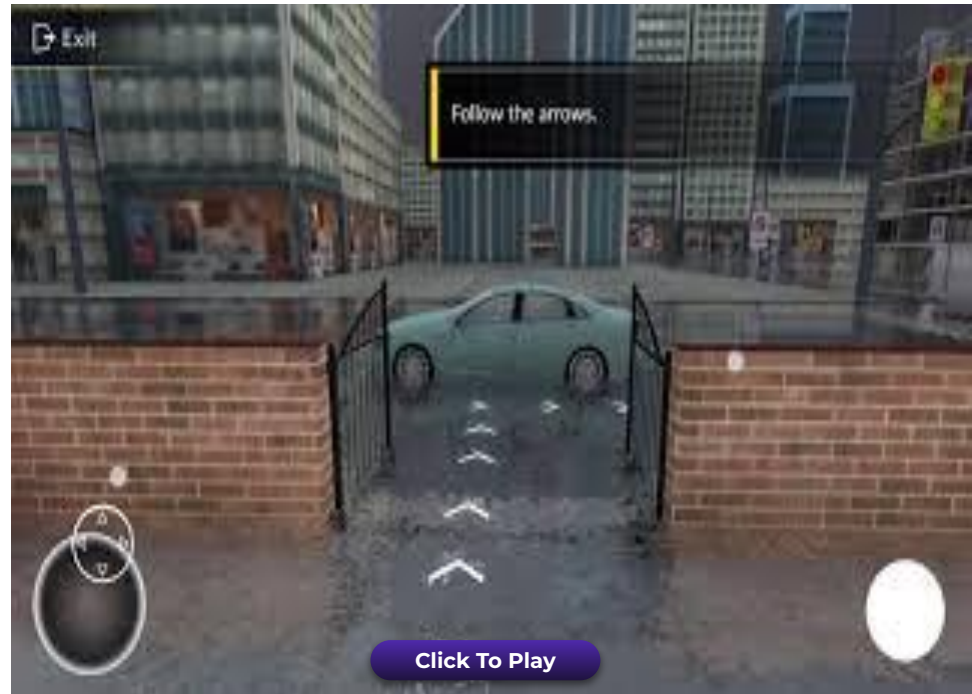
[Click To Play](#)

Understanding Mobile Simulation

General safety cases that includes safety scenarios around electrical appliances.



Disaster management during earthquake and flood-like situations.



Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Understanding Augmented Reality

Layering Digital Media with Reality - Intertwining the two worlds on a MOBILE interface

Sterlite Power

**TECHNOLOGY
TACKLING
TOUGHEST
CHALLENGES**

Experience how Sterlite uses technology to address the toughest challenges of energy delivery.

HELICRANE EXPERIENCE ▶

DRONE EXPERIENCE ▶

Click To Play

Markerless AR

We simply use the space around us to create a 'virtual boundary' within which the digital output comes to life.

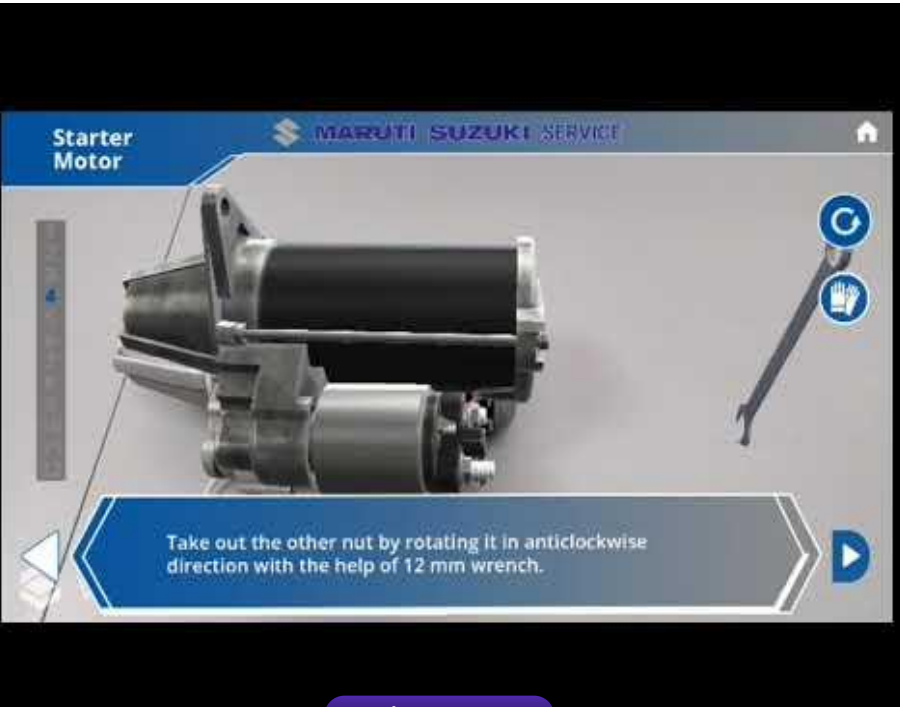
Once the ground planes are tracked, the digital output can be triggered by the user through a single tap on the mobile interface.

This is referred to as 'markerless AR' when there is no need to recognize a specific image through the camera of the mobile device.

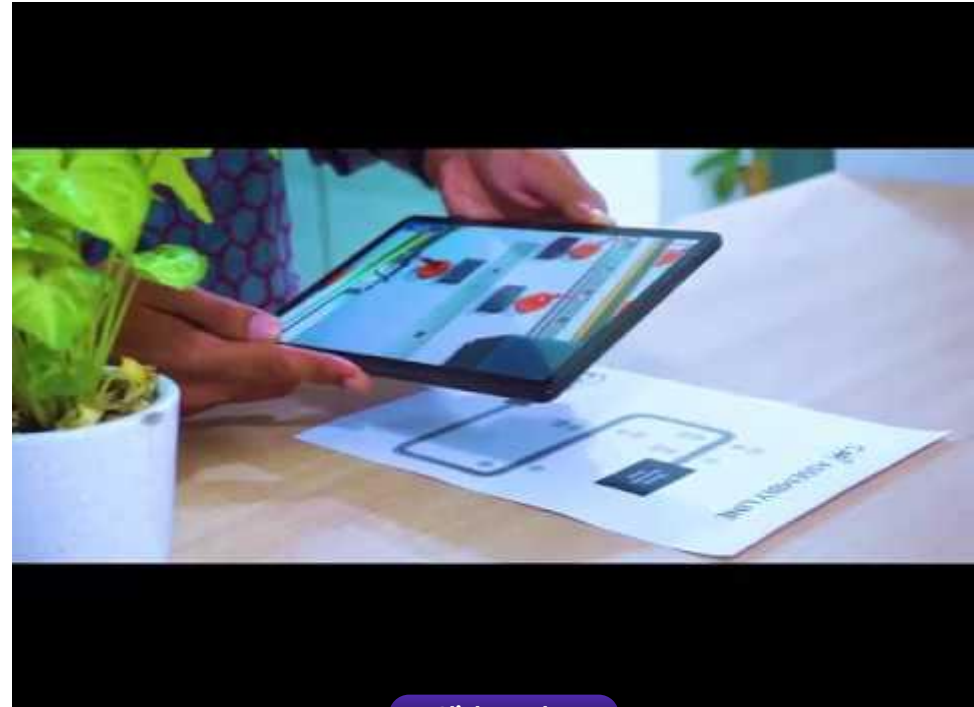
Understanding Augmented Reality

Things get exciting when we extend AR to scanning objects and juxtaposing reality!

Layering Digital Media with Reality - Intertwining the two worlds on a MOBILE interface.



[Click To Play](#)



[Click To Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Using Virtual Reality for Learning

Leveraging Virtual Reality technologies to capture various learning and development scenarios.

EHS-based



[Click To Play](#)

Features

- ❑ Interactive learning.
- ❑ Simulate all scenes in 3D.
- ❑ Cover a range of EHS situations.
- ❑ Integrate analytics to test learning.
- ❑ Multiplayer functionalities available with trainers / trainee in remote locations.
- ❑ Easy integration with physical simulation equipment.

Using Virtual Reality for Learning

Simulation on LOTOTO activity on a generator.



[Click To Play](#)

Simulation on an equipment process.



[Click To Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Using Mixed Reality for Dynamic Learning

Guided dynamic assistance using holographic Smart Glasses.



[Click To Play](#)

Step-by-step assembly and disassembly of parts using holographic Smart Glasses.



[Click To Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

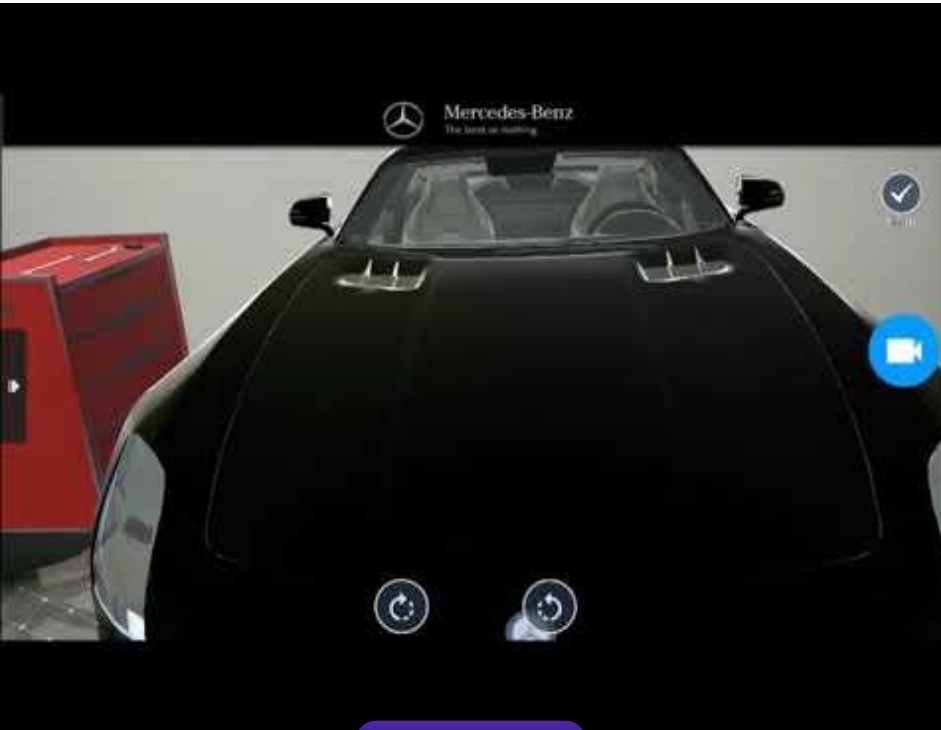
4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Understanding Assisted Reality

AR guidance with remote assistance on mobile.



[Click To Play](#)

AR guidance with remote assistance support using hands-free Smart Helmet.



[Click To Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Understanding 360° Immersion

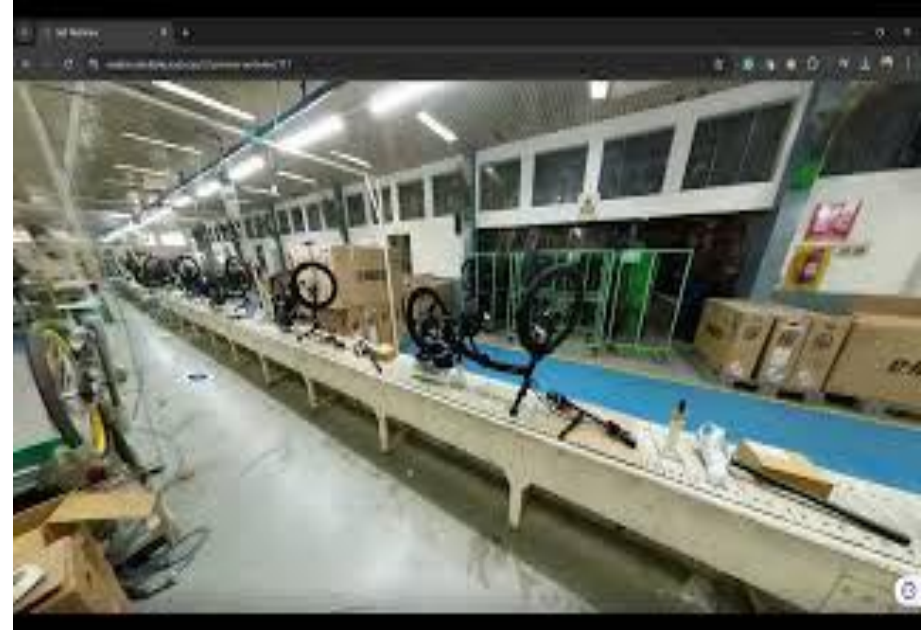
Immerse in reality with panoramic motion and guided movement, ideal for site walkthroughs.

Artistic 3D which looks and feels real!



[Click To Play](#)

360° Immersive Plant Walkthrough



[Click To Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

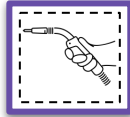
Deep Analytics

Understanding 4D-IoT Smart Simulators

Our proprietary 4D-IoT smart simulators combine XR software with real world tools to enhance the effectiveness of training for common manufacturing tasks and practices.



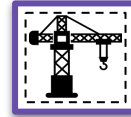
Paint Simulator



Welding Simulator



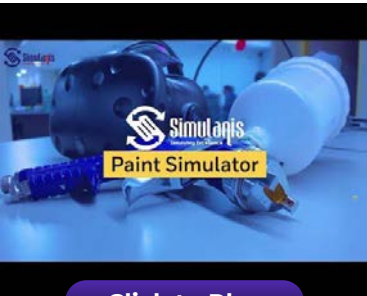
Fire Simulator



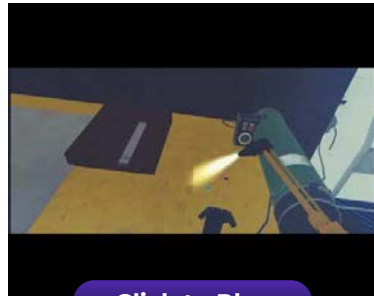
Forklift Simulator



Mining Simulator



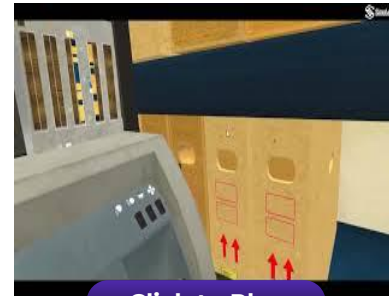
[Click to Play](#)



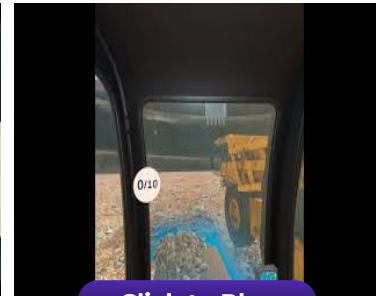
[Click to Play](#)



[Click to Play](#)



[Click to Play](#)



[Click to Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

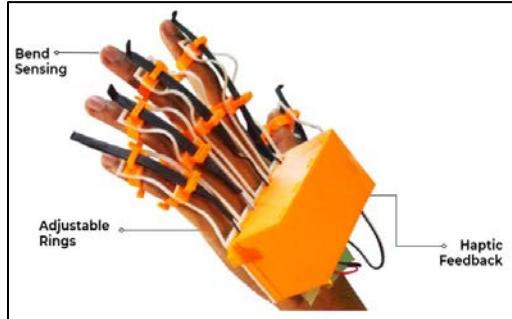
4D-IoT Smart Simulators

Haptic XR Hardware

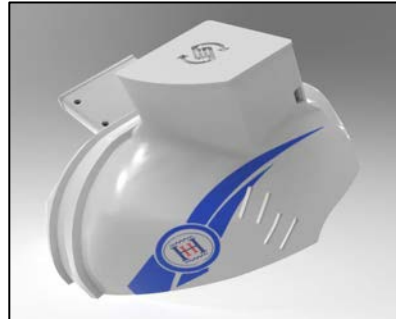
Deep Analytics

Understanding Haptic XR Hardware

Delivering haptic-based patent-pending XR hardware, hand-crafted in-house.

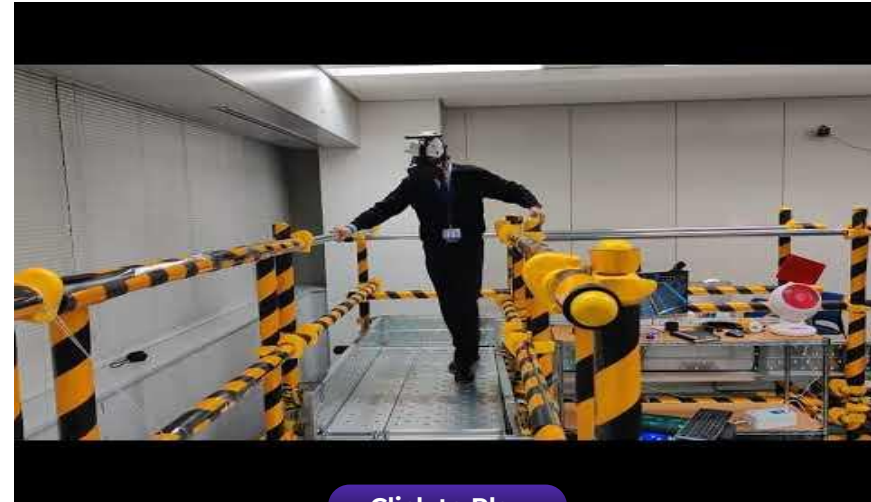


VR Gloves: Reflexis



Haptic Helmet

Watch Haptic XR in action



[Click to Play](#)

Our Range of XR Technology Offering

Desktop Simulation

Mobile Simulation

Augmented Reality

Virtual Reality

Mixed Reality

Assisted Reality

360° Immersion

4D-IoT Smart Simulators

Haptic XR Hardware

Deep Analytics

Understanding our proprietary Industry-leading AI-based Deep Analytics

I. Capture



- ❑ **In Game Data**
User Gaze, # Errors, # Game Sessions, Session / Task Time, Game Assessment Score
- ❑ **Physiological Data**
Heart Rate and Brain wave frequency
- ❑ **Psychometric Data**
Demographics, Personality Type, Behavioral Data, Feelings, Emotions and Cognitive ability

2. Measure



- ❑ Powerful views correlating different data types
- ❑ Composite Scores based on the performance across the different data types
- ❑ Comparative Analysis, Ranking and User Profiling
- ❑ Predictive Analysis and Correlation metrics

Online Interactive Dashboard

to analyze user performance and draw meaningful insights

**Simulanis
Use-Case
Breadth**

02

Simulanis Use-Cases Breadth

Through the Simulanis XR Suite, we can deliver a range of use-cases as described below.

Training (Repair, Maintenance, Operations, Troubleshooting use-cases)

Remote, Guided and Dynamic Assistance

Design Reviews

Walkthroughs

Planning, Visualization and Configuration

Digital Twin

Multi-user Collaboration

Worker Performance Management

SOP Digitization

**Simulanis
Use-Cases:
Curated**

03

Applications of the Metaverse

Vast and multifaceted!



Virtual Design and
Collaboration



Design Review
and Feedback



Virtual Construction
Twins



Immersive
Training



Remote Collaboration
and Inspection



Enhancing Client
Engagement

Applications of the Metaverse

Inspection and Training



[Click To Play](#)

Applications of the Metaverse

Virtual Design and Collaboration



Applications of the Metaverse

Virtual Design and Collaboration



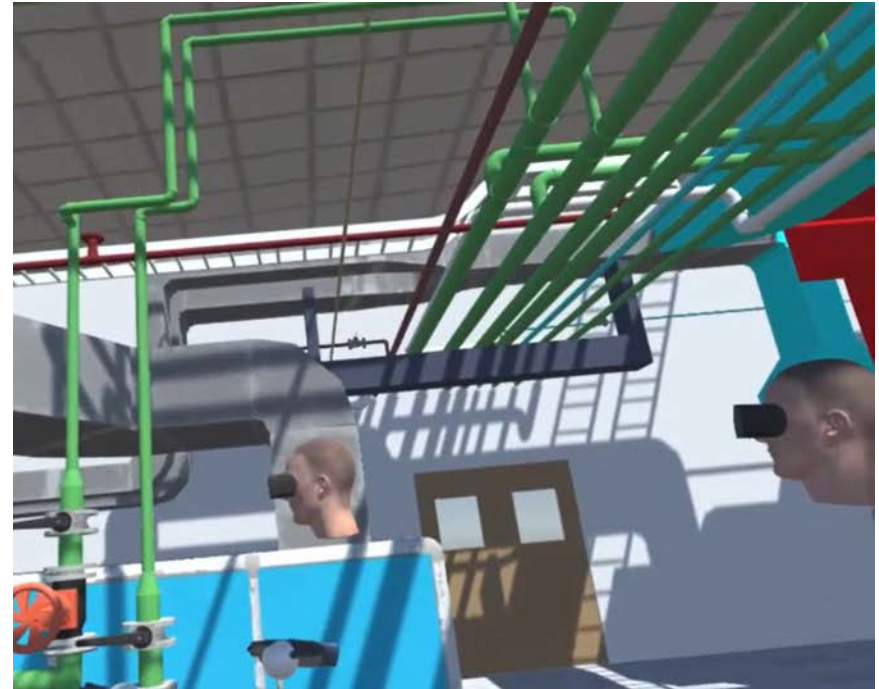
[Click To Play](#)

Applications of the Metaverse

Design Review and Feedback



[Click To Play](#)



Applications of the Metaverse

Virtual Construction Twins



Click To Play



Applications of the Metaverse

Immersive Training: Safety



[Click To Play](#)



Applications of the Metaverse

Immersive Training: Safety



Electrical Safety



Working at Heights



People Safety during Fire



Chemical & Biological Hazard



Cause & Prevention of Explosion



Emergency Evacuation



LOTO



First Aid



Vehicle Movement on Site



Fire Safety



HAZID and RA



Safety Case Study

Applications of the Metaverse

Remote Collaboration and Inspection



Applications of the Metaverse

Enhancing Engagement



Applications of the Metaverse

Enhancing Engagement



**Simulanis Case
Studies**

04

Case Study: Construction safety



Target to achieve 0% accidents in safety operations

What was the problem and challenge?

A lot of safety deviations and accidents at a different construction sites across the globe while performing the confined space, work at height and hot work activities, etc.

Impact delivered

In 2 years, we delivered:

- Achieved **0%** accidents on 3 client sites across the middle east region
- **10,000** trainees trained

What we delivered?



Feedback and Success Story / Testimonial

“A 4D scaffold simulation helped simulates personnel fall, impact on head, explosion, fire and traffic incidents on-site to enhance safety awareness, depicting on-site incidents for a zero accident goal”

Case Study: Tile Applicator Mastery



Empowering Skills, Expanding Reach for UltraTech Cement

What was the problem and challenge?

Outdated methods at client site for tile applicator training leading to low interactivity, material wastage, and hindered skill development.

Impact delivered

In 3 months we delivered:

- 500+ Trainings
- 200+ Training Hours
- Rapid Location Expansion
- 150+ Certifications

What we delivered?



Feedback and Success Story / Testimonial I

"We have brought the factory and shop floor experience without being actual present at the shopfloor"

Case Study: Streamlining Pump Maintenance

HINDALCO

Elevating Efficiency for HINDALCO

What was the problem and challenge?

The maintenance and overhaul of a 100 ft tall pump pose significant challenges, with current procedures relying on book and classroom training, limiting visualization, and understanding

Impact delivered

- MTTR reduction by 20%
- Error reduction by 40%
- Training time reduction by 40%

What we delivered?



Feedback and Success Story / Testimonial

“The KPI of 600 training can be achieved in 3 months of time instead of 6 months as training time will reduce by nearly 50% with the help of this XR training”

Case Study: Navigating Training Challenges

GRASIM

Empowering Skills, Expanding Skill Sets for Grasim

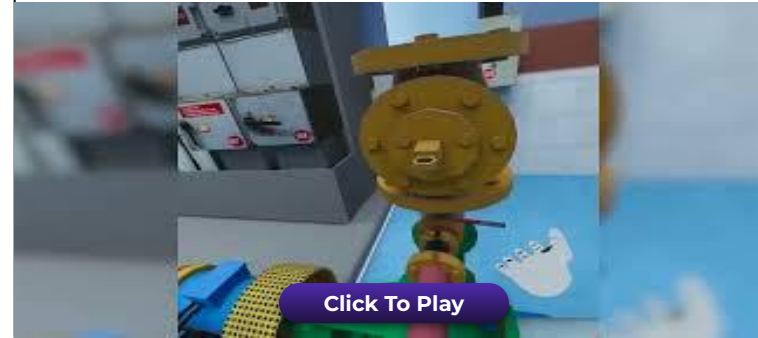
What was the problem and challenge?

Despite ISO-compliant SOPs, the client faces suboptimal training efficiency leading to increased workplace near misses and a missed KPI for safety officers.

Impact delivered

- Only in 2 sessions for the user to attain a perfect score.
- After the first iteration the retention was 100%.

What we delivered?



Feedback and Success Story / Testimonial

“Through this AR VR Training, we can reduce the training time with almost 50% compared to Traditional, Class room and Shop floor Training”



LOTO

Unlocking Safety for GSK

What was the problem and challenge?

The client sought a standardized solution for validating safety protocols across industries, leading to the identification of Lock-out Tag-out (LOTO) as a crucial procedure

Impact delivered

- Errors came down by 87.5%.
- Training time reduced by 44%.
- 56% reduction was recorded in the violation of safety protocol.

What we delivered?



Feedback and Success Story / Testimonial

“Through data analytics Simulanis has achieved another milestone in quest to revolutionize training”

Case Study: Safety standards trainings to all



Delivering safety training at scale for Cairn

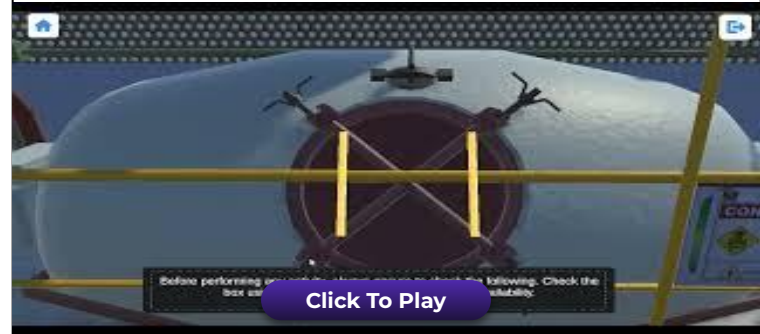
What was the problem and challenge?

Despite the capable HSE teams, the training of the involved site team personnel was a challenge due to manpower limitation, large area of site to cover and limited accessibility of training equipments at different places of site

Impact delivered

- Effective training increased 1.5 times
- Auto processed training without any trainer dependency

What we delivered?



Feedback and Success Story / Testimonial

“Lower level labours can now understand the importance of safety through this VR trainings, and this will help us enhance our Zero Harm, Zero Incident policy ”

Reactors

Visualizing and redefining safety for SABIC

What was the problem and challenge?

Video and classroom training for reactor operation lacked efficacy and physical training was hindered due to high capital and resource requirements for reactor construction, limiting practical training opportunities

Impact delivered

- Increased visualization helped workmen understanding in effective way
- Reduction in overall training time

What we delivered?



[Click To Play](#)

Feedback and Success Story / Testimonial

“The visualization has helped us understand the SOP in a better way, we look forward to implement more such scenarios”



IndianOil

IOCL

Retail Academy Training Modules for IOCL

What was the problem and challenge?

Training 25,000+ IOCL retail stores nationwide with limited SMEs poses a critical challenge, risking significant time, resource consumption, and inconsistent content delivery across the network

Impact delivered

- Consistent training: Uniform content across 25,000+ IOCL stores.
- Scalability: Empowered workforce with immersive learning.
- Center of excellence at two State HQ

What we delivered?



Click To Play

Feedback and Success Story / Testimonial

“Through XR training, we are not just upskilling our workforce but driving a powerful digital transformation that enhances visualization and deepens workforce understanding”

Case Study: Reimagining Unit Operation Training



Energising a Brighter Tomorrow

Redefining Unit Operation Training and Operational Safety for HME

What was the problem and challenge?

Training via traditional methods like documents & videos wasn't very effective & was very exhaustive.

Extended downtime was required for field trainings and also the units were needed to be interrupted from time to time to train the new engineers.

Impact delivered

- Training related unit downtime cut to upto 90%
- Training time cut by 50%
- Hands on experience resulting in upto 65-70% retention

What we delivered?



Click To Play

Feedback and Success Story / Testimonial

"The trainings have not only helped new joiners to understand the SOP & unit operation but has also enabled the existing engineers to revise & sharpen their skills and explore the scenarios apart from regular operations."

Case Study: Time Efficiency Gain



Unilever

Squeezing efficiency one-line at a time for HUL



**Simulans
Deployment
Philosophy and
Simulans Uno**

05

Our Deployment Philosophy

How we see the future evolving?

- ★ Blurred lines between AR, VR and MR.
- ★ Emergence of Spatial Computing from nowhere to everywhere!
- ★ Better form factor of all XR devices.
- ★ Democratization of content, access, and availability on all platforms.
- ★ Consolidation of use-cases.
- ★ Increased enterprise adoption driven by consumer interests.

What role are we playing!

We see ourselves redefining the future of XR and playing a vital part through the launch of our most ambitious offering yet.

Why?

Because, though:

XR technologies have proven to be effective.



Training: XR enhances learning outcomes with immersive training experiences.



Assisting: XR provides real-time guidance and support to frontline operators.



Collaboration: XR facilitates remote collaboration among teams.



Digital Transformation: XR streamlines workflows and enhances productivity.

We believe:

However, where XR adoption has failed so far?



Inherent Service-Driven Play: XR adoption at scale has been hindered by service-driven approaches.



Lack of Cross-Device Compatibility: Lack of cross-device / cross-platform technologies.



Lack of Standardized Work Practices: Absence of automated practices for app development.



Lack of Unified Platform: Enterprises lack a single platform for diverse XR needs.



Lack of DIY Apps and Low-Code Platforms: Limited availability of quick self-serving DIY apps

Introducing



Click To Play



Introducing Simulanis UNO!

Bringing together a decade of excellence in a SINGLE framework compatible across hardware.



Ever-growing collection of apps, bundled under four suites, focussing on a range of industrial use-cases

TRAINING

3D XR Library
4D Simulators
2D LMS
Skill Gauge
Skill Tracer
Quizbox

GUIDANCE

XR Calling
Digital Workflow
Dynamic Assist
D-SOP
IRIS

COLLABORATION

Immersive Collab
Spatial Collab
Immersive Meetings
Team Onboarding
Walkthroughs

AUTHORING

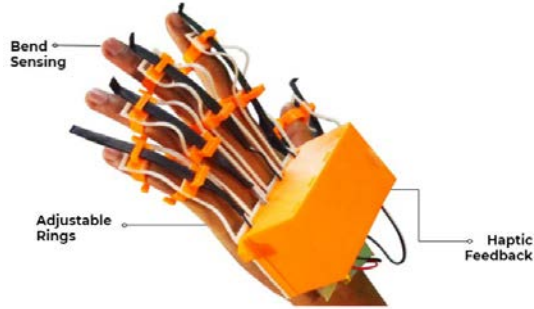
360 Content Creator
3D XR Skill Hub

With more use-cases in store, viz. Visualization, Designing, Planning, Reviewing and Configuration.

Introducing Simulanis UNO!

Bringing together our hardware innovations under one umbrella.

Simulanis REFLEXIS: Haptic Interactivity



Simulanis H2: Haptic and Wind Effect



Smell, Wind and Heat Effect



Introducing Simulanis UNO!

Delivering innovation in a SINGLE box, complementing UNO!



XR Kiosk Structure



VR Headset



VR Headset



VR Base Stations



VR Trackers



High End PC
(with screen, keyboard and mouse)



Heater



Smart Extension



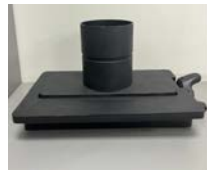
Welding Torch



Spray Paint Gun



Fire Extinguisher



Welding Pieces



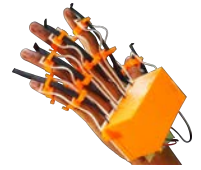
Fan Blower



Cooling Pad



H2 Haptic Helmet

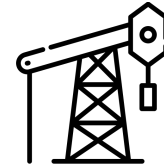


Reflexis VR Gloves

**Details of
Simulanis
Generic Modules**

06

Simulanis Generic Modules



Pharmaceuticals

- Good Manufacturing Practises (GMP)
- Primary, secondary and aseptic gowning
- API reactor
- Agitated Nutsche Filter Dryers
- Co-Mill & Crystallizer
- Fluid Bed Dryer and Blender
- Tablet Coating Machine
- Compression Machine
- Blister Packing Machine
- Strip Packing Machine
- Bulk Line IPQC Tests
- Blister Packing Machine
- Defoiling Machine

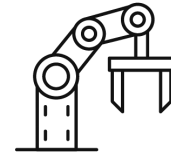
Energy and Oil & Gas

- Safety Scenario at Retail Outlet
- Safety Scenario at Carousel and Gantry Area
- Tank Truck Decantation
- Fire Safety with Handling System
- Hydrocarbon Detectors
- Smokehouse Fire Fighting Simulator
- Remote Operated Shut-Off Valve
- Double Block and Bleed Valve
- Net Zero Module

Mining

- Excavator Operator
- Dumper/Tipper Operator
- Bulldozer Operator
- Loader Operator
- Backhoe Loader Operator
- Jumbo Drill Operator

Simulanis Generic Modules



Health, Safety & Environment (HSE)

- Confined Space
- Lock-Out Tag-Out (LOTO)
- Electrical Safety LOTO
- Hot Work
- Fire Safety Extinguisher
- Safety Awareness (PPE & Tools)
- High Volume Long Range Firefighting (HVLR)
- Emergency Rescue: Terrace
- Smoke House: Search & Rescue
- Crane Safety
- Lifting and Rigging
- Emergency Evacuation
- Chemical Spillage

Construction

- Scaffolding Erection Safety
- Work at Height
- Hazard hunting during Hot Work
- Hazard hunting during grinding work
- Site traffic safety
- Confined space hazard hunting
- Welding simulator

Automotive

- Safety Drive Checks
- Starter Motor
- Engine Oil, Filter & Air Filter Replacement
- General Checkup (Inspection checklist)
- Brake Pads Cleaning & Replacement
- Brake Shoes Cleaning & Replacement
- Wheel Balancing & Tyre Rotation
- Spark Plugs Replacement
- Car Horn Assembly
- Paint Simulator
- Welding Simulator (SMAW)

A person in a dark suit is seated at a light-colored wooden desk. In front of them is a silver laptop, a white coffee cup, a smartphone, and a spiral-bound notebook. The person's hands are resting on the desk, one near the coffee cup and the other near the smartphone. The background is softly blurred, showing a window and some office supplies.

THANK YOU

Feel free to get in touch with

Punit Kumar - Simulanis

for further queries

Email: punit@simulanis.uk

Simulanis UK

Empowering people and augmenting workplaces for a brighter future