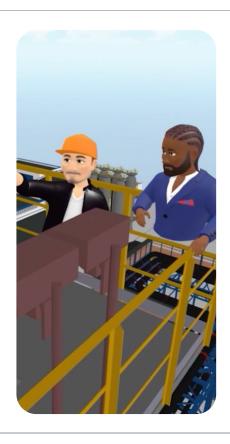


Manufacturing

MR is helping to safely accelerate training, launch immersive reviews and deliver data-driven design that boosts bottom lines.







Mortenson

Problem

The data center builder sometimes encounters software, safety and accessibility issues post-design, potentially leading to expensive change orders or added operational risk for clients.

Solution

After creating a digital twin:

- Provide over 50 stakeholders, spanning 4 states and 10 different disciplines, with Quest 2 headsets, letting them walk through the design and provide feedback on the spot, before construction began
- Develop a triage process to prioritize and resolve issues once identified

600+

issues raised by stakeholders while inspecting the design in VR. \$26.5K

Estimated construction cost savings by identifying and fixing a single issue, restricted access to end feed boxes.

"I've been on projects where we've had traditional virtual reality, which takes a lot longer to prepare and to get ready. And maybe only five people use it, and it's usually just the VDC people on the project site. So using Resolve on the Quest this was a pretty eye-opening experience of what we can use VR for in our coordination process."

Ryan Zoldan, Integrated Construction Manager, Mortenson





CUPRA

Problem

CUPRA impressed consumers with the Tavascan concept car in 2019. But as the launch approached in 2024, dealerships worried customers were losing interest. Manufacturing delays made the situation more challenging – and dealers needed a way to keep sales on track.

Solution

- A mixed reality CUPRA Tavascan experience, built in five months with agency support.
- A replica featuring an interactive steering wheel, doors and detailed interior to maintain customer excitement.
- A mixed reality CUPRA Tavascan experience, built in five months with agency support.
- A replica featuring an interactive steering wheel, doors and detailed interior to maintain customer excitement

580

headsets distributed across Germany, UK, France, Spain and Italy

- Successfully generated presales without physical cars available.
- The CUPRA Terramar added as a second mixed reality model.
- Immersive replicas planned for the entire CUPRA lineup.

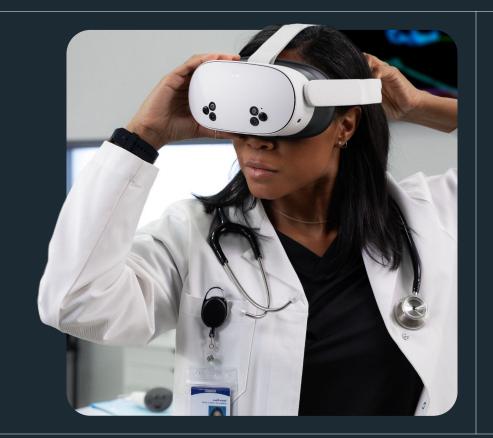
"The mixed reality experience wasn't a 'nice to have' it fulfilled a real customer and dealer need and helped to secure sales."

Tobias Baumann, Digital Product & Services, CUPRA Deutschland



Healthcare

MR is providing specialized simulation training, reducing risks, increasing learning outcomes and deepening patient empathy.









Pfizer

Problem

The pharmaceutical firm needed to train hundreds of new operators after its COVID-19 vaccine was approved, despite limited access to in-person training and a new manufacturing process.

Solution

- Deployed 500+ Quest 2 headsets to its new operators
- Created 'Virtual Twins' of its production lines that could be used for training
- Translated a 100-page document into a suite of VR training apps to create a more immersive and hands-on learning experience
- Leveraged Quest's haptic and hand speed tracking for behavioral training, including proper aseptic technique

40-60%

time savings on behavioral aseptic training in VR vs non-VR training. **UP TO**

\$23K

in savings per trainee / trainer pair on aseptic training in VR vs non-VR training. "Having no wires to deal with makes the experience less intimidating and more natural for the user, but also much easier to set up. This is important when you are looking to scale up."

Nicholas Hockley, Manager, Smart Factory Technology, Pfizer







Purdue Global

Problem

To address a national shortage of nurses, Purdue Global set out to train and upskill working adults throughout the US. However, lack of access to classroom and clinical training spaces have stopped many potential students from getting a nursing education. Purdue needed a way to teach hands-on nursing skills to a geographically dispersed student population.

Solution

- Use Meta Quest to simulate a wide range of real-world, clinical scenarios. For example, students can conduct head to toe assessments, perform infant wellness checks, or treat patients with different symptoms.
- Students also learn vital soft skills to care for patients with diverse backgrounds.
- Students can practice as many times as they need to, wherever it's convenient for them.

4,000+

graduate nurses supported through VR so far. 10-15%

increase in the pass rate on national exam to become a registered nurse.

"The cool thing about VR is it works for different learning styles. Incorporating these things into a physical space is really hard to do."

Meg McManus, Undergraduate Program Professor, Purdue Global

"Going into the VR simulation, I felt like I had just walked into a hospital room. It's just like doing the real thing with the patient."

James Gilmore, Undergraduate Student, Purdue Global



Education

MR is helping to create classrooms of the future, deepening students' understanding, developing their skills and knowledge via real-world scenarios.









NYU College of Dentistry

Problem

Traditional dental anesthesia training at NYU College of Dentistry involved practicing on peers – which could add pressure for students – or using manikins that often lacked anatomical detail. Both methods limited opportunities to gain sufficient realistic experience before treating patients.

Solution

- NYU Dentistry replaced manikins with a custom immersive mixed reality simulation for local anesthesia training using Meta Quest headsets.
- This two-part simulation includes virtual syringe assembly and injection of a detailed virtual patient in a realistic clinic.
- The program gives students instant feedback through sight, sound and touch.
- Students can use Meta Quest 2 headsets practice as much as they need, even at home.

1,600+

in individual MR sessions since 2021.

"Our MR system has proven to be more efficient than the alternatives because it enables a repeatable, realistic and low-stress experience. Also, because students can practice it at home and as many times as they like, it puts the learner in control of the experience."

Cristian Opazo, Director of Educational Technology, NYU College of Dentistry

- NYU's MR simulation is now licensed by other dental schools, improving dental education.
- Students now have unlimited time to practice local anesthesia techniques.
- Graduates now start their careers feeling more ready and sure of themselves.







University of Glasgow

Problem

Traditional teaching at the University of Glasgow faced limitations. Educators often relied on 2D materials to explain complex 3D subjects like chemistry and archaeology. Finding a scalable, affordable and engaging solution that could be applied across a range of diverse subjects seemed an impossible task.

Solution

- A competition that invited teachers to propose how mixed reality could overcome physical teaching constraints.
- Winning ideas were developed into 12 immersive learning apps with software partner Edify, covering subjects from microbiology to history.
- Established a dedicated MR teaching lab equipped with Meta Quest 3 headsets, accommodating 30 students at a time.
- Developed influential guidelines for using mixed reality in education.

"What MR allows us to do, in general, is break the laws of physics, enabling us to move beyond physical constraints."

Professor Neil McDonnell, Philosophy and XR Technology, University of Glasgow

£3.7M

UK government investment secured for extended reality research and development.

- Thousands of students each semester are taught using MR.
- Shortlisted for The Times
 Higher Education Awards 2021
 with Edify.
- Policy for mixed reality education is now helping shape approaches worldwide.



Meta