Unity Industry Trends Report 2026

Convergence era of immersive tech, AI, and sustainability

Unity®

Contents

Foreword

Over the past decade, immersive technology has moved from the margins of innovation labs into the heart of how products are imagined, built, and experienced. What was once considered experimental is now embedded in critical workflows across manufacturing, automotive, healthcare, transportation, energy, and beyond. As we look to 2026, we're at a clear inflection point: the convergence of immersive technologies, artificial intelligence, and sustainability is not just enhancing existing processes - it's unlocking entirely new forms of business value.

At Unity, we describe this shift as closing the *reality gap*: helping organizations move beyond static, siloed processes and 2D representations into shared, immersive 3D environments where people, data, and decisions come together in real time. When teams can see the same virtual product, facility, or scenario from anywhere in the world, they collaborate faster, de-risk complexity earlier, and make decisions with far greater confidence. That is the promise of real-time 3D in industry - and with AI and sustainability as force multipliers, that promise is now being realized at scale.

This report is a window into that *convergence era*. Across sectors and use cases, Unity customers and partners are demonstrating how solutions built with Unity's real-time 3D and AI capabilities are moving beyond proofs-of-concept into production: from experimentation to execution and virtual-first system engineering; from simple visualization to AI + XR experiences that are intelligent, contextual, and personalized.

They are using immersive training to upskill and reskill the workforce at scale, closing critical skills gaps while improving safety and resilience. They are democratizing 3D data across teams, making it accessible not just to specialists but to subject matter experts, clinicians, operators, and creatives who now participate directly in digital workflows. And increasingly, they are using these tools as a force for good - designing safer systems, reducing waste, and advancing more sustainable ways of working.

What stands out in these contributions is not just the technology, but the outcomes. Shorter commissioning times. Better-prepared nurses and astronauts. Smarter, more engaging fan and customer experiences. Reduced material waste and energy use. These are the markers of an industry that is no longer asking “if” immersive, AI-driven solutions can deliver value, but “how quickly” they can scale them across the enterprise.

My hope is that this report serves both as a reflection of where industry leaders are today, and as a roadmap for where we are headed next. The organizations featured here are not waiting for the future to arrive - they are building it in real time, in virtual spaces that directly shape real-world outcomes.

At Unity, we are committed to partnering with them, and with you, to close the *reality gap* and usher in a future where immersive technology, AI, and sustainable practices are the default foundation for how industry operates.

Sarah Lash,
SVP and GM of Industry, Unity

TREND 1

Shift from experimentation to execution

Industries: *Manufacturing, healthcare, automotive.*

Use cases: *Virtual-first system engineering & AI-driven industrial simulation, Scaling XR + AI for clinical training and patient care enablement, interactive product configurator.*

Contributors: *Prespective, Philips, NXRT*

As immersive technologies and AI mature, industries are moving decisively from small pilots to full-scale, production-ready systems. What began as isolated proofs-of-concept has evolved into virtual-first engineering pipelines, AI-accelerated clinical training and diagnostics, and high-fidelity simulation environments that shape next-generation mobility. Leaders from ***Prespective****,* ***Philips****, and* ***NXRT*** *discuss how immersive technology and AI are becoming foundational infrastructure - reducing commissioning time, expanding clinical capacity, and transforming how complex systems are designed, validated, and brought to market.*

Jorick Huizinga,
CEO, Prespective.

Accelerating the virtual-first future of safer, smarter industrial and defense systems

Prespective overview of solutions. Video courtesy Prespective.

In 2026, the convergence of immersive technologies, AI, and sustainable innovation will reshape how complex systems are designed, tested, and deployed. At Prespective, we see this shift every day in our work with the world's most advanced manufacturing and defense organizations. It is the shift from hardware-first development to virtual-first system engineering.

Virtual simulation is at the heart of this transformation. Our platform enables software engineers to test their control software on virtual hardware, long before physical prototypes exist. From the moment the first 3D CAD model is available, a virtual twin can be created, allowing systems to be tested, optimized, and validated in a fully simulated environment.

The benefits are profound. Because the virtual world is limitless, testing no longer carries the risks, costs, or logistical constraints of the physical world. Virtual twins can be copied thousands of times, enabling parallel testing across infinite scenarios, even running faster-than-real-time. The result is better-tested systems, delivered faster and with higher confidence in their performance and safety.

Artificial Intelligence now amplifies these capabilities. Within Prespective, we are training AI systems to configure and optimize virtual twins automatically. For example, AI can explore endless parameter combinations to find the highest possible system throughput, or adapt configurations to meet new operational constraints. We are also training AI agents to build and set up virtual environments themselves, accelerating simulation creation and democratizing access to advanced digital engineering.

These technologies don't just improve efficiency, they enable continuous learning and sustainability. By shifting testing and validation into the virtual domain, organizations dramatically reduce material waste, travel, and energy consumption associated with physical testing and iteration. Virtual simulation ensures that every hardware build is purposeful and informed by millions of digital iterations that came before.

This shift is already delivering measurable impact. Physical commissioning alone can represent 25–40% of total machine development cost, and delays during this stage directly affect project timelines and margins. Organizations that have moved system testing into digital environments are seeing 30–50% reductions in commissioning time, as issues are found earlier, integration is smoother, and teams collaborate around shared virtual references instead of waiting for physical access. Users of Prespective, in particular, report 2–5x faster iteration cycles, enabling not just faster delivery, but better-performing systems at launch.

Before and after digital testing

The impact extends beyond manufacturing. In defense, for example, software now defines the capabilities of modern systems, from autonomous vehicles to counter-drone operations. Prespective enables defense organizations to test and validate these systems safely in virtual environments, running endless variations of complex, high-risk scenarios. With our platform, testing can happen continuously, securely, and even faster-than-real-time, ensuring readiness for emerging threats without the dangers or costs of live testing.

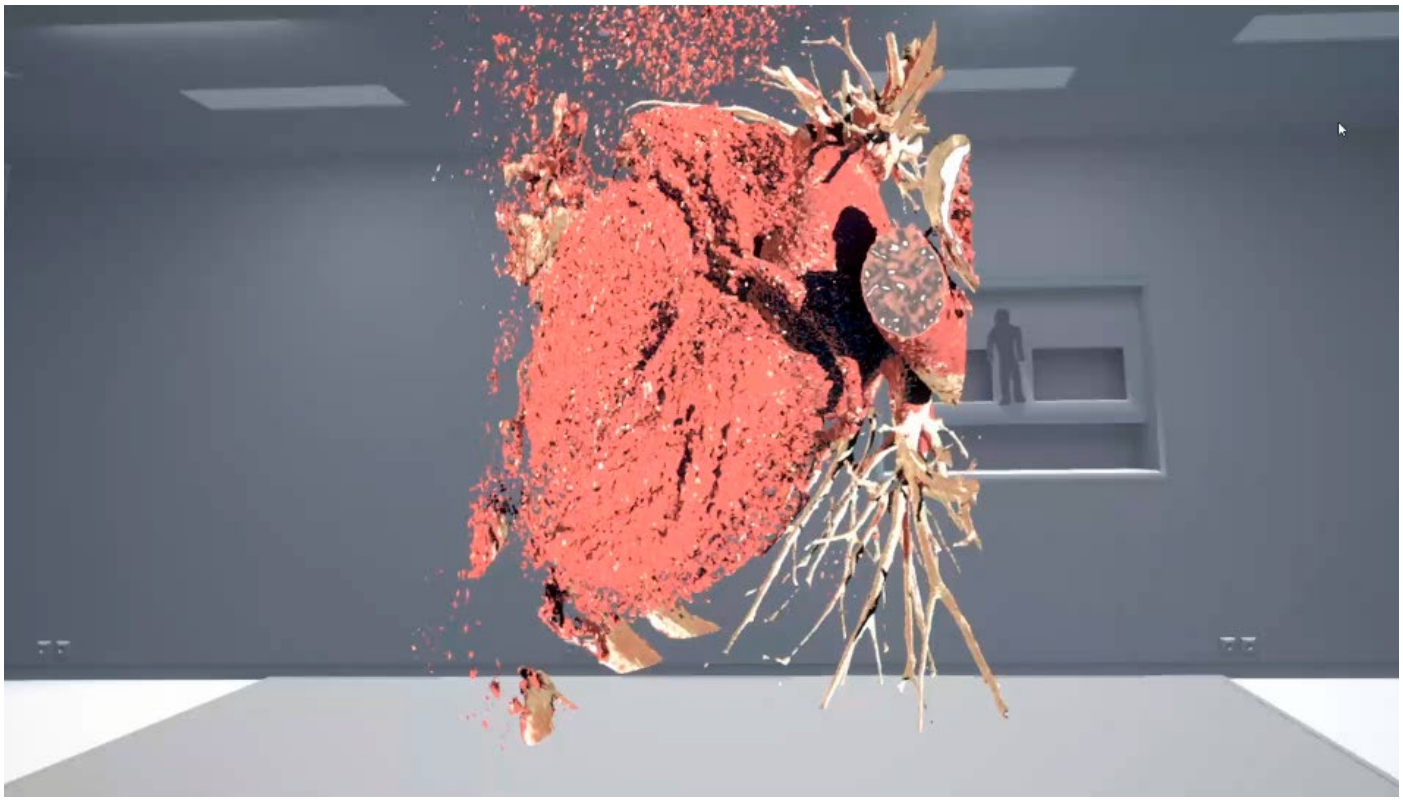
The convergence era isn't just new technology; it's a new foundation for how systems are created. Complex machines will be engineered first in accurate, virtual worlds, where iteration is safe, fast, and collaborative, and only then realized physically.

Jorick Huizinga, CEO, Prespective.

This virtual-first future is already here, and Prespective is enabling it today.

Jean-Marc Huijskens,
Innovation Lead Immersive Technologies,
Philips

Unlocking new value in healthcare with XR and AI



Concept video of AR used in clinical settings. Video courtesy Philips.

The healthcare industry is facing immense challenges; aging populations globally, shortage of staff and ever-increasing cost of care. There is no way we can recruit ourselves out of this – we can only keep innovating and come up with scalable and sustainable solutions that deal with these challenges.

Using immersive technologies with artificial intelligence is already revolutionizing healthcare at a rapid pace, and 2026 will mark the breakthrough of AI enhanced immersive experiences. This will help us cope with increased education and training demand – and the technology is already making an emerging footprint in clinical applications. These innovations will transform clinical practice, medical training, patient engagement, and operational efficiency in care settings.

In 2026, we will see the scaling up of immersive experiences in healthcare, powered by AI. Until now, we saw prototypes and proof of concepts, but the time has come to scale up these initiatives to full-blown medical applications.

Jean-Marc Huijskens,
Innovation Lead Immersive Technologies, Philips

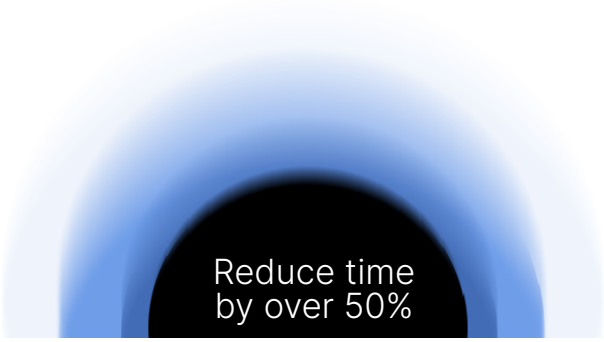
Think XR training for surgeons, AI and XR assisted interpretation of radiology imagery, the planning and building of hospitals (or newer types of points-of-care) and super AI personalized XR healthcare solutions.

Before and after AI

Scan time reduced by over 50%

Clearer images

More innovation emerging



AI has already helped reduce the scan time for an MRI examination by over 50%, while producing clearer images, and these types of breakthrough solutions will emerge even more now that the business value becomes so crystal clear. The large-scale education in XR of hospital staff will take further form in 2026, reducing the need for central educational centers and bringing training and education to the users at various points of care. AI and XR working in concert will quickly produce usable staff training that will iteratively improve by adapting to insights using feedback loops.

Concept video of AR used in clinical settings. Video courtesy Philips.

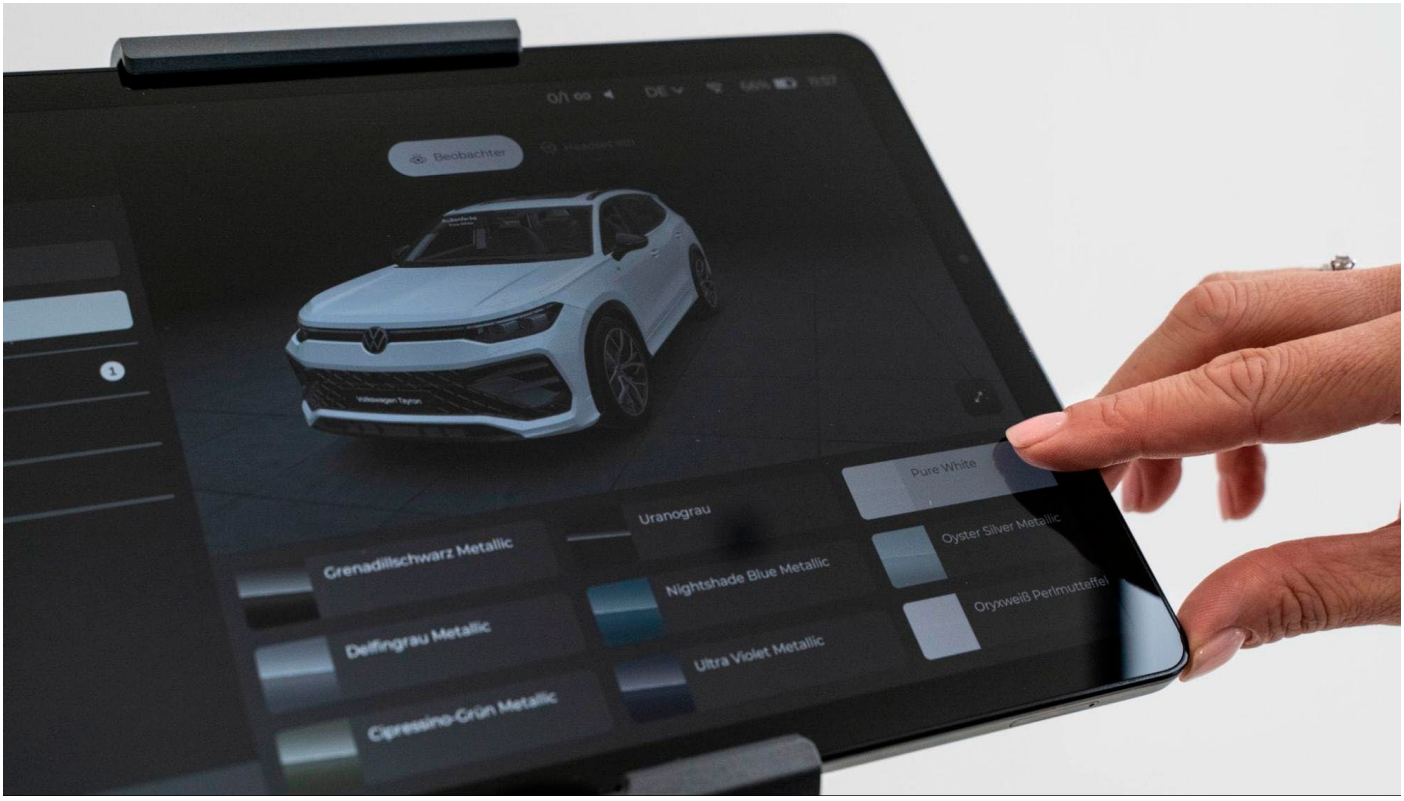
In clinical settings, we will see new, smaller AR form factors being adapted and accepted. This will augment the capabilities of care givers – providing “x-ray vision” to surgeons, helping radiologists interpret more data much quicker and with better clinical outcomes. And it will improve patient experience and prepare them much better for medical procedures they will have to undergo.

Azurion Image Guided Therapy presentation at an industry booth. Image courtesy Philips.

In short, XR and AI are already reshaping healthcare - and by 2026, the joint technologies will offer unique and innovative solutions for coping with the challenges of healthcare today: providing better care for more people.

Lukas Stranger,
CEO, NXRT

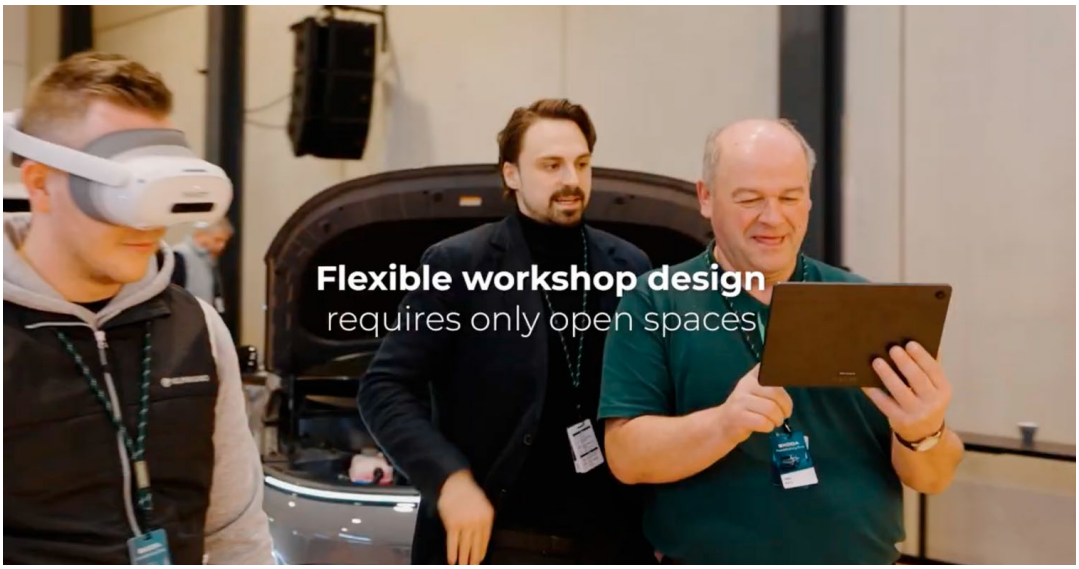
Immersive technologies & AI: driving sustainable transformation in the mobility industry



Interactive virtual 3D product catalog so customers can see, compare, and experience car models virtually. Image courtesy NXRT.

The evolution of immersive technologies has fundamentally reshaped the mobility industry in recent years. Mixed reality (MR) has matured from a visionary concept into a practical tool that now drives key business processes in marketing, sales and training. At NXRT, we experience every day how MR is not just an innovation driver but also creates real value, delivering tangible business impact.

With our solution HeroShow, we enable complex products to be experienced virtually at full scale and with lifelike detail and without the need for physical prototypes. This streamlines processes for model launches, accelerates digital transformation across manufacturers, importers, and retailers, and reduces costs for transportation, storage, and vehicle preparation. Our customers can showcase new models to their target audience even before physical availability, present accessories and options in an emotional, intuitive way and unlock upselling potential. MR elevates brand perception to a new level and positions companies as true innovation leaders.



NXRT HeroShow for training. Video courtesy of NXRT.

Product training also becomes more time-and cost-efficient, as well as sustainable: teams can collaborate remotely, knowledge is delivered interactively and enthusiasm for products increases significantly. Role-playing and realistic everyday simulations foster high learning motivation and lasting knowledge transfer. MR creates a new quality of interaction: authentic, safe, and close to reality. The technology combines the best of the physical and digital worlds, enabling genuine social interaction which is a decisive advantage over purely virtual solutions.

Customers use mixed reality to interact with products in the virtual showroom. Image courtesy NXRT.

Beyond immersive technologies, NXRT also leverages artificial intelligence, not primarily in product development, but to optimize internal processes. AI helps us automate workflows, analyze data faster and make decision-making more efficient across all departments. This allows us to allocate resources strategically and shorten time-to-market. For us, AI is a key enabler for operational excellence and continuous improvement of our services.

We already see that immersive technologies deliver measurable business benefits: our customers report significant cost savings, increased revenues, higher training engagement and stronger customer loyalty through unforgettable, interactive showroom experiences. The shift from experimentation to widespread adoption is well underway, this is a clear signal of these technologies' future viability.

Looking ahead to 2026, we expect the convergence of MR, AI, and digital twins to further revolutionize the mobility industry. The focus will be on relevant, scalable, and user-friendly solutions that put people at the center. At the same time, values such as inclusion, empathy, and continuous improvement are gaining importance. These values are shaping not only our corporate culture but also how we collaborate and grow.

Our mission at NXRT is clear: we make the invisible visible, create real business impact, and inspire the industry to shape the future together with us. True to our motto: Show, don't tell.

TREND 2

AI + XR: Powering the next generation of experiences

Industries: Cross industry verticals.

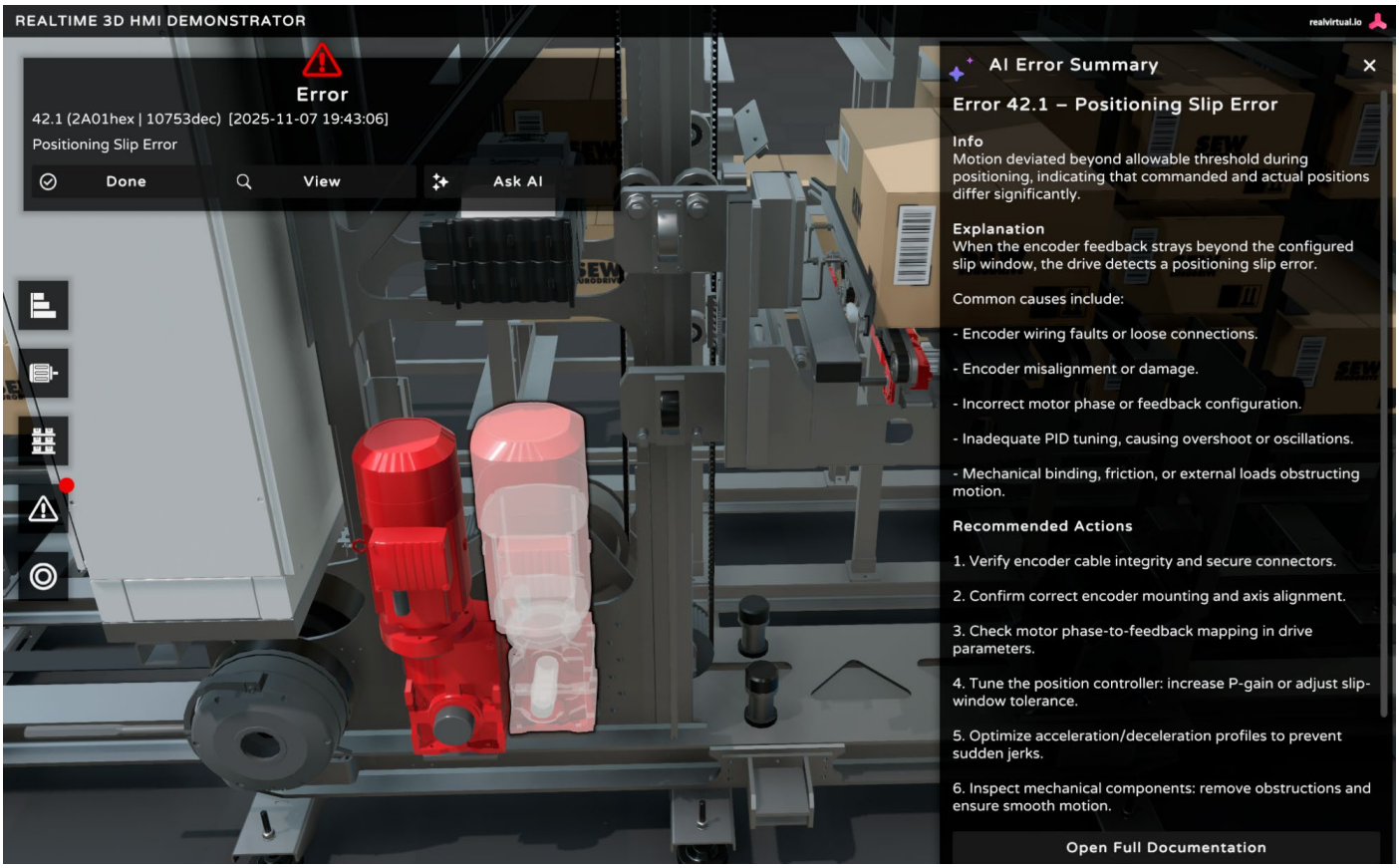
***Use cases**: Digital twin visualization, human machine interface (HMI), AR revolution in indoor fitness.*

***Contributors**: realvirtual.io, 3D Digital Venue, ROUVY*

*The fusion of artificial intelligence and extended reality (XR) is creating a new generation of intelligent, context-aware interfaces. This trend is not just about visualization; it's about creating responsive systems that understand their environment and assist users in real time. We hear from leaders at **realvirtual.io**, **3D Digital Venue**, and **ROUVY** on how this technology is revolutionizing industrial machine interfaces, personalized fan engagement, and hyper-realistic athletic training.*

Thomas Strigl,
CEO and Founder, Realvirtual.io

When AI Meets XR: The rise of context-aware industrial interfaces



Realvirtual 3D HMI. Image courtesy of Realvirtual.io.

Over the past six years building realvirtual.io, I've observed a persistent challenge: industrial human-machine interfaces have remained fundamentally unchanged for decades while production systems have become exponentially more complex. Operators struggle with the cognitive overhead of translating flat panel symbols into physical reality. Machine builders

are now addressing this - adopting digital twins as live, immersive operational interfaces that fundamentally change how humans interact with industrial automation.

From experimentation to production reality

What started as isolated proof-of-concepts is now delivering measurable impact for machine builders. Virtual validation catches integration issues before shipping, significantly reducing commissioning time at customer sites and eliminating costly on-site debugging. More significantly, the same digital twin used for engineering design becomes the operator training platform, then transforms into the live operational interface - a true "build once, use everywhere" approach that creates new value streams while breaking down silos between machine builder engineering teams and end-customer operations.

Spatial understanding replaces symbolic interpretation

Traditional HMIs force operators to mentally translate 2D symbols into physical reality. Unity-based 3D HMIs eliminate this cognitive overhead entirely. When faults occur, operators see them highlighted on actual machine components in spatial context. These "digital shadows" mirror physical systems in real-time via protocols like EthernetIP or Beckhoff ADS at 10-50 millisecond cycles, providing immediate, contextual feedback that flat panels cannot match.

AI-powered context awareness

The breakthrough comes when context-aware AR meets large language model intelligence. Machine builders can now deliver tablets that recognize their equipment and display live operational data spatially aligned with components. When errors appear, AI systems trained on machine documentation, maintenance logs, and institutional knowledge instantly provide the right information - in context, on the machine, with direct links to relevant procedures. This preserves the machine builder's institutional knowledge while dramatically reducing customer downtime - directly addressing both workforce challenges and sustainability priorities.

Driving measurable impact

Faster problem resolution means less downtime and reduced material waste from production interruptions. Machine builders are helping customers identify energy-intensive operations and eliminate bottlenecks through spatial visualization that makes abstract data actionable. While AR glasses remain limited by ergonomics, tablet-based AR delivers this intelligence today.

Context-aware digital twins powered by AI are transforming how machine builders deliver value, from equipment suppliers to operational partners providing responsive, waste-reducing systems where human expertise and machine intelligence combine to deliver measurable environmental and operational impact.

Thomas Strigl, CEO and Founder, Realvirtual.io

Marcela Martinez,
Head of Communications & Marketing,
3D Digital Venue

True innovation happens when fans forget the technology exists

In the sports and entertainment industry, technology has always been a bridge between fans and experiences. Today, that bridge is powered by artificial intelligence and immersive 3D environments. At 3D Digital Venue, we've seen firsthand how these tools are rewriting the way people connect with venues and live events.

AI has become part of everything we do. It helps teams, leagues, and organizers better understand their audiences by analyzing fan behavior, preferences, and purchase patterns. That information leads to smarter decisions, more personalized experiences, and stronger engagement. In 2026, I believe AI will take personalization to a new level. Fans will move through completely tailored journeys, from discovering the right section to sit in to receiving specific offers before, during, and after an event. It will go beyond automation to true customization, where every recommendation feels natural, personal, and relevant.

Within our company, we're also using AI to solve practical challenges. Every 3D project involves thousands of digital assets, from seats and furniture to architectural details and premium amenities. Managing all that data can be overwhelming. That's why we're developing an AI-driven asset search tool that helps our 3D artists instantly find what they need. This makes our workflow faster, strengthens collaboration, and contributes to more sustainable production by optimizing resources and avoiding redundant work.

Beyond efficiency, AI is already driving measurable business impact. We've implemented parametric venue generation to automate parts of the 3D modeling process. This approach allows us to scale faster and deliver accurate digital twins in a fraction of the time.

At the same time, we're testing conversational purchase flows where fans can chat directly with a venue, describe what they want, and instantly get the best available seat based on their preferences. These experiences turn complex purchase decisions into simple, interactive moments.

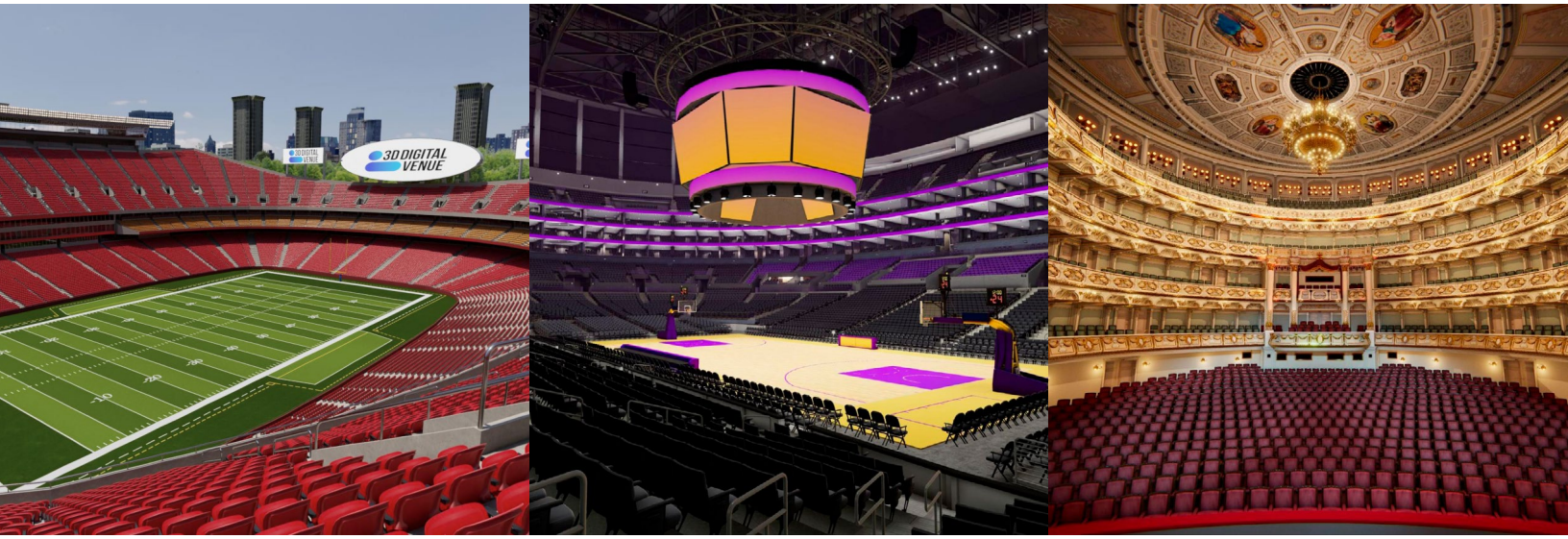
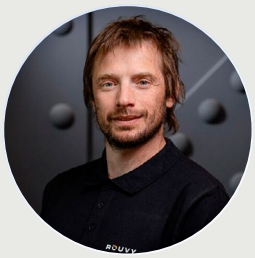


Image on the left: 3D digital twin of a football stadium. Image provided by MOBILE MEDIA CONTENT SL. All rights reserved.
In the middle: 3D digital twin of a basketball stadium. Image provided by MOBILE MEDIA CONTENT SL. All rights reserved.
Image on the right: 3D digital twin of a theater. Image provided by MOBILE MEDIA CONTENT SL. All rights reserved.

Looking ahead, one of the trends I believe will define the future is what we call the “infinite stadium.” Stadiums are evolving into hybrid environments where fans can connect both physically and virtually. Generative AI, together with VR and AR, is giving fans new ways to experience the game, from standing virtually on the field to replaying moments with personalized camera angles and insights. This marks a clear evolution in how people participate in live entertainment.

The common thread behind all of this is that AI and immersive technology are no longer experiments. The next step is to make these innovations feel invisible so that what stays at the center is the connection between fans, events, and the spaces that bring them together.

Matúš Kocka, *Technical Director, ROUVY*



Jan Jedlicka, *Lead Architect, ROUVY*

Jan Bartošek,*Tech Lead, ROUVY*

AI-powered reality: Transforming indoor cycling through photorealistic worlds and hyper-personalized training experiences

ROUVY hero teaser. Video courtesy ROUVY.

The convergence of AI and immersive technologies is fundamentally reshaping how athletes train indoors. At ROUVY, we're witnessing a paradigm shift from static virtual environments to dynamic, AI-generated photorealistic worlds that blur the line between indoor training and outdoor cycling experiences.

We can see a big shift towards AI-powered 3D reconstruction from real-world data. Using advanced techniques like Gaussian Splatting and neural radiance fields, we're converting video captures of real cycling routes into fully immersive 3D environments. This means cyclists can ride through their favorite local routes or explore locations worldwide with photorealistic quality and almost no movement limitation. All generated from standard video footage.

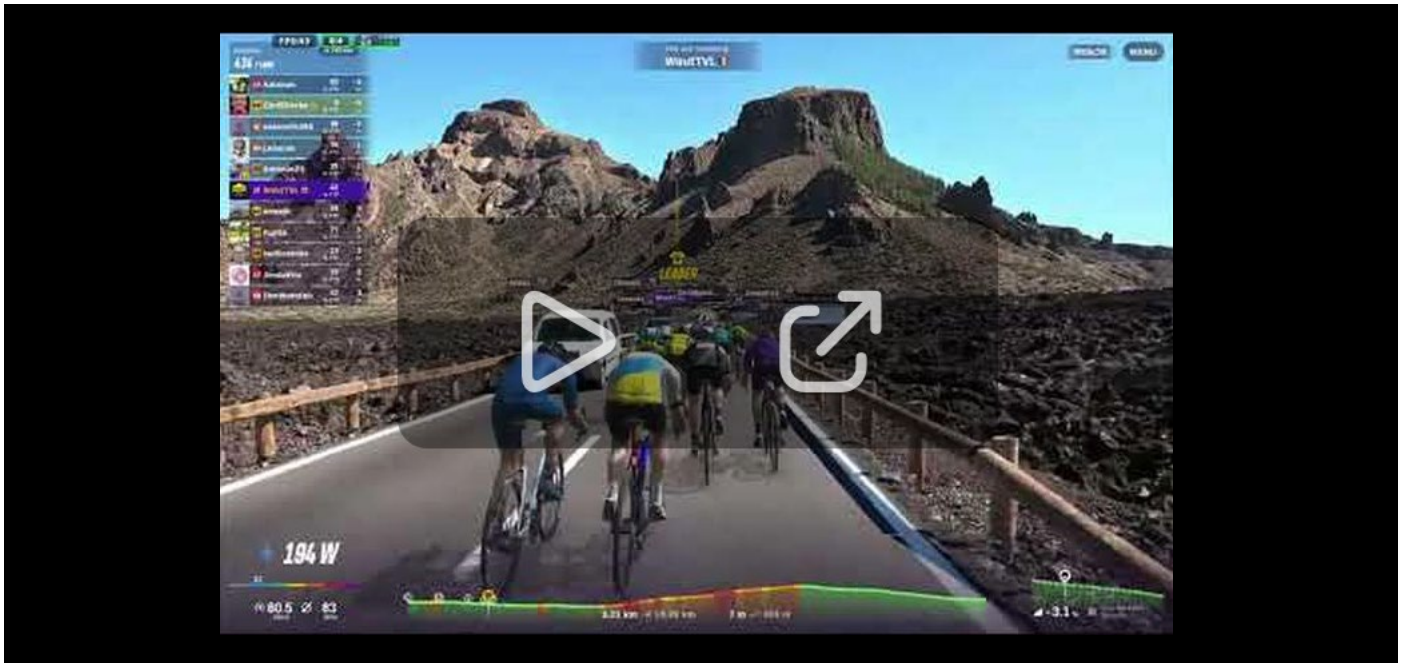
By 2026, we expect this technology to streamline content creation. Community members and route creators can contribute to our library using basic video equipment, making the process more accessible and scalable. This approach allows us to expand our route offerings while maintaining high quality standards, giving riders access to an ever-growing selection of real-world locations.

Cycling routes immersive experience. Image courtesy of ROUVY.

The personalization revolution: AI as your training partner

The future of indoor cycling technology undeniably lies in AI-driven personalization systems. We're developing sophisticated recommender systems that understand each rider's fitness level, training goals, and preferences to create truly individualized experiences.

Beyond this, the entire application experience can be dynamically tailored to reflect each user's unique preferences. With AI at its core, personalization moves beyond simple content recommendations. Intelligent systems can now adapt the entire interface - its layout, visuals, and functionality - to match user behavior and style. This level of smart customization transforms applications into living experiences that evolve alongside their users.



Virtual Group ride Tenerife. Video courtesy of ROUVY.

Imagine AI that automatically recommends routes matching your current fitness level, suggests training sessions that complement your outdoor rides, or dynamically generates custom soundscapes that match your cadence and power output. Our recent experiments with personalized audio tracks that adapt to performance metrics show remarkable results in motivation and training adherence.

Redefining interaction: Beyond the handlebar

The way users interact with applications is undergoing significant transformation. In physical e-sports, we're moving beyond traditional touchscreen and keyboard interfaces to embrace a multi-modal future. The growing ecosystem of remote controls - from steering devices to haptic feedback systems - provides more natural, intuitive control during intense efforts.

We also see growing potential in voice control which can become essential for high-intensity training sessions where physical interaction can be impractical. Adjusting target difficulty, requesting performance metrics, or receiving real-time coaching feedback through simple voice commands should allow athletes to maintain focus and form.

Scaling for global competition

We're evolving our platform architecture to support massive concurrent events with thousands of riders competing simultaneously. AI-powered monitoring systems analyze performance patterns in real-time, ensuring fair play and competitive integrity without interrupting the flow.

By 2026, this intelligent infrastructure will enable new event formats - from global championships to spontaneous community challenges - all running seamlessly whether with 10 or 10,000 concurrent riders.

Jan Jedlicka,
Lead Architect, ROUVY

Looking ahead

As we head into 2026, the fusion of AI, immersive technology, and social connectivity isn't just transforming indoor cycling - it's redefining what it means to train, compete, and connect in digital spaces and the real world. The future isn't just immersive; it's intelligent, personal, and inherently social.

Matúš Kocka,
Technical Director, ROUVY

TREND 3

Immersive training for skills: Upskilling & reskilling

Industries: *Healthcare, space technology.*

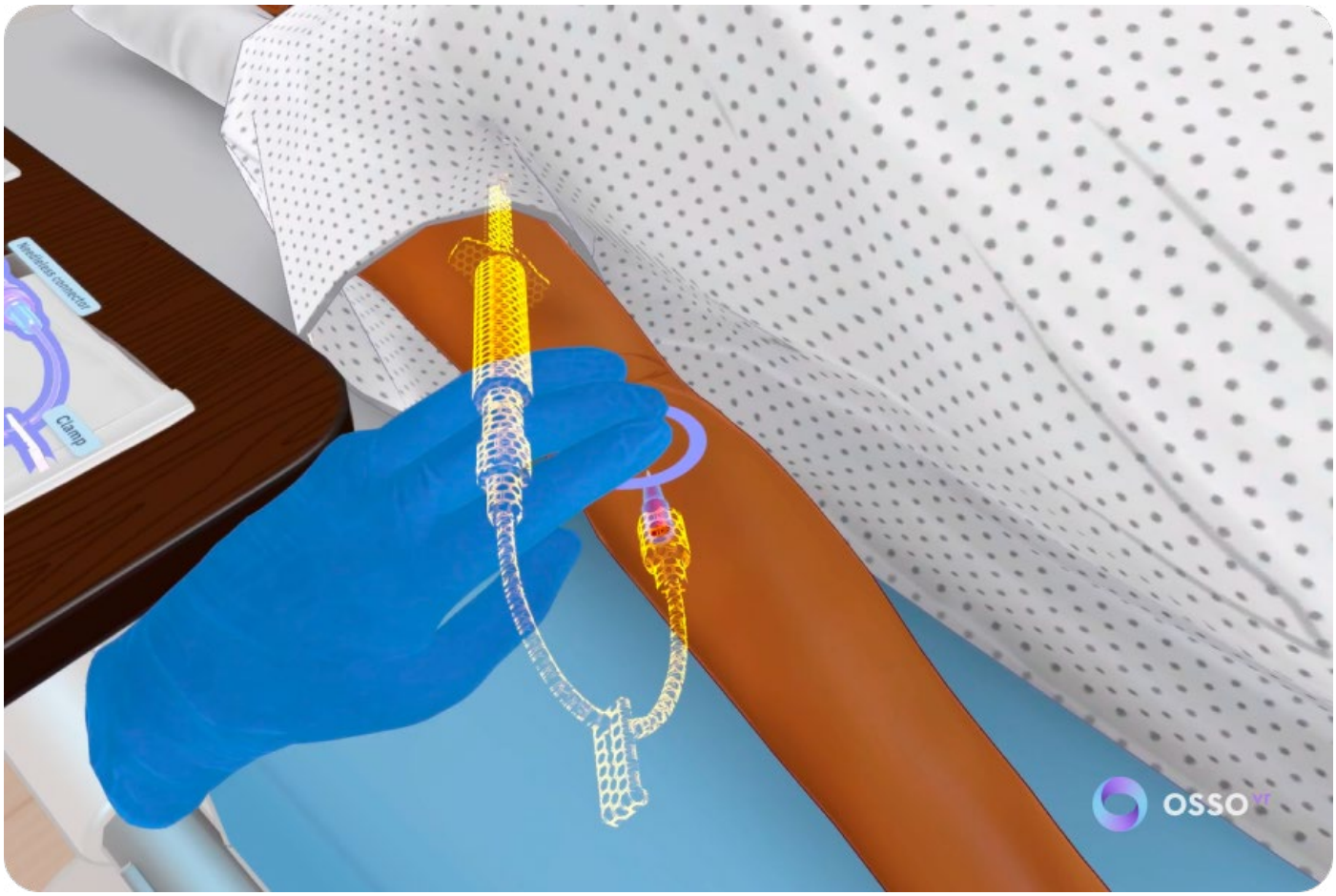
Use cases: *VR Healthcare training, aerospace training simulator.*

Contributors: *Osso VR, Pale Blue, Lucid Reality Labs, Specto Medical AG*

In high-stakes industries like healthcare, manufacturing, and aerospace, effective training is paramount. Immersive technologies are transforming how professionals are upskilled and reskilled by providing safe, repeatable, and data-rich learning environments. Experts from ***Osso VR***, ***PaleBlue***, ***Lucid Reality Labs***, *and* ***Specto Medical*** *share their insights on how immersive training is creating a more prepared and resilient workforce, from nurse training to astronaut preparation.*

Justin Barad,
Co-founder + Chief Strategy Officer, Osso VR

Defeating burnout: The convergence of immersion and impact in nurse training



VR training for nurses in action. Image courtesy OssoVR.

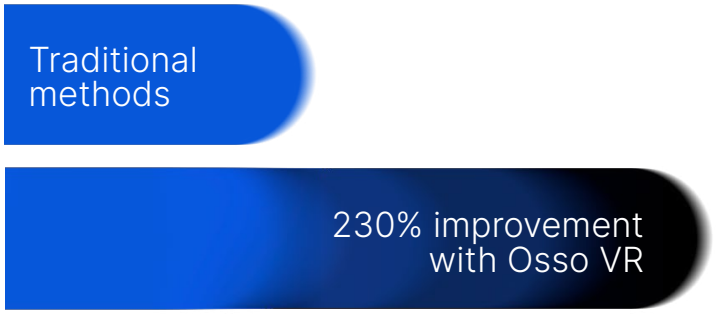
The nursing profession faces a global workforce crisis: record shortages, rising burnout, and demanding workloads. Traditional training models based on classroom lectures, observation, and limited practice opportunities struggle to keep up with low retention rates and increasing performance expectations. Immersive training has become a critical solution to this challenge. By placing nurses directly inside realistic, hands-on clinical scenarios, VR training enables learning by doing rather than by watching.

While practice is important, assessment and data may be even more so. Traditionally, in healthcare, we rely heavily on subjective evaluations of our own and others' competence. However, this is notoriously difficult and prone to inaccuracy. VR training offers the opportunity for a true, objective assessment. This not only gives learners insight into their proficiencies and gaps, but also provides organizational leaders with a broad awareness of the skill mix of the entire health system. This allows them to identify and address problems before patients are affected, rather than after the fact, which is unfortunately how things work today.

VR training for nurses in action. Image courtesy OssoVR.

Multiple published studies have demonstrated the effectiveness of VR training in healthcare. Osso VR has been shown to improve performance by 230% compared to traditional methods. The immersive nature of VR allows learners to make mistakes safely, receive instant feedback, and repeat key moments until mastery is achieved, accelerating readiness while reinforcing long-term retention.

Performance improvement



Safe practice space

Instant feedback

Long-term retention

What is also valuable about immersive training is the environmental and economic impact. We often rely on single-use consumables for practice, such as procedural kits and other materials that generate both cost and waste. By digitizing these experiences, virtual simulation reduces reliance on physical resources while maintaining or even improving quality. Hospitals and health systems adopting VR platforms can expect both faster onboarding and lower per-trainee material costs, aligning education with broader sustainability goals.

The recent explosion of interest in smart wearables paints an even more exciting vision of the future. These breakthroughs provide opportunities to make immersive training more accessible, scalable and friction-free. Imagine a healthcare professional wearing their everyday glasses when they get word that an emergency is on the way in. With a simple voice command, they can load up a hands-on refresher course, complete it and be ready to go just like that.

The boundary between training and clinical practice is becoming increasingly blurred. Immersive simulation no longer serves merely as a substitute for the real world; it is becoming an integral part of it. The result will be a more prepared, resilient, and connected healthcare workforce and, most importantly, the patients who will have the peace of mind knowing they will always get the very best care.

Justin Barad,
Co-founder + Chief Strategy Officer, Osso VR

Felix Horn,
Co-founder & CEO, PaleBlue

XR transforms astronaut training

Astronaut Training in VR. Video courtesy of PaleBlue.

Space exploration needs extensive preparation. VR and XR technologies have been part of astronaut training since the 1990s. The spatial technologies have been used for a number of training cases, from moonwalk studies to robotic arm simulators.

Until recently, zero-gravity experiences were found mainly in VR games, but not in real astronaut training. Starting in 2020, the European Space Agency (ESA) has been developing XR training using Unity technology for zero-g methods together with PaleBlue, an immersive space tech company. Getting input from astronauts

such as Samantha Cristoforetti and Luca Parmitano, ESA and PaleBlue have created a training simulator modeling the effects of zero-g locomotion in a XR setting, allowing for simulator training for the astronauts' work at the International Space Station.

To calibrate the system's behavior, parabolic flight campaigns have been employed. In such a campaign, a special airplane is flown on a parabola, to recreate weightlessness. PaleBlue and ESA have conducted parabolic flight campaigns, performing motion capture of humans in weightlessness to further improve the accuracy of virtual zero-gravity motions and effects.

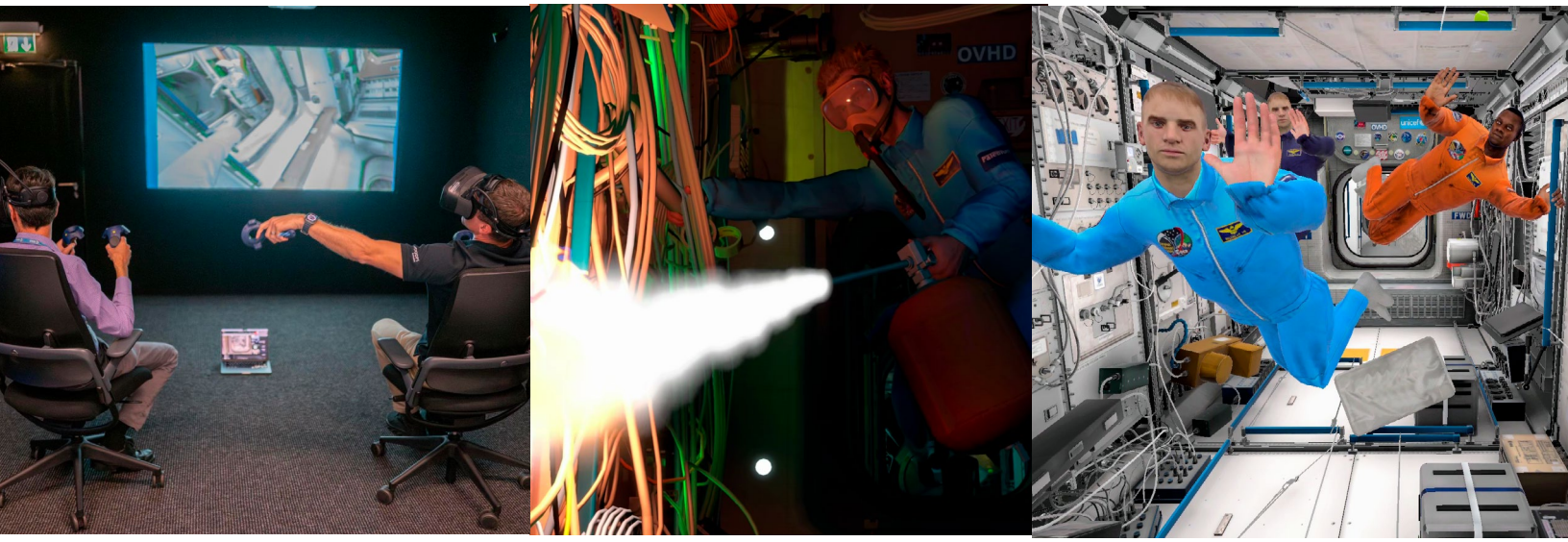
XR training in zero gravity. Image provided by PaleBlue. All rights reserved.

Today, astronauts go through XR training to familiarize themselves with the layout of the International Space Station (ISS) and learn to move in weightlessness. The tool is also promising in building resistance to motion sickness. Recent Axiom missions, Ax-3 and Ax-4 carried astronauts that have undergone training in PaleBlue VR simulation systems: for instance, ESA astronaut Marcus Wandt, having completed VR training in the simulator, had a head start in 2024 understanding how the International Space Station is set up and how to navigate in zero gravity.

There is a continuous push within the aerospace industry towards greater involvement of XR in all stages of a space mission.

Felix Horn,
Co-founder & CEO, Pale Blue

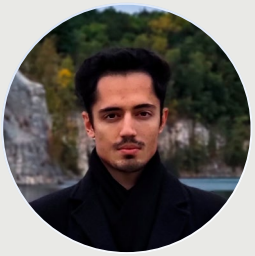
XR systems are used to verify the design of spacecraft and train the crews. The next step is using XR in operations, and this is where development is underway. PaleBlue, along with XR and spaceflight industry leaders, has formed a SpaceXR consortium, to build XR technology for supporting astronauts inside spacecraft, as well as outside during spacewalks (EVAs). This will enable greater awareness and understanding of space missions, bringing deep space exploration closer.



VR astronaut training. Images provided by PaleBlue. All rights reserved.

Lynn Welch, Chief Growth Officer, Lucid Reality Labs

Alex Dzyuba, Founder and CEO, Lucid Reality Labs



Ivan Taranov, Head of AI & Engineering, Lucid Reality Labs

Joanna Vetulani, Head of Art, Lucid Reality Labs

From hardware to impact: The era of intelligent content and smart learning

Lucid Reality Labs VR training hero image. Image courtesy Lucid Reality Labs.

After a year defined by rapid hardware evolution, the XR landscape is ready for its next step. Launches from Samsung, Apple, Meta, and others brought long-awaited progress in device performance, form factor, and accessibility. Hardware has become more capable, comfortable, and practical for everyday use. The technology has matured and is no longer a question of availability but of purpose. With stronger, lighter, more affordable devices in hands of consumers and enterprises, the focus shifts to what truly defines value and purpose: AI-driven, intelligent content.

2026 will be the year of XR content that is measurable, adaptive, meaningful, and integrated with AI embedded at the device level.

Lynn Welch,
Chief Growth Officer, Lucid Reality Labs

The industry has moved beyond experimentation into applied transformation. Enterprises are no longer exploring whether XR works, but how it scales, creates value, and delivers proven results. Content now connects advanced devices with real-world outcomes that teach, solve challenges, and create measurable impact.

Intubation Simulation Powered by Medical Agent by Lucid Reality Labs.
Video courtesy of Lucid Reality Labs.

Unity stands at the centre of this shift, evolving beyond its origins as a game engine to power enterprise-ready innovation in healthcare, education, and beyond. At Lucid Reality Labs, we contribute to this evolution daily by creating AI-powered immersive solutions built on Unity to enhance learning, improve safety, and deliver measurable results. From clinical simulation to enterprise training, Unity-based XR enables professionals to learn and perform in ways previously impossible.

Alex Dzyuba,
Founder and CEO, Lucid Reality Labs

Several technical factors accelerate this transition. The next-generation headsets have unified capabilities across ecosystems. Shared standards, like OpenXR, combined with eye tracking, hand tracking, and spatial mapping, provide a consistent interaction layer. Simultaneously, AI has entered production, as generative tools accelerate asset creation, drive behavioral logic, and enable personalization.

Immersive Simulation Lifeguard VR Training for the American Red Cross by Lucid Reality Labs. Video courtesy of Lucid Reality Labs.

On the art production side, AI is accelerating 3D workflows for immersive XR content. Automated model fixes, texture mapping, and motion-capture processing streamline production, enabling faster iteration and greater realism. Yet handcrafted animation remains essential, bringing depth, accuracy, and human perception, ensuring immersive design stays native, visually trustworthy, authentic.

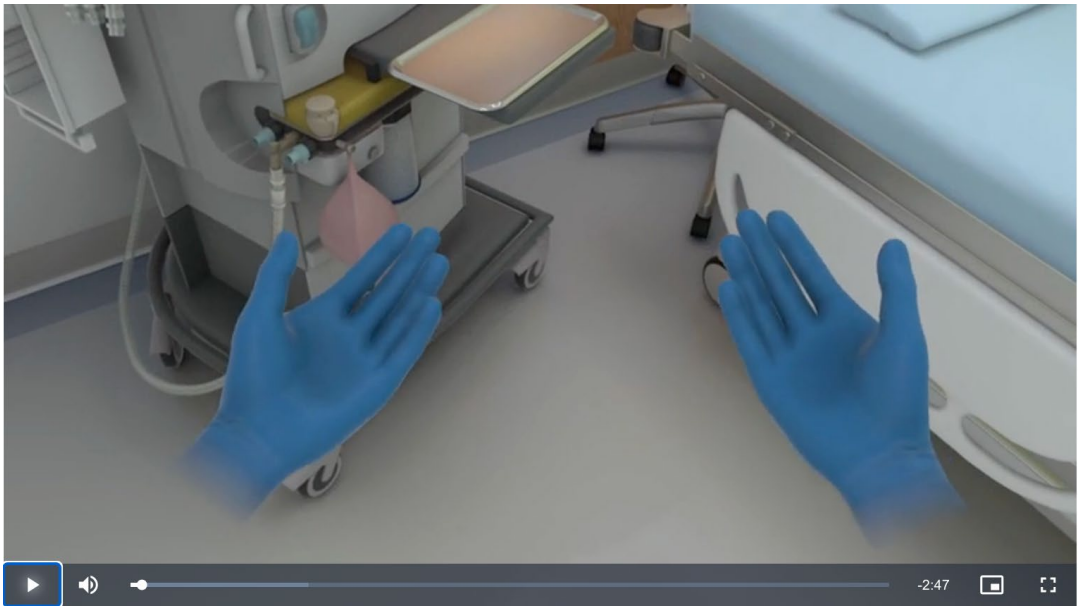
Delivery is changing, too. Cloud rendering and streaming allow instant deployment without installations. Demonstrations at the Galaxy Event, including integrations with YouTube, Netflix, and live sports, showed how immersive content can be streamed in real-time. XR is no longer about passive watching but being engaged and immersed.

Spatial computing tools such as Unity PolySpatial and visionOS SDK bring immersive content into real-world environments.

With AI integration, XR evolves into a natural interface for intelligent systems: immersive AI agents interact, respond, assist inside 3D spaces, unlocking new levels of engagement.

Ivan Taranov,
Head of AI & Engineering, Lucid Reality Labs

Web-based AR broadens accessibility, enabling experiences to run directly in browsers, instantly reaching millions. Virtual worlds now train intelligent systems and autonomous robots, providing safe, repeatable simulations, accelerating learning and mitigating risks. Device-agnostic development ensures seamless performance across headsets, tablets, and phones, lowering friction and driving adoption.



Medical VR Difficult Airway Tracheostomy Simulation by Lucid Reality Labs. Video courtesy of Lucid Reality Labs.

Ultimately, intelligent content will define the next phase of XR. It must be responsible, intuitive, scalable, and focused on measurable outcomes. Achieving this vision requires alignment across hardware, AI, and design within a unified ecosystem. Enterprises will lead this transformation, creating the generation of solutions that deliver impact and evolve through intelligent, human-centered design.

Dr. José-Luis Moctezuma,
CTO, Specto Medical AG

From simulation to collaboration: Immersive tech's role in the future of healthcare.

Immersive technologies continue to gain significant momentum in the healthcare delivery space. We're witnessing a transformative shift where diagnosis is increasingly embracing spatial understanding, discovering the hidden information that resides within 3D morphology and exploring how it relates not only to anatomy but also to physiology.

Beyond diagnostics, the next wave of innovation will focus on evaluating treatment options through realistic 3D simulation. This approach utilizes native diagnostic images augmented with AI-generated spatial insights, promising to revolutionize how we plan and execute patient care. I believe that by 2026, these technologies will become integral to clinical decision-making, fundamentally reshaping how healthcare professionals visualize, understand, and act upon complex medical information.

Addressing organizational priorities

These technologies are proving instrumental in addressing several critical priorities within healthcare organizations.

Workforce training and education: Sharing insights through immersive platforms accelerates and enriches the educational process, enabling faster and more holistic learning experiences for healthcare professionals.

Cross-functional collaboration: Immersive technologies empower care teams to optimize and orchestrate patient care by aligning care delivery along established therapeutic measures. This ensures that every specialist and team member maintains perfect awareness of the importance and timing of their collaborative contribution - whether working simultaneously in the operating theater or asynchronously throughout perioperative episodes.

This level of coordination represents a significant advancement in how multidisciplinary teams can work together to deliver superior patient outcomes.

From experimentation to measurable impact

While enthusiasm for immersive technology in healthcare has continued to grow, adoption is still lagging behind expectations. However, this gap is often not due to the value these technologies provide, but rather to the limitations of available hardware, which frequently does not match the professional requirements of daily clinical use.

This signals an important inflection point: as hardware technology catches up with clinical needs, we can expect to see a rapid acceleration in adoption and measurable business impact. The constraint is technological maturity, not value proposition - which bodes well for the near future.

Emerging trends for 2026

The most critical trend I see gaining momentum in 2026 is the integration of immersive visualization within established workflows. This will be a key element in progressing adoption of these technologies, which will gradually reshape these very workflows into more streamlined and informed processes.

Dr. José-Luis Moctezuma,
CTO, Specto Medical AG

This evolution will help increase both efficacy and efficiency, ultimately leading to better healthcare outcomes. The future isn't about isolated immersive experiences, but rather about seamlessly woven spatial computing capabilities that enhance every step of the care continuum.

TREND 4

Democratization of 3D data across teams for improved accessibility and collaboration

Industries: *Manufacturing, retail, software.*

Use cases: *Geospatial digital twins, training and guidance, customer experiences.*

Contributors: *Heizenrader LLC, Wren Kitchens, Esri*

As organizations adopt real-time 3D, breaking down data silos becomes crucial for success. Success in 2026 depends on connecting workflows and democratizing access to complex 3D data across all teams. ***Heizenrader***, ***Wren Kitchens***, *and* ***Esri*** *discuss how AI and immersive tech are preserving institutional knowledge and making it accessible, turning static data into an interactive asset for the entire organization.*

Cory Heizenrader, CEO, Heizenrader LLC

Alex Castedo, CPO, Heizenrader LLC

The democratization of 3D: How AI and immersive tech are connecting knowledge across industries

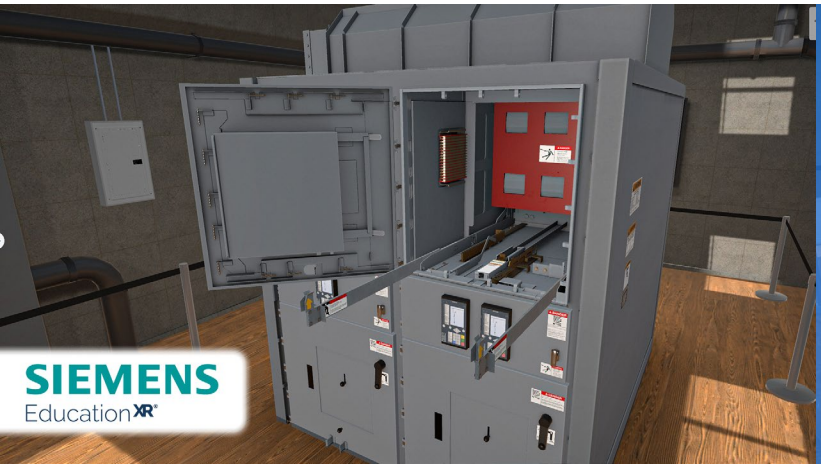
EducationXR Industry ecosystem overview of solutions and platforms.
Video courtesy of Heizenrader.

We are witnessing the birth of a new digital industrial revolution. Artificial intelligence has captivated the minds and hearts of the tech world, and human knowledge is being categorized, tagged and shared thanks to the advent of Large Language Models (LLMs). We

are now living in the “data revolution era” where knowledge and intelligence are becoming a new commodity that almost anyone can access. This tremendous acceleration in digital forward thinking does however, come with a new set of challenges that need to be understood and addressed if we want to stay at the forefront of this revolution.

Spatial knowledge and data are scarce, the majority of “data” collected for training LLMs being “just” textual information, while the physical, spatial world is being left undocumented or utilized until very recently. We are also losing an incredible amount of institutional knowledge as older generations of employees move out of the workforce and our antiquated educational models are showing their age by failing to address these issues. This is where real-time 3D content will show its biggest value: spatially documenting processes, knowledge and intelligence, bridging the gap of knowledge between generations and accelerating the speed at which Industry can grow their workforce.

Leading industry partners are making strides today by digitalizing their institutional knowledge in 3D, accelerating training and making it commonplace thanks to multi-modal delivery platforms. A multitude of use cases across healthcare, manufacturing, automotive, energy and even defense, are being developed today by our customers. And the key to this new revolution? The democratization of 3D development.



Siemens and EducationXR workforce training solution. Image courtesy Heizenrader, LLC

EducationXR training module content. Image courtesy EducationXR.

This is a story we have observed in the past with video, a type of media that was only (previously) accessible to teams of professional video makers in the past. Throughout the decades, video making tools became commonplace, and today, anyone with a phone and a computer can develop their own video productions without complex or expensive setups. This same paradigm is happening today with real-time 3D and Unity is leading the way. Industry partners across all verticals are asking for tools and workflows that subject matter experts (SMEs) can utilize on their own without having to be expert programmers. Platforms such as EducationXR are making this transition possible with tremendous results. SMEs, from product managers, marketing professionals and even instructional designers are now becoming interactive 3D developers, owning their companies’ digital workflows and becoming independent in the journey to 3D digitalization.

We stand at the intersection of two transformative forces, real-time 3D technology and artificial intelligence, each amplifying the other's potential.

Cory Heizenrader,
CEO, Heizenrader LLC

As AI becomes increasingly capable of understanding and generating knowledge, and 3D platforms empower anyone to spatially document and share that knowledge, we are witnessing the foundation of a new digital ecosystem where information is not only accessible, but truly experiential. The convergence of immersive 3D content with contextually aware AI will redefine how industries train, collaborate, and innovate, turning knowledge into a living, interactive medium that evolves alongside human ingenuity.

Katie Fisher,
Technical Development Manager,
Wren Kitchens

A more holistic view of 3D unlocks a world of experiences and tools

Exporting a customer plan into blender. Video courtesy of Wren kitchens.

For nearly a decade, Wren has been offering real-time 3D and VR customer experiences, and we've firmly established it as an integral part of the customer journey. As we enter our second decade with these technologies, we're expanding their scope to unlock even greater efficiency, creativity, and versatility across the business.

Our development efforts now focus on connecting every aspect of our previously highly specialised and separated 3D pipelines. This includes increasingly common processes like converting CAD data into real-time ready assets, but also some less conventional things, like hooking up our real-time configurator to Blender, allowing us to take real customer configurations to marketing-ready renders very quickly. These kinds of integrations let us bridge previously disconnected parts of our content creation pipeline, allowing us to keep pace with product launches, and fostering faster experimentation.

I originally started my 3D career in games development, and Unity felt incredible to use because of how quickly you could iterate and how much easier it became to port your work to new systems. When I transitioned to industrial 3D at Wren, those same qualities were naturally transferable.

Our primary application has evolved into something of a Swiss army knife. It enables fast export of customer designs into multiple 3D formats, making it easy to integrate with other tools like Blender. Customers can instantly generate videos, high-quality offline renders, or even export their configurations for use in VR. The same codebase can be repurposed into entirely different applications, allowing us to build exciting proof-of-concepts like augmented reality experiences and spatial awareness tools in a matter of days, not months.

Hackathons within the team have further showcased the strength of our platform. Thanks to our modular and adaptable system, our devs can quickly prototype features and explore new ideas.

Looking ahead, the possibilities for experimentation are vast, and we're just scratching the surface. One of our biggest challenges remains large-scale asset porting. With over 100,000 individual assets per platform, each potentially loaded in limitless configurations, bringing everything up to production quality remains time-consuming. Asset preparation still introduces unavoidable delays.

However, we're encouraged by Unity's move to unify its rendering pipelines, a step that should greatly benefit industrial applications like ours that need compatibility across a far wider array of systems than a video game would.

Katie Fisher,
Technical Development Manager,
Wren Kitchens

We're currently planning a large upgrade to our continuous deployment pipelines for assets. The rate at which we can build and deploy new assets should be able to scale with the business, as we're onboarding products faster than ever.

While AI hasn't yet proven capable of generating production-ready 3D assets from scratch, we're seeing real value in targeted, assistive systems that accelerate human workflows rather than attempt to replace them.

Katie Fisher,
Technical Development Manager,
Wren Kitchens

In conclusion, by adopting a comprehensive, end-to-end approach to our 3D stack, we've opened the door to rapid feature development, rich customer experiences, and faster collaboration with third parties.

Rex Hansen,
Principal Product Manager,
ArcGIS Maps SDKs, Esri

Next-gen digital twins: Fusing reality capture and GeoAI

Game engines like Unity now serve as powerful platforms for immersive visualization and interaction with real-world digital twins, spanning everything from high-end desktops to mobile devices and XR headsets. However, achieving a truly effective immersive experience depends on having an accurate digital representation of the real world.

Traditional methods for building digital twins, such as BIM, CAD, and static imagery, often fall short - they may not reflect current conditions and require extensive manual interpretation. To address this, organizations are adopting new approaches that combine reality capture technologies (like drones, LiDAR, and 360° cameras) with geospatial AI (GeoAI) to produce detailed 3D spatial models, classify and structure features, and incorporate results within a geospatial system of record (GIS).

As data capture becomes more accessible through affordable, high-performance consumer devices, generating high-accuracy, photorealistic 3D models of real-world environments is easier than ever. These digital twins can now be updated frequently, incorporating innovations such as radiance field representations (e.g., Gaussian splats) that optimize for visualization and distribution. AI further enhances this process by filling in missing spatial details and detecting changes in structure over time, ensuring digital twins remain complete and up to date. GeoAI also unlocks the potential of existing geospatial data, combining building footprints, digital surface models, and oriented imagery to create realistic city-scale 3D environments.

Esri ArcGIS Maps SDK for Unity. Video courtesy of Esri.

GIS powers living digital twins at the edge

Activating a real-world digital twin requires real-time data integration to enable accurate, informed decision-making. Within GIS, this involves ingesting live sensor, location, and event data; analyzing it; and triggering responsive actions. Because real-time data volumes are often vast, server-side analysis and distribution are essential. However, as edge devices become more powerful and affordable, more computation is shifting to the field, allowing critical, time-sensitive analysis to occur where data is captured. For instance, edge-based fusion of camera and sensor inputs can provide real-time object detection and situational awareness, enabling immediate responses when seconds count.

Ultimately, the future of digital twins extends beyond visualization toward real-time interaction, predictive analytics, and intelligent decision-making powered by living, intelligent geospatial systems.

Rex Hansen,
Principal Product Manager,
ArcGIS Maps SDKs, Esri

TREND 5

Tech for good — Implementing sustainable practices

Industry: *Manufacturing.*

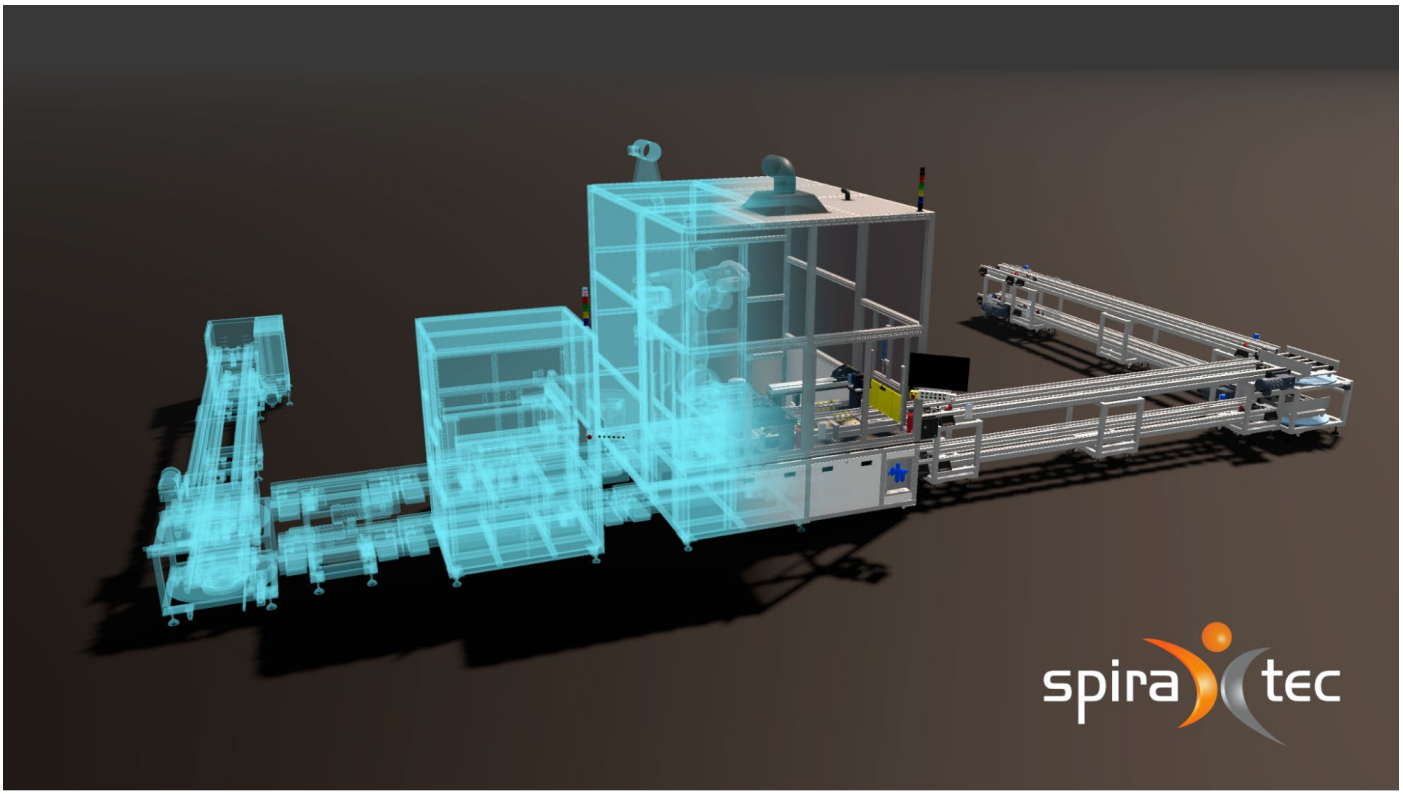
Use case: *Virtual commissioning.*

Contributor: *SpiraTec AG*

The convergence of immersive technology and AI extends beyond efficiency and profitability; it is becoming a powerful driver for sustainability. By shifting complex processes into the virtual realm, industries can significantly reduce material waste, energy consumption, and physical risk. From industrial automation, ***SpiraTec AG*** *demonstrates how a "safe by design" approach not only protects workers but also fosters more sustainable and responsible operations.*

Viktor Gaponenko,
Senior Software Engineer,
SpiraTec AG

Safe by design: How immersive tech and AI make industry more sustainable



Virtual Commissioning: Digital process simulation and optimization before physical deployment. Image courtesy SpiraTec.

We often talk about digital twins and virtual commissioning, but the real value of immersive technology in industrial automation goes deeper - it's about safety. When applied effectively, these tools go far beyond visualization - they let people interact, experiment, and learn from mistakes safely before working on the real machine. In one of our recent projects, SpiraTec created a digital twin of a stamping machine connected to a real PLC and streaming a live HMI from the machine manufacturer.

The model includes safety sensors, control panels, and the full logic of the real system. What makes it special is the VR integration: users can step into the environment, operate the panel, trigger sensors, and even simulate emergency stops, just like on the real machine, but without any risk or downtime.

This setup changes how safety is tested. Instead of waiting for the machine to be built, we can already validate PLC safety logic, check interlocks, and simulate accidents in a completely controlled environment. It brings mechanical, electrical, and automation teams together inside the same virtual space - something that was hard to achieve before.

AI adds another layer. By analyzing operator behavior in the simulation, AI can spot unsafe actions or slow responses and suggest improvements. This creates the foundation for predictive safety, where systems continuously learn from virtual and real interactions to prevent incidents before they happen.

Beyond safety, the environmental impact is huge. Every virtual test means fewer physical prototypes, less travel, and lower energy use. What began as a safety tool also contributes directly to sustainability and efficiency.

Viktor Gaponenko,
Senior Software Engineer,
SpiraTec AG

Looking ahead to 2026, we believe immersive technology and AI will become core safety components in industrial design. Digital twins will evolve from visual models into intelligent systems that understand, predict, and prevent errors.

The future of safety isn't just about protecting people after something goes wrong - it's about designing machines that learn, adapt, and protect by default.

Afterword

What this year's contributions make unmistakably clear is that we have crossed a threshold. Immersive technology and AI are no longer emerging capabilities - they are becoming the digital foundation on which the next generation of industrial, healthcare, and enterprise systems will be built.

Across every sector represented in this report, teams using Unity's real-time 3D ecosystem are moving from isolated experiments to production-scale transformation: engineering systems virtually before a single component is manufactured, training clinicians and astronauts with precision previously impossible, and turning the world's 3D knowledge into a shared resource accessible across entire organizations.

This acceleration is happening because the barriers that once held real-time 3D back - data complexity, specialist-only tooling, long iteration cycles - are finally dissolving. Organizations aren't just looking for new experiences; they're looking for speed, clarity, and the ability to involve more people in the creation process. They are looking for a way to scale.

This is exactly where Unity Industry is focused.

We are building a connected ecosystem that gives teams the performance, automation, intelligence, and accessibility required to deliver immersive solutions at enterprise scale:

- Unity Studio opens creation to new roles, enabling designers, trainers, engineers, and domain experts to build interactive 3D content directly from the browser.
- Unity Asset Manager and Asset Transformer turn massive CAD, BIM, and spatial datasets into a single, real-time-ready source of truth that teams across the business can access, review, and build upon.
- Unity AI shortens iteration cycles, automates repetitive tasks, and lowers barriers to high-quality 3D creation - helping teams deliver production-ready experiences faster, with more confidence.

- The Unity Editor and Unity 6 provide the performance, rendering quality, and extensibility needed for mission-critical simulation, visualization, and XR deployment.

Together, these capabilities allow organizations to collapse the distance between concept and execution - between physical and digital - between vision and value.

The stories in this report point to a future where immersive tech, AI, and sustainability are not separate initiatives but interconnected forces. A future where real-time 3D is woven into daily decision-making. Where virtual-first engineering reduces waste and accelerates innovation. Where training becomes safer, smarter, and more equitable. Where institutional knowledge lives not in documents, but in interactive spatial workflows. And where data moves freely across teams, powering a level of collaboration that simply wasn't possible before.

This is the convergence era.
And it's only just beginning.

At Unity, we are committed to helping every organization turn this shift into competitive advantage - by making real-time 3D easier to adopt, easier to scale, and accessible to more creators than ever before. The companies featured here are showing what's possible. Our mission is to help the rest of the world get there faster.

The next wave belongs to those who can imagine it - and build it.
We're here to help you do both.

Henning Linn, Senior Director, Industry Solutions, Unity


Unity®