

Unlocking the true capabilities of extended reality

Discover how Verizon 5G can help you bring immersive technologies into your everyday business operations.



Extended reality (XR) is evolving.

It's going from being a novelty to becoming a practical, results-driven capability for many industries. From surgical simulations in healthcare to guided assembly on manufacturing floors, XR is offering new, immersive ways to work, learn and solve problems. The technology's ability to visualize complex environments and overlay data in near real time is turning into a strategic advantage – especially for organizations facing labor shortages, operational risk or global reach demands.

However, unlocking the full potential of XR can come with challenges:

- 💰 High costs of equipment and deployment
- ⚡ Significant computing power demands beyond what standalone devices can handle
- 📶 A critical need for low latency and high bandwidth

Without addressing these challenges, immersive experiences can feel clunky, cause motion discomfort or fail to integrate into day-to-day workflows.

Explore XR in action across industries.

Take a look at how 5G connectivity within XR solutions can help address the challenges your industry is facing.

Oil and gas



Challenge

Hazardous environments and limited access to specialized experts make maintenance and inspections complex and costly. Unplanned downtime can become expensive, and sending staff to high-risk sites could increase safety risks.

Solution

XR wearables help enable:

- Workers to operate hands-free
- Access to visual workflows in near real time
- Instant connections with specialists
- Live inspections without requiring on-site presence
- Digital data capture for compliance requirements
- Near-real-time oversight without exposing personnel to unnecessary risk

Benefits

Get more efficient troubleshooting, reduced travel for expert staff, improved worker safety and faster return to service for critical equipment.

Manufacturing



Challenge

Quality control, detailed assembly processes and worker training traditionally demand close supervision and in-person expertise. Errors can lead to costly recalls or production delays, and scaling training for complex machinery can be resource-intensive.

Solution

XR technologies such as augmented reality (AR), virtual reality (VR), digital twins and assisted reality can:

- Provide near-real-time inspection feeds directly into the production line
- Help train staff to operate complicated equipment before they ever touch it
- Replicate factory environments for monitoring and scenario planning
- Deliver information overlays to support on-site workers

Benefits

Gain faster onboarding times, improve product consistency and help reduce human error.

Healthcare



Challenge

Highly specialized procedures require rigorous training and access to expert guidance. Geographic barriers and time constraints can limit the availability of experienced professionals, making it difficult to train staff or deliver complex care efficiently.

Solution

XR can enable medical applications such as:

- VR modules for surgical simulations for practitioners to rehearse complex operations safely
- AR overlays for clinicians to have near-real-time patient data access during procedures
- Connection for medical staff with off-site specialists
- Artificial intelligence (AI) glasses that assist with charting to give healthcare professionals more time with patients

Benefits

Gain access to experts in different locations, help improve training results and get stronger data protection.

Distribution and logistics



Challenge

Moving goods efficiently requires synchronized workflows across warehouses, transportation hubs and field operations. Missteps in picking, packaging or route planning can lead to delays, losses and increased costs.

Solution

XR technologies such as AI glasses, AR and VR can:

- Simulate and monitor logistics flows in near real time for optimization
- Guide workers through warehouse navigation and inventory tasks
- Prepare employees for operating heavy machinery or responding to supply chain disruptions
- Enable workers to use built-in front cameras as scanner replacements

Benefits

Help reduce operational bottlenecks, get better accuracy in order fulfillment and get dependable connectivity for teams stationed at temporary worksites.

Your connectivity matters.

Immersive environments require precise synchronization between the user's actions and the visuals or data displayed. Even minor delays or inconsistencies can break the sense of realism and limit usefulness. Reliable connectivity supports the use of these technologies in a broader range of locations.

When connectivity isn't dependable, it can affect every part of the XR experience. Even a brief lag can disrupt near-real-time collaboration, while lower-resolution visuals may reduce the impact of training or make inspections less precise. In critical environments, dropped connections can interrupt workflows and create delays. Connectivity issues can also increase the risk of security vulnerabilities, leaving sensitive intellectual property or data more exposed.

To create the foundation needed for XR to thrive, organizations need connectivity that can deliver:



Low latency

Essential for responsive interaction in fast-paced scenarios such as simulation-based training, equipment diagnostics or emergency response coordination



High bandwidth

Required to support rich textures, complex 3D models and data overlays for multiple users simultaneously



Enterprise-grade security

Necessary to help safeguard critical business intelligence from cyberthreats while data is in transit



Edge computing integration

Moves heavy processing tasks off of XR headsets and onto network edge resources to lighten device workloads and reduce overheating

Better XR starts with Verizon 5G.

With the power of America's fastest 5G speeds,¹ Verizon can enable organizations to find new ways to integrate XR into their operations that can be faster to deploy, easier to manage and ready to deliver results. Our 5G delivers the high-bandwidth capacity and network reliability that XR demands. With this level of performance, XR can help redefine the way teams work. The result is responsive, reliable and enterprise-ready XR experiences that deliver real results.

By moving processing power to the network edge, you can take advantage of having:



Lighter headsets

No bulky processors, just comfort and portability



Instant scale

Ability to roll out new sites or teams without reworking your system



Reduced data loads

Data processed closer to where it's generated for less traffic across the network

Ready to take the next step?

You've already seen what XR can do. Now it's time to take it to the next level. With the right foundation, XR can move from an impressive tool in select moments to a core capability powering everyday operations across your entire organization.

Why Verizon?

Making XR work in the real world requires a partner that understands your industry, your operational challenges and the complexities of deploying immersive technology at scale. Verizon has the expertise, technology and experience helping organizations across industries unlock the full potential of XR with fast, reliable, high-performance connectivity.

Verizon 5G gives XR the speed, low latency and security it needs to succeed, helping make immersive experiences near seamless, scalable and ready for real-world use virtually anywhere. Powered by America's most reliable 5G network,² it can help keep XR responsive in even the most demanding environments.

Learn more

Discover how Verizon 5G and our dynamic network solutions can help transform the way you use XR in your enterprise operations. For more about our XR-enablement solutions, contact a Verizon Business representative or call 844-235-7588.



1. Based on RootMetrics® United States RootScore® Report: 2H 2025. Tested with best commercially available smartphones on three national mobile networks across all available network types. Your experiences may vary. RootMetrics rankings are not an endorsement of Verizon.
2. Ibid.



© 2026 Verizon. All rights reserved. The Verizon name and logo and all other names, logos and slogans identifying Verizon's products and services are trademarks and service marks or registered trademarks and service marks of Verizon Trademark Services LLC or its affiliates in the United States and/or other countries. All other trademarks and service marks are the property of their respective owners. This content was created with the assistance of artificial intelligence.