

# 5G and the edge for immersive experiences

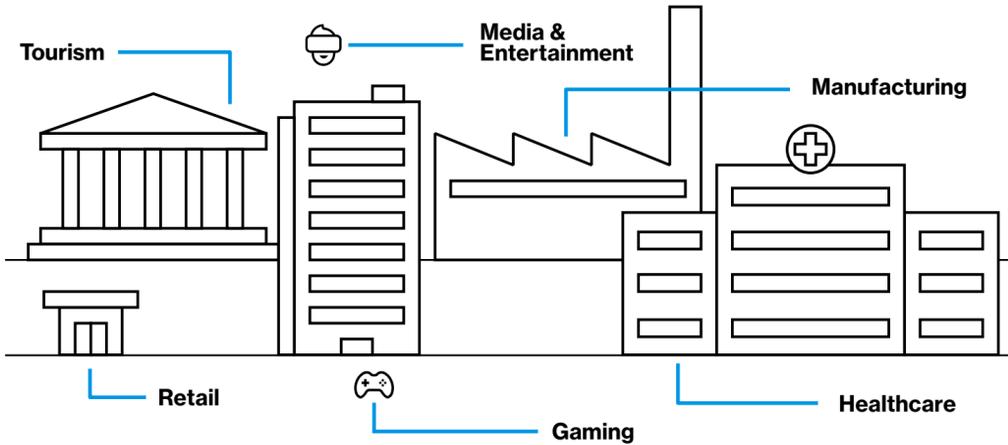
**Verizon 5G Edge with AWS Wavelength enables you to create new realities**

## Immersive experiences drive excitement and engagement

Extended Reality (XR), which includes both Augmented Reality (AR) and Virtual Reality (VR), creates opportunities for new and innovative modes of interaction



XR brings value to various use cases and industries.



### Media & Entertainment

Engage sports viewers with interactive selection of player perspectives during games. Allow music fans to stream 3D volumetric video streams from a venue, increasing fan loyalty.

### Gaming

Improve gaming experiences through fully-immersive 3D gaming with near real-time interactions.

### Manufacturing

Reduce downtime with AR-guided operations, maintenance, and equipment repair.

### Retail

Increase sales with interactive product engagement and smart AR mirrors that enable virtual apparel try-ons.

### Healthcare

Improve health outcomes using interactive 3D pre-operative walkthroughs and enabling XR-based diagnostic data visualization.

### Tourism

Save time and money with virtual tours of exotic locations.

## 5G and edge enables immersive experiences

**Ultra-low latency:** Close proximity of edge computing to the mobile user provides the lowest possible latency between computing and devices.

**Ultra-high bandwidth:** Data transfer between the edge computing resource and end-user devices reduces potential constraints in the backhaul or core network.

**Reliability:** Reduced number of network hops between the mobile user and computing resources helps ensure a reliable connection with reduced variability.

**Powerful computing:** AWS Wavelength provides access to powerful Amazon EC2 instances equipped with GPUs for fast visual rendering.

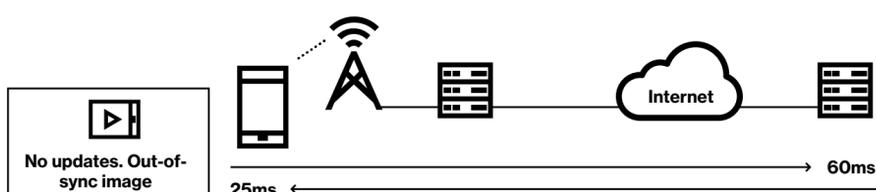
**Scalability:** AWS cloud services can be scaled up or down as needed based on customer workloads. Pay-as-you-go pricing provides added financial flexibility.

## AR-enhanced ice hockey example

AR-enabled app to see player-specific performance statistics overlaid on live action: distance traveled on ice, number of passes attempted and completed, overall performance rating. This leads to increased engagement, loyalty, and improves future monetization.

### Without 5G and edge computing:

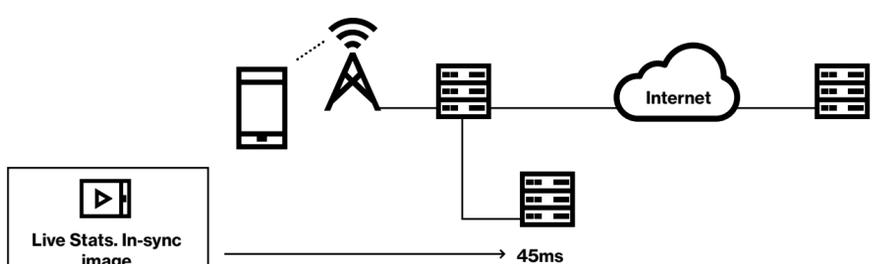
- 85 msec round-trip latency\*
- Out-of-sync overlay results in bad experience



### With 5G and edge computing:

- 55 msec round-trip latency (35% reduction)\*
- In-sync overlay with enhanced experience

\* Based on Verizon internal tests



## Immersive experiences using Verizon 5G Edge with AWS Wavelength

Explore how fast and reliable mobile technologies coupled with strategically-located edge computing resources can bring immersive experiences to enterprises and consumers everywhere.



AWS Wavelength is located with Verizon's 5G mobile core, providing the lowest latency and most reliable access to cloud computing that XR apps require.



Verizon 5G Edge is protected from direct internet access and relies on secure mobile identity management, providing increased security.



AR and VR apps can use Verizon Edge Discovery Service (EDS) in near real-time to find the closest AWS Wavelength instance.



Developers can use familiar AWS console, APIs and AWS services for development, with access to GPU-enabled EC2 instances for intensive graphics computing needed by XR.



Full-access to rich computing resources enables intelligent transformations and transcoding of near real-time immersive videos.



Edge-based immersive applications can continue to process data even if upstream network connections are down, improving network resiliency and application uptime.

## Get started.

Verizon 5G Edge with AWS Wavelength delivers interactive experiences with a smaller onsite footprint, a lower starting cost, pay-as-you-go pricing, and comes with a large ecosystem of developer and professional services support.

## Learn more

[verizon.com/5gedgeaws wavelength](https://verizon.com/5gedgeaws wavelength)

