THE
FUTURE OF VIDEO TECHNOLOGY

WOWZA

TABLE OF CONTENTS

WOWZA

Introduction

Here's an exercise: Try to count the number of ways video finds its way into your life each day. I'll go first.

My morning starts with a glance at the video-enabled baby monitor on my phone. From there, I'll scroll through social media while waiting for the coffee to brew. I might even stream an exercise class before work if I'm up early enough.

Like most desk workers in 2022, the bulk of my nine-to-five is made up of Zoom calls. I also clock plenty of time posting videos and blogs to content management platforms like WordPress.

Once work ends, I'll facetime my husband while cooking dinner to keep our daughter entertained. If he's unavailable, I might play her favorite sing-along videos on YouTube. We'll end our night with Netflix or another OTT platform — keeping an eye on the baby monitor once more.

Obviously, online video plays a huge role in my life. This isn't unusual, though. The average U.S. adult consumes almost eight hours of media each day, spanning video on demand (VOD), gaming, social media, and more. Routine use of video technology can also take the form of smart home solutions like doorbell cameras and virtual services such as telehealth visits.

The takeaway? These days, **video powers everything, for everyone, everywhere.**

So, without further ado, here's a look at the biggest trends in video, critical technologies paving the way, and our predictions for the decade ahead.

Traci Ruether
Content Marketing Manager
Wowza

Wowza

Big Trends

Video is a powerful tool in both business-to-business (B2B) and business-to-customer (B2C) settings. It can streamline operational efficiencies, boost customer experience, and transform an organization's product offering altogether. Ultimately, this all drives toward one goal: revenue growth.

But successfully putting video to work starts with making it a seamless component of everyday applications. Here are the trends transforming video into everything, for everyone, everywhere.

## EVERYTHING
Limitless Streaming Applications

01

No matter the industry or use case, video is fueling digital innovation. We conduct business meetings over Zoom, rely on backup cameras to navigate parking lots, and sweat to fitness routines on connected gym equipment. Even today's vacuums, watches, and medical devices have online streaming technology built in.

The healthcare sector relies on video-connected wellness devices, remote surgical capabilities, and smart hospitals equipped with AI-based surveillance. In the consumer world, shoppable video and digital fitness have replaced traditionally in-person experiences like going to the mall or gym.

Just look at the numbers. According to Cisco, video accounts for 80 percent of all internet traffic. That percentage is only expected to grow as tech giants like Meta evolve their strategy to focus on augmented and virtual reality (AR/VR).

Expect limitless video applications in the years ahead, with real-time interactivity and immersive technologies driving innovation.

WOWZA
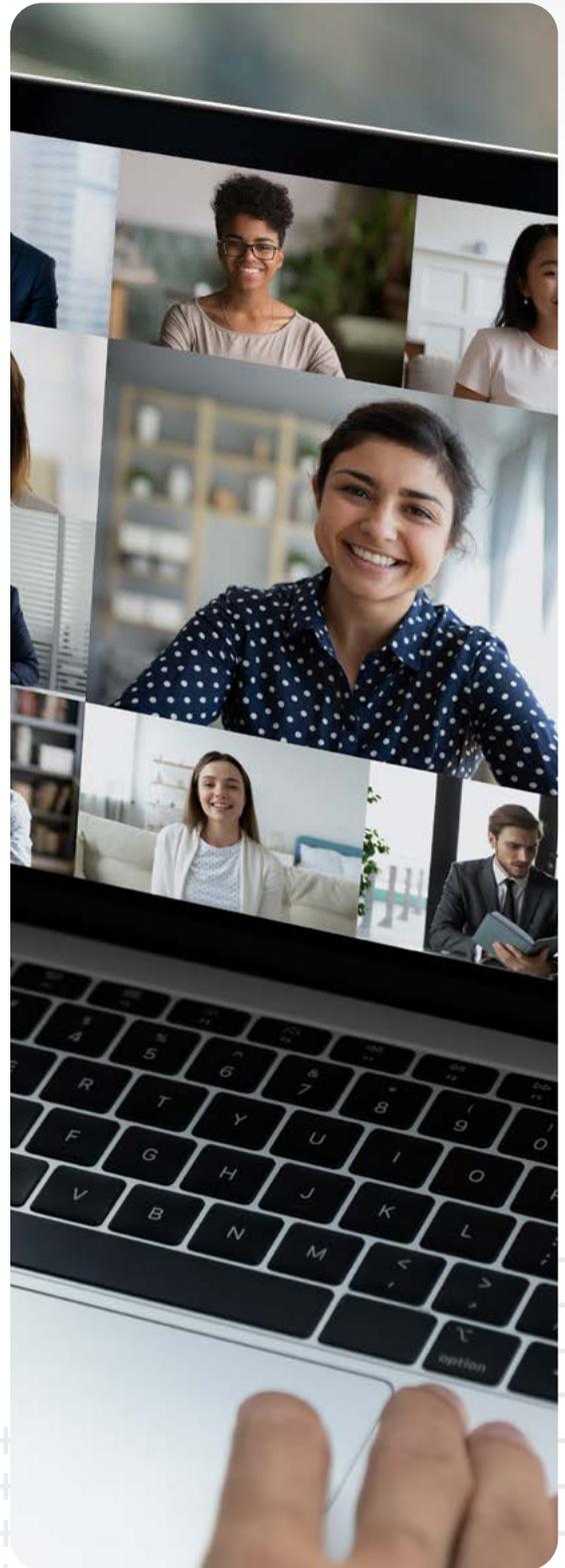
EVERYONE
Personalized and Relevant Content

Customer experience is now more important than an organization's core offering. That's why leading businesses have moved beyond a focus on tech to a focus on how tech can better serve their customers.

Viewers expect high-quality video delivery in just a few clicks. What's more, many have lost their patience for irrelevant content altogether. The onus falls on businesses to deliver effortless, personalized end-user experiences — no matter the industry or product.

Online shoppers are more likely to abandon their cart without personalized recommendations based on their browsing history. Similarly, OTT viewers will simply tune out when the same pharmaceutical commercial plays on repeat.

Luckily, today's data-rich ecosystems give content distributors unparalleled insight into customer demographics, viewing history, and geolocation. Effectively utilizing this information to enhance the customer experience is now vital to doing business.

Accessibility and inclusion have also become the norm across digital platforms. Automatic captioning, text-to-speech options, and creative use of extended reality (XR) technologies all serve toward this end.

It's simple. Meeting your customers halfway starts with providing accessible and targeted content. Today's innovators are relying on data automation to do just that.

WOWZA

It used to be that accessing online content required a cumbersome desktop computer tethered to the wall. Capturing and distributing video also involved substantial on-site infrastructure — which could take the form of a full-fledged broadcast studio or expensive satellite truck.

Today, though, viewers and publishers are on the go. We check home surveillance cameras on our smartphones and watch direct-to-VOD movie releases on our tablets. Whether at a coffee shop, walking through an airport, or on a road trip, we expect smooth viewing experiences and anywhere access.

Improvements to connectivity have made online video ubiquitous. For instance, during the 2022 Winter Olympics, both broadcasters and on-site personnel benefited from next-generation networking on China's 5G Express Train. It was the first train to offer 5G coverage at 350 kilometers per hour. Even more impressive, it housed the first high-speed live streaming studio, which was used to broadcast coverage of the Games.

Meanwhile, drones and internet of things (IoT) cameras mounted to snowmobiles helped capture outdoor events from every vantage point, while AR/VR studios made it appear as though remote commentators were broadcasting live from China's snowcapped mountains. The result? Global viewers enjoyed anywhere access to live Olympic footage — despite the numerous logistical challenges posed to capturing and distributing the content.

Remote video technologies have become standard, providing more flexibility across the board. Cloud-based workflows and high-speed connectivity power this trend, which we'll look at in depth below.

WOWZA
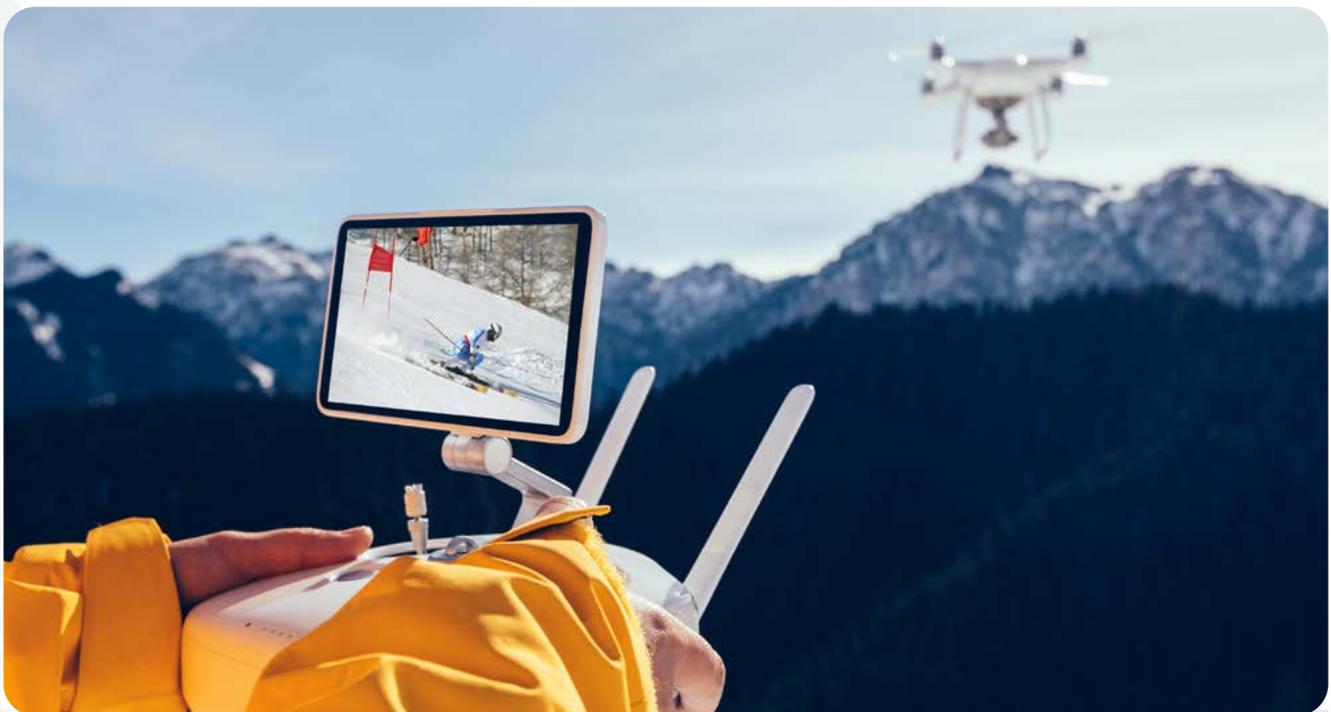
Critical Technologies

The proliferation of video across so many applications can be attributed to ever-expanding connectivity, infrastructure virtualization, and technological innovation. Here are some of the most critical capabilities shaping the future of video technology.

Cloud Computing

01

Video production, processing, delivery, and more have all moved to the cloud — delivering greater adaptability and scalability than ever before. With the cloud, organizations can innovate faster and expand further. Virtualized video environments are also key to remote-friendly workflows, which will remain standard long after the pandemic.

Migrating traditional video infrastructure to the cloud is a crucial step in any organization's digital transformation. Is also lays the groundwork for leveraging many of the capabilities detailed below.

5G

02

As the next generation of mobile communications, 5G brings landline speeds to mobile devices. This translates to improvements in wireless capacity, more robust mobile connectivity, and decreased latency. When it comes to video, 5G promises to support much more advanced functionality — like AR/VR and real-time communications — for remote internet-connected devices.

In this way, 5G is essential to unlocking the full potential of IoT. Applications that were once no more than science fiction, such as remote surgical operations and self-driving cars, will become commonplace once 5G takes over.

WOWZA

Extended Reality (XR) 03

[Extended reality (XR)](#) describes any computer-generated experience that merges the viewer's natural environment with a superficial one or creates a new environment entirely. XR covers the full spectrum of computer-altered realities — including virtual reality (VR), augmented reality (AR), and mixed reality (MR).

Traditionally relegated to gaming, XR video is finding its way into every vertical. For instance, the construction industry uses AR to enable computer-aided drawing (CAD) overlays for workers in the field, whereas 360° VR powers remote site tours for the real estate industry. XR capabilities have also proven successful in therapeutics applications ranging from [memory care for seniors](#) to [pain management for children](#).

Low Latency 04

The need to replicate real-life exchanges with live streaming technology has never been so crucial. Over the past few years, businesses in every industry have turned to low-latency video to [adapt to the realities of the pandemic](#). Business continuity, public safety, and customer support all now depend on interactive video communications.

Advancements in content delivery and the adoption of [new streaming protocols](#) are both driving latency down. And as video lag continues to decrease, new ways of doing things will continue to emerge.

Sophisticated Content Management 05

There's more content floating around than ever before. But without a simple way to organize, store, and access this content, it serves as little more than digital clutter. [Video content management systems (CMS)](#) help cut through the noise by acting as a central repository for media assets and streamlining online video distribution.

Today's video CMS solutions leverage [artificial intelligence (AI)](#) for content analysis, indexing, searchability, compilation, highlight production, and other forms of automation — all of which are game-changers for content distributors with a sizeable video library.

WOWZA

Video Analytics

The digital video supply chain is a goldmine of data — with the potential to improve quality of experience (QoE), content classification, ad targeting, and more. It starts with applying a proactive, analytical strategy to the digital information already available.

Today's viewers won't take the time to explain why they turned off a broadcast or stopped using a service. Instead, it's up to content distributors to figure that out. Video monitoring and analytics can help shed light on viewer behavior and uncover opportunities for improvement.

That said, a prerequisite to video analytics is interoperability across the video workflow. That's because end-to-end visibility requires integration between the encoder, content delivery network (CDN), and player. For this, your best bet is a unified video platform that provides observability every step of the way.

Video Predictions

Our three predictions for the future of video center around hybrid environments, metaverse interoperability, and IoT streaming.

Hybrid Everything

01

Forget about the workplace. Universities, hospitals, and every other organization imaginable will embrace video to blur the distinction between in-person and remote experiences. Just what will hybrid everything look like? Imagine seamlessly transitioning between browsing for a clothing item on your phone and walking into a physical store where it's hanging in the smart dressing room. From there, you'd be able to try out different colors not available at the store using an AR mirror. Alternatively, you could navigate to a video stream via a touchscreen within the dressing room to view other trending items. In just a few clicks, you'd add items to your digital shopping cart and be on your way.

Metaverse Interoperability

02

Beyond just using extended reality (XR) technologies to make a more vivid and immersive internet, the metaverse promises to deliver digital interoperability like we've never seen before. In the future, users will be able to participate in a seamless experience across different virtual platforms (like Facebook or Fortnite). This will enable users to easily exchange digital assets and share video content across previously distinct digital spaces. The different worlds currently making up the internet will become part of a single metaverse, transforming how digital video content is monetized and repurposed. Blockchain technologies like NFTs are at the crux of this transformation, beckoning a new era of Web3.

Internet of Streams

03

According to Cisco, the number of internet-connected devices will be more than three times the global population by 2023. It's safe to assume that a large percentage of these will implement video technology — being as today's smartphones, refrigerators, drones, and cars already do. In this way, the internet of things will give way to an internet of video streams. Just as the virtual world continues to grow, we can expect more video-enabled robots, wearables, and smart ecosystems to become standard in the physical world.

WOWZA

Conclusion

At Wowza, we've integrated all the necessary technology and capabilities detailed in this report into a single video platform — delivering a simple, unified solution for all your video needs.

The Wowza Video platform combines the flexibility required to build innovative products and services with the reliability needed for business-critical applications. What's more, our solution delivers powerful features at every stage of the workflow, thereby eliminating the complexity of integrating multiple vendors.
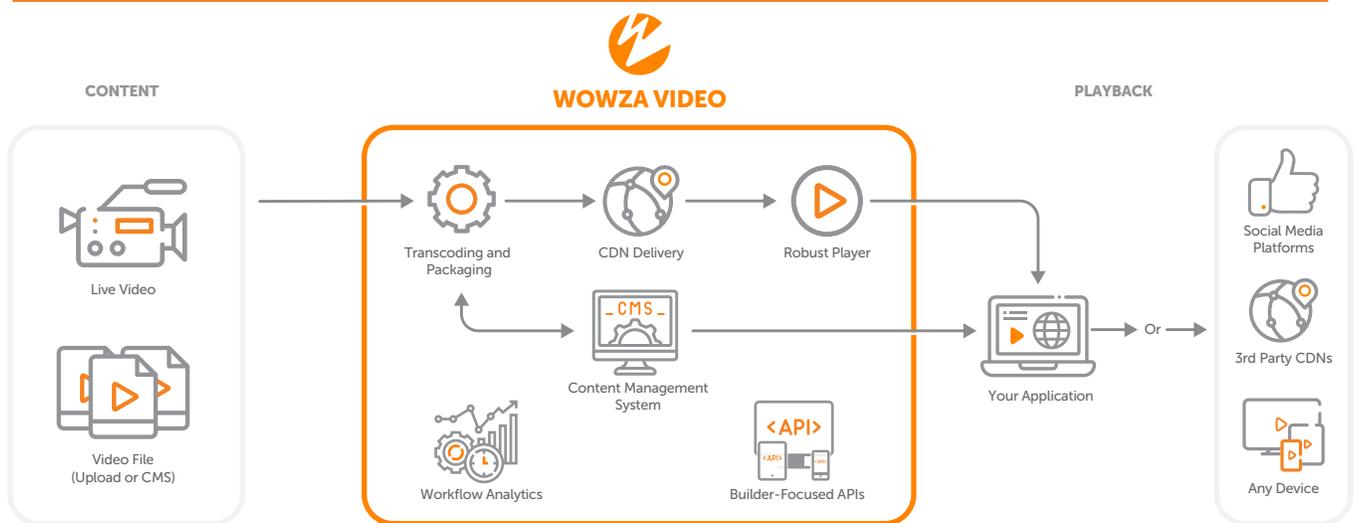
Find out how you can evolve your strategy to embrace the future of video technology.

LEARN MORE

About Wowza

Wowza is a video platform provider trusted by companies leveraging streaming technology to enhance their products and services. With more than 15 years of experience working with 35,000+ organizations, our video infrastructure technology has powered countless applications across industries — including media, enterprise, healthcare, government, and more.

We work with each customer to ensure their success while providing the reliability and security their business requires.

Learn more at wowza.com.

The solution you start with, the partner you scale with.

WOWZA