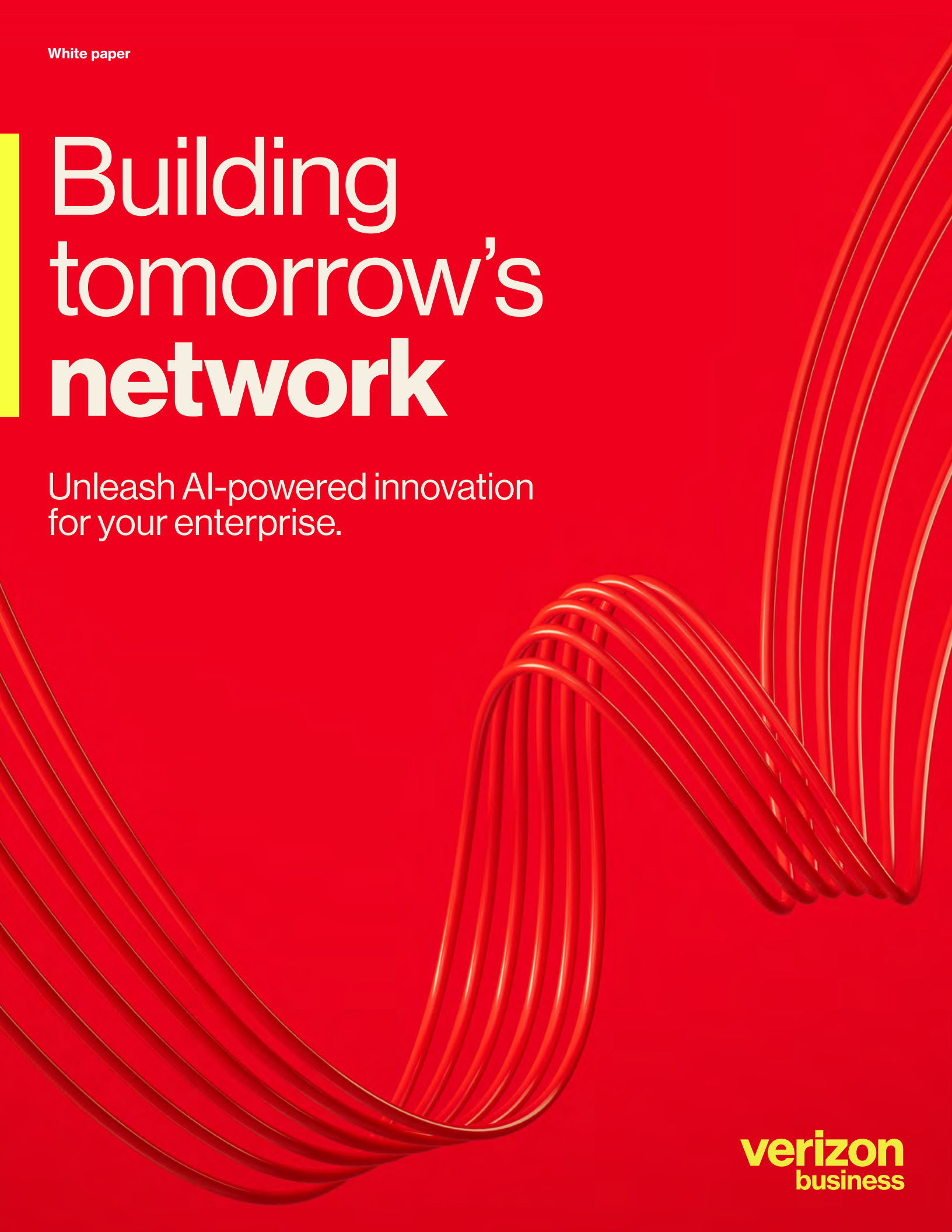
White paper

Building tomorrow's **network**

Unleash AI-powered innovation for your enterprise.



verizon business

The road ahead demands more from your network.

Artificial intelligence (AI) is transforming enterprise organizations from the inside out – accelerating change and promising breakthrough improvements in operational efficiency and productivity. As far as innovation goes, it's full speed ahead.

But today's networks may not be up to the task.

Legacy network architectures weren't built to handle the massive flow of data needed for AI. They weren't designed for the extensive integration required to orchestrate seamless digital experiences. They are often complex, fragmented and inconsistent across locations, which makes them costly and difficult to maintain. Their security measures may be showing cracks under the strain.

The bottom line: As AI adoption ramps up, the pressure on your network is rising. Before deploying AI at scale, you need a network that can stay a step ahead of the demands for speed and capacity – allowing you to lead the rush of growth and innovation ahead.

> "It's about elevating the network from a commodity to something that delivers outcomes and generates revenue."
>
> **Wade King**
> Director, Advanced Connectivity Design and Consulting, Verizon Business

Networks need to evolve. So what's next?

It's time to rethink the role of the network – not as a commodity but as a strategic asset, purpose-built for AI-driven innovation. When designed specifically to align with top business priorities, high-performing networks can make the road ahead smoother, faster and more manageable. That's a powerful competitive advantage in a business landscape that changes by the minute.

Accelerate toward the opportunities ahead.

An advanced network can help you break through stagnating performance metrics and unlock improvements across the enterprise. Imagine what that might look like for your organization.

Achieve more: employee productivity

Older networks weren't designed for all the ways teams work today. AI workflows. Video calls. Real-time collaboration. Access to a seemingly endless stream of cloud-based tools. And with so many workers returning to the office, the need for a modern network to support it all has become urgent.

Delight customers: digital experiences

Customers have little patience for disjointed experiences and delays when interacting with organizations, whether online, in person or at events. A high-performing network to keep all the pieces connected is essential to delivering near-seamless digital experiences and keeping customer satisfaction high.

Reduce waste: operational efficiency

Today's networks can play host to thousands of systems and devices. If networks aren't designed to support the heavy flow of traffic around the clock, connectivity issues can disrupt operations in a big way. Fast, reliable networks keep the data flowing to drive automation, create greater visibility and streamline decision-making.

Shift your perspective—think big.

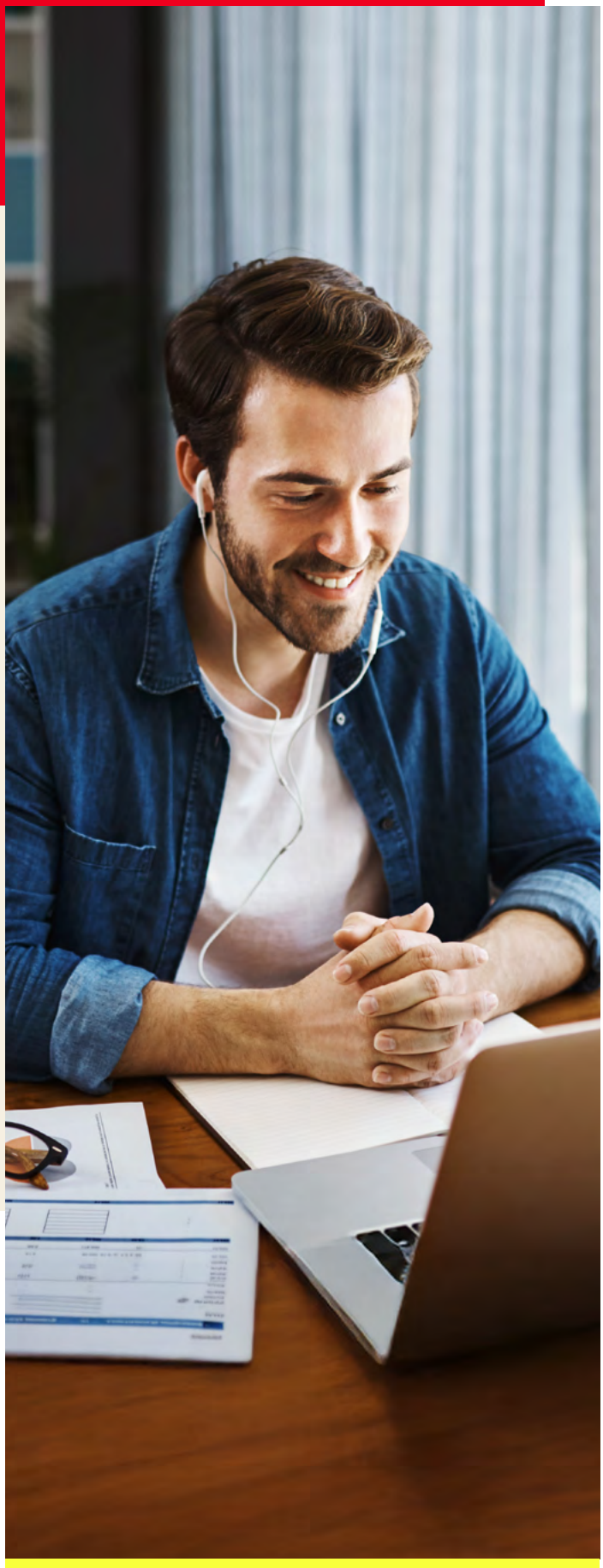
Designing networks to align with business outcomes can be a challenge, especially when multiple priorities are vying for your attention and resources. As you look to scale AI, you may struggle with planning, especially if you're accustomed to thinking in terms of network limitations and constraints.

Now is your chance to flip the script – and think bigger, broader and longer-term. Rather than letting existing network capabilities dictate future potential, let your vision shape your network.

So what could that look like? Consider the following use cases in manufacturing, healthcare, entertainment and beyond – all within reach with a purpose-built network.

- Supporting a distributed workforce
- Achieving operational agility in manufacturing
- Building resilience in healthcare
- Engaging fans at large-scale events

> "Most people are struggling with what to do with AI, what the use cases are and how to bring them to light."
>
> **Wade King**



Use case #1

A distributed workforce comes together.

Challenge

When your teams are stretched across multiple locations, productivity is top of mind. On-site employees and remote workers alike need efficient workflows, reliable access to data and the confidence to connect securely.

Solution

This organization keeps teams connected securely across locations with a custom network architecture built on a Software-Defined Wide Area Network (SD-WAN) framework. With low latency and dynamic traffic optimization, the network helps employees gain virtually seamless access to cloud applications and AI tools, which help automate administrative work and surface near-real-time insights.

Outcomes

- Higher productivity, with fewer delays and downtime
- Stronger collaboration across locations
- Faster, more informed decision-making

> “Everyone is trying to do more with fewer people. Anything repetitive, administrative or analysis-driven can take advantage of AI infrastructure.”
>
> **Wade King**

Use case #2

A manufacturer enhances operations in near real time.

Challenge

Manufacturers find their competitive edge in the margins. Every second, every unit of productivity, matters. So tighter operational control, reduced downtime and faster responsiveness in the supply chain can go a long way.

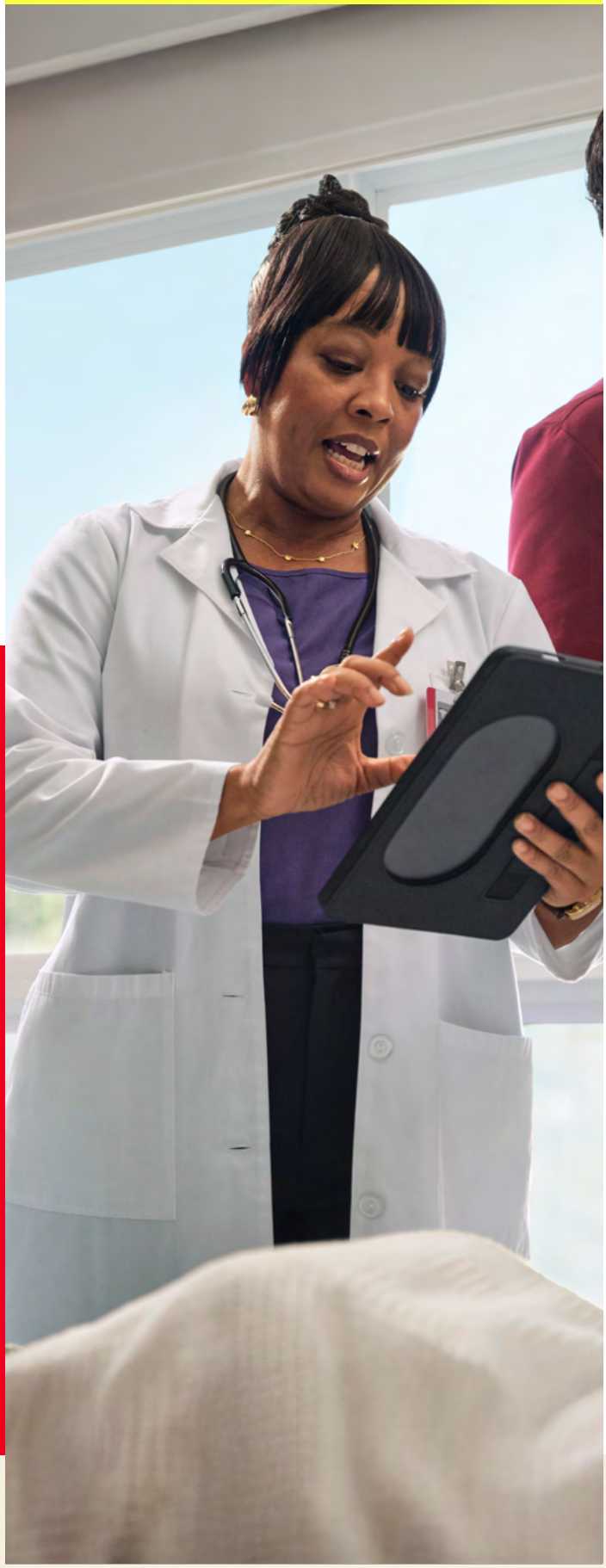
Solution

For this manufacturer, 5G and edge computing technologies connect thousands of Internet of Things (IoT) sensors on machinery, vehicles and assets to enable continual monitoring of key metrics. AI enhancement turns near-real-time visibility into predictive maintenance insights, dynamic inventory management and production adjustments on the fly.

Outcomes

- More productivity, less downtime
- New levels of operational control, leading to cost benefits
- Near-immediate responsiveness to changing conditions

> “AI is critical to make sense of the mountain of data produced, consolidating it and highlighting meaningful points for business decisions.”
>
> **Wade King**



Use case #3

A healthcare provider builds resilient connectivity.

Challenge

For a healthcare provider, downtime can be disruptive – and even potentially life-threatening – to patient care. Having a disaster recovery plan for software as a service (SaaS) applications is essential to mitigating operational risk, protecting patient data and maintaining uninterrupted care.

Solution

With an AI-driven analysis of backup systems, this healthcare provider now has a detailed recovery plan to get critical SaaS applications back up and running – and help protect data – in the event of a ransomware attack or other disaster. The solution includes the design, installation and configuration of private, secure wireless connectivity for medical devices, staff and patients.

Outcomes

- Helps protect patient data in the event of a ransomware attack
- Keeps staff, patients and critical medical devices connected
- Allows staff to recover quickly and stay focused on patient care

Use case #4

A public venue delivers fan experiences to remember.

Challenge

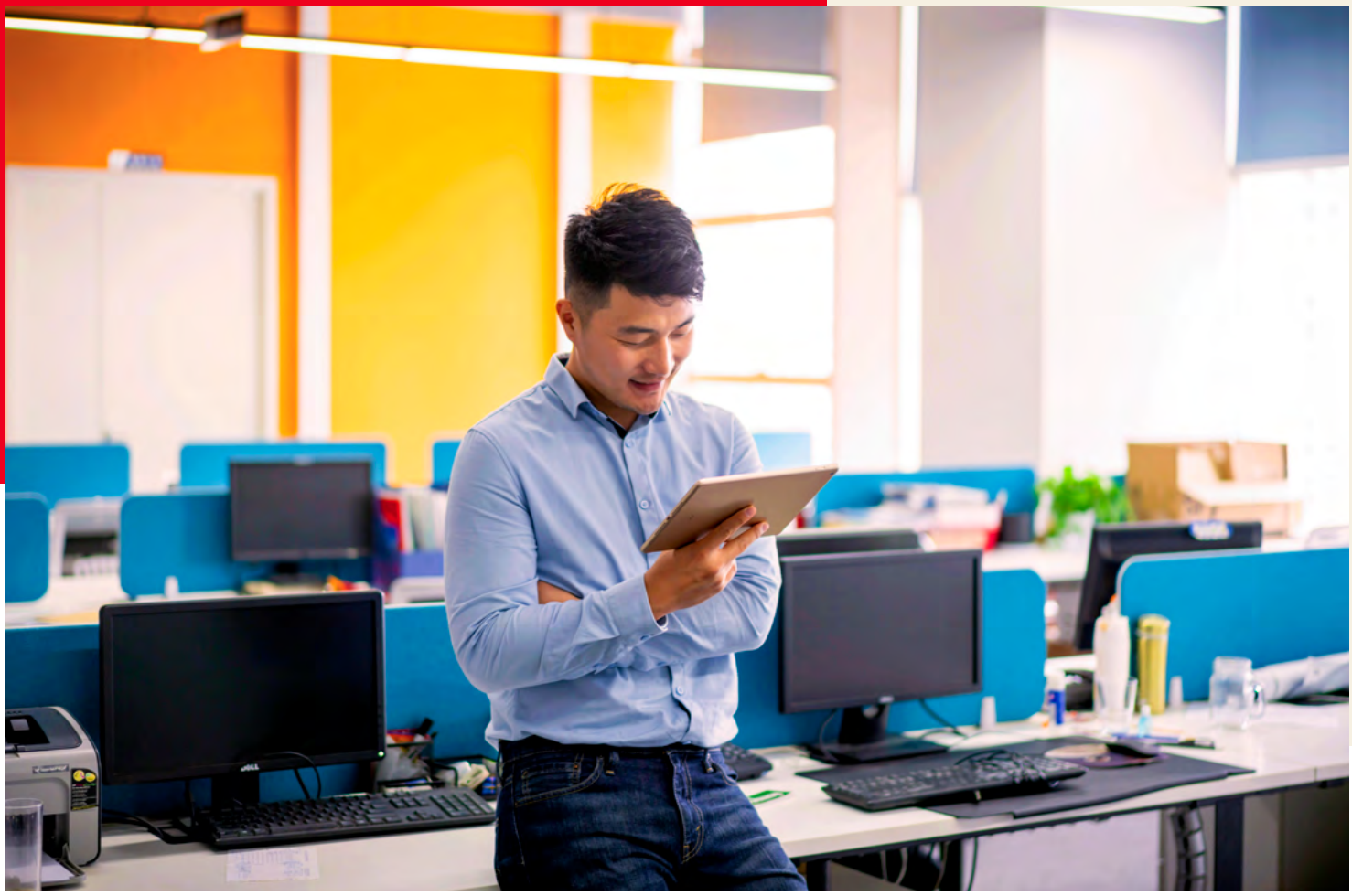
At sporting events and other large-scale, in-person experiences, attendees expect more than static, one-size-fits-all interactions. Dynamic, personalized fan engagement is the name of the game for public venues – and continuing to improve the experience over time requires real-time operational insights.

Solution

An AI-enabled network with high-density Wi-Fi (Wi-Fi 6/6E/7) and private 5G wireless provides the robust connectivity this public venue needs to deliver a personalized fan experience. With live video data and analytics, the venue can analyze attendee behavior in near real time – and deliver personalized content on mobile devices and digital signage. Plus, visibility into movement makes it possible to optimize crowd flow and make more informed staffing and security decisions.

Outcomes

- Helps increase revenue opportunities at the venue and online
- Helps boost engagement and deepen fan loyalty
- Provides rich operational intelligence for continuing improvements



Your blueprint for AI transformation starts here.

Whatever business success looks like to you – and whatever your AI vision – you need a modern, purpose-built network architecture to help make it a reality. Here's what you need to know to get started.

A unified network fabric is the antidote to complexity.

Optimize network traffic and centralize security across physical locations and cloud assets on an intelligent, virtualized network foundation.

What to consider

- SD-WAN: Virtualized network resources make allocation, optimization and security easier to manage across locations.
- Secure access service edge (SASE): Cloud-native security protects data closer to users, at the edge, to simplify management and move away from outdated, perimeter-based security.
- Next-generation local area networks (LANs): The combination of wired and wireless networks, including 5G, allows for high-speed, low-latency connectivity that covers a variety of business needs.

Assessing your AI readiness

- Can your data move quickly and reliably across cloud, campus and edge environments?
- Are security and management capabilities consistent everywhere AI runs?
- Can AI workloads shift locations without the need to rearchitect the network?

There is no one-size-fits-all connectivity.

Find the right connectivity for each business scenario you need to support, using expectations around performance, bandwidth, location, user behavior and security as a guide.

What to consider

- Private 5G: When speed and reliability are nonnegotiable – or for areas that are hard to cover – use dedicated, private wireless connectivity to provide precise, pervasive coverage.
- Next-generation Wi-Fi: For high-traffic scenarios, use Wi-Fi protocols tuned to new levels of reliability and stability – and specifically designed to improve performance in congested, high-density environments.

Assessing your AI readiness

- Is your edge connectivity designed around specific environments and use cases?
- Can AI inference and processing happen locally to take advantage of low latency?
- Can your edge environments scale securely as AI-enabled devices, sensors systems and data grow?

Networks can do more of the work themselves.

Build an intelligent management layer into your network infrastructure, and take the pressure off your team to keep the network aligned with escalating demands from AI applications.

What to consider

- AI for IT operations (AIOps): AI-powered analytics can help monitor the network for anomalies and optimize network performance for a smooth-functioning, self-healing network infrastructure that can adapt.
- Automation: Application programming interfaces (APIs) and software-defined networking (SDN) help automate routine and complex tasks, including provisioning, configuration and software updates so AI workloads can scale smoothly.

Assessing your AI readiness

- Are you using automation to actively monitor and optimize your network?
- Can you predict potential network issues before they affect AI applications?
- Can your network self-adapt to meet evolving AI demand and usage?

The future of your network comes down to next steps.

As AI operations ramp up, your network must change. It must be built for your vision, customized to match your needs and agile enough to adapt as AI operations scale. That can be a tall order, but the right team can make the path ahead clear and actionable.

At Verizon, our Advanced Connectivity Design and Consulting offers deep, cross-disciplinary expertise to help navigate your digital transformation – spanning connectivity, cloud, security, edge and AI assets. Our team takes a systematic approach to assessing your network and defining the way forward, helping:

- Diagnose the gaps in your current infrastructure
- Design a modern network architecture custom-fit to your use cases
- Support deployment with technical and operational considerations
- Help push past barriers to AI at scale and digital transformation

We specialize in integrating complex, high-density networks; private 5G networks; and LANs – supporting edge computing, real-time enterprise, intelligent video and AI. And when it's time to deploy your network, we can handle site surveys, network cabling and design, turnkey staging, equipment installation, and project management.

> "With our experience at scale, we can help accelerate AI transformation so customers achieve outcomes faster."
>
> **Wade King**

Work with a partner you can trust.

With forward-thinking design and world-class expertise, your network can evolve from a passive utility into the engine that powers near-seamless experiences, intelligent operations and AI-enabled innovation.

Verizon is more than just a network provider. We are a strategic partner ready to design a network that's focused on your priorities and outcomes. With more than 33 years of experience implementing and managing networks, we have the expertise to help you transform your network into a strategic asset that drives success.

- 500+ global experts
- 33+ years managing complex network transformations
- 125,000 access points designed and deployed
- 250,000 network devices designed and deployed
- 75+ certifications from industry-leading partners
- Award-winning partnerships with industry leaders

Learn more

For more information on how our Advanced Connectivity Design and Consulting team can help you create a modern network, contact your Verizon representative or visit verizon.com/business/products/networks/connectivity-design-and-consulting.

OGWP8421225