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Optimizing 5G connectivity indoors: What every business needs to know

A strategic guide to neutral host wireless connectivity

The indoor 5G imperative

In today's mobile-first world, seamless connectivity is no longer a nice-to-have —it's a business-critical necessity. Users expect fast, reliable connectivity everywhere — including indoors.

And with 90% of time spent indoors and 80% of mobile data consumed in those spaces, buildings have become the new frontier for mobile connectivity. Yet the environments where connectivity is most essential —hospitals, airports, campuses, factories, hotels— are often the hardest to cover.

According to the 2025 Ericsson Mobility Report, mobile data traffic is being driven by both rising smartphone subscriptions and increasing average data volume per user, fueled primarily by video content viewings. In fact, data usage per smartphone is projected to hit 43GB per month by 2027. At the same time, 60% of mobile users report poor or inconsistent indoor coverage. These numbers underscore a growing disconnect between user expectations and network performance.

And the consequences are real:

Frustrated customers and visitors

Productivity slowdowns and disrupted workflows for staff

Public safety blind spots and compliance risk
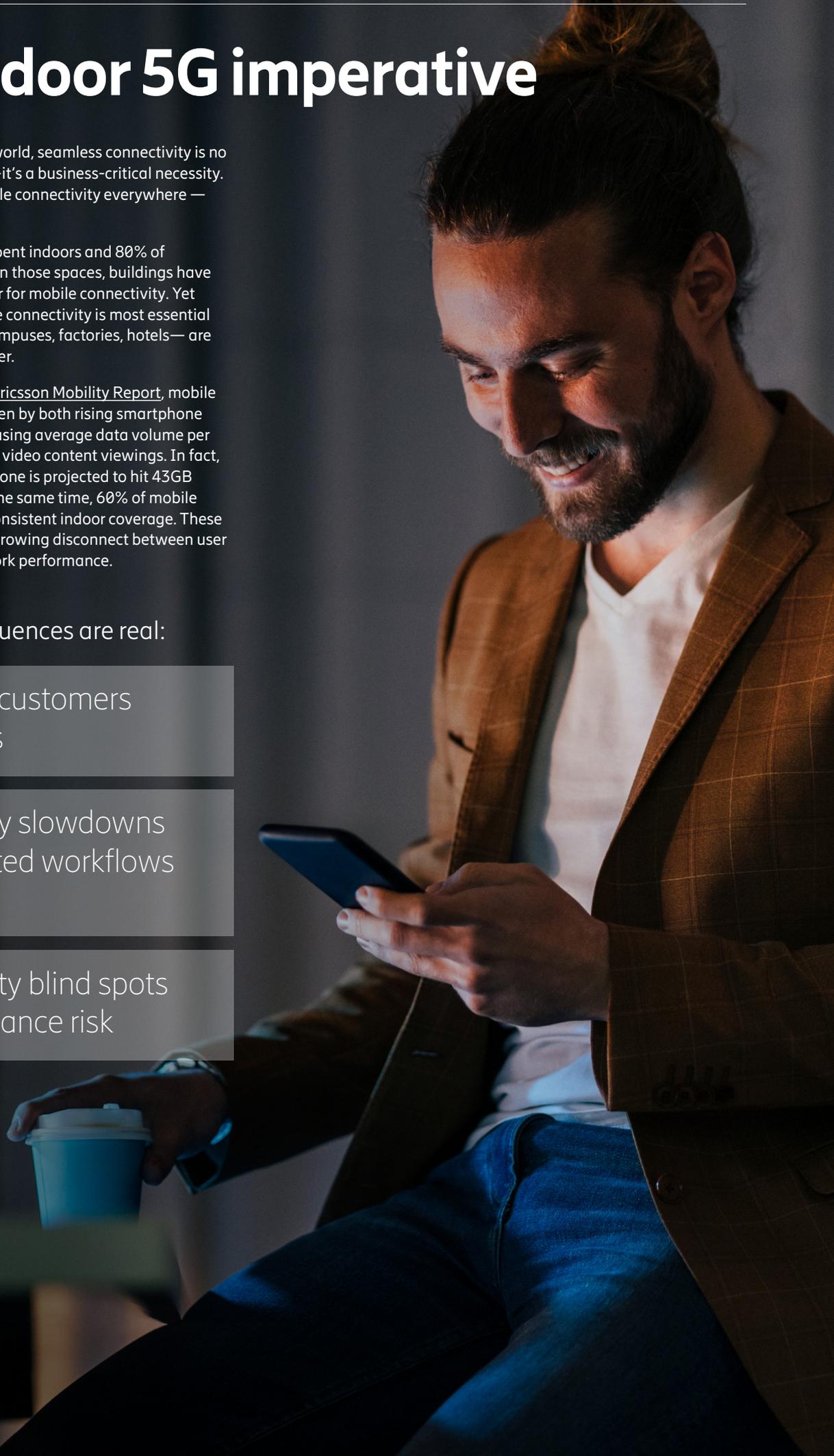
Wi-Fi and indoor cellular: Better together

Wi-Fi plays a vital role in enterprise connectivity—powering everyday tasks, devices, and operations. But as buildings become more complex and digital demands intensify, consistent performance is no longer optional.

Coverage gaps can disrupt workflows, stall critical systems, and compromise safety. That's why leading organizations are embracing purpose-built indoor cellular—especially neutral host

5G—for more consistent, scalable connectivity across all major US networks.

It's also important to recognize that not all "next-generation" truly are created equal. Traditional systems like DAS, while still in use, were not designed to meet today's requirements for multi-operator, high user density and low-latency performance.

Roadblocks to reliable indoor 5G

While 5G promises ultra-low latency, massive capacity, and enhanced reliability, delivering on that promise indoors presents unique challenges. From physical barriers to regulatory hurdles, the path to scalable, consistent indoor 5G is complex—but not insurmountable.

Several challenges include:

- **Signal penetration and attenuation:** Modern buildings use materials like steel, concrete, and low-E glass, which can drastically weaken 5G coverage and cause dead zones.
- **High user density:** Busy venues like airports, malls, and convention centers experience overwhelming demand and instead need a solution without a drop in performance.

- **Multi-carrier complexity:** Supporting multiple MNOs often means redundant systems—unless neutral host solutions are in place.
- **Legacy infrastructure:** Older buildings lean heavily on potentially outdated technological solutions, making 5G integration more complex without a clear migration path.
- **Deployment cost and complexity:** Traditional systems like Distributed Antenna Systems (DAS) are hardware-heavy, and installing indoor 5G DAS requires precision planning, investment and skilled execution.

To overcome these barriers, a new model is reshaping indoor connectivity: Neutral Host indoor 5G. Here's how it works.

The solution: What is neutral host indoor 5G?

Neutral host indoor 5G is a shared infrastructure model that supports multiple mobile network operators (MNOs) on a single system. One deployment provides indoor 5G coverage for all users, regardless of whether they're on Verizon, T-Mobile, or AT&T.

Ericsson's Radio Dot System (RDS) leads the market in delivering this solution.

Compact, efficient, and future-ready, RDS supports both public 5G from major carriers and private 5G for enterprise-specific needs.

Compare Ericsson Radio Dot System to Traditional DAS.

Ericsson Radio Dot	Legacy Active DAS
Native high performance • Up to 4X4 MIMO • More spectrum support • Local signal processing • More spectrum efficiency	**Performance requires costly upgrades** • MIMO requires more infra • Signal distro degrades latency • Limited uplink capabilities • Higher cost per gig
Efficient and easily scalable • 3 carriers from single Dot • Scales from 50k-10M+ sq. ft. • Up to 10X capacity • Lower power consumption	**Scaling drives reduced efficiency** • More operators = more infra • Up to 4X components required • Up to 70% more power consumption
Fast deployment and turn-up process • Integrated end-to-end • No analog to digital conversions • Up to 2X faster deployment	**More infrastructure and complex deployments** • More time to design, install test, tune, and commission • Some lack visibility across entire network
Inherent advanced capabilities • Carrier aggregation support • Add-on private 5G when using licensed spectrum • RedCap, indoor precise positioning and slicing capabilities	**Legacy architecture with limited capabilities** • Analog to digital conversion limits future capabilities • Lack of shared infrastructure limits unified experience

Where it fits: Industry use cases

Neutral host indoor 5G isn't one-size-fits-all — it's designed to accommodate the unique demands of diverse industries

Hospitality

Hotels, casinos, and resorts are adopting neutral host indoor 5G to elevate the guest experience and improve operational efficiency. These environments rely on strong, seamless mobile coverage to support:

- Frictionless guest services like mobile check-in, digital room keys and concierge services
- Staff coordination tools, including mobile POS, inventory management and real-time tasking
- Personalized VIP experiences powered by location-based services and data analytics

Commercial real estate and campuses

Class A office buildings, malls, airports, and enterprise campuses benefit from carrier-agnostic coverage that can meet high user demand and evolving tenant expectations:

- Reliable performance in high-density areas such as lobbies, stairwells, and food courts
- Support for critical services, including E911 compliance, emergency communications, and real-time alerts
- Flexible infrastructure that scales tenant turnover and growing digital demands

Industrial environments

Manufacturing facilities, logistics hubs, and warehouses are using neutral host indoor 5G to build smarter, safer, and more connected operations:

- Reliable, facility-wide mobile coverage—even in shielded or high-interference zones
- Enhanced worker safety and communication in hazardous or noise-heavy areas
- Dependable indoor emergency calling, supporting faster response and regulatory compliance

Public sector

Hospitals, universities, government offices, and regional transit hubs are increasingly deploying neutral host solutions to deliver secure, high-performance connectivity for mission-critical operations:

- Secure and resilient mobile workflows that support healthcare staff, faculty, and field workers
- Campus-wide coverage for education, research, and public access
- Reliable emergency communication systems that meet public safety and compliance standards
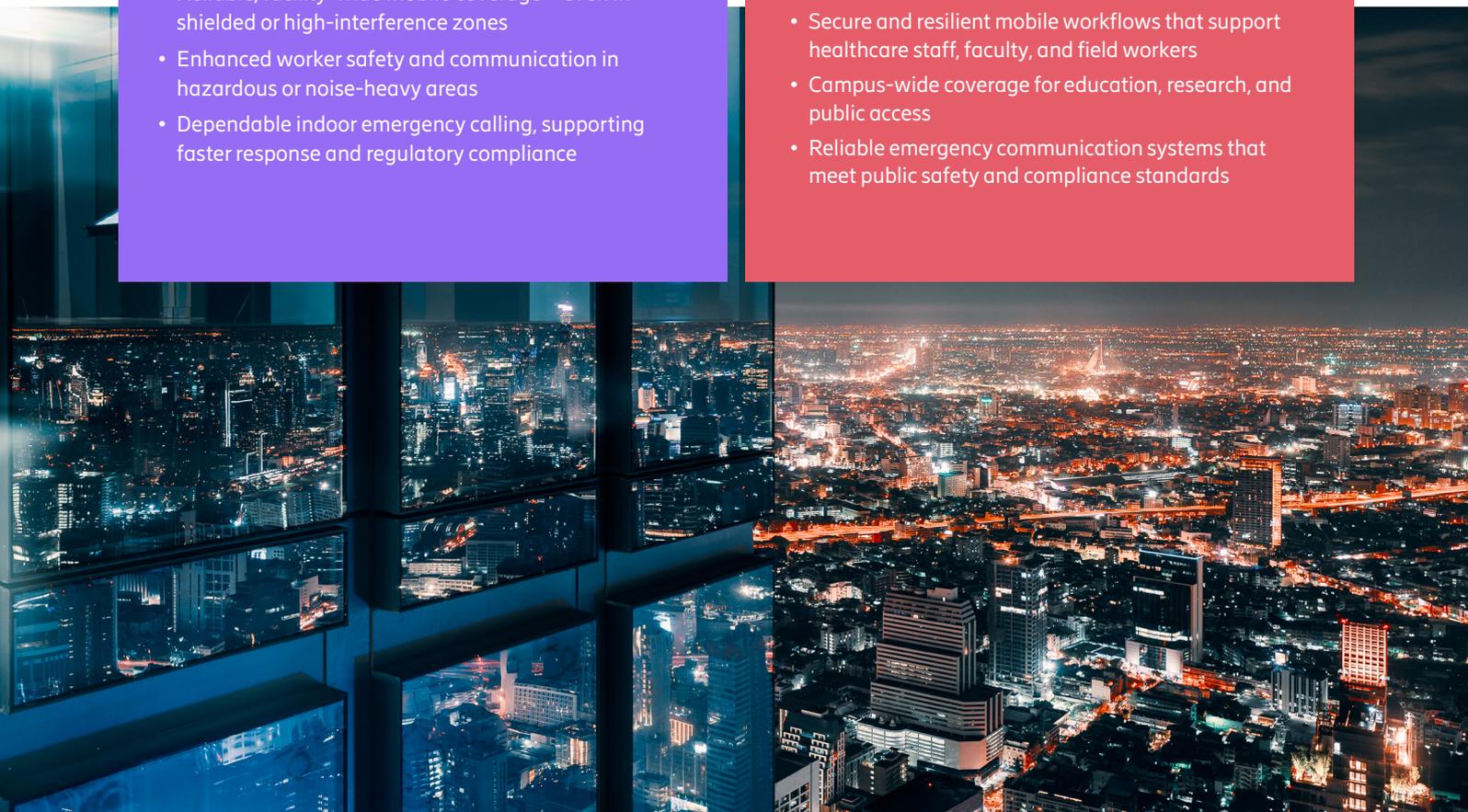
Real-world impact

Across industries, Ericsson's Enterprise 5G Coverage is enabling new levels of coverage, performance and control, transforming connectivity from a utility into a strategic enabler. Whether enhancing the guest journey, ensuring worker safety, or supporting emergency response, the benefits are tangible—more uptime, better service delivery, and infrastructure that's ready for what's next.

Toyota Material Handling boosts operational efficiency and worker safety

Toyota Material Handling's manufacturing facility in Columbus, Indiana faced unreliable public cellular coverage in key buildings—creating communication challenges and limiting visibility into logistics operations.

To solve this, Toyota partnered with Ericsson and STEP to deploy a neutral host solution using Ericsson's indoor-optimized 5G Radio Dot System—a discreet, high-performance technology purpose-built for complex indoor environments like warehouses and industrial campuses.

The result: stronger indoor coverage, improved forklift telematics, and a scalable, cost-effective alternative to traditional DAS. Employees now benefit from seamless connectivity that enhances operational efficiency, safety, and supports future innovation.

Community college improves student safety and mobile access

A large community college system in the southern U.S. struggled with poor cellular coverage across many campus buildings—causing daily frustrations and posing safety risks during emergencies.

To address this, the college deployed Ericsson Enterprise 5G Coverage with the indoor-optimized Radio Dot System. This neutral host solution delivers public 5G service across all major U.S. carriers, ensuring reliable connectivity throughout campus facilities.

The result: stronger indoor coverage, improved student safety, and a scalable, cost-effective alternative to traditional DAS. Students and faculty now enjoy seamless connectivity that supports academic success and operational efficiency—without straining the school's budget or future growth plans.

Why Indoor 5G matters

Strong indoor 5G coverage isn't just about better reception. It enables:

- **Customer experience:** Faster mobile transactions, immersive shopping, AR/VR applications
- **Security and safety:** Mobile access control, emergency alerts, real-time location services
- **Future readiness:** Support for 5G Advanced, network slicing and more

With Ericsson's Enterprise 5G Coverage Solution, businesses get:

- Certified support for Verizon, AT&T, and T-Mobile
- 70-80% reduction in equipment footprint and energy use

Better coverage = Better business.

Ericsson Enterprise 5G Coverage is transforming how industries deliver connectivity. With Ericsson's Radio Dot System, enterprises gain a future-proof, cost-effective, and scalable solution that meets the demands of today's mobile-first world—while taking control of 5G coverage and performance at their own premises.

Whether you're a property owner, campus IT leader, industrial operator, or public sector executive, investing in indoor 5G is investing in your brand, operations, and customer experience.

Expect more from your indoor network.

Better coverage starts here.

About Ericsson

Ericsson enables communications service providers and enterprises to capture the full value of connectivity. The company's portfolio spans the following business areas: Networks, Cloud Software and Services, Enterprise Wireless Solutions, Global Communications Platform, and Technologies and New Businesses. It is designed to help our customers go digital, increase efficiency and find new revenue streams. Ericsson's innovation investments have delivered the benefits of mobility and mobile broadband to billions of people globally. Ericsson stock is listed on Nasdaq Stockholm and on Nasdaq New York.

Learn more and contact us by visiting our Enterprise 5G Coverage website