



Built to Compete:

Why Hotel Technology Infrastructure
Is the New Business Imperative

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Built to Compete: Why Hotel Technology Infrastructure Is the New Business Imperative

Introduction

A hotel's technology infrastructure is only as valuable as the foundation beneath it. As highlighted by a recent Hotel Management survey[†] sponsored by [Spectrum Business®](#), **hotels are increasingly recognizing that a robust and resilient technology environment is essential to supporting business performance and maintaining a competitive advantage.** What was once viewed primarily as an operational necessity is now a strategic differentiator that directly influences guest satisfaction, operational efficiency, employee productivity, and revenue growth.

Today's hotels are investing in high-performance infrastructure to support rising bandwidth demands, the need for robust WiFi connectivity and AI technology, seamless streaming and casting, cloud-based applications, contactless interactions, smart-room technologies, IoT devices, and advanced

cybersecurity. At the same time, operators must ensure that a growing ecosystem of guest-facing and back-office technologies, from property management systems and communications platforms to security and building management systems, work together seamlessly. Without a modern technology infrastructure, hotels risk operational inefficiencies, fragmented technology environments, increased security vulnerabilities, and an inability to meet evolving guest expectations.

For hotel brands, ownership and management groups, and independent properties, there is a clear objective to build a scalable, secure, and future-ready framework that supports both current requirements and long-term business goals.

A well-designed infrastructure is the new business imperative as it enables hotels to elevate the guest experience, streamline operations, support innovation, and unlock new opportunities for growth.



Network Connectivity Drives Modern Hotel Performance

As digital services become embedded in virtually every aspect of hospitality, **connectivity has evolved from a utility into critical infrastructure that is essential for meeting customer expectations and enabling operational excellence.**

What constitutes a modern hotel infrastructure?

- **Scalable bandwidth and resilient connectivity** — preferably fiber internet with redundancy to support growing guest and operational demands.
- **State-of-the-art wireless technology** — incorporating the best-in-class access points using the latest WiFi standards, such as WiFi 7, to support a high number of devices and bandwidth-intensive applications.
- **High-performance network equipment** — switches, routers, cabling, and related infrastructure that optimize performance, reliability, and security across the property.
- **Integrated hospitality platforms** — technologies to power in-room entertainment, guest engagement, communications, and connected-room experiences.
- **Network management and security expertise** — internal, external, or hybrid resources capable of monitoring, updating, securing, and optimizing the environment on an ongoing basis.
- **Flexible, stable, and innovative technology partners** — to support both current operations and future modernization initiatives.

Together, these elements create the operational and guest-facing infrastructure that enables hotels to deliver reliable connectivity, support cloud-based systems, protect critical data, and scale new digital capabilities over time.

Research from the survey highlights the extent to which guest expectations are driving technology investment decisions. Nearly 80% of respondents cited guest experience expectations (including faster WiFi, streaming capabilities, and support for multiple connected devices) as the primary reason for prioritizing network and WiFi upgrades. **This underscores a growing reality for hotel operators that connectivity is no longer an amenity that enhances the guest experience but a core component of the experience itself.**

Hotels increasingly recognize that unreliable connectivity and poor WiFi can have a direct impact on guest satisfaction, loyalty, online reviews, and profitability. Staying abreast of evolving guest expectations, though, remains a significant challenge. According to the survey, 67% of respondents identified keeping up with guest

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expectations and device usage as their greatest connectivity-related concern over the next 12-24 months. A robust connectivity infrastructure helps hotels respond more quickly and effectively to these changing demands while creating the flexibility needed to support future innovations.

Importantly, the same infrastructure that supports guests also powers hotel operations. Today's properties rely on a growing ecosystem of cloud-based platforms, mobile applications, security systems, and connected devices that require consistent, high-bandwidth connectivity to function effectively. According to the survey, the operational systems most responsible for driving connectivity needs include:

- **50%** – Cloud PMS, POS, RMS, CRM, and payment systems
- **41%** – Video surveillance, access control, and safety systems
- **39%** – Workforce management tools and back-office systems
- **37%** – Energy management, IoT devices, and smart-room technologies
- **35%** – Mobile key and mobile check-in/checkout solutions

These findings reinforce a broader industry shift whereby hotels now view connectivity as essential infrastructure rather than a standalone connectivity investment.

Stable, high-bandwidth networks have become indispensable for supporting guest services, operational processes, security initiatives, and emerging digital experiences.

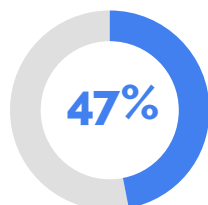
While budget considerations remain part of the decision-making process, they are no longer the primary barrier to investment. Only 23% of survey respondents cited budget constraints or ROI justification as a top concern. This suggests that many hotel leaders view connectivity investments as necessary to remain competitive rather than discretionary spending that can be deferred.

Getting connectivity right is no longer optional. As hotels continue to adopt new digital capabilities, those with the strongest technology frameworks will be best positioned to adapt, compete, and realize financial success.

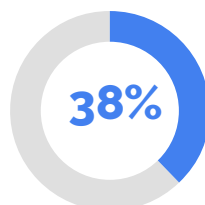


Network Readiness – Powering the Next Generation of Guest Experiences

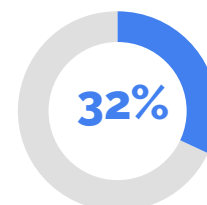
Guest expectations continue to redefine what constitutes a great hotel stay, making network readiness vital for achieving high customer satisfaction. **As travelers bring more devices, consume more content, and increasingly**



Hotels planning to upgrade in-room TVs over the next 12 months



Hotels enabling or enhancing streaming and casting capabilities from guest devices



Hotels considering integrating TVs with property management systems or guest profiles to support personalized experiences

expect personalized digital interactions, hotels must ensure their technology infrastructure can support today's demands and tomorrow's innovations.

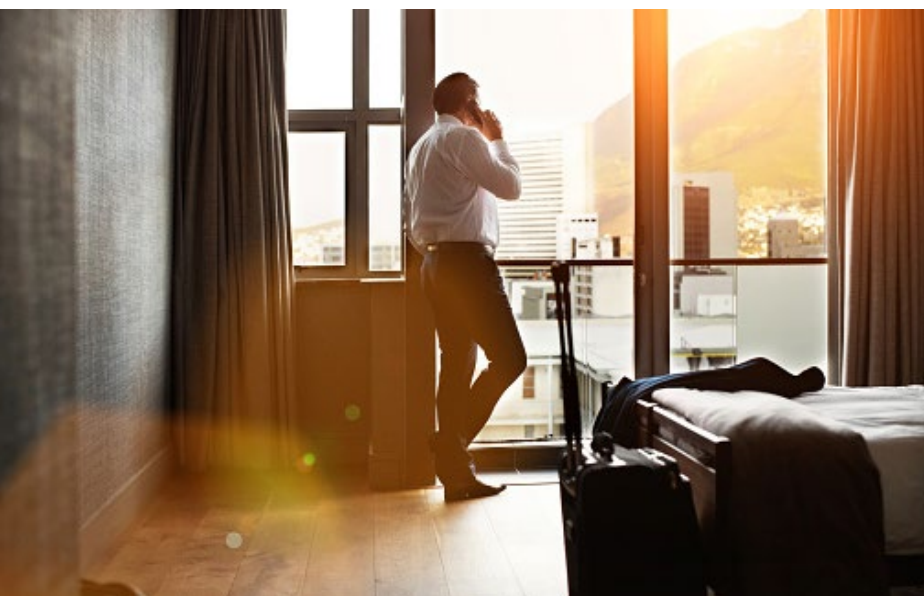
A robust, reliable, and scalable network enables seamless guest experiences and generates the necessary flexibility to add new technologies and services as expectations evolve.

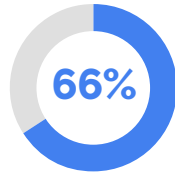
This is particularly evident in the guest room. The in-room experience has moved far beyond traditional television viewing and has become important for engagement, personalization,

and convenience. According to the survey, 47% of hotels are planning to upgrade in-room TVs over the next 12 months and 38% are enabling or enhancing streaming and casting capabilities from guest devices. Additionally, 32% are considering integrating TVs with property management systems or guest profiles to support personalized experiences, access to folio information, and other guest services.

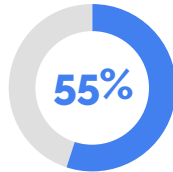
These investments indicate a new mindset towards how hotels view in-room technology. Guests expect the same seamless digital experiences they enjoy at home, including the ability to stream content from their preferred platforms, connect multiple devices simultaneously, and access information and services with minimal effort. Additionally, a robust WiFi network optimizes the guest's in-room streaming experience. Aligned with this sentiment, when survey respondents were asked about the primary drivers behind network and WiFi upgrades, nearly one-third (31%) cited support for in-room entertainment and streaming enhancements.

Further reflecting the importance of the in-room TV, a key finding of the [J.D. Power 2025 North America Hotel Guest Satisfaction Index Study](#) showed that 40% of guests said "smart

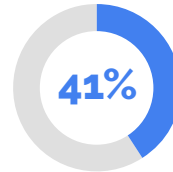


Benefits cited by survey respondents when consolidating connectivity and telecommunications providers


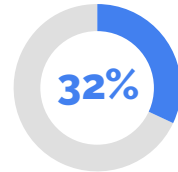
Simplified support and fewer points of failure



Better integration between systems and data



Improved pricing and commercial terms



Stronger security through greater accountability

TV/ability to stream my entertainment" is a hotel amenity they consider "need to have," up from 21% in 2019.

Meeting guest expectations requires more than upgraded televisions. It demands a network capable of supporting high-bandwidth applications, secure connectivity, and a growing number of devices across a property. Fast, reliable internet and WiFi must accommodate multiple connected devices per room, bandwidth-intensive streaming behavior, cloud-based applications, and the property management systems that support personalized guest interactions.

As guest rooms become more connected environments, televisions have evolved into interactive engagement platforms that help shape the guest experience. Beyond streaming and live programming, in-room TVs can serve as gateways to hotel services, allowing guests to browse amenities, make restaurant or spa reservations, review account information, and more. Additionally, network readiness supports a growing range of connected experiences, including smart-room controls. These capabilities depend on reliable, high-performing connectivity operating seamlessly in the background, enabling greater personalization for guests while creating new opportunities for hotels to communicate,

promote on-property offerings, and drive incremental revenue.

The modern network has become the bridge between a hotel stay and the home-away-from-home experience travelers expect. **By investing in a robust technology framework, hotels can deliver the seamless streaming, personalization, convenience, and connectivity that drive guest satisfaction and loyalty as well as position themselves more competitively for events, meetings, and conventions.**

Simplifying Operations Through Managed Services

Amid complex hotel technology environments, simplicity is a competitive advantage. Properties are managing a growing mix of guest-facing technologies, operational systems, cloud applications, communications platforms, security tools, and connected devices, all of which must work together reliably and securely. For many hotel leaders, the challenge now is how to manage technologies efficiently without creating operational difficulty, service disruptions, or security gaps.

More than half of survey respondents (51%) plan to upgrade core network infrastructure such as switches, routers, and firewalls over the next 12



months while 45% are upgrading or adding WiFi access points and controllers. Another 43% expect to increase internet bandwidth or add backup connectivity, 29% are implementing new security controls, and 25% are moving more systems to the cloud, including property management, point-of-sale, telephony, and building management platforms.

These investments point to growing recognition that **many legacy environments were not designed to support today's operational requirements incorporating cloud-based applications, connected devices, and AI-powered technologies. As a result, network modernization has become a business imperative rather than a periodic technology refresh.**

Additionally, cybersecurity has become an essential operational requirement. Every new connected device, cloud application, and guest-facing service increases the importance of maintaining a secure and resilient technology environment. Survey respondents identified several security initiatives currently under consideration, including upgrading WiFi security protocols (50%), expanding network segmentation between guest, staff, and IoT environments (48%), and conducting formal security assessments or audits (34%). In addition, 42% identified cyber risk and compliance

as one of their top future concerns.

While many hotels are focused on strengthening security controls, fewer have implemented more advanced cybersecurity measures such as endpoint detection and response (16%) or enhanced monitoring and alerting services (25%). This creates an opportunity for hotels to build a more comprehensive security strategy that protects connected systems and data and safeguards guest trust and business continuity.

Against this backdrop, vendor consolidation is becoming an increasingly important strategic priority.

Hotels often partner with multiple providers responsible for connectivity, communications, cybersecurity, cloud services, entertainment systems, and operational applications. The result can be fragmented support models, inconsistent performance, and challenges when troubleshooting issues that span multiple systems.

Survey findings reveal a clear desire to simplify. When asked about the primary reasons for consolidating connectivity and telecommunications providers, 66% cited simplified support and fewer points of failure and 55% pointed to better integration between systems and data. Additional benefits included improved

42% of respondents identified cyber risk and compliance as one of their top future concerns.

pricing and commercial terms (41%) and stronger security through greater accountability (32%).

This shift is helping drive interest in managed services and integrated communications solutions. **By centralizing responsibility for critical technology systems, managed service providers can help reduce complexity and improve operational performance, allowing hotels to gain a more integrated approach to network management, communications, security, and ongoing support.** Unified communications solutions further support operational efficiency by bringing together voice, messaging, collaboration, and guest communications on a common platform. This can improve responsiveness, streamline workflows, and help staff deliver more consistent service across departments and properties.

In 2025, Rosen Hotels & Resorts made the decision to consolidate services with Spectrum Business. They recognized the importance of working with a single technology provider following weather-related internet

outages at the company's Orlando convention location. "Historically, our infrastructure grew in silos with several connectivity providers, fragmented services, and limited coordination, which left us vulnerable at the worst possible moments," explained Darrin Pinkham, Chief Information Officer, Millenium Technology Group, A Rosen Hotels & Resorts Company. **"After experiencing major outages during large-scale events, it became clear that aligning our infrastructure under a single, accountable partner was not just an IT decision, but a business imperative. By unifying our network services across data and security on a single fiber platform with built-in redundancy and local support, we've transformed reliability from a constant concern into a foundational strength that our operations can depend on."**

Parable Hospitality also recognized the power of streamlining technology provider partnerships. To achieve their goal of providing guests with ample connectivity, Parable Hospitality, which manages properties in California and Hawaii,



aligned with Spectrum Business to simplify operations without compromising the guest experience. **"Consolidating services like WiFi, voice, network infrastructure, and connectivity under a single partner can create efficiencies, improve accountability, and reduce the operational friction that comes with managing multiple vendors,"** shared Alan Hurd, Director, Facilities & Capital Improvements, Parable Hospitality. "We're always looking for ways to simplify operations without compromising the guest experience. For us, technology is most effective when it supports hospitality rather than distracts from it. Strong infrastructure and proactive partnerships help create a more stable operating environment for our teams, our owners, and ultimately our guests."

Spectrum Business®

As hotels continue to modernize operations and elevate the guest experience, success increasingly depends on having a connectivity framework capable of supporting both current requirements and future innovation. Spectrum Business helps hotels create an integrated infrastructure that supports guest satisfaction, operational efficiency, security, and long-term scalability by:

- **Meeting growing connectivity demands –** Fast, reliable, and secure internet and WiFi support guest streaming and multi-device usage and enable cloud-based PMS, POS, CRM, and operational systems across a property.
- **Enhancing the in-room experience –** Hospitality-focused TV and entertainment solutions support streaming, live sports, and news programming while helping hotels

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modernize guest rooms and create more engaging, personalized stays.

- **Simplifying technology operations** – Managed network services help reduce complexity by providing network infrastructure, security, redundancy safeguards, and software management through fully managed or co-managed services that improve visibility and operational control.
- **Improving staff communication and collaboration** – Cloud-based unified communications solutions connect front desk teams, guest services, housekeeping, maintenance, and back-office staff, enabling faster coordination, more efficient operations, and more responsive guest service.

By bringing these capabilities together under a seamless connectivity strategy, Spectrum Business helps hotels reduce fragmentation across vendors and systems and build a stronger, more secure, and more scalable infrastructure. The result is a foundation designed to support both day-to-day

hotel operations and the evolving expectations of today's connected travelers.

"The shift to an integrated infrastructure with Spectrum Business has given us the agility to scale dynamically with occupancy and event demand, while also enabling seamless failover and proactive performance management, capabilities that are essential in today's high-expectation hospitality environment," said Pinkham.

"Equally important, this partnership has strengthened our cybersecurity posture and

operational visibility, allowing our teams to proactively manage performance, right-size services, and stop threats without disrupting the guest experience or hotel operations," he continued. "Ultimately, having a trusted partner manage our core infrastructure has allowed us to move beyond reacting to outages and instead focus entirely on delivering exceptional, uninterrupted guest and event experiences, turning technology into a true competitive advantage."

Learn more about hospitality infrastructure solutions from Spectrum Business at spectrum.com/hospitality

†The Hotel Management survey sponsored by Spectrum Business polled 93 hotelier technology decision-makers, including owners, operators, and C-suite executives. The survey was conducted from April-May 2026.

Leveraging AI To Optimize Network Performance

As hotels continue to modernize their technology environments, AI remains an important tool for improving both network performance and operational efficiency.

Findings from the survey indicate growing interest in AI-driven personalization, operational automation, and predictive maintenance as hotels look to streamline operations and elevate the guest experience. A modern, high-performing connectivity network provides the foundation for these capabilities.

AI-powered tools (such as AI-enabled PMS, smart-room management platforms, and cybersecurity solutions) can help monitor network health, identify performance issues before they impact operations, optimize bandwidth utilization, and support predictive maintenance to minimize downtime. Beyond network management, AI and automation can reduce manual tasks, improve resource allocation, and help address ongoing labor challenges by allowing staff to focus on higher-value guest interactions. These technologies can improve operational efficiency, strengthen service delivery, create opportunities to enhance margins, and prepare hotels for increasingly connected and data-driven operations.



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