The Recipe for Great Hospitality Wi-Fi: What Works, What Doesn’t



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Designing wireless networks for hotels, resorts, and hospitality spaces is one of the most rewarding yet challenging parts of wireless engineering.

Unlike corporate networks where you can control the type of devices that connect, hospitality Wi-Fi must serve *anything and everything* a guest brings in, from the latest smartphone to a ten-year-old tablet, smart TVs, consoles, streaming sticks, VoIP phones and IoT gadgets.

Add to that the brand standards, aesthetic requirements and the sheer variety of building types from glass-walled modern hotels to heritage stone properties and you have a recipe for complexity.

Over the years designing and deploying Wi-Fi across hotels and hospitality venues, I’ve seen what works beautifully and what causes endless problems.

Here’s my recipe for success.

Start with a Proper Site Survey

The foundation of a reliable design is a detailed survey.

Paper floor plans or evacuation diagrams don’t cut it.

You need scaled drawings, spectrum analysis, and predictive modeling, followed by on-site validation.

Every hotel has quirks, thick concrete walls, mirrored bathrooms, hidden service ducts that change how RF propagates. Without a proper survey, you’re designing blind and that almost always leads to poor guest experience.

In-Room Access Points Beat Corridor Coverage

One of the biggest lessons learned is to stop relying on corridor APs for guest rooms.

On paper, it looks cost-effective.

In practice, it leads to weak 5 GHz coverage in rooms, hidden node issues and frustrated guests.

Instead, in-room wall-plate APs deliver strong coverage exactly where it’s needed and provide wired ports for TVs, phones, or streaming devices. This also allows for VLAN-per-room setups, isolating devices like casting solutions or VoIP phones so they only work in that room, not across the entire property.

Coverage and Capacity in Public Spaces

Lobbies, restaurants, spas, pools and ballrooms are capacity challenges more than coverage ones. A single AP may cover the space in terms of signal, but when you have 200+ devices competing for airtime, throughput collapses.

Design for density:

- Use dual-band or tri-band APs that support high client counts.
- Plan channel reuse carefully to minimize co-channel interference.
- Expect to use more APs than a simple coverage model suggests.

Ballrooms and conference centers are particularly tricky.

Always design based on expected attendee counts, not just floor space.

Don’t Ignore the Back of House

Staff mobility apps, VoIP phones, point-of-sale terminals and security systems all depend on Wi-Fi in back-office areas.

These often get overlooked but are mission-critical for hotel operations.

Consistent coverage, VLAN separation and redundancy are just as important behind the scenes as they are in guest areas.

Cabling, Switching and Power Matters

Great Wi-Fi is useless if the switching and cabling can’t support it.

I’ve seen too many hotels try to reuse 15-year-old Cat5 cabling for Wi-Fi 6/6E APs, or rely on unmanaged switches tucked in cupboards.

This results in random failures and PoE power issues.

Best practice:

- Use Cat6A or fiber for future-proofing.
- Size PoE budgets carefully as modern APs can demand 25W+ each.
- Ensure IDFs are properly ventilated; overheated switches are a silent killer in hospitality.

Security and Guest Experience Balance

Guests expect Wi-Fi to “just work.”

Captive portals, while sometimes required by brand, add friction.

Where possible, keep them lightweight.

WPA3 and enhanced open standards are now becoming common in hospitality deployments, especially with 6 GHz.

For resident-style properties (student housing, serviced apartments, retirement communities), always isolate each unit’s devices into their own VLAN. This prevents Chromecast or Alexa devices from leaking into other rooms and keeps the experience familiar to what people have at home.

What Doesn’t Work

- **One AP per corridor strategy**: it saves money short-term but costs more in complaints, support calls and brand damage.
- **Overloading SSIDs**: more than four SSIDs per band increases overhead and hurts airtime. Keep it lean.
- **Static channel plans without validation**: interference from neighboring hotels or events will ruin it. Auto-RF and proper planning are essential.
- **Underpowered switches**: PoE injectors and unmanaged switches are not a foundation for reliable hospitality Wi-Fi.

Wi-Fi 6E and Wi-Fi 7: Future-Proofing Hospitality

With 6 GHz spectrum (Wi-Fi 6E and Wi-Fi 7), hospitality finally has room to breathe.

More channels mean less contention and features like Multi-Link Operation (MLO) in Wi-Fi 7 will make roaming smoother and performance more resilient. While most guest devices are still catching up, designing hotels with 6 GHz readiness today is a smart move.

Final Thoughts

Hospitality Wi-Fi is about more than coverage maps, it’s about experience.

Guests may forgive a slow check-in queue, but they won’t forgive bad Wi-Fi.

A solid recipe combines:

- **Accurate site surveys**
- **In-room AP deployments**
- **Capacity-driven design for public spaces**
- **Robust cabling, switching, and PoE planning**
- **Security that doesn’t get in the way of usability**
- **Future-proofing with 6 GHz and Wi-Fi 7**

Get these ingredients right and you don’t just deliver Wi-Fi but you deliver a guest experience that matches the hospitality brand’s promise.

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