

80% of mobile activity happens indoors, does your building deliver?

Indoor coverage is essential to mobile connectivity. Buildings are designed for safety, efficiency. They are not designed for indoor connectivity. This is why indoor coverage is a challenge for many buildings. Buildings are designed for safety, efficiency. They are not designed for indoor connectivity. This is why indoor coverage is a challenge for many buildings.

The two connectivity challenges

Buildings today face dual requirements. They need reliable 4G/5G coverage for occupants and tenants. They also need to ensure that first responders can access the Public Safety Network (PSN) indoors during emergencies.

The PSN is a critical communications network used by frontline emergency services, government agencies and essential services. In-building coverage solutions extend PSN coverage inside infrastructure, helping first responders stay connected in hospitals, tunnels, train stations and airports.

Addressing both requirements typically means coordinating multiple contractors, managing separate infrastructure deployments, and operating under different vendors' SLAs. This creates complexity, cost, and operational friction. BAI Communications (BAI) delivers both as an integrated solution.

Why modern buildings struggle

High-speed, high-capacity connectivity is increasingly essential. Mobile devices are multiplying. Internet of Things applications are growing. Remote networks are becoming standard. At the same time, the construction materials and techniques that make buildings efficient (concrete, metal reinforcement, energy-efficient insulation) actively block mobile signals.

Indoor wireless coverage solutions bridge this gap. With distributed antenna systems (DAS) and mobile booster solutions, mobile signals are captured from outdoor networks, amplified, and distributed throughout a building. This reaches areas where outdoor signals cannot penetrate.



In-building coverage made easy

Transforming indoor spaces with unmatched coverage

Distributed antenna systems (DAS)

A DAS is custom-designed for your building's size and capacity needs. DAS solutions use passive and active network elements: cables, combiners, splitters, and strategically placed antennas. These capture signals from outdoor base stations and distribute them throughout the building. PSN nodes can be integrated within the DAS infrastructure to provide emergency services connectivity.

DAS is suitable for large buildings and complex spaces with high-capacity demands: hospitals and healthcare facilities, office towers, stadiums and convention centres, airports and transit hubs, government and critical services buildings.

Mobile booster solutions

Mobile boosters are simpler and faster to deploy than traditional DAS. Equipment footprints are smaller. Commercial carrier approval is faster. Boosters amplify external signals and redistribute them indoors. PSN capability can be integrated depending on your requirements.

Boosters work well for smaller buildings, retrofit scenarios, and phased expansion: small to medium office buildings, hotels and residential buildings, shopping centres, and buildings with space or budget constraints.

Both approaches include

Complete design and site assessment. Commissioning, testing, and performance validation. 24/7 operations and maintenance. Regular performance reporting. Single point of contact for all technical coordination.

Features	Benefits
 Smaller equipment footprint	Maintain building aesthetics and functionality, reduce disruption during deployment, and lower upfront costs with compact equipment that's easy to install
 Scalability	Manage costs by starting small and expanding as your needs grow
 Equipment redeployability	Move and reuse mobile boosters if you expand or relocate, maximising equipment lifespan and reducing the need for new equipment as your requirements evolve
 Operations and maintenance	Minimise downtime and enhance operational efficiency with full management support, built-in diagnostics and easy access to performance data
 Emergency services ready	Support critical communications for first responders alongside commercial tenant connectivity in a single deployment
 No need for carrier approvals	Deploy mobile boosters faster by avoiding lengthy Mobile Carriers Forum (MCF) approval processes

In-building coverage solutions in action

Here's how in-building coverage solutions from BAI helped organisations in Australia improve connectivity throughout their buildings, delivering better results for staff, customers and patients.

Improving patient care at a small private hospital in Sydney

This hospital had been experiencing longstanding issues with mobile reception. The building's concrete structure made it impossible to make or receive phone calls, especially in the basement, which hindered the ability of doctors and other staff to perform their duties.

We installed a mobile booster system with an antenna on the roof for each mobile carrier and indoor units to distribute the signal where it was needed. That significantly improved 4G and 5G coverage in the main corridors of the lower ground level, enabling staff, patients and visitors to not only make calls, but also browse the internet, use social media and stream video.

Transforming mobile coverage at a private hospital in South Australia

The building materials used at this hospital made mobile coverage challenging before construction was even complete, with tradespeople forced to leave the site to get enough signal to make calls. This made it harder for them to do their jobs and degraded the experience for everyone on site.

Our mobile booster solution used rooftop antennas plus 25 indoor antennas to deliver enhanced 4G and 5G mobile coverage across five levels of the hospital. No longer faced with poor or even non-existent coverage, tradespeople could perform their work effectively. Now that the hospital is operational, staff, patients and visitors can confidently make and receive calls and use their mobile services throughout the building.

Enabling new opportunities for a shopping centre in Sydney

Mobile coverage had been an issue in this shopping centre for almost 10 years, with staff, tenants and guests largely unreachable and unable to use mobile services when they were inside.

We deployed antennas on the roof as well as a network unit that supplies power via ethernet cabling to coverage units throughout the building. With our mobile booster solution deployed, coverage has dramatically improved in six priority areas within the shopping centre. Stores can now take advantage of wireless payment terminals, and the centre can offer pop-up shopping opportunities that were previously impossible.



Why BAI for in-building coverage

BAI delivers comprehensive in-building coverage solutions designed, deployed, tested, and operated to the highest standards. We understand that connectivity is essential infrastructure for tenant experience, business operations, and emergency services. Uniquely, we can design and integrate PSN network connectivity into your IBC solution, eliminating the complexity of managing separate vendors and infrastructure. Our operational foundation managing Australia's largest critical communications network informs every solution we deliver.

PSN operations experience

BAI operates the Public Safety Network (PSN) on behalf of NSW Telco Authority, managing one of the largest critical communications networks in the world. The PSN handles an average of 1.47 million calls per month and maintains 99.95% reliability. We manage 50,000+ radio users across emergency services, government agencies, and essential services. We've operated through major emergencies including bushfires, floods, and natural disasters where communication reliability determined outcomes.

This operational foundation shapes how we approach in-building coverage. We understand what reliable connectivity demands. We know what happens when systems fail. We manage networks to prevent failure, not react to it. We design and operate with mission-critical standards: redundancy protocols, continuous monitoring, rapid response to issues, and enterprise-grade SLAs.

Technical credentials

BAI holds licenses and designations that matter:

- Licensed telecommunications carrier (enabling direct carrier coordination and Telstra connection)
- AMTA-designated DAS Infrastructure Operator (meeting industry standards for multi-carrier networks)
- MCF 2025-compliant design capability (ensuring compatibility across all operators)

These credentials enable BAI to transfer regulatory compliance obligations from property owners to BAI, coordinate directly with carriers, and ensure network designs meet industry standards

What this means for your building

When you engage BAI for in-building coverage, you're working with an operator that manages critical communications daily. We understand the difference between coverage that works most of the time and coverage that works when it matters. We design, operate, and maintain your building's connectivity with that discipline.

For buildings requiring PSN integration, we bring operational experience managing mission-critical networks. For all buildings, we bring the operational standards and monitoring protocols developed through managing one of the world's largest critical communications networks.



Our complete in-building coverage approach

BAI delivers end-to-end in-building coverage solutions. We handle everything: site assessment, design, installation, commissioning, testing, and ongoing operations and maintenance.

Assess

We begin with a comprehensive site visit and coverage study. We understand your building's layout, construction materials, occupancy patterns, and coverage requirements. We identify the critical areas where coverage is needed most. We deliver a formal assessment and pricing so there are no surprises.

Design

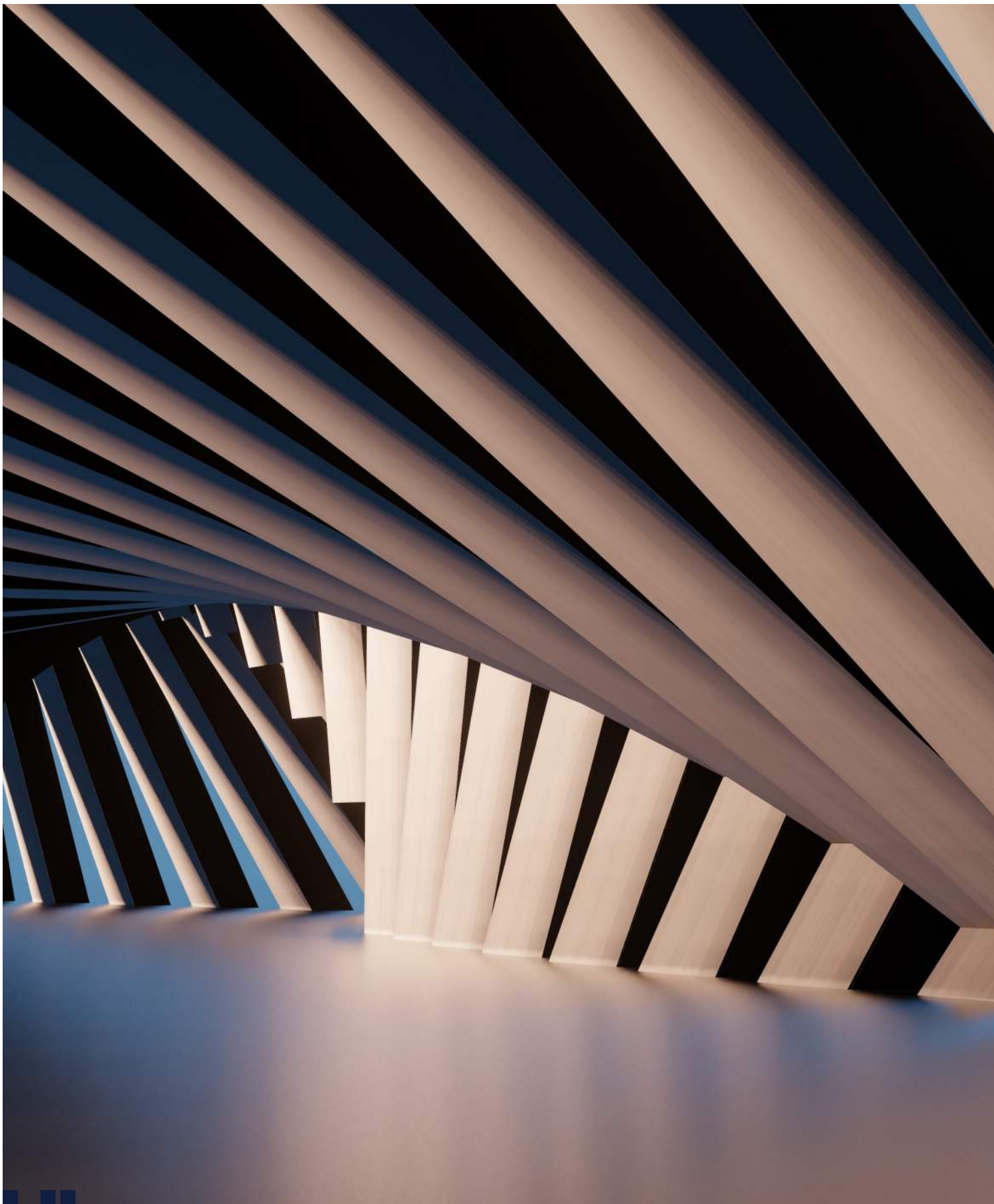
We design a solution customised for your building's specific needs. Our designs comply with Mobile Carriers Forum (MCF) standards, ensuring that all mobile network operators can connect using standard Australian spectrum bands. For PSN integration, designs account for PSN frequency requirements and emergency services access patterns. We procure all required hardware and equipment and provide complete design documentation.

Deploy and commission

Our team handles complete installation of infrastructure including cables, antennas, and network components. Installation is coordinated to minimise disruption, often scheduled during off-hours or in stages. Once installed, we conduct full commissioning and testing. Every system is validated against performance requirements. You receive as-built documentation and readiness certification before handover.

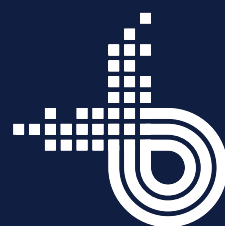
Operate and maintain

Our network operations centre provides 24/7 monitoring and proactive maintenance. We track performance, identify issues before they cause disruption, and perform regular maintenance and upgrades. You receive regular performance reporting against agreed service levels. Technical support is available when needed.



Contact us

To discuss your in-building coverage needs and learn how BAI can deliver reliable connectivity integrated with PSN access:
baicommunications.com



bai communications