



Executive Summary

Closing the connectivity gap

The case for investing in enhanced mobile connectivity.





The need for change in indoor communications

Look at any mobile coverage map, you'll find figures typically exceeding 90% connectivity when it comes to 4G, and the growing penetration of newer, ultra-fast 5G coverage.


Inside it's often a different story, thick walls, steel window frames, ceilings and pillars can impair indoor coverage. At the same time, buildings in the 'shadow' of others can find their mobile signals blocked. The result: users can't make or take calls or access their mobile apps.

As well as visitor and employee frustration, the impacts can be business critical: missing the customer call in the office, poor guest experiences in hospitality and poorly performing mobile apps in shopping centres.

Similarly, for commercial property owners and developers, inadequate mobile connectivity creates a range of issues from first occupancy and beyond. Business tenants will go elsewhere if teams can't use their smartphones indoors.

Just like power and water, mobile communication is now considered a utility. Everyone has an expectation and need for reliable indoor coverage.

The value it brings to business is considerable, and enhancing coverage is easier than you may think with a Cellnex multi-operator indoor connectivity solution.

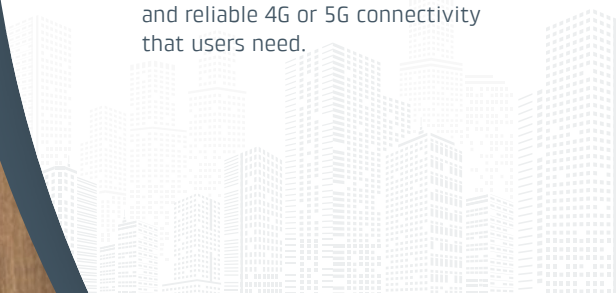


These indoor connectivity solutions can be deployed during construction or retrofitted during building refurbishment, and on a single floor or across the entire building as required.

Indoor connectivity explained

A popular, high value indoor connectivity option is a distributed antenna system (DAS).

Here, a network of radio units and small antennas is connected back to a technical room that houses the mobile network operator's (MNO) equipment. The antennas then distribute the signal around the building – filling mobile coverage gaps and delivering the fast and reliable 4G or 5G connectivity that users need.





The business value of staying connected

For building owners and landlords

- **Attract and retain high value tenants** with reliable mobile connectivity
- **Enhance differentiation** with bundled connectivity as part of your serviced office package
- **Market the property as a connected building** – with connectivity for today's smart applications
- **Ensure connectivity** for facilities management and maintenance teams
- **Eliminate mobile-related complaints** from tenants

For hospitality

- **Enhance guest experiences** with greater mobile connectivity, mobile apps and services
- Improve **staff to guest connectivity**
- **Ensure connectivity** for staff and maintenance teams
- **Overcome** on-site mobile communications issues for third party retail and leisure tenants

For enterprises

- **Make and receive business critical** sales and customer calls
- **Provide seamless mobile connectivity** for visitors and staff
- **Support bring your own device (BYOD)** strategies
- Drive **efficient and productive working**
- **Eliminate dropped calls** and slow mobile internet
- **Embrace flexible workstyles** to make mobility and hot-desking a reality

For retail and leisure

- **Support multichannel retail options** (with instore access to apps and online services)
- **Increase dwell time** by ensuring visitors can stay connected to family and friends
- **Take advantage of new mobile-related innovations** (augmented reality, etc)
- **Deliver new services** such as app-based promotions, wayfinding, and cashless payment options

Delivering connectivity, protecting investments

Mobile connectivity is critical in today's always-on world. All too often, however, people are forced to leave desks, rooms or even venues to get a signal, make a call or check email. This is frustrating for business users, shoppers and guests alike.

More significantly, dropped calls and coverage black spots can have a marked impact on daily business, personal productivity and even revenues. But while poor indoor coverage and capacity can be big problems, there's a simple solution.



Indoor solutions from Cellnex

Cellnex can help you bridge the gaps with a broad range of cost effective indoor connectivity options, funded through a range of flexible commercial models.





Continued

As a neutral host – an independent provider working with all mobile operators – we can deliver fast, reliable indoor connectivity from all main European Network Operators as an end-to-end service.

Plus Cellnex is continually innovating our solutions as technologies evolve. For example, exploring options to deploy solutions to the new Joint Operator Technical Specifications (JOTS) Neutral Host In-Building (NHIB) architecture which promises to further reduce the costs of delivering indoor connectivity.

We will engage with mobile operators and third-party suppliers on your behalf as your single point of contact, with network management and 24x7x365 monitoring delivered as standard.



Purpose-built **4G/5G solution**



Coverage from **all main European Network Operators**

Tailored to meet your **specific needs**

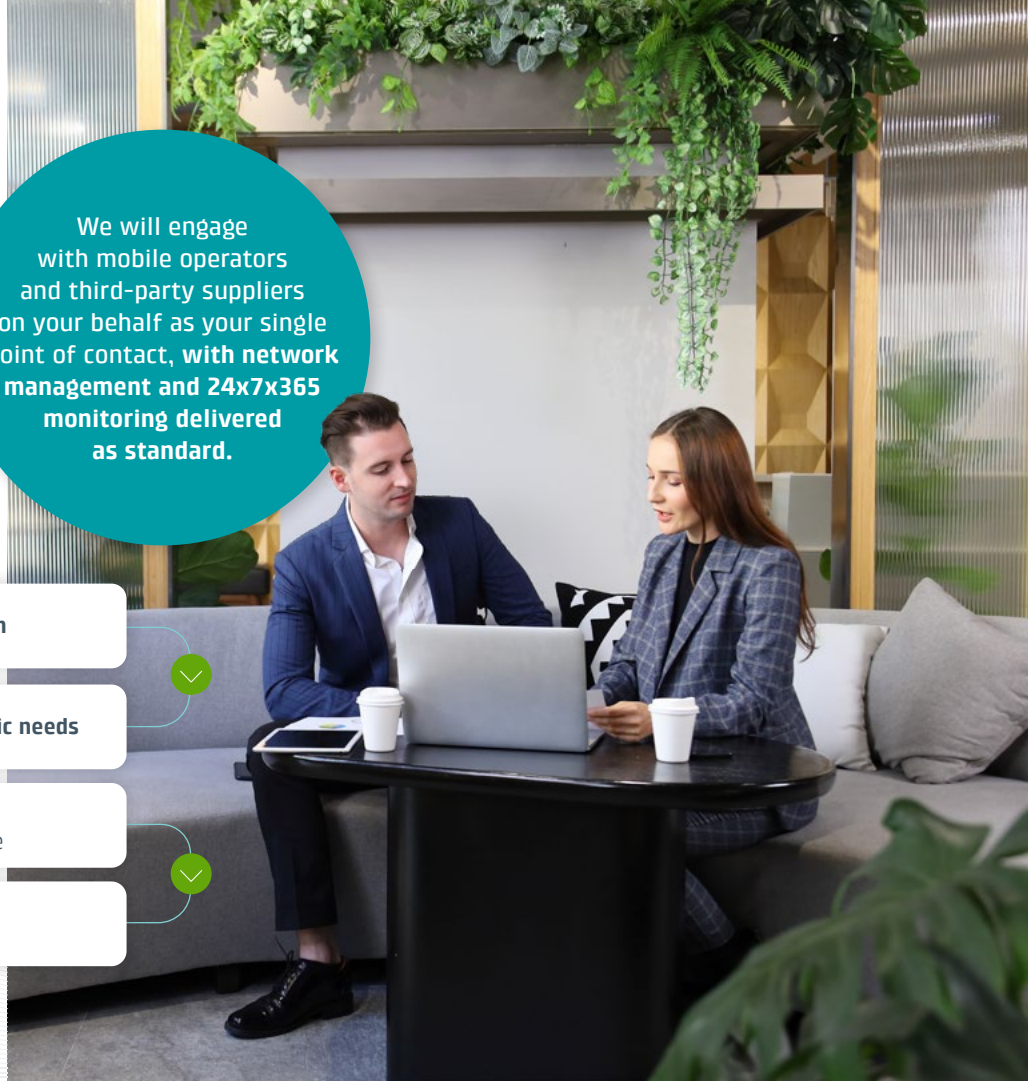


High data speeds and coverage throughout your building

Fully managed solution supported over its whole life



Flexible commercial models to suit your business



Cellnex is a Critical National Infrastructure Provider and one of Europe's leading telecommunication companies. We have extensive experience deploying indoor solutions in transport hubs, commercial real estate, retail outlets, hospitality venues and more.

Find out more and book a meeting with our Indoor Connectivity experts at:
www.cellnex.com