NEXTIVITY
Smarter by Design

Brochure
Fixing Cellular Coverage

5 Steps to Fixing Indoor Cellular Coverage

Understanding and Solving Indoor Cellular Coverage Problems

Why your phone works outside but not inside—and the five easy steps to bring strong signals indoors.

With an estimated 80%-90% of cell phone calls originating from indoors and 80% of all emergency calls coming from a mobile device, people want, need, and expect to have coverage wherever they go. While Wi-Fi calling technically provides this coverage, it is a stopgap solution and furthermore, only ~15% of users are willing to log onto a public Wi-Fi. In an emergency, precious seconds or even minutes could be lost in attempting to access the Wi-Fi network in order to place a call for help.

The need for in-building cellular coverage is well-established, but the way to achieve that coverage is less widely understood. If there is any signal outside, it can be brought inside and amplified to provide full coverage for every carrier throughout the site. Once you understand why your signal isn't strong inside, it's easier to understand the specific steps to take in order to solve the issue.

Factors Affecting Indoor Signal Strength

- Strength of signal outside the building (i.e., how close the building is to the cell tower)
- Obstructions blocking the signal that is coming from the tower (e.g., terrain, weather, trees, or other structures)
- The building itself, including construction materials and furnishings

The cell signal starts strong at the tower, but by the time it reaches your building, it's been weakened by distance and the many obstacles in its path.

Why you should fix your cellular coverage now

Continuous Connectivity: People and systems rely on cellular service for safety, communication, and operational efficiency.

5G Penetration Limits: Faster 5G signals have shorter wavelengths that struggle to reach indoors—this challenge will only grow as speeds increase.

Signal-Blocking Materials: Modern energy-efficient glass, wraps, insulation, and coatings block radio waves just like they block heat, cold, and sunlight.

Changing Environments: Network upgrades or new nearby construction can impact your building's reception. Intelligent cellular coverage systems automatically adapt to maintain strong, clean signals.

Persistent Problem: Indoor coverage issues don't fix themselves—action is the only solution.

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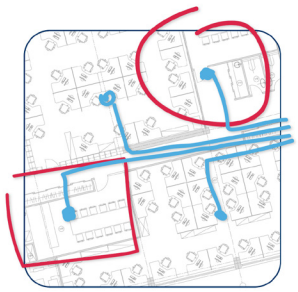
Here are the steps for delivering strong cellular coverage inside your building(s). This process is managed by your system integrator or installer, working with the IT team and/or facility manager. For very large sites or new construction, the site engineer or architect will also be involved.

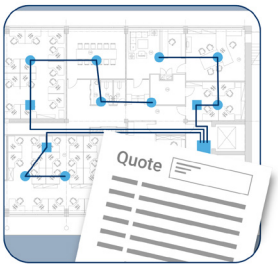


Step 1: Create an Estimate

Create a rough estimate for budgetary / planning purposes. This can easily be done remotely using files of your floor plan(s) and an understanding of the goals of the project. The estimate will be prepared by a Nextivity expert using our proprietary Bill of Material estimation tool, for quick and accurate results. This puts everyone on the same page regarding the scope of the effort and expected timelines.

Step 2: Conduct a Site Survey

Conduct a site survey by walking the space while measuring existing signal levels using special equipment. A Nextivity expert will walk the space using our propietary COMPASS XR grid tester to produce a signal report for your review. This includes going on the roof or other outside areas where the antennas that pull the signal into the building will be located.



Step 3: Finalize the Design and Quote

Using the information from the site survey, a final design and detailed quote is prepared and approved. This provides a blueprint for the installers so they know where to put the antennas inside and outside to achieve the required coverage. Designs also include all the cables and cable routes needed throughout the building.

Step 4: Install the System

In a relatively compact space with good accessibility, like a car dealership or bank branch, installation can be as fast as overnight. For campus projects and large sites, installation may take up to several weeks or be done in phases. Care is always taken not to disrupt normal building usage. Once the physical components are in place, the system is brought online through remote access, again minimizing disruption to the site.

Step 5: Test Final Signal Strength

A post-installation site survey will provide data showing signal levels throughout the building, ensuring project goals have been met. From this point forward, the system(s) will be monitored and managed remotely by the System Integrator using our award-winning WAVE Portal, keeping it performing at optimal levels. It is unlikely that additional site visits will be required unless the building changes or damage has occurred.

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