



BYOC

**BUILDING YOUR
OWN COVERAGE**

T-Mobile
BUILD YOUR OWN COVERAGE



LIGHTS? WATER? **WIRELESS!**

In office buildings and facilities across America, basic amenities like electrical, gas and plumbing are essential components that are planned and constructed.

The new amenity being planned or added by building owners, architects and operators?

Reliable, in-building wireless coverage.

IN-BUILDING WIRELESS INFRASTRUCTURE

WHY INVEST?

- It's needed everywhere: In commercial offices, university buildings, stadiums, retail spaces – anywhere teams of employees, tenants or large crowds gather.
- With 80% of mobile traffic starting and ending in a building, owners, operators and commercial developers recognize wireless infrastructure is crucial – just like HVAC, electrical and plumbing.



SMART BUILDINGS ARE THE FOUNDATION OF A SMART CITY

Adopting smart technology can reduce energy consumption and operating expense. But that's just the beginning. Building owners and operators who invest in future-ready indoor wireless networks are forming the foundation for smart cities across America.



40% of energy

Buildings account for nearly 40% of all energy consumed in the U.S.



IN-BUILDING WIRELESS INFRASTRUCTURE

WHAT DO BUILDING MANAGERS, OPERATORS & ARCHITECTS THINK?

87% AGREED

It's imperative that we have in-building cellular coverage in all areas of our buildings.

84% AGREED

Fitting our buildings with optimal in-building cellular coverage would improve our employee productivity.

54% AGREED

Wireless connectivity makes a building more desirable.

Source: CommScope Report – Wireless in Buildings

Indoor wireless networks create outstanding coverage and capacity in your building or venue – even when it’s at its most crowded – and this is crucial as mobile connectivity is revolutionized with 5G technologies.

GROWING DEMAND FOR IN-BUILDING WIRELESS

77%

of Americans currently own a smart phone.

(Pew Research Center)

5

hours per day is the average amount of time smart phone users spend on mobile devices.

(Fierce Wireless)

70%

of 911 calls originate from inside buildings.

(NENA: The 9-1-1 Association)

80%

of mobile traffic originates or terminates within a building.

(Urban Land Institute)

70%

of the time spent on digital media is on a mobile device.

(comScore)

BUILD YOUR OWN COVERAGE: ENTERPRISE

Optimize Your Building's Connectivity and Network Design

- T-Mobile's Build Your Own Coverage (BYOC) program supports enterprises, building owners, tenants, operators and commercial developers across the country.
- We assist with design and development of indoor wireless networks, helping deliver outstanding mobile coverage and capacity that meets the needs of tenants, residents and visitors.
- Commercial real estate is boosted by expert use of wireless technologies including small cells, macro network optimization and distributed antenna systems (DAS).

BUILD YOUR OWN COVERAGE

Optimize Your Building's Connectivity and Network Design

- When building owners or operators plan for electric connectivity as well as capital and operating costs, T-Mobile's BYOC team steps in with network design reviews, approvals, and our network signal source.
- When matched with carrier-designed high-speed connections, radios and receivers, the building's visitors, tenants and guests get access to T-Mobile's wireless services – and other carriers' networks when added to the indoor infrastructure.



BUILD YOUR OWN COVERAGE

T-MOBILE HELPS BUILD INDOOR WIRELESS NETWORKS FOR:

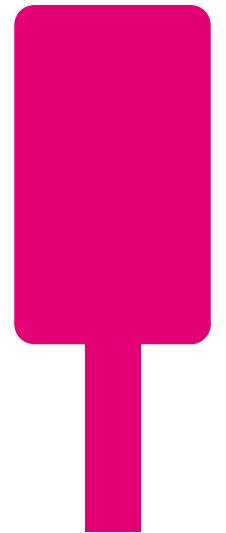
- Arenas / Stadiums
- Casinos
- Commercial Real Estate
- Government Buildings
- Hospitals
- Hotels
- Malls
- Military Facilities
- Resorts
- Residential Buildings
- University Campuses
- Warehouses



BUILDING BLOCKS OF INDOOR WIRELESS NETWORKS

SMALL CELLS

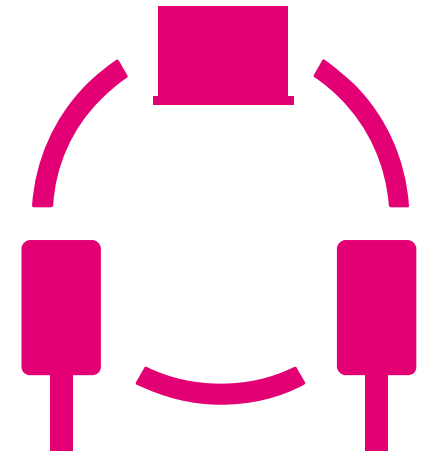
- Small cells are miniature versions of traditional cell sites.
- These self-contained cell sites are small, lightweight and low power.
- They can be used indoors so large crowds of people can simultaneously access a wireless network, or they can be placed outdoors in the public right-of-way, like on street lights and utility poles.



BUILDING BLOCKS OF INDOOR WIRELESS NETWORKS

DAS TECHNOLOGIES

- A distributed antenna system (DAS) network is made up of a base station connected by fiber optic cable to a group of antennas placed remotely in outdoor and indoor locations.
- DAS networks share and receive signals with remote nodes simultaneously, creating a single large cell. DAS systems can be shared by multiple carriers and are multi-frequency.



BUILDING BLOCKS OF INDOOR WIRELESS NETWORKS

MACRO ANTENNA SITES

- Traditional macro sites are installed on rooftops, building facades, monopoles and other steel structures.
- These traditional antenna support structures handle many users across a general geographic footprint.



GETTING STARTED BYOC STEP-BY-STEP

T-Mobile’s network team and operational experts have deployed countless numbers of indoor wireless networks of every shape, size and configuration. Our BYOC team removes building professionals’ pain points and streamlines the technology deployment process.



The first step is to find a strategic partner to help create a wireless infrastructure plan. We can help develop an RFP or find the right OEM or integrator.

Meet the local market and/or national BYOC team, learn more, and sign-up.

We will gather information including general system characteristics, proposed T-Mobile role and system signal power allocation, and backhaul requirements for budget approval.

We will reach out to your integrators for design files in iBwave format based on broadcast channels and bands. We will then finalize the signal source T-Mobile will provide.

The BYOC License Agreement will need to be signed by both parties. During legal review and after design approval, our local market teams will visit the site to develop lease exhibit drawings.

Once the license is fully executed, we will move to the deployment phase.

THANK YOU

Luke Lucas, Senior Manager
Engineering Business Development

Phone: 206.966.6000

Email: luke.lucas@T-mobile.com

