



T-MOBILE BRINGS ROBUST INDOOR SERVICES TO AN ICONIC SKYSCRAPER: 4 WORLD TRADE CENTER

4 World Trade Center is one of the most sophisticated architectural structures in the world, but like all towering skyscrapers it is difficult to serve with traditional cellular technologies. T-Mobile designed a high-capacity indoor network to meet the voice and data needs of the building's enterprise customers and visitors. Customers have expressed strong satisfaction with the reception and coverage.

The Challenge

Cellular services are difficult to deliver in modern skyscrapers because radio signals from the outdoor "macro" network can't penetrate concrete and steel structures or tinted glass. Nor can the signals extend far enough to reach above the 20th floor. To compound these challenges, the venues need robust services to support the voice and data needs of building occupants and visitors. These issues were particularly acute at 4 World Trade Center, which is 72 stories tall and has 2.5 million square feet of office and retail space. T-Mobile had many enterprise customers in the location and needed to ensure they had network access and an optimum user experience.

The Solution

T-Mobile joined a neutral-host distributed antenna system (DAS) that had access points at strategic

locations on every floor of the massive building. The company's Alternative Coverage Solutions (ACS) integrated T-Mobile's radio equipment and associated components with the in-building system, brought in fiber optic cables from a third-party provider to connect to the DAS to T-Mobile's core network, and performed extensive testing throughout the facility to ensure customers would have the best possible services anywhere in the building

The Results

The T-Mobile ACS team was able to complete deployment and activate services just three months after starting construction. During the first 6 months of service, data usage nearly doubled and call volume increased 40%. Customers are enjoying high data speeds. Network access for 911 calling is enhancing public safety.

QUICK FACTS

Venue

4 World Trade Center

Goal

Indoor coverage and capacity for T-Mobile customers

Success Metrics

Daily voice traffic: 3,500 calls

Dropped call rate:
less than 0.25%

Daily data traffic: 200 GB

Download speed: ~68 MBPS

Public safety: 13 calls to 911 in 6 months

Technology

Distributed antenna system (DAS)

For More Information Contact

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