# U.S. In-building Wireless Forecast, 2021 – 2026

*Spending in Commercial Buildings and Manufacturing Facilities*

# U.S. In-building Wireless Forecast, 2021 – 2026: *Spending in Commercial Buildings and Manufacturing*

A Market Study

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# Abstract

Indoor small cells and in-building wireless (IBW) systems are deployed in commercial buildings and manufacturing facilities to provide a secure network and improve the experience of employees and guests indoors. They are also used to support industry-specific use cases, such as online concessions in smart stadiums and ultra-reliable and low latency automated applications on the factory floor.

IBW systems use many types of indoor small cells, including distributed antenna systems (DAS), DAS Lite, picocells or enterprise small cells, femtocells and cellular signal boosters. Wi-Fi is not included in this forecast.

This market study provides a newly revised five-year forecast for spending for in-building wireless systems in U.S. commercial buildings and manufacturing buildings. This current revision is based on the following assumptions and information:

- iGR believes that while the direct impact of the COVID-19 pandemic has dissipated, the outlook for the cellular IBW market will continue feeling its indirect effects both in terms of the broader economic outlook (e.g., inflation, recession potential) as well as trends that are unique to the different categories of commercial buildings (e.g., hotels versus warehouses). In short, cellular IBW trends pre-2020 have become irrelevant while post-2020 trends are now clearer (e.g., work-from-home).

- iGR also updated its IBW forecast based on newly available data (late 2021) from the 2018 Commercial Buildings Energy Consumption Survey (CBECS) the date from which became available in late 2021.

- Information gathered from conversations with multiple solution providers in the IBW market during 2021 and the first quarter of 2022.

Included in the market study is a five-year forecast for both network build spending and operational spending for the deployment of cellular IBW in U.S. commercial and manufacturing buildings in the Sub 6 GHz (non CBRS bands), the CBRS band, and mmWave bands.

Note that this market study provides separate spending amounts for commercial buildings and manufacturing buildings, but it does not provide spending breakouts by types of commercial buildings, such as retail, healthcare, stadiums, and transportation buildings, nor does it provide spending breakouts by types of manufacturing facilities. This detailed spending can be found in our series of building-specific Private Wireless Networks market studies that will be published the second and third quarters of 2022.

Key questions addressed in this market study include:

- How much will be spent to build and operate Sub 6 GHz, CBRS and mmWave IBW systems in U.S. commercial buildings from 2021 to 2026?
- How much will be spent to build and operate Sub 6 GHz, CBRS and mmWave IBW systems in U.S. manufacturing buildings from 2021 to 2026?
- Which technologies and mobile industry trends are impacting the deployment of IBW systems?
- What are the different types of indoor small cells included in iGR's forecast?
- What are the key benefits of using in-building wireless systems and indoor small cells?
- What are some of the perceived negatives and issues related to indoor small cell deployments?

Who should read this report?

- Mobile operators
- Infrastructure OEMs
- Small cell product and solution vendors
- Backhaul service providers and equipment OEMs
- Financial analysts and investors.