U.S. Outdoor Small Cells Forecast, 2018 – 2023: *Not getting any easier*

Market Study
Second Quarter 2019

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Abstract

Over the past few years, the outdoor small cell market in the U.S. has grown substantially, but roadblocks to more widespread deployment persist and *iG*R believes these issues continue to impact the market. The main barriers facing the outdoor small cell market continue to have little to do with the technology itself and more to do with actual installation issues – power, backhaul, regulations, timelines and overall cost.

This forecast focuses on the future for small cells in the sub 6 GHz band and mmWave band. The forecast assumes that most currently deployed LTE small cells will eventually be upgraded to 5G NR. The rate at which that happens depends on when the MNOs start migrating their spectrum from LTE to 5G NR.

In this market study, *iG*R presents a total addressable market forecast and an "actual" forecast for U.S. outdoor small cell nodes installed: metrocells, remote radio heads as small cells, outdoor DAS and mmWave-based small cells.

The assumptions underlying *iG*R's outdoor small cell forecasts are explained in this market study. The forecasts are further based on *iG*R's global connections forecast market study and *iG*R's mobile data forecast market study, as well as *iG*R's primary and secondary research, and various other sources.

Key questions addressed in this market study include:

- What is an outdoor small cell? What are metrocells, RRHs and oDAS?
- Why do the mobile networks need outdoor small cells to meet bandwidth demand?
- How do outdoor small cells fit into operators' evolving networks?
- What are the issues with deploying outdoor small cells in the U.S.? How do these issues impact the number of small cells in the market?
- What is the regulatory environment for deploying small cells?
- What are the differences between oDAS, metrocells and remote radio heads?
- What is the role of CPRI with outdoor small cells?
- Where are outdoor small cells most likely to be located? What's their role?
- How important is location to the effectiveness of an outdoor small cell?
- What is the total addressable market in the U.S. for outdoor small cells? How does this vary by small cells for mmWave and sub-6 GHz?

- How does the forecast for actual outdoor small cells deployments in the U.S. compare to the U.S. outdoor small cell total addressable market forecast? How does this vary by small cells for mmWave and sub-6 GHz?

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.