



Unlocking the power of 5G with small cells

Global small cell deployments for enterprise
and operators

Ozgur Aydin
Nokia



"Small cells continues playing a pivotal role for increasing network performance, enabling new businesses and boosting industry efficiency"

Key market drivers for 5G small cells 2025-2030

- Completion of outdoor macro roll-outs in many markets
- Some cities not allowing macro site permits anymore
- Migration from 4G to 5G
- Higher capacity and higher efficiency
- Easy 5G insertion with all-in-one solutions
- Neutral hosts
- Private network and enterprises

\$7.7bn

Cumulative revenue
2025-2030

(1)

3.3million

Indoor units
annually in 2030

(1)

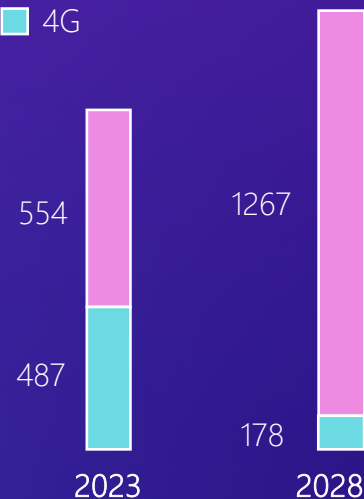
12%

Share of private small
cell business in 2030

(2)

Technology mix (revenue \$million)

- 5G
- 4G

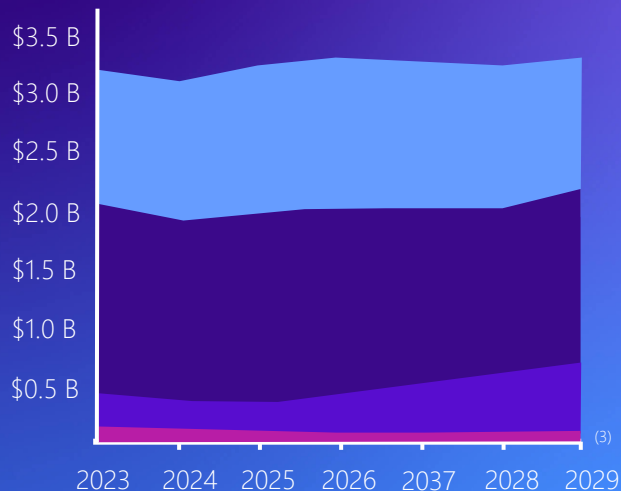


(1)

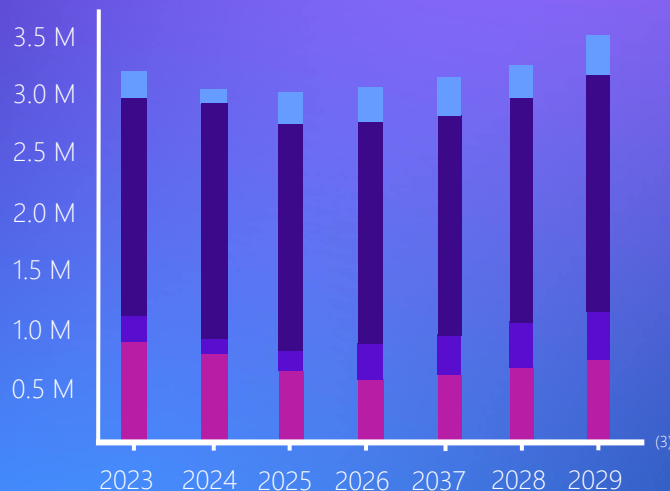
1) OMDIA
2) ABI Research

Small cells revenue and shipments picking up

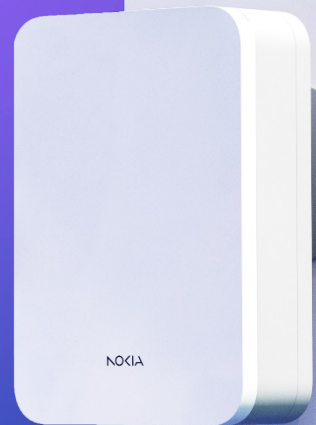
Total addressable market



Shipped units



- New **Radio Access Technologies** are deployed in waves: 5G macro first, then small cells
- Small Cells are less impacted by delays and decreased investments observed with RAN
- **Private 5G, industries, enterprises and in-building segments** are fuelling small cells demand



Symbiosis of neutral hosting and enterprises

Improve performance, efficiency and TCO with small cells



In-building coverage



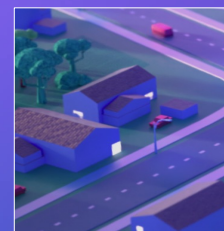
Private wireless



Urban densification



Rural expansion



Wide area network

Business Opportunity

Driver

- 79% of total mobile BB traffic is indoor
- Capacity and coverage should meet the end-user expectations

- Improve productivity and efficiency
- Deploy network on enterprise campuses and Industrial parks

- Boost performance in hot spot areas
- Introduction of 5G for CSPs and enterprises in white spots

- Improve cell edge performance and remove coverage gaps
- High performance connectivity for industries

- Critical services requiring on-spot capacity
- All-in-one small cells provides easy, plug-and-play 5G

Neutral hosting

NOKIA

Small cells explores new waters



350 ships
seven seas

IoT on board and ports

Controlled fruit ripening

Advanced sensing



Private Wireless on the sea

Local content

Entertainment

Sailors' Quality of Life (QoL)



(* definition of "the seven seas" depends on historical timeline and culture it is used. Map illustrates the modern and global adapted version of the seven seas

Key take-aways.

Enabling enterprises business and neutral hosting with small cells

Small cell
market
picking up



Small cells
complements macro
networks for
performance and
efficiency

Monetize
small cells



Enable new
revenue streams
and business
models

Portfolio
and
performance



Scale to any size,
performance or
coverage criteria

Vendor
positioning



Understand the best-
in-breed options

NOKIA

NOKIA