



# Radio access networks: worldwide forecast 2020– 2028



Caroline Gabriel and Grace Langham

## About this report

This report provides forecasts for addressable revenue for vendors in the radio access network (RAN) sector for 2020–2028. It provides details on MNO spending by site type, RAN architecture and region, and also gives a break down of spending based on major drivers of change, such as 5G expansions and upgrades and the adoption of virtualised RAN. The report provides recommendations for vendors and MNOs.

The report is based on several sources, including:

- Analysys Mason’s survey of 86 MNOs about their RAN investment plans
- interviews with MNOs and vendors worldwide.

### KEY QUESTIONS ANSWERED IN THIS REPORT

- What are the key trends and factors that will affect the RAN market during 2020–2028?
- Which will be the key areas of new revenue, and how will emerging technologies such as massive MIMO and Open RAN perform?
- What ecosystem changes will result from the adoption of new architecture?
- How far will 5G standalone drive new investments and approaches?
- Which regional factors will drive growth?
- What should vendors do to exploit new business opportunities?



### GEOGRAPHICAL COVERAGE

- Worldwide
- Central and Eastern Europe
- Developed Asia–Pacific
- Emerging Asia–Pacific
- Latin America
- Middle East and North Africa
- North America
- Sub-Saharan Africa
- Western Europe

### COVERAGE

- Site type: macro, micro and small cell
- Architecture: integrated, centralised, virtualised and Open RAN
- Network: 5G and non-5G
- Product type: antennas, basebands, xNFs and cloud infrastructure
- Professional services



### WHO SHOULD READ THIS REPORT

- RAN vendor strategy and planning teams.
- Product management teams that are responsible for feature functionality and geographical focus, and product marketing teams that are responsible for revenue growth.
- Strategy teams and CTO office within MNOs, to understand trends that will affect their procurement strategies and architecture.
- Investors in mobile network start-ups or operators.
- Vendors that are looking to enter the RAN market for the first time, including start-ups.

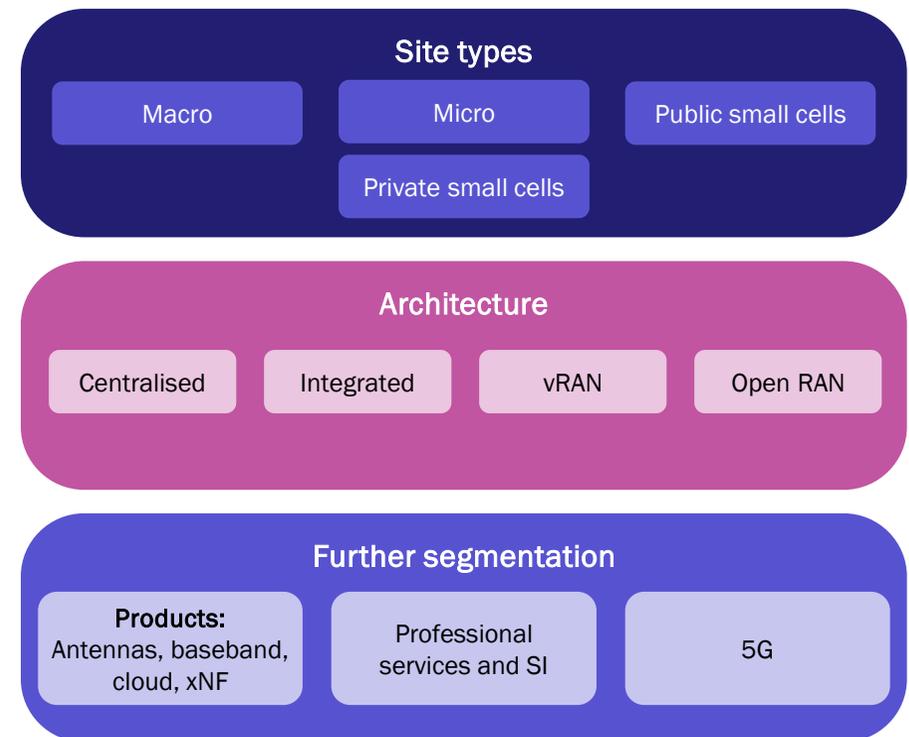
## Changes to the 2020–2026 RAN forecast: we have accounted for an increase in spending from late 2025 due to the delayed adoption of new architecture

We underwent a thorough review of the scope of our RAN forecast in late 2022 in response to conversations with clients and industry stakeholders and the results of a detailed survey of 86 MNOs regarding their RAN investment plans.

The key changes in this year's forecast are as follows.

- We have extended the end date from 2026 to 2028. We believe that several important trends will reach a tipping point in 2025/2026, including the adoption of virtualised and Open RAN architecture and the take-up of 5G-Advanced with the 5G standalone (SA) core. We continue to forecast modest overall revenue growth, but have increased the growth rate from late 2025. This reflects the slower-than-expected adoption of 5G SA and vRAN in the early 2020s.
- We have excluded some aspects of the RAN ecosystem that were previously included to focus more on the addressable revenue for equipment and services vendors. These include passive site and infrastructure costs, which are still reflected in our capex and opex forecasts, and some xHaul revenue (we now publish a standalone xHaul forecast within our *Transport Network Strategies* programme). The 2021 RAN forecast figure is based on actuals but is lower than that in last year's report due to the rescoping exercise.
- We have introduced new sub-categories to reflect the diversification of the RAN architecture and ecosystem (Figure 1).

Figure 1: Overview of our revised forecast report taxonomy



Source: Analysys Mason



Executive summary and recommendations

Forecast

Overall telecoms market context

Market definition

**About the authors and Analysys Mason**

## About the authors



**Caroline Gabriel** (Research Director) leads Analysys Mason's *Networks* research practice, as well as leading many 5G-related research activities across multiple programmes including *Next-Generation Wireless Networks* and *Transport Network Strategies*. She is responsible for building and running Analysys Mason's unique research base of mobile and converged operators worldwide. She works directly with Analysys Mason's research clients to advise them on wireless network trends and market developments. She has been engaged in technology analysis, research and consulting for 30 years, and has focused entirely on mobile and wireless since 2002. Her focus is on critical issues and trends related to mobile and wireless infrastructure, particularly operator deployment intentions for 4G, 5G, virtualised RAN, end-to-end open networks and other technologies.



**Grace Langham** (Research Analyst) is a Research Analyst based in the London office and is part of the *Networks* research practice. She holds an MChem degree in chemistry from the University of York. Grace's final year research project was based on pharmaceutical drug discovery, and she also worked as an analytical chemist.

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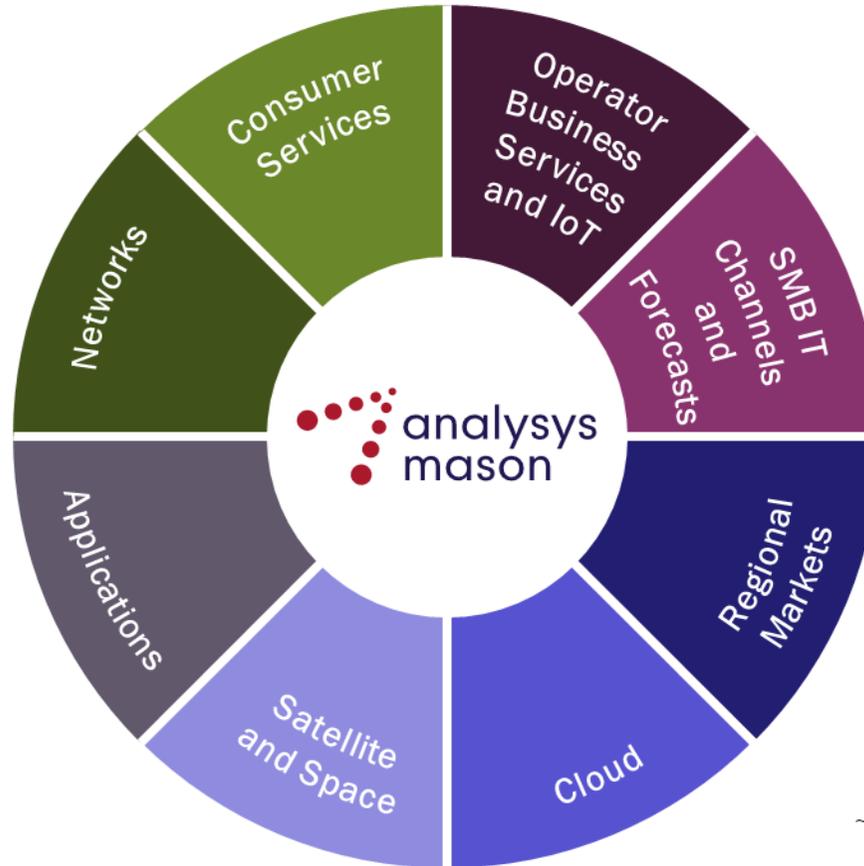
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  - Fixed-Mobile Convergence
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  - Future Comms
  - Video, Gaming and Entertainment
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  - Wireless Infrastructure Strategies
  - Fibre Infrastructure Strategies
  - Operator Investment Strategies
  - Telecoms Strategy and Forecast
  - Transport Network Strategies
- 
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  - Automated Assurance
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# Our areas of expertise



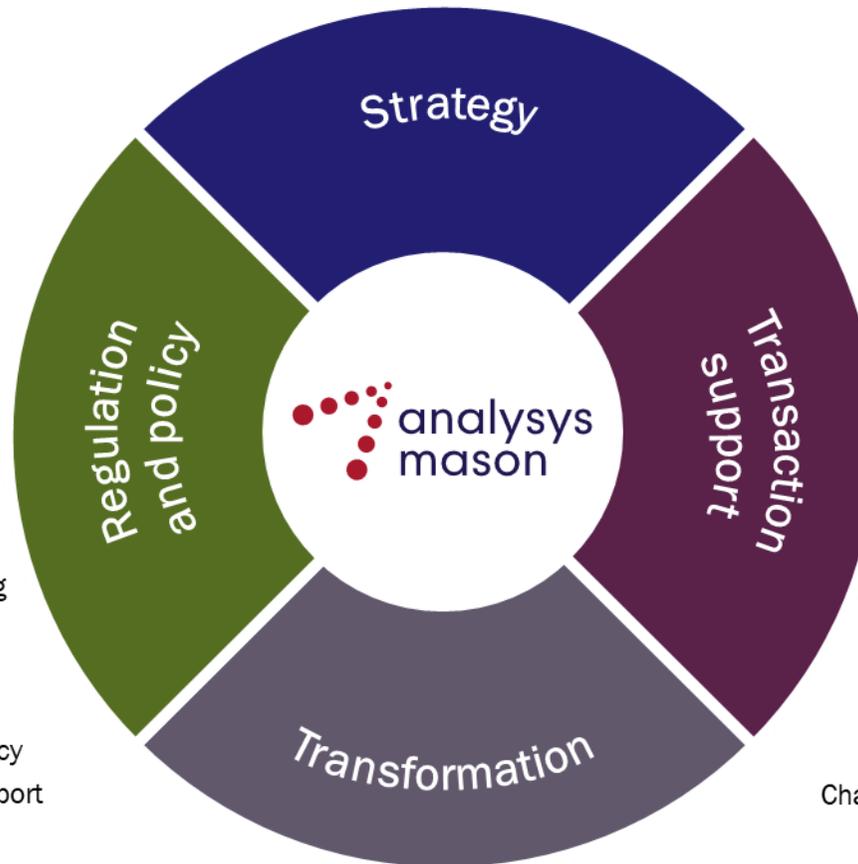
## Strategy

- Corporate growth strategy
- Business unit strategy
- Infrastructure strategy



## Regulation and policy

- Network and platform
- Public sector broadband intervention
- Accelerating digital transformation of society
- Price controls and cost modelling
- Regulatory accounting
- Regulatory benchmarking and analysis
- Spectrum management and policy
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- Postal regulation and policy



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- Periodical business monitoring and loan technical advisory
- Opportunity scouting and pre-deal support



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- Operational excellence
- Data, BI, steering and insights
- Change and programme management
- Sustainability

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