

**Global RAN  
Infrastructure  
Spending Forecast,  
2017-2027: *RAN in  
the U.S., Europe and  
Asia Pacific***

Market Study  
Second Quarter, 2018





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# **Global RAN Infrastructure Spending Forecast, 2017-2027: *RAN in the U.S., Europe and Asia Pacific***

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## Market Study

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## Abstract

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The first part of the evolution to 5G involves the RAN (Radio Access Network) with the deployment of the first part of the 3GPP Release 15 standard called 5G NR (New Radio). The next step will be to deploy the new packet core and subsequent 3GPP releases. Historically, the majority of build and operating spending on the mobile network has been for the RAN and this is not expected to change as 5G is deployed.

5G RAN will also involve new spectrum, specifically in the mmWave and 3.5 GHz bands. While 5G is not defined by the spectrum used, *iGR* expects that 5G will eventually be deployed in all spectrum bands currently used today for LTE. RAN build spending will therefore continue until at least the middle of next decade, as the industry upgrades the current 4G LTE to 5G and implements new spectrum bands with 5G.

But this migration will not be without challenges for the industry. As well as the move to cloud RAN (C-RAN), increased use of small cells and virtualized solutions, the mobile operators are also increasing the use of off-the-shelf hardware and open RAN solutions. This will significantly impact the amount spent on 5G RAN, the current vendors and the opportunities for new market entrants.

This market study presents a summary of *iGR*'s RAN research, including build spending in the U.S., Europe and Asia Pacific.

Key questions addressed in this market study include:

- What are the various 3GPP standards leading up to 5G and what are they likely to contain for the RAN?
- What is 5G? How is it defined and/or viewed right now? When will 5G be deployed?
- What are some of the goals and use cases for 5G?
- How will U.S. mobile operators get from their 4G LTE networks of today to tomorrow's 5G networks?
- What are the key RAN technologies that will enable 5G, such as Massive MIMO and beamforming?
- How big is the LTE and 5G RAN infrastructure opportunity in the U.S., Europe and Asia Pacific in the next ten years?
- How is the RAN infrastructure spending split between 4G and 5G in the U.S., Europe and Asia Pacific in the next ten years?

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- What is the expected impact of eCPRI and other enhancements to the Radio-baseband interface?
- What is the expected impact of open RAN?
- Who are some of the major vendors that will support LTE and 5G RAN over the next ten years?

Who should read this report?

- Mobile operators
- Infrastructure OEMs
- Small cell product and solution vendors
- Financial analysts and investors.

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