



# LTE and 5G Market Statistics

## Network Types

### Over 400 operators are investing in 5G networks

As of October 2020 GSA's NTS database showed:

- There are 795<sup>1</sup> operators with commercially launched LTE networks (offering broadband fixed wireless access and or mobile services) Within this, GSA has identified:
  - 406# operators that have launched LTE fixed wireless access services (excludes those offering MiFi/dongle services only).
  - 728# operators that offer fully mobile LTE services.
- 233 # operators hold licences to use spectrum for TD-LTE services, 165 of which are known to be actively using the spectrum (either deploying networks or have launched services).
- 353 operators are deploying or have launched LTE-Advanced or LTE-Advanced Pro technologies in their commercial networks. 207 operators are investing in one or more LTE-Advanced Pro technologies.
- 402 operators in 129 countries are investing in 5G networks in the form of tests, trials, pilots, planned and actual deployments.
- 136 operators have announced that they have deployed 3GPP-compliant 5G technology in their networks. Of those, GSA now counts 112 operators in 47 countries/territories that have launched one or more 3GPP-compliant commercial retail 5G services.
- 5G standalone data added to the NTS database for the first time: 52 operators investing in 5G standalone (including those evaluating/testing, piloting, planning, deploying as well as those that have launched 5G SA networks)

Figure 1: Countries/territories with operators known to be investing in 5G



## Network Features

### 110 deployed/launched NB-IoT networks worldwide

The NTS database tracks various LTE network technologies:

- 4x4 MIMO – 150 operators identified as investing, of which 93 have deployed/launched the technology within their commercial networks.
- 8T8R MIMO and Massive MIMO – 84 operators identified as investing in these technologies; at least 38 deployed/launched.
- 256 QAM in the DL – 124 operators identified as investing, of which 79 are known to have deployed/launched the technology within their commercial networks.

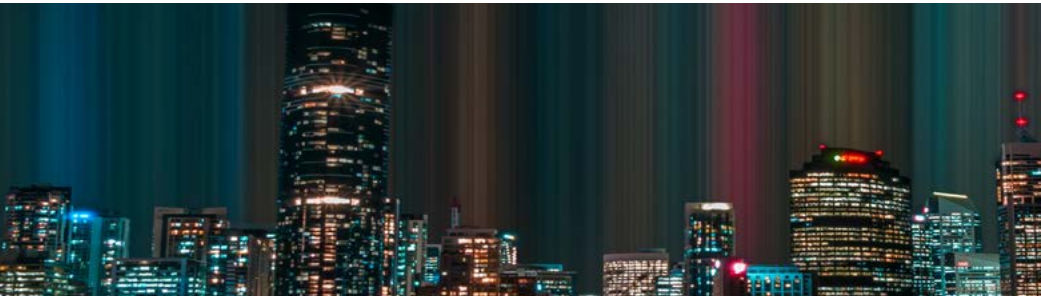
And numerous key LTE service features:

- 36 operators investing in LAA (9 with deployed/launched networks); 12 operators investing in LTE-U (3 with deployed/launched networks); 3 operators investing in LWA (one launch so far).

- 273 operators investing in VoLTE, and 224 operators with launched VoLTE services.
- 110 deployed/launched NB-IoT networks.
- 49 deployed/launched networks LTE-M networks.

1: Counts reduced slightly due to recent merger and acquisition activity





# Definitions

### **GSA uses the following definitions for technologies and services:**

- Licensed to test/trial: in live public networks, or using specific spectrum bands, but tests have not started yet.
- Evaluation/testing/trialling: Work to evaluate possible investments, early tests and trials including demonstrations, lab tests, and field trials where the technology might be subsequently removed. Also includes testing/trialling of an unspecified type.
- Planned: the operator has announced an intention to launch but has not yet started deploying the network/service and does not have a licence (if one is needed).
- Licensed: means the operator has a licence to use the spectrum band for commercial services. Variations include licensed for mobile broadband, licensed – technology neutral, licensed for LTE, licensed for 5G, or licensed for 2G or 3G.
- Deploying: the operator has started actual construction/installation/deployment; and may be piloting the network in selected locations.
- Running field trials/pilot projects: Later stage testing, typically using the equipment intended to be deployed or in process of wider deployment within the network.
- Deployed in network: 5G has been installed and activated in parts of the network, even if not used for commercial service yet, but is intended to stay in the network and is ultimately expected to be used for commercial services.
- Soft launch: a 5G launch has been announced, but services are not widely available for customers to use – they are either restricted to a few pilot customers, or 5G devices are not generally available, (or where they are available, they cannot yet access the 5G network).
- Launched: commercial services are generally available to customers, over a live 5G network, with access to devices and subscriptions offering access to the 5G network.
- Testbed/incubator services: services accessible by third-party partners (such as enterprises and public sector or government organisations) for developing 5G applications and solutions, including those funded by the government/public sector. Excludes testbeds to test the 5G network technology itself.
- 5G FWA/home broadband: services designed to provide home or enterprise broadband using fixed wireless access terminals or 5G-enabled home routers; nomadic mobility only.
- 5G mobile: full mobility 5G data services within the network coverage area.



# ABOUT GSA

GSA is the voice of the global mobile ecosystem and has been representing mobile suppliers since 1998.

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