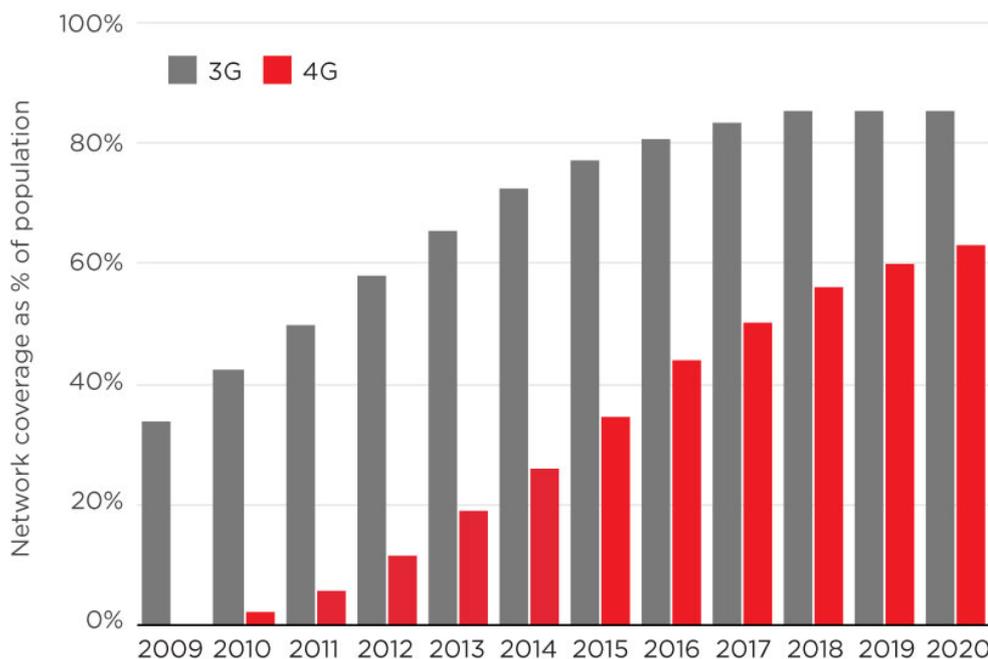


## Mobile broadband reach expanding globally

New GSMA Intelligence data set on mobile broadband coverage

New research from GSMA Intelligence predicts that more than four out of five people worldwide will have access to 3G networks by 2020 (up from 70% today), while 4G networks will cover over 60% of the global population by this point (up from 25% today). More consumers worldwide have access to mobile broadband networks that support download speeds that have been continuously increasing since the launch of the first 3G/WCDMA network in 2001 and the first 4G/LTE network in 2009.

The new data sets available in GSMA Intelligence measure mobile broadband network coverage as a share of population for each country worldwide where 3G and 4G networks have been commercially launched, including forecasts to 2020. The data notably shows that 4G networks are rolled out at a faster pace than 3G networks; while it took ten years for 3G network coverage to reach half of the global population, it will take 4G networks eight years after launch to reach the same milestone - therefore reaching this level in 2017. Several factors impact the deployment of mobile broadband networks, notably the timely allocation and assignment of required 3G/4G spectrum in each country, as well as macro-economic conditions that can influence investment decisions.



### Mobile broadband coverage reach, 2009–2020

Source: GSMA Intelligence

#### 3G network access is becoming ubiquitous

To date, 649 operators have commercially launched 3G networks across 217 countries, covering over 70% of the global population. In developed economies, 3G coverage surpassed 95% of the population in 2011, against almost two thirds of population in developing

economies in 2014. It is important to note that the deployment of mobile broadband networks in countries with large population sizes influence coverage results at regional and global levels. 3G networks were only launched in late 2007–early 2009 in countries such as Bangladesh, Brazil, China, India, Nigeria, Pakistan and Russia – where almost 50% of the global population is located.

In Asia Pacific, 3G coverage will increase by approximately 20 percentage points between 2014–18 to reach 90% of the region’s population. Meanwhile, 3G networks currently cover 97% of the population in the European Union. This region witnessed a wave of 3G deployments since the launch of 3 (Hutchinson) in the United Kingdom, Italy, Sweden, Denmark and Austria in 2003. By the end of 2005, 66 operators had commercially launched 3G networks, providing coverage to over 40% of the EU population. In early 2009, three out of four people living in the region had access to 3G services with 97% of all operators in the region offering 3G networks and services.

Based on our definition, 3G networks refer to WCDMA, HSPA, EV-DO and TD-SCDMA network technologies which, over the past decade, took theoretical maximum download speeds from just under 0.4 Mb/s to over 40 Mb/s as the 3G technology variants have evolved. To date, LTE technologies have taken theoretical maximum download speeds from 100 Mb/s (LTE) to 300 Mb/s (LTE Category 6).

#### **4G network coverage expansion is accelerating**

There are currently 335 mobile operators that have commercially launched LTE networks across 118 countries worldwide. The number of operators is forecast to almost double over the next three years to reach close to 600 operators in 156 countries. In developed economies, 4G coverage has already reached over 80% of the population in December 2014, while in developing economies 4G coverage stands at just above 10% of the region’s population. It is expected that deployments across countries in Latin America and Asia Pacific will drive global 4G coverage over the next five years.

The early allocation of spectrum in the Digital Dividend band (700 MHz) and programmes to expand coverage in rural areas helped to position the US as one of the most advanced 4G markets in the developed world. The FCC assigned LTE spectrum in 700 MHz in 2008, which allowed operators to deploy base stations early and commercially launch LTE services having reached initial high coverage rates – notably with Verizon Wireless covering 35% of the US population at launch in Q4 2010.

Between Q4 2010 and Q4 2012, Verizon’s 4G network coverage in the US jumped from 35% to 89% of the population, largely leading the country’s 4G deployments during that period. As of Q4 2014, 98% of the US population is covered by 4G networks. It is important to note that Verizon’s LTE in Rural America Programme and Sprint’s NetAmerica Alliance supported the rapid expansion of 4G networks in the country. Through these programmes, rural carriers lease 700 MHz and AWS spectrum from the national operators and build their own 4G networks. To date, the Rural America Programme is estimated to cover around 2.2 million people and NetAmerica Alliance a further 34 million people, which jointly represent coverage of around 11% of the US population.

GSMA Intelligence subscribers can access the new data sets below:

- [3G coverage, by population](#)
  - [4G coverage, by population](#)
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