GSMA

Low-Band Spectrum for Digital Equality

Low-band spectrum is the cornerstone of digital equality and a driver of broad and affordable connectivity. It is a crucial national asset that can build bridges towards digital inclusion. Increasing low-band capacity is an ongoing effort that all countries should prioritise as they plan their future roadmaps.

Why low-band spectrum?

- Digital equality
- Rural connectivity
- Rural economic growth

Developing low bands

Long-term replanning of spectrum below 700 MHz is being considered to help lower the digital divide.

WRC-23 paved a path towards greater digital equality by defining mobile use of more low-band spectrum in the 470-694 MHz band in EMEA.

Development of 470-694 MHz will continue in national processes and WRC-31.

Closing the usage gap is estimated to add an additional

$900bn GDP in 2030 alone

The usage gap includes people who are covered by a mobile network, but do not use it.

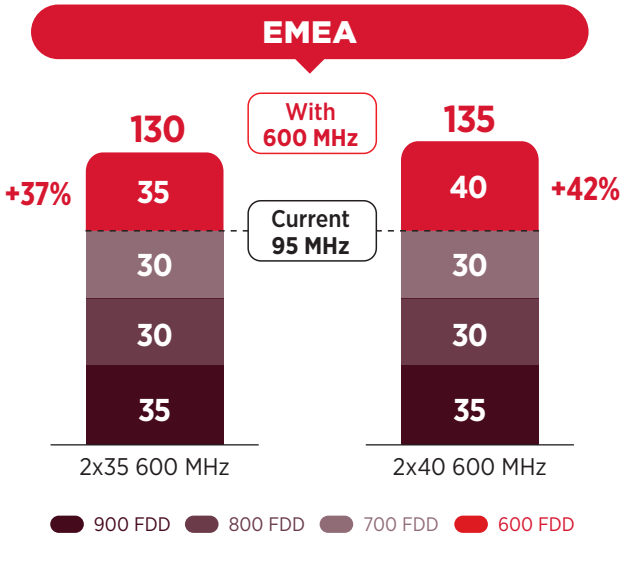
311 operators have launched commercial 5G networks.

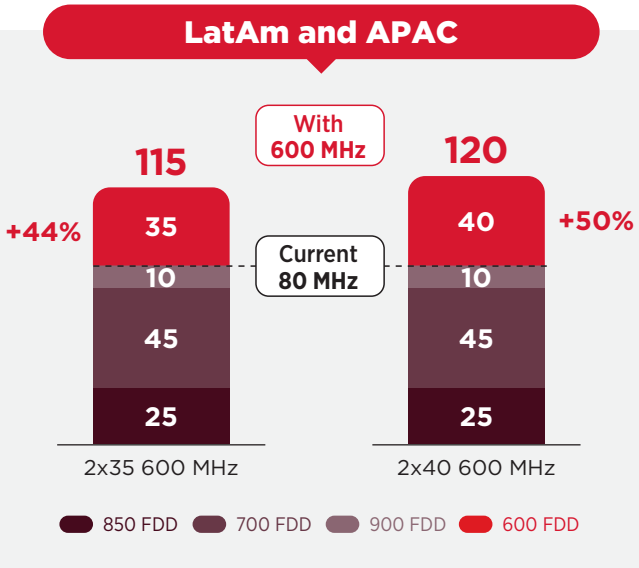
Approximately **18%** use low-band spectrum (September 2024)

The contribution to global GDP from low-band 5G in 2030

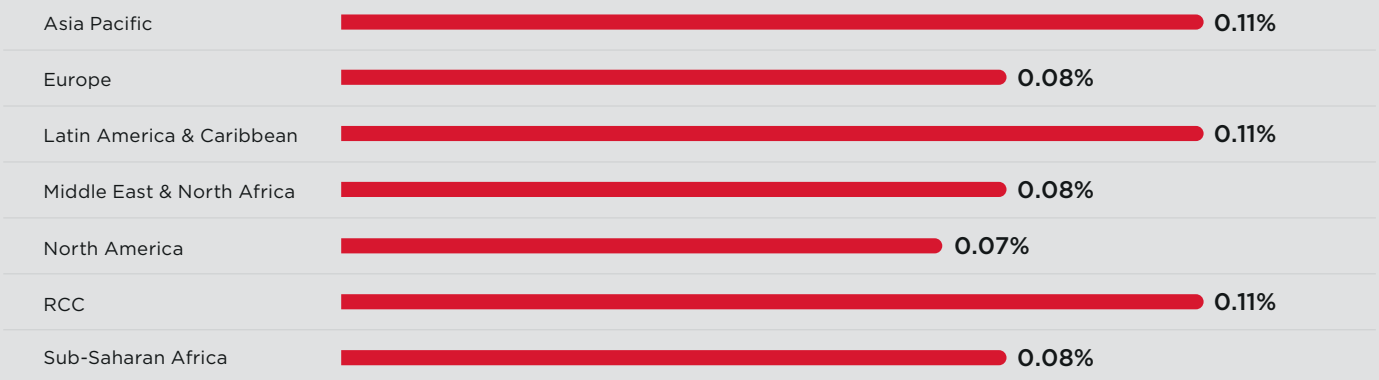
$130bn

Download speed increase with 600 MHz per region





Regional breakdown of the GDP contribution generated by low-band 5G in 2030



Estimated global contribution of low-band 5G spectrum to GDP, by sector, 2030

Agriculture & mining $4bn

Retail $4bn

Finance $5bn

ICTs $10bn

Transportation & construction $11bn

Services $22bn

Public administration $24bn

Manufacturing $51bn

Benefits of low-band spectrum:

- Reduce cost of covering roads for 5G-connected vehicles
- Improve digital equality with 5G speed in rural areas
- Consistent speeds: deep indoors and in hard-to-reach urban areas
- Improve the business case for 5G fixed wireless access (FWA)
- Enable smart agriculture, notably precision farming
- 5G capacity solution for areas where mid-bands do not reach

Enhancing the social impact of mobile

Poverty reduction | Well-being | Education | Health | Employment | Financial inclusion | Environment and climate change

All data and further analysis can be found at: **www.gsma.com/spectrum/resources/low-band-5g-spectrum-benefits/**

Read more about low bands at WRC here: **www.gsma.com/spectrum/wrc-series/**

February 2025