



The internet is the most important enabler of social development and economic growth of our time. Telecoms infrastructure serves as the foundation of all modern digital economies. It plays a crucial role in helping governments deliver economic growth and increased employment in all communities, supporting social objectives such as healthcare and education, and helping to meet environmental goals.

WRC-23 can develop mobile across the world. It can help address the digital divide, lower the usage gap, and ensure that no-one is left behind in the digital age.

Powered By Spectrum:
Mobile can connect over
6.3 billion people by 2030.

More than 5 billion people across the world now have a mobile subscription, connecting people to each other and the digital economy.



Unique mobile subscribers

2022

5.4bn

2030

6.3bn



Penetration rate
Percentage of population



CAGR
2022-2030

2.0%



Mobile internet users

2022

4.6bn

2030

5.5bn



Penetration rate
Percentage of population



CAGR
2022-2030

4.5%



UN Sustainable Development Goals



Mobile is a powerful tool for achieving the United Nations Sustainable Development Goals (SDGs), helping to reduce poverty, improve healthcare and education, and drive sustainable economic growth. Countries with high levels of mobile connectivity have made the most progress in meeting their SDG commitments – put simply, quality of life improves as people gain access to mobile technology.

“Mobile must be part of our drive to put the SDGs back on track. The world cannot wait. The fate of all the unconnected and all those struggling to stay online is in the balance. What’s at stake is humanity’s relationship with technology and our ability to keep this planet healthy for future generations.”

Doreen Bogdan-Martin
Secretary-General
International Telecommunication Union



62 mobile operators have committed to science-based targets (SBTs) as of January 2023, accounting for...

46% of global connections

Powered By Spectrum: Mobile drives economic growth

Powered by spectrum, the mobile industry makes a significant contribution to global GDP growth, as well as helping drive employment and delivering material tax revenues to governments.



Mobile industry contribution to GDP

2022

\$5.2tn (5%) of GDP

2030

\$6.0tn



Public funding



2022

\$530bn

Mobile ecosystem contribution to public funding (before regulatory and spectrum fees)



Employment

16 million jobs



Directly supported by the mobile ecosystem in 2022



12 million jobs



supported indirectly



Mid-band spectrum is at the heart of 5G and is necessary for the increases in bandwidth and capacity that numerous 5G applications will require. It will play a central role in meeting the city-wide capacity demand of 5G use cases from Manufacturing IoT to smart education and healthcare.

2 GHz

Average mid-band requirement by 2030 for each country

\$610bn

Average mid-band requirement by 2030 for each country

Impact of constrained 5G

5G alone can deliver **\$961bn** to the global economy by 2030, but requires spectrum. If only mid-bands are constrained to today's levels, **40%** of the economic impact of mobile will be lost.

Optimal Scenario

\$961bn

→ 0.68% of GDP

Constrained Scenario

\$594bn

→ 0.42% of GDP

Powered By Spectrum: How low band and mid-band can power the future of 5G

The speed, reach and quality of 5G services will depend on governments and regulators supporting timely access to the right amount and type of spectrum, and under the right conditions.

Low-band spectrum is the cornerstone of digital equality and a driver of broad and affordable connectivity. It is vital to giving rural communities equitable access to the services available in urban areas and pushing towards digital inclusion goals. It can provide 5G speeds in rural areas and help to provide a consistent 5G user data.



Low band gaining momentum
40 operators from 27 countries have launched 5G using low-band spectrum

The additional capacity in the 600 MHz band leads to:



Improvement in rural and deep-indoor 5G speeds

30 to 50%



Reduction in the cost of extending 5G to rural populations

33%



Low-band signals propagate further, making it a crucial national asset that can build bridges towards digital inclusion and ensure the impact of mobile's economic and social benefits are felt in all communities.

Why do we need low-band spectrum



Digital Equality



Rural Connectivity



Rural Economic Growth



Average 5G network population coverage (Q4 2022)

73% Countries **using** 600 or 700 MHz

46% Countries **not using** 600 or 700 MHz



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

\$130bn