

# Socio-Economic Benefits of Low-band Spectrum

## Global (2020-2030)



Low-band or UHF spectrum is the cornerstone of digital equality and a driver of broad and affordable connectivity. 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)

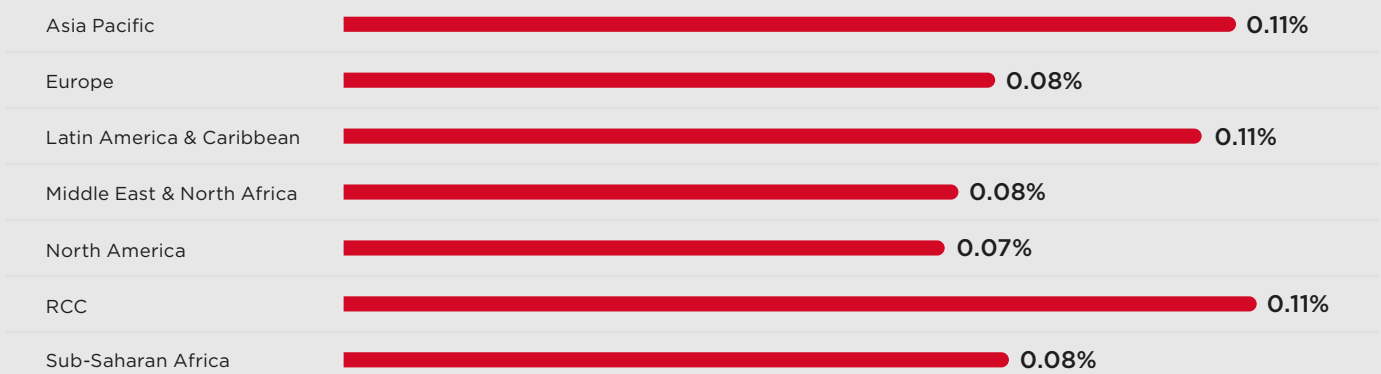
**73%** Countries **using** 600 or 700 MHz  
**46%** Countries **not using** 600 or 700 MHz



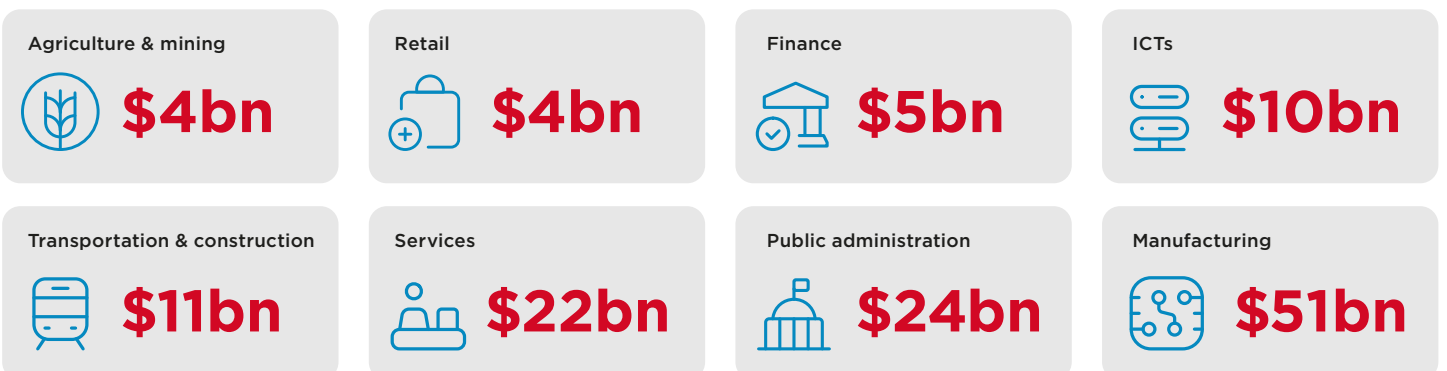
The contribution to global GDP from low-band 5G in 2030

**\$130bn**

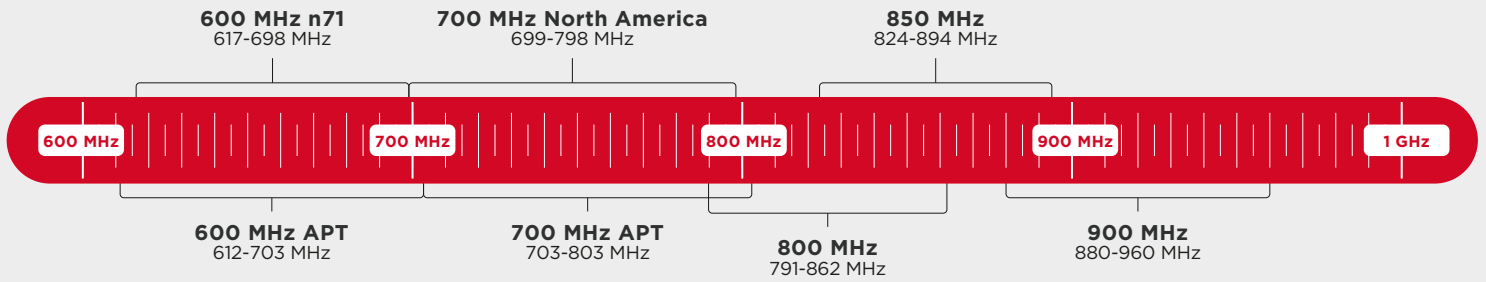
### Regional breakdown of the GDP contribution generated by low-band 5G in 2030



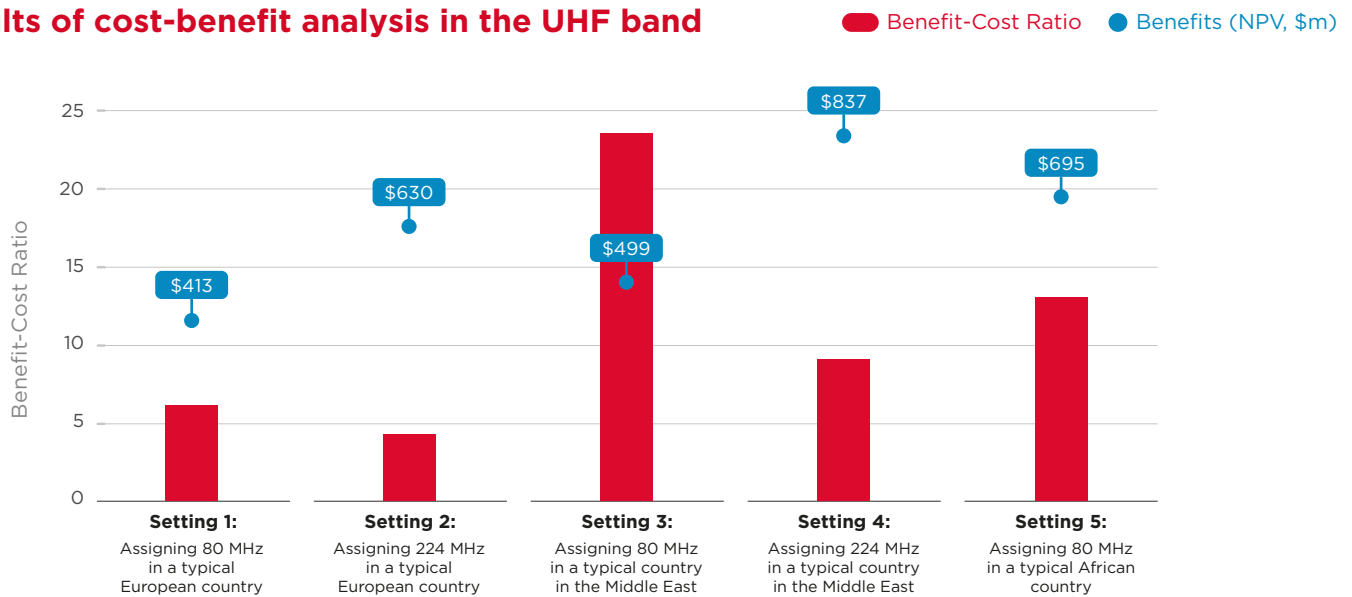
### Estimated global contribution of low-band 5G spectrum to GDP, by sector, 2030



## Regional low-band variations



## Results of cost-benefit analysis in the UHF band



## Enhancing the social impacts of mobile

In addition to macroeconomic impacts, 5G has wider social and environmental benefits that low bands can help deliver to more people. Examples include the following:

- Poverty reduction** Mobile broadband reduces poverty. For example, during 2010-2016, mobile helped lift 2.5 million people out of extreme poverty in Nigeria.
- Well-being** Mobile ownership combined with internet connectivity is associated with an improvement in peoples' happiness and well-being.
- Education** Mobile improves quality of teaching and learning, and facilitates reading and enhanced literacy. In 2021, some 2.5 billion people worldwide used mobile to improve their education or the education of their children.

- Health** Mobile phones are linked to improved health outcomes, including lower maternal and child mortality. In 2021, around 2.1 billion people worldwide used mobile to access health information.
- Employment** Access to mobile broadband improves labour force participation and wage employment, as it enables more efficient matching between employers and job seekers. In 2021, more than 1 billion people worldwide used mobile to look or apply for a job.
- Financial inclusion** Mobile has helped reduce the financial exclusion gap in low- and middle-income countries, with more than 1.35 billion registered mobile money accounts at the end of 2021. In Sub-Saharan Africa, one in three adults has a mobile money account.
- Environment and climate change** Mobile technologies can enable carbon emissions reductions that are 10x greater than the carbon footprint of mobile networks themselves.