DIGITAL FIRST PROJECT

# UNLOCKING THE 5G ECONOMY

**Demands for spectrum are growing.** As more consumers embrace 4K video, mobile gaming, and other 5G innovations, wireless spectrum—radio frequencies that transmit information—is more important than ever.

**5G networks** exceeded over a **half-billion global connections** in 2021, and estimates suggest we could reach **1.3 billion connections** by the end of this year.[1]

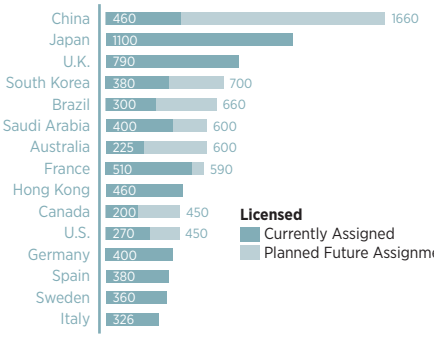
**Operators** could need to **double their networks' capacity** every 20 months to match mobile traffic's **44% annual growth**.

## Closing the Spectrum Deficit

As it currently stands, the U.S. ranks 13th in currently assigned licensed mid band mobile spectrum which is essential to building out 5G networks.

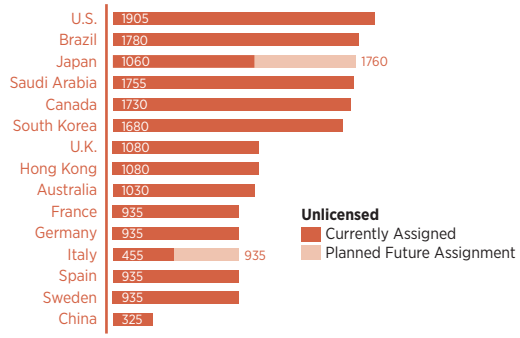
According to current global projections the U.S. will still remain tied for 10th place unless policy makers act fast to fill the spectrum pipeline. The deficit that is growing is not just between the U.S. and China. If legislators fail to act we will remain falling behind countries like Saudi Arabia, Brazil, and several others.

**Currently assigned + future licensed mid-band mobile spectrum** (total MHz)[2]




**China has nearly 4X** more licensed mobile mid band spectrum forecasted, and they are not the only ones leaving the U.S. behind.

**Currently assigned + future unlicensed mid-band mobile spectrum** (total MHz) [3]




**The U.S. is leading** the pack in unlicensed mid band mobile spectrum, which is valuble to our economy and mobile opperators ability to develop 5G networks.

## Unlocking the 5G Economy

A dedicated licensed spectrum pipeline is essential to closing the spectrum deficit and expanding the reach of 5G across critical industries of the economy.

**5G deployment** will generate $1.4 to $1.7 trillion towards national GDP and around 4 million additional jobs.[4]

**Fixed Wireless Access:** In some cases, fixed wireless broadband may be more practical for connecting less populated areas. Exclusive-use spectrum with its predictable qualities will be essential to delivering the fast and consistent service users have come to expect.[5]

**Industrial Internet of Things:** 5G has multiple features to address industrial IoT needs. Think ultra-high-definition cameras monitoring manufacturing processes coupled with AI to analyze the video streams.[6]

**Extended Reality, Cloud Gaming, and the Metaverse:** Immersive virtual reality will consume around 100x more data than a video on our phone would.[7] 5G will need more licensed spectrum to deliver these high throughput rates.[8]

## 5G Cannot Wait

**Policymakers should act fast to reauthorize the government's spectrum auction authority and develop a dedicated pipeline of licensed spectrum to meet evolving connectivity needs while boosting industries across the economy.**

[1] "Spectrum Crunch: Doubling Mobile Data Demand Every 20 Months," 5G Americas, April 2022
[2,3] "Comparison of total mobile spectrum in different markets,"Analysys Mason, September 2022
[4] 10-year estimate, sourced from "5G Promises Massive Job and GDP Growth in the US," Boston Consulting Group, February 2021
[5,6,8] "5G Mid-Band Spectrum: The Benefits of Full Power, Wide Channels, and Exclusive Licensing," Rysavy Research, September 2022
[7] "VR and AR pushing connectivity limits," Qualcomm, Oct. 2018.