



Socio-Economic Benefits of Mid-band Spectrum

North America (2020-2030)

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.



North America GDP Impact in 2030

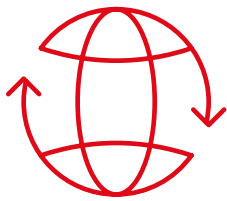
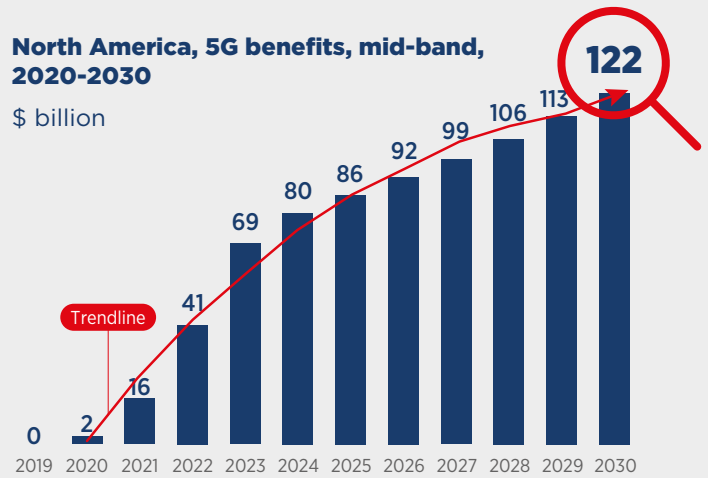
\$122bn

0.36%
GDP Share

North America is an early leader in 5G development and will drive GDP impact from the start of the study period, backed by strong US development. This growth has been helped by 3.5 GHz assignments for 5G launch.

North America, 5G benefits, mid-band, 2020-2030

\$ billion



1.07 GHz

Average mid-band capacity today in North America

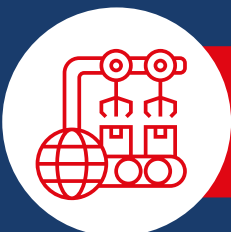
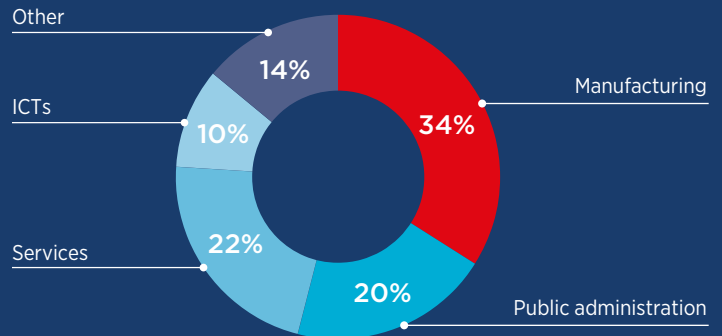


2 GHz

Global average mid-band spectrum need by 2025-2030

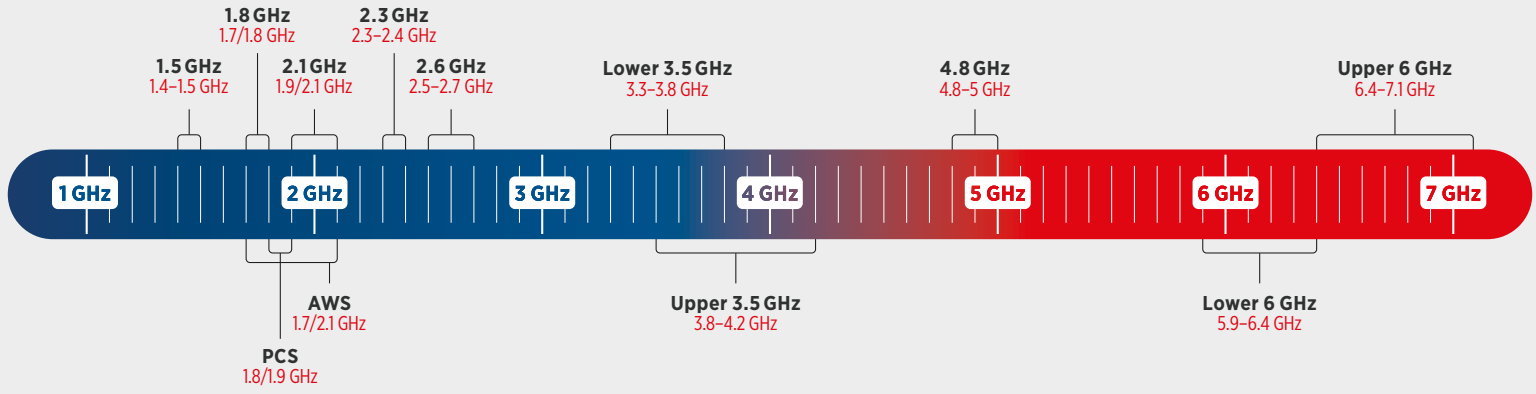
Vision 2030: Mid-Band Benefits by Sector in North America

High-tech manufacturing, services including education and healthcare, and public administration, including smart cities, will provide the biggest economic impact through mid-band 5G in the region.



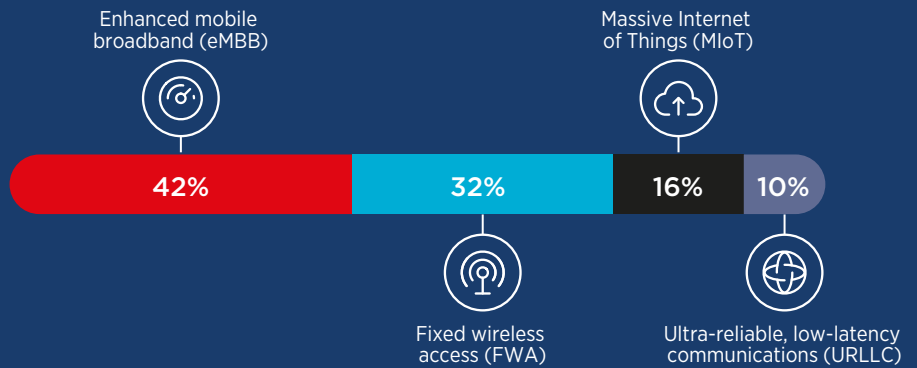
Manufacturing will provide the majority of GDP impact as the industrialised countries of North America exploit mid-band 5G. This connectivity will help manufacturing to improve the productivity of its processes, reduce costs and remain competitive on the global stage.

Delivering 2 GHz of Mid-Band



Global Mid-Band Benefits by 5G Use Case

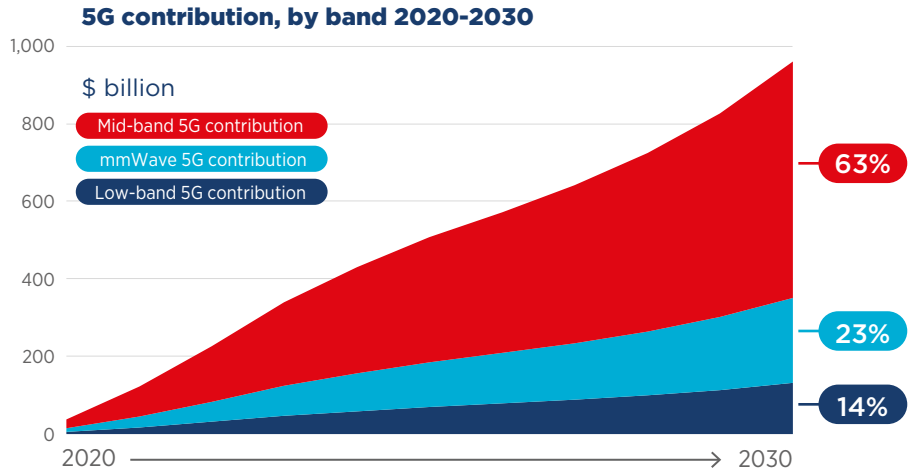
Mid-band will benefit all four main 5G use cases with its impact on each is expected to be stable in different parts of the world.



Global Breakdown: Mid-Band Drives 5G

5G is expected to yield US\$960bn in additional GDP value add to the global economy - approximately 0.70% of forecast global GDP, in 2030.

The mid-band 5G contribution will represent \$610bn uplift to global GDP or 65% of total 5G benefits.



Economic Impact of Low Spectrum Assignment

5G relies on mid-band spectrum to realise its full potential. The global economy could lose up to 40% of the expected 5G benefits if no additional mid-band spectrum is allocated to mobile services. Global 5G benefits in 2030 could decrease from 0.68% of GDP (around \$960bn) to 0.42% of GDP (less than \$600bn) if spectrum is constrained.

