



# Socio-Economic Benefits of Mid-band Spectrum Europe (2020-2030)

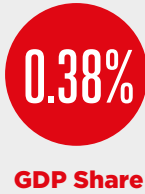
## Mid-band spectrum is at the heart of 5G

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.



## Europe GDP Impact in 2030

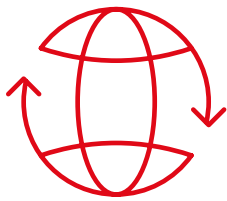
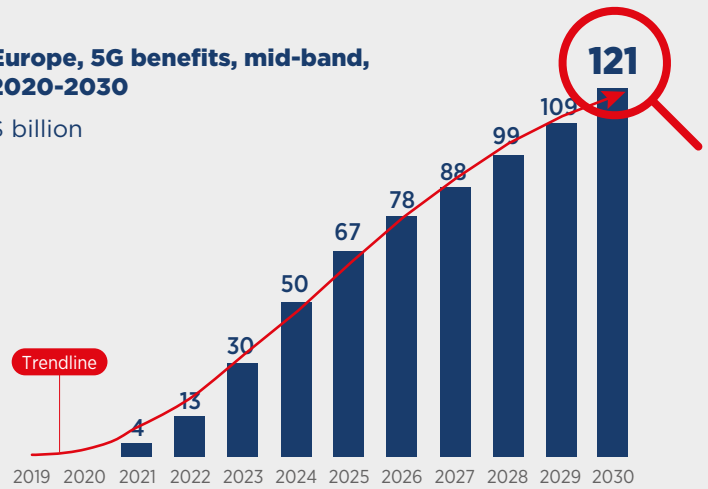
**\$121bn**



The large European markets of Germany, UK and France will produce about 45% of the overall economic impact of mid-band 5G. Rapid 5G development will drive the initial growth while 5G will start to mature towards 2030.

## Europe, 5G benefits, mid-band, 2020-2030

\$ billion



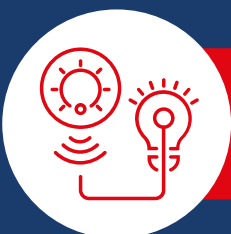
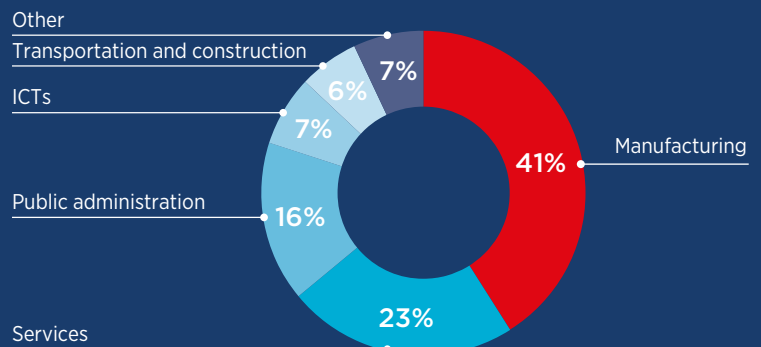
**1.05 GHz**  
Average mid-band capacity today in Europe



**2 GHz**  
Global average mid-band spectrum need by 2025-2030

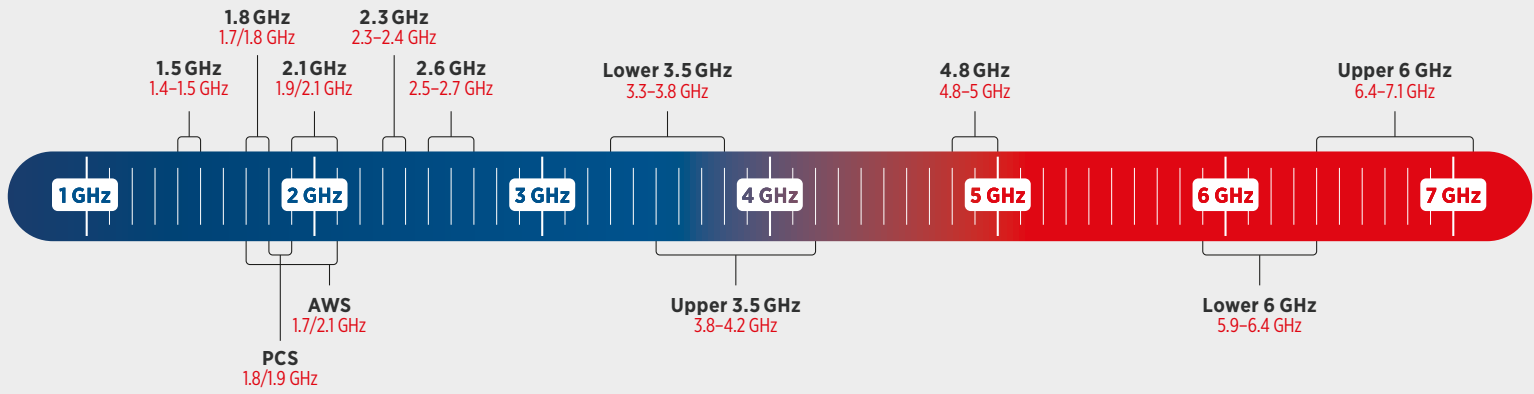
## Vision 2030: Mid-Band Benefits by Sector in Europe

5G mid-band applications will mostly be used to benefit the manufacturing, public administration/services, ICT and retail sectors across the region.



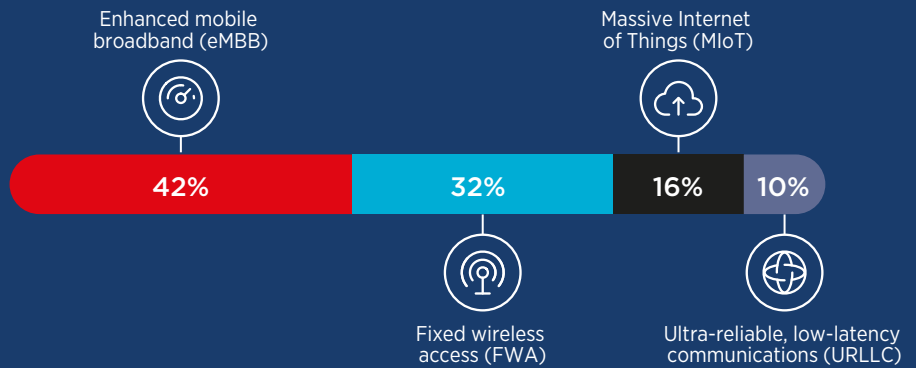
Aside from manufacturing, public administration and services which benefit from applications such as smart cities and smart utility grids are two sectors expected to have a strong GDP impact in European countries.

## Delivering 2 GHz of Mid-Band



## Global Mid-Band Benefits by 5G Use Case

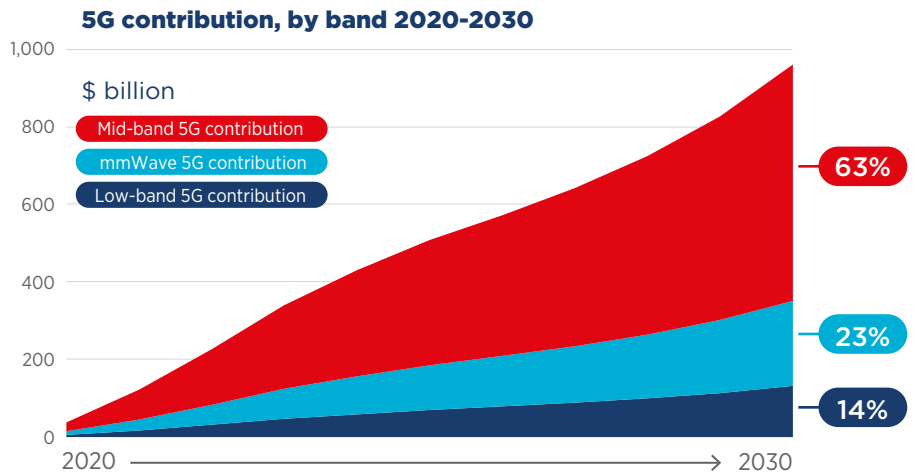
Mid-band will benefit all four main 5G use cases with its impact on each is expected to be stable in different parts of the world.



## Global Breakdown: Mid-Band Drives 5G

5G is expected to yield \$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.

### 5G total benefits, 2030

