

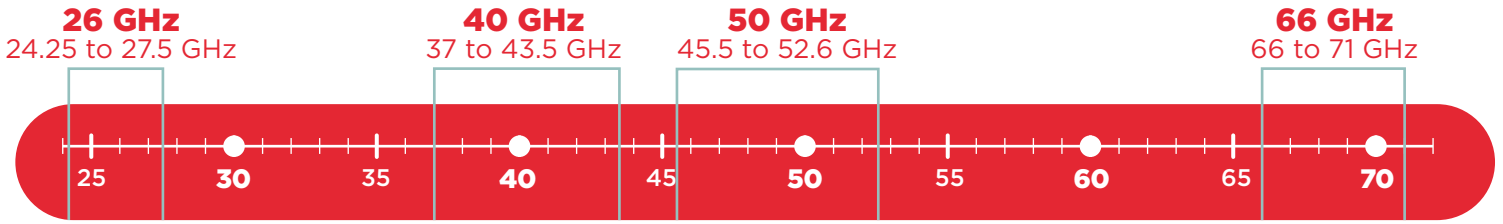


# The WRC Series WRC-19 Agenda Item 1.13

IMT in bands between 24.25 GHz and 86 GHz to bolster 5G



The combination of 5G and millimetre waves pioneers a new level of performance with ultra-high speeds and low latencies. The potential impact on our lives is greater than any previous mobile generation and can be felt in areas including cleaner transport systems, safer factories, smarter cities and more advanced healthcare. WRC-19 can make this a reality by delivering a significant amount of spectrum with optimal conditions.



## The GSMA's positions on WRC-19 Agenda Item 1.13:



A successful identification of spectrum for IMT under Agenda Item 1.13 with optimal conditions is vital to realise the full potential of 5G networks



The GSMA supports the 26 GHz and 40 GHz bands



The GSMA also supports 66 GHz



Due to the large amount of spectrum needed for 5G services, the 50 GHz band also needs to be considered



Technical studies show that coexistence between IMT and other services is possible.

## 5G USE CASES WITH GREAT POTENTIAL

### Where



Busy urban areas, stadiums, shopping malls and railway stations



Homes and businesses using fixed wireless access



Connected trains, buses and cars

### What



Data transmission at tens of gigabits



IoT



Augmented and Virtual Reality



Video Streaming with low latencies: 4K without compression and 8K

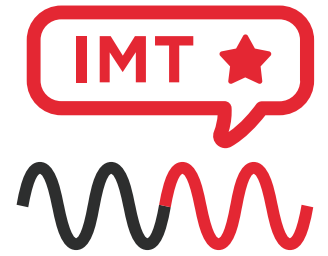


Industrial Automation with low latencies and high reliability

And more...

## The key mmWave bands and the importance of optimal conditions

The CPM Report for Agenda Item 1.13 is now a complex compendium of many possible conditions and options. It is possible, through the current text, to identify a band for IMT on paper, but effectively render it unusable in practice. There is a risk at WRC-19 that, unless only the optimal technical conditions are applied, IMT use of the bands will be severely restricted.



# 26 GHz

(24.25-27.5 GHz)

Limits to protect EESS (passive) not more restrictive than -32 dB(W/200MHz)

No conditions necessary for FSS/ISS since sharing studies show significant protection margin

# 40 GHz

(37-43.5 GHz)

Existing 3GPP limits sufficient to protect EESS (passive)

Active band. Res 752 applies

FSS downlink: ES sharing is a national issue. FSS uplink: sharing studies show a significant protection margin

# 66 GHz

(66-71 GHz)

Flexible use for 5G systems

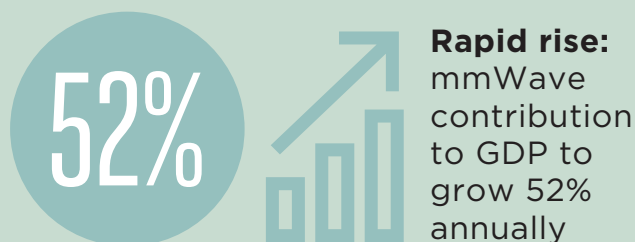
Enabling both IMT and non-IMT technologies

Shared with WiGig

## GDP impact of mmWave spectrum by 2034



## THE GROWING IMPORTANCE OF MMWAVES



The share of 5G services using mmWaves

### Read More

The GSMA's spectrum team's policy position on 5G spectrum is available at: <https://www.gsma.com/spectrum/5g-spectrum-guide/>

The team's policy position on WRC-19 Agenda Item 1.13 is available at: <https://www.gsma.com/spectrum/wrc-series/>

Read more about the socio-economic benefits of mmWave spectrum, including 26 and 28 GHz, at: <https://www.gsma.com/spectrum/resources/mmwave-5g-benefits/>

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