



# Impact of mmWave spectrum in RCC countries

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Minsk, 8th April 2019



# Five Mobile Industry Goals with 5G



1

Boundless Connectivity for All

2

Innovation and Network Economics

3

Transformation of Vertical Industries

4

Revolutionise the Mobile Broadband Experience

5

Help to Grow New Use Cases

# 5G use cases – MBB, IoT and beyond

## Where



Busy urban areas,  
stadiums, shopping  
malls and railway  
stations



Homes and  
businesses  
using fixed  
wireless access



Regular and  
autonomous  
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

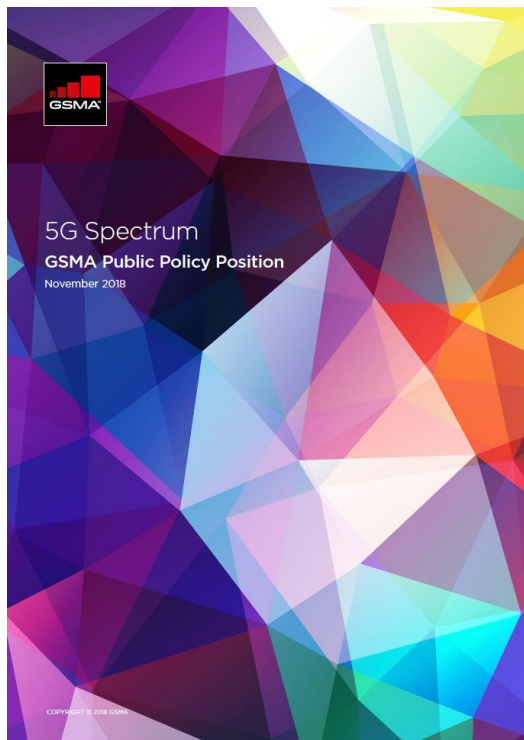
**5G needs spectrum across three ranges**



**Sub-1 GHz**  
**1-6 GHz**  
**AND ABOVE**  
**6 GHz**



# 5G spectrum positions



1. 5G needs new harmonised and contiguous spectrum (80 to 100 MHz of in mid-bands and around 1 GHz in mmWaves)
2. Across three ranges: below 1 GHz, between 1 and 6 GHz, and above 6 GHz
3. WRC-19 is vital to realising the 5G vision
4. Inflated spectrum prices should be avoided
5. Exclusive licensing should remain the core approach
6. Setting spectrum aside for verticals in prime bands could jeopardise the success of public 5G
7. Regulators must consult 5G stakeholders to ensure the success of spectrum awards
8. Governments and regulators need to adopt policies to encourage long-term heavy investments in 5G networks



# WRC-19 AI 1.13 – The Key Bands

## 26 GHz

(24.25-27.5 GHz)

EESS (passive) -32 to  
-35 dB(W/200MHz)

FSS / ISS sharing  
studies show significant  
protection margin

## 40 GHz

(37-43.5 GHz)

EESS (passive)  
Res 752 applies  
Active band

FSS sharing is a  
national issue

## 66 GHz

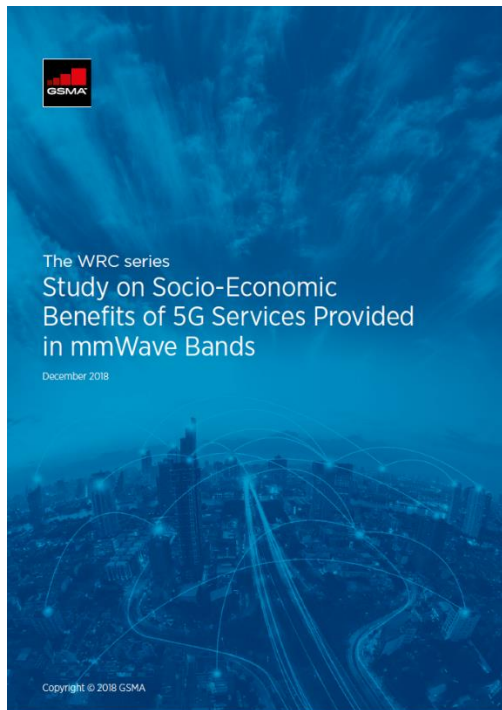
(66-71 GHz)

Flexible use for 5G  
systems

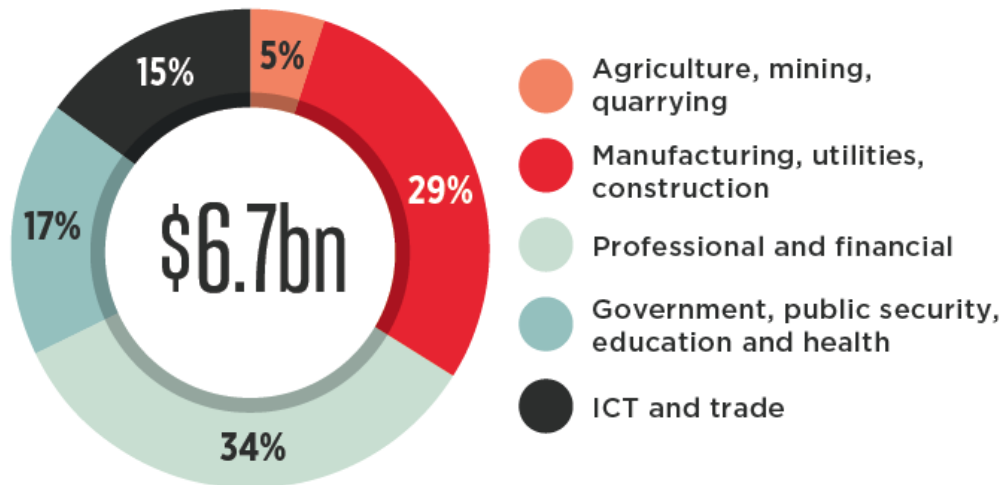
Enabling both IMT  
and non-IMT  
technologies



# Why we need mmWave spectrum for 5G



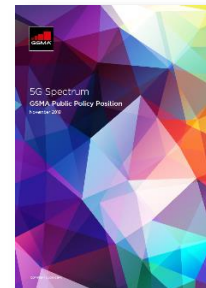
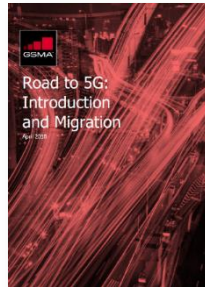
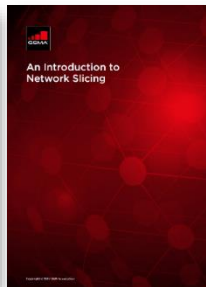
For countries in the RCC region, mmWave 5G is estimated to increase GDP by \$6.7 billion







# Learn more about making the most of 5G



<https://www.gsma.com/futurenetworks/technology/understanding-5g/>  
<https://www.gsma.com/spectrum/5g-spectrum-guide/>