The GSMA WRC Series

WRC-23 : 5G For All

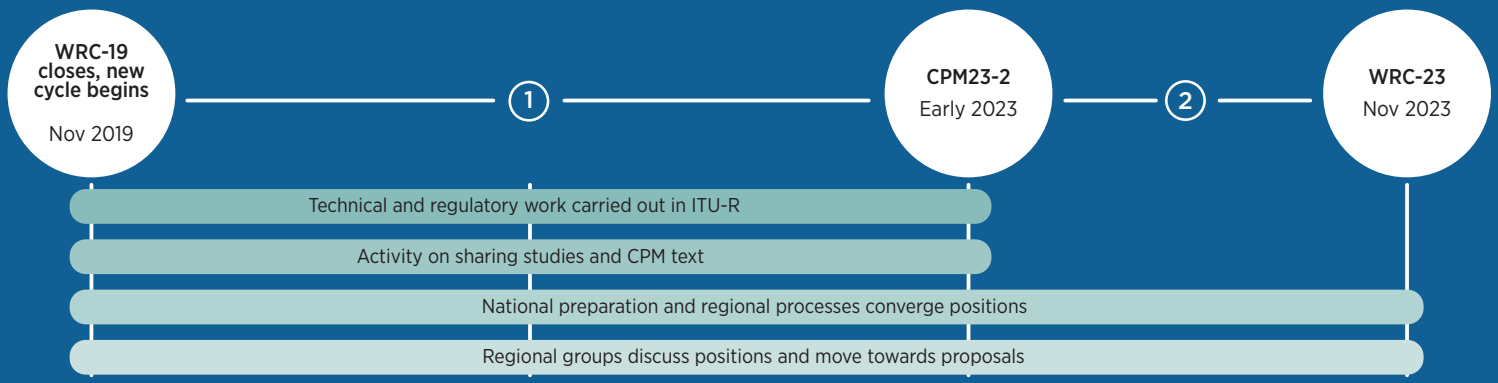
Harmonisation, capacity and cost

World Radiocommunication Conferences have played an important role in the mobile industry connecting more than 5 billion people. WRC-23 is a chance to build on that achievement by identifying spectrum that will help expand the availability of affordable 5G services and ensure future growth and innovation. It is an opportunity to build a spectrum roadmap going into the 2030s, address the digital divide and ensure 5G is for all.

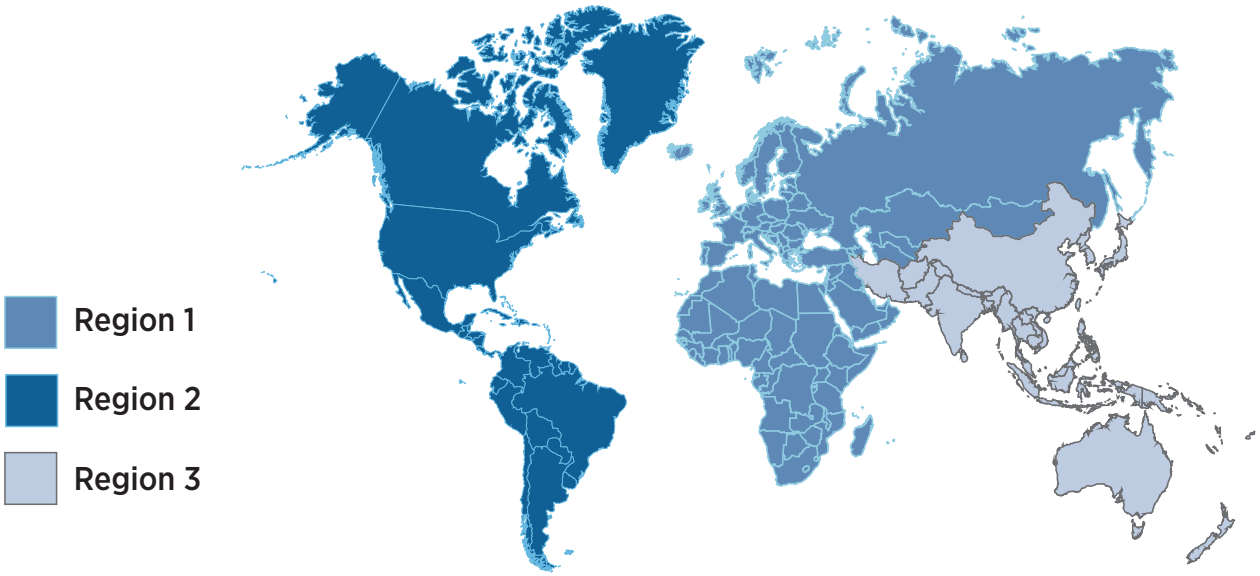
WRC-23 has the power to:

- Expand capacity in rural areas and lower the digital divide.
- Harmonise 3.5 GHz to increase capacity and lower costs for 5G.
- Safeguard 5G development through the 6 GHz range.
- Provide fibre competition and FWA capacity.

WRC-23 Timeline:



WRC-23 IMT Agenda Items Overview



Bands	470-960 MHz	3300-3400MHz	3600-3800MHz	4800-4990 MHz	6425-7025 MHz	7025-7125 MHz	10-10.5 GHz	IMT FS
Region 1	AI 1.5 (IMT)	AI 1.2 (IMT)	AI 1.3 (MS)	AI 1.1 (IMT)	AI 1.2 (IMT)	AI 1.2 (IMT)		9.1.c
Region 2		AI 1.2 (IMT)	AI 1.2 (IMT)	AI 1.1 (IMT)		AI 1.2 (IMT)	AI 1.2 (IMT)	9.1.c
Region 3				AI 1.1 (IMT)		AI 1.2 (IMT)		9.1.c

Agenda

470-960 MHz - Agenda Item 1.5

Additional spectrum below 1 GHz is being discussed under Agenda Item 1.5. These frequencies can be used to provide increased capacity and performance in rural areas which higher frequencies cannot cover cost-effectively. In-building coverage will also be enhanced. Increased sub-1 GHz IMT spectrum can give users in rural areas comparable IMT access to those in urban areas and help lower broadband prices, making access to communications services more inclusive and lowering the digital divide.

3300-3800 MHz - Agenda Items 1.2, 1.3

WRC-23 Agenda Items 1.2 and 1.3 are an opportunity to achieve greater harmonisation of the 3.5 GHz range. The payoff will be more affordable 5G services for everyone. Frequencies in the 3.5 GHz range are already used as the basis for commercial 5G networks globally. This spectrum is at a balancing point between coverage and capacity that has provided the perfect environment for much of the earliest 5G connectivity. A channel size of 80-100 MHz per operator lowers network density and reduces the cost of 5G while producing the highest throughput.

4800-4990 MHz - Agenda Item 1.1

4800-4990 MHz was first identified in a small group of countries at WRC-15 and then by a wider group, in all three regions, at WRC-19. The band now has the backing of a growing ecosystem, based on new assignments in China, nearby assignments in Japan and the ongoing activity for WRC-23. In short, it is backed by countries representing a large portion of the world's population. That makes it a strong option for adding more mid-band spectrum, which is needed to ensure future 5G growth.

6425-7125 MHz - Agenda Item 1.2

The 6 GHz range is a core component of the spectrum needed to realise universal 5G connectivity. While different regions will consider different amounts of spectrum at WRC-23, the results impact the entire band's use all over the world. Discussions regarding 6 GHz spectrum need to maximise its value and balance different uses, including looking after mobile backhaul. 6425-7125 MHz is a priority band for mobile network operators on a global basis as they look to increase capacity and lower costs.

10-10.5 MHz - Agenda Item 1.2

10-10.5 MHz provides valuable additional capacity in between mid-band and mmWave. This spectrum is being studied as a potential supplement to provide capacity in Region 2.

Fixed IMT Systems - Topic 9.1c

Fixed IMT, or the use of IMT technologies in static locations, can be a huge use case for 5G systems. It can provide FWA connectivity as a competitor to fibre where it exists or an alternative where fibre is not an affordable solution. Providing FWA competition to fibre services carries a significant capacity demand and study of IMT systems for fixed broadband will need supporting with the right regulations.

Read more

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

The GSMA's WRC page:
https://www.gsma.com/spectrum/wrc-series/

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