Spectrum Aspects and WRC-23

IAFI - 6th National Preparatory Workshop for WRC-23

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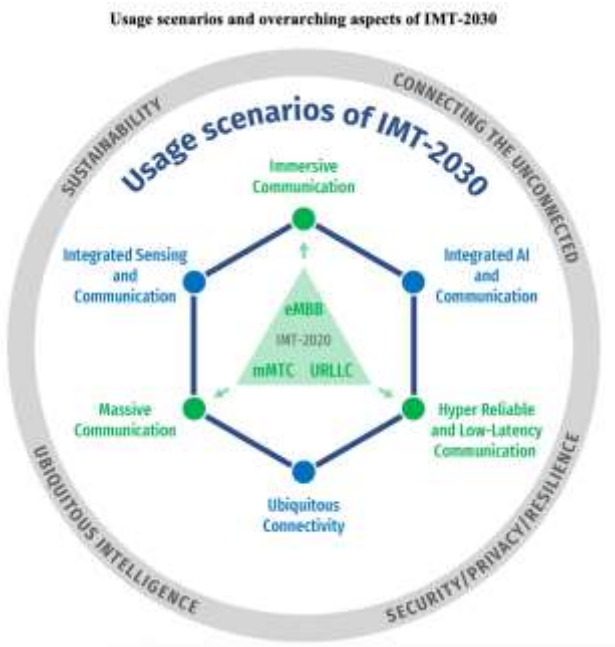
Preparation for Future

- Additional spectrum is essential for 6G/IMT-2030 for capacity-demanding use cases with mobility requirements
- An agenda item for WRC-27 to identify additional spectrum for IMT;
  - Timely availability of spectrum relative technology evolution and first 6G deployments (2030)
  - WRC-27 provides an opportunity for global or regional spectrum harmonization
  - The lower the better in this frequency range – considering propagation characteristics

Additional wide-area spectrum need per network
~500 to ~750 MHz

2 to 3 GHz for the analyzed wide-area use cases..



Enable the **new 6G use cases** and enhance **5G/5G-Advanced services**

APAC Regional Considerations

Key to have support from APT for an agenda item to WRC-27 (support needed from 10 countries)

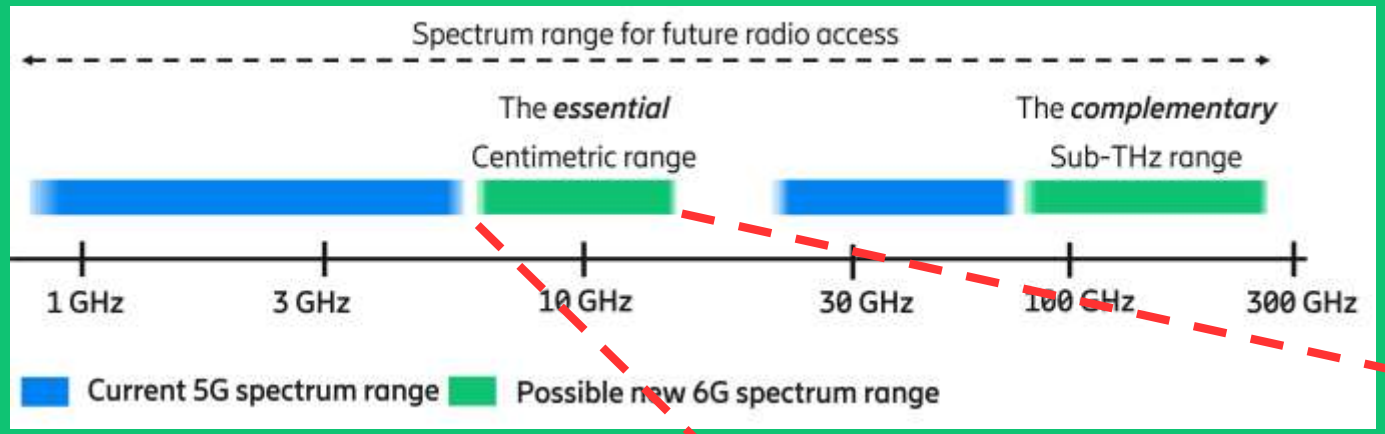
Initial 6G/IMT-2030 frequency bands for WRC-27

- 7.125-8.5 GHz
- 10.7-13.25 GHz
  - 10.7-11.7 GHz
  - 11.7-12.75 GHz
  - 12.75-13.25 GHz
- 14 - 15.35 GHz
- 15.35-17.7 GHz (from AWG-31)

5G/IMT-2020 add frequency bands for WRC-27

- 3800-4200 MHz for WRC-27 (from WRC-15)
- 4400-4800 MHz for WRC-27 (from WRC-15)
- 6425-7125 MHz China+… for WRC-23 and -27

Spectrum for 6G



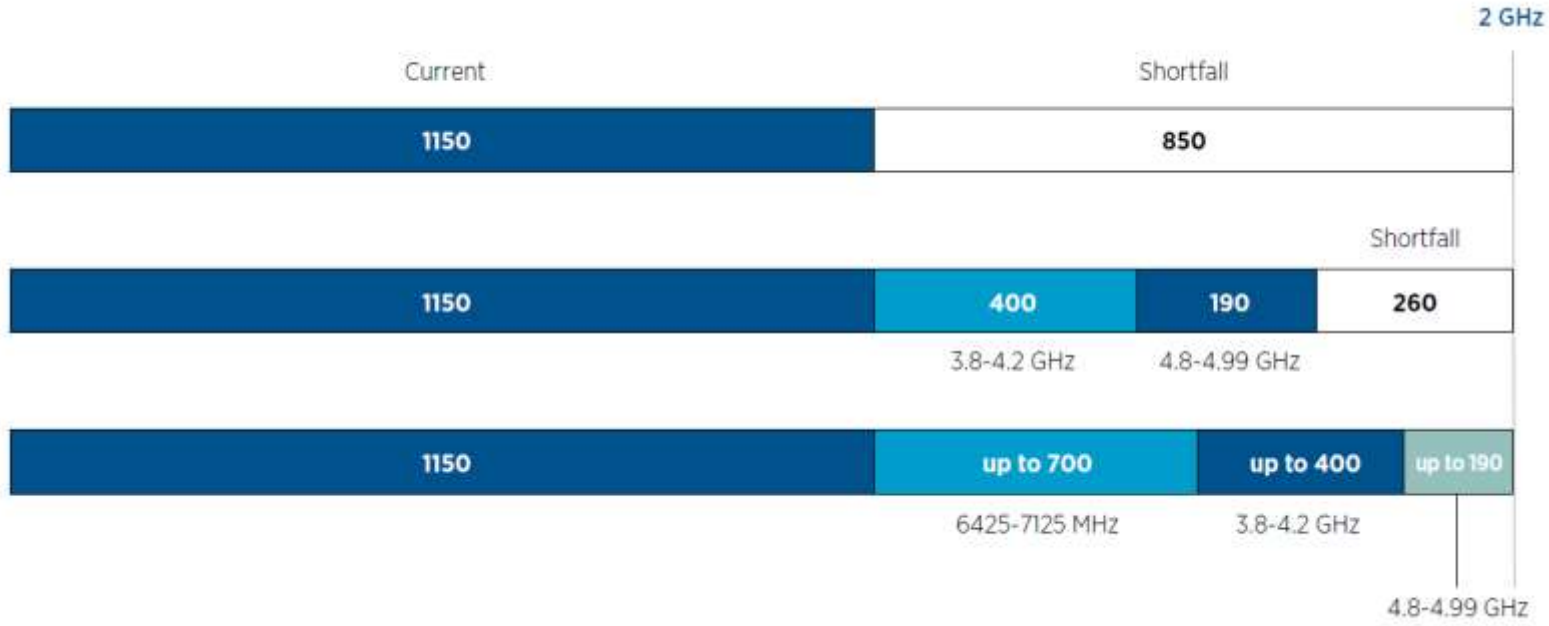
Initial bands with potential for studies – Incumbent services to be considered

WRC-23 AI1.2

Initial bands with potential for studies:

- **7.125-8.5 GHz**
- **10.7-11.7 GHz, 11.7-12.75 GHz , 12.75-13.25 GHz**
- **14-14.8 GHz, 14.8-15.35 GHz**

Mid-band capacity for 5G expansion

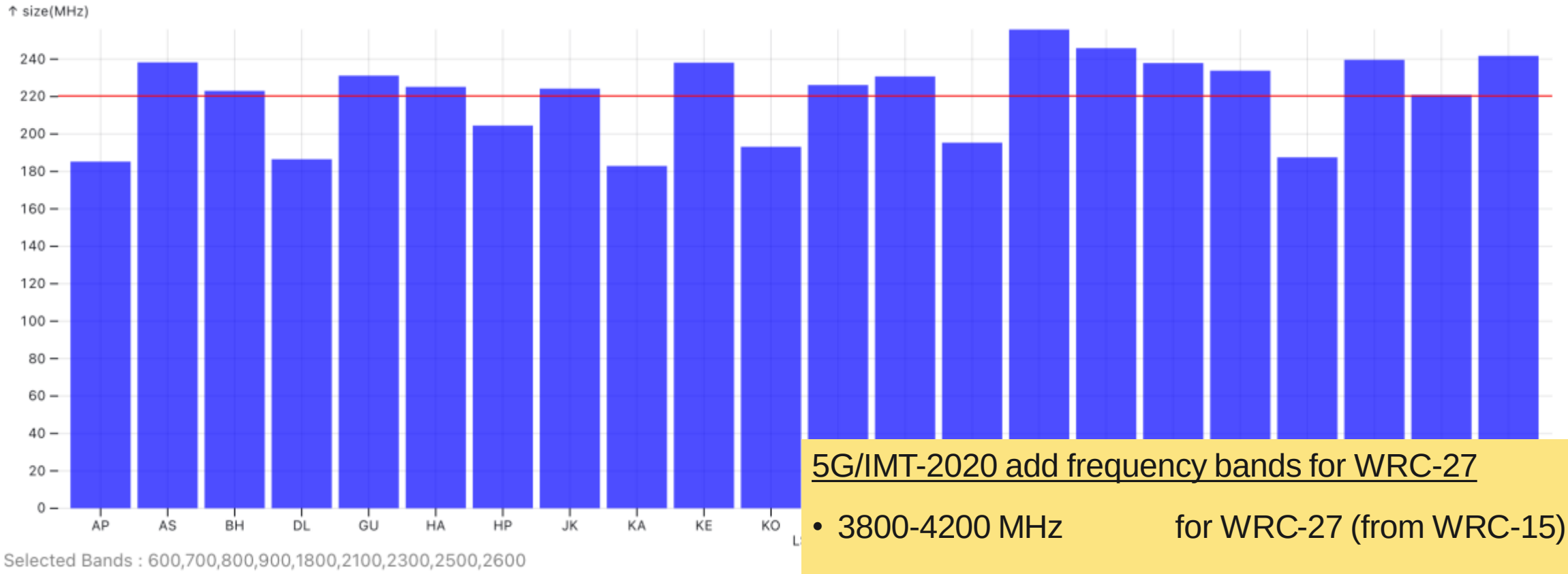


2 GHz

of mid-band is required for 5G by 2030 (GSMA)

- Many countries in APAC face a larger mid-band spectrum deficit than counterparts in other regions due to limited supply in 3.5 GHz band
- Additional mid-band spectrum will be essential for APAC countries.

INDIA – Allocation



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