VISION 2040: SPECTRUM FOR THE FUTURE OF MOBILE CONNECTIVITY

1

Cities with over 50% of the world's urban population will be capacity-constrained by 2030 if mid-band spectrum remains at today's levels.

2

A global average of 2-3 GHz of total mid-band spectrum will be required in urban areas by 2035-2040; higher-demand countries will need 2.5-4 GHz in this period.

3

A harmonised spectrum roadmap that delivers the total mid-band spectrum requirements should be developed to enable operators to meet these capacity demands from 2030.

4

Regulators should seek to assign spectrum in 3.8-4.2 GHz and upper 6 GHz to mobile by around 2030 to meet demand and consider 4.4-4.99 GHz and 7-8 GHz beyond that.

2035-2040

2-3 GHz
Global average

2.5-4 GHz
Higher-demand countries

2 GHz needed by 2030

50%

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Driven by applications

- Extended reality
- Generative AI video

Driven by needs

- Capacity
- Latency

6G penetration

2035
2.1 BILLION
connections

24%


market penetration

2040
5 BILLION
connections

54%


market penetration

Spectrum needs driven by high-demand locations

83%
of traffic is from **5%** of geographic area

Dense urban needs are

9X GREATER
than other urban

650X GREATER
than rural