

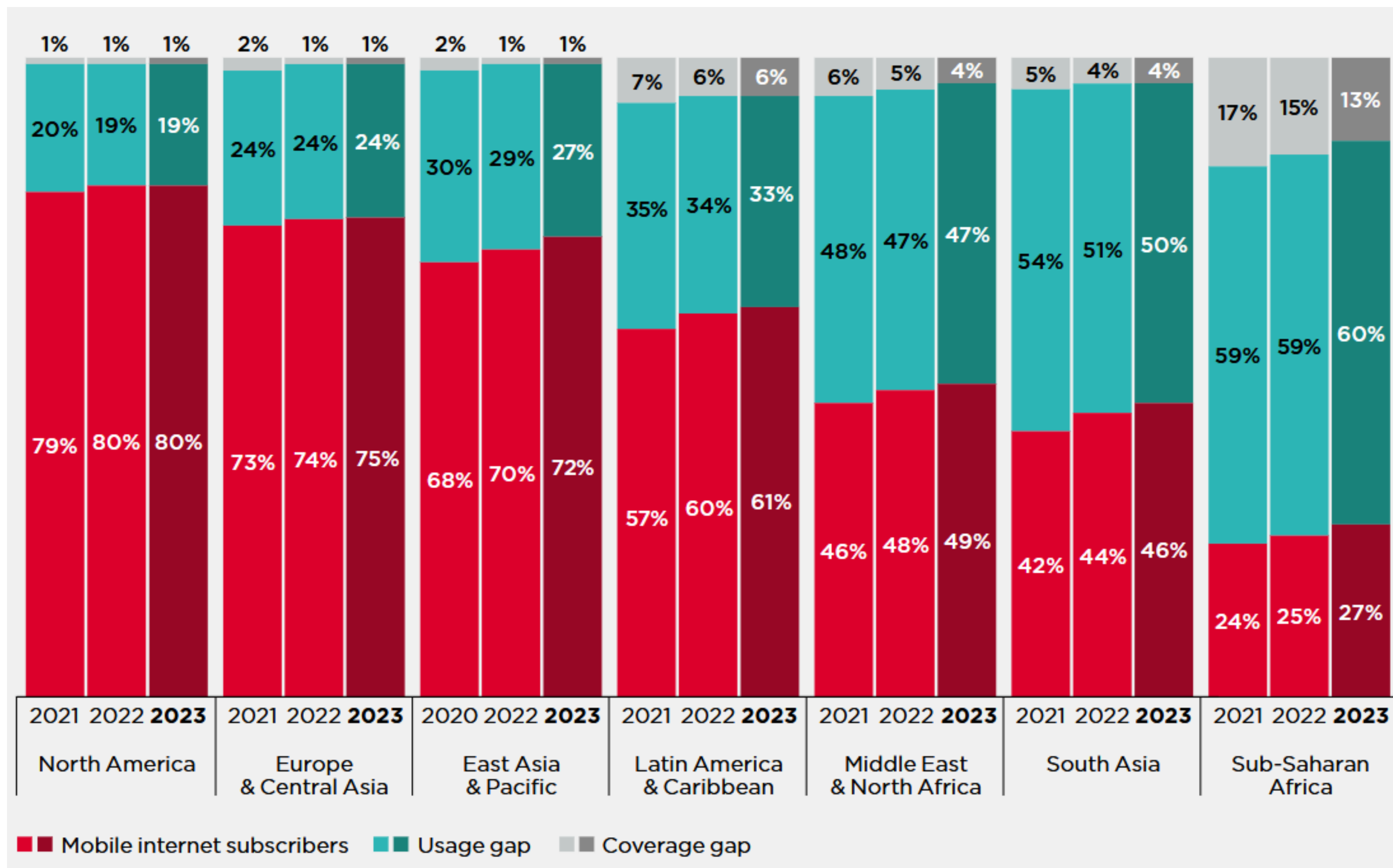
Mobile Connectivity and Evolution with WRC-27

CTU Spectrum Management Task Force, 20th February 2025

Carol Sosa Leguizamón
Spectrum Policy Director, GSMA

State of Mobile Internet Connectivity & Spectrum

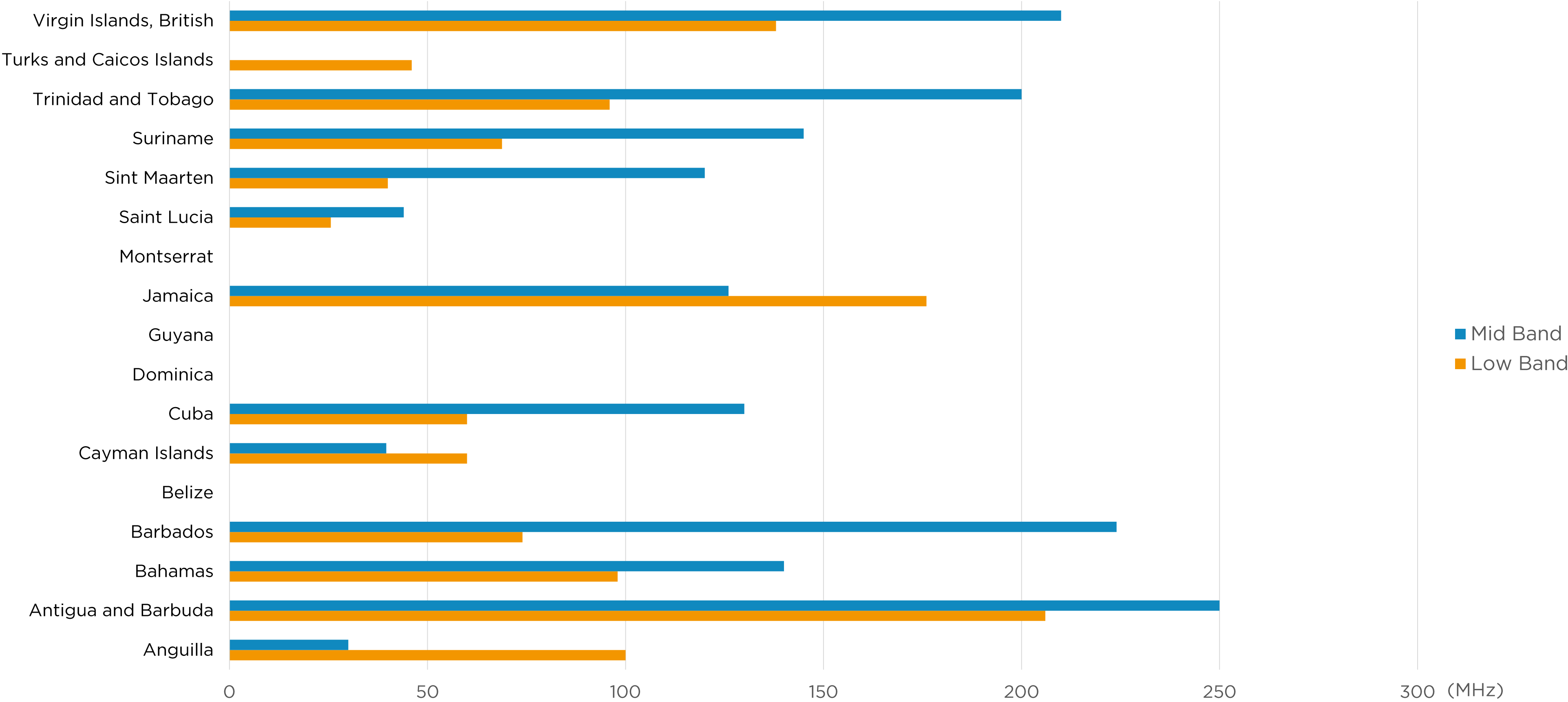
Connectivity by Region



- Connectivity varies substantially between and within regions
- Globally there is a 4% of coverage gap and 39% usage gap while 57% population is connected

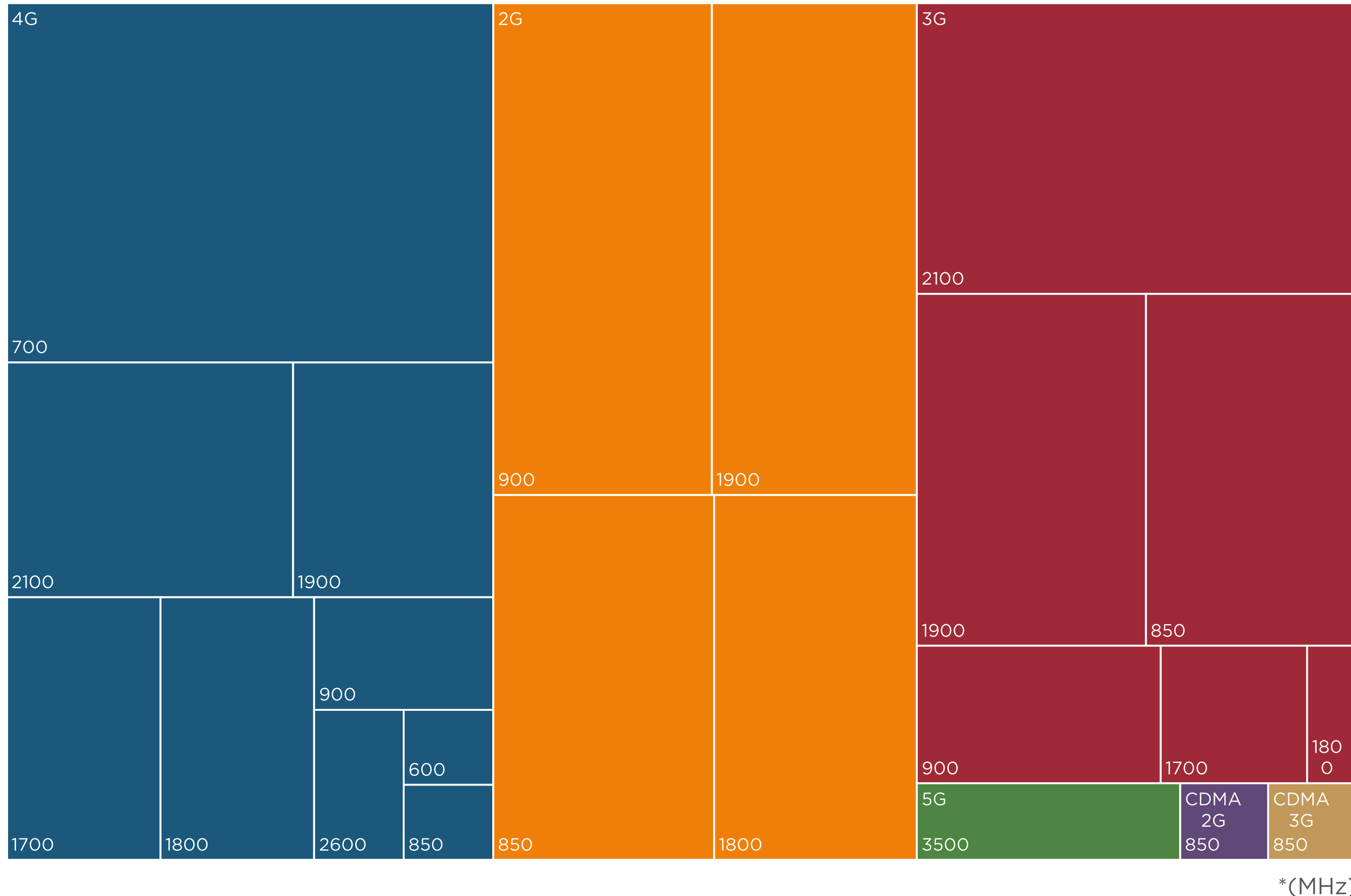
Source: The State of Mobile Internet Connectivity 2024
<https://www.gsma.com/r/somic/>

Spectrum Assigned



Source: GSMA Intelligence

■ 2G ■ 3G ■ 4G ■ 5G ■ CDMA 2G ■ CDMA 3G



Spectrum by Technology

Include CTU members:
 Anguilla; Antigua and Barbuda; Bahamas; Barbados; Cayman Islands; Cuba; Dominica; Grenada; Guyana; Jamaica; Montserrat; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Sint Maarten; Suriname; Trinidad and Tobago; Turks and Caicos Islands; British Virgin Islands

Source: GSMA Intelligence

IMT Spectrum expansion

RR 2024

Low Bands

- **5.307A:** 614-694 MHz in R1*
- **5.308A:** 614-698 MHz in R2*
- Mobile allocations in R1

3.5 GHz Harmonisation

- **5.429B:** 3 300-3 400 MHz, R1*
- **5.429D:** 3 300-3 400 MHz, R2
- **5.429F:** 3 300-3 400 MHz, R3*
- **5.433A:** 3 500-3 600 MHz, R3*
- **5.433B:** 3 600-3 700 MHz, R1*
- **5.433B:** 3 600-3 700 MHz, R1*
- **5.434:** 3 600-3 700 MHz, R2
- **5.434B:** 3 600-3 800 MHz, R1*
- **5.435B:** 3 700-3 800 MHz, R2*

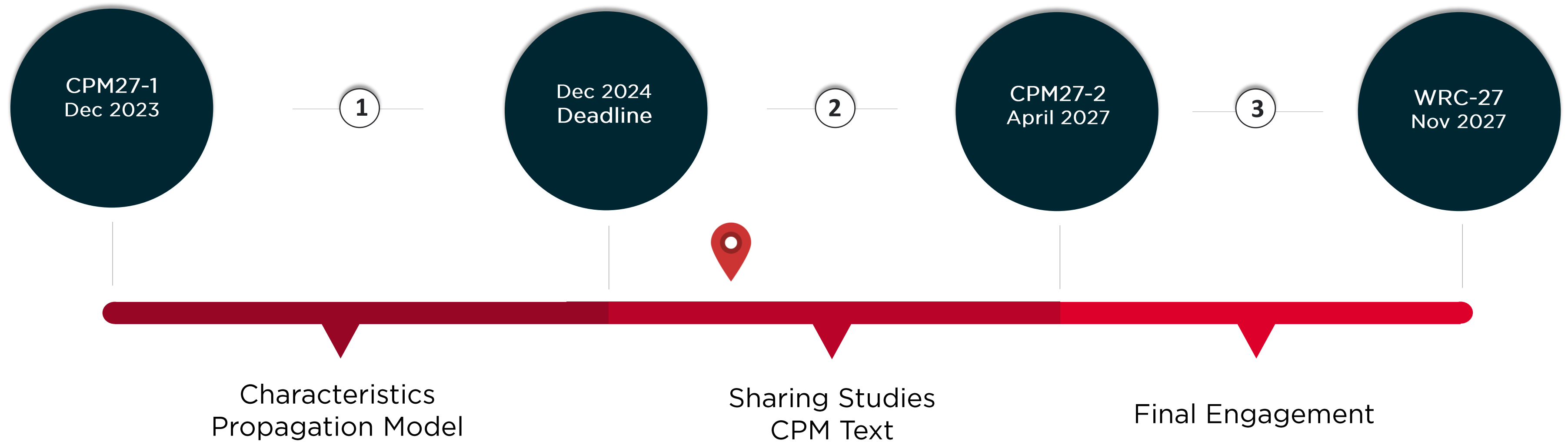
6 GHz Capacity

- **5.457D:** 6 425-7 025 MHz, R3*
- **5.457E:** 6 425-7 125 MHz in R1 and 7 025-7 125 MHz in R3
- **5.457F:** 6 425-7 125 MHz, R2*

*Some countries

WRC-27 Preparation

WRC Timeline



WRC-27

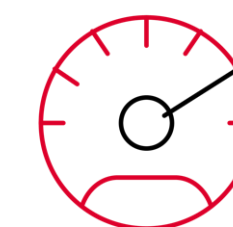
Agenda Item 1.7

Region 1	Region 2	Region 3
4 400-4 800 MHz		4 400-4 800 MHz
7 125-7 250 MHz 7 750-8 400 MHz	7 125-8 400 MHz	7 125-8 400 MHz
14.8-15.35 GHz	14.8-15.35 GHz	14.8-15.35 GHz

Next mobile generations must embrace:



Universal
meaningful
connectivity



Quality and
consistency



Sustainability and
energy efficiency



Massive capacity
for more devices

“By delivering ever-present intelligent communication, 6G will contribute to the creation of a more human-friendly, sustainable and efficient society.”

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Agenda Item 1.7

Sharing Studies
IMT-2030 / 6G

- Govt Users
- Space Research
- Space Operation
- Meteorological Satellites
- Mobile Satellites
- Fixed Satellites
- Earth Exploration Satellites
- Fixed Links
- Adjacent Incumbents

4 400-4 800 MHz

FS

MS

FSS

AM(R)S

ARNS

In-band

Adjacent

7 125-8 400 MHz

FS

MS

SRS

SOS

FSS

MSS

MetSat

EESS

14.8-15.35 GHz

FS

MS

SRS



EESS (passive)

RAS

SRS (passive)

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Agenda Items 1.12, 1.13, 1.14

Direct to Device AI 1.13	New Mobile Satellite AI 1.12, 1.14
 <p>Mobile satellite in IMT bands between 694/698-806 MHz and 2.7 GHz</p>	 <p>1 427-1 432 1 645.5-1 646.5 MHz 1 880-1 920 MHz 2 010-2 025 MHz 2 120-2 170 MHz</p>

WRC-27

Agenda Item 1.13

- Complement terrestrial IMT network coverage
- Study groups roles:
 WP 4C - Description, operational characteristics, frequency bands, sharing studies of MSS connectivity to IMT UE
 WP 5D - IMT operational characteristics for sharing studies, regulatory limits and protection measures

Early Regulation on D2D

United States



← 4500km →

Australia



← 4000km →

Uplink (MHz)	Downlink (MHz)
807-849	852-894
880-915	925-960
832-862	791-821
698-716	716-746
776-798	746-768
698-748	753-803
1 427-1 470	1 475-1 518
1 920-1 980	2 110-2 170
1 710-1 785	1 805-1 880
1 850-1 920	1 930-2 000
1 710-1 780	2 110-2 180
2 000-2 020	2 180-2 200
2 010-2 025	1 880-1 920
2 305-2 320	2 345-2 360
2 500-2 570	2 620-2 690

Thank you!

GSMA[™]