

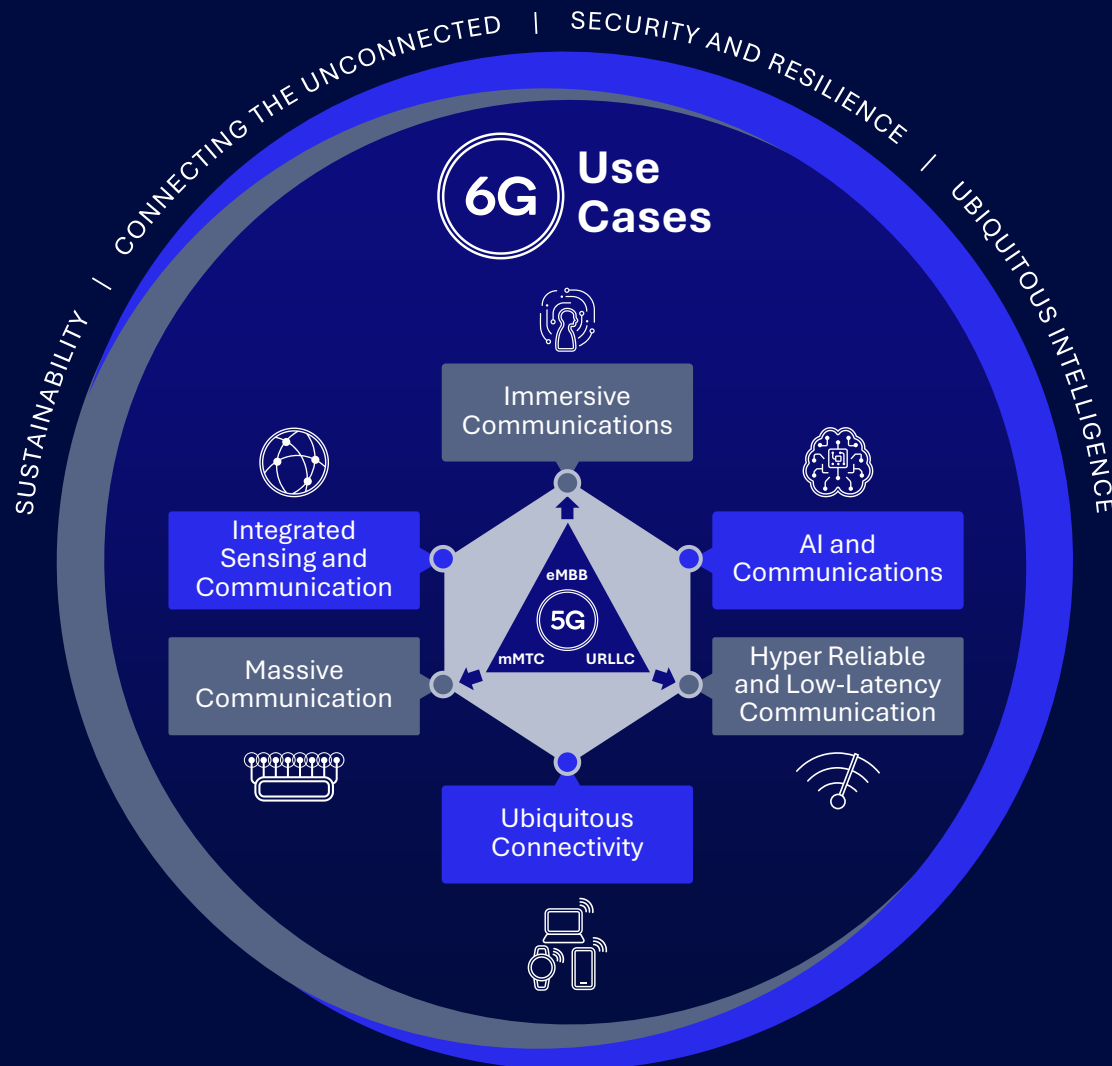


India's 6G Golden Band Roadmap

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6G Framework - Usage scenarios and capabilities



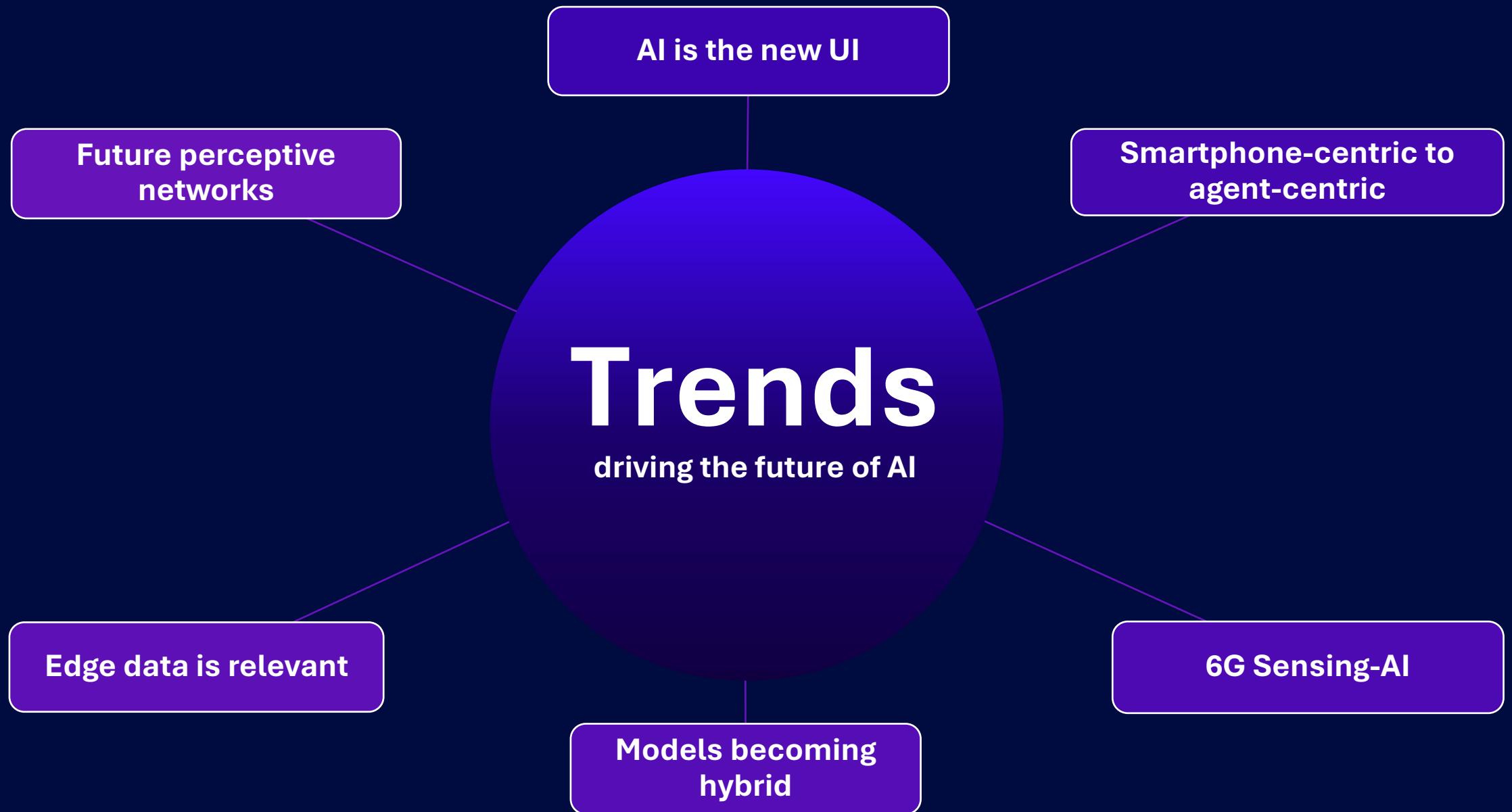
Enhanced Capabilities

Security resilience	
Reliability	5G $1-10^{-5}$ 6G $\uparrow 1-10^{-5} - 1-10^{-7}$
Latency	5G 1 6G $\downarrow 0.1 - 1$ ms
Mobility	5G 500 6G $\uparrow 500 - 1,000$ km/h
Connection density	5G 10^6 6G $\uparrow 10^6 - 10^8$ devices/km ²
Area traffic capacity	
Spectrum efficiency	
User experience data rate	
Peak data rate	

New Capabilities

Coverage
Sensing-related capabilities
AI-related capabilities
Sustainability
Interoperability
Positioning (1-10 cm)

6G Capabilities



We stand at Edge of Intelligent Future

Value is created at the edge

6G and advanced wireless technologies are key to unlocking AI's full economic potential



Connected AI and compute enable new use cases for the merging physical, digital, and virtual worlds

Mobile connectivity is enabling intelligence everywhere

Mobile transformations by Qualcomm



TECHNOLOGY REVOLUTIONS



NEXT-GEN WIRELESS

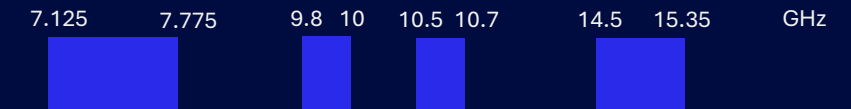
Innovation platform for the next decade and beyond

New user experiences and services at scale

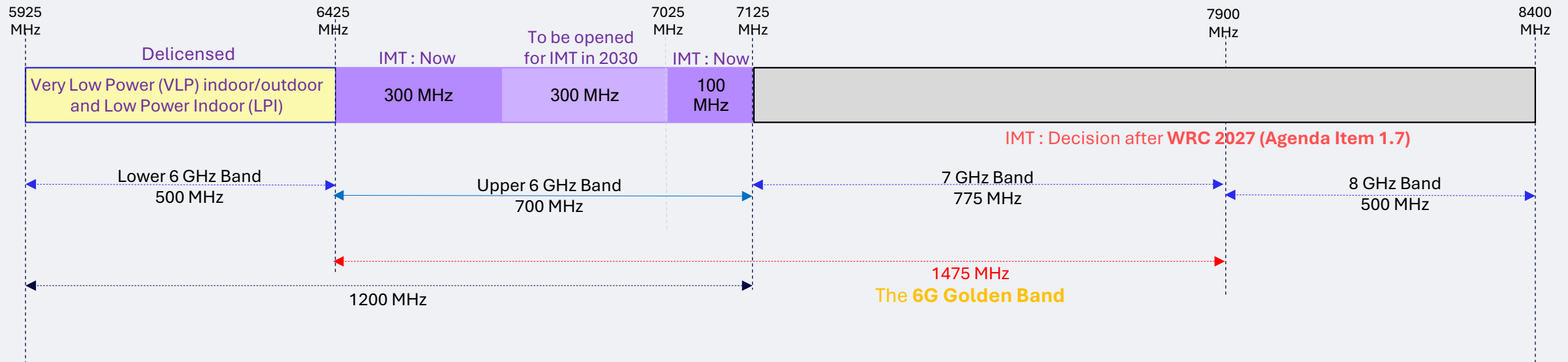
AI-native for efficient and resilient operations

6G Spectrum Background

- APG23-5
 - India pushed for WRC agenda item on 6G spectrum
 - India proposed spectrum in range 7.125-24 GHz (APG23-5/INP-31)
 - Supported by Korea, Vietnam and Laos
- WRC-23
 - India pushed for WRC agenda item on 6G spectrum
 - Supported by multiple countries across the globe
 - WRC-23 decided following ranges for studies in WRC-27 cycle under AI 1.7
 - 4.4-48 GHz, 7.125-8.4 GHz and 14.8-15.35 GHz
- Spectrum Studies
 - WP5D : India chairing studies of 7.125-8.4 GHz group (Dr. Punit Rathod)
 - Studies to close by October 2026 for preparation of CPM text



6 GHz Band : India Status



- 6G Spectrum opportunity is now
- Maximum alignment with 6G Golden band
 - To be on right side of 6G technology evolution
 - Maximize benefits of economies of scale
- Incumbents support must for India 6G leadership
 - Support opening of 6G Golden band now
 - Plan for incumbents' spectrum refarming over 4-5 years

Agenda Item 1.7

IMT identification in 4 400-4 800 MHz, 7 125-8 400 MHz and 14.8-15.35 GHz

	4400-4800 MHz	7125-8400 MHz	14.8-15.35 GHz	Remarks
No IMT	BGD, CHN, NZL, GSOA, ICAO, Bosch	CHN, IRN, NZL (7900-8400 MHz), APL (7.7-8.3 GHz), GSOA, RCC (7900-8400 MHz), Bosch, WMO ^{\$}	AUS, CHN, IRN, NZL, TON, GSMA, CEPT	\$ No IMT in 7125-7250 MHz, 7450-7550 MHz and 8025-8400 MHz
Support studies	AUS, IRN, KOR, CEPT	AUS (7250-8400 MHz for incumbent protection), KOR, CEPT [*]	BGD, KOR, ICAO [#]	[*] Ok with IMT in 7125-7250 MHz only and protection to EESS(P) in adjacent band (AI 1.19) @No to IMT in 7900-8400 MHz in R3 \$ Ok for IMT in 7750-7900 MHz but protection of MetSat Ok for IMT in 8025-8400 MHz but protection of EESS (s-to-E)
Support studies for IMT identification	IND, INS, PAK, THA, RCC	IND, INS, NZL (7250-7900 MHz), PAK, SNG, THA	IND, INS, PAK, SNG, THA	
Support IMT identification	JPN, VTN, CITEL, GSA, GSMA,	AUS (7125-7250), BGD, JPN, MLA (7125-7250 MHz), NZL (7125-7250 MHz), VTN, CITEL, GSA, GSMA, IAFI, RCC (7125-7250, 7125-7900 MHz in R3), WMO (7250-7450 MHz)	JPN, VTN, GSA, RCC	
Reverse studies		CEPT		
No comments	BHU, CAM, KIR, LAO, MIC, MLA, MLD, MON, MYN, PAK, PHP, PNG, SMO, SRL, SNG, TON	BHU, CAM, KIR, LAO, MIC, MLD, MON, MYN, NEP, PHP, PNG, SMO, SRL, TON	BHU, CAM, IRN, KIR, LAO, MIC, MLD, MON, MYN, PAK, PHP, PNG, SMO, SRL	

India's Golden 6G Band should be secured before entering the conference room

WRC-27 Agenda Item 1.7 covers 7.125–8.4 GHz. India's preferred outcome should be built through studies, national alignment and regional coalitions.

7.125–7.750 GHz Priority: secure harmonized IMT identification	7.750–7.900 Strategic stretch	7.900–8.400 GHz Longer-term / negotiated outcome
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Golden 6G Band

01

Lock a single national position

Resolve refarming, relocation and incumbent coordination domestically. Internationally, speak with one position and defined fallbacks.

02

Win the technical record

Challenge overly conservative assumptions and ensure CPM text preserves deployable IMT conditions.

03

Build votes before WRC-27

Map supporters, persuadable administrations and opponents across APG and other regions. Use bilateral packages, reciprocity and leadership roles.

Decision requested: mandate an empowered India AI 1.7 team now, with authority to negotiate and commit within approved red lines.

Technology leaders convert national intent into WRC influence

Across WRC cycles, the consistent playbook is early policy direction, empowered experts, technical contributions and coalition building.



WRC-19: USA, Korea

- Finalized the delegation months in advance
- Engaged regional meetings outside Region 2
- Used bilateral discussions to build momentum

IMPLICATION FOR INDIA

Start external advocacy before positions harden.



WRC-23: China

- Allocated clear responsibilities to industry well ahead of WRC
- Persisted despite an initially uncertain outcome
- Announced national direction during the CPM process

IMPLICATION FOR INDIA

National policy clarity strengthens negotiating credibility.



WRC-23: Europe

Empowered industry experts in technical negotiations
Built visible chair and vice-chair presence

IMPLICATION FOR INDIA

Continuity and trusted experts convert participation into influence.



WRC-27: Russia

Originated the 4.4–4.8 GHz WRC-27 study item
Nationally identified 4.4–4.8 GHz for IMT in May 2026
Informed WP5D in September 2026 after approving MNO assignments

IMPLICATION FOR INDIA

National commitment can shape studies and CPM options before they harden.

The signal is consistent: decide early, contribute continuously, build coalitions and negotiate from demonstrated national commitment.

Key Takeaways

- Spectrum is a critical enabler of economic growth, digital transformation, and national security
- Collaborative spectrum planning is key to balancing national security, innovation, and economic objectives
- At least Regional harmonization is essential to maximize sustainable technology ecosystems
- AI is the new UI, Smartphone-centric to agent-centric as models become hybrid
 - Edge data is increasingly becoming more relevant in future perceptive networks
 - Spectrum requirements will change accordingly
- Hon'ble PMs vision for India's 6G Leadership
 - 7.125-7.9 GHz acknowledged as **6G Golden Band** for India, and now finding global/regional alignment
 - DoT, Bharat 6G Alliance, IAFI, Academia, and Industry working towards realizing this vision in global forums (3GPP / ITU / APT)
- Targeted Strategy : Align regional/global admins before entering conference room
- One India – One 6G Goal – Single alignment across all stakeholders including incumbents : **Act Now**



Thank you