

Bharat's Initiatives on Beyond 5G

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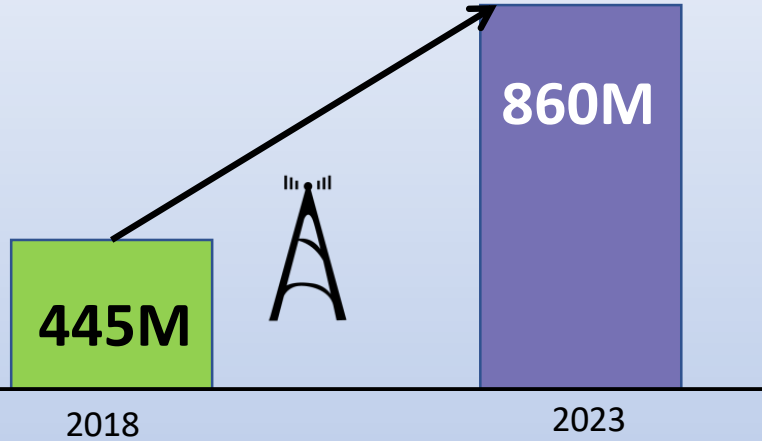
The logo for the Bharat 6G Alliance. It features the word "Bharat" in orange, "6G" in blue with a yellow signal icon above the "G", and "Alliance" in green. The logo is set against a background of a network of glowing orange and yellow lines on a dark blue background, with geometric shapes in orange and dark blue.

Content

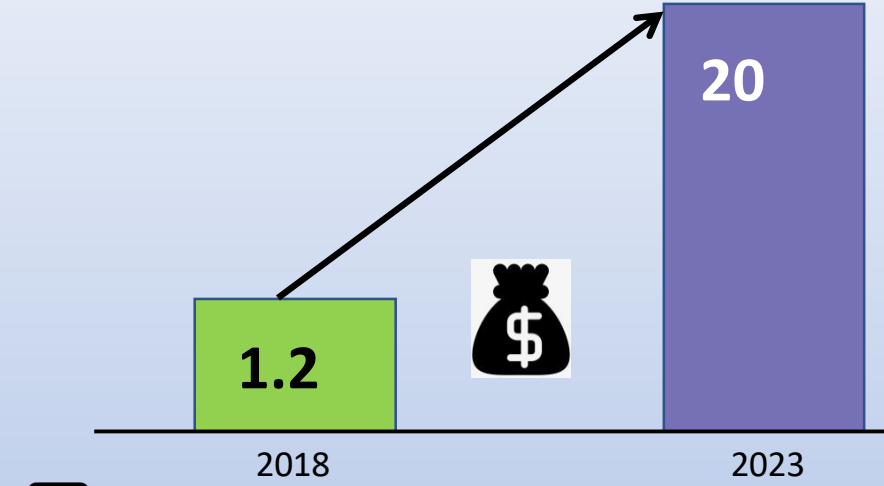
- India Context
- Where 5G and beyond will take India next?
- 5G and Beyond Initiatives
- Bharat 6G Vision
- Bharat 6G Mission
- Bharat 6G Alliance
- Possible Areas of Cooperation

India: World's Second Largest Telecom Market

4G+5G Subscribers



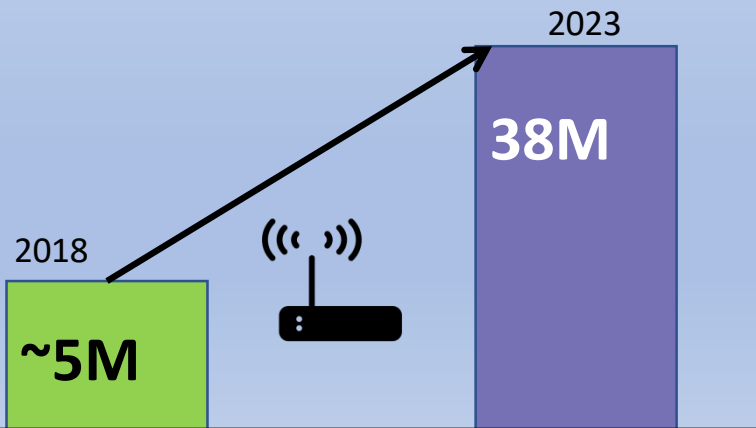
Average Data Usage (GB/month)



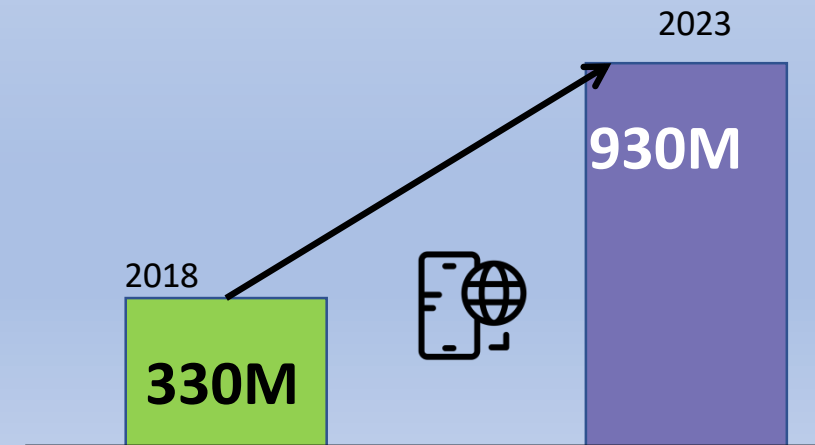
**Global #1
in Mobile
Data Usage
per
Smartphon**

e

Fixed Broadband Subs (Million)



Smartphone Users



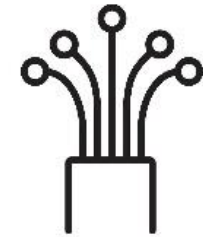
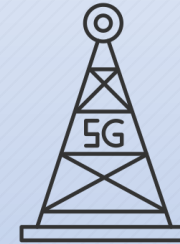
Large and Well Developed Telecom Infrastructure

1m+
Telecom Towers

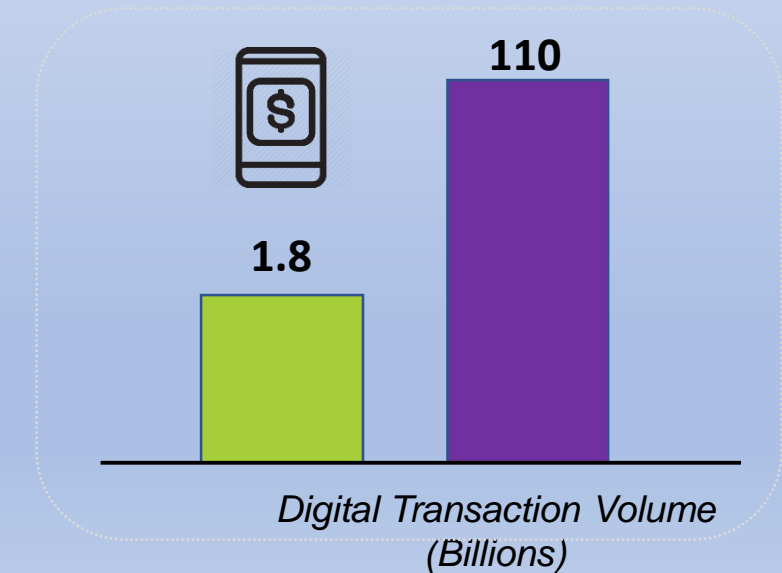
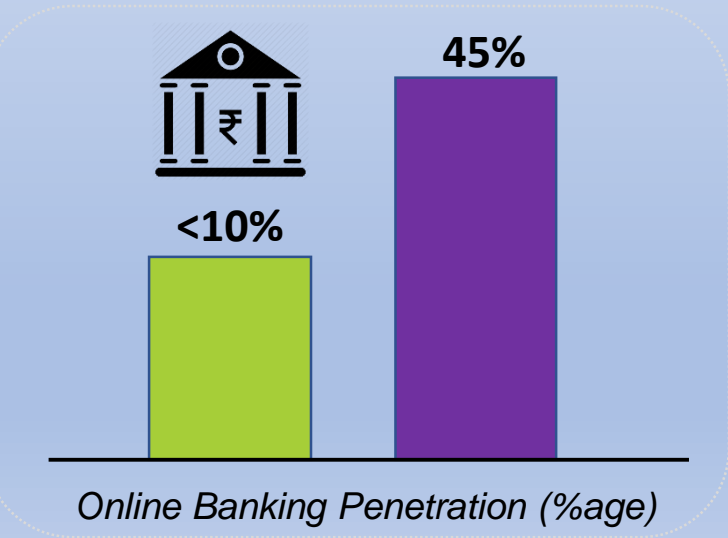
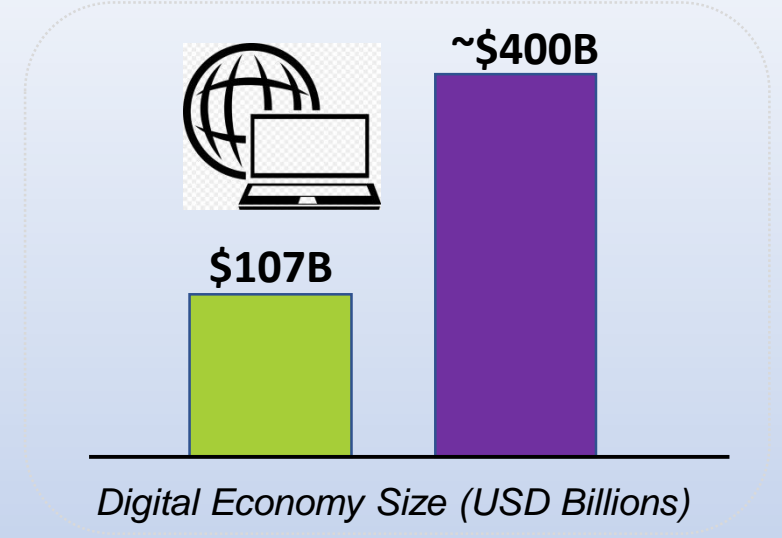
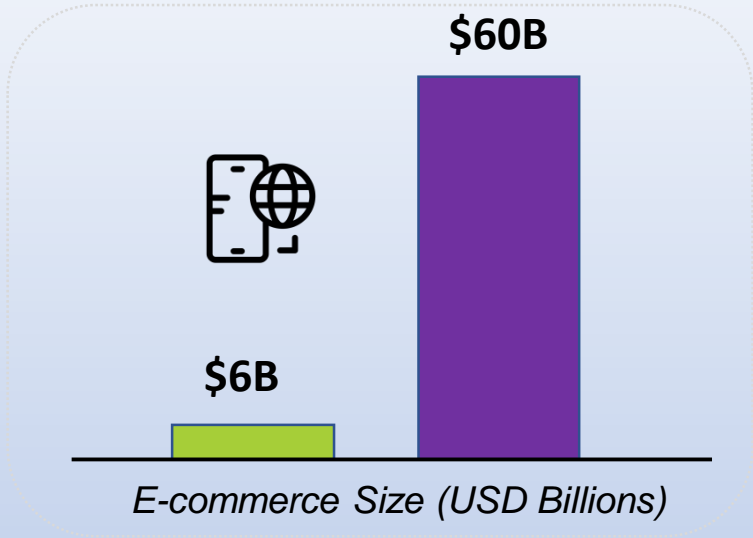
400,000
5G Base Stations

37 Lac. Km
Fiber

11 M.sq.ft Data Centers



Enabling Sustained Digital Transformation



2014-15 2023-24

Enabling Policies from Government

Patents &
Standards



Driving Global Standards

Standard
Participation



Consistent participation

Funding for
Design



Catalyzing Domestic R&D

Manufacturing
Support



Increasing global value addition

Pilots/Proof of
Concepts



Helping Test technology developed

Where 5G and beyond will take India next?

... being the smart part across its verticals and Indian innovation for the world

- Smart Cities; Safety and Security
- 230K Factories
- 3000 Mining Licenses
- 130+ Airports
- 13 major ports and 200+ minor and intermediate ports
- 151K Kms National Highways
- 159.7 million hectares Arable Land
- 7500 Km Coast line
- \$227 B Software Industry
- 25000+ Tech Startups

Bharat's 5G and Beyond Initiatives

- Large Pool of R&D funding by the Government
 - More than US \$ 100 million per annum
- Testbeds across institutions
 - 100 Use case labs for 5G and beyond at institutions
- Quantum Technologies – Pilots/Deployments in progress
 - National Quantum Mission- Us \$ 1 billion
- India Chipset Mission – Semiconductor Fabs, Assembly & Mounting
 - US \$ 10 billion fund
- 6G R&D taking shape – Opportunity for global collaboration
 - 6G testbeds set up

Bharat 6G Vision

Design, develop and deploy 6G network technologies that provide ubiquitous, intelligent and secure connectivity for high quality living experience for the world

Task Forces on 6G

- Multi-platform Next Generation Networks
- Devices
- Spectrum Policy
- Multi-disciplinary Innovative Solutions
- International Standards Contribution, and
- Financing Research and Development



... Indian innovation for the world

Bharat 6G Objectives

- Facilitate and finance Research and Development, design and development of 6G technologies
- Enable India to become a leading global supplier of IP, products and solutions of affordable 6G solutions
- Deploy 6G technologies to act as a powerful force multiplier for India@2030
- Enable inclusive and significant enhancement in quality of living experience of citizens



Focus on business & societal needs and India's strengths to make a mark on standards contribution

Priority Areas for Standards Contribution

e-Health

- Robotics Surgery
- Online clinical treatment
- Automated labs & pathology

e-Education

- Smart Classes
- Digital Schools
- Real-time distance education

Technology

- High altitude Platforms (HAPS)
- AI, ML and IoT led 4.0 platforms
- Analytics
- Green

Entertainment

- Metaverse Exp.
- Realtime Gaming Experience
- Teleoperated Driving Experience
- Intelligent BOT's

Beyond Connectivity, Coverage and Experience, drive R&D and Innovation around (India Context)

- Enabling rural education and Distance learning
- Emergencies & Natural calamities – Weather, Pandemic, Public safety
- Hospitals connectivity & shared resources and expertise
- Yield & productivity in everything that we do - Agriculture, storage, distribution, supply chain, inventory management & warehousing
- Democratized information and entertainment

Bharat 6G Alliance (B6GA)

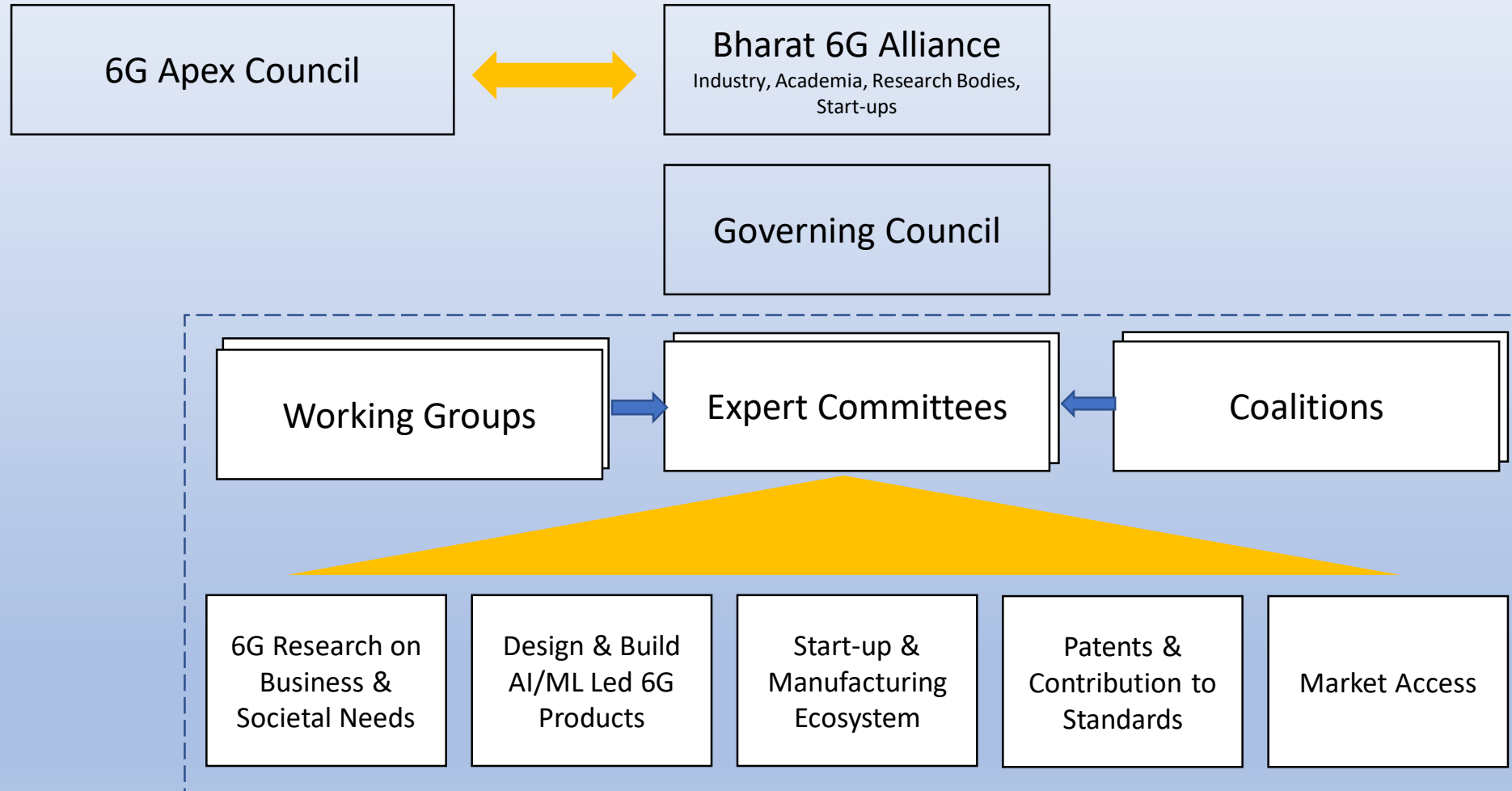
An industry led body consisting of public/private companies, academia, research institutions and Standard Development organizations facilitated by the Government

- Understand business and societal needs 5G advanced and 6G technology i.e. coverage, capacity and experience
- Build consensus on such needs, promote high impact Open R&D and pursue pre-standardization efforts
- Help design & develop AI/ML led Open 6G RAN products and solutions
- Ensure availability of 6G test beds and access to 6G / 6G RF / AI-ML chipsets
- Build consortia of Indian Startups, companies including manufacturing ecosystem
- Accelerate filing of patents from India and energize contribution to standards in 3GPP/ITU
- Facilitate market access for Indian telecom technology products & services
- Build coalition and synergies with like-minded 6G Global Alliances

Facilitate Realisation of 'Bharat 6G Vision'

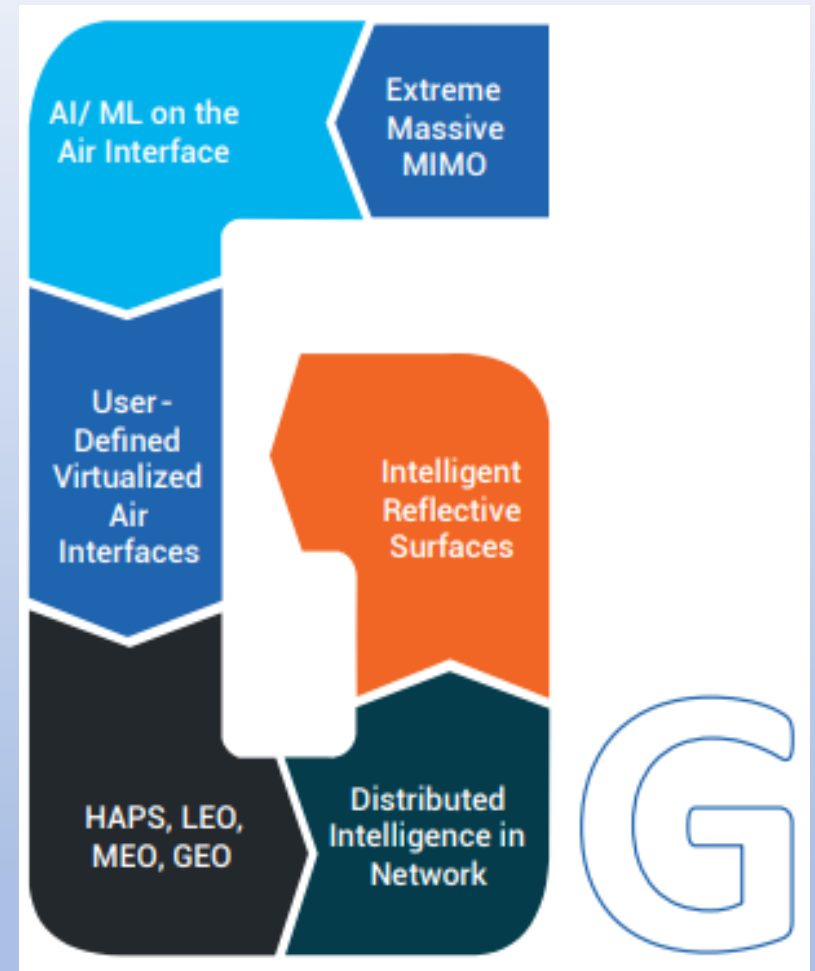
Bharat 6G Alliance (B6GA)

Facilitate Realisation of 'Bharat 6G Vision'



Bharat 6G Alliance Working Groups

- Spectrum
- Devices, Sensors and Manufacturing ecosystem
- Technology
- Applications
- Green and Sustainability
- Outreach, and
- 6G Use-cases and Revenue Stream



MoU between Bharat 6G Alliance and NextG Alliance

- To explore collaboration opportunities on 6G wireless technologies
- Support a common 6G vision and creating secure and trusted telecommunications as well as resilient supply chains
- Enabling global digital inclusion

Possible Areas of Cooperation

- Aligning research and development priorities
- Trust, Security, and Resilience
 - Support a common 6G vision
 - Creating secure and trusted telecommunications
 - Resilient supply chains
- Promote joint research, Proof-of-Concept (POC), pilots etc.
- Encourage and develop collaborative activities, including the exchange of ideas and expertise
- Exchange of information on respective work programs in the domains of mutual interest
- Collaboration in the development of various studies

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Bharat 6G Alliance

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Visit us: <https://bharat6galliance.com/>

Bharat 6G Alliance | Restricted Circulation