



Department of Telecommunications

Ministry of Communications Government of India



# Introduction about 5G Rollout Timelines

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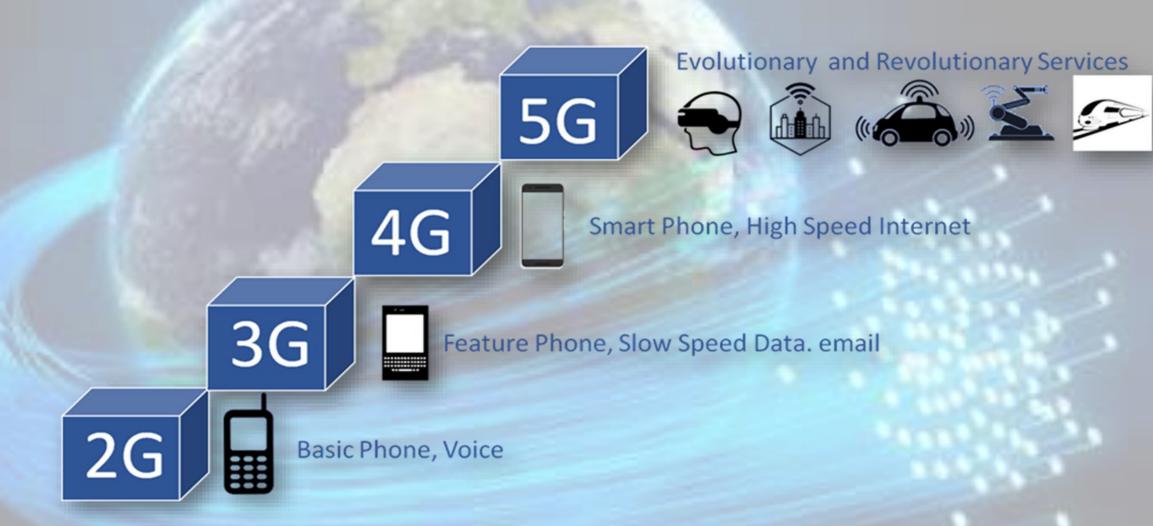
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### Flow of Content

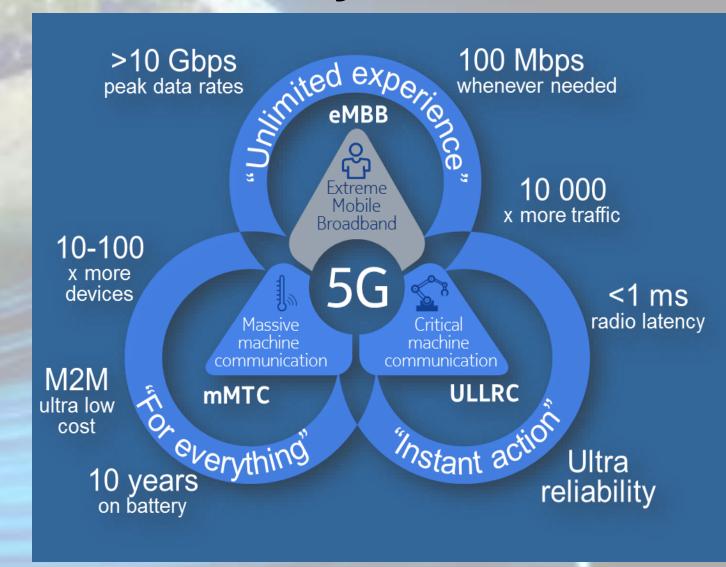
- 5G Evolution
- 5G is Revolutionary
- 5G High Level forum
- 5G Ecosystem
- AtmaNirbhar Bharat
- 5G Deployment

#### **5G Evolution**



## **5G** is Revolutionary

- Connectivity(ultra) +
   Content(dynamic) + Computing
   = Collaboration(unlimited)
- 5G opens up a new realm of applications driving individual intelligence towards omnipotent collaboration of things
- 5G though a wireless transport heavily intertwined with computing, networking, optical transport, and machine learning....



#### **5G High Level Forum**

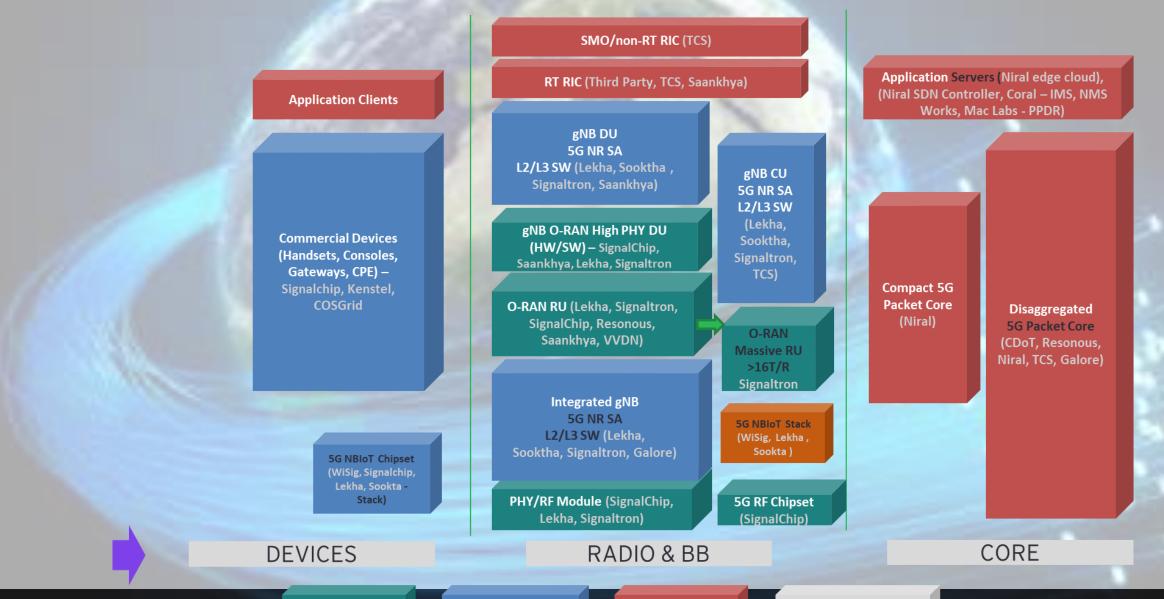
- High Level Forum (HLF) for 5G India 2020 DoT, MeitY, DST
- HLF submitted report "Making India 5G Ready"
- 5G Vision for India
  - 5G technology has the potential for ushering a major societal transformation in India by enabling a rapid expansion of the role of information technology across manufacturing, educational, healthcare, agricultural, financial and social sectors

Cumulative economic impact of 5G on India can reach one trillion USD by 2035

## **5G Ecosystem**

- 5G Standards: Working with academia, R&D institutions and Startups
- Technology Development: Grant funding by the Government
  - 43 Startups/MSMEs supported through grant funding of >Rs. 50 Cr
  - 5% of USOF levy for funding Startups/Industry for 5G technologies
  - Indigenous 5G stack available in different flavours
- Indigenous 5G Test Bed (IIT-Madras led 8 institutions)
  - Transfer of technology to Start-ups/MSMEs
  - Startups/MSMEs testing their products
- Make in India 31 companies under Telecom PLI to manufacture 5G network equipment
- Design led manufacturing under PLI launched

#### AtmaNirbhar Bharat- 5G NR Stand Alone End 2 End Network



PHY/RF L2/L3 Radio SW Core/App COTS HW/OS/VM

## **5G Deployment**

- High-dense Infrastructure
- Small Cells, Fibre / Radio Backhaul deployment
  - Electrics Poles, Side walls, Hoardings, Bus shelters, Traffic signals / lights, Metro Rail structures, Poles, road-side / campus infrastructure etc.
- Guidelines for Rollout of Small Cells Infra for 5G Networks
- Access to Street Furniture including DISCOM infrastructure
  - Electricity distribution infrastructure with built in 'access to power and also the opportunity to draw optical cable'
- Right of Way facilitation

