
1. 5G Technologies: Call for a Better Future

Why in News?

- The Covid-19 pandemic has transformed the way we work and live. With social distancing being the norm, dependence on telecom and internet infrastructure has become a necessity.
- It is an opportune time for policymakers, regulators and service providers to lead massive deployment of 5G.

What is 5G Technology?

- It is the next generation cellular technology that will provide faster and more reliable communication with ultra-low latency.
- Latency is the amount of time data takes to travel between its source and destination.
- A government panel report points out that with 5G, the peak network data speeds are expected to be in the range of 2-20 Gigabit per second (Gbps).
- This is in contrast to 4G link speeds in averaging 6-7 Megabit per second (Mbps) in India as compared to 25 Mbps in advanced countries.
- In a recent report, McKinsey Global Institute (MGI) has estimated an increase in global GDP by about \$2 trillion through the use of 5G in key sectors such as healthcare, retail, mobility and manufacturing.

Applications of 5G:

- 5G will be implementation in sensor-embedded network that will allow real time relay of information across fields such as manufacturing, consumer durables and agriculture.
- 5G can also help make transport infrastructure more efficient by making it smart.
- 5G will enable vehicle-to-vehicle and vehicle-to-infrastructure communication, making driverless cars, among other things, a reality.

Besides 5G will be used in:

- ✓ Integrated command centres for fleet management
- ✓ AI-enabled predictive healthcare
- ✓ Automated guided vehicles in manufacturing
- ✓ Personalised retail store experience
- ✓ Continuous monitoring and effective utilisation of energy
- ✓ Stringent measurement and proactive management of pollution levels

What Government Needs to be Done?

- The 5G systems also must comply with varied regulations including data privacy and protection, cyber-security laws, telecom interconnection agreements.
- Regulators and policymakers should look at 5G deployment as a system that has cascading benefits.
- This requires putting in place new forms of self and co-regulation instead of the command-and-control regime.
- Liberalised scarce resource policies including spectrum sharing across private and public entities should be done.
- Releasing 26 and 60 GHz millimetre wave spectrum for micro-cellular coverage in dense urban areas
- Mandating open standards for data and connectivity
- Pooling investment for co-working and value creation by different entities
- Enabling non-discriminatory access to infrastructure and services
- Revamping the traditional multi-licensing model to a simplified possibly dual infrastructure and service-based licensing.

Conclusion:

- India, with its overstressed physical infrastructure, and the associated inefficiencies can benefit hugely from deployment of integrated 5G digital infrastructure.
- Proactive industry-friendly policy is the need of the hour for India to attain the true benefits of 5G.

Source: Financial Express