

**New Delhi, 14<sup>th</sup> October, 2019: KPMG in India** in association with IMC and COAI launched a **report on the TMT sector** titled **‘Imagine a new connected world: Intelligent, Immersive, Inventive.’** at the **India Mobile Congress 2019**. The report takes a deep dive into the digital ecosystem enabled through 5G, blockchain technology, IoT, AI, cognitive computing, machine learning and AR/VR to name a few. While the current investment and focus is on creating an enriched omni-channel experience for customers, it is the use of bots and blockchain that are going to be game changers in enhancing customer experience over the next five years, as per the report. Further, on the need to address and allocate strategic importance to digital risk and data privacy, the report highlighted that 57 per cent of the companies who have commenced work on digital transformation do not have a digital risk strategy, presenting a danger to the very existence of the organisations eventually. The report further throws light on the challenges in the implementation of the digital vision like financial stress in telecom industry, the high price of spectrum, inadequacy of a fibre network and the lack of device interoperability standards as well as suggests a way forward on how the industry could mitigate some of these challenges like the adoption of a sustainable and transparent pricing model, creation of Special Purpose Vehicles (SPV) to support international lending organisations, providing substantial investment into digital infra projects at cheaper interest rates, policy interventions in ease of doing business, and establishing funding mechanisms that provide grant funding to emerging tech start-ups.

**Satya Easwaran, Partner & Head – Telecom, Media and Technology sector, KPMG in India** said, *“India has never been more alive in the telecom and technology space. We are excited to be a part of IMC 2019, at the core of all the action. There is a fundamental shift underway, with significant disruption and convergence in the roles of telecom and tech companies, as well as other sectors. This is leading to a wave of innovation and invention. It is imperative for companies to stay nimble from a strategic, business and customer experience standpoint, or else face potential losses or even bankruptcy. With the mobile data explosion over the last few years, rapid migration of customers to 4G, the advent of 5G in 2022, and all the associated technological possibilities in the next few years, we couldn’t be poised at a more pivotal juncture. There are some infrastructure and customer adoption challenges however, that we do need to address collectively as an industry. However as things stand right now, we are on the brink of an India which is intelligent, immersive, inventive.”*

**Purushothaman KG, Partner and Sector Lead – Telecom, KPMG in India** said, *“The future value that will be delivered through telecom operators is not by being the provider of ‘connectivity’ but as being a trusted partner and platform provider offering value and services and experiences to customers. We are living in exciting times where new technologies like 5G, IoT, AI and AR/ VR promise to revolutionise connectivity and unlock value by creating better, more secure and personalised experiences for everyone.”*

Commenting on the industry growth, **Mr. Rajan S Mathews, Director General, COAI** said, *“The global digital revolution at present is led by the telecom industry, which is providing services beyond the conventional offerings of access, interconnectivity and applications. A testament to India gaining a competitive edge over its global players is the fact that it has the world’s cheapest mobile data at USD 0.25 per GB, resulting in higher usage by its citizens. Also, India has made great strides in other aspects of internet inclusion such as regional penetration and gender parity parameters. However, in order to deliver value in future, telecom operators will have to go beyond being the connectivity provider and become a trusted partner and platform providing value, services and experiences to customers.”*

The full report is attached for your consideration.

**Key technology trends of the digital ecosystem in India in 2019/2020**

- **5G is slated to potentially add between 0.35 per cent to 0.5 per cent to the GDP of India:** With potential still existing from existing technologies (2G, 4G) not fully exploited, India is expected to see a gradual migration to 5G by 2022. 5G is most likely to see widespread adoption by 2025 in India. Until then 2G, 4G and 5G will continue to co-exist. KPMG estimates that India Inc. has the potential to unlock USD48.69 billion (INR3408 billion) through the deployment of 5G over four years and the 5G contribution to annual GDP is likely be in the range of 0.35 - 0.5 per cent.
- **Disruptive technologies: table stakes or future stars:** KPMG survey revealed that while India Inc.'s current table stakes are on data analytics and cloud, IoT, blockchain and AI are projected to be strategic investments and robotics and AR/VR are the future stars
  - IoT will be the most immersive, intelligent and inventive of all technologies, and soon be ubiquitous, incorporated into how we live, work and play
  - Blockchain is a technology trend that has seen wide implementation during 2019 and its applications will continue to expand beyond cryptocurrency
  - The survey ranked AI, AR/VR, cognitive computing and machine learning as the top technologies that will have the highest potential to generate immersive experiences but are nascent in terms of their evolution and adoption. AR, VR and AI will all come together to form 'Extended Reality' (XR)
- **The transformation and adoption to the digital ecosystem:**
  - Transformational changes in the telecom sector, technological advancements, positive policy intervention and increasing connectivity penetration have been key enablers of India's digital dream. KPMG in India analysis 2019 survey indicates that 43 per cent of companies have begun work on emerging technologies but almost 31 per cent are yet to develop a roadmap for digital strategy. The importance of digital transformation has been recognised but the journey in transformation is still evolving
  - As per the survey, sectors that are likely to be the most disrupted by emerging technologies are retail, then financial services and technology, in that order
  - 90 per cent of the respondents feel the need for product innovation with newer technologies and approaches is needed to enhance customer experience
  - While the current investment and focus is on creating an enriched omni-channel experience for customers imbibing AI and ML, survey respondents reckon face-to-face video communication, use of bots and blockchain that are going to be a game changer in enhancing customer experience over the next five years
- **Digital risk and data privacy will need management screen time:** With the near ubiquitous nature of digital technologies, digital risk acquires strategic importance and needs to be addressed. Adoption of multiple digital technologies by the enterprises exposes them to a myriad of vulnerabilities impacting consumers' privacy. A data breach could ruin the reputation of organisations and it is important to note that the average total cost of data breaches in India in 2017 was INR 110 million (USD1.57 million) making it important to mitigate the security concerns.
- **Challenges in the implementation of the digital vision:**

- Adoption of the National Digital Communications Policy 2018 (NDCP) needs to be done in a more efficient and productive manner
  - Financial stress in telecom industry coupled with high price of spectrum provides limited room for the industry to deploy and scale the digital infrastructure
  - Inadequacy of a fibre network and the lack of device interoperability standards are impacting the quality of technology implementation and limiting innovation in the sector
  - Enactment of the Personal Data Protection bill is a step in the right direction as far as data privacy is concerned but effective implementation and customer education is necessary to improve customer confidence in adoption of digital technologies.
- **The need of the hour:**

**Policy:** Policy interventions relating to 'ease of doing business', RoW clearance, public-private partnership (PPP) models for infrastructure development, creation of a national portal to monitor and track development and adoption of emerging technologies, expediting the roll-out of smart cities, finalising the Personal Data Protection (PDP) bill, drafting an IoT policy and implementation of a national programme on AI will accelerate the adoption of digital technologies in the country. Additionally, in the long term, the domestic manufacturing for telecom equipment and fibre can be given a boost through direct tax incentives for reducing manufacturing cost, formation of special economic zones, increasing export incentives

**Investments:** To promote investments in the sector, the government should create Special Purpose Vehicles (SPVs) to support international lending organisations and provide substantial investment into digital infra projects at cheaper interest rates

**Spectrum:** As the country is gearing up for 5G, it is critical that the additional spectrum should comprise a mixture of coverage (i.e., lower frequency) and capacity (i.e., higher frequency) bands to ensure that networks can provide high speed, cost effective services in rural and urban areas

**Easing the financial burden of the sector:** With the total levy of between 29 and 32 per cent in the form of GST, licence fee and spectrum usage charge (SUC) on the telecom sector, there is a clear need for levy rationalisation. The Universal Service Obligation Fund (USOF) contribution and SUC could be reduced to three per cent and one per cent respectively, to make the sector competitive. Further declaration of a three-year moratorium on spectrum payments to the government with abeyance on interest charge, refund of accumulated unutilised input tax of USD4.24 billion are some of the other demands of the debt-laden sector. The government could also consider doing away the levy of GST on government payments such as LF and SUC

**Ecosystem:** Incubation hubs and accelerators along the lines of the Atal Incubation Centres (AICs) can be established, additional funding mechanisms like the VC funding scheme and Startup India which provide grant funding to emerging tech start-ups to facilitate their operation and business could be started, as well as the adoption of a sustainable and transparent pricing model