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FOREWORD

Digital transformation brought about through the power of connectivity and digitalization is taking place in almost every industry. The landscape is expanding to include “smart things” to be interconnected. Therefore, the manner in which future networks will cope with highly varied demands and the business landscape will be significantly different from today. India is on the threshold of becoming a significant Digital Economy in the World (One Trillion by the year 2025) with ubiquitous & adequate broadband connectivity, internet access to all thereby enabling socio-economic benefits of broadband to be accessible to all.

The world is at the cusp of a next generation of wireless technology 5G. 5G has been conceived as a foundation for expanding the potential of the networked society. The biggest revolutionary technology which will enable this vision and will eliminate the bounds of access, bandwidth, performance, and latency limitations on connectivity worldwide is 5G. It has the potential to enable fundamentally new applications that require high data-rate instantaneous communications, low latency, and massive connectivity for new applications for e-Health, autonomous vehicles, smart cities, smart homes, and the IoT. This will provide an opportunity to start-ups, entrepreneurs & Industry. Technology will be the key enabler and hence we have to prioritise on 5G, IoT, Cloud Computing, AR/VR, Artificial Intelligence (AI) etc. Apart from globally recognized professional strengths, India’s strength is its market size. It is time to strategically position India’s market strength as an opportunity to build wireless technologies and solutions from India. Collaboration within the country and government is critical to realize this competency. I am happy to acknowledge that the key departments Electronics & IT, Science and Technology and Telecommunications have come together to build this dream of positioning India on the global 5G landscape.

India is a global leader in IT and ITeS services. 5G is more software centric; hence, there exists a huge opportunity for India to not only catch up with the world in technology development, but also to play a leadership role in IPRs, standardisation and product development.

For India, Digital Transformation through 5G is expected to positively impact other national Mission Mode projects like ‘Digital India’, ‘Start-Up India’, ‘Smart Cities’, and ‘Make in India’ missions. 5G has particular relevance to India because this is a country digitising both. 5G is expected to increase GDP and Jobs and bring new services to people rapidly and profoundly.

Widespread implementation of 5G and its allied services such as higher speed mobile broadband and Internet of Things (IoT) deployment, will drive our digitization mission forward. India is gearing up to embrace this new digital future with our focus on 5G readiness and the facilitation of new technology adoption across sectors.

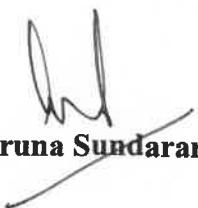
Government has constituted the High Level Forum for 5G India 2020 with the aim of making India a leading technology provider in this area. The Forum would enthuse a roadmap and opportunities to Indian companies to innovate, design and develop 5G products and solutions not only for India but for the world.

There is a need to take calibrated steps, including putting in place a conducive regulatory framework and policy initiatives to make the best use of the short window of opportunity available to us for achieving common goals in 5G. The Report has clearly enthused a roadmap for India identified quantifiable goals in each sector and the initial funding requirements as well as milestones for measuring success/track progress of implementation.

The Department of Telecommunications has already initiated work on establishing a comprehensive 5G Test bed program in premier academic institutions in Public Private Partnership mode. This is expected to enable growth of IoT and other digital technologies.

I am grateful to Prof. A.J. Paulraj, Professor Emeritus, Stanford University USA and Chairman, 5G Steering Committee for his leadership on visualizing this national roadmap. I would like to place on record my heartfelt thanks to Secretary, DST, Secretary, MeitY and my colleague Mr. N. Sivasailam, Special Secretary (T), for their continued inputs and invaluable contributions in 5G HLF activities. I also wish to express my thanks to the five directors of IITs and IISC and other participants in the High Level Forum, Steering Committee and Task Forces for their enthusiastic participation and in making this whole exercise effective and meaningful.

The Department of Telecommunications welcomes the inputs provided by 5G HLF and reiterates its commitment to implement the recommendations with full vigour.


(Aruna Sundararajan)