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A ROBUST DIGITAL TRANSFORMATION MISSION ROADMAP

CHANDRAJIT BANERJEE

Director-General, CII



India has registered a multi-fold increase in digital adoption, making it the second-largest consumer internet market. Increased investments towards digital infrastructure will lead to quicker adoption of emerging technologies. To further strengthen the sector, a sustained and comprehensive approach is the need of the hour.

India currently has 34 rural internet subscribers per 100 population, and 1.75 lakh villages are connected on fibre. The government has taken major initiatives under the Digital India programme to provide internet access and connectivity to all areas, including rural and remote locations.

Emerging technologies and very high-speed broadband connectivity necessitate attention to several challenges, ranging from the manufacturing of products to the last-mile delivery of services.

The first priority is digital infrastructure buildout, which is critical for economic growth, job creation and the provision of services. India has a large optical fibre cable network in the public and private sector that constitutes its digital highways and is progressively increasing its per capita availability. About 30% of the existing 6,40,000 telecom towers are fiberised and the remaining

need to be done speedily.

In the 5G ecosystem, the number of towers is likely to grow to about two million and close to 80% of these would need optical fibre cable backhaul. Further, the existing fibre-optic network would require upgradation and under the BharatNet 1, would have to be augmented to a ring architecture to maintain services, despite fibre cuts.

An independent government entity with expertise that uses funds from the dedicated pool meant for digital infrastructure, builds state-of-the-art digital networks and works on the business model of leasing out fibre and infra to internet service providers, would accelerate the process.

Considering the current telecom scenario, it would be pertinent to further increase the government's investment share in establishing digital fibre networks.

Second, digital transformation will significantly impact critical sectors like manufacturing, agriculture, healthcare, education, etc. Covid-19 forced the closing of 1.5 million schools that impacted 247 million children enrolled in elementary and secondary schools, making online classes the new normal.

To smoothly implement the

new education process in a post-Covid world, we need to work on e-readiness, digital literacy and safe spaces on the internet. As the domestic industry is growing rapidly, a comprehensive policy framework to organise and clarify the collective principles, functions, definitions, requirements and practices will go a long way.

Third, 5G is expected to create a cumulative economic impact of \$1 trillion in India by 2035. Several critical policy initiatives, including that of spectrum, technology demonstration and major trials are in the pipeline. To accelerate 5G adoption, the government could embrace a ship-to-software model.

In the 5G ecosystem, domestic players are now available across the network stack and this ecosystem can thrive with the right government support.



Government-led investment in digital infrastructure, recalibrating the budget allocation for the telecom sector, exploring new funding sources for digital infra, effective implementation models and promoting Make in India will transform the nation



SOUMYADIP SINHA

We need to replace our reliance on foreign technology imports with home-grown innovations and companies.

To establish a globally relevant 5G ecosystem, the industry must explore ways to establish semiconductor fabrication units in the country, utilise R&D incentives by the government and undertake domestic manufacturing of 5G equipment/hardware/software, etc.

Digital security: The fourth priority for strengthening digital capabilities lies in the security aspect. The government is planning to unveil a new cyber security strategy this year. The vision of the strategy is to ensure a safe, secure, resilient, vibrant and trusted cyberspace. It will serve as a guideline to handle every aspect such as governance, national data resources, building indigenous capabilities and cyber audits.

The industry must discuss and pass on vital inputs to the government in areas such as managing cyber security of the private sector organisations that own and operate critical infrastructure, providing incentives for the industry to invest in cyber security, co-ordination through an integrated command-and-control entity for agencies including private operators.

Accelerating impact of policies: Finally, manufacturing domestically is an essential prerequisite of the digital mission. The government has announced and rolled out many incentives and schemes like NDCP, PLI, RoW, SPECS, MSIPS, etc., to boost the domestic manufacturing sector. Along with these landmark reforms, India must have a framework for comprehensive policy planning, reduce its dependence on telecom imports, and effectively use incentives and trade remedies.

To speed up infrastructure deployment, the 2016 Right of Way Rules was a useful first step. To make it more impactful, giving RoW permissions with uniform standards for restoration charges, a common duct policy for all infrastructure to avoid repeated digging and a system of a single window for approvals could be adopted.

Information technology is creating an intelligent world, from smart cities to smart companies and schools. Government-led investment in digital infrastructure, recalibrating the budget allocation for the telecom sector, exploring new and innovative funding sources for digital infra, effective implementation models and promoting Make in India will transform the nation.

(cb@cii.in)