



Digital India: Catalyzing Growth in the Information Technology Landscape

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ABSTRACT

Government of India initiated a campaign Digital India in 2015 with the aim of transforming India into a digitally empowered society and knowledge economy. Digital India is an umbrella programme that covers multiple Government Ministries and Departments. It weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them can be implemented as part of a larger goal. Digital India aims to provide the much needed thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. Each of these areas is a complex programme in itself and cuts across multiple Ministries and Departments. The implementation of this initiative has created a plethora of opportunities for various segments like retail sector, education sector, manufacturing sector and so on. But Information Technology industry is one of the industry for which a large pool of opportunities have been created by Digital India Programme. Through this programme an attempt has been made to highlight the impact of Digital India initiative on Information technology Industry in India.

1. Introduction:

India's new leadership considers the digital economy as a major growth enabler of technology companies. Digital India opens up a plethora of opportunities such as building the broadband infrastructure; creating identity solutions, payment systems, web or mobile based delivery structures and so on. Upon the realization of dream of Digital India, more than five crore jobs will be created in Indian economy. For a developing nation like India, Information Technology sector is the backbone for growth and development. With the upcoming initiatives of Indian government, IT industry will experience a great boom in upcoming times.

2. Objectives:

The main objective of this paper is to identify various opportunities created for Information Technology Sector with the introduction of Digital India campaign in the nation.

3. Research Methodology

Available secondary data was extensively used for the study. Different news articles, books and web sources were used which were enumerated and recorded.

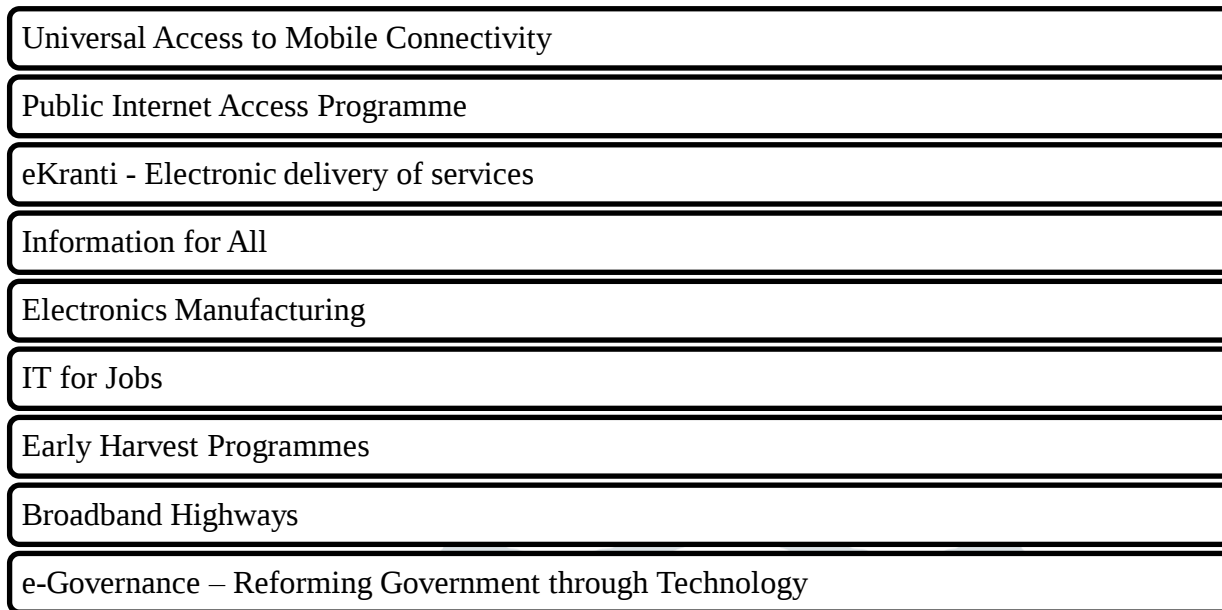
4. Digital India campaign

Digital India is an ambitious programme of the Government of India with a vision to transform India into a digitally empowered society. The focus areas are: creation of a countrywide digital infrastructure as a utility for every citizen, ensuring governance and services on demand and digital empowerment of citizens. The Digital India Programme is a mission to prepare India for a knowledge future by making technology central to enabling change. From enabling storage of legacy documents in digital format to providing a unified platform for all scholarships provided by the Government of India, from facilitating online registration and obtaining appointments in hospitals to propagating widespread use of digital signatures, from setting up of a National Centre for Flexible Electronics to creating an Electronic Development Fund as a Fund of Funds, from creating the fiber optics backbone infrastructure across the country to moving ahead with the Next-Generation Network that heralds the convergence of voice, data and multi-media services . Further the demonetization of Indian banknotes led to adoption of various modes of digital payments (Kalluri, 2023). Digital India is the most comprehensive programme under implementation, de-Signed to harness the immense potential of Digital to propel India forward. The Digital India programme rests on nine pillars which are shown in Figure 1. Various opportunities have been created by the introduction of Digital India Campaign:

- Education: Akshaya (Kerala), Sub Titles on TV
- Health: Webhealthcenter.com, MIS in AP, nLogue-Arvind Hospital
- Economic Opportunities: eChaupal, Tara Haat, Drishtee, NDDB
- Multi purpose telecenters: SARI in Tamilnadu, nLogue in many states, NIC centers in NE

- E-Government: Bhoomi, eSeva, Drishtee, Gyandoot, Lokvani, NEGP- creation of 100,000 Citizen Service Centers

FIGURE 1: NINE PILLARS OF DIGITAL INDIA INITIATIVE



5. Digital inclusion

According to the UN, the value of E-government will increasingly be defined by its contribution to the development for all using benchmarks such as citizen-centricity, inclusiveness, connected government, universal access, and use of new technologies. However, there are still many cases of social exclusion or digital-divides of different social groups around the world due to the way the e-government concept is operationalized, and or inadequacies in execution. ICT constitutes an essential inclusion tool, for three reasons for it allows people, who are potentially at risk of exclusion, to make up because it affects both the macro-social and the individual sphere. Therefore, the inability of an individual or group to exploit new technologies rolled out by government, condemns the individual to a process of progressive social exclusion. Those excluded from the digital world, and thus excluded from the participatory perspective, are destined to become second- or third-class workers, students, or consumers.

India has taken a strong step to digitally empower the citizens of the country by introducing Digital India programme. Figure 2 shows the three key visions of Digital India programme.

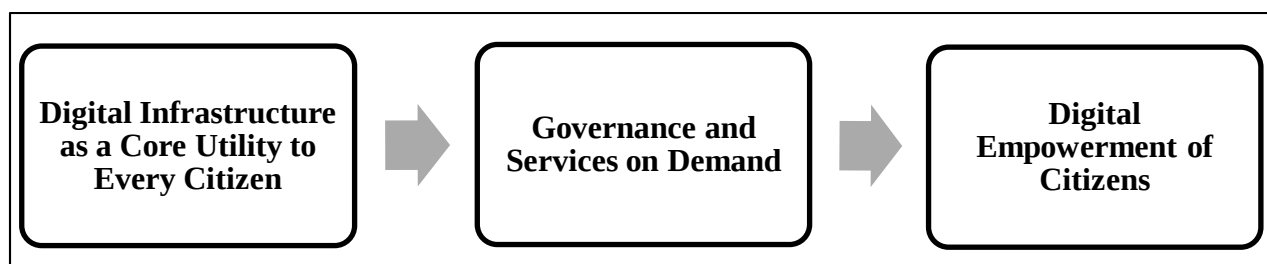


FIGURE 2: KEY VISIONS OF DIGITAL INDIA PROGRAMME

- **Digital Infrastructure as a Core Utility to Every Citizen:**

A well connected nation is a prerequisite to a well-served nation. Once the remotest of the Indian villagers are digitally connected through broadband and high speed internet, then delivery of electronic government services to every citizen, targeted social benefits, and financial inclusion can be achieved in reality. One of the key areas on which the vision of Digital India is centred is “digital infrastructure as a utility to every citizen”. A key component under this vision is high speed internet as a core utility to facilitate online delivery of various services. It is planned to set up enabling infrastructure for digital identity, financial inclusion and ensure easy availability of common services centres. It is also proposed to provide citizens with “digital lockers” which would be sharable private spaces on a public cloud, and where documents issued by Government departments and agencies could be stored for easy online access. It is also planned to ensure that the cyberspace is made safe and secure.

- **Governance and Services on Demand:**

Over the years, a large number of initiatives have been undertaken by various State Governments and Central Ministries to usher in an era of e-governance. Sustained efforts have been made at multiple levels to improve the delivery of public services and simplify the process of accessing them. E-governance in India has steadily evolved from computerization of Government Departments to initiatives that encapsulate the finer points of Governance, such as citizen centricity, service orientation and transparency. The National e-Governance Plan (NeGP) was approved in 2006 to take a holistic view of e-governance initiatives across the country, integrating them into a collective vision (Pandey, 2023). Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is being developed, and large-scale digitization of records is taking place to enable easy and reliable access over the internet. The ultimate objective was to make all government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realize the basic needs of the common man (Bhatia and Kiran, 2016).

- **Digital Empowerment of Citizens:**

Digital connectivity is a great leveler. Cutting across demographic and socio-economic segments, Indians are increasingly connecting and communicating with each other through mobile phones and computers riding on digital networks. The Digital India programme itself promises to transform India into a digitally empowered society by focusing on digital literacy, digital resources, and collaborative digital platforms. This also places emphasis on universal digital literacy and availability of digital resources/services in Indian languages.

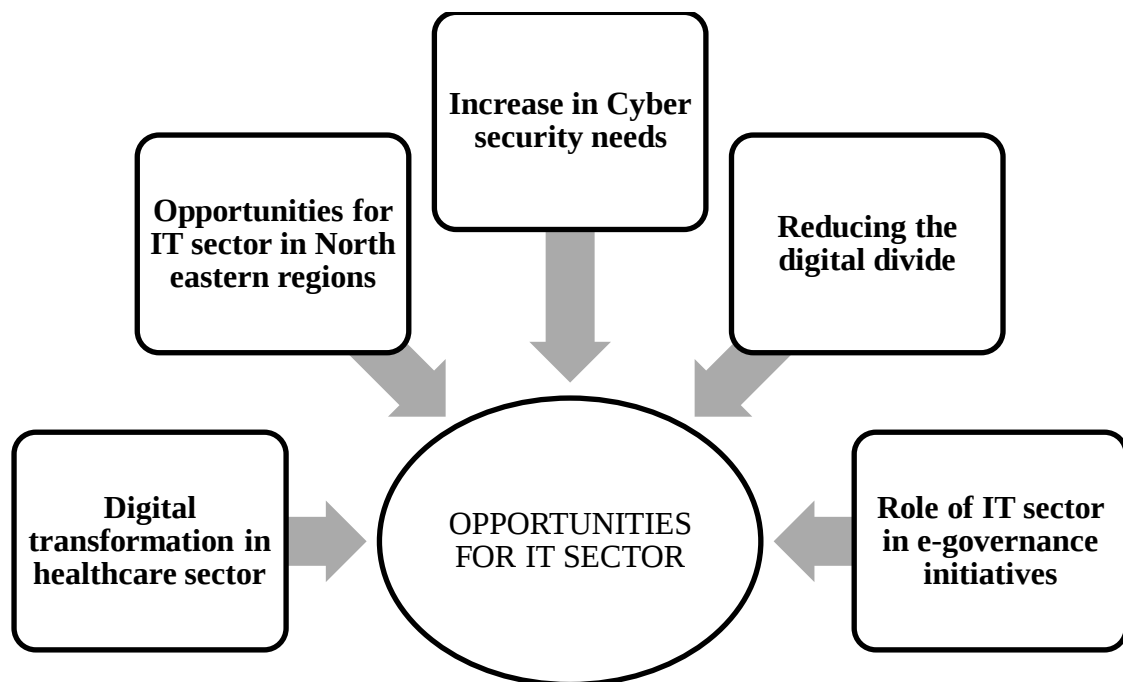
6. Opportunities for IT sector in the wake of Digital India

Digital revolution, also known as ‘The Internet Economy’ or Internet of Everything (IoE), is expected to generate new market growth opportunities, jobs and become the biggest business opportunity of mankind in the next 30 to 40 years. Goldman Sachs predicts that India - comprising 15% of the world population, with a growth rate of 7 to 8%, could be the second largest economy by 2030.

For years, India has been the IT hub for the world and India's IT workers have solved some of the biggest technology problems worldwide. IT gives employment to about 30 lakh people. IT for jobs is an important pillar of the Digital India program. Once Digital India becomes reality, India can give jobs to 5 crore plus people, as indicated by the telecom minister Ravi Shankar Prasad. This pillar focuses on providing training to the youth in the skills required for availing employment opportunities in the IT/ITES sector. There are eight components with specific scope of activities under this pillar:

1. IT Trainings to people in smaller towns and villages
2. The target of this component is to train one crore students from smaller towns & villages for IT sector jobs over 5 years.
3. IT/ITES in Northeastern States
4. This component focuses on setting up BPOs in every north-eastern state to facilitate ICT enabled growth in these states.
5. Training Service Delivery Agents
6. The focus is on training three lakh service delivery agents as part of skill development to run viable businesses delivering IT services.
7. Training Rural Workforce on Telecom and Telecom related services
8. This component focuses on training of five lakh rural workforce the Telecom Service Providers (TSPs) to cater to their own needs. Department of Telecommunications (DoT) is the nodal department for this scheme.

The digital platform can enable more creative and service-oriented business models that create employment opportunities. The Digital India project itself will create employment opportunities for 17 million people directly or indirectly which will help in fighting against unemployment problems in India. Government has planned to give IT training to 100 million students in smaller towns and villages as employment opportunity in IT sector is very high in India, according to a recent report by Deloitte. The government is planning to open BPOs in small towns and rural areas. Once the BPOs start opening in these small towns and rural areas, there will be a need for computer training, for which computer centers will come up, that too will create jobs.



Some segments are listed below in which IT sector has a great potential for growth.

- **Digital transformation in healthcare sector:**

Healthcare is undergoing its own digital transformation globally, and in a country like India, telemedicine and remote health will likely play a huge role in driving universal accessibility to quality healthcare. From inadequate government spending to sub-standard health infrastructure, absence of a robust regulatory environment to a discrepancy of care quality between the rural and urban populace, India's myriad of healthcare challenges have been widely discussed and debated. Despite these difficulties, many industry observers appear optimistic and proffer that technology deployment might just be the remedy for the country's healthcare woes. In a 2016 report by Deloitte Touche Tohmatsu, the consulting services firm puts digital adoption for the Indian healthcare segment as a significant contributor to the current \$100 billion market. Additionally, Deloitte forecast that this market will reach \$280 billion in 2020. Current developments also indicate that India's healthcare providers are planning to increase technology investments over the coming years in the hopes of boosting quality of patient care and improving efficiency gains. For introducing digital healthcare services, IT sector has a major role to play.

- ✓ **Access to Products/ Information/ Knowledge:** The internet is an ocean of knowledge, and once a consumer is plugged in to this ocean of knowledge, he/she gets the power to make more informed choices. For example, a patient today is able to learn about their condition, treatment options, best practices and understand their condition and how best to manage it better (regardless of his location or his financial condition) .
- ✓ **Access to health services:** Through ePharmacy, eDiagnostics, eInsurance etc, consumers in different parts of the country can access medication at their doorstep, through a well tracked system which will strengthen authenticity in the supply chain, ensure better access, provide convenience to the patient and also make sure that the deep rooted issues of middlemen taking commission to procure medicines (often

fake and without a bill) is addressed. Across the country, an online model to procure health services ensures everything is tracked, recorded and hence organized and operated in a professional manner.

- ✓ **Access to experts/ doctors:** The internet can create access to qualified specialists and doctors whom a consumer would otherwise not be able to physically access. Through telemedicine, a village dweller in the heart of India can access a top specialist anywhere in the large cities, or perhaps even globally through the digital connect. This will change the entire nexus of middlemen who thrive on taking poor villagers to random low quality hospitals for a fat commission, and then getting needless procedures done which ruin their livelihoods.
- ✓ **Transparency:** Online models for healthcare, be it access to doctors, pharmacy or diagnostics ensure there is all the information available at the patient's fingertips. Hence a consumer can compare prices, learn about more cost effective options and make sure they are not taken for a ride.

- **Opportunities for IT sector in North eastern regions**

The Indian BPO industry has witnessed significant growth over the past years and India has gradually emerged as one of the preferred BPO destinations globally. Several factors including operational cost effectiveness, availability of skilled manpower and ever-increasing demand for employment opportunities have increasingly contributed to the growth of BPO industry in the country. However, the BPO industry has largely been concentrated in and around large (Tier-I) cities where skilled manpower drawn from various parts of the country including NE Region seek employment. North East BPO Promotion Scheme (NEBPS) has been proposed. The main objectives of NEBPS are as under:

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- ✓ Employment creation for educated and unemployed youths in NER through the IT/ITES Industry particularly by promoting BPOs/Call Centres.
 - ✓ To promote investment in IT Sector in NER in order to expand the base of IT Industry and facilitate balanced regional development.

In large (Tier-I) cities, the recurring manpower cost to the company is considered to be higher particularly keeping in view the relatively higher cost of residential accommodation and larger travelling distance for employees. Thus, it would be prudent for a BPO Company to migrate to smaller (Tier-II/III) cities including those in North Eastern Region, as it would result in significantly reduced manpower related expenses and thus making its operations far more profitable. It is understood that key concerns for setting up of BPO operations in the N.E. Region are related to various issues including reliable internet connectivity and power supply. Currently main hurdles in this scheme are funding required and administrative procedures to start a new centre. It is envisaged to create a total seating capacity of 4000 till the end of the current five year plan, which is expected to generate direct employment to about 12000 persons.

- **Increase in Cyber security needs:**

Cyber security is another key area of focus. As commerce and banking go online and mobile, the threat of data leaks and hacks will only increase. It is imperative that organizations of all sizes invest significantly in securing their products and services. In such cases IT sector will need to develop more up-to-date and powerful software

to deal with such security issues. With the recent advancements, Artificial Intelligence will assist in ways of shaoing cyber secutiry strategies (Kumar et al, 2023).

- **Reducing the digital divide in nation:**

Reducing the digital divide in Indian economy is one of the main objectives of Digital India programme. *The Digital Divide* examines how various demographic and socio-economic factors including income, education, age and gender, as well as infrastructure, products and services affect how the internet is used and accessed. The digital divide can exist between those living in rural areas and those living in urban areas, between the educated and uneducated, between economic classes, and on a global scale between more and less industrially developed nations (Lythreatis et al, 2022).

IT sector is an indispensable factor which assists in reducing the digital divide. More number of mobile phones and other handheld devices are being made available to people at affordable costs. National Optical Fibre Network (NOFN), a project under Digital India aimed to ensure broadband connectivity to over two lakh (200,000) gram panchayats of India by 2016. Also the government allowed Mobile number portability (MNP) which enables mobile telephone users to retain their mobile telephone numbers when changing from one mobile network operator to another..

- **Role of IT sector in e-governance initiatives:**

E-Governance has witnessed a prolific advancement over the years as India has strategically adopted e-governance as a part of its policy. In recent times each state has its own e-governance plan to deliver services as planned. National policy also aims to provide formalized services across the nation while recognizing the importance of state specific services. This approach includes various mission mode projects under national e-governance plan (NeGP). Manifestation of such approach has resulted in 100,000 common service centers (CSC) in rural areas. In fact, the motto behind E-Governance is to provide SMART (Simple, Moral, Accountable, Responsible and Transparent) government (Prabhu, 2004). For implementing any e-governance initiative, there is a need to have a sound infrastructure which can be provided only through well quipped IT companies (Refat et al, 2023).

7. Conclusion

Opportunities for various segments have been created with the implementation of Digital India programme. But majorly, Information Technology industry is the one which has been affected the most. All the aims and objectives of Digital India programme have opened gates from all segments of IT industry be it manufacturing or IT enabled services. IT sector plays a major role in reducing digital divide in India, in transforming healthcare services, in implementing e-governance initiatives and many more. In a nutshell it can be stated that IT industry has a lot of untapped potential which can be harnessed with the introduction of Digital India.

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