Digital India new way of innovating India digitally

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Abstract
Digitization is defined as the social transformation triggered by the massive adoption of digital technologies to generate, process, share and transact information. Unlike other technological innovations, digitization builds on the evolution of network access technologies, semiconductor technologies, software engineering and the spillover effects from their use. 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. The Digital India programme rests on nine pillars: 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. 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 fibre 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. Digital India is the most comprehensive programme under implementation, designed to harness the immense potential of Digital to propel India forward. This paper explores Innovativeness of Digital India.

Keywords: Digital India, Digitally Empowered Society, Digital Infrastructure, Broadband Highways, E-Governance, E-Kranti, Electronic Development Fund.

1. Introduction
Technology transforms people’s lives. It empowers and connects. From mitigating poverty to simplifying processes, ending corruption to providing better services, vitality of technology is everywhere. It is an important instrument of human progress.

Narendra Modi (Prime Minister, India)

Digital India is an initiative of Government of India to integrate the government departments and the people of India. It aims at ensuring the government services are made available to citizens electronically by reducing paperwork. The initiative also includes plan to connect rural areas with high-speed internet networks. Digital India has three core components. These include:
- The creation of digital infrastructure
- Delivering services digitally
- Digital literacy

The project is slated for completion by 2019. A two-way platform will be created where both the service providers and the consumers stand to benefit. The scheme will be monitored and controlled by the Digital India Advisory group which will be chaired by the Ministry of Communications and IT. It will be an inter-ministerial initiative where all ministries and departments shall offer their own services to the public Healthcare, Education, Judicial services etc. The Public-private-partnership model shall be adopted selectively. In addition, there are plans to restructure the National Informatics Centre. This project is one among the top priority projects of the Modi Administration.
The initiative is commendable and deserves full support of all stakeholders. However, the initiative also lacks many crucial components including lack of legal framework, absence of privacy and data protection laws, civil liberties abuse possibilities, lack of parliamentary oversight for e-surveillance in India, lack of intelligence related reforms in India, insecure Indian cyberspace, etc. These issues have to be managed first before introducing Digital India initiative in India. Digital India project is worth exploring and implementation despite its shortcomings that can be rectified before its implementation.

From smartphones to lightning-fast laptops to GPS devices, it’s hard to imagine life without technology. In the twenty-first century, one of the most important technologies is the power of the digitization. The system, which allows individuals to communicate globally. Another part of digitization is the advancement of smartphones that gives the freedom of single touch to access the online services all over the globe. With Digital India project, the government is ready for the big programme by connecting every service with the e-power. This facility will aim to lessen the usage of physical documents and enable sharing of e-documents across organizations. Number of mobile apps and portals will be developed by the government which gives the freedom to access the data while on the move. The e-power platform will facilitate more creative and service-oriented business models that create employment opportunities. High speed network will aid adequate infrastructure for online education platforms through smart and virtual classrooms. The geNext services like cloud helps in lowering the carbon footprint by reducing fuel consumption, waste management, greener workplaces and thus leading to a green computing.

Major Sector under Digital India Programme
Communication Infrastructure and Services
Bharat Net
BSNL Next Generation Network BSNL Wi-Fi Services

Products
Digital Locker
National Scholarships Portal e-Hospital/ORS
e-Sign
Digitize India Platform (DIP)

Portals / Apps
Digital India Portal, Mobile App & Book MyGov Mobile App
Swachh Bharat Mission App

Institutions and Policies
National Centre for Flexible Electronics
Centre of Excellence for Internet of Things (IoT)

e-Governance Policy Initiatives Under Digital India

Electronics Development Fund (EDP) Policy
Indian Railway
E Ticket SMS Service E Catering
Online Reservation System State Transport Service Cab Service
BUS Ticket Mobile Recharge and Many more---------------------

Challenges before Digital India
The Government of India entity Bharat Broadband Network Limited which executes the National Optical Fibre Network project will be the custodian of Digital India (DI) project. BBNL had ordered United Telecoms Limited to connect 250,000 villages through GPON to ensure FTTH based broadband. This will provide the first basic setup to achieve towards DI and is expected to be completed by 2017.

The Digital India initiative is a promising initiative of the Indian Government. Many companies have shown their interest in this project. It is also believed that E-commerce would facilitate the Digital India project. However, it is not free from challenges and legal hurdles. Some believe that Digital India cannot be successful till mandatory bcb e-governance services in India are introduced. Having incomplete implementation of the National e-Governance Plan of India will only affect the success of the Digital India project. India has poor regulations in the field of privacy protection, data protection, cyber law, telegraph, e-governance, e-commerce, etc. Further, many legal experts believe that e-governance and DI without cyber security is useless. The cyber security trends in India have exposed the vulnerability of Indian cyberspace. Even the National Cyber Security Policy 2013 has not been implemented till now. In these circumstances, Critical infrastructure protection would be a really tough task to manage for the Indian Government. The project also lacks the concept of proper E-waste management.

2. Digital India: Towards Digitalizing Governance
An influential umbrella project of the government and blessings for the citizens to bring India to a global platform with participation from people and businesses. This initiative will ensure that all government services and information are available anywhere, anytime, on any device that are user friendly and secured. This transformation will make into reality when every citizen of India will participate in this transformative impact. Digital India initiative could help in achieving the objectives of:

- Education for all.
- Broadband for all.
- Information for all.
- Leadership structure.
- Globally industry participation and many more [2].

a) Digital Infrastructure as a utility to every citizen: This initiative brings together to deliver high speed communication technologies and digital services that will reach to the remotest villages, round the clock. Public services like land records, certificates and many more will be made available online or public cloud.

b) Governance and Services on Demand: This vision will provide single window access to every individual. Every government services or information is available online and on mobile platforms with a single touch.

c) Digital Empowerment of Citizens: Under this vision, every citizen will empower through digital literacy and universal access to digital resources. All documents and certificates to be available on cloud and in Indian languages [3].

4. Digitization Megatrend: A truly interconnected India...
In the coming years, an entire generation will have grown up in a primarily digital world. Technologies like PCs, the Internet, smart phones, texting, social networking web-sites will fully contribute to this megatrend. The process of digitization can easily be achieved when people can access government services through the magic of the Internet. This is the aim of digitizing India to make an India a powerful
domain. There are some powerful forces that help in the digitization process.

a) **Consumer Pull:** 21st century users are fully engaged and adapted in the digital environment. All are virtually connected in entertainment, news, reaching out to their friends through social media such as Facebook and Twitter. This new trend is spreading speedily as every individual wants to connect with the global information flow.

b) **Technology Push:** Information communications technology is one of the fastest growing technologies that give huge potential for every country backbone. With their prodigious and increasing presence in our lives, it gives freedom to stay connected and access online information with digital cloud based services.

c) **Economic Benefits:** The Digital India initiative has huge potential to empower the country and aid economic growth by connecting latest technology trends. Industry leaders from all over the world are willing to invest billions of dollars in this project. New job opportunities will take place and it will probably take India to greater heights.

5. **Pillars of Digital India: The Road to Smart Governance**

a) **Broadband Highways:** The first step is to provide high speed broadband highways through fiber optics that connect all the remote areas, government departments, universities, R&D etc. Web based portals and Mobile apps will be developed to access online information while on the move.

b) **Universal Mobile Access:** In the coming years, network technologies like 3G, 4G and upcoming 5G will storm the speed. Government is specially preparing to connect unconnected areas and speedy use of these technologies. General public will access the online government services with the help of handheld devices. Nation is ready to be well-connected, efficient, and more productive in every aspect.

c) **Public Internet Access:** Virtuous technologies that support cost containment, collaboration, security, services-on-the-go, social-connect, and in-built intelligence that deliver remote access to any information or service available across the domain. This change will open new doors of e-services to every citizen.

d) **e-Governance:** This governance will transform every manual work into fully automation system. It will revolutionize the system in the following ways:

- Online access to applications i.e. availability of all databases and information in electronic format.
- Effortlessly tracking of assignments.
- Interface between departments for superior production of work.
- Quickly respond, analyze and resolve persistent problems and many more.

e) **e-Kranti:** This kranti will fully focus on digital knowledge program where education, health, farming, rights, financial and many more services will be delivered on a very high bandwidth. Physical boundaries no longer are a limitation when almost everyone and everything is a digital handshake away.

f) **Information for All:** Websites and mobile apps will convey data and realistic participation and through social media. Everything is connected through virtual networks. Swift work flow and no delays due to wait in queues.

g) **Electronics Manufacturing:** This milestone will create a huge base for electronics manufacturing in India with the aid of digital technologies and skills. The empowerment of manufacturing through the Internet of Things will enable intelligent workshops that demonstrate data driven operational excellence and decentralized production control systems within and beyond the physical factory walls.

h) **IT for Jobs:** The government is preparing to provide training and teaching skills to the youth for employment opportunities in the IT sector. BPO industries will be established for the fastest growing segment of the Information Technology Enabled Services industry. It offers e-services 24/7 in every field and gives more job potentials.

i) **Early Harvest:** This programme will generate short timeline projects where every manual service is altered by e-service. E-services like:

- Implementation of Wi-Fi in all the universities.
- Public Wi-Fi Sports to access online gen.
- Educational books to e-books.
- People will use the e-services for entertainment, weather information, latest updates etc.
- Replacement of manual attendance to Biometric procedure [4].

6. **Make in India: Boost for the Economy**

The Digital India vision aims to transform India into a digital economy with participation from citizens, businesses and promises to make India an important investment destination. Sectors like financial, edification, healthcare, automobiles and many more all over the world is ready to contribute in this mega project. New potentials will arise to change this development model. Villages will turn into smart economic centers that connect farmers directly to e-markets to know the price and make them less vulnerable to the whims of weather. During the Prime Minister recent visit to United States and meeting with Sundar Pichai, CEO Google, he has shown interest in providing free public Wi-Fi in hundreds of Indian railroad stations, which are major transit and social hubs for their communities. This rebellion will open affordability of products and services in better ways. We Indians and others, have worked together to shape the knowledge economy. Our contribution to sustainable development of one-sixth of humanity will be a foremost force of noble for our world and our planet [5].

**Institutional Mechanism at National Level**

6.1. **Current Status**

The Apex Committee on the Digital India programme headed by the Cabinet Secretary and the Digital India Advisory
Group chaired by the Minister of Communications and Information Technology has been constituted. The first meeting of the Apex Committee on the Digital India programme was held on 26.11.2014. The second meeting of the Apex Committee on the Digital India programme was held on 09.02.2015. The actions on decisions made by the Apex Committee are being worked out.

7. Conclusion
In this digital age, every civilian has a bright prospect to transform the lives in many ways that were hard to envision just a couple of years ago. With the imminent of “Digital India” campaign, India will have a stout and powerful digital infrastructure. All educational institutions and government services will soon be able to provide I-ways round the clock. Tech giants from all over the world are willing to actively participate in this dream campaign. More employment prospects will open for the youth that will boost the nation’s economy. Let us all look forward for the successful implementation for this project for the brighter and prosperous India and hope India will again called a Golden Sparrow.

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