



DIGITAL INDIA: Transforming India into a Digitally Empowered Nation

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ABSTRACT:

One of the greatest marvels of our times, undoubtedly, is the digital revolution. It has pushed through human limitations to unleash an 'e'-era of cutting-edge innovations. With an aim to digitally connect all Indians, the Government of India has launched a program to digitize India. Coined as "Digital India", the program is focused on building digital infrastructure, governance and services on demand, and digital empowerment of citizens. It is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. The programme includes projects that aim to ensure that government services are available to citizens electronically and people get benefit of the latest information and communication technology. The initiative isn't the first of its kind, but given the institutional mandate & transformational promise, it is a remarkable one. It not only has the potential to leapfrog a nation into the digital age but also level the field for an inclusive society. The present paper is conducted with an objective to identify the various Pillars and key projects of Digital India campaign. The paper contains the schemes for digital India from Budget Speech of 2017-18. Through this paper an attempt has also been made to study the impact of digital India. At last the paper includes Challenges and Changes needed in Implementing Digital India Programme.

KEY WORDS: Digital Divide, Digital India, Digital Literacy, E-Governance, Pillars

INTRODUCTION:

"All one needs is a computer, a network connection, and a bright spark of initiative and creativity to join the economy." - Don Tapscott. This is increasingly becoming true nowadays. The Digital India initiative aims to transform India into a digitally empowered society and knowledge economy. It aims to connect entire India digitally by 2019. India is moving towards a great vision: where a farmer in a village can get the information about the right pesticide right there in his mobile inbox; where a school won't be the only destination for education but e-Education would facilitate 24x7 learning space; where a patient in a core village can get the information about the medicine in his mobile if the doctor is not available nearby; and where a person at any corner of India can log on a complain in a centralized portal and get back his right.

In recent decades, India's growth story has been difficult to ignore. And the Indian technology revolution, a key contributor to this growth, has been remarkable. The information technology industry contributes to nearly 9.5% of India's GDP and is the largest private sector employer, generating some 3.5 million direct jobs, and over 10 million indirect jobs.

However, the dividends of India's digital growth have been unevenly realized, providing lots of opportunities for improvement, including:

- Mobile penetration in India is still relatively low. India's rural populace makes up approximately 68% of the

population but account for just over 40% of its mobile users.

- India ranked 156th in the world in terms of broadband penetration (at over 19%) as per the UN Broadband Commission report released in 2015.
- Roughly nine out of 10 workers are informally employed and lack social protection. Most workers lack adequate education or skills and the educated youth faces high unemployment rates.

To bridge this digital divide and to provide a digital platform for inclusive growth, the 'Digital India' Programme was presented to the Union Cabinet on 20th August, 2014 and was formally launched by Hon'ble Prime Minister on 1st July, 2015.

Envisaged by the department of Electronics and Information Technology (DeitY), the vision of Digital India is focuses on - Digital Infrastructure as a utility to every citizen, Governance & services on demand and Digital Empowerment of citizens. It wants to bridge the digital divide and bring India at par with the developed nations. It will combine many existing schemes related to e-governance; other digital initiatives etc.; restructure them and implement them in a synchronized manner under this umbrella initiative named as 'Digital India'.

OBJECTIVES AND METHODOLOGY:

The objectives and the research methodology are as follows:

OBJECTIVES OF STUDY: The study has been geared to achieve the following objectives;

1. To study the Pillars and key projects of Digital India campaign
2. To study the impacts of Digital India
3. To construct Challenges and Changes needed in Implementing Digital India Programme

RESEARCH METHODOLOGY:

Type of Research: Exploratory and Analytical Research

Data Collection Method: This study has been carried out with the help of secondary data only, all the data has been collected from the various sources such as websites & reports and compiled as said by the need of the study.

LITERATURE REVIEW: Jain (2015) concluded that some projects are under various stages of implementation which may require some transformational process to achieve desired objectives.

Sharma (2015) described that in this project age every civilian has a bright prospect to transform the lives in many ways that were hard to envision just a couple of year's ago. It was concluded that more prospects will open for the youth that will boost the nation's economy.

DIGITAL INDIA: The Prime Minister Shri Narendra Modi has envisioned the 'Digital India' programme to transform India into a digitally empowered society and a knowledge economy. The Programme symbolizes the Government of India's vision for connecting and empowering 132 crore citizens; creating unprecedented levels of transparency and accountability in governance; and leveraging technology for quality education, health care, farming, financial inclusion and empowering citizens. Under the 'Digital India' Programme,

technology will play a central role to achieve easy, effective and economical governance.

Digital India is a Programme to prepare India for a knowledge future. The focus is on being

transformative – to realize $IT + IT = IT$. The focus is on making technology central to enabling change. It is an Umbrella Programme – covering many departments.

THE FOCUS IS TO BRING TRANSFORMATION TO REALIZE



It weaves together a large number of ideas and thoughts into a single, comprehensive vision so that each of them is seen as part of a larger goal. The weaving together makes the Mission transformative in totality. Thus Digital India is a campaign launched by the Government of India to ensure that Government services are made available to citizens electronically by improved Online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology.

It was launched on 1 July 2015 by Prime Minister Narendra Modi. The initiative includes plans to connect rural areas with high-speed internet networks. According to Department of Electronics and Information Technology, Government of India, Digital India is centered on three key areas. These include:

- The creation of digital infrastructure
- Delivery of services digitally
- Digital literacy

DIGITAL LITERACY: Digital literacy is the set of competencies required for full participation in a knowledge society. It includes knowledge, skills, and behaviors involving the effective use of digital devices such as smart

phones, tablet, laptops and desktop PCs for purposes of communication, expression, collaboration and advocacy. While digital literacy initially focused on digital skills and stand-alone computers, the focus has shifted from stand-alone to network devices including the Internet and social media. The term digital literacy was simplified by Paul Gilster in his 1997 book Digital Literacy. Gilster described digital literacy as the usage and comprehension of information in the digital age. He also emphasized the importance of digital technologies as an "essential life skill."

Digital literacy is distinct from computer literacy and digital skills. Computer literacy preceded digital literacy. Digital literacy is the marrying of the two terms digital and literacy. However, it is much more than a combination of the two terms. Digital information is a symbolic representation of data, and literacy refers to the ability to read for knowledge, write coherently, and think critically about the written word. A digitally literate individual will possess a range of digital skills, knowledge of the basic principles of computing devices, and skills in using computer networks.

DIGITAL DIVIDE: The digital divide was first widely discussed by journalists, academics, and governmental agencies in the 1990s. The digital divide was used to distinguish between the digital accessibility of wealthy and lower-income groups. Jessamyn C. West defines the digital divide as the gap between individuals who can and cannot easily access technology, or the haves and have-nots. The digital divide highlights the privileges individuals have in accessing technology.

Expanding on the definition of the digital divide, Howard Besser argues that the digital divide means more than technology access between the haves and have-nots. The digital

divide encompasses aspects such as information literacy, appropriateness of content, and access to content.

WHY DIGITAL INDIA CAMPAIGN?

- To bring into reality a digitally empowered society
- To bring all the departments in the government in one place digitally
- To integrate the citizens of India digitally
- To enact the government services digitally so that they are available to people instantly
- To speed up the development of our nation

II. VISION:

The vision is centered on three key vision areas:



I. Digital Infrastructure as a Core Utility to Every Citizen: - The Digital India initiative has a vision to provide high speed internet services to its citizens in all gram panchayats. Bank accounts will be given priority at individual level. People will be provided with safe and secure cyber space in the country.

II. Governance and Services on Demand: - Under this vision, every government services or information is available in real time from online & mobile platforms. It makes financial transactions electronics & cashless and provides single window access to every individual.

Transactions will be made easy through electronic medium.

III. Digital Empowerment of Citizens: - This is one of the most important factors of the Digital India initiative to provide universal digital literacy and make digital sources easily accessible. The services are also provided in Indian languages for active participation.

III. PILLARS OF DIGITAL INDIA:

The Government of India hopes to achieve growth on multiple fronts with the Digital India Programme. Specifically, the government aims to target nine 'Pillars of the Digital India' that they identify as being:

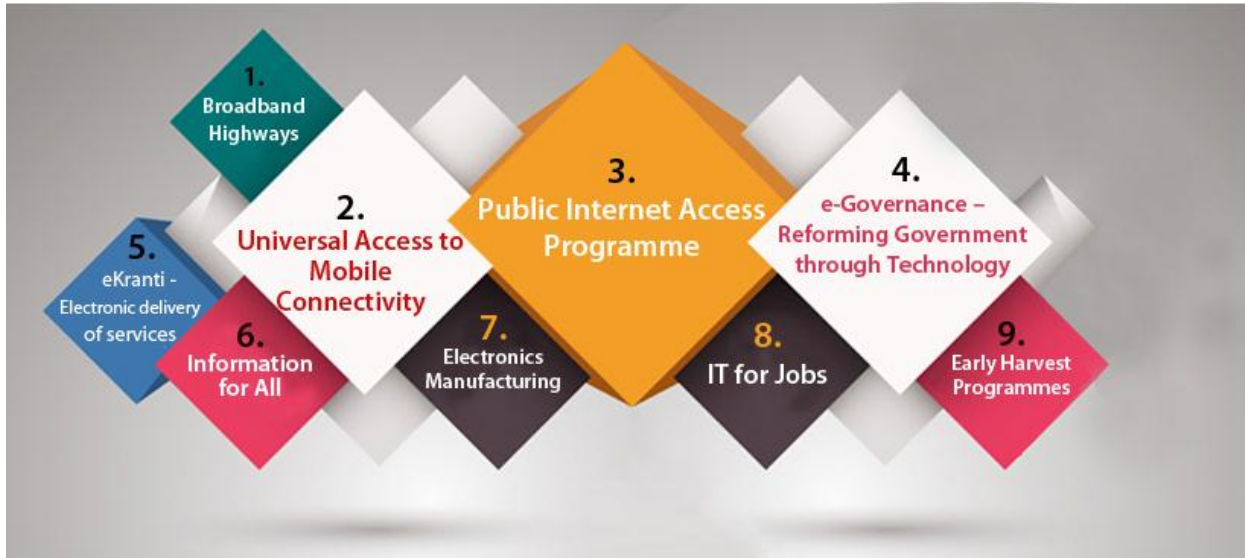


Figure 1: Pillars of Digital India

A. Broadband highways:

- Broadband for all –rural and urban
- National Information Infrastructure (NII)
- Mandate communication infrastructure in new urban development and buildings

B. Universal access to mobile connectivity:

- Increasing networking services
- To connect unconnected areas by using technologies.
- To provide universal phone connection.

C. Public internet access programme:

- It is a national rural internet mission.
- CSCs- Made viable, multifunctional end-points for service delivery.
- To provide internet services to 2.5 lakh villages which comprises of one in every panchayat by March 2017 and 1.5 lakh post offices in the next two years. These post offices will become Multi-Service centres for the people.

D. e-Governance:

- To reform government through technology

- Online application and tracking interface between departments
- To transform every manual work into fully automation system inside government
- Quickly respond, analyze and resolve persistent problems and many more
- All databases and information to be electronic, not manual
- To improve processes and delivery of services through e-Governance with UIDAI, payment gateway, EDI and mobile platforms. School certificates, voter ID cards will be provided online. This aims for a faster examination of data.

E. e-Kranti:

- This service aims to deliver electronic services to people which deals with health, education, farmers, justice, security and financial inclusion.

F. Information for all:

- Citizens have open, easy access to information.



- 2-way communication between citizen and government
- Online messaging to citizen on special occasions
- People can send in their suggestions and comment on various issues raised by the government, like net neutrality.

G. Electronic manufacturing:

- Target net zero imports is a striking demonstration of intent.
- There are many ongoing programs which will be fine-tuned.
- Put up smart energy meters, micro ATMs, mobile, consumer and medical electronics.

H. IT for jobs:

- To provide training and teaching skills to the youth for employment opportunities in the IT sector. Around 1 crore students from small towns and villages for IT sector by 2020.
- Setting up of BPO sectors in North eastern states is also part of the agenda.

I. Early harvest programme:

- Government plans to set up Wi-Fi facilities in all universities across the country.
- Email will be made the primary mode of communication.
- Aadhaar Enabled Biometric Attendance System will be deployed in all central government offices where recording of attendance will be made online.
- Educational books to e-books.

KEY PROJECTS OF DIGITAL INDIA

CAMPAIGN:

Some of the facilities which will be provided through Digital India initiative are:

A. DigiLocker/ Digital Locker: Digital Locker facility will help citizens to digitally store their important documents like PAN card, passport,

mark sheets and degree certificates. Digital Locker will provide secure access to Government issued documents. It uses authenticity services provided by Aadhaar. It is aimed at eliminating the use of physical documents and enables the sharing of verified electronic documents across government agencies. Three key stakeholders of DigiLocker are Citizen, Issuer and requester.

B. Attendance.gov.in: Attendance.gov.in is a website, launched by PM Narendra Modi on 1 July 2015 to keep a record of the attendance of Government employees on a real-time basis. This initiative started with implementation of a common Biometric Attendance System (BAS) in the central government offices located in Delhi.

C. MyGov.in: MyGov.in is a platform to share inputs and ideas on matters of policy and governance. It is a platform for citizen engagement in governance, through a "Discuss", "Do" and "Disseminate" approach.

D. SBM Mobile App: Swachh Bharat Mission (SBM) Mobile app is being used by people and Government organizations for achieving the goals of Swachh Bharat Mission.

E. eSign framework: eSign framework allows citizens to digitally sign a document online using Aadhaar authentication.

F. eHospital: The eHospital application provides important services such as online registration, payment of fees and appointment, online diagnostic reports, enquiring availability of blood online etc.

G. National Scholarship Portal: National Scholarship Portal is a one step solution for end to end scholarship process right from submission of student application, verification, sanction and disbursement to end beneficiary for all

the scholarships provided by the Government of India

H. eBooks Platform (eBasta): It is an electronic platform of e-Books for schools. Currently, 501 e-Contents and 15 eBasta (collection of books) are available on this platform.

SCHEMES FOR DIGITAL INDIA FROM BUDGET SPEECH 2017-18: Here are major highlights for Digital India from the Union Budget for 2017-18.

Rural High-Speed Broadband Connectivity: High-speed broadband connectivity on optic fibers will be available in more than 1, 50,000 gram panchayats.

No more service charges on e-tickets from IRCTC: The service charges that existed on e-tickets booked from IRCTC will be withdrawn. However, this is available only when booked through the IRTC website and not third parties.

New Centralised Online Booking System for Soldiers: The New Centralised Defence Travel System is introduced to help soldiers and defence personals to make their travel needs easy. Now they can book tickets online through the new booking system, saving them from the need to stand in long queues.

Aadhaar Based Smart Card for Senior Citizens: Senior Citizens will soon get an Aadhaar based smart card. The smart cards will be designed to monitor their health.

Aadhaar Pay to be launched: One of the proposals in the budget speech is to restrict cash transactions above Rs 3 lakh. That means more push towards digital payments. The Bhim app has been adopted by 1.25 crore people, said Arun Jaitley. A new scheme called Aadhaar Pay to be launched soon for those without e-wallets, phones, and debits cards. Additionally, there will be a merchant version of Aadhaar-enabled payment system for those without debit cards.

INDIAN DIGITIZATION STRUCTURE:

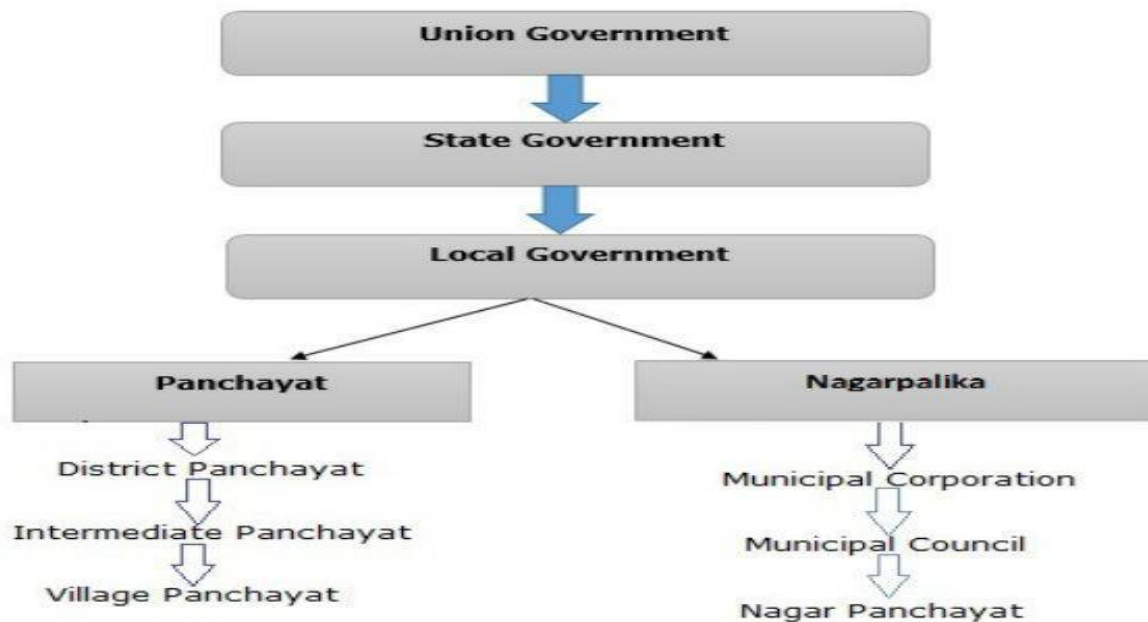


Figure 2: Indian Digitization Structure

RESPONSE TO THE DIGITAL INDIA INITIATIVE FROM GLOBAL INVESTORS:

Global investors like Sundar Pichai, Satya Nadella, and Elon Musk have supported Modi's Digital India initiative. Microsoft CEO, Satya Nadella intends to become India's partner in the Digital India program. His company will set up low cost broadband technology services to 5 lakh villages across the country.

Sundar Pichai, CEO, Google said that India will play a big part in driving technology forward in future which will improve people's lives in India. Prime Minister Narendra Modi showed keen interest and wanted to use Tesla Motors' power wall technology which will store electricity in a battery for a long term.

ESTIMATED COST AND IMPACT OF DIGITAL INDIA:

OVERALL COSTS OF DIGITAL INDIA:

~ Rs 100,000 Cr in ongoing schemes (only DeitY, DOT & not incl. those in other line Ministries)

~ Rs 13,000 Cr for new schemes & activities

IMPACT OF DIGITAL INDIA BY 2019:

- Broadband in 2.5 lakh villages, universal phone connectivity
- Net Zero Imports by 2020
- 400,000 Public Internet Access Points
- Wi-Fi in 2.5 lakh schools, all universities; Public Wi-Fi hotspots for citizens
- Digital Inclusion: 1.7 Cr trained for IT, Telecom and Electronics Jobs
- Job creation: Direct 1.7 Cr. And Indirect at least 8.5 Cr.
- e-Governance & eServices: Across government

- India to be leader in IT use in services – health, education, banking
- Digitally empowered citizens – public cloud, internet access

The estimated impact of Digital India by 2019 would be cross cutting, ranging from broadband connectivity in all Panchayats, WI-Fi in schools and universities and Public Wi-Fi hotspots. The programme will generate huge number of IT, Telecom and Electronics jobs, both directly and indirectly. Success of this programme will make India Digitally empowered and the leader in usage of IT in delivery of services related to various domains such as, Digital Marketing, health, education, agriculture, banking, etc.

ADVANTAGES & DISADVANTAGES OF DIGITAL INDIA

A. ADVANTAGES

- Transparency.
- No corruption as IT official can track records easily.
- Convenient and easier.
- Improve the quality of service.
- Less documentation required.
- More employment in IT corporations.

B. DISADVANTAGES

- Hacking poses a threat to digital transactions. However, adopting safe cyber security solutions we can curb this problem too.

THE LONG ROAD TO DIGITAL INDIA: In 2013, when the Congress-led United Progressive Alliance (UPA) government was still in power, India was ranked 68 on the NRI index out of 144 countries. The following year, when the Narendra Modi-led National

Democratic Alliance (NDA) government took over in May 2014, the ranking slipped to 83 out of 148 countries.

In 2015, India's ranking fell to 89 out of 143 countries. And in 2016, it slipped further to 91 out of 138 countries. India's low ranking on the Networked Readiness Index (NRI) 2016, a key component of the World Economic Forum's (WEF) The Global Information Technology Report 2016 that was released on 6 July, reveals that the government's Digital India programme has to overcome steep challenges before it can claim success. Not only has India been ranked 91 among 138 countries in 2016, but WEF's figures also show that India has actually fallen 23 places in the NRI ranking in the last four years.

CHALLENGES AND CHANGES NEEDED: Challenges and changes needed in Implementing Digital India Programme are as follows:

- Program on this scale never conceived
- Each Pillar/program has own challenges
- **Human Resource Issues**
 - NIC - not equipped for a fraction of this task (obsolesce) - needs revamping & restructuring
 - DeitY – needs program managers – at least 4 more officers at senior levels
 - **Ministries – Need a Chief Information Officer / Chief Technology Officer (CIO/CTO)**
 - Could begin with CIOs 10 major Ministries
 - Can be anyone – from within or outside government
- **Financial Resource Issues**

- Mostly structured around ongoing programs : Better focus, need some restructuring
- Some others are process improvements or better utilisation of resources
- A few new programs may be needed – particularly in Electronics manufacturing and Skill Development
- **Coordination Issues**
 - Program covers many other departments
 - Need commitment and effort
 - Leadership and support critical for success

CONCLUSION: Digital India is a large umbrella program which will restructure and re-focus several existing schemes to bring in a transformative impact. The Digital India vision aims to transform our country into a digital economy with participation from citizens and businesses. This initiative will ensure that all government services and information are available anywhere, anytime, on any device that is easy-to-use, seamless, highly-available and secured. The Digital India program is just the beginning of a digital revolution, once implemented properly it will open various new opportunities for the citizens.

It is one of the highly ambitious programs of Indian government, and is directly monitored by Hon'ble Prime Minister of India. The program is a multi-ministry program, with the involvement of central cabinet ministers, state governments etc. Various grand companies like Microsoft, Google and Fujitsu will also agreed be partner and help the success of Digital India initiative.



For successful implementation of Digital India Programme involves lot of hindrances but in the present global context there is no second thought. Therefore it is highly expected to expedite the initiation of the digital India Programme.

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