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Digital India: A Digital Revolution for Next Generation

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Abstract

It is a well-known fact that digital India is the outcome of many innovations and technological advancements. These transform the lives of people in many ways and will empower the society in a better manner. The 'Digital India' programmes an initiative of honorable Prime Minister Mr. Narendra Modi, will emerge new progressions in every sector and generates innovative endeavours for GenNext. The motive behind the concept is to build participative, transparent and responsive system. The Digital India drive is a dream project of the Indian Government to remodel India into a knowledgeable economy and digitally empowered society, with good governance for citizens by bringing synchronization and co-ordination in public accountability, digitally connecting and delivering the government programs and services to mobilize the capability of information technology across government departments. Today, every nation wants to be fully digitalized and this program strives to provide equal benefit to the user and service provider. Hence, an attempt has been made in this paper to understand Digital India – as a campaign where technologies and connectivity will come together to make an impact on all aspects of governance and improve the quality of life of citizens.

Key-words: Digital India, Digital Technology, e-Governance and MyGov.

1. Introduction

The digital world that we live in today is that where every civilian has a bright prospect to transform the lives in many ways that were hard to envision just a couple of years ago. It is the outcome of several innovations and technology advances. Today, every nation wants to be fully digitalized that will empower society in a better manner. All educational institutions and government services will soon be able to provide I-ways round the clock. Digital India will provide all services electronically and promote digital literacy. Digital Technologies which includes the concept of cloud computing and mobile applications have emerged as the catalysts for express economic growth and citizen empowerment. Companies all over the world desire to invest in Digital India- the 21st century India, as a growth opportunity. Hence, an attempt has been made in this paper to understand Digital India – as a campaign where technologies and connectivity will come together to make an impact on all aspects of governance and improve the quality of life of citizens.

2. Objectives: The objectives are as follows-

1. To know how the technologies and connectivity will come together to make an impact on all aspects of governance and improve the quality of life of citizens.
2. To find out how the government services can work effectively with practical solutions and innovative ideas to accomplish the vision of a digital India-a reality.
3. To inform about creation of a countrywide digital Schemes as a utility for every citizen
4. To aware and ensure governance and services on demand and digital empowerment of citizens.
5. To prepare India for a knowledge future by making technology central to enabling change.

3. Data Collection

The secondary data has been collected. For this purpose, various magazines and journals have been used as it is a conceptual paper. Thus, the focus is to know more about the

concept, its application and the impact on economy via other parameters. Therefore, qualitative and quantitative data have been used. Govt. websites and other relevant internet sources were also used for analysis and interpretation

4. Digital India Programme: A Digital Revolution

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 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. Digital India is the most comprehensive programme under implementation, de-Signed to harness the immense potential of Digital to propel India forward.

5. Approach and Methodology for Digital India Programme are:

- i. Ministries / Departments / States would fully leverage the Common and Support ICT Infrastructure established by GoI. DeitY would also evolve/ lay down standards and policy guidelines, provide technical and handholding support, undertake capacity building, R&D, etc.
- ii. The existing/ ongoing e-Governance initiatives would be suitably revamped to align them with the principles of Digital India. Scope enhancement, Process Reengineering, use of integrated & interoperable systems and deployment of emerging technologies like cloud & mobile would be undertaken to enhance the delivery of Government services to citizens.
- iii. States would be given flexibility to identify for inclusion additional state-specific projects, which are relevant for their socio-economic needs.
- iv. E-Governance would be promoted through a centralised initiative to the extent necessary, to ensure citizen centric service orientation, interoperability of various e-Governance applications and optimal utilisation of ICT infrastructure/ resources, while adopting a decentralised implementation model.
- v. Successes would be identified and their replication promoted proactively with the required productization and customisation wherever needed.
- vi. Public Private Partnerships would be preferred wherever feasible to implement e-Governance projects with adequate management and strategic control.
- vii. Adoption of Unique ID would be promoted to facilitate identification, authentication and delivery of benefits.
- viii. Restructuring of NIC would be undertaken to strengthen the IT support to all government departments at Centre and State levels.
- ix. The positions of Chief Information Officers (CIO)

would be created in at least 10 key Ministries so that various e-Governance projects could be designed, developed and implemented faster. CIO positions will be at Additional Secretary/Joint Secretary level with over-riding powers on IT in the respective Ministry.

6. Major Projects under The Initiatives: Digital India

comprises of various initiatives under the single programme each targeted to prepare India for becoming a knowledge economy and for bringing good governance to citizens through synchronized and co-ordinated engagement of the entire Government. Nine projects have been undertaken. These are as follows:

- 6.1 **Highways to have broadband services:** Government aims to lay national optical fibre network in all 2.5 lakh gram panchayats. Broadband for the rural will be laid by December 2016 and broadband for all urban will mandate communication infrastructure in new urban development and buildings. By March 2017, the government aims to provide nationwide information infrastructure.
- 6.2 **Easy access to mobile connectivity:** The government is taking steps to ensure that by 2018 all villages are covered through mobile connectivity. The aim is to increase network penetration and cover gaps in all 44,000 villages.
- 6.3 **IT Training for Jobs:** This initiative seeks to train 10 million people in towns and villages for IT sector jobs in five years. It also aims to train 0.3 million agents to run viable businesses delivering IT services. Additionally, the project involves training of 0.5 million rural IT workforce in five years and setting up of BPOs in each North-eastern state.
- 6.4 **Manufacturing of electronics:** The government is focusing on zero imports of electronics. In order to achieve this, the government aims to put up smart energy meters, micro ATMs, mobile, consumer and medical electronics.
- 6.5 **Provide public access to internet:** The government aims 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 multiservice centres for the people.
- 6.6 **E-Governance:** The government aims 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
- 6.7 **E-Kranti:** This service aims to deliver electronic services to people which deals with health, education, farmers, justice, security and financial inclusion.
- 6.8 **Global Information:** Hosting data online and engaging social media platforms for governance is the aim of the government. Information is also easily available for the citizens.

6.9 **MyGov.in** is a website launched by the government for a 2-way communication between citizens and the government. People can send in their suggestions and comment on various issues raised by the government, like net neutrality.

6.10 **Early harvest programs:** Government plans to set up Wi-Fi facilities in all universities across the country. Email will be made the primary mode of communication. Aadhar Enabled Biometric Attendance System will be deployed in all central government offices where recording of attendance will be made online.

7. Empowerment Schemes

7.1 Visvesvaraya Phd Scheme for Electronics and IT

One of the key goals of the Visvesvaraya PhD Scheme is to encourage working professionals and non-PhD faculty members to pursue PhD in the ESDM & IT/ITES sectors as part-time candidates. It is envisioned that having part-time PhD students is likely to encourage the Industry-Academia interaction, help in the alignment of the R&D efforts between them and bring value to the country.

7.2 Targeted Public Distribution System (TPDS)

The Government of India launched the Targeted Public Distribution System (TPDS) with focus on the poor. Under the TPDS, states were required to formulate and implement foolproof arrangements for the identification of the poor for delivery of foodgrains and for its distribution in a transparent and accountable manner at the FPS level. The scheme, when introduced, was intended to benefit about 6 crore poor families for whom a quantity of about 72 lakh tonnes of food grains was earmarked annually.

7.3 Smart Cities

The Government of India launched the Smart Cities Mission in June 2015. Its objective is to promote sustainable and inclusive cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on sustainable and inclusive development and the idea is to look at compact areas, create a replicable model which will act like a lighthouse to other aspiring cities. The Smart Cities Mission is meant to set examples that can be replicated both within and outside the Smart City, catalysing the creation of similar Smart Cities in various regions and parts of the country.

7.4 Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

Pradhan Mantri Kaushal Vikas Yojana (PMKVY) is the flagship scheme of the Ministry of Skill Development & Entrepreneurship (MSDE). The objective of this Skill Certification Scheme is to enable a large number of Indian youth to take up industry-relevant skill training that will help them in securing a better livelihood. Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).

7.5 Pradhan Mantri Jan-dhan Yojana (PMJDY)

PMJDY is a National Mission on Financial Inclusion encompassing an integrated approach to bring about comprehensive financial inclusion of all the households in the country. The plan envisages universal access to banking facilities at least one basic banking account in every household, financial literacy, access to credit, insurance and pension facility. The initiative envisages channeling all Government benefits (from Centre / State / Local Body) to the beneficiaries' accounts and pushing the Direct Benefits Transfer (DBT) scheme of the Union Government.

7.6 Pradhan Mantri Gramin Digital Saksharta Abhiyaan

Pradhan Mantri Gramin Digital Saksharta Abhiyaan is the scheme to make six crore persons in rural areas, across States/UTs, digitally literate, reaching to around 40% of rural households by covering one member from every eligible household by 31st March, 2019. The Scheme aims to bridge the digital divide, specifically targeting the rural population including the marginalised sections of society like Scheduled Castes (SC) / Scheduled Tribes (ST), Minorities, Below Poverty Line (BPL), women and differently-abled persons and minorities.

7.7 Paygov India

A National Payment Service platform has been envisaged for a common e-Governance infrastructure that will offer end-to-end transactional experience for a citizen which includes accessing various services through internet with payment gateway interface for online payments. Ministry of Electronics and Information Technology along with NSDL Database Management Ltd (NDML) created a common infrastructure that can be used by Center/States/Departments to offer various services through their National / State portals with a facility to make online payment using net banking, credit cards and debit cards.

7.8 Pahal (dbtl)

The PAHAL (DBTL) aims to reduce diversion and eliminate duplicate or bogus LPG connections. The scheme was earlier launched in 2013 and was modified in 2015. Under the PaHaL scheme, LPG cylinders are sold at market rates and entitled consumers get the subsidy directly into their bank accounts. This is done either through an Aadhaar linkage or a bank account linkage.

7.9 Open Forge

OpenForge is Government of India's platform for open collaborative development of e-governance applications. Through this platform, the government wants to promote the use of open source software and promote sharing and reuse of e-governance related source code.

7.10 Nrega-Soft:

NREGAsoft envisions implementing e-Governance across State, District and three tiers of Panchayati Raj Institutions. It empowers the common man using the information technology as a facilitator. NREGAsoft

provides information to citizen in compliance with the right to information Act (RTI Act). It makes available all the documents like Muster Rolls, registration application register, job card/employment register/muster roll issue register, muster roll receipt register which are hidden from public otherwise.

7.11 North East Bpo Promotion Scheme (NEBPS)

The North East BPO Promotion Scheme (NEBPS) has been approved under Digital India Programme, to incentivize BPO/ITES Operations in North East Region (NER) for creation of employment opportunities for the youths and growth of IT-ITES Industry.

7.12 National Mission on Education using ICT

The National Mission on Education through Information and Communication Technology (NMEICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time anywhere mode. It is a landmark initiative of the Ministry of Human Resource Development to address all the education and learning related needs of students, teachers and lifelong learners.

7.13 My Gov

MyGov platform is a unique path breaking initiative which was launched by the Hon'ble Prime Minister of India, Shri Narendra Modi. It is a unique first-of-its-kind participatory governance initiative involving the common citizen at large. The idea of MyGov brings the government closer to the common man by the use of online platform creating an interface for healthy exchange of ideas and views involving the common citizen and experts with the ultimate goal to contribute to the social and economic transformation of India.

7.14 Digidhan Abhiyaan

The initiative plans to enable citizens and merchants to undertake real time digital transactions through the DIGIDHAN Bazaar. Through organising DigiDhan Mela's across the country, it aims to handhold users in downloading, installing and using various digital payment systems for carrying out digital transactions.

7.15 BPO Scheme

The India BPO Promotion Scheme (IBPS) seeks to incentivize establishment of 48,300 seats in respect of BPO/ITES operations across the country. It is distributed among each State in proportion of State's population with an outlay of Rs. 493 Crore. This would help in capacity building in smaller cities in terms of infra & manpower and would become basis for next wave of IT/ITES led growth. This scheme has potential to create employment opportunities of around 1.5 lakh direct jobs considering three shift operations. It may also create good number of indirect jobs.

7.16 Aadhaar Enabled Payment System

AEPS is a bank led model which allows online interoperable financial inclusion transaction at PoS (MicroATM) through the Business correspondent of

any bank using the Aadhaar authentication. It is a payment service empowering a bank customer to use Aadhaar as his/her identity to access his/ her respective Aadhaar enabled bank account and perform basic banking transactions like balance enquiry, cash deposit, cash withdrawal, remittances through a Business Correspondent.

8. Communication and Infrastructure Services

8.1. BharatNet: BharatNet serves as the infrastructure backbone of Digital India, taking Internet and telecommunication services to every nook and corner of the country. It is speedily working towards the massive goal of connecting all the villages across India through broadband. BharatNet is the world's largest rural broadband connectivity project using optical fibre, connecting 2.5 lakh Gram Panchayats, with a minimum of 100 Mbps bandwidth for each. This network will be supported by a High Capacity Network Management System and Network Operation Centre. It will facilitate the rollout of e-Governance, e-Health, e-Education, e-Banking, Internet and various other services to rural India.

8.2. BSNL Next Generation Network: The Next Generation Network (NGN) is a packet-based network to provide telecommunication services to make use of multiple types of traffic such as voice, data and multimedia. It is a convergence of service provider networks that includes voice telephony, data networks (Internet) and wireless networks. BSNL has chalked out a massive plan to use the cutting edge technology of NGN for its NGN C-5 project. The objective is to migrate existing voice and data customers to NGN platform to provide basic telephone and supplementary services using internet protocol (IP).

8.3. BSNL Wi-Fi Services: Under the mission of Digital India, it has been planned to roll out Wi-Fi in 2,500 cities and towns to provide affordable seamless connectivity. Towards this goal, BSNL has commenced large-scale deployment of Wi-Fi hotspots throughout the country. Such hotspots will enable people to access anywhere-anytime, high-speed broadband services. 2,500 hotspots within a year Having launched 53 Wi-Fi Hotspots in 24 locations in 11 cities this year, BSNL plans to set up 2,500 hotspots, all during the year 2015-16. BSNL will be deploying 2G/3G mobile data Wi-Fi offload solution on pan-India basis which would enable a much better experience to mobile users for accessing internet through their mobile devices.

9. Products

9.1. Digital Locker: Digital Locker aims at eliminating the use of physical documents and at enabling sharing of verified government issued or self-uploaded electronic documents across agencies. Digital Locker provides a dedicated personal storage space in the cloud to citizens, linked to citizens' Aadhaar numbers. It will enable various organisations registered on Digital Locker to push certificates of citizens directly in their Digital Locker in electronic format. Citizens can also upload and securely store the scanned

copies of legacy documents in Digital Locker. These legacy documents can be electronically signed using e-Sign facility. A citizen can share these electronic certificates online with various departments and agencies registered on Digital Locker while applying for the services provided by them.

9.2. National Scholarships Portal: The National Scholarships Portal is a one-stop solution for implementing the entire scholarship process – applying for different scholarships, application receipt, processing, sanction and disbursal by different central ministries, state governments and other agencies. The portal is an end-to-end solution, right from registration of application by the student to the transfer of money to the bank accounts of students.

9.3. E-Hospital: For a common man, seeking diagnosis and treatment means waiting for hours in long queues and a lot of running around. e-Hospital is a unique initiative that addresses this problem. The patient can fix an appointment with the concerned doctor from his home, can get to know about the availability of critical requirements such as blood, and can check his/her report online.

9.4. E-Sign: Sign is an online electronic signature service to facilitate an Aadhaar holder to digitally sign a document. It can be integrated with service delivery applications. The facility of online electronic signature is enabled through the Aadhaar e-KYC service.

9.5. Digitize India Platform (DIP): Digitize India is a programme of the Government of India to digitize physical records and reduce piles of papers in record rooms and offices. It enables organisations to free their warehousing real estate and to keep their records for a longer time and in safer environment. A special Digitize India Platform has been developed for this. It leverages an innovative algorithm and technology to enable digitization of any kind of record at a reasonable price. The platform uses crowd sourcing. It provides income opportunities by facilitating people to work from home or any other location.

10. Portals and Apps

10.1. Digital India Portal and Mobile App: Digital India Portal is the dedicated portal for Digital India programme. The portal has been created to provide informational services to various stakeholders on the various aspects of the Digital India programme. Digital India Mobile App is a mobile-based application developed to provide easy access to information on Digital India Programme through smart phones and other mobile devices. Through Mobile App, the latest status, discussion forums and message platform, everything can be accessed. The Mobile App is made available in Android, iOS and Windows versions

10.2. MyGov Mobile App: The MyGov Mobile App is a mobile version of the citizen engagement platform – MyGov. It expands MyGov's reach and empowers citizens to share opinions and inspired suggestions, even when they are on the move. The MyGov App has

been created in view of the steady increase in Internet access through mobile devices, especially among the youth, and the need to further facilitate and simplify access to MyGov.

10.3. Swachh Bharat Mission App: The 'Swachh Bharat' Campaign has charged the people with a new zeal to clean up their neighborhood, their city, town and village. Swachh Bharat Mobile App has been developed to generate greater awareness about the campaign among the people and connect them with various cleanliness programmes. The App has inbuilt features that take the mobile-user into various activities such as 'Swachhata Pledge', video clips and images taken during different cleanliness programmes, and inspiring messages on cleanliness. The Mobile App facilitates citizens to post photos of unclean spots in their locality and mark it on a map, organise a cleanliness drive and invite friends and neighbours to join in. It allows one to share stories and photos with friends.

11. Institution and Policies:

11.1. National Centre for Flexible Electronics: Flexible electronics is an emerging area of electronics which is based on the monolithic integration of electronic components on amorphous and often flexible substrates, typically resulting in products that are large in size with length scales ranging from a few centimeters as in sensors, to a few decimeters as in displays and lighting, to several meters as in organic solar cell based panels. The technology with a lot of promise The electronics emerging from this technology can be fabricated on substrates, which are plastics, paper, textiles or metal foils. The products of flexible electronics are much more affordable and if required, even disposable.

11.2. Centre of Excellence for Internet of Things (IoT): The Internet of Things (IoT) is the emerging technological advancement in the sphere of IT/ITeS which is expected to swamp the digital world. The Centre of Excellence for IoT seeks to promote an IoT ecosystem, striving to take India to the leadership position in the field. The Centre is a combined initiative of Department of Electronics & Information Technology, National Association of Software (NASSCOM) and Education & Research Network (ERNET).

11.3. e-Governance Policy Initiatives under Digital India: The Department of Electronics and Information Technology have taken several policy initiatives in the e-Governance domain that are crucial for achieving the vision and objectives of the Digital India programme. These policies provide necessary support to all ministries and departments in leveraging the emerging technologies, making use of newer business models and revamping of existing projects.

11.4. Electronics Development Fund (EDF) Policy: - The objective of the EDF policy is to support Daughter Funds including Early Stage Angel Funds and Venture Funds in the area of Electronics, Nano-electronics and

IT. The supported Daughter Funds will promote innovation, R&D and product development within the country in the aforementioned fields. They will also support acquisition of foreign companies and technologies for products imported in India in large volumes. The core focus of the Daughter Funds would be to develop domestic de-Sign capabilities. The Daughter Funds supported will create a resource pool of IP within the country in the specified fields.

24. www.digitizeindia.gov.in

Conclusions

It can be conclude that the Digital India Programme contained tasks that target to make sure that govt. services are available to people digitally and people get advantage of the newest information and connections technological innovation. Gandhiji felt that 'India resides in its villages,' and technology will help the villages to grow and prosper. Digital libraries, online magazines, e-books can be made available for free which will further help in knowledge sharing.. It connects people on the strength of human values, not identities." Technology is a bridge indeed, a bridge that connects the hope that India's villages will be educated and aware to the opportunity of internet and access to information from across the world. 'Digital India' is not just an initiative but a need for this country, where majority of population still does not have access to the world of internet. The Digital India initiative seeks to lay emphasis on e-governance and transform India into a digitally empowered society. Digital India also aims to transform ease of doing business in the country. The Department of Electronics and Information Technology (deitY) anticipates that this program will have a huge impact on the Ministry of Communication and IT. It will focus on providing high speed internet services to its citizens and make services available in real time for both online and mobile platform.

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