Digital India: Emerging Technology to Lead the World

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Abstract

Digital India is an ambitious program to transform India into a digitally empowered economy and emerge as one of the strongest countries in the world. This program was launched on July 1st, 2015, by our honorable Prime Minister, Mr. Narendra Modi. The goal of this idea is to create a responsible, transparent, and participatory system. These improve people's lives in a variety of ways and will have a positive impact on the economy and society. By bringing synchronization and coordination to public accountability, digitally connecting and delivering government programs and services, and mobilizing the capability of information technology across government departments, the Indian government hopes to transform India into a knowledge-based, economically robust, digitally empowered society with good governance for citizens. The 'Digital India' effort can bring immense changes in the fields of banking, agriculture, education, medical care, administrative services, insurance, infrastructure, automation, etc. Applications of digital India are innumerable, and all these applications make India one of the most emerging nations in the world.

Keywords – Digital India, Digital Technology, E-governance, Innovations

Introduction

Today, living without technology is unthinkable. The power of digitization is one of the most significant technologies of the twenty-first century. It is the system that makes it possible for people to communicate internationally. A digitally empowered society and knowledge economy are the goals of the plan called "Digital India." It was introduced on 2nd July 2015 with the goal of ensuring that residents may access government services online by enhancing online infrastructure, expanding internet connectivity, or giving the nation digital empowerment. It is made up of the following three primary components are Digital infrastructure, Digital service delivery and Digital literacy

Several departments are part of the overall "Digital India" plan. The government will be ready for the huge program by connecting every service e-power and ensuring that information and services provided by the government are available anywhere, anytime, on any user-friendly and secure device. The aim of Digital India is to make available Digital services in Indian languages. The Digital India initiative could help in achieving the objectives of: Universal education, General information, Broadband access for everyone and The leadership structures

India's Vision For Digital

The vision centers on three key areas:

1. The utility of digital infrastructure for every citizen: According to this vision, public services like property records, certifications, and many others would be made available online or via the public cloud and will include high-speed internet as a key utility. It provides a safe and secure online environment for the nation.

2. Governance and services on demand: In accordance with this vision, all government information and services are accessible in real-time via online and mobile platforms. It offers everyone a single point of access and makes financial transactions electronic and cashless.

3.   Digital citizen empowerment: All digital resources would be widely accessible in Indian languages. All records and certificates will be accessible to everyone via the cloud.

Pillars Of Digital India

The government aims to target nine 'Pillars of Digital India' which are as follows:-

1. Broadband highways - Broadband for all rural and urban

2.   Universal access to mobile connectivity - Increasing networking services

3. Public Internet access program – Concept of CSCs (Common Service Centres)

4. Post offices - Upgradation of all kind of services

Digital India Initiatives

A new idea for connecting with people in times of demographic and socioeconomic catastrophe is digital connectedness. By putting a focus on digital literacy, Digital

a. **Digital payments in India**- The transition from a cash-based to a card-based and mobile transaction economy has been significant. All modes of transfer have exhibited positive growth, including Real Time Gross Settlement (RTGS), National Electronic Funds Transfer (NEFT), debit cards, digital wallets, and Unified Payments Interests (UPI).

b. **Bharat Net** - Bharat Net is the world's largest rural broadband project, connecting 2.5 lakh Gramm Panchayats across India using optical fiber to provide broadband connectivity. Prior to 2014, just a few dozen Panchayats were linked to an optical fiber network. By March 2023, the Bharat Net scheme had linked 1.5 lakh gram Panchayats.

E – health transformation in the health industry- Because of the role played by technology, the delivery of health services has become an efficient service. The healthcare industry is facing major changes in data storage, sharing, and access, as well as how services are delivered. The following are health-related ICT initiatives.

d. **Digital health with e-hospital** - E-hospital is an initiative of the Ministry of Electronics and Information Technology's Digital India plan. The e-Hospital application is a Hospital Management Information System (HMIS) for internal hospital operations and processes.

e. **Smart Cities** – On June 25, 2015, the government of India launched the Smart Cities Mission with the goal of improving the quality of life and accelerating growth in the urban sector. It prioritizes the development of 109

5. e-Governance - To reform government through technology, Online application and tracking interface between departments, Quick response, analyze and resolve persistent problems and much more.

6. e-Kranti - Technology for Education, Health, Farmers, Security, Justice and Financial inclusion

7. Information for all citizens

8. Electronic manufacturing – Make in India implementation

9. IT jobs - Train people in the small town & villages for IT sector jobs

10. Early harvest program - e-greetings, e-books, e-entertainment, weather updates and Public Wi-Fi hotspot, live locations etc

India promises to transform India into a nation that is digitally enabled. The actions conducted as part of the Digital India program include

Electronic health records such as Individual health record, Telemedicine, Systems for chronic disease management, Clinical decision support, Electronic prescription transfer, Radio frequency identification and Bar-coding, Business intelligence in disease pattern detection etc.

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smart cities by 2022. The mission strategy for smart cities includes. Three models of area -based development are presented in a step-by-step manner are Retrofitting, Redevelopment and Pan - city initiative in which at least one Smart Solution has been applied city-wide.

f. **My Gov** – My Gov is a one-of-a-kind citizen engagement and crowd sourcing platform that engages citizens in policy formation and program implementation, as well as fosters citizen-government partnerships to drive inclusive growth in India.

g. **Digital farming** - The state government has also set up a network of weather stations and soil sensors to collect data on weather patterns, soil moisture, and nutrient levels. This data is used to help farmers make informed decisions about crop planting, irrigation, and fertilization. Our Karnataka state government has also set up a network of weather stations and soil sensors to collect data on weather patterns, soil moisture, and nutrient levels. This data is used to help farmers make informed decisions about crop planting, irrigation, and fertilization.

h. **Common Services Centers (CSC**) - The CSC is a strategic cornerstone of the National E-governance Plan (NeGP) approved by the government in May 2006. CSCs are the centers through which e-governance is made available to the villagers as a way of the village-level Entrepreneur model being followed to empower locals. The main focus of CSCs is Agriculture service, Education and training services, Health services, Rural banking and insurance services, Entertainment services, Utility services and Commercial services.

i. **Digitization of post offices** - networking all post offices, and enabling digital payments.

j. **Universal Access to mobile** - 55600 villages have been given mobile coverage.

k. **Public WiFi hotspots** - provision of local area hotspots especially public places.

New-Age Digital Technologies routing India towards growth

The Indian technological environment has undergone a significant transition during the last 20 years. The introduction of cutting-edge technology has elevated the position of telecom players, who are now more than just providers of voice and data services but also enablers of the nation's growing digital revolution. The top technologies, both established and developing, that are revolutionizing the nation are listed below:

1. Cloud computing gets popular

The use of cloud computing is rapidly expanding in this nation. India is the second-largest and fastest-expanding market for cloud services in the Asia-Pacific region, after China. Cloud computing, in its broadest sense, refers to the provision of IT services via the internet without the use of extra infrastructure.

2. Automated Business Processes

RPA (Robotic Process Automation) is gaining hold in a number of industries and is modernizing how business processes, IT support, workflow, remote infrastructure, and back-office labour are managed. RPA is a superior resource-saving method for large call centres and for customer interactions since it can respond to questions in natural language.

3. AI makes telecom smart

The next wave of automation has been brought on by the development of artificial intelligence (AI). AI has allowed businesses to reduce human interaction and drive growth by modernizing business processes and producing cognitive insights. Deep-learning algorithms make it easier to analyze past behaviour to forecast clients' future purchasing decisions. Digital platforms powered by AI, like chatbots, have created new opportunities for elevating the consumer experience.

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Block chain buzz

The banking industry is drawn to block chain because of its salient characteristics, including decentralization, immutability, and transparency. The sector can gain from blockchain applications by reducing the likelihood of fraud. Additionally, it offers an extremely high level of safety and security for the transfer of data, information, and money.

3D printing for prototyping

Businesses continue to use 3D printing mostly for prototyping since it offers the chance to shorten time to market for new products and new product development. The use of technology may enable manufacturers to switch from mass manufacturing to fully customised production as well as from centralised to distributed production.

Pay with a tap and NFC

Near-field communication (NFC) is a short-range connectivity technology that designed specifically for intuitive, simple, and secure communications between electronic devices. It is a development of radio frequency identification (RFID) technology. For smooth transactions, NFC is used by a number of digital wallets, including Google Pay.

4. Future 5G

Given its enormous potential to boost network speeds and connectivity, 5G has generated buzz in the industry. In comparison to 4G, 5G is anticipated to provide network speeds of up to 10 Gbps and 1,000 times more bandwidth per unit area.
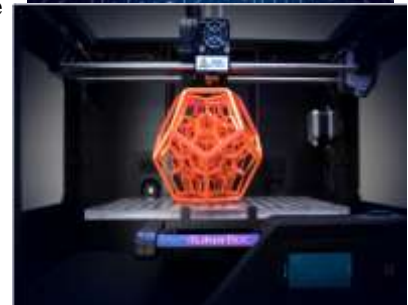
Barriers & Remedies

Digital India is a great plan, but its improper implementation due to inaccessibility & inflexibility to requisite can lead to its failure. There are few barriers to the Digital India program such as Each pillar has its own barriers, Infrastructure deficit such as lack of towers, especially in the countryside, Implementing entities in the actual field and Auxiliary services such as health, education, banking, governance, etc may not be well developed

We can overcome these barriers by following these remedies such as A few new programs may be needed particularly in electronics manufacturing and skill development; the Government should conduct seminars to aware people of digital services, mandate a lecture about Digital India in every educational institute and provide a help center in each state to solve public issues.

Conclusions

To conclude the Digital India program is a flagship program of the government of India to shape by connectivity and technological opportunity. It is a vision to transform India into a digitally empowered society and knowledge economy. It is a good effort to develop India. Although the digital India program is facing some barriers, it has a great impact on India to make the best future for every citizen. We Indians and others should work together to shape the knowledge economy. More employment prospects will open for the youth, which will boost the nation's economy. The Digital India campaign is a welcome step in shaping India of the 21st century powered by connectivity and technological opportunity. In short, this paper focuses on the key of barriers and provides remedies to prevent the challenging facing the Indian people.

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