DIGITAL INDIA INITIATIVE: REVOLUTIONIZING GOVERNANCE AND PUBLIC ADMINISTRATION

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ABSTRACT

The Digital India initiative has emerged as a pivotal force in shaping India's journey towards digital transformation, bolstering public administration, and enhancing e-governance practices. This paper provides an overview of the Digital India initiative, highlighting its key components and objectives. It delves into the various ways in which Digital India has contributed to revolutionizing India's digital landscape, thereby improving efficiency, accessibility, and transparency in governance. Furthermore, the paper delves into the challenges and opportunities that have arisen during the implementation of Digital India. By examining the hurdles faced and lessons learned, it provides valuable insights into enhancing the effectiveness and sustainability of the initiative. Additionally, the paper offers perspectives on the future trajectory of Digital India, identifying potential areas for expansion, improvement, and continued innovation. Through this exploration, it aims to contribute to the ongoing discourse surrounding digital transformation and governance in India.

Keywords: Digital India, E-Governance, Digital Transformation, Digital Infrastructure, Smart Administration

1. INTRODUCTION

The world is witnessing the emergence of the Fourth Industrial Revolution, often known as the Digital Revolution. In this era of rapid digitalization and cutting-edge technological innovation, expertise has evolved into a critical cornerstone of our daily lives. Technology is the most important factor in influencing the innovative global economy and producing speedy changes in society. This transformative wave is aims to reshape our lifestyles, professional endeavours, and interpersonal interactions. It encompasses not only the way people connect with each other but also how they engage with machines and technology.

In the era of digitalization, where technology has become deeply ingrained in our daily lives, governments worldwide are increasingly acknowledging its crucial role in improving citizen

well-being. India, far from being a passive observer, actively engages in and shapes this global transformation, eagerly positioning itself at the forefront of the digital future.

With the visionary "Digital India" scheme, the Government of India embarks on an exhilarating journey akin to that of an explorer venturing into uncharted territories. This initiative ignites the spark of digital transformation, propelling India towards an extraordinary digital future. Digital India signifies the onset of a new era in the digital revolution. It represents a visionary endeavor by the Government of India to ensure the accessibility of government services to citizens through electronic means, even in the most remote areas of the country. This is achieved through improvements in digital infrastructure and the expansion of internet connectivity.

The Digital India initiative represents a visionary undertaking by the Indian Government, with the overarching goal of transitioning India into a knowledge-driven economy and a digitally empowered society. This transformative effort is centered on seamlessly integrating government departments and citizens, with a core focus on promoting good governance and enhancing citizen welfare and empowerment. Central to its mission is the comprehensive utilization of digital technology to facilitate efficient coordination among various aspects of public accountability.

The core objective of the program is to digitally link citizens and ensure the efficient provision of government programs and services. This requires fully utilizing information technology to overcome the divide between government departments. By adopting this strategy, the Digital India initiative not only aims to streamline administrative procedures but also strives to leverage the vast capabilities of the digital realm to propel the nation's development forward.

Governments nationwide are increasingly utilizing Information and Communication Technology (ICT) to streamline governance processes and deliver services to citizens across various sectors of government-citizen engagement. Additionally, ICT has played a significant role in effectively implementing development initiatives in rural areas. Recognizing the importance of transparency in promoting public confidence in policymaking, there is widespread acknowledgment of the need for information flow to be transparent. To achieve this, government departments and organizations leverage digital platforms to disseminate

official information, making government websites pivotal in fostering new forms of civic engagement and online activism.

Over the past seventy years, the Indian experience has demonstrated that chronic issues of maladministration cannot be adequately addressed using traditional methods, which are often slow and susceptible to problems like corruption, nepotism, pilferage, and bribery. Consequently, technology has become indispensable in overcoming various socio-cultural and psychological barriers in governance. Digitization is fundamentally transforming how governments tackle people's problems and address developmental challenges.

India's digital technology witnessed a monumental shift with the economic liberalization of 1991[1], which fuelled the expansion of the country's IT sector and digital infrastructure. The National e-Governance Plan in 2006[2] and the Information Technology Act of 2000[3] paralleled digital and economic changes in the nation and expedited the progress of digital inclusion. The biometric database Aadhaar, which was introduced in 2009,[4] made it easier for citizens to get government benefits and services. According to reports, there were 135.5 crore[5] holders as of January 2023. Subsequently, the goal of the 2015 Digital India project was to provide easy access to government services and platforms for all residents. Therefore, development has been accelerated by digital investments in India's ecosystem of tech-based startups, including banking platforms, e-commerce, healthcare services, organization, and online marketplaces.

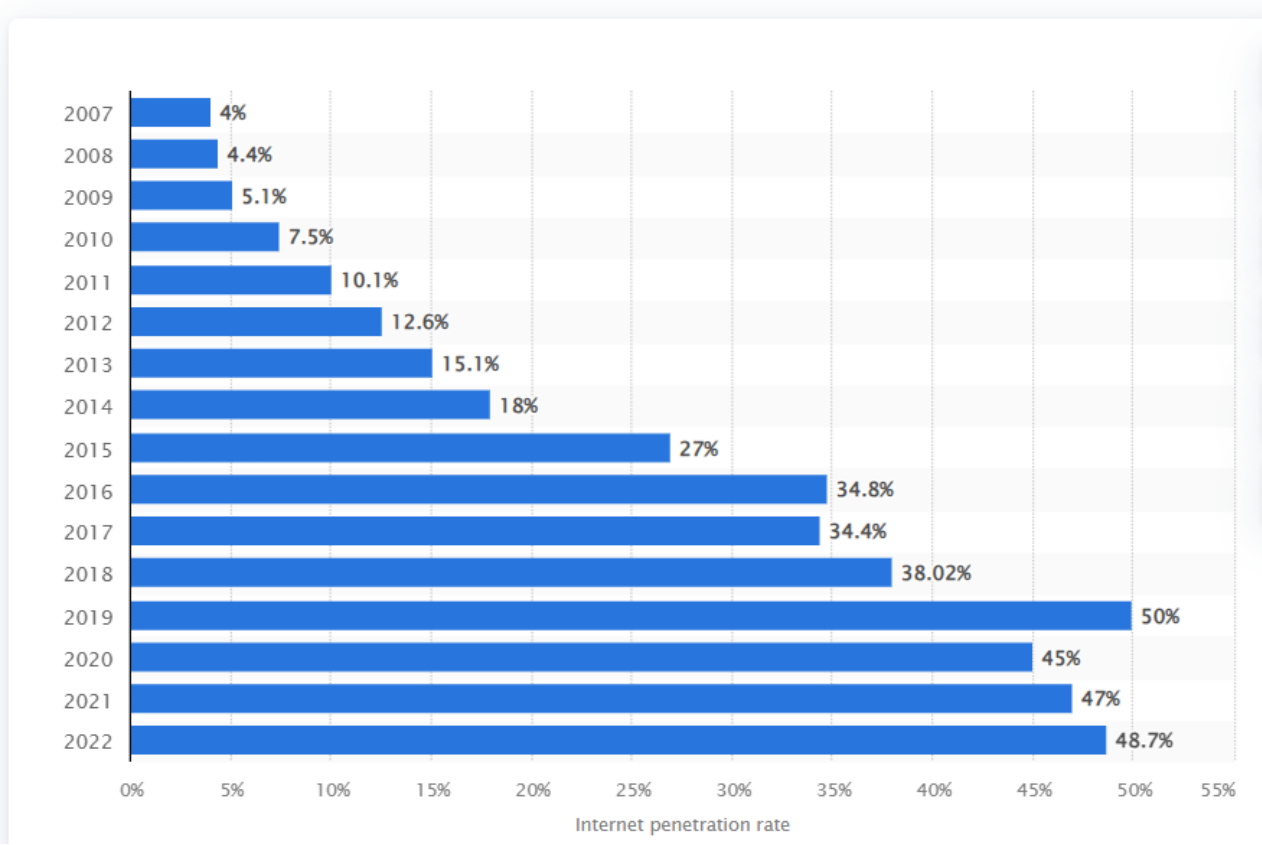
The National e-Governance Plan (NeGP), initiated by the government in 2006[6], marked one of the pioneering endeavours dedicated to the digitization and enhancement of e-governance[7]. Despite its initial sluggish progress, the program laid the foundation for the establishment of a technology-driven knowledge economy[8]. Subsequent to its inception, significant advancements have been achieved. For instance, the Ministry of External Affairs introduced

[1]Ashok Kotwal, Bharat Ramaswami, and Wilima Wadhwa, "Economic Liberalization and Indian Economic Growth: What's the evidence?," *Journal of Economic Literature* 1 (2010).
[2]National e-Governance Plan, Ministry of Electronics and Information Technology, Government of India, available at: https://www.meity.gov.in/divisions/national-e-governance-plan (Last visited on 2 November 2023).
[3]Information &Technology Act, 2000.
[4]"Uttar Pradesh Driving Innovation through Information Technology," available at: https://informatics.nic.in/article/739 (Last visited on 31 October 2023).
[5]"Achievements made under Digital India Programme," available at: http://pib.gov.in/PressReleaseIframePage.aspx?PRID=1885962 (Last visited on 31 October 2023).
[6]*Supra* note 2.
[7]Early challenges and achievements of the National e-Governance Plan (NeGP), Government of India, available at: https://www.meity.gov.in/divisions/national-e-governance-plan. (Last visited on 12 November 2023)
[8] Ibid.

an e-passport seva portal that facilitated online application submissions and offered an integrated interface for various stages of the passport application procedure[9]

The subsequent phase aimed at accelerating economic growth by incorporating technology comprehensively across all sectors of the economy. The Digital India project emerged as a technological strategy with the overarching goal of transitioning India into a digital society and fostering a knowledge-based economy[10]

Graph 1.1 Internet Penetration Rate in India from the Year 2007 to 2022



[11]

Source: Statista- Internet Usage in India[12]

[9]Ministry of External Affairs, Government of India, e-passport seva portal, available at: https://passportindia.gov.in/AppOnlineProject/welcomeLink. (Last visited 15 November 2023).
[10]Digital India, Government of India, technology strategy for transforming the nation into a digital society and knowledge economy, available at: https://digitalindia.gov.in/ (Last visited on 1 November 2023).
[11]"Statista- Internet Usage in India," available at: https://www.statista.com/topics/2157/internet-usage-in-india/#topicOverview (Last visited on 30 October 2023 at 12:30 pm).
[12]*Ibid.*

THE CONCEPT OF MODERN WELFARE STATE AND BASIC GOVERNANCE STRUCTURE

Under the welfare state theory of governance, the state is primarily responsible for safeguarding and advancing the social and economic well-being of its people. It offers a social safety net that may include things like housing, healthcare, education, and nourishment. The welfare of the disadvantaged and marginalized groups in society cannot be guaranteed in the absence of fair and equal distribution of resources and opportunities. It is a vital aspect of contemporary government that it benefits everyone in society. It refers to a wide variety of activities and procedures that comprise the 'social safety net', which ensures that all persons have access to basic services provided which is essential for growth of citizen and society. The modern welfare state, according to sociologist T.H. Marshall, is a unique fusion of capitalism, welfare, and democracy. This is why the government is putting various programs into place for the public[13].

The welfare state as defined by the Constitution of India encompasses more than just the provision of specific necessities like shelter, food, health care, and education. The Indian Constitution envisions a welfare state that is comprehensive in nature.

Article 38[14] of the Constitution of India[15] states that the State[16] has a responsibility to secure a social order that promotes the welfare of the people, ensuring justice and encompassing social, economic, and political aspects across all national institutions. It also emphasizes the State's efforts to minimize income inequalities and eliminate disparities in status, facilities, and opportunities among individuals and different groups residing in various areas or engaged in different vocations[17].

Evolution of E-governance in India

The e-governance initiative in India, branded as Digital India, traces its roots back to the 1970s when the "Department of Electronics" was established within the National Informatics

[13]K.P Kusuma,"Government Schemes And Its Awareness Among Tribal People: With Special Reference To Kodagu District"'*International Journal of Creative Research Thought's*,C683, (2022).
14 Article 38, Constitution of India, 1950.
[15]*Ibid.*
[16]*Ibid.*
[17] Ibid.

Centre[18]. The initiation of e-governance in India marked a significant milestone. Maharashtra pioneered the implementation of comprehensive e-governance practices and policies, setting the stage for digital transformation. In 1987, the District Information System of the National Informatics Centre (DISNIC) played a pivotal role by digitizing manual operations in district offices and providing state governments with free software and hardware[19]. These early initiatives laid the foundation for the evolution of e-governance in India. The impact envisioned by Digital India represents a stride towards a technologically advanced and globally interconnected health system. The Digital India vision is committed to fostering change in healthcare accessibility, promoting the growth of electronic services, manufacturing of equipment and materials, and generating employment opportunities[20]. This transformation aligns with the aspirations of the twenty-first century, emphasizing the need for an inclusive, efficient, and enduring government that caters to the diverse needs of its populace.

E-Governance Model[21]:

E-governance in India originated in the 1970s with a focus on leveraging IT for managing data-intensive tasks such as elections, census, and tax administration. The National Informatics Centre (NIC) played a pivotal role during the 1980s by connecting all district headquarters, laying the foundation for a structured e-governance framework. This framework comprised three main components: State Wide Area Network (SWAN), State Data Centre (SDC), and Common Service Centres (CSC), which facilitated ICT connectivity across all districts.

In the late 1990s, both Central and state governments embraced ICT adoption, web-based technologies, and the internet. The launch of internet services by Videsh Sanchar Nigam Limited (VSNL) in 1995 marked a significant milestone, enabling widespread access to the World Wide Web (www) and information sharing. India emerged as a global leader in the IT revolution, transforming various sectors including rural development, service delivery,

[18]National Informatics Centre. "About Us." *available at*: https://www.nic.in/about-us/ (Last visited on 12 November 2023).
[19]Ministry of Electronics & Information Technology. "Brief History of e-Governance in India." *available at*: https://www.meity.gov.in/ (Last visited on 10 November 2023).
[20]Ministry of Electronics & Information Technology. "Digital India."*available at*:https://digitalindia.gov.in/(Last visited on 10 November 2023).
[21] "E governance meaning, objectives, features and 4 types – SPS, available at: https://schoolofpoliticalscience.com (Last visited on 11 November 2023).

education, and economy. The Information Technology Act of 2000 provided legal recognition for electronic transactions, paving the way for administrative reforms.

Driven by political will, India transitioned from a representative democracy to a participatory democracy through initiatives like the National e-Governance Plan (NeGP) in 2006. Comprising twenty-seven Mission Mode Projects (MMPs), NeGP aimed to enhance government service delivery to citizens and businesses, making them accessible through common service delivery outlets at affordable costs.

The Digital India Programme, launched as a flagship initiative, envisions transforming India into a digitally empowered society and knowledge economy. The e-Kranti mission, introduced under Digital India in August 2014, is hailed as one of the world's most ambitious broadband projects. Digital India strives to deliver all government services electronically to citizens, extending high-speed internet connectivity to even the remotest administrative units and providing citizens with a comprehensive digital identity from birth to death.

In the early 1990s, two significant global shifts occurred: a growing emphasis on good governance, characterized by greater involvement of non-government entities in delivering public services, and the emergence of Information Communication Technologies (ICTs) and the internet, which had the potential to connect individuals worldwide in real-time. The concept of e-Government or e-Governance emerged from the convergence of these two trends. E-Governance represented a fundamental change in governance philosophy, shifting from a focus on processes to a citizen-centric approach. It also facilitated extensive public participation through the enablement of ICTs. Government, companies, employees, and citizens can participate in electronic government services.

Below are four models[22] of e- government:

(i) **Government to Citizen** (G2C): G2C involves the direct delivery of government services to citizens electronically, enhancing accessibility and convenience[23].Government to Citizen approach focuses on providing shared government services to citizens. It

[22]E-governance for Public Administration, *SpringerLink*, at:https://link.springer.com/chapter/10.1007/978-981-15-7961-5_98. (Last visited on 11 November 2023)
[23]United Nations Department of Economic and Social Affairs. "E-Government Survey 2020: Digital Government in the Decade of Action for Sustainable Development." https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020

establishes a close relationship between the state and its people by offering various types of services through designated service links. This model aims to enhance the interaction and engagement between citizens and the government by various ways such as:

- Online bill payment for utilities including phone, energy, and water bills, among others.
- Online application registration.
- A duplicate and copies of land record.
- Completing complaints online.
- Accessibility of all types of information on the internet.

(ii) **Government to Government** (G2G): G2G focuses on electronic interactions between different government entities, streamlining communication and information exchange for improved administrative efficiency[24].Government to Citizen approach focuses on providing shared government services to citizens. It establishes a close relationship between the state and its people by offering various types of services through designated service links. This model aims to enhance the interaction and engagement between citizens and the government by various ways such as:

- Information exchanged between different state police departments.
- E-governance facilitates the exchange of government papers, encompassing the production, approval, dissemination, and preservation of all governmental documents.
- Most budgetary and financial tasks are also completed via e-governance.

(iii) **Government-Employee (G2E)**: G2E encompasses the delivery of government services to employees through electronic means, aiming to enhance internal processes and communication within government organizations[25].This model includes the submission of

[24]United Nations, "E-Government: E-Government Interoperability Framework," available at: https://www.un.org/en/sections/issues-depth/egovernment/index.html (Last visited on 13 November 2023).
[25]World Bank. "Glossary - Government to Employee (G2E)." available at: https://www.worldbank.org/en/topic/publicsector/glossary/government-to-employee(Last visited on 13 November 2023

various types of data, such as attendance records and personnel files, from various government offices. Employees can also submit grievances and express discontent. Additionally, all rules, regulations, and information related to staff, including salaries and employment history, are shared, and employees can register different working forms online.

(iv) **Government to Business (G2B):** G2B facilitates electronic transactions and interactions between the government and businesses, aiming to improve the ease of doing business and foster a business-friendly environment[26].

DIGITAL INDIA INITIATIVE - AN OVERVIEW

Digital India is the beginning of era of the digital revolution. It is a visionary endeavor which is created by the Government of India to ensure that government services are made available to citizens though electronic medium, even in the remotest areas of the India, through enhancements in digital infrastructure and expanded internet connectivity.

Digital India aligns with the global digital transformation narrative, contributing to India's emergence as a technologically advanced nation. As the program continues to evolve, it holds the potential to position India as a global leader in digital innovation and inclusive growth.

Digital India Mission was launched by Hon'ble Prime Minister Mr. Narendra Modi on 1st July 2015 as flagship programme with a vision to transform India into a digitally empowered society and knowledge-driven economy. It represents a visionary approach to harnessing digital technology for the comprehensive development of the nation. By addressing connectivity gaps, promoting digital literacy, and redefining governance through technology, Digital India charts a transformative course towards a digitally empowered and inclusive society.

VISION OF DIGITAL INDIA MISSION

The Digital India vision comprises three key elements, collectively contributing to the creation of an enabling environment for digital use, support, and education in India[27]. These three

[26]The Organisation for Economic Co-operation and Development (OECD). "Government at a Glance 2021 - Country Fact Sheet: India." https://www.oecd.org/gov/government-at-a-glance.htm (Last visited on 12 November 2023).

[27]Press Information Bureau, Government of India. "Launch of Digital India Week by the Hon'ble Prime Minister of India." https://pib.gov.in/newsite/PrintRelease.aspx?relid=122790

visions are:

(a) Digital Infrastructure as a Utility to Every Citizen:

The first vision of Digital India is centred on establishing digital infrastructure as a utility accessible to every citizen[28]. This entails providing secure and robust digital networks, ensuring high-speed internet connectivity, and granting individuals a unique, permanent, online, digital identity. Additionally, the vision emphasizes the facilitation of online banking and mobile banking services, offering easy access to public services, digital resources, and financial facilities. It also envisions the secure utilization of public cloud services, fostering a safe and reliable cyberspace for citizens[29].

(b) Governance and Services on Demand:

The second pillar of Digital India focuses on providing governance and services based on demand, introducing a paradigm shift in the delivery of public services[30]. This vision is geared towards enhancing accessibility and efficiency by tailoring governmental services to meet the specific demands and needs of the citizens. The aim is to create a responsive and citizen-centric governance system that adapts to the evolving requirements of the populace[31].

(c) Digital Empowerment of Citizens:

The third vision revolves around the digital empowerment of citizens, seeking to engage and empower individuals through digital platforms and resources[32]. It underscores the importance of fostering digital literacy and creating opportunities for citizens to leverage digital tools for their personal and professional growth. This vision envisions a digitally literate and empowered population that actively participates in the digital landscape, contributing to the overall progress of the nation[33].

[28] Ibid.
[29]Ibid.
[30]Ibid.
[31]Ibid.
[32]Ibid.
[33]Ibid.

Nine Pillar of Digital India scheme

The Digital India program aims to give the "nine pillars" of growth as the necessary impetus. The 9 pillars of growth are:

1. **Broadband Highway:** The Broadband Highway initiative aims to connect approximately 250,000 villages, government offices, universities, and more through a high-speed broadband expansion service, fostering interconnectivity. This aligns with the broader objectives of National Wide Area Network (SWAN), National Information Network (NKN), and National Optical Fiber Integrated Information Infrastructure Network (NOFN)[34].

2. **Universal Access to Mobile**: The Universal Access to Mobile initiative extends mobile connectivity to around 42,300 villages, contributing to enhanced communication and accessibility in remote areas[35].

3. **Public Internet Access Programme (PIAP)**: The Public Internet Assistance Project (PIAP) envisions deploying 250,000 Common Service Centres (CSCs) at the Gram Panchayat level to provide government services. It also involves relocating 150,000 post offices to multiple service centres[36].

4. **E-Governance**: E-Governance involves leveraging business process reengineering to simplify, automate, and enhance the efficiency of government processes[37].

5. **E-Kranti**: E-Kranti encompasses the use of technology in various sectors such as education, health, agriculture, security, and justice to provide enhanced services[38].

6. **Information for All**: The Information for All initiative focuses on providing public access to online government data and information, establishing two-way communication channels

[34]Ministry of Electronics & Information Technology. "National Wide Area Network (SWAN)," https://meity.gov.in/state-wide-area-network-swan
[35]Press Information Bureau, Government of India. "Universal Service Obligation Fund for Providing Mobile Connectivity to 55,669 Identified Remote Village Panchayats," https://pib.gov.in/PressReleasePage.aspx?PRID=1776448
[36]Common Service Centers. "About CSCs," https://csc.gov.in/
[37]Ministry of Electronics & Information Technology. "E-Governance," https://meity.gov.in/e-governance
[38]Digital India. "E-Kranti," https://digitalindia.gov.in/ekranti

between the public and government through online platforms and social media[39].

7. **Electronics Manufacturing**: The Electronics Manufacturing initiative includes measures such as tax incentives, economies of scale, technology development, and government procurement to boost the electronics manufacturing sector. It also aligns with environmental goals, aiming to achieve zero emissions by 2020 through various initiatives[40].

8. **IT for Jobs**: The IT for Jobs program aims to equip young people with the necessary skills and training to secure employment opportunities in the IT/IT sector[41].

9. **Early Harvest Programmes**: The Early Harvest Programmes encompass a range of short-term projects, including information technology platforms, electronic government reception, biometric attendance, and the implementation of Wi-Fi in various regions[42].

Vision of Digital India

Objective and Scope of Digital India Initiative

The primary objective of the Digital India initiative is to ensure universal access to digital resources, promoting digital literacy and citizen participation. The MyGov website serves as a platform for public input, particularly focusing on encouraging the adoption of cashless transactions. Key highlights underscore the initiative's cross-sector impact, fostering a robust environment for digital mobility and effective governance in the country:

- **Workplace Impact:** Significant investments of 1 trillion rupees in regular spending on proposals and new schemes, along with an additional 130 billion rupees allocated for information technology, aim to create employment opportunities in the technology sector. Digital India envisions the creation of 17 million direct jobs and 85 million indirect jobs in 2019, emphasizing education-related activities and initiatives like the

[39]Digital India. "Information for All," https://digitalindia.gov.in/information-all
[40]Ministry of Electronics & Information Technology. "Electronics Manufacturing," https://meity.gov.in/electronics-manufacturing
[41]Ministry of Electronics & Information Technology. "IT for Jobs," https://meity.gov.in/it-jobs
[42]Digital India. "Early Harvest Programmes," https://digitalindia.gov.in/early-harvest-programmes

National Digital Literacy Mission (NDLM) for widespread digital literacy[43].

- **Delivery of Public Services:** Digital India has enhanced the speed and quality of public services, elevating the standard of digital service delivery through expansion and improved quality. The volume of government electronic transactions surged from 3.5 billion in 2014 to over 7 billion in 2015, indicating a growing popularity of electronic services, particularly reaching the underserved segments of the population. The government remains committed to enhancing last-mile connectivity by providing affordable internet access to rural households and institutions[44].

- **Universal Accessibility**: With the DigiLocker service, citizens now have universal access, allowing them to receive and share information. Currently, nearly 4 million people have signed 5 million[45] user records placed in the digital locker.

- **Social Inclusion**: Digital India is tackling the challenge of inadequate places in the school system, 40% decline in primary education, 28:1 student-faculty ratio and below standard enrolment ratio (21% in primary education[46]). High education). The government has allocated Rs 1 billion[47] for the creation of virtual classrooms and online teaching to solve the problem of shortage of teachers and quality teachers. Digital India uses smart classroom equipment compared to other schools in the world and has built many private schools in India that are ahead of technology. Massive Open Online Courses (MOOCs) or online courses can be easily accessed from anywhere. Current usage of MOOCs is 8.8%52[48] and growing. However, OLabs (Online Labs) is expected to improve student performance by offering courses and has enrolled 90,00,053 people.

- **Healthcare and Treatment**: Digital India can provide treatment for the following problems: Good doctor ratio of 1:1674[49], bad doctors, diseases requiring treatment,

[43]Ministry of Electronics & Information Technology. "Digital India - Overview," https://meity.gov.in/digital-india
[44] Ibid.
[45]*Ibid.*
[46]"Re-imagining K-12 education with a STEM pedagogy in India - Deloitte US." https://www2.deloitte.com/content/dam/Deloitte/in/Documents/strategy/in-strategy-STEM-integration-in-K-12-noexp.pdf. (Last visited on 8 November 2023).
[47]*Ibid.*
[48]*Ibid.*
[49]"A Study on the Influencing Factors of Continued Intention to Use MOOCs ...." 04 Aug. 2021, *available at:* https://www.frontiersin.org/articles/10.3389/fpsyg.2021.528259/full. (Last visited on 11 November 2023).

poor access to healthcare and guidance in remote areas and quality healthcare Cost of care. E-hospital accelerated the delivery of health services by allowing patients to make appointments online. Sehat or Social Enterprise for Health and Telemedicine aims to expand healthcare coverage by providing healthcare services to the public wherever they are, with approximately 60,000 CSCs providing phone call services in Sehat.

- **Financial Inclusion**: India Postal Payments Bank (IPPB)[50] will offer digital and online banking services through post offices, benefiting 40% of the existing population outside the financial institution[51]. Mobile and online banking will expand the scope and volume of financial transactions; this will be important given the recent demonetization and transition to a cashless economy[52].

IMPACT AND ACHIEVEMENTS:

Since its launch, the Digital India program has witnessed significant strides, positively impacting various facets of Indian society. The initiative has facilitated the establishment of Common Service Centres (CSCs), extending digital services to rural and remote areas[53]. Additionally, the program has played a crucial role in promoting e-governance, with initiatives like the National e-Governance Plan (NeGP) and the implementation of digital platforms for service delivery[54].

GOVERNMENT INITIATIVES TOWARDS DIGITAL GOVERNANCE

Effectively managing information and data is paramount, but it must also be complemented by insights, intelligence, and actionable strategies to achieve desired outcomes. In India, digital transformation is recognized as a top priority agenda, aimed at democratizing Information and Communication Technology (ICT) access for all. The evolution of digital transformation will leverage ICT capabilities to expedite governance processes, enhance efficiency, reduce costs, promote accountability, and foster transparency. Five key factors that influence digital

[50]"India Post Payments Bank - Press Information Bureau." *Available at* https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/sep/INDIAeng.pdf. (Last visited on 15 November 2023).
[51]*Ibid.*
[52]*Ibid.*
[53]National e-Governance Division. "About CSC." https://www.csc.gov.in/
[54]Ministry of Electronics & Information Technology. "National e-Governance Plan (NeGP)."https://meity.gov.in/national-e-governance-plan-negp

transformation in public service organisations are; Strategy, Leadership, Workforce Skills, User Focus and Digital Culture[55].

India, renowned as the world's largest democracy, has been actively advancing in the realm of e-governance in recent years. Leveraging the widespread adoption of digital technologies and the internet, the Indian government has undertaken a mission to enhance accessibility, efficiency, and transparency in public services.

Through various initiatives and programs, India has sought to digitize government processes, making them more streamlined and accessible to citizens across the country. This digital transformation aims to eliminate bureaucratic hurdles, reduce paperwork, and ensure quicker delivery of services to citizens. Key components of India's e-governance efforts include the implementation of digital platforms for service delivery, online portals for citizen engagement and feedback, and the digitization of government records and transactions. These initiatives not only make it easier for citizens to access essential services but also promote transparency and accountability within the government.

The Ministry of Electronics and Information Technology (MeitY) plays a vital role in promoting e-governance by supporting knowledge-based enterprises, fostering collaboration among stakeholders, adhering to international standards, advocating for internet accessibility, and implementing IT education initiatives. Below, we provide an overview of the current status of key initiatives spearheaded by MeitY across India as part of the Digital India campaign.

- **Aadhaar**[56]: Provides unique, permanent, online and portal guides: Verifies 12 biometric[57] numbers and demographic information through Adhar. - Provides support for the law on adding Aadhaar, which falls under the Aadhaar (Financial Assistance and Other Services, Purpose of Services and Assistance) Act, 2016[58], notified on 26 March 2016. More than 1.355 billion citizens are registered[59].

[55] E-GOVERNANCE: MOVING TOWARDS DIGITAL GOVERNANCE, May 2023 by VIDYA - A JOURNAL OF GUJARAT UNIVERSITY 2(1):204-215
[56] Achievements Made under Digital India Programme, Ministry of Electronics & IT, PIB Delhi, 23 December (2022).
[57] *Ibid.*
[58] *Ibid.*
[59] *Ibid.*

- **Common Service Centres**[60]: Through Village Entrepreneurs (VLEs)[61], CSCs provide digital government and business services in rural areas. - These CSCs have 400 digital services. Currently, out of 5.21 million[62] CSCs operating in the country, including urban and rural areas[63], 4.14 million[64] CSCs are operating at the panchayat level. There are 23,035 functioning CSCs in Rajasthan, of which 18823[65] operate at the Gram Panchayat level.

- **Digi Locker**: Publishers can send data to digital storage facilities using the gateway and storage facilities provided by Digital Locker. More than 137 million[66] people use Digital Locker, and 2,311 advertising agencies have sent more than 5.62 billion[67] documents through Digi Locker.

- **Unified Mobile Application for New Age Governance (UMANG)**: allows citizens to understand government and access government services through their mobile devices[68]. UMANG has more than 20,197 paid services and more than 1,668 electronic services[69].

- **Electronic signature**: With the electronic signature service, citizens can sign documents and documents online quickly and legally. Many applications that use UIDAI's OTP-based authentication services use this service. More than Rs 31.08 billion e-signatures have been given by all institutions, out of which Rs 7010000 has been given by CDAC[70].

- **National Scholarship Portal (NSP)**[71]: The National Scholarship Portal is a digital platform launched by the Government of India to enhance the efficiency of scholarship applications and disbursements[72]. Functioning as a unified system, NSP provides

[60] *Ibid.*
[61] *Ibid.*
[62] *Ibid.*
[63] *Ibid.*
[64] Ministry of Electronics & Information Technology. "Digital India - Key Initiatives," https://meity.gov.in/
[65] *Ibid.*
[66] *Ibid.*
[67] *Ibid.*
[68] Ibid.
[69] *Ibid.*
[70] Meri Pehchan, *available at*: https://meripehchaan.gov.in/ (Last visited on 5 November 2023).
Digital Village, *available at*: https://digital-village.in/ (Last visited on 5 November 2023).
[71] National Scholarship Portal *available at:*https://scholarships.gov.in/ (Last visited on 2November 2023).
[72] Ibid.

students with a single-window interface to apply for a diverse range of scholarships available throughout the country.The portal facilitates transparency, accessibility, and efficiency in scholarship distribution, catering to diverse educational levels and categories. NSP aims to empower students by providing them with equal opportunities for education and skill development. Around 11.13 lakh applications have been received; 8.03 lakh applications have been successfully verified.

- **MyGov**[73]: This is a public engagement platform designed to facilitate government engagement. Currently, more than 2.76 billion people are registered with MyGov and use the platform to participate in various activities.

- **Jeevan Pramaan** is a program designed to streamline the process for government pensioners to submit their life certificates electronically on an annual basis. Over 1.5 million registered pensioners across the nation are utilizing this digital platform to ensure uninterrupted pension disbursements. The Aadhaar-based biometric authentication system, known as Jeevan Pramaan or Life Certificate, is proving to be highly efficient. Pensioners now have the convenience of submitting their Digital Life Certificate (DLC) from the comfort of their homes, using a PC or mobile device equipped with biometric authentication capabilities.

- **Digital Land**[74]portal is an integrated and interoperable[75] for expanding e-Services into the state's rural Land distribution[76],information, and registration areas[77]. It consists of the following seven web applications: Revenue Court Cases Management System (RCCMS), BHULEKH, Bhu Naksha, Khasra, Online Mutation, Anti Bhu Mafia Portal and UP SVAMITVA**.**

- **DARPAN**[78](Dashboard for Analytical Review of Projects Across Nation)[79] is a multilingual[80], adaptable dashboard solution for top government officials. For the

[73]MyGov- A Platform for Citizen Engagement towards Good Governance, *available at*:https://www.mygov.in/ (Last visited on 10 November 2023).
[74]Digital Land,*available at*https://upbhulekh.gov.in/ (last visited on 3 November 2023).
[75]*Ibid.*
[76]*Ibid.*
[77]*Ibid.*
[78]"DARPAN - Dashboard." http://dashboard.nic.in/.
[79]*Ibid.*
[80]*Ibid.*

purposes of planning, assessing, and keeping track of certain plans and projects, it provides real-time data on important performance metrics. Users may tailor their perspective to prioritise information and improve data analysis by combining numerous data sources into a single centralized platform. The dashboard finds patterns in the data to offer more comprehensive project views.

- **Mobile Seva**[81]is a nation-wide Mobile Governance initiative of the Government of India.17 Departments/services have been integrated for Push SMS. Over 4.79 crore, [82]SMSs have been sent by the government departments of Uttar Pradesh using this platform. 3 Mobile applications pertaining to the departments of Uttar Pradesh have been downloaded over 1.01 lakh times.

- **Meri Pehchaan** (July 2022): The Meri Pehchaan National Single Sign-On (NSSO) platform, inaugurated in July 2022, simplifies citizens' access to government websites. A collaboration between various departments and NSSO offers a comprehensive range of 4,419 services[83].

- **Digital Life Certificates**[84]: These programs are for retired government personnel, called "Jeevan Pramana." Every year, they provide the government with their digital Aadhar number and biometric information to ensure their pension is continued. It will eventually allow the pension disbursing agency to access a digital life certificate as it will be uploaded in real-time to a central database.

- **MGNREGA's Digital Boost**[85]: The MNREGA rural employment program will now use a mobile monitoring device. A real-time online database update is now being provided by an implementation agency that uses real-time data from the work locations.

- **Samvad:**[86] on Twitter: Through SMS and tweets, the public will be able to learn about new government activities, initiatives, and services.

[81]Mobile Seva, *available at:* https://mgov.gov.in/(Last visited on 3 November 2023).
[82]*Ibid.*
[83]Ministry of Electronics & Information Technology. "Meri Pehchaan - National Single Sign-On (NSSO)," https://meity.gov.in/meri-pehchaan
[84]*Ibid.*
[85]*Ibid.*
[86]*Ibid.*

- **Madad** (Help): Indian nationals residing overseas would be able to electronically submit concerns to the consulate for speedy resolution using the "Madad"[87] site. Any National can still access its portal.

- Cyclone Warning System: In addition to fishermen, farmers, and the public, district magistrates and collectors will be the recipients of an SMS-based weather information and catastrophe alarm system.[88]

- **eMoney order**[89]: By December, offer the Department of Posts (DoP) electronic money order service. With the help of this service, customers will be able to deliver money securely and quickly the following day at their doorstep. Up to a one-time limit of Rs 5,000 via electronic money order.

- **PRAGATI**:[90] It attempts to solve the complaints of the average person while simultaneously keeping an eye on and evaluating projects and programs of the federal and state governments.

- **Digital Village Pilot Project** (October 2018): MeitY introduced the "Digital Village Pilot Project" in October 2018, encompassing 700 Gram Panchayats (GPs)/villages across every district in each state/UT. This initiative provides digital health, education, financial services, skill development, solar-powered street lighting, and government-to-citizen (G2C) and business-to-citizen (B2C) services[91].

- **CO-WIN** (Covid-19 Vaccination): CO-WIN serves as an open platform for Covid-19 vaccination management, handling registration, appointment scheduling, and

[87]*Ibid.*
[88]*Ibid.*
[89]Digital Rupee vs UPI: 7 key differences between RBI's e-rupee- Mint, *available at:* https://www.livemint.com/money/personal-finance/digital-rupee-vs-upi-7-key-differences-between-rbi-s-e-rupee-and-upi-explained-11671073944465.html, (last visited on 11 November 2023).
[90]PM Modi launches PRAGATI platform for redressal of grievances - DNA India, *available at:* https://www.dnaindia.com/india/report-pm-modi-launches-pragati-platform-for-redressal-of-grievances-2071960, (last visited on 10 November 2023).

[91]Ministry of Electronics & Information Technology. "Digital Village Pilot Project," https://meity.gov.in/digital-village

vaccination certificates. With 110 crore registered persons, it has facilitated the administration of 220 crore vaccine doses[92].

- **NCOG-GIS** Applications: The National Centre of Geo-informatics (NCoG) project, a GIS platform for sharing and collaboration, supports location-based analytics and decision-making for various departments. Currently, 659 applications in diverse domains are operational[93].

- **National Knowledge Network (**NKN): NKN, a high-speed data communication network, links institutions of higher learning and research. It has commissioned and operationalized 1752 links to institutions, with 522 NKN links connected to NIC district centers across India[94].

- **Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA**): The PMGDISHA scheme, approved by the Government, aims to impart digital literacy to 6 Crore rural households. With 6.63 billion registered candidates, 5.69 billion are educated, and 4.22 billion are certified[95].

- **Unified Payments Interface (UPI):** UPI, the leading digital payment platform, collaborates with 376 banks and has facilitated cashless and paperless transactions worth Rs 1,190 billion, based on a transaction volume of Rs 730 billion[96].

- Cyber Security IT ACT 2000: The IT ACT 2000 introduces provisions for data privacy and security. In the 2020 'Global Cyber Security Index' (GCI) by the International Telecommunication Union (ITU), India rose 37 places to become one of the top 10 countries with the world's most robust security network[97].

[92]Ministry of Health and Family Welfare, Government of India. "CO-WIN Dashboard," https://www.cowin.gov.in/
[93]Ministry of Electronics & Information Technology. "National Centre of Geo-informatics (NCoG)," https://meity.gov.in/national-centre-geo-informatics-ncog
[94]National Knowledge Network. "About NKN," https://nkn.gov.in/cms/about
[95]Ministry of Electronics & Information Technology. "PMGDISHA," https://meity.gov.in/pmgdisha
[96]National Payments Corporation of India. "Unified Payments Interface (UPI)," https://www.npci.org.in/what-we-do/upi/about-upi
[97]International Telecommunication Union (ITU). "Global Cyber Security Index (GCI)," https://www.itu.int/en/ITU-D/Cybersecurity/Pages/GCI-2020.aspx

A cashless and paperless economy and a new and innovative environment with the help of digitalization and connectivity are the measures by which India can build its growth plans. Increasing use of technology will increase India's economic growth. The number of smartphone users in the country is increasing; the user base is poised to reach 900 million, with 331 million individuals being active online. A notable capability is the Aadhaar UID, enabling 1 billion people to conduct 100 transactions daily with instant verification. This functionality is facilitated through developer APIs, exemplified by India Stack, which offers features like e-KYC, e-signature, and Aadhaar for identity verification. The convergence of these elements is expected to catalyze technological disruption, foster digital connectivity, and propel the expansion of technology start-ups, aligning with the overarching objective of the Digital India initiative[98]

Digital India Achievements from 2015-22

At the core of this transformative journey is Aadhaar, a pioneering initiative providing a unique 12-digit biometric and demographic-based identity to over 135.5 crore residents[99]. With its robust design aimed at eliminating duplicates and fake identities, Aadhaar has become a cornerstone for ensuring easy and cost-effective verification across a multitude of services.In rural areas, Common Services Centres (CSCs) have emerged as dynamic hubs, offering over 400 digital services through Village Level Entrepreneurs (VLEs)[100]. With a staggering 5.21 Lakh CSCs operational nationwide, including 23,035 in Rajasthan alone, these centres play a crucial role in bridging the digital divide, providing essential services to citizens[101].

- The Unified Mobile Application for New-age Governance (UMANG) has become a major application for providing more than 1668 e-Services and over 20,197 bill payment services. Simultaneously, the e-Sign service facilitates instant online signing of forms/documents, issuing over 31.08 crore e-Signs[102].MeghRaj, the Government's Cloud Computing initiative, is focused on optimizing ICT spending and accelerating

[98]Unique Identification Authority of India (UIDAI). "About Aadhaar," https://uidai.gov.in/about-aadhaar.html
[99]Press Information Bureau- Achievements Made under Digital India Programme,*available at:*https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1885962 (last visited on January 3,2024).
[100]*Ibid.*
[101]*Ibid.*
[102]UMANG - Unified Mobile Application for New-age Governance,*available at:*https://www.india.gov.in/umang-unified-mobile-application-new-age-governance (last visited on January 3,2024).

the delivery of e-services[103]. Additionally, the National Centre of Geo-informatics (NCOG) platform, with 659 operational GIS applications, fosters collaboration, location-based analytics, and decision support systems across various domains[104].

- The Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA) aims to impart digital literacy in rural India[105]. With 6.63 crore registered candidates, 5.69 crore trained, and 4.22 crore certified, the program is making significant strides in empowering rural communities through digital education[106].

- The Unified Payment Interface (UPI) stands as a leading digital payment platform, with 376 banks onboard and a staggering 730 crore transactions, amounting to Rs 11.9 lakh crore[107]. This platform has played a pivotal role in fostering a digital economy and promoting cashless transactions.In collaboration with NASSCOM, "FutureSkills[108]" Prime is steering the re-skilling and up-skilling of IT professionals, with a specific focus on emerging technologies such as Augmented/Virtual Reality, Internet of Things, Big Data Analytics, Artificial Intelligence, and more.

Challenges and Issues Hindering the Realization of Digital India's Vision

The successful implementation of the Digital India Programme is undoubtedly a commendable vision, but it faces several significant challenges that need to be addressed for its realization. Let's elaborate on these challenges:

1. **Lack of Education**: One of the foremost obstacles is the educational gap in India. A considerable portion of the population, especially in rural areas, lacks the necessary digital literacy and skills to use digital devices and technology. This makes it difficult

[103]Ministry of Electronics and Information Technology GI Cloud (MeghRaj),*available at:*https://www.meity.gov.in/content/gi-cloud-meghraj(last visited on January 6,2024).
[104]Press Information Bureau, *available at:*https://pib.gov.in/PressReleasePage.aspx?PRID=1885962. (last visited on January 3,2024).
[105]PMGDISHA,*available at:*https://www.myscheme.gov.in/schemes/pmgdisha(last visited on January 3,2024).
[106]Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) *available at:*https://www.indiafilings.com/learn/pradhan-mantri-gramin-digital-saksharta-abhiyan-pmgdisha/ (last visited on January 6,2024).
[107]India's Unified Payment Interface's impact on the financial landscape,*available at:* https://www.weforum.org/agenda/2023/06/india-unified-payment-interface-impact/ (last visited on January 3,2024).
[108]FutureSkills Prime-India's Technology Skilling Hub, *available at:* https://futureskillsprime.in/.(last visited on January 3,2024).

for them to access and benefit from the Digital India Programme, which heavily relies on digital tools and services.

2. **Lack of Infrastructure and Technology**: Effective implementation of the Digital India campaign relies on robust technological infrastructure, which is still lacking in many parts of the country. Basic amenities like reliable internet connectivity, hardware, and software required for digital initiatives are not readily available, especially in rural areas. Overloaded servers and slow internet speeds can hamper the program's effectiveness.

3. **Financial and Technical Issues**: India, despite its rapid growth, is still a developing nation, and funding a large-scale program like Digital India can be a challenge. The country often needs financial assistance from external sources to sustain such initiatives. Additionally, technical challenges such as inadequate bandwidth, cybersecurity, and the lack of proper tools and resources can hinder the program's success.

4. **Attitude of Citizens and Government Personnel**: The success of the Digital India Programme requires active participation and support from both citizens and government officials. However, there is often a resistance to change and a "devil-may-care" attitude that impedes progress. The older generation, in particular, may be hesitant to adopt digital methods, while inter-departmental coordination and bureaucracy can slow down implementation.

5. **Cybercrimes and Lack of Confidence**: Concerns about cybersecurity and data privacy can deter people from engaging in online transactions and using digital services. India needs to strengthen its cyber laws and enforcement mechanisms to ensure people's confidence in digital platforms. Additionally, there is a lack of faith in the reliability of machines, especially in sectors where manual methods have traditionally been used.

6. **High Costs**: Electronic devices and internet services are still relatively expensive for the average Indian citizen. Many people struggle to afford these technologies, especially in rural and economically disadvantaged areas, where even basic necessities can be a challenge to acquire. High costs can act as a significant barrier to digital inclusion.

7. **Training Needs**: Transforming government departments from manual to digital management is a complex task that requires training a vast and diverse workforce. Many government employees lack the necessary technical qualifications for their roles. Proper training is essential to ensure that the transition to digital processes is both efficient and effective.

Conclusion and Recommendation

The Digital India scheme has not only enhanced the quality of life for people of India but has also cultivated a more interconnected and knowledgeable society. Through the dissemination of digital literacy, individuals are better empowered to access crucial services, engage in online forums, and interface with government facilities. Furthermore, the initiatives under Digital India have significantly streamlined governance and citizen interaction in India, rendering government services more accessible and efficient. This has led to a marked improvement in the delivery of essential services such as healthcare, education, and public welfare, thereby enhancing the overall governance experience for citizens. Moreover, the introduction of digital skills training programs and initiatives to make internet access more affordable has transformed how individuals interact with technology and the internet. Citizens now possess the capability to seamlessly connect with government services, access vital information, and actively engage in online communities, thereby fostering a more digitally inclusive society.

Recommendations:

1. **Increase Awareness Campaigns**: Conduct more extensive awareness campaigns to reach a broader audience. Utilize digital channels, community meetings, and partnerships with local organizations to disseminate information about the "Digital India" initiative effectively.

2. **Improve Accessibility and Ease of Use**: Enhance the user interface of e-governance platforms to make them more intuitive and user-friendly. Strengthen customer support services to assist users in navigating digital platforms with ease.

3. **Strengthen Skill Development Programs**: Develop comprehensive and accessible training programs to equip individuals with essential digital skills. Focus on improving

the quality and accessibility of skill development initiatives under the "Digital India" scheme.

4. **Expand Employment Opportunities**: Introduce more schemes that link skill development to employment opportunities. This will further contribute to job creation and economic empowerment through the "Digital India" initiative.

5. **Ensure Equitable Access**: Make efforts to ensure that the benefits of the "Digital India" scheme are equitably distributed among all sections of society. Address any disparities in access to digital services and welfare schemes to promote inclusivity and social equity.

Moreover, to sustain the momentum of the "Digital India" initiative and maximizing its impact, it is essential to:

- **Promote Remote Work and Entrepreneurship**: Encourage remote work and entrepreneurship opportunities facilitated by digital technologies, fostering socioeconomic growth and empowerment.

- **Invest in Continuous Digital Literacy Initiatives**: Continue investing in digital literacy programs to ensure that citizens possess the necessary skills to thrive in the digital era.

- **Collaborate with Private Sector**: Collaborate with private sector organizations to develop innovative solutions and technologies that enhance the effectiveness of digital services and infrastructure.

- **Bridge the Digital Divide**: Improve internet connectivity in rural areas and provide affordable devices to enhance digital inclusion and access to government services.

In conclusion, the recommendations outlined above are tailored to tackle the specific challenges identified in the data analysis. Through the implementation of these suggestions, Uttar Pradesh can significantly enhance the positive outcomes of the Digital India initiatives. This concerted effort will pave the way for a more digitally literate, connected, and empowered society, benefitting all its citizens. By fostering accessibility, improving skill development, and ensuring equitable access to digital services, Uttar Pradesh can leverage the transformative

potential of digital technologies to create a more inclusive and prosperous future for its residents.