



## 10 Years of Digital India Mission

*This editorial is based on “[Digital decade: India's journey from inclusion to tech innovation](#)” which was published in The Business Standard on 01/07/2025. The article brings into picture the transformative journey of Digital India, highlighting its success in expanding tech access and boosting digital transactions.*

**For Prelims:** [Digital India](#), [Direct Benefits Transfer](#), [Common Service Centres](#), [UPI \(Unified Payments Interface\)](#), [JAM \(Jan Dhan-Aadhaar-Mobile\) system](#), [Vishvasya-Blockchain Technology Stack](#), [UMANG](#), [DigiLocker](#), [SVAMITVA](#), [AgriStack](#)

**For Mains:** Key Strides India Made under Digital India Mission, Key Issues Associated with India's Digital Ecosystem.

Ten years ago, India launched [Digital India](#) to democratize technology access. The mission has achieved remarkable success—**internet connections grew from 250 million to 970 million, UPI processes 100+ billion transactions annually**, and [Direct Benefits Transfer](#) has saved ₹3.48 trillion while empowering MSMEs nationwide. Digital India has evolved from a government program into a people's movement, fundamentally transforming governance, commerce, and daily life across the nation. However, **as India shifts from digital governance to global digital leadership**, the road ahead requires sustained focus on **inclusive innovation and technology solutions that truly empower every citizen**.

### What are the Key Strides India Made under Digital India Mission?

- **Expansion of Digital Infrastructure:** India's commitment to expanding its digital infrastructure has been pivotal in connecting remote areas and enhancing online accessibility.
  - This infrastructure serves as the backbone for various **e-governance and financial inclusion initiatives**.
  - India's internet penetration has **grown from 250 million in 2014 to over 970 million by 2023**, with rural areas increasingly being brought online.
    - Over **400,000 Common Service Centres (CSCs)** have been established, directly bridging the digital divide in rural areas.
- **Financial Inclusion Through Digital Payment Systems:** Digital India's thrust on financial inclusion has revolutionized the payment landscape, making financial services accessible to even the most marginalized sections.
  - [UPI \(Unified Payments Interface\)](#) has emerged as a leading tool, driving the digital economy by offering seamless and secure transactions.
  - In FY23, **UPI processed over 8,375 crore transactions** worth ₹139 lakh crore, a sharp increase from 92 crore transactions in FY18.
  - This phenomenal growth shows the role of digital payments in enhancing financial inclusion and streamlining government transfers.

- **Aadhaar- A Catalyst for Service Delivery:** Aadhaar has transformed the way India delivers welfare services, enabling seamless and transparent distribution of subsidies and benefits.
  - With over **138 crore individuals enrolled**, it has become the foundation for the [JAM \(Jan Dhan-Aadhaar-Mobile\) system](#), allowing direct benefit transfers (DBT) to beneficiaries, reducing leakages.
  - For instance, DBT has helped transfer **₹44 trillion directly to citizens, saving an estimated ₹3.48 trillion in leakages.**
- **Digital Literacy and Empowerment:** Through initiatives like the [Pradhan Mantri Gramin Digital Saksharta Abhiyan \(PMGDISHA\)](#), India has worked towards ensuring digital literacy across rural areas.
  - This has empowered citizens, especially in rural India, to engage with digital services like banking, healthcare, and education.
  - As of 2024, **over 48 million rural citizens have been certified under PMGDISHA**, equipping them with essential digital skills.
    - This shift is also supported by the **government's efforts to provide digital training to over 6 crore rural households**, addressing the digital divide and making digital platforms more inclusive.
- **Emerging Technologies Driving Innovation:** India has strategically positioned itself to harness emerging technologies such as **Artificial Intelligence (through IndiaAI Mission, MuleHunter.ai of RBI)**, **Blockchain ([Vishvasya-Blockchain Technology Stack](#))**, and the **Internet of Things (IoT)**.
  - These technologies are now being used in various sectors like agriculture, health, and governance.
  - For example, the **AI-driven chatbot introduced by PM-Kisan has empowered over 5 lakh farmers** by providing real-time updates on eligibility and payment status.
    - India's focus on AI has led to the establishment of AI centres of excellence and recognition as a leader in AI skill penetration globally, as ranked by the Stanford AI Index.
- **E-Governance and Transparent Service Delivery:** The Digital India mission has streamlined government service delivery through e-governance platforms like [UMANG](#), [DigiLocker](#), and **e-Sign, ensuring transparency and efficiency.**
  - UMANG now offers over 2,077 services, with more than 7 crore users accessing government services seamlessly.
  - The digitalization of public services has significantly reduced paperwork and corruption, **as evidenced by over 19 crore e-Signatures issued**, providing legal verification for government documents.
  - Schemes like [SVAMITVA](#) have issued over 2.4 crore property cards and mapped 6.47 lakh villages, thereby ending years of land-related uncertainty.
- **Digital Health Infrastructure and Telemedicine:** India's digital health infrastructure has seen exponential growth, especially through platforms like [eSanjeevani](#), **which provides telemedicine services, and CoWIN**, which facilitated the world's largest vaccination drive.
  - With 38.18 crore patients registered and millions more benefiting from online consultations, these initiatives have ensured that health services reach even the most remote areas.
  - The [Ayushman Bharat Digital Health Mission](#) is set to integrate over **67 million Ayushman Bharat Health Accounts**, improving healthcare accessibility and monitoring across the country.
- **Development of Digital Public Infrastructure (DPI):** India's DPI, epitomized by platforms like Aadhaar, UPI, and DigiLocker, has set a global benchmark in digital governance.
  - These platforms enable secure, interoperable services, enhancing transparency, accountability, and access.
  - As of 2024, **Aadhaar has generated over 2 billion monthly authentication transactions.** These technologies not only streamline public service delivery but also bolster the digital economy, contributing significantly to India's growth as a digital superpower.
- **Skilling and Employment through Technology:** The government's efforts to reskill the workforce through initiatives like [FutureSkills Prime](#) and the **expansion of tech ecosystems** have enhanced India's standing as a technology hub.
  - India has become the world's largest startup ecosystem, **with over 180,000 startups,**

**and is poised to see 60-65 million new jobs** in the digital economy by 2025.

- The **FutureSkills Prime initiative, in partnership with NASSCOM**, has equipped over 1 lakh IT professionals with cutting-edge skills in AI, Blockchain, and IoT, ensuring that India remains at the forefront of the global tech race.
- **Digital Agriculture and Rural Transformation:** The Digital Agriculture Mission is one of India's latest strides towards transforming the agricultural sector.
  - By leveraging digital platforms like **AgriStack** and **Krishi Decision Support Systems (DSS)**, India aims to offer farmers access to better tools for crop planning, weather forecasting, and market linkages.
  - The **Krishi DSS**, for instance, integrates geospatial data to assist farmers with crop yield predictions and disaster management.

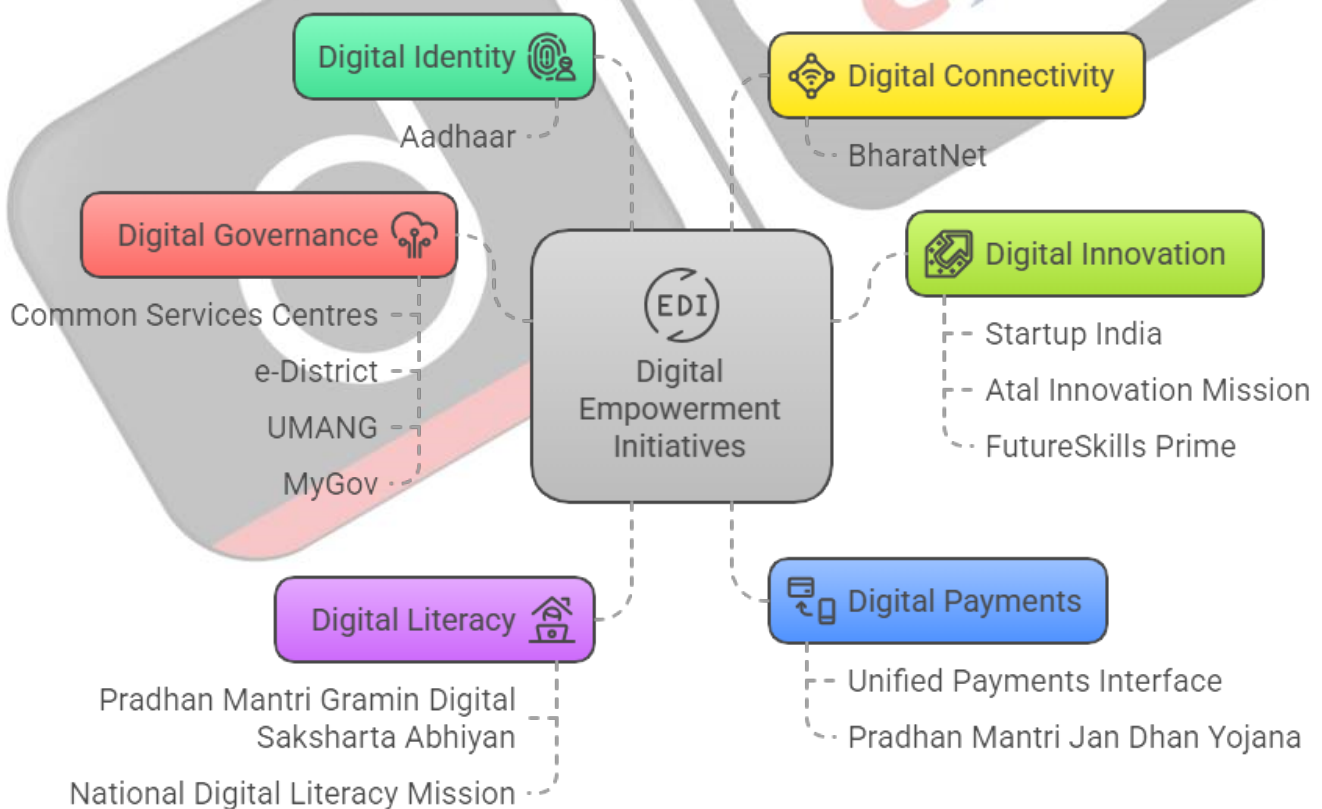
## What are the Key Issues Associated with India's Digital Ecosystem?

- **Digital Divide and Inequality:** Despite significant strides, India's digital divide remains a critical issue, with a stark gap between urban and rural internet access.
  - While urban areas benefit from high-speed connectivity, rural regions still struggle with unreliable internet access.
  - According to the NSSO data, **only 24% of rural Indian households have access to the Internet**, compared to a 66% penetration in cities.
    - This disparity limits the effectiveness of digital initiatives, hindering inclusive growth and preventing equitable access to services like e-health and digital education.
- **Cybersecurity and Data Privacy Concerns:** As India's digital footprint expands, cybersecurity remains a significant challenge, especially **with the increase in cyber-attacks and data breaches**.
  - The rise in digital transactions and the storage of personal data heightens the risks of data theft and privacy violations.
  - **India** emerged as the **second most targeted nation in terms of cyber attacks** in the world as 95 Indian entities came under data theft attacks in 2024.
    - Also, the **number of digital arrest scams and related cybercrimes** in the country almost **tripled between 2022 and 2024**, leaving citizens vulnerable to security threats in an increasingly digital world.
- **Fragmented Digital Infrastructure and Interoperability:** India's digital ecosystem suffers from a **lack of uniformity in its infrastructure, with different states implementing varying levels of digitization**.
  - This fragmentation hampers the seamless delivery of services, especially in a federal system where data-sharing and cross-platform operations are often complex.
  - For instance, **while Aadhaar has made significant inroads**, state-level initiatives like **e-District and e-Governance platforms** often fail to integrate efficiently, leading to disjointed service delivery.
- **Digital Literacy and Skill Gaps:** Despite large-scale programs like **PMGDISHA**, **digital literacy rates remain low**, particularly in rural areas, where people still struggle to adapt to new technologies.
  - The country faces a pressing need for digital upskilling to ensure that its workforce can meet the demands of a rapidly evolving economy.
  - NSS 78th round survey (2020-21) indicates a computer literacy rate of **only 24.7% among individuals aged 15 and above**.
    - Also, a recent **National Skill Development Corporation report** estimates a deficit of **29 million skilled workers**, with demand spiralling in IT and BFSI, creating a significant barrier to full participation in the digital economy.
- **Regulatory and Policy Gaps in Emerging Technologies:** India is yet to fully regulate emerging technologies like **Artificial Intelligence (AI), Blockchain, and IoT**, leading to uncertainty in their adoption across sectors.
  - The absence of comprehensive policy frameworks for these technologies may delay their integration into critical sectors like healthcare, agriculture, and governance.
  - For instance, India currently **lacks specific laws directly addressing generative AI**.

Also, India's copyright framework lacks clarity on AI-generated content.

- The government's recent push for AI **centers of excellence is a step in the right direction**, but a significant push is required to integrate AI in governance.
- **Government-Private Sector Coordination and Vendor Lock-in:** The rapid digitalization efforts in India have led to increased reliance on private tech companies, raising concerns about **vendor lock-in and insufficient coordination between the government and private sector stakeholders**.
  - Government initiatives like **GeM and MyGov** rely heavily on private technology providers, and there is little clarity regarding data ownership and privacy.
  - This creates dependency on a few tech giants, which could hinder the flexibility of India's digital ecosystem and make it vulnerable to monopolistic practices.
    - For instance, while **Aadhaar is managed by the [Unique Identification Authority of India \(UIDAI\)](#)**, a statutory body of the Indian government, the **proprietary technology belongs neither to the government nor the UIDAI**.
- **Digital Exclusion of Marginalized Communities:** While India's digital transformation has been largely successful, certain marginalized communities still face exclusion due to systemic barriers such as lack of access, education, or awareness.
  - **Tribal populations, many backward classes and women in rural areas** remain the most disadvantaged in this digital revolution.
  - For instance, despite efforts like PMGDISHA, **only 1 in 3 women in India (33%)** have ever used the internet ([National Family Health Survey 2019-21](#)).
    - This creates a digital underclass, limiting their access to government services, job opportunities, and social benefits, and exacerbating existing inequalities.

## Indian Government Initiatives for Digital Empowerment





# What Measures can India Adopt to Enhance Digital Empowerment and Inclusion in India?

- **Universal Digital Literacy Program:** To ensure inclusive digital participation, **India should implement a nationwide digital literacy program** that focuses on practical skills for both urban and rural populations.
  - This initiative should **move beyond basic awareness and enable citizens** to use digital tools for **education, financial management, and e-governance**.
  - By embedding digital literacy in school curriculums and offering free online training, the government can equip individuals to navigate the digital ecosystem effectively, reducing exclusion and building confidence in using technology.
- **Expansion of Digital Infrastructure in Remote Areas:** A strategic push towards improving internet connectivity and digital infrastructure in remote areas is essential for bridging the rural-urban divide.
  - **India should prioritize expanding 5G networks in underserved regions** through public-private partnerships and incentivize telecom operators to extend their services.
  - In parallel, **strengthening last-mile connectivity**, such as **satellite internet solutions or low-cost broadband access points**, will empower communities with better access to digital resources and services.
- **Localized Content Creation and Access:** For true digital inclusion, India must focus on **creating and promoting content in regional languages** that caters to diverse cultural and social needs.
  - Government platforms and private enterprises should collaborate to develop **multilingual apps, e-learning platforms**, and government portals that are accessible to non-English speakers.
  - This will enable individuals from various linguistic backgrounds to access essential services, participate in **e-commerce**, and **engage with educational material without language barriers**.
- **Public-Private Partnerships for Digital Skill Development:** India should foster public-private partnerships aimed at reskilling and upskilling its workforce for the digital age.
  - **Collaboration between government bodies, tech giants, and educational institutions** can create specialized training centers to teach high-demand digital skills like coding, cybersecurity, AI, and data analytics.
  - By promoting certification programs and internships, India can enhance employability and foster entrepreneurship, particularly among youth and marginalized communities.
- **Incentives for Digital Startups and Innovations:** To create an ecosystem of digital empowerment, India should introduce **incentives for digital startups focused on solving local challenges in education, healthcare, agriculture, and governance**.
  - Providing **tax exemptions, low-interest loans, and incubators for tech-driven enterprises** will encourage innovation in underserved sectors.
  - Additionally, promoting a **“Make Tech in India” initiative will ensure that digital solutions are culturally relevant, cost-effective, and scalable for the masses**.
- **Strengthening Data Privacy and Cybersecurity Frameworks:** To enhance trust in digital systems, India must urgently strengthen its data privacy and cybersecurity frameworks.
  - Introducing **robust privacy laws and setting up regulatory bodies** to oversee data protection will ensure that digital platforms operate transparently and securely.
  - Public education campaigns on cybersecurity hygiene and safe digital practices, along with better enforcement of data breach protocols, will protect citizens' data and encourage broader digital adoption.
- **Promoting Digital Health Infrastructure in Rural India:** Digital health solutions must be expanded to rural India to empower citizens in managing their health proactively.
  - By developing **telemedicine services, digital health records, and mobile health apps**, India can improve access to medical consultations, diagnostics, and treatments in remote areas.
  - Integration of AI-powered health tools with local health services will enable timely medical interventions and ensure equitable access to healthcare services, bridging the urban-rural healthcare divide.
- **Integrated Digital Governance Platforms:** India can significantly enhance digital inclusion by

integrating various government services into a **single, unified platform that is easy to access and navigate.**

- A **streamlined, transparent digital governance portal** that offers everything from education and welfare benefits to legal services will simplify the public service experience.
- This integration will **not only ensure equitable access but also reduce corruption, delays, and administrative hurdles**, making it easier for citizens to interact with the government.
- **Integrating Digital Literacy into Social Welfare Programs:** Linking digital literacy with existing welfare programs such as **MGNREGA, PDS, and the National Rural Employment Guarantee Scheme (NREGS)** will empower beneficiaries to access these services digitally.
  - By ensuring that every recipient of government aid is digitally literate, the government can streamline service delivery, reduce fraud, and provide timely benefits directly into the hands of those who need them most.
- **Revamping Rural Digital Ecosystems with Integrated Tech Hubs:** The government should promote the establishment of rural digital hubs, which are integrated centers that **offer access to digital services, skill development, and employment opportunities in rural areas.**
  - These hubs can provide essential resources like computers, high-speed internet, and technical training, while also serving as spaces for innovation and community learning.
  - **Such localized tech hubs can stimulate rural entrepreneurship**, connect remote communities to global markets, and create local employment opportunities in the digital sector.

## Conclusion:

India's Digital India mission has truly **transformed the nation by making technology accessible, empowering citizens, and bridging gaps across sectors.** The upcoming **Digital India Act** can further streamline and secure this transformation, ensuring a future where technology remains a tool for equitable progress. After all, **"The power of technology lies not just in its innovation but in its ability to uplift every citizen and bring about inclusive development."**

### **Drishti Mains Question:**

Assess the impact of the Digital India initiative on governance, financial inclusion, and socio-economic empowerment. In your opinion, what further measures should be implemented to address the existing challenges and ensure inclusive digital growth for all segments of society?

## UPSC Civil Services Examination Previous Year Question (PYQ)

### **Prelims**

**Q. Consider the following: (2022)**

1. Aarogya Setu
2. CoWIN
3. DigiLocker
4. DIKSHA

**Which of the above are built on top of open-source digital platforms?**

- (a) 1 and 2 only
- (b) 2, 3 and 4 only
- (c) 1, 3 and 4 only

(d) 1, 2, 3 and 4

**Ans: (d)**

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**Mains**

**Q.** “The emergence of the Fourth Industrial Revolution (Digital Revolution) has initiated e-Governance as an integral part of government”. Discuss. (2020)

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