

Revamping Digital Infrastructure in India

For Prelims: Artificial intelligence, IndiaAl Mission, Large Multimodal Models, Digital Public Infrastructure (DPI), sustainable development, Aadhaar, UPI

For Mains: Challenges and Mitigation of India's Digital Public Infrastructure (DPI), IndiaAl Mission, Boosting Al innovation and startups, Al ecosystem in India

Source: PIB

Why in News?

India's digital infrastructure has evolved rapidly, contributing 11.74% to Gross Domestic Product (GDP) in 2022-23 and projected to reach 20% of GVA by 2029-30.

 To further accelerate this growth, <u>Union Budget 2025-26</u> has sanctioned Rs 2,000 crore for the IndiaAl Mission to develop Al infrastructure and skill-building programs.

What are the Key Achievements in India's Digital Infrastructure Growth?

- Unified Payments Interface (UPI): <u>UPI</u> was launched in 2016, it now powers 49% of global real-time transactions (ACI Worldwide Report 2024).
 - Digital transactions rose from Rs 707.93 crore (2016) to Rs 23.24 lakh crore (2024), with participating banks increasing from 35 to 641. It has expanded to 7 countries, including the UAE, Singapore, and France.
- Internet Infrastructure:
 - Telephone connections increased from 933 million (2014) to 1,188.70 million (2024).
 - Internet connections grew from 25.15 crore (2014) to 96.96 crore (2024), an increase of 285%.
 - Broadband penetration rose by 1,452% from 6.1 crore (2014) to 94.92 crore (2024).
 - BharatNet, launched in 2011 to provide affordable high-speed internet to Gram
 Panchayats has connected 2.14 lakh Gram Panchayats by 2025 with 6.92 lakh km of optical fiber cable laid, and 1.04 lakh Wi-Fi hotspots installed.
- Aadhaar: <u>Aadhaar</u>, launched in 2009, serves as a digital identity framework, linking biometric
 and demographic data. It has enabled <u>direct benefit transfers</u>, <u>financial inclusion</u>, and
 reduced <u>corruption</u>.
 - By March 2023, 136.65 crore Aadhaar cards were issued. Aadhaar face authentication crossed 100 crore transactions (Jan 2025), and E-KYC transactions grew from 0.01 crore (2014) to 1,470.22 crore (2023).
- DigiLocker & UMANG: <u>DigiLocker</u> launched in 2015, provides secure access to digital documents, reducing reliance on physical records.
 - As of February 2025, it has 46.52 crore users, with yearly signups rising from 9.98 lakh (2015) to 2025.07 lakh (2024).
 - <u>UMANG app</u>, launched to integrate e-Gov services, has 7.34 crore registered

users in 2024, up from 0.25 lakh (2017).

- ONDC & GeM: ONDC (launched in 2022) promotes fair e-commerce competition, benefiting <u>MSMEs</u>. By <u>December 2024</u>, it expanded to 616+ cities, with 7.64 lakh sellers and 154.4 million orders.
 - <u>GeM</u>, launched in 2016, streamlines government procurement with Rs 4.09 lakh crore GMV in FY 2024-25, supporting 1.6 lakh buyers and 22.5 lakh sellers, fostering transparency and efficiency for small enterprises.
- BHASHINI: <u>BHASHINI</u> has enhanced digital access in 22+ Indian languages, facilitating 100 million+ inferences monthly and has over 500,000 app downloads, promoting inclusive digital governance and bridging linguistic divides.

What is IndiaAl Mission?

- About: The <u>IndiaAl Mission</u> is a flagship initiative launched by the Government of India aimed at creating a comprehensive Al ecosystem to foster innovation, research, and development in Al.
- Objective: It aims to build a robust AI ecosystem by establishing high-performance computing
 infrastructure, enhancing data quality and AI models, promoting indigenous AI technologies, and
 fostering innovation in sectors like healthcare, agriculture, and governance.
 - It also focuses on supporting AI <u>startups</u>, attracting talent, and ensuring ethical AI practices.
- Budgetary Allocation: Rs 2,000 crore has been allocated for 2025-26, which is nearly a fifth of the scheme's total outlay.
- Key Components:
 - Al Center of Excellence: It aims at integrating Al technologies into the curriculum to enhance educational outcomes. The Union Budget 2024-25 allocates Rs 500 crore for this.
 - Additionally, 3 Al centers in agriculture, health, and sustainable cities, announced in 2023, will continue to receive support.
 - IndiaAl Innovation Centre
 - IndiaAl Datasets Platform
 - IndiaAl Application Development Initiative
 - IndiaAl FutureSkills
 - IndiaAl Startup Financing
 - Safe & Trusted Al

Conclusion

India's digital infrastructure has significantly boosted economic growth, governance efficiency, and financial inclusion. To sustain this progress and achieve a 'Viksit Bharat' by 2047, the focus must shift to enhancing cybersecurity, expanding 5G, and promoting digital literacy. Leveraging its digital capabilities, India can drive sustainable development, improve service delivery, and empower citizens in the digital era.

Drishti Mains Ouestion:

What are the objectives and key components of the IndiaAl Mission? How does it aim to transform India's Al landscape?

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

- Q. With the present state of development, Artificial Intelligence can effectively do which of the following? (2020)
 - 1. Bring down electricity consumption in industrial units

- 2. Create meaningful short stories and songs
- 3. Disease diagnosis
- 4. Text-to-Speech Conversion
- 5. Wireless transmission of electrical energy

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 5 only
- (b) 1, 3 and 4 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

Ans: (b)

Mains

- **Q.** What are the main socio-economic implications arising out of the development of IT industries in major cities of India? (2022)
- **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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