

6. Digital Public Infrastructure -economy

India is transforming from a major user of digital systems to a builder of population – scale digital infrastructure, distinguished by its scale, openness, and integration

WHAT'S IN THE NEWS?

1. Digital Public Infrastructure (DPI)

1. Meaning and Concept of DPI

1. Digital Public Infrastructure (DPI) refers to a set of foundational digital systems and platforms that enable governments, businesses, and citizens to access services securely and efficiently.
2. These systems are interoperable, inclusive, and scalable, forming the backbone for delivering public services and facilitating economic activity.
3. DPI typically consists of three core digital layers –
 1. Digital Identity
 2. Digital Payments
 3. Data Exchange Platforms
4. India's DPI model connects these layers to create public digital rails, allowing government services, financial transactions, and data exchange to operate seamlessly.
5. The model demonstrates that digital infrastructure can be designed as a public good, improving governance efficiency while expanding access to services.

2. Foundations of India's Digital Public Infrastructure

1. JAM Trinity (Jan Dhan – Aadhaar – Mobile)

1. India's DPI architecture evolved through the integration of identity, banking access, and digital connectivity, known as the JAM Trinity.
2. The JAM framework enables direct and efficient interaction between the state and citizens, particularly for welfare delivery.

Aadhaar – Digital Identity Layer

1. Aadhaar provides a biometric – based unique digital identity for residents of India.
2. Over 144 crore Aadhaar numbers have been issued, making it one of the largest digital identity systems in the world.
3. In 2024–25, more than 2,707 crore Aadhaar authentications were carried out.
4. Aadhaar enables –
 1. Instant identity verification
 2. Portability of services across states
 3. Reduction in identity fraud and duplication

Jan Dhan Yojana – Financial Inclusion

1. The Pradhan Mantri Jan Dhan Yojana (PMJDY) expanded access to formal banking services.
2. Bank accounts increased from 14.72 crore in 2015 to 57.71 crore by March 2026.
3. Deposits under the scheme reached ₹2.94 lakh crore.
4. Nearly 40 crore RuPay debit cards have been issued.
5. Jan Dhan accounts enable –
 1. Direct benefit transfers (DBT)
 2. Financial inclusion of rural and low – income households
 3. Integration with digital payment systems.

Mobile Connectivity – Digital Access

1. Rapid expansion of telecom infrastructure ensured widespread digital access.
2. Around 85.5% of households now own smartphones.
3. 5G coverage has reached 99.9% of districts, significantly improving connectivity.
4. Mobile phones act as the primary interface for accessing digital public services, banking, education, and healthcare.

3. Sectoral Expansion of India's Digital Public Infrastructure

1. Digital Economic Infrastructure

Unified Payments Interface (UPI)

1. UPI is India's real - time digital payment system enabling instant bank - to - bank transfers.
2. In January 2026, UPI processed 21.7 billion transactions.
3. It accounts for around 81% of India's retail digital payments.
4. UPI has revolutionized cashless transactions and financial inclusion.

Public Financial Management System (PFMS)

1. PFMS tracks and manages government financial transactions and welfare payments.
2. Through Direct Benefit Transfer (DBT), the system has transferred ₹49.09 lakh crore directly to beneficiaries.
3. PFMS improves transparency, accountability, and reduction of leakages in welfare schemes.

Open Network for Digital Commerce (ONDC)

1. ONDC is an open and interoperable digital network for e - commerce.
2. It connects 1.16 lakh+ sellers across more than 630 cities.
3. The platform aims to democratize digital commerce and reduce the dominance of large e - commerce platforms.

Government e - Marketplace (GeM)

1. GeM is an online platform for government procurement of goods and services.
2. It has processed 3.27 crore orders worth ₹16.41 lakh crore.
3. The platform has enabled significant participation by Micro and Small Enterprises (MSEs).

2. Citizen Service Delivery Platforms

DigiLocker

1. DigiLocker is a secure digital document storage platform.
2. It has 67.63 crore users and hosts over 950 crore digital documents.
3. Citizens can store and share official documents such as driving licences, academic certificates, and Aadhaar.

UMANG (Unified Mobile Application for New - age Governance)

1. UMANG provides access to 2,400+ government services through a single mobile application.
2. The platform has 10.25 crore users and over 723 crore transactions.
3. Services include -
 1. Utility payments
 2. Pension services
 3. Passport and employment services.

e - Courts Mission Mode Project

1. The e - Courts project aims to modernize India's judicial system using digital technologies.
2. Key features include -
 1. Online filing of cases
 2. Digital payments
 3. Video conferencing for hearings
 4. AI - enabled case management.
3. Phase III (2023-2027) aims to create fully digitised and paperless courts.

3. Digital Health and Nutrition Ecosystem

CoWIN Platform

1. CoWIN was developed to manage the COVID - 19 vaccination programme.
2. It handled 220 crore vaccine doses with real - time tracking.
3. The platform demonstrated India's ability to manage population - scale digital health systems.

eSanjeevani Telemedicine Platform

1. eSanjeevani provides online consultations and telemedicine services.
2. It has served 45.42 crore patients through 2.3 lakh healthcare providers.
3. It improves healthcare access in remote and rural areas.

National Health Platforms

Other important digital health systems include –

1. eHospital and Online Registration System (ORS) – digitising hospital management and patient services.
2. Aarogya Setu – evolving into a national health app integrating lab reports, prescriptions, and consultations.
3. National Non – Communicable Diseases Platform – tracking 74.97 crore beneficiaries for lifestyle disease management.
4. POSHAN Tracker – monitoring nutrition services for 8.9 crore children across 14.03 lakh Anganwadi centres.

4. Digital Education and Skill Development

DIKSHA Platform

1. DIKSHA is a national digital platform for school education and teacher training.
2. It has delivered 566 crore learning sessions to 2.11 crore users.
3. Over 12.69 crore digital certificates have been issued.
4. It supports students, teachers, and administrators across multiple states and education boards.

Skill India Digital Hub

1. Launched in 2023, the Skill India Digital Hub integrates –
 1. Skill training
 2. Certification programs
 3. Job discovery platforms
 4. Government skilling schemes.
2. The platform connects learners with employers, aligning workforce skills with industry needs.

5. Digital Governance and Administrative Coordination

e – Office

1. e – Office enables paperless government administration.
2. It improves efficiency in file movement, decision – making, and record management.

API Setu

1. API Setu, launched by the Ministry of Electronics and IT in 2020, enables secure data exchange across government departments and institutions.
2. The platform hosts over 8,036 APIs connecting more than 10,530 organisations.
3. It ensures interoperability between digital platforms.

PM GatiShakti Platform

1. PM GatiShakti is a GIS – based platform for integrated infrastructure planning.
2. It coordinates projects across multiple ministries and states.
3. Around 352 infrastructure projects worth ₹16.10 lakh crore have been evaluated through the platform.

3. India's Digital Public Infrastructure Diplomacy

1. Global Outreach and Collaboration

1. India is actively promoting its DPI model globally, positioning it as a scalable and inclusive framework for digital governance.
2. The initiative reflects the philosophy of “Vasudhaiva Kutumbakam” (the world is one family).
3. India has signed agreements with 24 countries to share expertise on –
 1. Digital identity systems
 2. Digital payments infrastructure
 3. Data exchange platforms

4. Digital public service delivery.

2. India Stack Global

1. India Stack Global provides technical support and digital architecture for countries seeking to build population – scale digital systems.
2. It enables partner nations to adopt modular and interoperable digital infrastructure.

3. Global DPI Repository

1. The Global DPI Repository was launched during India's G20 Presidency in 2023.
2. It serves as a knowledge platform for sharing best practices and lessons in digital infrastructure development.

4. Open – Source Digital Platforms

CoWIN as Global Digital Public Good –India offered **CoWIN as open – source software** to help other countries manage vaccination programs.

MOSIP (Modular Open Source Identity Platform)

1. MOSIP is an open – source digital identity framework.
2. It allows countries to build sovereign and secure national identity systems.
3. More than 25 countries have adopted or are exploring MOSIP.

4. Significance of India's DPI Model

1. Inclusive Development –DPI enables universal access to financial services, welfare schemes, and government services, reducing social and regional inequalities.

2. Efficient Governance –Digital platforms improve transparency, reduce corruption, and enhance administrative efficiency.

3. Economic Growth –Digital infrastructure supports digital commerce, fintech innovation, and entrepreneurship, strengthening the digital economy.

4. Global Digital Leadership –India's DPI framework is increasingly seen as a model for developing countries seeking affordable digital infrastructure solutions.

Conclusion

India's Digital Public Infrastructure represents a transformational governance model that integrates identity, payments, and data exchange into a unified digital ecosystem. By treating digital systems as public goods, India has enhanced welfare delivery, financial inclusion, and economic participation at an unprecedented scale. As countries worldwide seek scalable digital solutions, India's DPI model is emerging as a global benchmark for inclusive, secure, and interoperable digital governance in the twenty – first century.

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