NEXT IAS

DAILY EDITORIAL ANALYSIS

TOPIC

Remarkable Journey of Digital Public Infrastructure

REMARKABLE JOURNEY OF DIGITAL PUBLIC INFRASTRUCTURE

In Context

- In this age of rapid technological advancement, India has embarked on a remarkable journey of deploying **Digital Public Infrastructure (DPI)** which has reshaped the nation's socio-economic landscape.

Digital Public Infrastructure (DPI)

- Digital Public Infrastructure (DPI) refers to the **foundational digital infrastructure** and platforms created by governments to facilitate the delivery of digital services to citizens.
- It encompasses a range of technologies and systems designed to improve the efficiency, accessibility, and inclusivity of public services in the digital age.
- **Foundational elements of DPI** are like:
    - **Digital Identification Systems:** Programs like Aadhaar in India that provide a unique digital identity for citizens.
    - **Payment Infrastructure:** Platforms like Unified Payments Interface (UPI) in India that facilitate secure and efficient digital payments.
    - **Data Exchange Solutions:** Frameworks that enable secure and standardized exchange of data between different entities.

Scenario in India

- India boasts the highest number of digital transactions, surpassing even the combined figures of the US, China, and Europe.
    - The digital economy is booming, projected to reach a staggering $1 trillion by 2025.
- This growth is fuelled by a massive internet user base, with over 7**59 million Indians actively connected,** with a significant portion residing in rural areas.
- The a**mbitious Aadhaar programme**, a digital ID system, has enrolled nearly **1.3 billion citizens,** facilitating efficient delivery of welfare services, financial transactions, and access to government schemes.
- Similarly, the **Unified Payments Interface (UPI) is witnessing exponential** growth, expected to reach a billion transactions daily by 2026.
- **Broadband connectivity** has also seen a significant leap, reaching over 93 per cent of Indian villages.
    - These milestones reflect India's unwavering commitment to building a digitally empowered and inclusive society.

Advantages & Achievements of Robust DPI

- The emergence of DPI has ushered in an era of e-governance, with **citizens gaining online access** to a wide range of government services.
- DPI empowers individuals and businesses to participate in the **digital economy, regardless of location or socioeconomic background.**
- India's DPI initiatives, often referred to as the **India Stack**, have been **instrumental in boosting productivity, improving efficiency**, and generating **employment opportunities**.
- A robust digital infrastructure fosters **global connectivity, financial inclusion, and innovation.**
- It serves as a springboard for entrepreneurs and businesses.
- DPI is also **transforming education** through e-learning and healthcare through telemedicine, paving the way for a more equitable and accessible future.
- The true power of DPI was evident during crises.
    - Initiatives like the Garib Kalyan Yojana, which utilised digital banking infrastructure for direct benefit transfers, **ensured swift and transparent delivery of financial assistance to millions during the pandemic**.

- ◆ Digital platforms also facilitated access to vital information, healthcare services, and emergency assistance, leaving no one behind.

Governments steps

- The government's programmes like the **National Optical Fibre Network (NOFN), Digital India, National Broadband Mission**, and **National Data Centre Policy** have laid the groundwork for a robust digital infrastructure.
- **The Bharat Net Project,** with its ambitious goal of connecting villages through high-speed internet, serves as a prime example.
- Additionally, the government's commitment is evident in **establishing Wi-Fi hotspots in public spaces** and fostering domestic production of telecom equipment through **Production Linked Incentive schemes.**
- The government has undertaken monumental steps to advance DPI.
    - ◆ Th**e Jan Dhan-Aadhaar-Mobile (JAM) trinity** has resulted in millions of new bank accounts and streamlined direct benefit transfers, eliminating leakages and ensuring targeted delivery of welfare programmes.
- Initiatives like **Ayushman Bharat Mission and Unified Logistics Interface Platform (ULIP)** are transforming healthcare and logistics sectors respectively.
- Innovative solutions such as **digilockers and authentication** frameworks empower citizens with secure storage and access to vital documents.
- D**igital platforms like ONDC** are further empowering small businesses by providing a global marketplace.
- Portals like the **National e-Governance Plan (NeGP)** offer a one-stop platform for everything from birth certificates to land records.
    - ◆ This digitalization has streamlined processes, reduced bureaucracy, and enhanced transparency.

Challenges

- The digital divide still persists, and ensuring equitable access to technology and internet connectivity remains a priority.
- Inadequate digital infrastructure, lack of digital literacy still exist
    - ◆ structural weaknesses could hamper the adoption of innovative digital solutions
- **Concerns regarding accountabilit**y and **data protection** also require careful consideration.
- **Cyberattacks** and breaches of data privacy are emerging challenges that governments face in this digital age

Conclusion and Way Forward

- Digital Public Infrastructure is crucial in addressing important global challenges such as climate change and the need for responsive and effective public finance.
- It's important to engage in infrastructure-first thinking to catalyse the ecosystem to create solutions that empower people and protect our planet.
- Looking ahead, India has immense potential to lead the global conversation on DPI development.
- India can serve as a role model for developing nations, promoting multilateral dialogue to establish universal standards and fostering sustainable financing models for global DPI development.

Mains Practice Question
Q. What are the transformations brought about by India's Digital Public Infrastructure? Discuss the emerging challenges and ways to tackle them .

■■■■