



Shaping India's Techade

This editorial is based on [“The Design Principles We Should Employ To Shape India's Techade”](#) which was published in Livemint on 08/06/2022. It talks about the concept and key elements of India's 'Techade'.

For Prelims: India's Techade, SDGs, Digital India, Green technology, Internet of Things, Cloud Computing, Artificial Intelligence, Cybersecurity

For Mains: Roadblocks to India's technological development, Digital India and India's Tech Revolution, Steps that India can take to tackle slow development in technology, India's Vision of Techade

With the deadline for the [2030 Sustainable Development Goals](#) approaching, we are running out of time to tackle mega challenges, from the climate crisis to our need for inclusion and better healthcare and education for all. And the only way to solve these problems is by **significantly raising our [ability to leverage technology](#)**.

The [United Nations General Assembly](#) back in 2019 underscored that the next 10 years must be a [“Decade of Action”](#). **Technology is the key enabler** of this decade of action, and for it to become real, we would have to unlock the real power of technology as a tool for problem-solving.

The Concept of 'Techade'

What does Techade mean?

- Techade is a **portmanteau of technology and decade** i.e., a decade powered by the impact of technology. The concept gained salience right before the world was disrupted by the Covid-19 outbreak.
 - The pandemic has actually, exponentially upped the urgency and role of technology in finding solutions to some of the most daunting challenges faced by humankind.
- To bring the idea of a techade to success, the key point of consideration should be the design principles that would ultimately shape this decade into India's own techade.
 - It should not only come to mean **an increased use of technology** but stand for **impact, especially human-centric**.

How well has India conceived the Idea of Techade?

- **India as a Hub for Innovation:** India is fast becoming such a hub for the world. At present, **nearly every Fortune 500 company has an R&D centre in India**.
 - These aren't back offices for secondary tasks, but **front-end leaders of the innovation charters** of companies.
 - The Fortune 500 is an annual list compiled and published by Fortune magazine that ranks

500 of the largest US corporations by total revenue for their respective fiscal years.

- **Digital India Programme:** The major initiative in technology adoption is the **Digital India programme** - a flagship programme of the Government of India with a vision to **transform India into a digitally empowered society and knowledge economy**.
 - In July 2021, addressing a virtual event to mark the completion of **six years of Digital Indian programme**, the Prime Minister of India described the decade 2021-30 as India's Techade wherein the **data** and **demographic dividend** combined with **India's proven tech prowess** will play a massive role in the growth and development of the country.
- **Financial Inclusivity:** No country has been able to demonstrate the power of inclusive scale as India has done in the past few years.
 - India rolled out several inclusion initiatives to drive financial inclusion across a population of about 1.4 billion.
 - Through the **Jan Dhan Yojana**, India has seen the **opening of 430+ million bank accounts** resulting in over 80% Indians now having bank accounts.
 - India's flagship digital payments platform, the **Unified Payments Interface (UPI)**, recorded its **highest ever number of transactions** in April 2022 at 5.58 billion (**worth ₹9.83 trillion in value**).

// Nine Pillars of Digital India

● TARGETS ● COST

1 Broadband Highways
Broadband in 2.5 lakh gram panchayats by Dec 2016; Virtual network operators and smart buildings in cities; National Information Infrastructure by March 2017
₹ 47,686 cr

2 Universal Mobile Access
Cover rest of 42,300 villages by FY18
₹ 16,000 cr

4 E-Governance: Reforming Govt through Technology
Simplify forms, create online repositories for school certificates, IDs Integration of services and platforms (Aadhaar, payment Gateway); automate govt workflow; redress grievances

5 E-Kranti - Electronic Delivery of Services
E-education, broadband, free WiFi, online courses. * E-healthcare, online consultation/records/supply. Full coverage in three years; online cash, loan. Information for farmers, financial inclusion e-courts, e-police, e-prosecution

3 Public Internet Access Programme
Common Service Centres in 2.5 lakh villages by March 2017; 15 lakh post offices to offer multiple services
₹ 4750 cr

6 Information for All
Online hosting of information & documents; Govt engages via social media. Little addition resources needed

7 Electronics Manufacturing – Target Net Zero Imports
Focus on semi-conductor fabrication plants, fabless design, set-top boxes, VSATs, mobiles, consumer & medical electronics, smart energy meters, smart cards, micro-ATMs

8 IT for Jobs
Train 1 crore people in towns/villages in five years (new); three lakh agents to run viable businesses delivering IT services (ongoing); five lakh rural IT workforce in 5 years; BPO in every NE state
₹ 200 cr

9 Early Harvest Programmes
Biometric attendance by Oct; WiFi in all varsities secure govt email hotspots in cities with pop > 1 million/tourist centres; ebooks; SMS-based disaster alerts weather info
₹ 900 cr

What are the Impediments to Fulfilling the Idea of Techade?

- **Brain-Drain:** India's failures are linked to its inability to make use of the market-driven growth opportunities consequently leading the talented people out to countries like the U.S. for job

opportunities.

- As of 2019, there were **2.7 million Indian immigrants in the U.S** who are **among the most educated and professionally accomplished communities** in that country.
- **Gradual Decline in R&D Spending:** In 1991, when India embraced markets and globalisation, it should have redoubled efforts to strengthen its technological capabilities.
 - However, the spending on research & development as a proportion of GDP declined in India (**0.85% in 1990-91 to 0.65% in 2018**).
 - In contrast, this proportion increased over the years in China and South Korea to reach 2.1% and 4.5%, respectively, by 2018.
- **Lesser Public Spending for Tertiary Education:** An overwhelming proportion of tertiary students in India are enrolled in private institutions.
 - According to the [Organisation for Economic Cooperation and Development \(OECD\)](#), It was 60% for those enrolled for a bachelor's degree in 2017, while the average for G20 countries was 33%.
- **High Import of Electronic Items:** India is a large market for all kinds of new technologies. However, the **domestic industry has not yet managed to derive the benefits**.
 - The country is operating far below its potential in electronic manufacturing, **electronic goods and components are the second largest item in India's import bill** after oil.
 - As of 2020-21, India's **imports are almost five times its exports** in this technology sector.
- **Other Roadblocks:** In the successful implementation of the Digital India Programme, there are many roadblocks like **digital illiteracy, poor infrastructure, low internet speed, connectivity issues, lack of coordination** among various departments, **issues pertaining to taxation** etc.

What should be the Key Elements of this Tech-Revolution?

- **Disruption:** 'Disruption' is the action of completely changing the traditional way an industry or market operates by using new methods or technology.
 - This is the need of the techade that's underway as the **status quo of technology adoption will not suffice**.
- **Innovation and Impact:** This techade should see technology **move from 'potential' to 'real life problem solving and impact'**. Given the urgency, we have to make innovation count like never before in order to solve real problems.
- **Inclusivity:** The techade has to be about scale, while moving towards achieving the SDGs, it must be ensured that no one gets left behind.
 - As we innovate, **inclusion and security must be built into the design process** from the very start.
- **Ethical Use of Tech:** Responsibility must be borne by the Governments to ensure that we use technology as an **equaliser and enabler of a better life for all**.
 - It is imperative to come up with an **ethical framework for using technology** to minimise risks as much as possible.
 - The techade must be **shaped from a human-centric lens**.

What should be the Key Areas of Focus?

- **Keeping with the Global Standards:** Technology is going to be the key driver of the global economy in the next 20 years.
 - To take full advantage of the techade, India will need to play a **constructive role in joining and shaping global standards** that are currently in evolution - around [privacy](#), [data localisation](#), [tax laws](#), the definition of [monopolies](#), [cyber security](#), [immigration and predictability of regulations](#).
- **Looking out for Growth Opportunities:** The techade offers tremendous growth opportunities for the Indian industry.
 - There is immense potential in **green technology** and sustainability solutions, [Internet of Things](#), [cloud computing](#), [artificial intelligence](#) and analytics, digital twins, cybersecurity, [blockchain](#), and applications like green building, [carbon footprint management](#), weather monitoring and forecasting, air and water pollution monitoring, forest monitoring, crop monitoring, [soil condition/moisture monitoring](#) and water

purification.

- All this was valued at \$10.32 billion in 2020, and is projected to reach \$74.64 billion by 2030.

- **More Public Spending on Education:** The '[Make in India initiative](#)' will have to go beyond increasing the 'ease of business' for private industry. Indian industry needs to deepen and broaden its technological capabilities.
 - This will happen only if **universities and public institutions in the country are strengthened** and emboldened to enter areas of technology development for which the private sector may have neither the resources nor the patience.
- **Strengthening the Public Sector:** A strengthened public sector will create **more opportunities for private businesses** and **widen the entrepreneurial base**.
 - Small and medium entrepreneurs will flourish when there are mechanisms for the diffusion of publicly created technologies, along with greater availability of bank credit and other forms of assistance.

Drishti Mains Question

The Prime Minister, in his virtual address at the event marking the completion of six years of Digital India programme described the ongoing decade as India's Techade. What factors should be considered as the key elements to bring this idea of techade to success?

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Q. Which of the following is/are the aim/aims of "Digital India" Plan of the Government of India? (2018)

1. Formation of India's own Internet companies like China did.
2. Establish a policy framework to encourage overseas multinational corporations that collect Big Data to build their large data centres within our national geographical boundaries.
3. Connect many of our villages to the Internet and bring Wi-Fi to many of our schools, public places and major tourist centres.

Select the correct answer using the code given below:

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

Ans: (b)