

# ACCELERATING TELANGANA: POWERING INDIA'S DIGITAL ECONOMY THROUGH DATA CENTRES, AI AND, CLOUD

28<sup>th</sup> May 2026, Hyderabad





# Table Of CONTENTS

---

Executive Summary .....	1
Introduction .....	3
1. India's Digital Infrastructure Evolution.....	5
2. Telangana as a Strategic Data Centre & Cloud Hub.....	8
3. Strategic Impact of Data Centres, AI & Cloud .....	10
4. Industry Value Proposition.....	13
5. Key Challenges & Recommendations .....	15
6. Economic & State-Level Impact for Telangana.....	18
7. Integration of Cloud Infrastructure (Key Focus Area).....	21
8. Role of AI in Driving Demand & Innovation (Key Focus Area) .....	22
9. Sustainability & Future-Ready Infrastructure .....	23
10. Investment Outlook & Roadmap (2026–2030).....	24
11. Policy Recommendations & Call to Action.....	25
Conclusion.....	26
About ASSOCHAM .....	27





## *Foreword*



India's digital economy is entering a defining decade powered by Artificial Intelligence, cloud computing, hyperscale infrastructure, and data-driven innovation. In this transformation, data centres are no longer viewed merely as technology assets, but as strategic infrastructure critical to economic growth, governance, and national competitiveness. Telangana recognised this opportunity early and has been building a future-ready ecosystem that positions Hyderabad among the leading digital infrastructure destinations in Asia.

Over the last couple of years, Hyderabad has emerged as one of India's most trusted technology hubs with a strong ecosystem of global technology companies, Global Capability Centres (GCCs), startups, research institutions, and innovation platforms. Today, the city is rapidly becoming a preferred destination for hyperscalers, AI-driven workloads, cloud infrastructure, and advanced computing ecosystems. Global leaders like Microsoft, Amazon, Google, Meta Platforms, along with CtrlS, Iron Mountain, and State Street Corporation, are already investing over \$20 billion in Telangana. Together, these investments are expected to create close to 2 gigawatts of hyperscale data centre capacity, further strengthening Hyderabad's position as one of India's fastest-growing digital infrastructure hubs.

As AI adoption accelerates globally, the demand for high-density compute infrastructure, GPU-enabled data centres, and scalable cloud ecosystems will grow exponentially. Telangana is preparing proactively for this future with a clear vision to enable 5 GW of data centre capacity by 2030. Our focus is not only on attracting investments, but also on building sustainable, energy-efficient, and globally competitive digital infrastructure powered increasingly by renewable energy integration, strong connectivity, and future-ready policies.

I congratulate ASSOCHAM and PwC for bringing together this important report, "Accelerating Telangana: Powering India's Digital Economy through Data Centres, AI & Cloud." I am confident this report will contribute meaningfully to discussions among policymakers, industry leaders, investors, and ecosystem stakeholders as we collectively shape the next chapter of India's digital growth story. Telangana remains committed to partnering with global industry leaders to build a secure, scalable, and innovation-led digital future.

### **Shri Duddilla Sridhar Babu**

Hon'ble Minister for Information Technology,  
Electronics, Communications, Industries & Commerce, and Legislative Affairs  
Government of Telangana



## *Message from* **The President, ASSOCHAM**



The rapid growth of AI, cloud computing, digital services, and data-driven enterprises is reshaping infrastructure requirements across economies worldwide. In India, this transition is creating significant demand for scalable, secure, energy-efficient, and investment-ready digital infrastructure ecosystems. Data centers are no longer viewed only as technology assets; they are increasingly becoming strategic infrastructure supporting economic growth, digital governance, innovation, and industrial competitiveness.

In this context, ASSOCHAM along with PwC is pleased to present the report titled “Accelerating Telangana: Powering India's Digital Economy through Data Centers, AI & Cloud” on the occasion of the 10th Smart Datacenters, Cloud & AI Summit 2026.

The report examines Telangana's emerging role in India's digital infrastructure landscape and evaluates the state's readiness to support the next phase of growth in data centers, cloud infrastructure, and AI-led computing. It highlights the factors that are strengthening Hyderabad's positioning as a preferred destination for digital infrastructure investments, including policy support, power availability, connectivity, talent ecosystem, and enterprise demand.

At the same time, the report brings attention to critical operational and policy challenges faced by the industry, including power costs and renewable integration, land and zoning constraints, network readiness, regulatory coordination, and availability of specialized talent for AI and data center operations. Addressing these issues through coordinated action between government and industry will be essential to sustain long-term growth and competitiveness.

The report also outlines practical recommendations aimed at enabling faster project execution, improving ease of doing business, supporting sustainable infrastructure development, strengthening digital connectivity, and encouraging greater investments in AI-ready and cloud-enabled infrastructure. These recommendations are intended to support policymakers, industry leaders, infrastructure developers, and ecosystem stakeholders in shaping a future-ready digital infrastructure framework for Telangana.

As India's digital economy continues to expand, states that can provide reliable infrastructure, policy predictability, energy readiness, and innovation ecosystems will emerge as strategic growth centers. Telangana has the opportunity to strengthen its position as a leading destination for hyperscale infrastructure, enterprise cloud adoption, and AI-driven investments.

We hope this report serves as a constructive reference for government and industry stakeholders and contributes to ongoing discussions around strengthening India's digital infrastructure ecosystem.

### **Nirmal Kumar Minda**

President , ASSOCHAM &  
Chairman, Uno Minda Group



## *Message*

# Secretary General, ASSOCHAM



The growth trajectory of India's data center and cloud market is increasingly being shaped by rising AI workloads, enterprise digitalization, data localization requirements, and expanding digital public infrastructure. As investments in digital infrastructure accelerate, states that can offer execution readiness, policy clarity, energy access, and ecosystem support will play a critical role in enabling the next phase of India's digital economy.

This report, *"Accelerating Telangana: Powering India's Digital Economy through Data Centers, AI & Cloud"*, has been developed jointly by ASSOCHAM and PwC to provide a practical industry perspective on the opportunities and implementation priorities emerging across the digital infrastructure sector.

The report focuses on the evolving requirements of data center developers, hyperscalers, cloud providers, enterprises, and AI infrastructure players while examining Telangana's preparedness to support large-scale infrastructure growth. It brings together insights on investment trends, infrastructure demand, policy frameworks, sustainability considerations, and operational challenges impacting the sector.

One of the key objectives of this report is to support informed discussions between policymakers and industry stakeholders on areas requiring focused attention. These include faster approvals, availability of high-quality power infrastructure, renewable energy integration, network expansion, land readiness, and development of specialized talent for AI and data center operations.

The report also highlights how AI is influencing infrastructure design and capacity planning, particularly with the increasing demand for high-density compute environments, GPU infrastructure, low-latency connectivity, and scalable cloud ecosystems. These developments are expected to significantly shape future investments in digital infrastructure over the coming years.

Telangana has made notable progress in creating a conducive environment for technology-led investments, and Hyderabad continues to strengthen its position as a strategic location for digital infrastructure deployment. Going forward, sustained focus on infrastructure readiness, coordinated policy implementation, and ecosystem development will be important to maintaining this momentum and attracting long-term investments.

We hope this report serves as a useful reference for government authorities, industry leaders, investors, and ecosystem stakeholders working toward strengthening Telangana's position as a leading hub for Data Centers, AI, and Cloud infrastructure.

**Saurabh Sanyal**

Secretary General, ASSOCHAM



## *Message*



India stands at an inflection point in its digital infrastructure journey. As data volumes grow exponentially and emerging technologies such as AI, advanced analytics, and cloud-native platforms redefine how enterprises and governments operate, **data centres and cloud infrastructure have become critical nation-building assets.**

Telangana has demonstrated a clear and forward-looking vision in this regard. Through progressive policies, proactive governance, and a strong focus on sustainability and innovation, the state is rapidly positioning itself as a preferred destination for **hyperscale data centres, AI-driven workloads, and next-generation cloud ecosystems.** Hyderabad's evolving role as a digital infrastructure hub reflects not only an economic opportunity, but also India's ambition to build resilient, secure, and globally competitive technology foundations.

PwC is pleased to partner with **ASSOCHAM** as the **Knowledge Partner** for the *10th India Smart Datacentres and Cloud Infrastructure Summit*, organised in association with the **Government of Telangana.** This engagement is part of PwC's continued commitment to supporting governments and industry stakeholders in shaping future-ready digital infrastructure that balances growth, sustainability, and trust.

This knowledge report has been developed in response to discussions with ASSOCHAM and government stakeholders and aims to provide a structured perspective on:

- Key trends shaping India's data centre and cloud infrastructure landscape
- The growing role of AI and digital services in driving infrastructure demand
- Policy, regulatory, and ecosystem enablers required to scale responsibly
- Telangana's strategic opportunity to emerge as a regional and global hub

We trust that the insights presented in this report will help inform dialogue, encourage collaboration, and support informed decision-making among policymakers, investors, and industry leaders. We look forward to engaging in constructive discussions at the summit and contributing to Telangana's journey towards becoming a leading digital infrastructure powerhouse.

**Shivendra Singh**

Partner

PwC India



# Executive Summary



Telangana is rapidly emerging as a progressive, technology driven state, pioneering bold initiatives across AI, data centres, quantum computing, climate tech, very large-scale integration (VLSI), robotics, hardware and automation. With AI (AI) and deep tech embedded across every sector, the state will unlock breakthrough gains in productivity, resilience, and service delivery. From healthcare and agriculture to governance and advanced manufacturing, AI-enabled systems will drive smarter decisions, seamless operations, and significantly enhance citizen experiences.

Telangana has attracted huge investments in digital infrastructure investments. These investments are expected to significantly boost India's digital economy, strengthen data sovereignty, and accelerate cloud adoption across industries.

Telangana is positioning itself as India's digital powerhouse by investing heavily in data centres, AI innovation hubs, and cloud infrastructure, with Hyderabad emerging as a national leader. The state's initiatives—such as the Telangana AI Innovation Hub, Bharat Future City<sup>1</sup>, and TGDEx<sup>2</sup>—are designed to accelerate India's digital economy while ensuring sustainability and global competitiveness.

Developed by the Emerging Technologies Wing, Department of ITE&C, Government of Telangana, and Japan International Cooperation Agency (JICA), as India's first State-led digital public infrastructure (DPI) for AI, TGDEx provides users, both within and beyond Telangana, a secure platform where AI solutions can be developed and tested using curated public datasets, reusable models, open-source tools, and GPU-based compute power. Built on DPI principles of openness and modularity, it is designed to lower the cost of innovation and broaden participation across sectors and geographies.

## Building data centre infrastructure

Telangana has prioritised the development of large-scale data centres to meet the growing demand for digital services. Hyderabad, the state's capital, has become one of the preferred destinations for global technology companies due to its reliable power supply, favourable climate, and strong connectivity. The government has introduced incentives and policies to attract investments, resulting in projects by major players. These facilities not only support India's digital economy but also create employment opportunities and strengthen cybersecurity frameworks.

---

<sup>1</sup> Bharat Future City: A 765 sq km Vision for India's Urban Future

<sup>2</sup> TGDEx - Telangana Data Exchange Platform | Official Portal

## **Advancing AI**

AI is a cornerstone of Telangana's digital strategy. The state has launched initiatives like the Telangana AI Mission (T-AIM) to foster innovation, research, and entrepreneurship in AI. Collaborations with academic institutions and industry leaders have enabled the creation of AI-driven solutions in healthcare, agriculture, and governance. For instance, AI-powered crop monitoring systems are helping farmers improve yields, while predictive analytics in healthcare is enhancing patient outcomes. By nurturing startups and providing incubation support, Telangana is building a vibrant AI ecosystem.

## **Cloud adoption and digital transformation**

Cloud computing is enabling businesses and government agencies in Telangana to scale operations efficiently. The state has promoted cloud adoption across sectors, from e-governance platforms to smart city projects. Cloud-based solutions are improving service delivery, reducing costs, and enhancing transparency. Enterprises in Hyderabad's IT corridor are leveraging hybrid and multi-cloud strategies to drive innovation and competitiveness. This widespread adoption of cloud technologies is laying the foundation for a resilient and agile digital economy.

# Introduction



Since it came into existence in 2014, Telangana has combined strong industrial policies with an already existing tech environment to create a fast-growing area for business making it a preferred choice for investment. Some of the reasons for this are:

Telangana is changing how industries are managed by introducing the TS-iPASS system, which is a new way of handling project approvals and self-certifications. This system focuses on making things more efficient and open. Telangana started India's first self-certification process, which lets business owners start their projects by simply declaring that they meet all the rules and regulations. This removes the initial processes that are used to slow things down. The system also makes sure everyone is responsible by setting strict time limits for approvals. All clearances must be completed within 15 to 30 days.<sup>3</sup> If a department doesn't respond within that time, the approval is automatically considered granted. The entire process is done online, from start to finish, which helps prevent corruption by reducing the need for face-to-face interactions. This makes the system clean, fast, and predictable, and has become an example of ease of doing business in India.

Due to its advanced infrastructure, Hyderabad is considered one of India's most important IT hubs, offering significant advantages in logistics. The city's transportation network is mainly based on the Outer Ring Road (ORR) and the soon-to-be-completed Regional Ring Road (RRR), which help move goods and people efficiently throughout the state and beyond. This strong road system is backed by the Rajiv Gandhi International Airport, which is a top performer in handling cargo and offering a great experience for passengers. The airport plays a big role in connecting the city with international trade. In addition to transportation, the state of Telangana has more electricity than it needs, providing industries with a steady, round-the-clock supply of high-quality power. This reliable energy supply is essential for large manufacturing and technology operations.

Telangana's attractiveness as an investment destination is strongly supported by a strong pool of skilled people and a high quality of life that sets it apart from other major cities in India. The state is a top education centre, home to top institutions, which regularly produce highly skilled engineers and business leaders. This talent ecosystem is being strengthened through forward-looking skilling and innovation initiatives such as the Young India Skills University and AIKAM, the proposed Global AI Innovation Hub, which are focused on developing industry ready talent in AI, cloud computing, cybersecurity, data engineering, and emerging technologies. These initiatives are helping create a future ready workforce while fostering stronger collaboration between academia, industry, startups, and global technology partners. Alongside this knowledge base, Hyderabad offers a better cost of living compared to cities like Bengaluru or Mumbai, with affordable prices for both commercial and residential properties. Combined with its status as one of India's safest cities and its diverse, vibrant culture, Telangana offers a great environment for businesses to attract, establish, and keep top global talent.<sup>5</sup>

---

<sup>3</sup> [viewpdf.aspx](#)

<sup>4</sup> T-Hub – Department of Information Technology, Electronics & Communications

<sup>5</sup> Hyderabad: The Unrivaled Destination for Global Capability Centers in 2025 | Westside Realty

# Telangana's Position in India's Digital Infrastructure Landscape



Let's explore the exciting developments in Telangana's IT Park, focusing on how this vibrant region is becoming a major centre for technology and innovation. It's not only about buildings; it's about building a strong ecosystem. We're seeing a lot of investments, new job opportunities, and a significant boost to the state's economy. This isn't just a local story; it's a clear example of what can be achieved through smart planning and progressive policies. The Telangana government has been instrumental in fostering this growth, creating an environment where IT companies, startups, and skilled professionals can thrive. From the sprawling HITEC City to the emerging IT clusters in Tier-2 and Tier-3 cities, the development is widespread and impactful.

Hyderabad has transformed itself into a tech metropolis, often referred to as the 'Cyberabad'.<sup>6</sup> The sheer scale of development in its IT corridors is breathtaking. Think of HITEC City and its extensions like Madhapur, Gachibowli, and Nanakramguda. These aren't just office spaces; they are integrated campuses with world-class amenities, designed to attract and retain top talent. The government's proactive approach, which offers incentives and streamlines regulatory processes, has been a gamechanger. Companies from across the globe have established significant operations here. This influx isn't just about setting up shops; it's about creating a robust ecosystem where research, development, and innovation flourish.

We're seeing significant investments pouring into developing new IT special economic zones (SEZs) and dedicated clusters for specific technologies, such as FinTech, Bio-IT, and gaming.

The Telangana State Industrial and Infrastructure Corporation (TSIIC) is at the forefront, facilitating land allocation and infrastructure development. Furthermore, there's a concerted effort to extend the IT revolution to Tier-2 and Tier-3 cities within Telangana, such as Warangal, Karimnagar, and Nizamabad. This decentralisation aims to create employment opportunities outside the capital, reduce migration, and foster regional development.

The government's 'work from anywhere' policy, while a response to global trends, is also being integrated into the long-term planning for these parks, making them more adaptable. The emphasis is on creating flexible, sustainable, and future-ready workspaces that can accommodate the evolving needs of the IT industry. These expansion efforts are crucial for maintaining Telangana's competitive edge and ensuring that its growth story continues for years to come. The continuous pipeline of new projects underscores the state's ambition to remain a frontrunner in India's digital economy.

Telangana's IT exports soared to ₹ 3.13 lakh crore in 2024–25, reflecting a robust 16.6% growth over 2023–24. The Telangana Socio-Economic Outlook, released by the planning department, reported IT employment at 9.39 lakh for the year 2026.

Hyderabad is home to over 1,500 IT/ITES companies and nearly 20% of India's global capability centres (GCCs). By October 2025, as per the official data the city had attracted 40 new GCCs, the highest in the country. Over the past one to two years, Telangana has drawn significant greenfield investments and major GCC expansions across sectors.

The services sector, which dominates the state's GSDP with IT as a key driver, saw its gross state value added (GSVA) rise from ₹ 9,96,293 crore in 2024–25 (First Revised Estimates) to ₹ 11,30,596 crore in 2025–26 (provisional actual estimates), recording the highest growth rate of 13.5%.

The services sector forms the bedrock of Telangana's economy, contributing 68.6% of the state's GSVA in 2025–26. A NITI Aayog report on GVA Trends and State-level Dynamics 2025 highlighted that Telangana, alongside Karnataka, Maharashtra, and Tamil Nadu, accounts for nearly 40% of India's total services output.<sup>7</sup>

<https://www.deccanherald.com/business/telangana-it-exports-hit-rs-313-lakh-crore-amid-services-sector-surge-3939905>

<sup>6</sup> Hyderabad's IT Hub: The Rise of Cyberabad - Letsgohyderabad

<sup>7</sup> Telangana IT exports: Rs 3.13 lakh crore as services sector surges jobs row

# 1 India's Digital Infrastructure Evolution



Between 2024 and 2026, India transitioned from a digital consumer to a global digital infrastructure powerhouse. Driven by a surge in **AI** and the acceleration of **5G networks**, the nation's data centre capacity is projected to surpass **2 GW by the end of 2026**.<sup>8</sup> This evolution is anchored by the India Stack and a massive influx of investment from global hyperscalers, positioning India as the primary digital hub for the Global South.

## Growth of data centres, cloud and AI in India

India's digital economy is experiencing an unprecedented surge, fuelled by rapid adoption of cloud computing, AI, and digital payments. This growth necessitates massive investments in data centres, with heavy investments and government-led incentives. The country aims to become a major global AI hub, hosting global summits and attracting significant data centre investments.

In an era where data is considered the new oil and a strategic global currency, data centres act as refineries powering the digital economy. The rise of AI is intensifying the global race to build advanced data and computing infrastructure. As nations scale up digital capacity, integrating sustainability into infrastructure development is becoming essential to ensure long-term responsible growth.

Every time a user streams a movie on an over-the-top (OTT) platform, makes digital payment at a roadside tea stall, asks an AI chatbot to summarise meeting minutes on the go, or refines an email draft, a vast network of servers springs into action inside high-security concrete facilities. These data centres form the backbone of India's fast-expanding digital economy. The country's rapid adoption of cloud computing, AI, and digital payments is fuelling an unprecedented surge in demand for large-scale data infrastructure. Operators are committing billions in capital expenditure to expand capacity, strengthen power redundancy systems and enhance physical and cyber security. Behind the fortified perimeters, the infrastructure powering India's digital services is both complex and meticulously engineered.

Leading tech giants have announced big-ticket investments in setting up data centres in India. And such companies received a further filip in the Union Budget for 2026–27, which announced a tax holiday for them until 2047 on global cloud revenues if they route foreign workloads through Indian data centres.

India is now a major force in AI adoption, coming in second to the U.S. in the number of enterprise AI and ML transactions. Between June and December 2025, Indian businesses handled over 82.3 billion AI and ML transactions, accounting for 46.2 percent of all AI activity in the Asia-Pacific region.<sup>9</sup>

Between October and December 2025, global technology majors announced multi-billion-dollar investments in AI infrastructure and data centres in India. Electronics and IT Minister recently said that the government expects investment in data centres to cross \$200 billion, about ₹ 18.33 lakh crore, noting that proposals worth \$90 billion have already been received, with nearly \$ 70 billion having entered the construction phase.<sup>10</sup>

<sup>8</sup> India's data centre capacity set to reach 2GW by 2026, backed by \$30 billion in investments: Report - BusinessToday

<sup>9</sup> India stands second in AI adoption, accounts for 46% of APAC AI traffic: Report

<sup>10</sup> Ashwini Vaishnaw: Investment in Data Centres to Exceed \$200 Billion with Nuclear Energy Support, Says Minister Vaishnaw, ETCFO

Digi Locker, the government's digital document wallet, now serves over 620 million users and has issued more than 9.5 billion documents since 2015<sup>11</sup>. The government's Poshan Tracker nutrition monitoring app, run by the Ministry of Women and Child Development, has facially verified 75 million beneficiaries out of 89 million active users using AWS's Rekognition image recognition service.<sup>12</sup>

The Government e-Marketplace, the world's second-largest public procurement platform, handles around 9,000 page views per second and clocks a daily gross merchandise value (GMV) of nearly Rs 1,000 crore.<sup>13</sup>

A cloud tech giant said it has trained more than seven million individuals in cloud and data skills in India since 2017. An EdTech platform, which runs 200–250 live classes daily on a cloud platform reaching 98% India's pin codes, has built an education-focused large language model, at one-tenth the cost and five times the speed of comparable global models.

## **Role of hyperscalers and enterprise demand**

India is one of the fastest growing economies in the world. This rapid expansion has created unprecedented demand for cloud services, AI-ready infrastructure, and secure data storage. Two forces are primarily responsible for this momentum: the aggressive expansion of global hyperscalers and the rising demand from Indian enterprises across sectors. Together, they are reshaping the nation's digital landscape and laying the foundation for a future driven by AI, automation, and large-scale digital services.

At the same time, enterprise demand within India has undergone a dramatic transformation. Organisations that once relied heavily on legacy systems are now embracing cloud-native architectures to support modern workloads. The rise of AI, ML(ML), and real-time analytics has pushed companies to adopt scalable and flexible infrastructure that can handle data-intensive operations. Industries such as banking, financial services, telecom, healthcare, manufacturing, and e-commerce are leading this shift. They require low-latency, high-performance systems that can support everything from digital payments and fraud detection to supply-chain automation and personalised customer experiences.

Another important trend is the expansion of digital adoption beyond major metropolitan areas. Tier 2 and Tier 3 cities are emerging as new centres of enterprise activity, especially in sectors like manufacturing, healthcare, education, and government services. As digital services spread deeper into the country, the need for regional data hosting and edge computing has grown. This shift has encouraged data centre operators and hyperscalers to expand their presence beyond traditional hubs like Mumbai, Chennai, and Bengaluru. Cities such as Pune, Hyderabad, and Noida are now becoming important nodes in India's distributed digital infrastructure.

In the coming decade, India is poised to become not just a major consumer of cloud services but one of the global hubs of digital infrastructure. The synergy between hyperscalers and enterprise demand will remain central to this evolution, shaping the country's economic growth and technological leadership in the years ahead.

## **India's emergence as a global digital infrastructure hub**

Digital transformation has emerged as a critical catalyst for India's economic growth and social development, fundamentally reshaping how citizens interact with government services, businesses, and financial systems. This comprehensive analysis examines India's digital transformation journey,

---

<sup>11</sup> DigiLocker: An Initiative Towards Paperless Governance

<sup>12</sup> AWS Sees Double-Digit Growth In India As Cloud, AI Demand Accelerates - BW Businessworld

<sup>13</sup> AWS Sees Double-Digit Growth In India As Cloud, AI Demand Accelerates - BW Businessworld

highlighting the remarkable progress achieved through strategic initiatives such as the JAM Trinity (Jan Dhan-Aadhaar-Mobile), Digital India Mission, and the Unified Payments Interface (UPI). The study reveals that India's digital transformation market, is projected to reach USD 229.59 billion by 2029, representing a compound annual growth rate (CAGR) of 20.63-32.1%.<sup>15</sup>

India's digital infrastructure development has been anchored by the JAM Trinity, which has revolutionised the way government services are delivered and has empowered millions of citizens. The Digital India Mission, launched on 1 July 2015, by Honorable Prime Minister with the vision to transform India into a digitally empowered society and knowledge economy, has provided the strategic framework for this transformation. The success of UPI exemplifies India's innovative approach to digital infrastructure. The success of UPI may indicate that Indian organisations would be able to design technologies as innovative digital solutions that could have global effects. Included in these are the smooth digital payments and the fact that the system has helped in financial inclusion.

India is solidifying its position as a digital infrastructure hub-a transformation which is fuelled by the convergence of low-cost data, a unique digital public infrastructure (DPI) model, and a massive surge in physical assets like data centres and subsea cables. This emergence is not merely a domestic achievement but a blueprint for 'population-scale' digital governance that is increasingly being exported to the rest of the world.

However, India's digital transformation still has a long way to go. The next step will involve dealing with the new problems arising from the opportunities harnessed. The outcomes will rely on the balance that is sought between creativity and inclusion, effectiveness and equality, and development and sustainability. As long as there is policy response and persistent adherence to inclusive development, digital transformation in India can be used as the steppingstone towards fulfilling larger developmental goals and making India a digital economy global leader.

India's digital transformation is positioned to achieve several objectives. The vision of becoming a \$5 trillion economy will likely be supported by comprehensive digitalisation across all sectors.<sup>16</sup> India may emerge as a global leader in DPI offering its model and solutions to other developing nations. Quantum computing, advanced AI, and the Internet of things (IoT) technologies will likely be mainstream, creating new paradigms for economic activity and social interaction. The challenge is to ensure that accelerating technology is aligned to the goal of making the systems inclusive.

---

<sup>15</sup> Digital transformation in India: A comprehensive analysis of current perspectives, systemic challenges, and future trajectories

<sup>16</sup> Roadmap to making India a \$5 trillion economy

# 2 Telangana as a Strategic Data Centre and Cloud Hub



Telangana, particularly its capital Hyderabad, has emerged as one of India's most promising destinations for data centres and cloud infrastructure. This transformation is the result of a deliberate combination of government policy, global investment, and the state's existing IT ecosystem.

Hyderabad's geographical location plays a crucial role in this rise. Situated centrally, it offers low-latency connectivity across India, making it an ideal hub for enterprises and startups alike. The Telangana government has actively promoted 'Digital Telangana', offering incentives, land, and infrastructure support to attract multinational firms. The state's proactive policies have created a favorable environment for companies seeking reliable and scalable cloud solutions.

## **Policy framework and ease of doing business**

Telangana has positioned itself as one of India's most business-friendly states through proactive digital and industrial policies. The state government's 'Digital Telangana' initiative emphasises cloud adoption, e-governance, and IT infrastructure. Telangana has consistently ranked high in the national Ease of Doing Business index, due to streamlined approvals, single-window clearances, and investor-friendly regulations. The government has also introduced specific incentives for data centre operators, including subsidies on power tariffs and exemptions on stamp duty, which have attracted multiple global players.

## **Power, connectivity, and land readiness**

Data centres are energy-intensive, requiring uninterrupted power and robust connectivity. Telangana has invested heavily in strengthening its power grid, with a focus on renewable energy integration to ensure sustainability. The state offers dedicated land parcels for IT and data centre parks, particularly in the Hyderabad region, with pre-approved zoning and infrastructure support. Hyderabad also benefits from multiple submarine cable landing stations and high-speed fibre connectivity, ensuring low-latency access across India and beyond.

## **Talent ecosystem and innovation capacity**

Hyderabad's established IT ecosystem provides a strong talent base for cloud and data centre operations. The city hosts leading universities, research institutions, and a thriving startup community, which together create a pipeline of skilled professionals in AI, cybersecurity, and cloud engineering. Telangana's T-Hub, one of India's largest startup incubators, fosters innovation and collaboration between enterprises and entrepreneurs. This ecosystem ensures that global firms investing in data centres can tap into local expertise while driving innovation in cloud services. Hyderabad's combination of technical talent and entrepreneurial energy makes it uniquely positioned to support next-generation digital infrastructure.

## Hyderabad's competitive advantage vs other data centre clusters

While other Indian states are also developing data centre clusters, Hyderabad offers distinct advantages. Its central location reduces latency for pan-India connectivity, the cost of land and operations is relatively lower than other cities and the state's proactive policies provide a smooth investment climate. Moreover, Hyderabad's reputation as a global IT city—home to multiple tech giants—reinforces investor confidence.

Hyderabad sits on the Deccan plateau, a relatively earthquake-safe zone compared to coastal hubs like Chennai and Mumbai. Its central geography ensures equidistant connectivity to major Indian metros—Delhi, Mumbai, Bengaluru, Chennai, and Kolkata—making it ideal for disaster recovery and low-latency services. The city also offers competitive power tariffs and a reliable grid, crucial for energy-intensive data centres. Abundant land availability at lower makes it easier to scale hyperscale campuses here. Further, the city hosts a deep IT talent pool, supported by universities, research institutions, and innovation hubs like T-Hub which ensures an adequate pool of skilled professionals for cloud, AI, and cybersecurity workloads.

# 3 Strategic Impact of Data Centres, AI and Cloud



Data centres, once considered mere digital warehouses, have evolved into the primary engines of the modern global economy. As AI and cloud computing move from experimental phases to core business necessities, these facilities now represent the physical foundation of national competitiveness. The strategic impact lies in their ability to centralise massive computational power, allowing organisations to scale rapidly without the overhead of physical infrastructure.

However, this transition is more than just convenience; it's a race for digital sovereignty. Nations and corporations are investing heavily in localised data centres to ensure data privacy, reduce latency, and secure a foothold in the AI revolution. Because AI models require unprecedented amounts of energy and cooling, the strategic focus has shifted toward resource management—balancing the hunger for processing power with the realities of the power grid and sustainability goals.

Ultimately, the synergy between cloud architecture and AI is redefining how value is created. It's no longer just about storing data, but about the speed at which that data can be synthesised into actionable intelligence.

## Benefits: Strengthening the country's digital sovereignty

- Data localisation and sovereignty are critical for India's national security and governance. India generates nearly 20% of global data but hosts only 1% of global data centre capacity, creating vulnerabilities in data reliance.<sup>17</sup>
- Expanding domestic data centres ensures that sensitive government, financial, and citizen data remain within national borders, reducing dependence on foreign jurisdictions.
- Sovereign cloud frameworks also allow India to set its own standards for privacy, cybersecurity, and compliance, aligning with initiatives like the Digital India Act.

## Enabling AI-led DPI

- Data centres provide the computational backbone for AI-driven public platforms such as Aadhaar, UPI, and DigiLocker.
- Breakthroughs in AI and cloud computing will accelerate India's journey toward a digitally empowered society, supporting smart governance, healthcare, and education.
- AI-enabled data centres can process large volumes of citizen data securely, enabling predictive analytics for public health, disaster management, and agricultural planning.

## Boosting cloud adoption, MSMEs, and startups

- Cloud infrastructure lowers entry barriers for MSMEs and startups, allowing them to access enterprise-grade computing without heavy capital investment.
- MSMEs benefit from scalable cloud services for e-commerce, logistics, and FinTech, while startups leverage AI platforms for rapid prototyping and market expansion.
- Initiatives like T-Hub in Hyderabad and state-level cloud adoption programmes further integrate small businesses into the digital economy.

<sup>17</sup> 20251029-Building-Indias-Data-Centres.pdf

## Contribution to national economic growth and resilience

- The Council on Energy, Environment and Water reports that India's data centre investments have already crossed \$ 95 billion and are expected to exceed \$ 100 billion by 2027.<sup>18</sup>
- The sector contributes to GDP growth through job creation, foreign direct investments (FDI) inflows, and ancillary industries such as renewable energy and real estate.
- Data centres also enhance economic resilience by ensuring continuity of digital services during crises (e.g., COVID-19), supporting financial transactions, healthcare records, and government services.
- By integrating renewable energy into data centre operations, India can align growth with sustainability, reducing carbon footprints while expanding digital infrastructure.

## Benefits to the data centre industry

The integration of data centres, AI, and cloud computing has triggered a structural shift in the global industrial landscape, fundamentally altering how value is created and delivered. At the core of this transformation is the transition from rigid, high-cost physical infrastructure to elastic, software-defined environments.

By leveraging cloud technology, industries can bypass the massive capital expenditures traditionally required for hardware, instead of treating computational power as a scalable utility that expands or contracts based on real-time demand. This financial agility allows even mid-sized enterprises to compete with global giants, as they gain access to high-performance computing and enterprise-grade security that was previously cost-prohibitive.

Beyond operational efficiency, the strategic impact of this 'tech trifecta' is most visible in sector-specific innovation. In the banking, financial services, and insurance (BFSI) sector, the cloud-AI stack has revolutionised risk management and fraud detection, allowing for real-time analysis of millions of transactions to identify anomalies with surgical precision.

In healthcare, the impact could be lifesaving as researchers utilise cloud-hosted AI to decode complex protein structures or analyse medical imaging, reducing the time taken for drug discovery from years to months.

Even in the public sector, GovTech initiatives are using these technologies to streamline citizen services and improve urban planning through data-rich 'smart city' frameworks. Ultimately, the industry-wide benefit is the creation of a more resilient, responsive, and data-driven ecosystem where intelligence is embedded into every layer of the supply chain, turning information into a primary competitive advantage.

## Improved cost efficiency and scalability

One of the most immediate benefits of cloud and data centre adoption is cost optimisation. Traditional IT models require heavy upfront capital expenditure on servers, storage, and networking. Cloud services, by contrast, offer pay-as-you-go models, reducing fixed costs and enabling firms to scale resources dynamically.

- **BFSI sector:** Banks and financial institutions have migrated core workloads to cloud platforms to reduce infrastructure costs while ensuring compliance with the Reserve Bank of India's data localisation norms.

---

<sup>18</sup> Scaling India's Data Centres Sustainably

- **Manufacturing:** Cloud-enabled smart factories leverage scalable computing for predictive maintenance and supply chain optimisation, reducing downtime and operational costs.
- **Healthcare:** Hospitals and diagnostic firms use cloud-based electronic health records, lowering IT overheads while ensuring secure patient data management.

Scalability is equally critical. As demand fluctuates, industries can expand or contract computing resources without delays. This flexibility is particularly valuable for startups and MSMEs, which often face unpredictable growth trajectories.

### **Faster time to market with cloud and AI**

Speed is a decisive factor in modern industry. Cloud platforms and AI tools accelerate product development, testing, and deployment.

- **Startups:** Cloud services allow startups to launch applications globally without investing in physical infrastructure.
- **Retail and e-commerce:** AI-driven analytics enable companies to personalise customer experiences and optimise inventory in real time, reducing the time between concept and market launch.
- **Pharmaceuticals:** Cloud-based research platforms accelerate drug discovery by enabling collaborative data sharing across labs worldwide. During the COVID-19 pandemic, Indian pharma firms leveraged cloud computing to speed up vaccine trials and approvals.

By reducing development cycles, industries can respond faster to consumer demand, regulatory changes, and competitive pressures.

### **Innovation enablement across sectors**

**BFSI:** AI-enabled systems based on data centres provide greater security for transactions while adoption of cloud technologies enables digital banking services such as UPI and mobile wallets. Several Indian banks are testing AI-based systems for credit risk evaluation implemented on domestic cloud infrastructure.

**Healthcare:** AI-based algorithms applied to cloud services enable early diagnosis of diseases based on imaging and clinical data and data centres expand access to health care in rural areas. Cloud-based approaches accelerate development of individualised medical care and involve collaboration with international research groups.

**Manufacturing:** Implementation of cloud-enabled systems for industrial automation provides continuous real-time monitoring of production lines. Application of predictive analytics reduces equipment failures and improves efficiency. AI-based tools for design accelerate times for product development and increase competitiveness in global markets.

**GovTech:** Major healthcare applications implemented on secure cloud infrastructure provide large-scale services to citizens. AI-based methods support decision making for agricultural, urban development and disaster management activities.

# 4 Industry Value Proposition



The modern industrial world is undergoing a fundamental transformation from physical assets to digital intelligence enabled by integration of data centre, cloud computing and AI technologies. At the core of this infrastructure is the modern data centre, which has evolved from a facility for storage of information to a high-performance utility capable of providing the physical reliability, security and specialised cooling required for operation of large GPU clusters driving today's economy.

On this foundation, cloud computing emerges as the great equalizer by making high-end computing capacity available to all. The resulting model of operational flexibility replaces traditional modes of capital investment with systems of consumption-based accounting.

Integration with AI provides the ultimate element of transformation and imparts to raw data the characteristics of a competitive advantage. With respect to physical facilities and access to cloud computing, the major contribution of AI is to provide the basis for insight. In the industrial setting, this results in conversion of reactive operations to a model of predictive management.

The real value in this industry comes from combining these three parts into a single smart system called "cognitive infrastructure." This mix brings a level of efficiency and innovation that wasn't possible before. For example, in healthcare, combining secure data storage, cloud-based teamwork, and AI analysis speeding up drug discovery from taking years to just weeks. In finance, it allows for real-time fraud detection across billions of transactions worldwide. Being good at this digital mix is no longer an option for forward-thinking organizations—it's a must for staying relevant in a world that's becoming more automated and data-driven.

## Benefits to industry

### Access to hyperscale and colocation infrastructure

Hyperscale data centres operated by global providers deliver enormous computing capacity and storage capabilities to enterprise customers. In contrast, colocation facilities provide firms with an economical, highly reliable environment for hosting their IT infrastructure.

Domestic colocation providers are expanding campuses in Hyderabad and Mumbai to provide firms with secure, scalable hosting solutions and substantially reduce capital expenditures for computing and storage facilities. This provides access to advanced infrastructure and allows even medium-sized firms to utilise facilities of enterprise quality.

### AI-ready compute and high-density facilities

Modern industries increasingly apply AI to enable analytics, automation and innovation. AI workloads require dense computing environments with graphics processing unit (GPU) clusters and advanced cooling. Hyperscale data centres in Hyderabad were designed to provide AI-ready computing for applications in medical imaging, financial fraud detection and manufacturing automation. As a result, industries achieve high-speed execution of complex simulations, deep learning applications and real-time analytics.

Pharmaceutical companies use AI-ready computing for drug discovery, and institutions in the banking, financial and insurance services use ML to improve credit risk assessment and prevent fraud. These capabilities accelerate cycles of innovation and enable Indian industries to compete with global providers.

### **Reliable power and network redundancy**

Data centres are highly energy-intensive and require continuous power for industries reliant on digital services. States of Telangana and Maharashtra have developed dedicated power corridors and integrated renewable energy to support hyperscale facilities. Multiple routes for fibre connectivity and undersea cable capacity provide redundancy and protect against outages. Availability of reliable power and redundant networks is mandatory for industries such as BFSI and GovTech in which interruption of service disrupts millions of transactions. These factors increase confidence and assure continuity of operations during periods of crisis. Integration of renewable energy sources provides additional environmental benefits for the data centres .

### **Cloud native and hybrid deployment flexibility**

Industries today demand flexibility in deploying workloads to public cloud, private cloud and hybrid configurations. Cloud-native architectures enable development of portable, scalable and resilient applications.

Startups achieve cost-effective operations with public cloud providers that offer pay-as-you-go pricing. Large enterprises generally favour hybrid configurations that combine on-premises infrastructure with public cloud resources for sensitive workloads.

Hybrid implementations provide particular advantages for regulated industries such as financial services and healthcare in which compliance requires retention of sensitive data on-premises and exploitation of cloud capacity for analytical applications. As a result, industries can adapt infrastructure to their specific requirements and optimise the balance between cost, compliance and innovation.

### **Policy stability and investment security**

Policy stability is essential for attracting long-term investments. States such as Telangana, Maharashtra and Tamil Nadu have implemented data centre policies with incentives for land allocation, electricity subsidies and tax exemptions.

Compliance with requirements for data localisation further increases confidence of financial services and government institutions. Security of investment provided by well-defined regulations and strong government support stimulates commitment of capital by global enterprises and provides assurance of long-term availability of infrastructure for domestic industries.

As a result, policy stability minimises uncertainty and promotes conditions for predictable rates of industrial growth. This experience illustrates the importance of policy stability for attracting long-term investments.

# 5 Key Challenges and Recommendations



India's digital ecosystem is experiencing an immense transformation as it evolves from a service economy to becoming a data-driven economy. By early 2026, India's data centre capacity had nearly tripled since 2020 to ~1.5 GW and is projected to grow to 6.5 GW by 2030.<sup>19</sup> However, continued growth is accompanied by persistent difficulties with power, land, connectivity, human resources and regulation. These challenges will impede future growth unless overcome by integrated efforts of policy and industry.

## Problem areas for data centre companies :

### Power availability, cost and renewable integration

Energy is the single largest operating cost for data centres. Electricity tariffs differ among states, with rates generally higher in Mumbai and Delhi than in Hyderabad or Chennai.<sup>20</sup>

Electricity costs accounted for approximately 50 to 60% of operating expenses for hyperscale facilities. Renewable integration: Pressures for sustainability continue to grow.

Indian data centres consumed 0.5% of national electricity and 150 billion litres of water in 2025, and generated concerns about carbon and water footprints. As a result, financial and reputational risks would be incurred by companies unable to achieve low-cost renewable integration. Finally, uninterrupted power is required for data centres, but regional imbalances and bottlenecks in transmission continue to limit service quality in India.

### Land acquisition and zoning complexity

Data centres require large areas of land with appropriate zoning approvals.

- High costs: Although Mumbai continues to serve as a major hub with submarine cable landings, construction costs there have reached \$6.64/W, the second highest cost in Asia.
- Delays in obtaining zoning approvals result in slow project implementation.
- High rates of urban development further limit opportunities for expansion.

As a result, firms experience delays and increasing costs, and must give particular attention to location strategies.

### Network latency and fibre density gaps

Connectivity is the foundation of cloud services. Latency challenges persisted for interior gateway cities such as Hyderabad and Delhi, despite submarine cable landing points in Mumbai and Chennai. Risks of single points of failure for fibre routes increased susceptibility to outages for BFSI and GovTech workloads. Fibre penetration remained well below global standards.

Only 30% of towers were fibreised, thereby limiting high-speed connectivity.<sup>21</sup> As a consequence, attainment of goals for large-scale deployment of AI workloads will be limited by inadequate levels of fibre density and redundancy.

<sup>19</sup> India's Data Centre Market : A Strategic Analysis of Capacity Expansion, Investment, Economic Multipliers, and the Imperative for a Sustainable Energy Playbook

<sup>20</sup> Electricity Rates in India by State 2026 | VoltFlow

<sup>21</sup> Low fiberisation leads to a 5G success story roadblock: Telcos, infra providers, ETTelecom

## Skilled talent for AI and data centre operations

Data centres are not just about infrastructure but also require highly specialised talent. Although the country has a large IT workforce, there is a critical shortage of expertise needed for modern data centres.

- AI workloads require engineers experienced with high-density computing, cooling systems and information security. Shortages of highly skilled personnel limit the ability to provide advanced cooling, fully automated operations and AI-based management.
- Though there are numerous IT graduates, only few of them receive training in data centre operations or in management of AI infrastructure. As a consequence, companies experience difficulty in expanding operations without a continuous supply of highly qualified personnel.

## Regulatory approvals and inter-department coordination

Regulatory complexity remains a major impediment due to:

- Fragmented policies: Although states such as Telangana and Tamil Nadu have adopted policies for data centres, a unified national framework is lacking.
- Multiple approvals: Firms must obtain approvals from departments responsible for power, telecommunications, environment and municipal operations, and experience significant delays.
- Requirements for data localisation further increase the complexity of operations for financial services and government technology applications.

As a consequence, uncertainty about regulations reduces the willingness to invest and impairs the speed of project implementation.

## 5.1 Recommendations

India's data centre and cloud industry is growing rapidly, with investment expected to exceed \$100 billion by 2027.<sup>22</sup> Large hyperscale operations by domestic Indian firms are resulting in major campuses being established in Hyderabad, Mumbai and Chennai. However, barriers to power, land, connectivity, talent and regulation remain. Sustained growth will require implementation of specific measures at the policy, regulatory and infrastructure levels with intensive public-private cooperation and rapid mechanisms for regulatory approval. The capacity of India to implement these measures will ultimately determine its ability to maintain growth, attract global capital and develop a robust, sustainable digital economy.

### Policy, regulatory, and infrastructure level solutions

Simplify compliance for BFSI and GovTech workloads by harmonising RBI and MeitY requirements with international standards. Implement stable tax regimes and long-term incentives to stimulate foreign direct investment. Extend renewable energy corridors to enable hyperscale campus operations. Hybrid solar and wind power at our CtrlS data centres in Hyderabad achieved substantial reductions in carbon footprint.

Rapidly extend fibreisation of telecom towers to reduce latency and increase system redundancy. Promote use of environmentally friendly building standards and systems for recycling water to further reduce environmental impact.

---

<sup>22</sup> India's Data Centre Market: Seizing Growth Opportunities | CBRE India

## **Public-private collaboration models**

Data centres are highly energy-intensive. Public-private partnerships can provide funding for integration of renewable energy, battery storage and advanced cooling technologies. Workloads for AI are shifting limitations from electricity supply to thermal management and require combined development of liquid cooling and HVAC systems.

Collaboration between industry and academia should result in specialised courses in data centre engineering, infrastructure for AI and information security. T-Hub in Telangana illustrates the potential for government-supported incubators to stimulate interaction among startups, large enterprises and academic institutions.

Co-investment in submarine cable landing stations and terrestrial fibre transmission facilities will minimise latency, reduce costs and provide redundancy for operations in different geographic regions.

## **Fast-track clearance mechanisms**

Current projects require multiple approvals from agencies responsible for power, telecom, environment and municipal services, and slow project implementation. A national system of single-window approvals is needed, based on the proactive approach used to achieve \$60 billion in investments in Telangana.

Implement dedicated data centre facilitation cells within state IT agencies to coordinate inter-agency activities. Apply electronic systems for real-time monitoring of approvals and elimination of bureaucratic delays.

Pre-approve sites for data centre parks with integrated power and fibre connectivity. Promote locations where there is excess capacity for renewable energy and water availability to achieve maximum sustainability.

# 6 Economic and State-Level Impact for Telangana



Telangana has become one of India's most rapidly developing markets for data centre investment, especially in Hyderabad. With commitments to hyperscale development by global and domestic technology firms, the state is experiencing a transformation of its overall economic development. The effects of these projects extend well beyond technology to produce large multipliers for employment, tax revenues and future industrial development.

## 6.1 Multiplier impact per megawatt

### Employment generation (Direct, indirect and induced)

The employment effects of data centres are multi-tiered. Direct employment occurs during construction and operations for engineers, technicians and facility managers. Indirect employment reflects the supply chain required to operate the facility and includes providers of hardware, specialised electrical engineering services and renewable energy. Additional indirect employment occurs in supporting industries such as real estate, logistics, cooling systems and fibre connectivity. Induced employment is of equal importance, because operation of data centres stimulates demand for services in the hospitality, retail and transportation sectors. As a result, all megawatts of data centre capacity generate continuing employment throughout the economy of Telangana.

### Revenue impact and fiscal benefits

Data centres also provide substantial fiscal benefits to the state. Revenue sources include property taxes, electricity duties and taxes on services. Establishment of large data centre projects increased municipal revenues by 15% for the IT corridor of Hyderabad.<sup>23</sup> In addition, inflows of FDIs enhance fiscal stability. Although the state provides subsidies for electricity rates and for land to encourage investment, long-term fiscal gains substantially exceed these costs.

Finally, data centres serve as 'anchor tenants' for digital systems and stimulate additional investment in start-up companies, information technology services and ancillary industries. Consequently, the fiscal effects of each megawatt of capacity far exceed immediate revenues and generate a self-reinforcing cycle of investment and growth.

### Long-term industrial growth multiplier

The most important effect of data centres is as industrial multipliers of growth. By enabling cloud adoption, data centres stimulate innovation by startups, MSMEs and enterprises in FinTech, health-tech and manufacturing, and accelerate digital transformation across all economic sectors. In addition, demand for data centre services stimulates renewable energy, cooling technologies and real estate sectors. Operation of hyperscale facilities further enhances the global competitiveness of Telangana as a centre for AI workloads and an attraction for multinational enterprises.

During the COVID-19 pandemic, uninterrupted delivery of e-government services was achieved through operation of the state data centre. This illustrates the importance of infrastructure investments for maintaining continuity of operations during periods of crisis. Ultimately, each megawatt of data centre capacity stimulates further industrial diversification and integrates Telangana fully into worldwide information technology supply chains.

<sup>23</sup> Cyberabad Municipal Corporation set to become richest civic body in Telangana | Hyderabad News - The Times of India

## 6.2 What Telangana stands to gain

Telangana's benefits from growth in data centres, AI and cloud services are multidimensional. Greater investments at the national and global levels improve fiscal stability and stimulate associated industries. Growth of AI and cloud infrastructure accelerates innovation throughout the economy and integrates Hyderabad into global information networks. Regional and urban development provide for equitable patterns of growth and generate additional revenues from housing, transportation and municipal services.

### **Increased domestic and global investments**

Hyderabad is attracting high volumes of investment from both domestic and international sources, due to the proactive policies and infrastructure preparedness of Telangana. The state has been consistently successful in bringing in investments, especially highlighted at the Telangana Rising Global Summit 2025. This resulted in record commitments of investment of ₹ 5.75 lakh crore (about \$69 billion) and represented an enormous demonstration of confidence on the part of global and domestic investors.<sup>24</sup> The resulting multiplier effects stimulated ancillary industries of real estate, renewable energy, cooling technologies and logistics, and generated a wide base of economic activity.

### **Expansion of AI, cloud and digital services economy**

The rapid expansion of hyperscale data centres drives Telangana's AI and cloud ecosystem and supports startups, enterprises and government initiatives that use advanced computing capabilities to foster innovation. For example, financial institutions implement AI-based systems for fraud detection, health care providers apply ML for diagnostic purposes and manufacturers implement predictive analytics to improve efficiency. State-owned Telangana State Data Centre maintains continuity of e-governance services, whereas private hyperscale facilities underpin India's goal of becoming a digital economy. Hyderabad's AI-ready infrastructure will help speed up India's digital transformation and put Telangana at the forefront of cloud adoption and innovation.

### **Urban and regional economic development**

One of the major achievements for Telangana has been the transition from a monocentric model of growth centred exclusively on western Hyderabad to a more dispersed pattern of regional development. The resulting growth in dispersion (GRID) strategy accelerates the geographic expansion of IT and digital infrastructure beyond the conventional IT corridor of Gachibowli and Madhapur.

The expansion of the IT corridor has already generated substantial increases in municipal revenues. For example, property and service taxes increased by 15% after major investments in data centres. Demand for residential, commercial, tourism and transportation services stimulated by large-scale information technology activity produced additional growth of the regional economy. In addition, infrastructure spillovers extended fibre connectivity, corridors for renewable energy and networks for logistics beyond the city limits to surrounding districts. As a result, inequalities between urban and rural areas were substantially reduced and integration of the state into global systems of production was greatly accelerated.

---

<sup>24</sup> Telangana Bags Rs 5.75 Lakh Crore Investments At Rising Global Summit

## 6.3 Role of the ecosystem

The emergence of Telangana as a strategic centre for data centres, cloud computing and AI reflects not only government policies and foreign investment, but also the operation of a broader ecosystem in which all stakeholders contribute to the competitive advantage of Hyderabad.

### **Developers, cloud providers, AI firms**

Global providers of cloud services serve as the foundation for the ecosystem, with construction of hyperscale data centres and delivery of advanced services in AI. Domestic companies provide complementary services of colocation and managed operations. Developers are responsible for designing and constructing facilities of high density that meet international standards, and AI companies exploit these facilities to deliver solutions for financial services, healthcare and manufacturing. The combination of developers, cloud providers and companies applying AI constitutes the basis for the digital economy of Telangana.

### **Power, telecom, real estate and skill institutions**

Data centres represent a major demand for continuous electrical power and for sophisticated systems of cooling. To support sustainable operation of hyperscale facilities, the state has developed corridors for renewable energy and provides adequate capacity for fibre connections. However, the overall density of fibre connections remains substantially below international standards. Land for industrial parks and for clusters of data centres is available with pre-approved conditions for land use.

Training of personnel for cloud computing, cybersecurity and AI is provided by higher education institutions. As a result, all components of the physical and human infrastructure necessary for continued growth are in place.

### **Startups, academia and innovation hubs**

The final component of the ecosystem provides the interface between research and practical application. Activities of startups and academic investigators represent the major source of momentum for economic transformation and enable application of AI in the field rather than in the laboratory. Startups are the principal beneficiaries of the ecosystem. Availability of services of hyperscale cloud providers enables rapid technological innovation with minimal requirements for capital expenditures. Collaboration between entrepreneurs, industrial enterprises and government agencies is facilitated by the large startup incubator of Hyderabad, which also provides a basis for collaborative research in AI, ML, and data sciences. Finally, integration of academic and industrial research provides a basis for conversion of research results to commercial applications.

# 7 Integration of Cloud Infrastructure



## Hybrid and multi-cloud adoption trends

Hybrid and multi-cloud strategies are now standard for enterprises in India. Hybrid cloud enables enterprises to balance workloads between private and public infrastructures to achieve compliance and exploit capacity for scalability. Multi-cloud implementation reduces reliance on a single provider and improves system resiliency. Manufacturing firms optimise supply chain operations with multi-cloud strategies, and health care providers protect sensitive patient information using hybrid models. Increasing use of AI workload has accelerated these trends, as enterprises require diverse computing environments for efficient implementation of ML applications.

## Cloud enablement for government and enterprises

Cloud technology is transforming approaches to enterprise management and system governance. The cloud-based data centre of the state of Telangana continuously provides services to government departments and ensures uninterrupted delivery of health care and other services to citizens. During the COVID-19 pandemic, this capability was critical for maintenance of electronic systems for public administration and demonstrated the robustness of cloud technology. Cloud-enabled reductions in capital expenditures accelerate innovation for enterprises. Benefits of flexible pay-as-you-go pricing models are greatest for startups, whereas hybrid implementation by large enterprises optimises requirements for compliance and capacity for scalability.

## Role of cloud in DPI

Cloud technology eliminates many barriers between public and private sectors and integrates digital infrastructure into all aspects of the economy. This provides an extraordinary opportunity to accelerate development of a digital economy and to position the state at the forefront of that transformation. Implementation of cloud technology is fundamental to this effort, supports development of hybrid and multi-cloud strategies, strengthens capabilities for public administration and enterprise operations and expands availability of digital infrastructure for public services. The largest component of India's effort to develop digital infrastructure is represented by platforms such as Aadhaar, UPI, DigiLocker and CoWIN. These systems are based almost entirely on cloud technology that provides capacity for high volumes of transactions, strong security and universal availability of services.

Absence of cloud technology would make it impossible to achieve the extremely high rates of transaction processing required for these platforms. In addition, use of cloud technology provides a basis for application of predictive methods to public health care, disaster management and urban development.

# 8 Role of AI in Driving Demand and Innovation



AI is no longer a peripheral technology but has become the primary driver of demand and innovation for India's digital economy.

## **AI compute and high-density data centres**

AI workloads require enormous computing capacity, especially for training large language models and executing complex algorithms of deep learning. Traditional data centres are inadequate and instead require high-density facilities with clusters of graphics processing units and advanced systems for thermal management. Hyperscale campuses in Hyderabad provide AI-ready computing environments that support complex simulations and real-time analyses.

In addition, these facilities incorporate technologies for utilisation of renewable energy and for implementation of highly efficient liquid cooling. As a result, the state is capable of hosting global workloads of AI and developing a competitive position within the global digital economy. This rapid expansion of AI applications is stimulating enormous growth in capacity for data centres. AI workloads are highly demanding with respect to computing capacity and require environments of very low latency.

## **AI workloads for driving data centre's capacity expansion**

By 2030, capacity for data centres in India will reach 6.5 GW, with a large fraction attributable to workloads of AI.<sup>25</sup> Expansion of capacity for hyperscale operations is also leading to development of facilities capable of rapid expansion with increasing workloads. This in turn stimulates additional investments in systems for generation of electricity, for control of thermal conditions, for provision of fibre connectivity and for development of real estate.

## **AI use cases across government and industry**

AI is revolutionising government services and industrial operations. AI-based platforms provide predictive capabilities for public health, disaster response and agricultural planning. In industries AI applications can help many sectors:

- Banking, finance and insurance: AI-based methods for fraud detection and credit risk assessment increase security and promote financial inclusion.
- Healthcare: Algorithms for data mining improve diagnostic capabilities, methods of medical imaging and approaches to individualised therapy.
- Manufacturing: Predictive methods reduce failures of equipment and optimise processes for the delivery of goods.
- Government technology: AI facilitates development of smart cities, methods of traffic control and systems of public service delivery.

## **Telangana's opportunity in an AI-first infrastructure**

Telangana has the opportunity to become one of India's leading AI-first infrastructure hubs. Integration of AI into its data centre and cloud strategies will attract global firms, stimulate domestic innovation and integrate the state into global supply chains. The resulting vision of 'Telangana Rising 2047' will provide a foundation for a \$3 trillion economy.<sup>26</sup> With investments by global technology leaders and expansion of AI-capable campuses, Telangana is optimally positioned to lead India's AI revolution. Stability of policies, integration of renewable energy, and development of human resources will be essential to maintaining this advantage and achieving long-term competitiveness, resilience and equitable patterns of growth.

<sup>25</sup> How Is Data Centre Infrastructure in India Shaping Power and Water Use? CEEW

<sup>26</sup> 'Rising Vision 2047' unveiled at summit | India News

# 9

# Sustainability and Future-Ready Infrastructure



## Green data centres and renewable energy integration

The drive toward green data centres is accelerating in India. In September 2025, The Energy and Resources Institute and the National Solar Energy Federation of India launched the Green Data Centre Coalition to achieve decarbonisation of India's rapidly expanding data centre sector. Integration of renewable energy with storage provided continuous, reliable 24x7 power. India's data centres are projected to require 390 TWh of electricity by 2070, reinforcing the need for planning with carbon-free electricity.<sup>27</sup> Low costs for solar plus storage enabled economical and rapid implementation of renewable energy integration. Additional efforts to attract sustainable investments and promote states as favorable locations for growth of green data centres were achieved through use of innovative financial instruments such as virtual power purchase agreements and models for continuous supply of renewable electricity.

## Energy efficiency

Energy efficiency is another component of sustainable infrastructure. Since 2007, the Indian Data Centres Initiative of the Confederation of Indian Industry and the Indian Green Building Council has increased efficiency via market transformation, capacity building and application of international performance standards.

The result was development of an addendum to the Energy Conservation Building Code applicable to data centres, thereby facilitating compliance with national standards. Real-world examples show how advanced cooling, efficient IT systems, and smart building designs improve performance.

Additionally, an exclusive rating system for green data centres was developed to provide a basis for measurement and improvement of efficiency. Consequently, the country is progressively adopting international standards for sustainable operations of data centres.

## Global best practices

India is gradually adopting global standards for sustainable data centres. These are being driven by partnerships with international partners that bring in new technologies and best practices. Some of the key steps include:

- Use of liquid and immersion cooling for high-density AI applications.
- Complete integration of renewable energy to achieve continuous operation with green power.
- Application of ESG compliance systems to attract international investment.
- Implementation of standards for green building design and recycling of water to minimise environmental impacts.

Finally, extensive efforts to share experience among international and domestic operators ensure continued compliance with international standards of sustainability.

---

<sup>27</sup> Greening India's Digital Future: TERI and NSEFI sign pact on sustainable data centers | TERI

# 10 Investment Outlook and Roadmap for 2026–2030



As we approach the 2026–2030 horizon, investment in AI infrastructure is evolving from a speculative gold rush to a well-structured, utility-scale expansion. Financial plans are now being shaped by the real-world needs of the next generation of AI models, and the focus is moving from just the hardware to the things that keep it running—especially power and space.

The result will be a period of hyper-scaling in which the global footprint of data centres will expand at an unprecedented rate to support AI applications. Projections indicate that global data centre capacity will increase threefold by 2030, with AI applications accounting for approximately 70% of this growth.<sup>28</sup> Current estimates say the world will need to add almost 100 gigawatts of new capacity—about twice the current total—to meet the demand. India will be a major beneficiary of these developments. Domestic capacity will increase fourfold to 4 GW by 2030, with an estimated investment of ₹ 1.5 million crore.<sup>29</sup>

## Emerging investment models

As capital intensity for AI infrastructure accelerates, investors are moving away from traditional models to more flexible, asset-intensive or utility-based configurations.

### Compute as critical infrastructure

Large data centres are increasingly viewed not as simple real estate, but as strategic national utilities similar to ports or electrical grids. This facilitates attraction of sovereign wealth funds and long-term institutional capital seeking "GDP multiplier" assets.

### AI-as-a-Service (AlaaS) and hybrid models

AlaaS refers to "Artificial Intelligence as a Service" where third-party service providers host the AI infrastructure, technologies, and mechanisms, available to users to enable them to develop solutions in a cost-effective and robust way as an alternative to locally hosted solutions. Due to the quick adoption of AlaaS, AI technology has been accessible to the end-users and developers through Application Programming Interfaces (APIs), minimal coding requirements, and user-friendly platforms. As a result, the power of AI is being harnessed more than ever before, with cost-effective and scalable solutions on offer. Instead of hiring experts for infrastructure development and maintenance, Small to Medium Enterprises (SMEs) can directly use AlaaS for their businesses to develop intelligent AI-based solutions.

### State-level incentives

In the absence of binding national policies, states are providing incentives for hyperscale investment in the form of land, electricity subsidies and tax reductions.

## Public-private partnership opportunities

Governments increasingly recognise that they cannot fund the transition to AI alone and are entering a new era of partnerships for DPI. Plans like the National AI Agenda (2026–2030) are being approved to create public value through innovation contracts and state-run computing centres.

For decades, governments have partnered with the private sector to build and maintain infrastructure. Today, collaboration extends far beyond roads and airports to include digital infrastructure, social outcomes, innovation ecosystems, and data platforms.

Traditional public-private partnership models remain important. What has expanded is the range and flexibility of collaboration structures. Governments are using innovative contracting, blended finance, and digital governance mechanisms to share risk, accelerate delivery, and unlock value from assets, services, and data—while preserving core public safeguards.

<sup>28</sup> Data center demands | McKinsey & Company

<sup>29</sup> India's data center capacity to quadruple to 4 GW by 2030 | Communications Today

# 11

# Policy Recommendations and Call to Action



Policymakers need to focus on immediate reforms in approval processes and access to energy, medium-term investments in skills and infrastructure, and long-term strategies for global competitiveness.

## Immediate actions (2026–2027)

The 2025 workshop on AI-ready data centres of NITI Aayog confirmed the strengths of Hyderabad in renewable energy, talent and growth of the digital economy, but also underscored the importance of competing globally with other countries.<sup>30</sup> Simplify the process for getting land, power, and fiber connections approved to avoid delays. Fragmented approval processes remain a major impediment to large-scale investments in information technology. Prioritize development of renewable energy corridors and continuous availability of clean power for large-scale information technology facilities. NITI Aayog urged expansion beyond a land-based model of investment and achieve full integration of renewable energy sources. Develop specialised programmes for training in infrastructure for AI, engineering of cloud computing systems and operation of data centres through partnerships with industry.

## Medium-term actions (2027–2028)

Construct modular, distributed data centres in close proximity to centres of user load to reduce losses from transmission and costs of land acquisition. Expand the use of public-private partnerships for integration of renewable energy sources, technologies for cooling information technology equipment and expansion of fibre transmission capacity. Offer a stable system of taxes and instruments of green financing to attract investments of enterprises with high standards of environmental and social performance. Develop coastal locations for data centres that are integrated with submarine transmission systems and networks for delivery of renewable energy.

## Long-term actions (2029–2030)

Promote greater interaction among start-ups, academic institutions and industries through centres such as T-Hub to accelerate translation of research on AI into commercial applications. Position Indian cities as global centres for information technology and harness the country's clean energy resources along with the expertise in engineering of information technology systems.

## Role of the government, industry, and knowledge partners

Stakeholder	Primary Responsibility	Key Initiative
Government	Policy certainty, regulatory relaxation and fiscal incentives	Tax holidays (budget 2026–27), AI investment fund
Industry	Infrastructure development and market-based innovation	Expansion of hyperscale data centre operations
Knowledge partners	Development of a talent pipeline and implementation of ethical standards	AI university, agreements for research collaborations

<sup>30</sup> Press Release Page | Press Information Bureau



# Conclusion

Data centres play a very important role in Telangana's as well as India's digital transformation, providing the essential infrastructure required to support a rapidly digitalising society. They drive economic growth, enhance Government services, foster start-up innovation, enable remote work and education, and propel technological advancements. By aligning with the global standards and best practices, the Indian data centre industry can enhance its reliability, efficiency and sustainability. Addressing current gaps through strategic investments and policy support will position India as a competitive player in the global data centre market, fostering economic growth and technological advancements.

Acceleration of cloud adoption in the financial services, health care and manufacturing sectors is driving widespread implementation of hybrid and multi-cloud architectures. Availability of infrastructure fully prepared for implementation of AI applications will allow India to achieve large-scale innovations in financial, health and government technologies, and to integrate cloud computing throughout the country's effort to reach its goal of a trillion-dollar digital economy.

India's rapid advancements in AI, underpinned by strategic government initiatives, have positioned the country as a global AI powerhouse. By expanding AI compute infrastructure, fostering indigenous AI models, enhancing digital public infrastructure, and investing in talent development, India is creating an inclusive and innovation-driven ecosystem. The emphasis on open data, affordable access to high-performance computing, and AI-driven solutions tailored to local needs ensures that the benefits of AI reach businesses, researchers, and citizens alike. As AI adoption accelerates across industries, India's proactive approach is not only strengthening its digital economy but also paving the way for self-reliance in critical technologies. With a clear vision for the future, India is set to become a leader in AI innovation, shaping the global AI landscape in the years to come.

# About ASSOCHAM



The Associated Chambers of Commerce & Industry of India (ASSOCHAM) is the country's apex national chamber since 1920. It advocates actionable policy suggestions to strengthen the Indian economy by leveraging its extensive membership reach of over 450,000 companies, comprising of large corporates and SMEs. With over 70 Sector and State Councils, ASSOCHAM effectively represents diverse segments of Indian industry and focusses on aligning industry priorities with the nation's growth aspirations.

## ASSOCHAM Contacts

### **Saurabh Sanyal**

Secretary General  
sg@assochem.com

---

### **Varun Aggarwal**

Sr. Director, ICT  
varun.aggarwal@assochem.com

---

### **Vicky Pandita**

Dy. Director  
vicky.pandita@assochem.com

## *Disclaimer*

The report is prepared using information from various sources and is not intended to address the circumstances of any particular individual or entity. The report has been prepared from various public sources and the information received from these sources is believed to be reliable. The information available in the report is selective and subject to updation, revision and amendment. While the information provided herein is believed to be accurate and reliable, ASSOCHAM do not make any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and data available in the public domain. While due care has been taken while preparing the report, ASSOCHAM do not accept any liability whatsoever, for any direct or consequential loss arising from this document or its contents.











**The Associated Chambers of Commerce and Industry of India**

ASSOCHAM Corporate Office:  
4th Floor, YMCA Cultural Centre and Library Building,  
01, Jai Singh Road, New Delhi - 110001 Ph: 011-46550555

**Email: [info@assochem.com](mailto:info@assochem.com) Website: [www.assochem.org](http://www.assochem.org)**