

Redefining Digital Infrastructure In India: 2025 Updates

TRANSFORMING POLICY TO PROGRESS



INDEX

Foreword	3
New Way Forward For India's Telecom Sector	5
Unlocking The Sky: India's Satellite Connectivity	9
Beneath The Waves: Charting The Course Of Submarine Cables	10
India Leaps Into A New Era Of Data Protection	11
Fostering AI Integration: The Cornerstone Of India's Development	13
Appetite For Data Centres Continues To Grow	15
Digital Competition Act - Shaping The Market	17

FOREWORD

As India's telecom sector enters 2025, the focus is undeniably clear – execution. The past year set the stage with policy reforms, infrastructure expansion, and digital acceleration. Now, the government is translating these shifts into tangible outcomes.

The essence of this forward-looking transformation is the Telecommunications Act 2023 (**Telecom Act**), which began taking shape in 2024 with stakeholder consultations around 'modernised' service authorisations and the government releasing rules around telecom infrastructure.

The Department of Telecommunications (**DoT**) is expected to roll out the new authorisation norms shortly, incorporating the Telecom Regulatory Authority of India's (**TRAI**) recommendations on unified service authorisation. Industry insights indicate that most of TRAI's recommendations – largely considered as business and investment friendly – are likely to be accepted by the DoT.

Accordingly, if the TRAI recommendations are accepted, the new authorisation framework under the Telecom Act may streamline network operations, enable new business and service models, reduce costs and logistical burdens, and enable telcos to offer mobile, internet and international services under a single permission. Moreover, the Telecom Act and TRAI's recommendations promote network infrastructure security at par with international standards which will continue to attract global digital businesses into India.

Meanwhile, data proliferation (accelerated by 5G rollouts) continues at an unprecedented scale. India's subscriber base is projected to hit 300 million by March 2025. Meanwhile, data consumption per wireless data subscriber is surging, growing by approximately 30% on a monthly average, leading to a rise in demand for 5G telecom equipment. Sectors like digital services, manufacturing, healthcare, and logistics continue to drive an exceptional demand for 5G networks – pushing telcos to redefine and upgrade their network architecture.

This explosive demand has fueled a data centre boom, with the country's capacity projected to be more than double to 2.3GW by 2027. Telcos are expected to invest heavily in edge computing, bringing cloud services closer to consumers and enterprises.

Network fiberisation continues to be a significant area of focus. The BharatNet mission moves into high gear, sharply focusing on last mile connectivity. Moreover, DoT's new 'Right of Way' (**RoW**) rules are enabling faster clearances and shared use of utility infrastructure (such as, poles, ducts, and street infrastructure), leading to greater cost-sharing and reduced deployment delays.





International connectivity has also emerged as a strategic priority, as India strives to cement its position as a critical submarine landing and transit hub in the Asia-Pacific undersea cable market (projected to hit USD 546.78 million by 2028). New cable landings promise to enhance India's global data exchange capabilities and may present significant investment opportunities in the sector. Additionally, satellite connectivity is gaining significant traction, bolstering remote and rural digital access while complementing terrestrial and undersea networks.

In parallel, India's 100% FDI approval on the 'automatic route' in the space sector has opened the floodgates for global players. Amidst this, the battle over satellite spectrum allocation remains a contested space.

Overall, 2025 stands as a defining year to transform 'potential' into measurable 'progress' in the telecom sector. The groundwork is firmly placed, and with focused execution, India is on track to establish itself as a premier global digital hub for business expansion and investments, innovation, and digital consumer services.



New Way Forward For India's Telecom Sector

Key Takeaways

- DoT's regulatory transformation will enhance digital connectivity and consumer services via air, sea and terrestrial networks (including last mile connectivity).
- Artificial Intelligence (AI) is on a leap, with cloud service providers and data centres poised to capitalise on the boom.
- Significant investment expected across air, land and sea infrastructure, and AI integration.

Charting The Path To Future Growth: India's Current Telecom Landscape

- **Investment Boom:** The Indian telecom sector is poised to attract substantial investments, fueled by the reforms outlined in the Telecom Act. Industry projections estimate that India's digital infrastructure market will grow at a CAGR of 12%, reaching approximately USD 23 billion by 2025. International investors are increasingly drawn to India, supported by the government's steadfast commitment to enhancing the ease of doing business and creating a favorable investment climate.
- **Accelerated Digital Transformation:** With the digital user base already surpassing 900 million, India is set for further expansion driven by increased smartphone penetration and affordable data services. The Telecom Act's streamlined regulatory framework is poised to encourage significant investments in 5G rollouts. The government's efficient spectrum allocation and infrastructure approval processes are expected to catalyse the rapid adoption of 5G.
- **Data Centres and Cloud Services:** Rising computational demands and the exponential growth of AI is driving significant investments in data centres and cloud infrastructure within India (as a global outsourcing hub). Both global tech giants and local players are capitalising on this opportunity to establish state-of-the-art facilities across India, supported by the Telecom Act, which fosters innovation while ensuring infrastructure security.
- **Focus on Private Networks and Enterprise Solutions:** Apart from public telecom networks, tech entities are increasingly looking to own, establish, or rely on private networks, including undersea cables, for captive use to better serve their consumers. This growing demand for terrestrial and subsea private telecom networks across industries such as global digital and content services, manufacturing, healthcare, among others, presents immense potential for business growth. These networks enable seamless management of high transit traffic while ensuring low latency and high reliability—essential for mission-critical applications like AI, IoT, and Industry 4.0 solutions.

India's Telecommunications Act 2023 & TRAI Recommendations: A Strategic Forward Step Towards Digital Infrastructure Transformation

The phased implementation of the Telecom Act has been a significant focus in 2024 and is expected to command most of the attention in 2025. This overhaul seeks to modernise India's telecom regulatory framework, aiming to harmonise the fragmented licensing regime into a cohesive structure that aligns with contemporary business needs and



technological advancements like AI, blockchain, edge computing, and quantum communication.

India's existing telecom laws function under the unified licensing regime comprising of various standalone licenses and registrations for specific services. To modernise and simplify this fragmented regime, TRAI's recommendations on service authorisations advocates for a single authorisation regime. This change aims to enhance compliance, eliminate redundancies, and promote ease of doing business in the telecom sector – for both new entrants and legacy players.

Though the authorisation framework is yet to be formalised, DoT has initiated the process of introducing rules under the Telecom Act on certain critical aspects related to digital infrastructure. The comprehensive implementation of the provisions and rules under the Telecom Act will play a pivotal role in shaping the future of the telecom sector in India.

Meanwhile, TRAI as well continues to play an active role. On DoT's reference, followed by TRAI's open stakeholder consultations on the Telecom Act, TRAI has made exhaustive recommendations on key open areas in the telecom regulatory framework. These recommendations, if adopted, could drive significant reforms, and promote ease of doing business and investments.

Both, DoT and TRAI continue to revamp the existing laws to expand the reach of telecom networks, laying the groundwork for a more inclusive and digitally connected India.

Here are some key developments regarding how this impacts digital infrastructure:

Telecom Act and its Rules: Digital Infrastructure Focus

Key Takeaways

- New **RoW Rules** to expedite approvals, reduce project delays, and lower costs. 5G rollout, last-mile connectivity in rural areas, and broadband penetration to receive a considerable boost.
- The **Digital Bharat Nidhi (DBN) Fund** to also accelerate rural broadband expansion, supporting projects like BharatNet.
- The initiative expected to provide high-speed internet to 600,000 more villages and contribute 5–10% to India's GDP growth by 2028.
- **Critical Telecom Infrastructure (CTI) Rules** to foster safe innovation at par with international standards. Six-hour mandatory reporting requirement for cyber incidents to strengthen India's cybersecurity and reinforce consumer and investor confidence.

RoW Rules: Unlocking Seamless Telecom Infrastructure Deployment

The expansion of digital connectivity relies heavily on robust fibre networks and extensive ground coverage supported by telecom towers. A critical dependency (and often a significant roadblock) has been the timely acquisition of RoW permissions and the need for a consolidated framework to streamline the process.

The RoW rules address these challenges by establishing a uniform, transparent, and time-bound mechanism for granting permissions. They simplify the procedures for deploying telecom infrastructure, reduce costs, and ensure faster implementation, ultimately driving the growth of digital connectivity and enabling next-generation technologies.

The intent is to facilitate the seamless deployment of telecom networks, including fibre-optic cables and mobile towers. While largely retaining the existing framework, these rules introduce key clarifications to minimise operational roadblocks. Notably, the rules curtail the discretionary powers of local authorities to arbitrarily seal telecom infrastructure (thus, hindering consumer services and network architecture in the region). Procedural and regulatory safeguards against such powers will optimise the utilisation of telecom resources deployed by the telcos.

Moreover, the rules catalyse the establishment of transparent and time-bound clearance processes, which will ensure faster network rollouts, expediting approvals and reducing bureaucratic delays.

This reform is also set to accelerate 5G deployment and the expansion of next-generation networks, particularly last-mile connectivity in rural and semi-urban areas, where connectivity gaps persist.

Universal Service Obligation Fund Evolution: Transition to Digital Bharat Nidhi Fund

To bolster rural connectivity, the Telecom Act has evolved the Universal Service Obligation Fund into the DBN Fund, an initiative aimed at driving India's inclusive growth vision. While the rebranding signifies continuity, the strategic focus lies in enhancing the fund's impact on projects that bridge the digital divide. A flagship example is BharatNet, which aims to extend high-speed broadband access to over 600,000 villages across India.

DBN emphasises connectivity in remote and underserved areas, unlocking untapped market potential and paving the way for transformative growth in sectors such as e-commerce, digital payments, telemedicine, and online education. Rural Connectivity Expansion Projects under the DBN Fund, including BharatNet, are pivotal to this mission, targeting the 70% of India's population that resides in rural regions. By expanding broadband access, the DBN Fund not only accelerates economic progress but also opens new avenues for investment and revenue generation, creating a robust foundation for a digitally inclusive Bharat.

Critical Infrastructure Rules: Fortifying the Backbone of Digital India

Safe innovation – a cornerstone of India's telecom evolution continues to anchor the evolution of India's telecom sector. DoT's rules under the Telecom Act around CTI (mandating reporting timelines and rigorous technical standards for certain equipment as may be notified) can be pivotal towards securing India's telecom infrastructure according to international norms.

Under these rules, specific telecom infrastructure will be classified as 'critical infrastructure' based on its potential impact on national security, thereby imposing stricter regulatory requirements to safeguard these assets. Notably, incidents involving CTI must be reported within six hours of their occurrence—a more stringent mandate compared to CERT-In's existing notice-based reporting framework.

This expedited reporting requirement will compel telecom operators to enhance the resilience of their networks, enabling quicker responses to emerging cyber threats. By aligning India's infrastructure security standards with global benchmarks, the CTI Rules also help bolster investor confidence in the sector.

As India's digital ecosystem grows, driven by the adoption of AI, increased computational demands, and rising big tech investments, a more robust framework around critical infrastructure will be essential in meeting the market demand for secure, scalable networks at par with the international security standards.

TRAI Recommendations on the Telecom Act: Positive Approach

Key Takeaways

- Telcos may lease **cloud telecom infrastructure** (from authorised cloud service providers), provided cloud servers remain within India. This may boost India's cloud services market, while reducing CAPEX and OPEX burdens for telecom players.
- **National Long Distance (NLD) - International Long Distance (ILD) merger** into a single 'Long Distance' authorisation, with simplified regulatory framework – potentially reducing compliance burdens and enable bundled service-offerings.
- **Scope Expansion for Internet Service Providers (ISPs)** to domestic leased circuits and virtual private networks – leading to better resource utilisation and market competition, along with increase broadband penetration, particularly in Tier 2 and Tier 3 cities, contributing to India's goal of 900 million broadband users by 2025.

Cloud Telecom Infrastructure

TRAI has recommended that telecom entities may obtain telecom network resources on lease or hire from certain authorised cloud service providers, so long as the cloud servers (and associated data) remain within India and the telecom entities ensure compliance with the Telecom Act relating to such cloud infrastructure.

If adopted, new business opportunities for cloud-based managed services will arise within India, making the market segment for cloud services more lucrative. Additionally, telecom entities will also mitigate costs and logistical burdens for procuring and maintaining network equipment, thus ensuring greater return on their investments.

NLD-ILD Merger

Another recommendation from TRAI is to merge the existing NLD and ILD authorisations – into a single 'Long Distance' authorisation.

New entrants may thus consider providing bundled service offerings at the outset, while existing players may consider migrating to the new authorisation framework for their business expansion. This may not only diversify and expand the customer base for telecom entities (i.e., providing domestic as well as international connectivity services to customers under a single authorisation) but also decrease compliance burdens for such entities comparatively (if they were to operate under separate NLD and ILD authorisations).

Scope Expansion For ISPs

Similarly, TRAI has advocated that ISPs may be allowed to provide domestic leased circuits (**DLCs**) and virtual private networks (**VNP**) under the scope of their ISP authorisation – without having to obtain a separate NLD authorisation.

If permitted, ISPs would then be able to use their existing networks to augment their service offerings. Since ISPs in most cases already have the network resources for such additional service offerings (and are only restricted by the current licensing conditions), such an expansion in scope will also lead to better resource optimisation for ISPs. According to TRAI, this will also enhance market competition.



Unlocking The Sky: India's Satellite Connectivity

Key Takeaways

- **Investment-Friendly Reforms** – The non-auction spectrum model and N-SPACe (i.e., an autonomous agency within the Department of Space) framework streamline foreign participation, requiring non-Indian entities to collaborate with Indian partners, boosting local innovation.
- **Faster, Cost-Effective Rollouts** – TRAI's April 2024 recommendations (if adopted) will allow satellite gateway and infrastructure sharing, reducing costs and accelerating deployment in remote areas.
- **Government-Backed Expansion** – The INR 1,000 crore (c. USD 115 million) space-sector VC fund reinforces India's ambition as a global satellite leader, paving the way for universal high-speed broadband in 2025.

India's satellite broadband landscape is set for a defining year. With Jio and Airtel completing regulatory clearances and Starlink and Amazon Kuiper in the final stages of compliance, satellite-powered connectivity is no longer a distant promise. Administrative spectrum allocation will unlock the sector's full capability, delivering high-speed internet to even the most remote corners of the country.

Recognising the strategic role of satellite communications, the government has adopted a non-auction model for spectrum allocation under the Telecom Act, fostering an environment conducive to global investments and digital inclusivity. The N-SPACe norms, guidelines, and procedures, streamline approvals for private entities, ensuring transparency and easing market entry for both domestic and foreign players. Non-Indian entities must apply through an Indian subsidiary, joint venture, or partner, fostering local collaboration and Indian entry of foreign entrants.

Meanwhile, TRAI's recommendation on Telecommunication Infrastructure Sharing, Spectrum Sharing and Spectrum Leasing dated 24 April 2024 proposes that the licensees may share active and passive infrastructure, including satellite gateways. This reduces costs and accelerates service deployment, particularly in remote areas. These recommendations reinforce India's push for an efficient, investment-friendly space and telecom ecosystem.

With India's satellite broadband market projected to grow 36% annually, the sector is poised to become a key pillar of the country's digital transformation. Government-backed initiatives, including INR 1,000 crore (c. USD 115 million) space-sector VC fund reinforce India's ambition to be a global leader in next-generation connectivity. As satellite broadband services gear up for launch, 2025 will mark a new chapter in India's push for universal, high-speed, and resilient digital infrastructure.



Beneath The Waves: Charting The Course Of Submarine Cables

Key Takeaways

- **Regulatory Reinforcement** - TRAI's 2023 recommendations on Cable Landing Stations (CLS) introduce main CLS and CLS Points of Presence, enhancing availability, resilience, and security for undersea cables.
- **Rising Data Demand** - AI-driven end-user and backend infrastructure traffic is surging, necessitating higher submarine cable capacity to handle global data flows.
- **Private Submarine Cables** - Tech giants are investing in private undersea cables to efficiently manage growing data demands and ensure seamless global connectivity.

Submarine cables are the backbone of global communications, carrying nearly 99% of the world's internet traffic. These vital networks underpin a wide array of services, including commerce, finance, and digital health. India's strategic positioning, with 17 international subsea cables and a combined capacity of over 138 Tbps solidifies its position as a key hub for global connectivity.

As digital technologies evolve, particularly with the integration of AI-powered tools, the surge in data traffic has become two-fold. On one hand, end-user data traffic is increasing as AI tools become more integrated in everyday tasks, resulting in a spike in direct data flow. On the other hand, backend infrastructure, where data processing occurs, is also experiencing substantial increases in traffic. This backend flow, primarily routed through data centres, plays a pivotal role in meeting the growing demands on the network, highlighting the need for more robust infrastructure.

To accommodate this surge in data, there is a pressing need for additional undersea fibre cables and enhanced submarine cable capacity. In response, major technology companies are aiming to deploy private submarine cables for their captive use, ensuring efficient management of their data flows to meet rising demand.

In 2023, TRAI recommended reinforcing the regulation of CLS. This recommendation defines two key categories for CLS (i.e., the main CLS and a CLS point of presence), both of which are designed to enhance the availability, resilience and security of submarine cable infrastructure, and present more options to customers availing the use of such undersea cables landing in India. These recommendations may be essential as the sector faces emerging challenges related to data volume and the need for greater network security.

In parallel, the International Telecommunication Union and the International Cable Protection Committee have launched the International Advisory Body for Submarine Cable Resilience. This global initiative aims to enhance the stability and protection of subsea cables, further underscoring their importance.

As India's regulatory framework continues to evolve, its leadership in the submarine cable sector will remain a cornerstone for innovation, attract significant investment, and contribute to global digital resilience. With these transformative advancements, India is poised to solidify its leadership at the vanguard of the global digital connectivity revolution.



India Leaps Into A New Era Of Data Protection

Key Takeaways

- New framework for **consent managers** to facilitate consent management across applications – requiring AI, blockchain, secure networks – driving data centre and cloud investments.
- **Stricter consent requirements** for obtaining explicit consent including through token mapping – requiring verifiable identity systems, secure cloud systems and dedicated infrastructure.
- Reliance on **digital public infrastructure** and integration with DigiLocker – boosting interoperability, compliance and market expansion.
- **Data-driven economy** through larger datasets, personalised services, cross-sector growth – promoting scalable infrastructure, digital trust and regulatory adherence.

As 5G expansion and last-mile penetration infuse an increasing number of broadband and internet consumers into the digital services segment, the need for a dedicated data protection framework has heightened even more significantly. With digital services increasingly using personal data, safeguarding this information has become paramount. Recognising this, India introduced its first (and much awaited) dedicated data protection framework in 2023 – the Digital Personal Data Protection Act 2023 (**DPDP**) Act.

2025 began on an even more enriching note, with the Ministry of Electronics and Information Technology (**MeitY**) releasing ‘draft’ rules under the DPDP Act. The key drivers for the stakeholders appear to be aligning India’s data protection framework with international standards and fostering safe and responsible innovation – while also promoting ease of doing business.

These draft rules address critical aspects such as verifiable parental consent and introduce the new concept of consent managers in India’s data protection landscape.

Additionally, India’s evolving data protection framework strengthens its position as a trusted global data hub, ensuring secure cross-border data flows (both inward and outward) while aligning with the international standards. The DPDP Act establishes a regulatory framework for secure outbound data transfers, balancing compliance with global requirements. As for inward data transfers, with robust safeguards in place, India is positioning itself as a data-centric hub, attracting outsourcing opportunities as EU entities increasingly rely on India’s robust digital infrastructure for backend data processing and support services.

Here is what to expect in 2025 from a digital infrastructure viewpoint, with the enactment of the DPDP Act and the likely release of its rules.

1. Consent Managers

For the first time, the DPDP Act, introduces consent managers, a concept new to the Indian market. The consent managers act as facilitators between the data principals and data fiduciaries. Their role is pivotal in ensuring seamless consent management under the DPDP Act, and enabling individuals to give, manage, and withdraw their consent across multiple platforms.



- **Strengthening Digital Infrastructure.** Given the stringent privacy measures applicable to consent managers, they will require robust digital infrastructure, including advanced data management systems, secure networks, and scalable platforms to handle vast amounts of data. This will boost India's digital infrastructure sector, particularly in data centres and cloud solutions, which consent managers can either establish themselves or outsource from third parties.
- **Driving AI and Blockchain Investments.** Consent managers will heavily rely on AI-driven automation and blockchain technology to enhance security and ensure data integrity. This will lead to higher investments in AI and digital infrastructure, aligning with India's expected AI market growth projection of 25-30% CAGR by 2027.
- **Enabling Interoperability Across Digital Ecosystems.** The government has emphasised the need for interoperability to support India's expanding digital public infrastructure. Consent managers must ensure seamless integration across sectors, reinforcing India's position as a global leader in secure, scalable digital services.

2. Impact of Stricter Consent Requirements on Infrastructural Needs

With the DPDP Act's stricter requirements for obtaining explicit consent and providing consent notices, businesses will need to invest in dedicated infrastructure, including data centres, secure networks, backend systems, and cloud service providers, to handle large volumes of data while ensuring compliance with the prescribed security standards.

3. Verifiable Consent and Integration with Digital Infrastructure

The Draft Rules requires token mapping to verifiable identities when processing children's data. To ensure compliance and obtain verifiable consent, particularly for sensitive data like children's information, businesses will need to integrate with services such as DigiLocker and other digital public infrastructure verifiers. This will necessitate growth of digital public infrastructure and investments in systems capable of supporting token mapping and robust identity verification processes.

4. Emergence of a Data-Driven Economy

With trust in data usage increasing, businesses will have access to larger datasets, enabling them to tailor services more effectively. As the consumer base and market size grow, the demand for data-driven solutions will intensify, highlighting the need for secure and scalable infrastructure and cross-vertical investments.

Overall, the DPDP Act serves as a cornerstone for India's data-driven digital transformation, paving the way for significant investments in digital infrastructure to enable compliance and support the expanding market.



Fostering AI Integration: The Cornerstone Of India's Development

Key Takeaways

- TRAI, RBI, SEBI and other **government agencies adopting AI** for compliance, fraud detection, market monitoring – securing digital economy.
- **AI-driven manufacturing** through INR 1.46 lakh crore (c. USD 17 billion) Production-Linked Incentive (**PLI**) investments, coupled with automation, predictive maintenance and market investments like Microsoft's \$3 billion cloud push.
- **DPDP Act** may ensure **ethical AI**, privacy and accountability – strengthening trust and global regulatory alignment.
- Expected **USD 450-500 billion AI contribution** to India's GDP by 2025 – driving digital economy and global innovation leadership.

AI has emerged as a cornerstone of modern innovation, fundamentally transforming industries and reshaping the global economy. Its diverse applications are wide-ranging, revolutionising key sectors like healthcare diagnostics, optimising supply chain management, personalising customer experiences, and driving the next generation of smart cities. By enabling data-driven decision-making, AI has unlocked unprecedented opportunities for growth and efficiency, fostering economic development and bridging the digital divide.

Indian industries are increasingly leveraging the transformative potential of AI to enhance operational efficiency, improve customer services, and drive innovation. Regulators like the TRAI, the Reserve Bank of India (**RBI**), and the Securities and Exchange Board of India (**SEBI**) are actively encouraging AI adoption to bolster compliance, security, and efficiency across sectors.

For instance, TRAI already employs AI-driven analytics to curb unsolicited commercial communications and enhance telecom service quality. Similarly, RBI is leveraging AI in fraud detection, risk assessment, and regulatory compliance in the financial sector, while SEBI has turned to AI to monitor trading activities, detect market manipulation, and protect investors. These initiatives underscore AI's pivotal role in driving regulatory innovation and ensuring the integrity of India's rapidly digitising economy.

AI-Driven Manufacturing: The Catalyst Behind India's Industrial Transformation

The realisation of investments worth INR 1.46 lakh crore (c. USD 17 billion) under the PLI scheme underscores its success in transforming India into a global manufacturing hub. India has transitioned from being an import-dependent market to an export-driven powerhouse, attracting major global players like Cisco and Apple establishing manufacturing units within the country.

AI-driven automation is playing a pivotal role in this transformation. The Indian manufacturing sector has embraced Industry 4.0, leveraging AI-powered automation, predictive maintenance, and supply chain analytics to enhance productivity and efficiency. By 2025, nearly two-thirds of Indian manufacturers are expected to undergo digital transformation, reinforcing India's position in the global supply chain.

This rapid industrial evolution intrinsically aligns with India's broader economic goals. The synergy between manufacturing advancements and AI-driven efficiencies is set to play a critical role in driving India towards its ambition of becoming a USD 5 trillion economy by 2026-27.

Simultaneously, the increasing migration of AI workloads to India is driving investments in data centres and cloud capabilities. Notably, Microsoft's commitment to invest USD 3 billion in building cloud infrastructure and AI systems across India over the next two years signals a new era of technological growth and innovation.

The Two-Fold Impact of AI on Digital Infrastructure



Enhancing Digital Services

AI is revolutionising digital services by powering innovations like large language models (**LLMs**) such as ChatGPT, government-led AI initiatives like MuleHunter.ai, and industry-wide reliance on AI for performance optimisation. These developments have driven an exponential surge in AI adoption. By 2025, AI is projected to contribute USD 450–500 billion to India's GDP, accounting for nearly 10% of its USD 5 trillion economic target. Furthermore, AI is projected to grow at a compound annual growth rate of 20.2%, as highlighted in the State of Education Report 2022.



Optimising Digital Infrastructure

AI is not just reliant on digital infrastructure—it actively enhances it. The rise of generative AI models and LLMs demand immense computational power, spurring investments in advanced data centres, GPUs, and TPUs. These investments not only enhance computation power but also improve the connectivity networks essential for AI applications.

AI's role in optimising digital infrastructure includes predictive maintenance, which proactively identifies potential issues in data centres to reduce downtime and enhance operational efficiency. Additionally, AI-driven solutions also optimise energy consumption by dynamically managing workloads and cooling systems, reducing costs and environmental impacts.

This synergy extends to connectivity networks as well. Applications like autonomous systems, real-time analytics, and IoT devices require ultra-fast, low-latency networks. To meet these demands, 5G is being refined, and foundational work on 6G is underway, offering unmatched speed, capacity, and reliability. AI-powered network management further enhances bandwidth allocation, reduces latency, and ensures consistent service quality, addressing the growing complexity of digital ecosystems.

Regulatory Synergy: The DPDP Act and AI

As AI advancements accelerate, the regulatory landscape is evolving to ensure responsible innovation. The enactment of the DPDP Act represents a pivotal milestone in bridging the regulatory gaps. The Act governs the processing of personal data (**PD**), a critical component in AI training and operations. This interplay between the DPDP Act and AI highlights the need for a regulatory framework that balances innovation with privacy and accountability.

By emphasising transparency, accountability, and consent-based data processing, the DPDP Act aligns with global efforts to establish ethical AI practices. It fosters trust among stakeholders, encouraging increased reliance on AI while safeguarding individual privacy. This regulatory foresight is expected to spur further investments in digital infrastructure and AI-driven innovation, accelerating India's technological and economic progress.

Solidifying India's Position as a Global Digital Powerhouse

Hyperscalers and technology innovators are integrating AI-driven optimisations into their infrastructure while aligning with emerging regulatory standards. These synergistic advancements are laying the foundation for a resilient, adaptive, and sustainable digital ecosystem.

India stands at the forefront of a new technological era, where the seamless integration of AI, cutting-edge digital infrastructure, and robust governance is driving unprecedented growth. By fostering innovation, bridging digital divides, and ensuring regulatory compliance, India is poised to harness the full potential of AI and solidify its position as a global digital powerhouse. This transformation sets the stage for an inclusive and innovation-driven digital future, propelling the nation toward achieving its ambitious economic and technological aspirations.



Appetite For Data Centres Continues To Grow

Key Takeaways

- There's a growing trend of data centre operators and real estate developers forming joint ventures/platforms in India, combining technical expertise with land development skills for data centre development.
- Onshore fund structures, and the use of GIFT International Financial Services Centre (**GIFT IFSC**) are emerging as potential investment routes for India's data centre market, with Environmental, Social, & Governance (**ESG**) considerations set to play a larger role in M&A deals.
- Colocation is becoming increasingly popular among businesses for its cost-effectiveness, offering secure and reliable data hosting services without the need to build and maintain their captive data centres.
- Investor interest in the Indian data centre market is driven by demand from hyperscalers and enterprise clients, with customer contracts typically structured as service agreements or leases, often tailored to specific locations or global agreements.
- The Indian Government's announcement to set up data embassies in GIFT IFSC signals its plan to position India as a trusted data storage ecosystem, driven by advanced infrastructure and strong data security. There is expectation that the Government will release a draft policy for setting up data embassies.

India's data centre growth story persists owing to several well-identified factors generating demand and thus, as a logical and corollary response, significant strides have been made from the supply side as well to make available the requisite data centre inventory - with there being room for more expected in 2025.

In the Indian market, demand has been consistently driven by hyperscalers, cloud service providers, banking and financial services industry, Over-the-Top (**OTT**) industry, social media and public sector undertakings. Consequently, there has been a steady source of offtake leading to data centre occupancy levels to be somewhere between about 65-80% as per certain reports (with location-wise variations observed). The demand for data centres is anticipated to continue throughout this year with OTT content consumption, widespread smartphone accessibility, and the roll-out of 5G and high-speed WiFi internet, serving as the tailwinds.

Concurrently, enterprises are constantly exploring growth opportunities through cutting-edge technologies like cloud computing, AI analytics, Internet of Things (**IoT**), etc., all of which heavily rely on robust data centre infrastructure.

On the supply side, reports suggest that about 200+MW was potentially added by the end of 2024 and industry observers expect a similar, if not higher capacity addition this year. While Mumbai and Chennai continued to remain the preferred destination for data centre inventory, Noida, Hyderabad, Bangalore and Kolkata are poised to be hubs for future data centre stock. Amongst other things, infrastructure measures such as expansion of subsea cables and availability of surplus power and water will see certain geographies doing better than others - though the geographic spread will nevertheless widen.

The growth is also backed by the government's positive intent to make India a preferred destination for data centres. Policy incentives and ease of doing business initiatives across states have been framed to provide much needed impetus to set up data centres. Regulatory reforms such as inclusion of data centre within the meaning of "infrastructure" have enabled a more conducive environment to bolster investments into the burgeoning data centre environment.

Deal Making And Data Centres

Foreign investors are increasingly recognising the potential of India's data centres. Since 2020, global players, domestic real estate investors, and private equity firms have made substantial investments in the sector¹.

While greenfield development of data centres by operators continues organically, there has been a noticeable uptick in deal making in the data centre space in India with platform deals / joint venture deals being the flavour of the season. An emerging trend has been data centre operators and real estate developers collaborating on data centre development, an obvious synergistic alliance – bringing in technical expertise in data centre services together with land / site procurement expertise. One such notable transaction includes the recently announced USD 1.7 billion joint venture between Colt Data Centre Services and RMZ. Apart from equity deals, real estate developers and data centre operators have entered into complex collaboration arrangements for construction of data centre (as per operator specifications) pursuant to the built-to-suit lease model along with suite of other agreements for continuous collaboration.

Though at nascent stage, due to conducive regulatory reforms (tax and non-tax), onshore fund formation structures, foreign venture capital investment route and possible use of GIFT IFSC are being contemplated as possible investment routes for the data centre market and we would anticipate traction for these structures this year or soon thereafter. ESG considerations are also expected to play a more prominent role in M&A deals in the Indian data centre market.

Upswing Of Interest In Colocation Facilities And Offtake Arrangements

The country has seen a steady rise in colocation facilities, which provide shared data centre spaces and resources to various tenants. Colocation has become a preferred solution for businesses seeking affordable, secure, and reliable data hosting services without the burden of building and maintaining their own data centres. A significant rise in data centres is expected to flow from public sector undertakings and government enterprises, as they place greater emphasis on digitisation and e-governance to streamline operations.

Perhaps the most critical reason for investor interest in the Indian market has been the potential demand being generated by hyperscalers and other reputed enterprise clients – who are coveted customers/tenants for the entire industry. Data centre customer contracts in India have typically followed the common trends and issues observed globally. These contracts are structured either as services agreements or leases/sub-leases for a variety of leasing/services models such as fully fitted colocation services or turnkey / built-to-suit particularly for hyperscalers. In India, service agreements are more commonly used as opposed to sub-lease models. However, use cases have been observed for both contracting models. Further, customer contracts in India can be location specific or global/master agreement with shorter local contracts or work orders.

Data Embassy Policy

From few announcements by the Indian Government on setting up data embassies in GIFT IFSC in India, it appears that permitting countries and international companies to set up data embassies in India is a part of the bigger plan of Indian Government to build India as a trusted data storage ecosystem. India is also emerging as a compelling destination for hosting data embassies, owing to its sophisticated technological infrastructure and commitment to robust data security. While no formal policy has been rolled out by the Indian Government yet, with the rapid rise of demand of data centres in India, it can be expected that the Indian Government may come up with a draft policy soon for setting up data embassies in India.

¹ Source: <https://www.ibef.org/news/india-s-data-centre-industry-is-expecting-an-investment-of-us-10-billion-over-the-next-three-years-cii-colliers-report>



Digital Competition Act – Shaping The Market

Key Takeaways

- On 22 December 2022, the Parliamentary Standing Committee on Finance submitted a report titled “Anti-Competitive Practices by Big Tech Companies” (**Report**), identifying ten anti-competitive practices in digital markets.
- The proposed Digital Competition Act (**DCA**) is expected to tackle these practices. It will establish a process for identifying systematically important digital intermediaries (**SIDIs**) and introduce an ex-ante regulatory framework that SIDIs must comply with.
- The DCA has faced strong criticism from big tech companies, which argue that its scope is excessive and potentially harmful to innovation. Concerns have been raised over the adoption of an EU-inspired ex-ante regulation without considering India’s unique market context.
- Given the opposition, there is an expectation that the current version of the DCA may not pass Parliament and will be modified. The final form of the DCA remains uncertain and it is expected to be introduced in Parliament in 2025.

On 22 December 2022, the Parliamentary Standing Committee on Finance submitted the Report. The Report identified ten different anti-competitive practices in digital markets (such as anti-steering, self-preferencing, bundling/tying, unauthorised non-public data usage to one’s own advantage, etc.) and proposed a framework for addressing their adverse impact. Upon assessment of these practices and the developments in certain foreign jurisdictions, the Report recommended the formation of the Committee on Digital Competition Law (CDCL) to study the possibility of introducing a DCA for ex-ante regulation of digital markets (i.e., pre-determined rule-based enforcement). A nine member CDCL was established on 6 February 2023 to study the facets of digital markets and draft the DCA.

Mr Haigreve Khaitan, Senior Partner, Khaitan & Co, was a member of the CDCL.

The DCA will mark a fundamental shift in Indian antitrust regulation from the Competition Commission of India’s (**CCI**) ex-post facto review of conduct to now an ex-ante framework, in the digital markets. The DCA is expected to address the ten different prevalent anti-competitive practices in digital markets as identified in the Report, and additional concerns that may be identified by the CDCL. Further, the DCA will lay down the process for identifying SIDIs)and lay down the new ex-ante regulatory framework that SIDIs will have to comply with under the DCA.

This development comes at a time of heightened scrutiny of the digital markets by the CCI, which has imposed a penalty in 2024 on Meta for WhatsApp’s “take it or leave it” privacy policy update and Google for abusing its dominant position in two different cases pertaining to the digital markets. Further, based on publicly available information, CCI is likely to conclude its investigations involving a number of other digital players such as Apple, Amazon and Flipkart in 2025.

Given the focus on big tech under the existing competition law framework, the DCA has been met with sharp criticism from the big tech industry for being excessive and overbearing in its scope. Stakeholders have questioned the decision to import an EU inspired framework of ex-ante regulation of big tech without considering the differences between EU and India, which could have the unintended effect of stifling innovation in the digital markets.

Accordingly, there is an industry-wide expectation that the DCA in its current remit is unlikely to be passed by the Parliament, and a watered-down version of the DCA will be tabled for discussion before the Parliament. Therefore, while it is expected that the DCA shall be introduced to the Parliament in 2025, the shape and form of the DCA continues to remain a mystery.

About Khaitan & Co

Khaitan & Co is a top tier and full-service law firm with over 1200 legal professionals, including 270+ leaders and presence in India and Singapore. With more than a century of experience in practicing law, we offer end-to-end legal solutions in diverse practice areas to our clients across the world. We have a team of highly motivated and dynamic professionals delivering outstanding client service and expert legal advice across a wide gamut of sectors and industries.

To know more, visit www.khaitanco.com



Contact Us



Abhinav Chandan
Partner
Technology, Media and Telecom
Privacy and Data Protection
abhinav.chandan@khaitanco.com



Anshuman Sakle
Partner
Competition/ Antitrust
anshuman.sakle@khaitanco.com



Ashraya Rao
Partner
Corporate and Commercial
ashraya.rao@khaitanco.com



Deepak Jodhani
Partner
Corporate and Commercial
deepak.jodhani@khaitanco.com



Harsh Wallia
Partner
Technology, Media and Telecom
Privacy and Data Protection
harsh.walia@khaitanco.com



Shantanu Gupta
Partner
Corporate and Commercial
shantanu.gupta@khaitanco.com



Udayarkar Rangarajan
Partner
Corporate and Commercial
udayarkar.rangarajan@khaitanco.com

Contributors

Rohan Shrivastava
Counsel
rohan.shrivastava@khaitanco.com

Nilav Banerjee
Senior Associate
nilav.banerjee@khaitanco.com

Vanshika Lal
Associate
vanshika.lal@khaitanco.com

Sabrina Liow
Manager - Strategy
sabrina.liow@khaitanco.com

Disclaimer

This document has been created for informational purposes only. Neither Khaitan & Co nor any of its partners, associates or allied professionals shall be liable for any interpretation or accuracy of the information contained herein, including any errors or incompleteness. This document is intended for non-commercial use and for the general consumption of the reader, and should not be considered as legal advice or legal opinion of any form and may not be relied upon by any person for such purpose. It may not be quoted or referred to in any public document, or shown to, or filed with any government authority, agency or other official body.



www.khaitanco.com | © Khaitan & Co 2025 | All Rights Reserved.

Ahmedabad ■ Bengaluru ■ Chennai ■ Delhi-NCR ■ Kolkata ■ Mumbai ■ Pune ■ Singapore