

MANAGEMENT DISCUSSION & ANALYSIS - IR 2024-25

A. GLOBAL ECONOMIC ENVIRONMENT

The global economy in FY2025 experienced stable but modest growth amid elevated policy uncertainty and geopolitical tensions. According to the **International Monetary Fund (IMF)**, global GDP growth is projected at **3.3% for both 2025 and 2026**, slightly below the historical average of 3.7%. This forecast reflects divergent trends across major economies, with upward revisions in the United States offsetting downward adjustments elsewhere. Inflation is expected to decline gradually, but risks to the baseline remain tilted to the downside.

Geopolitical Tensions

FY2025 saw continued volatility in global geopolitics. The Russia-Ukraine conflict remains unresolved, evolving into a prolonged war of attrition with intermittent ceasefires and intensified hybrid warfare. In the Middle East, Israel's strategic actions have reshaped regional dynamics, particularly in its shadow conflict with Iran. Meanwhile, the United States announced sweeping tariffs on April 2, 2025, imposing a 10% base levy on nearly all imports, with higher rates for specific countries. These measures have triggered global trade disruptions and are expected to lead to a strategic reordering of supply chains. India, with its competitive manufacturing base and improving infrastructure, is well-positioned to benefit from this shift.

Indian Economic Environment

India's GDP growth for FY2025 was provisionally estimated at **6.5%** by the **National Statistics Office (NSO)**, marking a slowdown from **9.2% in FY2024**. The deceleration was driven by subdued consumption across both urban and rural segments. In response, the Government of India introduced significant tax relief measures in the FY2026 Union Budget to stimulate demand. Looking ahead, the **IMF projects India's GDP to grow at 6.3% in 2026**, reaffirming its status as the fastest-growing major economy globally.

India's Construction Industry Structure and Developments

The global EPC (Engineering, Procurement, and Construction) market will expand significantly by 5.5% CAGR between 2024 and 2031, while the India EPC market is projected to grow at a CAGR of 6.4% during the same period.

India's construction industry is a key pillar of national economic development, contributing approximately 9% to the country's GDP and employing over 50 million people. The sector is broadly segmented into

infrastructure, residential, commercial, industrial, and energy and utility construction. Infrastructure projects—comprising roads, railways, ports, airports, and urban transit—remains the dominant segment, driven by government-led initiatives such as the National Infrastructure Pipeline (NIP), PM Gati Shakti, and Smart Cities Mission. The industry is undergoing rapid transformation, with increasing adoption of digital technologies, green construction practices, and modular engineering. The government's push for 100% FDI in construction development and the rising demand for urban housing, logistics hubs, and data centres are reshaping the sector's landscape.

Technological Advancements

Technological innovation continues to reshape the EPC industry, driving transformative improvements in efficiency, safety, and sustainability. The adoption of Building Information Modelling (BIM), Artificial Intelligence (AI), and Internet of Things (IoT) technologies are enabling real-time project monitoring, enhanced collaboration, and predictive analytics—resulting in reduced timelines and cost overruns.

The construction sector, traditionally labour-intensive and reliant on manual processes, is increasingly embracing automation and robotics to streamline operations. These technologies help mitigate human error, improve precision, and reduce fatigue-related inefficiencies, thereby enhancing overall project outcomes.

Opportunities and Threats

Opportunities

- **Government Investment:** Continued capital outlay in infrastructure (₹11.2 Lakh Crore in the Union Budget for 2025-26) offers significant project opportunities in roads, water, power, and urban transit
- **Private Capex Revival:** Sectors such as airports, semiconductors, energy storage, and data centres are witnessing renewed private investment, creating demand for specialised EPC services
- **Energy Transition:** India's ambitious targets for renewables, energy storage, and nuclear power are expected to generate over ₹25 Lakh Crore in infrastructure investments by 2047
- **Urbanisation and Housing:** Rising urban population and government schemes like PMAY are driving demand for affordable and mid-income housing
- **Technology Adoption:** Increasing use of BIM, IoT, AI, and digital twins is improving project efficiency, safety, and exploring innovative solutions like 3D printing and renewable energy integration

Threats

- **Input Cost Volatility:** Fluctuations in prices of cement, steel, and fuel can impact project margins
- **Regulatory Delays:** Land acquisition, environmental clearances, and shifting compliance norms can delay project execution
- **Labour Shortages:** Migration trends and skill gaps continue to affect workforce availability and productivity
- **Competitive Pressure:** Intense competition from domestic and international players may lead to margin compression, especially in government tenders

Risks and Concerns

The construction sector faces a range of operational, financial, and strategic risks:

- **Project Execution Risk:** Delays due to poor planning, design errors, or unforeseen site conditions can lead to cost overruns and penalties
- **Safety and Compliance:** The sector remains one of the most hazardous, with high accident rates due to inadequate safety protocols and training
- **Financial Exposure:** Working capital constraints, delayed payments from clients, and overdependence on a few large contracts can strain liquidity
- **Environmental and ESG Risks:** Increasing scrutiny on emissions, waste, and water usage requires robust ESG frameworks and compliance mechanisms
- **Technology Risk:** Rapid digitalisation demands continuous investment in tools, training, and cybersecurity to stay competitive and secure

Our Strategic Response

Tata Projects has proactively embraced innovation and workforce transformation to navigate the evolving business landscape. Key initiatives undertaken during FY2025 include:

- **Execution Excellence:** Delivered complex infrastructure projects under NIP and PM Gati Shakti, including metro rail systems, airports, freight corridors and power projects
- **Workforce Development:** Launched initiatives like Skill Shakti and Nirmaan Nayak to upskill labour and ensure site readiness
- **Technology Integration:** Embedded AI, BIM, and IoT across project sites to enable real-time monitoring, reduce rework, and drive predictive analytics for safety, cost control, and sustainability
- **Risk Management:** Established an Integrated Risk Management Framework with structured go/no-go decision-making to de-risk project execution and enhance delivery predictability

- **Safety Excellence:** Achieved over 110 million accident-free work hours, reflecting a deeply embedded safety culture supported by digital tools and site-level empowerment
- **Green and Modular Construction:** Invested in modular construction, prefabrication, and digital procurement platforms to accelerate project timelines and optimise resource utilisation, and use of alternate materials and catalyst technologies like Nanogence to reduce cement consumption, water consumption and improved concrete quality
- **Client-centric Delivery:** Maintained a CSI above 95%, supported by Kaizen reviews, feedback loops, and real-time dashboards
- **ESG Monitoring:** Deployed live IoT-linked dashboards and environmental sensors to monitor emissions, energy consumption, and site performance in alignment with ESG targets along with digitisation of ESG reporting across the business

B. SUSTAINABILITY

The EPC sector is undergoing a transformative shift, propelled by the twin drivers of environmental responsibility and digital modernisation. Given that buildings and construction contribute to 32% of global energy use, 34% of CO₂ emissions, and produce over 2.2 billion tonnes of waste annually, the industry is under increasing pressure to align with international climate targets.

In response, EPC firms are adopting Construction 4.0—a forward-looking approach that blends ecological awareness with advanced digital capabilities. Smart technologies are reshaping how infrastructure is designed, built, and maintained. Connected sensors, intelligent analytics, and virtual modeling platforms now enable dynamic project oversight, predictive upkeep, and efficient energy use. These innovations also facilitate adherence to sustainability standards such as LEED and BREEAM. The International Energy Agency (IEA) advocates for a policy mix of regulation, information, and incentives to enhance building energy performance. It underscores the potential of modern energy codes to reduce consumption by up to 50% and calls for doubling retrofit rates and expanding code coverage by 2030—key levers for decarbonising the built environment. The World Bank estimates that decarbonising construction value chains in emerging markets could unlock over \$1.5 Trillion in investment opportunities.

Emerging practices like modular building techniques, embedded monitoring systems in construction materials, and intelligent energy control platforms are helping reduce resource consumption and improve long-term asset performance. At the same time, the sector is integrating renewable energy solutions and

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circular economy principles—such as water reuse, material recovery, and sustainable sourcing—into its core operations. This evolution is steering the EPC model towards a more data-centric, resource-conscious, and climate-resilient future. Meanwhile, the World Economic Forum (WEF) highlights digital transformation as a cornerstone of sustainable infrastructure. It stresses the importance of strategic partnerships, workforce upskilling, and robust data governance to drive innovation. WEF envisions future infrastructure as more connected, adaptive, and digitally enabled—capable of meeting evolving environmental and operational demands.

In terms of governance and disclosures, the Sustainability Accounting Standards Board (SASB) plays a critical role by offering sector-specific metrics that help EPC companies identify and disclose financially material ESG issues. Its emphasis on greenhouse gas emissions, resource management, labour practices, and health and safety align with the broader IFRS Sustainability Disclosure Standards, reinforcing investor confidence and long-term accountability.

Together, these global perspectives provide a cohesive roadmap for EPC firms to transition towards a more sustainable, transparent, and digitally empowered future. By aligning with these frameworks, the sector cannot only mitigate environmental impact but also unlock new avenues for growth and resilience.

Our Strategic Response

Tata Projects has embedded sustainability into its core operations, delivering measurable impact across its portfolio in FY2025:

- **Green Revenue Share:** Over 35% of revenue was generated from green projects, including battery manufacturing plants, renewable energy transmission, FGD installations, and metro rail infrastructure, reflecting our commitment to climate-aligned growth
- **Smart Technology Deployment:** IoT, AI, and digital twins were deployed across key project sites, enabling real-time monitoring, predictive maintenance, and energy optimisation
- **Modular and Prefab Engineering:** Flagship projects such as NIAL and Micron adopted modular construction and prefabrication, reducing rework and material waste while accelerating delivery timelines
- **Advanced Materials:** International technologies like Nanogence catalyst were utilised to enhance concrete quality and environmental sustainability
- **Carbon and Energy Analytics:** Digital tools for carbon tracking and energy analytics are operational

across high-impact projects, supporting quantifiable emissions reductions and efficiency gains

- **Circular Economy Integration:** Practices such as alternate material use, waste-to-resource recovery, and water recycling are embedded in our industrial and urban infrastructure projects, aligning with national and global sustainability frameworks
- Development of **Net Zero Roadmap** including emissions forecasting and strategic levers for emissions reductions across short term, mid term and long term

C. CHANGING CLIENT NEEDS

The EPC sector is witnessing a significant evolution in client expectations, driven by increased infrastructure investments, compressed delivery timelines, and heightened demand for transparency and sustainability. Clients today seek faster execution, predictable outcomes, and real-time visibility across project lifecycles. This shift is being enabled by the growing adoption of digital-first delivery models, integrated project planning, and AI-powered communication platforms.

Digital transformation has become central to meeting these evolving demands. Technologies such as Building Information Modelling (BIM), IoT, and modular engineering are now standard in high-impact infrastructure projects, enabling enhanced coordination, reduced rework, and accelerated timelines. Additionally, AI-driven dashboards, chatbots, and digital twins are improving client engagement by offering real-time updates, predictive insights, and seamless communication. Clients are also increasingly focused on ESG compliance, requiring contractors to align with evolving environmental and social standards. In India, frameworks like SEBI's BRSR Core have made ESG tracking a strategic imperative for infrastructure projects.

Our Strategic Response

Tata Projects has proactively adapted to these changing client needs through a combination of digital innovation, operational agility, and client-centric delivery models:

- **Digital-first Execution:** Implemented digital-first project delivery models at flagship sites such as NIAL and TCS, leveraging BIM, IoT, and modular engineering to accelerate timelines and minimise rework
- **Client Satisfaction Excellence:** Maintained a Customer Satisfaction Index (CSI) above 95%, driven by consistent execution, client-chaired Kaizen reviews, and structured feedback loops—well above industry benchmarks

- **Agile Operating Models:** Deployed new operating models focused on shorter construction cycles, enabling faster turnaround in sectors such as data centres, advanced tech facilities, and transmission infrastructure
- **ESG Compliance Integration:** Instituted client-specific ESG tracking mechanisms, ensuring projects like Pune Metro meet evolving environmental and social standards in line with SEBI's BRSR framework
- **Predictive Planning:** Customised project planning and risk frameworks, including go/no-go filters and AI-enabled forecasting, to align precisely with client expectations on predictability, safety, and quality
- **Transparent Communication:** Enhanced transparency and real-time communication through AI-powered dashboards and site-specific progress tracking, addressing the growing client demand for visibility and accountability

D. MATERIAL DEVELOPMENTS IN HUMAN RESOURCES

Human capital is vital to the construction sector's growth and sustainability. Globally, the industry employs over 220 million people yet faces a 91% skilled labour shortage and low gender diversity, with women making up just 10.9% of the workforce. In India, the sector contributes around 9% to GDP and employs 7.1 Crore individuals, but only 5% have formal skill training. Skill gaps affect over 85% of construction sites, leading to cost overruns and project delays. Bridging these gaps through targeted skilling, inclusive hiring, and workforce modernisation is essential to meet the demands of sustainable and tech-driven infrastructure.

Our Strategic Response

Recognising this urgent need of lack of skilled workforce, Tata Projects has embarked on a mission to enhance the skills of our frontline workforce, ensuring they are equipped to meet the demands of the industry and drive progress through our specific programmes.

- **Skill Shakti Programme:** This groundbreaking 5-week upskilling programme is designed to elevate workers from unskilled to semi-skilled levels. Not only does it enhance productivity, but it also provides workers with dedicated skill cards, guaranteeing 100% employment opportunities on any Tata Projects site nationwide. To date, over 3,200 workers have been trained across 14 sites, transforming the landscape of our projects and the lives of our workers
- **Nirmaan Nayak Programme:** Retaining skilled talent is as crucial as developing it. Our Nirmaan Nayak Programme, a 3-year graduate-level initiative, aims to build a cadre of skilled champions and leaders. With an impressive 100% retention rate of skilled

supervisors and over 1,500 RPL certifications, this programme underscores our commitment to workforce development and career advancement

Our vision extends beyond skilling to create an empowered and motivated workforce through:

- **Consistent Workforce Experience:** Ensures quality and motivation across sites through compliance, sentiment analysis, and team-focused engagement
- **Workforce Supply Augmentation:** Expands recruitment from key regions to address labour shortages and strengthen frontline capabilities
- **Future Plans:** Scaling training programmes and workforce augmentation to lead in sustainable, skilled construction delivery
- **Organisational Enablement:** Drives digital alignment, equips teams with tools and training, and fosters a culture of agility and accountability

E. FINANCIAL PERFORMANCE

- **Revenue:** TPL recorded revenue of ₹16,363 Crore, compared to ₹17,247 Crore in the previous year
- **EBITDA:** The Earnings Before Interest, Taxes, Depreciation, and Amortisation (EBITDA) for the year was ₹89.50 Crore, compared to ₹944.26 Crore in the previous fiscal year
- **EBIT:** Earnings Before Interest and Taxes (EBIT) was ₹(184.15) Crore, compared to ₹708.32 Crore in the prior year
- **PAT:** Profit After Tax (PAT) for the period was ₹(750.66) Crore, compared to ₹139.10 Crore in the previous year
- **Margins:** EBITDA and EBIT margins were 0.55% and (1.13)% respectively. The PAT margin was (4.59)%
- **Order Inflow:** TPL achieved order inflows of ₹14496 Crore, compared to ₹9,747 Crore the previous year

F. GOVERNMENT INITIATIVES

India's infrastructure sector continues to be a cornerstone of national development, with the Government of India implementing a series of strategic programmes to accelerate growth. Flagship initiatives such as the National Infrastructure Pipeline (NIP), PM Gati Shakti, Sagarmala, and the Jal Jeevan Mission are driving large-scale transformation across transport, logistics, water, and urban infrastructure.

In the Union Budget 2024-25, the government allocated ₹11.1 Lakh Crore for capital investment in infrastructure—an 11% increase over the previous year—representing 3.4% of GDP. This budget emphasised project completion, private sector participation, and sustainable infrastructure development, with targeted investments in digital infrastructure, water management,

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transportation safety, and green corridors. Building on this momentum, the Union Budget 2025-26 further increased capital investment to ₹11.21 Lakh Crore, at 3.1% of GDP allocation.

The establishment of the Infrastructure Finance Secretariat (IFS) aims to streamline private investment through viability gap funding, regulatory support, and market-based financing frameworks. Additionally, the Second Asset Monetisation Plan targets ₹10 Lakh Crore from 2025-2030, enabling reinvestment into new infrastructure projects and expanding private sector participation.

These initiatives are aligned with the government's long-term vision of *Viksit Bharat @ 2047* and are expected to unlock significant opportunities across sectors including roads, railways, airports, industrial parks, and urban infrastructure.

Our Strategic Response

Tata Projects has strategically aligned its operations with national infrastructure priorities, contributing to India's development goals through innovation, execution excellence, and policy engagement:

- **Flagship Project Execution:** Delivered critical infrastructure such as , including metro rail systems, airports, freight corridors and power projects
- **Public-Private Partnerships:** Actively engaged in PPP-mode projects across transportation, urban development, and industrial corridors, leveraging our technical expertise and risk management capabilities
- **Policy Integration:** Aligned with evolving regulatory frameworks, including SEBI's BRSR Core and IFS-led investment facilitation, to support private capital mobilisation and ESG compliance
- **Capacity Building:** Collaborated with government bodies on infrastructure planning, digital project delivery, and ESG integration, supporting national missions through joint workshops and technical partnerships
- **Innovation in Delivery:** Deployed digital twins, IoT-linked dashboards, and modular construction across government-backed projects to meet accelerated timelines and sustainability goals

G. OUTLOOK

India is entering a transformative phase in its infrastructure journey, driven by the national vision of *'Viksit Bharat @ 2047'* and the ambitious goal of becoming a \$10 Trillion economy within the next decade. The Government of India has significantly ramped up capital expenditure, increasing allocations from ₹3.4 Lakh Crore in FY2020 to a budgeted ₹11.2 Lakh Crore in FY2026, as outlined in successive Union

Budgets. This sustained investment catalyses growth across sectors of strategic importance, including roads, water, power, and urban mass transit.

Private capital expenditure is also gaining momentum, with notable activity in airports, semiconductors, energy storage, and data centres—reflecting a broader revival in industrial and digital infrastructure. India's ambitious energy transition plan is expected to drive extensive investments across the power value chain. According to the Central Electricity Authority, Battery Energy Storage Systems (BESS) and Pumped Hydro Storage will require over ₹3.5 Lakh Crore by 2032, while transmission infrastructure is projected to attract more than ₹9 Lakh Crore. The government's Nuclear Power Vision, targeting 100 GW by 2047, is expected to demand ₹15–20 Lakh Crore in capital outlay. A resurgence in thermal power projects is also underway, with both public and private sector players announcing new investments.

Tata Projects' Outlook

In recent years, India has taken aggressive steps to build world class infrastructure, to enable the achievement of *'Viksit Bharat'* and the ambitious target of a \$10 Trillion economy by the next decade. The Union Government has significantly raised its capital expenditure, increasing from ₹3.4 Lakh Crore in FY2020 to the budgeted ₹11.2 Lakh Crore in FY2026. Major investments are taking place in sectors of national importance, such as Roads, Water, Power and Urban Mass Transit. Private capex has also started to show signs of recovery, with Airports, Semiconductors, Energy Storage and Data Centre projects leading the way.

From conventional power generation, transmission, oil & gas, and metals to the fast-moving frontiers of clean energy, semiconductors, and emerging industries—our EPC capabilities reflect the bold ambitions of a rising India. We are not just responding to change; We are engineering it. The future of EPC is green, digital, and driven by innovation. Companies that integrate sustainability, advanced technologies, and strong ESG frameworks into their operations will lead India's next industrial revolution.

Tata Projects aims to leverage its deep expertise and domain knowledge to position itself as key player in delivering sustainable, technologically advanced, and large-scale infrastructure solutions. We plan to prioritise projects with shorter construction cycles, such as data centres, industrial units, 4G manufacturing, and power transmission. We are also aiming to partner with private players looking to develop Energy Storage Projects, and high-end manufacturing units. Our focus will be on safety first, and our aim is to become the leading tech-enabled EPC partner of choice for our customers, by

leveraging advanced construction technology, precast and prefab building solutions and modular engineering.

Tata Projects is well-positioned to capitalise on these emerging opportunities by leveraging its deep domain expertise, execution excellence, and technology-driven delivery models. Our strategic priorities include:

- **Accelerated Delivery:** Focus on projects with shorter construction cycles such as data centres, industrial units, 4G manufacturing, and power transmission, to ensure faster turnaround and capital efficiency
- **Energy Transition Leadership:** Partnering with private players to develop energy storage projects, such as pumped hydro and supporting high-end manufacturing in clean energy and electronics

- **Technology-enabled Execution:** Scaling up the use of advanced construction technologies, including precast and prefab solutions, modular engineering, and digital twins, to enhance safety, predictability, and sustainability
- **Client-centric Approach:** Strengthening our position as the tech-enabled EPC partner of choice, by delivering customised, transparent, and ESG-compliant infrastructure solutions aligned with evolving client and regulatory expectations

With a robust pipeline of opportunities and a future-ready operating model, Tata Projects remains committed to building infrastructure that is not only world-class but also sustainable, resilient, and inclusive.