

Industry Report on Enterprise Performance Management (EPM) System

I

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Prepared for

GenXAI Analytics Limited



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Annexure for Abbreviation used.

CDD			
GDP	Gross Domestic Product		
GVA	Gross Value Added		
IIP	Index of Industrial Production		
PFCE	Private Final Consumption Expenditure		
GFCF	Gross fixed capital formation		
WPI	Wholesale Price Index		
СРІ	Consumer Price Index		
у-о-у	Year on Year		
m-o-m	Month on Month		
IMF	International Monetary Fund		
RBI	Reserve Bank of India		
MOSPI	The Ministry of Statistics and Programme Implementation		
Est., Adv. Est	Estimated, Advance Estimates		
P, F	Projected, Forecast		
USD	US Dollar		
INR	Indian Rupee		
Mn, Bn, Tn, Cr	Million, Billion, Trillion, Crore		
ІоТ	Internet of Things		
IT-BPM	Information Technology-Business Process Management		
CY	Current Year		
FY	Financial Year		
KPI	Key Performance Indicators		
PIB	Press Information Bureau		
NASSCOM	National Association for Software & Service Companies		



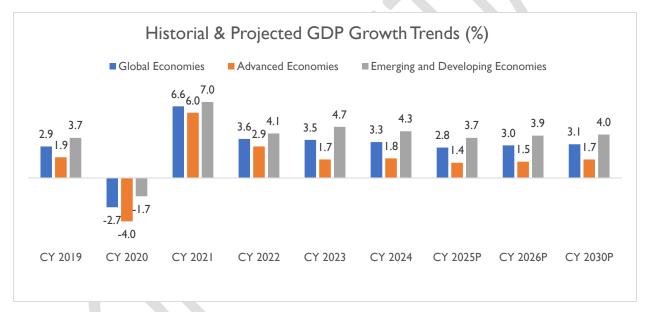
GFCF	Gross Fixed Capital Formation		
ASEAN	Association of Southeast Nations		
IFRS	International Financial Reporting Standards		
GAAP	Generally Accepted Accounting Principles		
CRM	Customer Relationship Management		
UPI	Unified Payments Interface		
NIC	National Informatics Centre		
FP&A	Financial Planning & Analysis		
RAN	Radio Access Network		
GPU	Graphics Processing Unit		
BNPL	Buy Now, Pay Later		
CNAPP	Cloud-Native Application Protection Platform		
WAF	Web Application Firewall		
CIEM	Cloud Infrastructure Entitlement Platform		
CASB	Cloud Access Security Broker		
EDR	Endpoint Detection & Response		
XDR	Extended Detection & Response		
SASE	Secure Access Service Edge		
PAM	Privileged Access Management		
MDR	Managed Detection & Response		
GRC	Governance, Risk & Compliance		
ESG	Environmental, Social and Governance		



Macroeconomic Analysis

Global Economic Overview

The global economy, which recorded GDP growth at 3.3% in CY 2024, is expected to show resilience at 2.8% in CY 2025. This marks the slowest expansion since 2020 and reflects a 0.5%-point downgrade from January 2025 forecast. Moreover, the projection for CY 2026 has also reduced to 3.0%. This slowdown is majorly attributed due to numerous factors such as high inflation in many economies despite central bank effort to curb inflation, continuing energy market volatility driven by geopolitical tensions particularly in Ukraine and Middle East, and the re-election of Donald Trump as US President extended uncertainty around the trade policies as well as overall global economic growth. High inflation and rising borrowing costs affected the private consumption on one hand while fiscal consolidation impacted the government consumption on the other hand. As a result, global GDP growth is estimated to moderation by 2.8% in CY 2025 as compared to 3.3% in CY 2024.

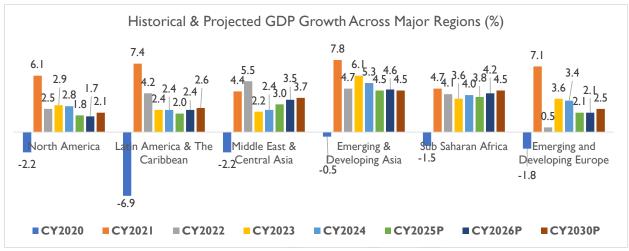


Source – IMF Global GDP Forecast Release April 2025

Note: Advanced Economies and Emerging & Developing Economies are as per the classification of the World Economic Outlook (WEO). This classification is not based on strict criteria, economic or otherwise, and it has evolved over time. It comprises of 40 countries under the Advanced Economies including the G7 (the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada) and selected countries from the Euro Zone (Germany, Italy, France etc.). The group of emerging market and developing economies (156) includes all those that are not classified as Advanced Economies (India, China, Brazil, Malaysia etc.)

Historical and Projected GDP Growth

GDP growth across major regions exhibited a mixed trend between 2022-23, with GDP growth in many regions including North America, Emerging and Developing Asia, and Emerging and Developing Europe slowing further in 2024. In 2025, GDP growth rate in Emerging and Developing Asia (India, China, Indonesia, Malaysia, etc.) is expected to moderate further to 4.5% from 5.3% in the previous year, while in the North America, it is expected to moderate to 1.8% in CY 2025 from 2.8% in CY 2024.



Source-IMF World Economic Outlook April 2025 update

Except Middle East & Central Asia, all other regions like Emerging and Developing Asia, Emerging and Developing Europe, Latin America & The Caribbean, Sub Saharan Africa and North America, are expected to record a moderation in GDP growth rate in CY 2025 as compared to CY 2024. Further, growth in the United States is expected to come down at 2.71% in CY 2025 from 2.80% in CY 2024 due to lagged effects of monetary policy tightening, gradual fiscal tightening, and a softening in labour markets slowing aggregate demand.

Global Economic Outlook

The global economy is navigating a period of exceptional uncertainty. Policy shifts, particularly those reshaping trade, have alarmed financial markets and bruised business sentiment. The U.S.'s reciprocal tariffs, which represent additional costs for businesses from almost all countries with which the U.S. trades, charge trade partners an import duty at a discounted rate of approximately half the rate that the trade partner currently imposes on the U.S. According to U.S. President Donald Trump, reciprocal tariffs, ranging from 10% to 50%, are meant to address trade barriers limiting U.S. exports. The effective tariff rate includes other tariffs imposed at an earlier date and cumulatively may now be higher than duties charged on U.S. imports. It is unclear whether the reciprocal tariffs represent a negotiating tool, and may therefore be temporary, or form part of broader long-term protectionist measures and industrial strategy.

Responses to reciprocal tariffs have been varied, with some economies promising swift countermeasures. More than 50 markets have sought negotiations with the US. While Malaysia is seeking a united response across ASEAN, the Chinese Mainland has retaliated with duties on all imports from the U.S., declaring it will



"fight to the end". In early April, the U.S. confirmed the most aggressive steps yet, with a cumulative 145% tariff on some products imported from the Chinese Mainland. Brazil has readied itself by passing a bill allowing for retaliation, Australia has ruled out retaliatory levies, and the EU remains open to negotiation while preparing a package of countermeasures.

Tariffs and their unpredictable application have weighed on consumer and business sentiment, sunk global stock markets, raised recession risks, and made a global slowdown more likely. Our latest Global Business Optimism Insights report for indicates a further decline in business optimism as firms continue to grapple with trade-related policy uncertainty and its broader economic implications. Export-driven sectors reported sharp declines in optimism. Financial risk perceptions remain elevated as businesses contend with high borrowing costs and persistent inflation expectations. More broadly, the uncertainty is reflected in delayed capital expenditure and a pullback in hiring.

Tariffs have begun to exert pressure on central banks by contributing to inflationary pressures and increasing financial market volatility. Central banks are adjusting forward guidance and policy frameworks and may begin to consider the likelihood of softer growth being a bigger priority than high inflation by starting to cut interest rates to support economies. For businesses, this uncertainty translates into unpredictable cost structures, fluctuating credit availability, and the management of operational costs through diversified supply networks.

The latest Dun & Bradstreet Global Business Optimism Insights report reveals a further decline in business optimism, though at a more moderate pace than in the prior quarter, as businesses continued to grapple with trade-related policy uncertainty and its broader economic implications. Export-driven sectors such as automotives, electricals, and metals saw sharp declines in optimism, particularly in the U.S., Mexico, South Korea, and Japan, where rising tariffs and shifting trade policies have fuelled cost pressures and demand volatility. Financial risk perceptions remain elevated.

Global Growth Projection

At broader level, the global economy is expected to experience a slowdown in 2025, with GDP growth projected to decline to 2.8%, down from 3.3% in 2024. This deceleration reflects persistent inflationary pressure, geopolitical uncertainties and tightened monetary policies. However, a sightly recovery is anticipated in 2026, with growth projected to improve to 3.0%. Global inflation is expected to decline steadily, to 4.3% in 2025 and to 3.6% in 2026. Inflation is projected to converge back to the target earlier in advanced economies, reaching 2.2% in 2026, whereas in emerging market and developing economies, it is anticipated to decrease to 4.6% during the same period.

Trade tariffs function as a supply shock for the countries imposing them, leading to a decrease in productivity and an increase in unit costs. Countries subject to tariffs experience a negative demand shock as export demand declines, placing downward pressure on prices. In each scenario, trade uncertainty introduces an additional layer of demand shock since businesses and households react by delaying investment and spending, and this impact could be intensified by stricter financial conditions and heightened exchange rate volatility.



Moreover, Global trade growth is expected to slow down in 2025 to 1.7%. This forecast reflects increased tariff restrictions affecting trade flows and, to a lesser extent, the waning effects of cyclical factors that have underpinned the recent rise in goods trade. Geopolitical tensions as seen in the past such as the wars in Ukraine and the Middle East could exacerbate inflation volatility, particularly in energy and agricultural commodities.



India Macroeconomic Analysis

India emerged as one of the fastest growth economies amongst the leading advanced economies and emerging economies. In CY 2024, even amidst geopolitical uncertainties, particularly those affecting global energy and commodity markets, India continues to remain one of the fastest growing economies in the world and is expected to grow by 6.2% in CY 2025 and 6.3% in 2026.

Country	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025	CY 2026 P	CY 2030 P
India	-5.8%	9.7%	7.6%	9.2%	6.5%	6.2%	6.3%	6.5%
China	2.3%	8.6%	3.1%	5.4%	5.0%	4.0%	4.0%	3.4%
United States	-2.2%	6.1%	2.5%	2.9%	2.8%	1.8%	1.7%	2.1%
Japan	-4.2%	2.7%	0.9%	1.5%	0.1%	0.6%	0.6%	0.5%
United Kingdom	-10.3%	8.6%	4.8%	0.4%	1.1%	1.1%	1.4%	1.4%
Russia	-2.7%	5.9%	-1.4%	4.1%	4.1%	1.5%	0.9%	1.2%

Source: World Economic Outlook, April 2025

The Government stepped spending on infrastructure projects to boost the economic growth had a positive impact on economic growth. The capital expenditure of the central government increased by average 26.52% during FY 2023-FY 2024 which slowed to 7.27% in FY 2025 which is expected to translate in moderating GDP growth of 6.5% in 2024. In the Union Budget 2025-2026, the government announced INR 11.21 billion capex on infrastructure (10.12% higher than previous year revised estimates) coupled with INR 1.5 trillion in interest-free loans to states. This has provided much-needed confidence to the private sector, and in turn, expected to attract the private investment.

Historical GDP and GVA Growth trend

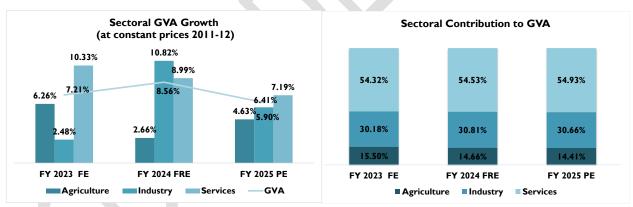
As per the latest estimates, India's GDP at constant prices is estimated to grow to INR 187.96 trillion in FY 2025 (Second Revised Estimates) with the real GDP growth rates estimated to be 6.48% for FY 2025. Similarly, real Gross Value Added (GVA) growth stood is estimated to have moderated to 6.37% in FY 2025. Even amidst global economic uncertainties, India's economy exhibited resilience supported by robust consumption and government spending.



Source: Ministry of Statistics & Programme Implementation (MOSPI), National Account Statistics: FY 2025

FE is Final Estimates, RE is Revised Estimate and SAE is Second Revised Estimates

Sectoral Contribution to GVA and annual growth trend



Source: Ministry of Statistics & Programme Implementation (MOSPI)

FE is Final Estimates, RE is Revised Estimate and SAE is Second Revised Estimates

Sectoral analysis of GVA reveals that the industrial sector experienced a moderation in FY 2025, recording a 5.90% y-o-y growth against 10.82% year-on-year growth in FY 2024. Within the industrial sector, growth moderated across sub sector with mining, manufacturing, and construction activities growing by 2.69%, 4.52%, and 9.35% respectively in FY 2025, compared to 3.21%, 12.30%, and 10.41% in FY 2024. Growth in the utilities sector too moderated to 6.03% in FY 2025 from 8.64% in the previous year. The industrial sector's contribution to GVA moderated marginally from 30.81% in FY 2024 to 30.66% in FY 2025.

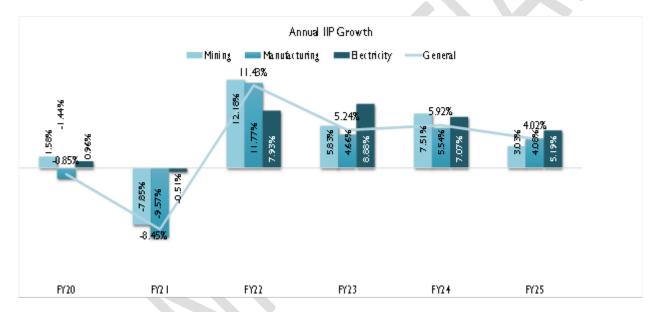
The services sector continued to be the main driver of economic growth, although its pace moderated. It expanded by 7.19% in FY 2025 from 8.99% in FY 2024. The services sector retained its position as the largest

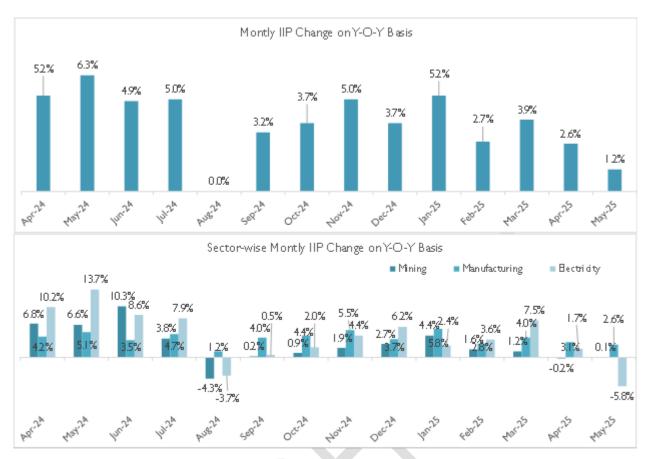


contributor to GVA, rising from 54.32% in FY 2023 to 54.53% in FY 2024, with a further increase to 54.93% in FY 2025.

The agriculture sector saw an acceleration, with growth increasing from 2.66% in FY 2024 to 4.63% in FY 2025. However, its contribution to GVA declined marginally from 14.66% in FY 2024 to 14.41% in FY 2025. Overall, Gross Value Added (GVA) growth moderated to 6.41% in FY 2025 from 8.56% in FY 2024 Annual & Monthly IIP Growth

Industrial sector performance as measured by IIP index exhibited moderation in FY 2025, recording a 4.02% y-o-y growth against 5.92% increase in the previous year. The manufacturing index showed moderation and grew by 4.08% in FY 2025 against 5.54% in FY 2024. Mining sector index too moderated and exhibited a growth of 3.03% in FY 2025 against 7.51% in the previous years while the Electricity sector Index, also witnessed moderation of 5.19% in FY 2024 against 7.07% in the previous year.





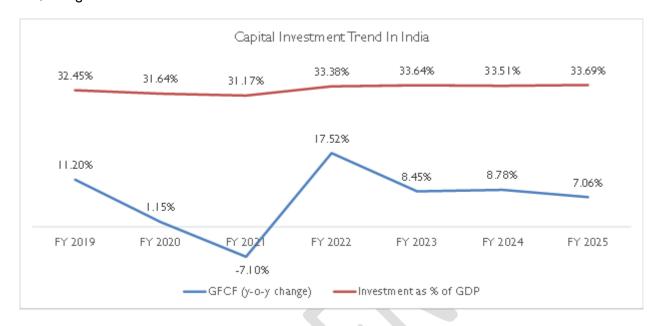
Source: Ministry of Statistics & Programme Implementation (MOSPI)

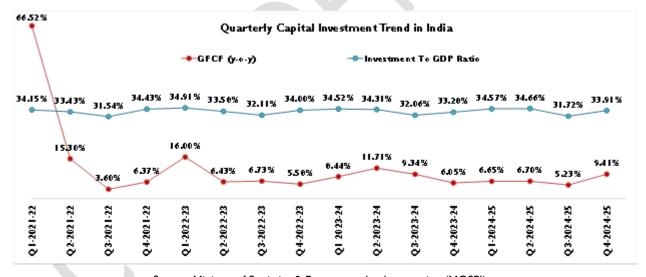
The IIP growth rate for the month of May 2025 is 1.2% which was 2.6% in the month of April 2025. The growth rates of the three sectors, Mining, Manufacturing and Electricity for the month of May 2025 are (-)0.1%, 2.6% and (-)5.8% respectively.



Annual and Quarterly: Investment & Consumption Scenario

Other major indicators such as Gross fixed capital formation (GFCF), a measure of investments, has shown fluctuation during FY 2025 as it registered 6.13% year-on-year growth against 8.78% yearly growth in FY 2024, taking the GFCF to GDP ratio measured to 33.40%.

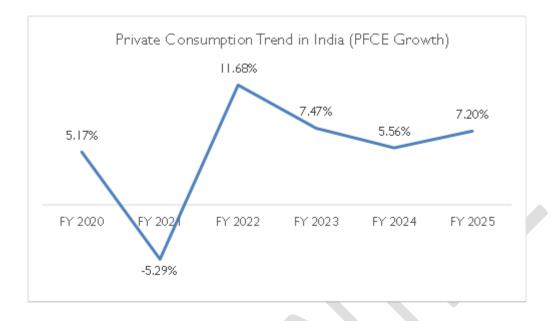


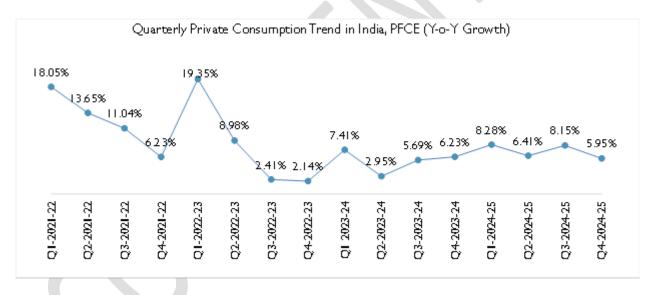


Source: Ministry of Statistics & Programme Implementation (MOSPI)

On quarterly basis, GFCF exhibited a fluctuating trend in quarterly growth over the previous year same quarter. In FY 2024, the growth rate moderated to 6.05% in March quarter against the previous two quarter as government went slow on capital spending amidst the 2024 general election while it observed an improvement in Q1 FY 2025 by growing at 6.65% against 6.05% in the previous quarter and moderated in the subsequent two quarter. On yearly basis, the growth rate remained lower compared to the same quarter in the previous year during FY 2025. The GFCF to GDP ratio measured 33.91% in Q4 FY 2025.

Private Consumption Scenario





Sources: MOSPI

Private Final Expenditure (PFCE) a realistic proxy to gauge household spending, observed growth in FY 2025 as compared to FY 2024. However, quarterly data indicated some improvement in the current fiscal as the growth rate improved over the corresponding period in the last fiscal.



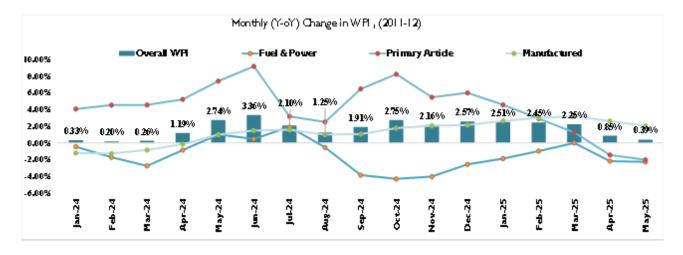
Inflation Scenario

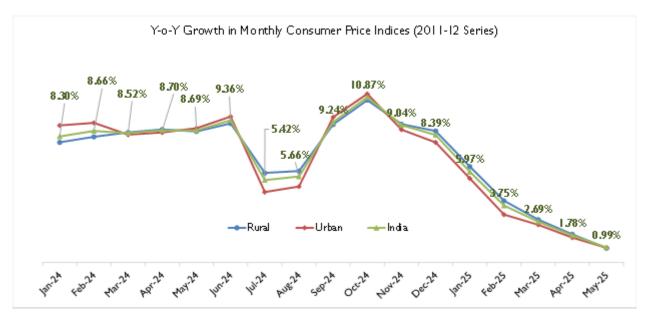
The inflation rate based on India's Wholesale Price Index (WPI) exhibited significant fluctuations across different sectors from January 2024 to May 2025. The annual rate of inflation based on All India Wholesale Price Index (WPI) number is 0.39% (provisional) for the month of May 2025 (over May 2024). Positive rate of inflation in May 2025 is primarily due to increase in prices of manufacture of food products, electricity, other manufacturing, chemicals and chemical products, manufacture of other transport equipment and non-food articles etc.

By May 2025, Primary Articles (Weight 22.62%), The index for this major group decreased by 0.05 % to 184.3 (provisional) in May 2025 from 184.4 (provisional) for the month of April 2025. Price of minerals (-7.16%) and non-food articles (-0.63%) decreased in May 2025 as compared to April 2025. The price of food articles (0.56%) increased in May 2025 as compared to April 2025.

Moreover, power & fuel, the index for this major group declined by 0.95% to 146.7 (provisional) in May 2025 from 148.1 (provisional) for the month of April 2025. Price of mineral oils (-2.06%) decreased in May 2025 as compared to April 2025. The price of coal (0.81%) and electricity (0.80%) increased in May 2025 as compared to April 2025.

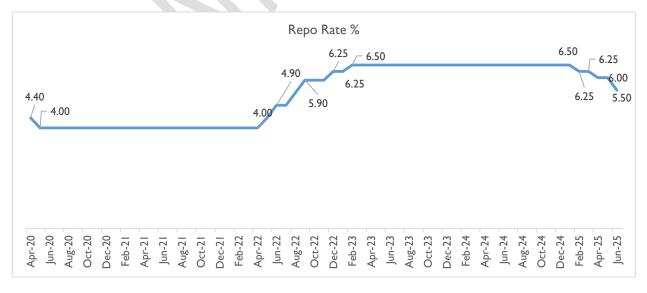
Furthermore, Manufactured Products (Weight 64.23%), The index for this major group remained unchanged at 144.9 (Provisional) in May 2025. Out of the 22 NIC two-digit groups for manufactured products, 10 groups witnessed an increase in prices, 9 groups witnessed a decrease in prices and 3 groups witnessed no change in prices. Some of the important groups that showed month-over-month increase in prices were other manufacturing; manufacture of other non-metallic mineral products; computer, electronic and optical products; pharmaceuticals, medicinal chemical and botanical products and textiles etc. Some of the groups that witnessed a decrease in prices were manufacture of food products, basic metals; rubber and plastics products, chemical and chemical products and electrical equipment etc. in May 2025 as compared to April 2025.





Source: MOSPI, Office of Economic Advisor

Retail inflation rate (as measured by the Consumer Price Index) in India showed notable fluctuations between January 2024 and May 2025. Overall, the national CPI inflation rate moderated to 0.99% by May 2025, indicating a gradual easing of inflationary pressures across both rural and urban areas. Rural CPI inflation peaked at 10.69% in October 2024, declining to 0.95 % in May 2025. Urban CPI inflation followed a similar trend, rising to 11.09% in October 2024 and then dropping to 0.96% in May 2025. CPI measured above 6.00% tolerance limit of the central bank since July 2023. As a part of an anti-inflationary measure, the RBI has hiked the repo rate by 250 bps since May 2022 and 8 Feb 2023 while it held the rate steady at 6.50 % till January 2025. On 6th June 2025, RBI reduced the repo rate by 50 basis points which currently stands at 5.50%.



Sources: CMIE Economic Outlook



Growth Outlook

The Union Budget 2025-26 has laid the foundation for sustained growth by balancing demand stimulation, investment promotion and inclusive development. Inflation level is reaching within the central bank's target; the RBI may pursue further monetary easing that will support growth. The medium-term outlook is bright, fuelled by the emphasis on physical and digital infrastructure spending. With a focus on stimulating demand, driving investment and ensuring inclusive development, the budget introduces measures such as tax relief, increased infrastructure spending and incentives for manufacturing and clean energy. These initiatives aim to accelerate growth while maintaining fiscal discipline, reinforcing India's long-term economic resilience. The expansion of tax relief i.e. zero tax liability for individuals earning up to INR 12 lacs annually under the new tax regime is expected to strengthen household finances and, consequently, boost consumption.

The external sector remains resilient, and key external vulnerability indicators continue to improve. However, tariff-related uncertainty is likely to weigh on exports and investment, prompting us to cut our FY 2026 GDP growth forecast to 6.3%.



Industry Overview

Enterprise Performance Management

Enterprise Performance Management (EPM) refers to a set of integrated processes, methodologies, and software applications that organizations use to plan, monitor, and manage business performance. Its core purpose is to align strategic objectives with operational execution by ensuring that resources, budgets, and activities are effectively linked to overall corporate goals. EPM encompasses several key areas such as strategic planning and forecasting for long-term objectives ,scenario modelling, budgeting,financial planning to allocate resources through top-down and bottom-up approaches.It is also used for consolidation and financial reporting to automate statutory, management, and compliance needs.

Beyond financial processes, EPM also includes performance monitoring through KPIs, variance analysis, and dashboards, as well as analytics and insights that leverage business intelligence, predictive analytics, and AI to improve decision-making. Often referred to as the "financial nervous system" of the enterprise, EPM provides the critical connection between strategy, execution, and measurable outcomes, enabling organizations to operate with agility, accuracy, and accountability.

Role of EPM within the Organization

- 1. **Strategic Alignment** Ensures corporate strategy is translated into operational goals across departments.
- 2. **Decision Support** Provides real-time financial and operational insights for faster, data-driven decisions.
- 3. **Agility & Forecast Accuracy** Enables rolling forecasts and scenario planning, helping organizations respond quickly to market changes.
- 4. **Financial Integrity & Compliance** Streamlines financial consolidation, reduces errors, and supports regulatory requirements (IFRS, GAAP, etc.).
- 5. **Cross-functional Collaboration** Acts as a unifying platform connecting finance, operations, HR, sales, and supply chain.
- 6. **Resource Optimization** Helps allocate capital, human resources, and operational capacity effectively.

Key End-use Verticals of EPM Within an Organization

I. Finance & Accounting

- Core vertical and primary driver of EPM adoption.
- Functions: Budgeting, forecasting, financial consolidation, and statutory/compliance reporting.
- EPM helps finance teams automate manual processes, reduce reporting cycles, and ensure accuracy in data.
- Supports compliance with IFRS, GAAP, and other regulatory standards while also enabling variance analysis and profitability reporting.
- End users: CFO, FP&A teams, Controllers, and financial analysts.

2. Operations & Manufacturing

- Focus on cost optimization, production efficiency, and resource utilization.
- EPM enables operations managers to align production output with demand forecasts and financial goals.
- It supports planning for capacity utilization, cost of goods sold (COGS) analysis, and plant performance tracking.
- Helps identify inefficiencies across supply, production, and distribution cycles, driving operational excellence.
- End users: Plant managers, operations heads, supply planners.

3. Sales & Marketing

- Emphasis on revenue planning and growth forecasting.
- EPM supports sales forecasting, territory planning, pipeline management, and quota setting.
- Marketing teams use EPM for campaign ROI analysis, pricing optimization, and demand modeling.
- It ensures revenue targets are closely tied to overall business objectives and resource allocation.
- End users: Chief Revenue Officer, Sales Directors, Marketing Analysts.

4. Supply Chain & Procurement

- · Critical for demand-supply balancing and cost efficiency.
- EPM assists in demand forecasting, supplier performance analysis, procurement planning, and inventory optimization.
- Enables scenario modeling for disruptions (e.g., raw material shortages, logistics issues).
- Enhances collaboration between finance and supply chain teams to ensure working capital optimization.
- End users: Supply chain managers, procurement heads, logistics planners.

5. Human Resources (HR) / Human Capital Management (HCM)

- Focus on workforce planning and cost management.
- EPM enables headcount planning, labor cost forecasting, and compensation analysis.
- Helps align workforce capacity with business growth strategies while controlling costs.
- Also supports succession planning and skill-gap analysis.
- End users: CHRO, HR planners, talent management specialists.

6. Information Technology (IT)

- Supports digital transformation and IT spend management.
- EPM helps IT leaders track project portfolio performance, align technology investments with business strategy, and measure ROI.
- Provides insights into IT resource allocation, cloud migration costs, and cybersecurity investments.
- Enhances governance over IT budgets and ensures transparency in technology spending.



• End users: CIO, IT finance managers, project portfolio managers.

7. Corporate Strategy & Leadership

- CXO-level view for enterprise-wide decision-making.
- EPM gives executives access to real-time dashboards, KPIs, and predictive insights that guide strategic initiatives such as mergers & acquisitions, market expansion, or cost transformation programs.
- Enables scenario-based planning for external disruptions (economic downturns, regulatory shifts, competitor actions).
- Ensures strategy is cascaded down to all departments with measurable outcomes.
- End users: CEO, Board of Directors, Strategy Heads.

Key Elements of EPM

Enterprise Performance Management (EPM) is a closed-loop framework that connects strategy with execution by moving through key elements—strategic planning, budgeting and forecasting, financial consolidation and reporting, performance monitoring and analytics, and continuous improvement. Together, these elements ensure that organizational goals are translated into actionable plans, tracked through accurate reporting, and refined over time for agility, efficiency, and data-driven decision-making.

Strategic Planning

- Defines long-term objectives, business models, and growth targets.
- Involves scenario modeling (e.g., best-case, worst-case, market expansion).
- Ensures corporate strategy is translated into measurable goals for all business units.

Budgeting & Forecasting

- Converts strategic objectives into detailed financial and operational budgets.
- •Uses both top-down (management-driven) and bottom-up (department-driven) approaches.
- Enables rolling forecasts and driver-based modeling for agility.
- Aligns financial resources with priorities identified during strategy planning.

Financial Consolidation & Reporting

- Automates consolidation of financial results across business units, geographies, or subsidiaries.
- Produces statutory reports, management dashboards, and compliance disclosures (IFRS, GAAP).
- Ensures a single version of truth for leadership and stakeholders.

Performance Monitoring & Analytics

- •Tracks performance against budgets and KPIs using dashboards, scorecards, and variance analysis.
- Provides insights into financial health, operational efficiency, and departmental performance.
- •Uses BI, predictive analytics, and AI to anticipate future trends and risks.

Continuous Improvement & Optimization

- Feeds insights back into planning and budgeting cycles for iterative improvement.
- Identifies gaps between planned and actual outcomes to refine processes.
- Encourages agility by enabling organizations to reallocate resources quickly.
- Promotes a culture of accountability and data-driven decision-making across functions.

Application Use cases of EPM

EPM plays a critical role in **finance**, **sales**, **supply chain**, **and HR** by integrating planning, forecasting, and performance monitoring across these verticals. Finance ensures accuracy and compliance, sales maximizes revenue predictability, supply chain drives operational efficiency, and HR optimizes workforce strategies. Together, these use cases ensure organizations are agile, resilient, and aligned with long-term business objectives.

I. Financial Planning & Analysis (FP&A)

Applications:

- o Annual budgeting and rolling forecasts that incorporate market trends and business drivers.
- Financial consolidation across business units, geographies, or subsidiaries with compliance to IFRS/GAAP.
- Variance analysis to compare actual performance against budgets and forecasts.
- o Profitability analysis by product line, customer segment, or geography.

• Organizational Impact:

- Increases accuracy and speed of financial reporting.
- o Provides real-time visibility into the organization's financial health.
- Supports leadership with insights for capital allocation, cost control, and investment planning.
- Reduces reliance on spreadsheets and manual reporting, lowering errors and cycle times.

2. Sales Planning

Applications:

- Revenue forecasting based on pipeline, market demand, and historical sales trends.
- Territory and quota planning aligned with company revenue goals.
- Sales performance dashboards tracking KPIs such as win rates, conversion ratios, and deal velocity.
- Pricing and discount optimization to maximize margins.

• Organizational Impact:

- Ensures sales targets are realistic, achievable, and aligned with strategic objectives.
- o Improves forecasting accuracy and reduces revenue volatility.
- o Enhances coordination between finance and sales for revenue budgeting.
- Helps marketing teams measure ROI of campaigns and adjust strategies.

3. Supply Chain Planning

• Applications:

- Demand forecasting to anticipate customer needs and reduce volatility.
- o Procurement and supplier planning to manage sourcing costs and supplier performance.
- o Inventory optimization to balance working capital with service levels.
- Scenario modeling for disruptions (e.g., logistics delays, raw material shortages, economic shocks).

• Organizational Impact:

- o Minimizes stockouts, overstocking, and related carrying costs.
- o Improves supply chain resilience by testing alternative scenarios.
- Enhances collaboration between supply chain and finance teams for cost management.
- Enables end-to-end visibility and alignment of supply chain goals with business strategy.

4. Human Resource Planning (Workforce & Talent Management)

• Applications:

- Workforce headcount planning to align staffing with business growth.
- Compensation and benefits forecasting to optimize labor costs.
- o Workforce analytics for skill-gap identification, succession planning, and turnover analysis.
- Scenario-based HR planning to prepare for mergers, expansions, or downsizing.

• Organizational Impact:

- o Aligns workforce strategies with organizational goals and financial constraints.
- o Improves utilization of talent while managing payroll and benefits costs effectively.
- Enables proactive workforce planning to support new business initiatives.
- Supports a data-driven HR function, moving beyond administrative tasks to strategic workforce management.

Key advantages & impact

Improved Visibility & Cross-Functional Transparency	Enhanced, Data-Driven Decision-Making	Better Strategic Alignment Across the Enterprise	Improved Forecasting & Agile Planning
Higher Efficiency & Productivity Through Automation	Stronger Risk Management & Compliance	Streamlined Financial Close & Reconciliation	Long-Term Value Creation & Scalability (bonus insight)

> Improved Visibility & Cross-Functional Transparency

EPM provides a **centralized repository** by consolidating data from multiple systems (ERP, CRM, HR, supply chain platforms). Leaders no longer need to chase disparate spreadsheets or conflicting reports. Real-time dashboards and scorecards enable management to monitor organizational health at a glance—financial, operational, and strategic. This transparency ensures that all departments understand their contribution to organizational objectives and promotes trust in decision-making.

Impact: Eliminates silos, improves collaboration, and accelerates corrective action when performance deviates from plan.

> Enhanced, Data-Driven Decision-Making

EPM shifts organizations from instinct-driven to **evidence-based decision-making**. With advanced analytics, scenario modeling, and Al-driven insights, leaders can evaluate multiple options before committing resources. For example, EPM can model the profitability impact of entering a new market or the operational effect of a supply chain disruption.

Impact: Decisions are faster, more reliable, and grounded in holistic insights—leading to better capital allocation, pricing, and growth strategies.

> Better Strategic Alignment Across the Enterprise

EPM ensures that **corporate strategy cascades into departmental goals and measurable KPIs**. Instead of isolated planning in finance, sales, or operations, all functions operate on an integrated plan. For instance, if the strategic goal is to increase EBITDA margins, EPM aligns procurement cost reductions, sales focus on high-margin products, and HR efforts to optimize workforce costs.

Impact: Enhances organizational coherence, ensures accountability, and keeps all teams moving toward common outcomes.



Improved Forecasting & Agile Planning

With EPM, companies move away from static annual budgets to **rolling forecasts and driver-based planning**. Real-time data inputs—such as market trends, customer demand, and supply chain costs—make projections more dynamic and accurate. Organizations can run "what-if" scenarios to test different strategies under changing conditions.

Impact: Boosts agility, enabling businesses to anticipate risks, capture opportunities, and adapt quickly in volatile markets.

> Higher Efficiency & Productivity Through Automation

EPM automates repetitive, manual processes like financial closure, reconciliation, reporting, and data aggregation. This reduces human error and frees finance and operational teams to focus on strategic activities like profitability analysis or growth modeling.

Impact: Cuts operational costs, reduces cycle times (e.g., financial close completed in days instead of weeks), and improves staff productivity.

> Stronger Risk Management & Compliance

EPM integrates **risk assessment into the planning cycle** by continuously monitoring key business drivers. For example, it can highlight cash flow risks, rising costs, or supply chain vulnerabilities before they become critical. It also supports regulatory compliance (IFRS, GAAP, SOX, ESG reporting) by automating audit-ready financial and operational reports.

Impact: Organizations become more resilient, reducing the impact of external shocks and improving stakeholder confidence.

> Streamlined Financial Close & Reconciliation

One of the most operationally tangible benefits is EPM's ability to **automate the financial close process**. Tasks like consolidating subsidiary accounts, intercompany eliminations, and reconciliations are handled seamlessly. This reduces reporting bottlenecks and ensures stakeholders have access to accurate results

Impact: Faster monthly/quarterly close cycles, fewer reconciliation errors, and more time for analysis rather than data preparation.

> Long-Term Value Creation & Scalability (bonus insight)

Beyond immediate operational improvements, EPM is designed to **scale with the organization's growth**. As businesses expand into new geographies or product lines, EPM provides the framework to integrate additional data sources, processes, and reporting standards without disruption.



Impact: Supports sustainable growth, improves investor relations with reliable reporting, and strengthens long-term competitiveness.

Deployment models

Enterprise Performance Management (EPM) solutions are critical for planning, budgeting, forecasting, and performance analysis across organizations. These solutions can be deployed either **on-premise**, where the software is hosted on internal servers and managed by in-house IT teams, or via a **cloud-based model**, hosted on vendor infrastructure and accessed over the internet. On-premise deployments offer full control over data, security, and customization but require high upfront investment, dedicated IT resources, and slower scalability. In contrast, cloud EPM provides agility, rapid deployment, subscription-based cost models, global accessibility, and automatic updates, though it may have some limitations in customization and granular infrastructure control. Understanding these deployment models is essential for organizations to align their EPM strategy with business priorities, budget considerations, and digital transformation goals.

Feature / Factor	On-Premise EPM	Cloud EPM
Cost Model	High upfront CapEx	Subscription-based OpEx
Deployment Speed	Slower, requires IT setup	Rapid, minimal setup
Scalability	Limited, requires hardware upgrades	High, flexible scaling
Data Control & Security	Full control internally	Managed by vendor, compliant solutions available
Maintenance & Upgrades	Managed by internal IT	Automatic vendor-managed updates
Accessibility	Restricted to internal network	Global, real-time access
Customization	High, tailored to enterprise needs	Moderate, some limitations

Comparative analysis of deployment models of EPM

Impact of AI and ML

AI & ML: Powering the Future of EPM:

Artificial Intelligence (AI) and Machine Learning (ML) are fundamentally reshaping Enterprise Performance Management (EPM), elevating it from retrospective, control-oriented systems to **predictive and adaptive intelligence platforms**. Traditional EPM centred on budgeting, reporting, and variance analysis. With AI/ML integration, enterprises can now **anticipate outcomes**, **run dynamic simulations**, and **align strategies in real time** with volatile environments—making EPM a core enabler of enterprise agility.

Smarter Financial Forecasting & Scenario Planning:

Al-powered EPM enables continuous, adaptive financial forecasting—moving away from static annual budgets. ERP providers like Ramco, SourcePro, and Elite Mindz rolled out new Al/ML-enabled ERP editions in early 2025, featuring automated forecasting, procurement optimization, and planning



analytics. These tools detect hidden patterns in business data, improving the speed, accuracy, and reliability of financial projections—helping companies pivot strategies instantly in response to market shifts.

Real-Time Supply Chain & Sales Intelligence:

By blending enterprise data with external signals such as **customer behaviour**, **weather patterns**, and **macroeconomic trends**, Al-fuelled EPM unlocks advanced demand sensing and predictive supply chain planning. This allows organizations to align **inventory**, **logistics**, **and pricing strategies** in real time.

Predictive Workforce Planning:

Al-augmented EPM introduces foresight into workforce planning. Instead of reactive hiring or catch-up responses to attrition, Al models can:

- Forecast workforce shortages
- Predict turnover trends
- Align hiring with long-term strategic growth

Generative Al-powered HR assistants became more prominent in **2024–2025**, enabling enhanced employee engagement, **reducing churn**, and ensuring that critical skills are available ahead of demand—turning talent planning into a **strategic advantage**.

Operational Efficiency & Insight Democratization:

Al liberates finance and planning teams by automating repetitive workflows such as **budget consolidation**, **reconciliation**, **and variance reporting**. Generative Al further enhances this transformation by enabling **conversational interfaces**: leaders can ask natural language questions and instantly receive insights. This trend accelerated in **2024–2025**, as **Microsoft Al Tour (Jan 2025**, **New Delhi)** showcased partnerships embedding GenAl-driven productivity labs across Indian enterprises, democratizing data-driven decisions.

Proactive Risk Detection & Resilience:

Al-integrated EPM systems revolutionize risk management by detecting anomalies and correlations that human monitors may miss—such as supplier instability, fraud indicators, or cost escalations. By embedding predictive risk modeling into 2025 ERP editions, organizations are shifting from reactive controls to proactive resilience—anticipating and mitigating risks long before they materialize.

India's Expanding AI Ecosystem: Fueling EPM Innovation: Published by Press Information Bureau, Government of India (PIB Gov.)

India's AI ecosystem is catalyzing the adoption of AI-powered EPM through growth in infrastructure, startup activity, and strategic programs:



- India Al Mission (March 2024): With a ₹10,371.92 crore (~USD 1.25 billion) investment, this mission established 10,000+ GPUs, innovation centers, datasets platforms, talent upskilling, startup funding, and responsible Al frameworks (PIB, March 2024).
- National Compute Power (July 2024): Capacity crossed 34,000 GPUs to support advanced Al workloads (PIB, July 2024).
- Startup Ecosystem (Q2 FY2025): India hosts 520+ tech incubators and accelerators, ranking third globally. About 42% were launched in the last five years (2019–2024), with Alfocused hubs like T-Hub MATH supporting 60+ startups (NASSCOM, Nov 2024).
- Al Adoption & Investment:
 - 80% of Indian companies (BCG, Nov 2024) consider AI a core strategic priority, above the global average of 75%.
 - 69% plan to boost AI tech investments in 2025, with one-third allocating USD 25 million+ to AI.
 - GenAl startup funding surged sixfold (NASSCOM, Nov 2024), hitting USD 51 million in Q2 FY2025, driven by B2B and agentic Al startups.

AI Empowering SMBs & Democratization of EPM

Al's benefits are no longer exclusive to large enterprises. With **ERPNext** and India-first **cloud ERPs** (2025 launches), even small and medium businesses (SMBs) are adopting Al-driven EPM. According to Salesforce (Oct 2024):

- 78% of Indian SMBs using AI reported revenue growth,
- 93% said Al contributed to increased revenues.

This ensures that forward-looking planning capabilities are accessible to businesses of all sizes.

The Emergence of GenAl as a Digital Co-Pilot

Generative AI (GenAI) is redefining EPM by becoming a digital co-pilot for leaders. With Oracle, SAP, and Microsoft expanding GenAI-driven ERP features in 2024–2025, enterprises can now:

- Automate narrative report generation
- Provide real-time insights via conversational interfaces
- Enhance cross-functional collaboration with simplified intelligence

GenAl is not a future promise—it is an active part of India's enterprise transformation journey in 2025.



EPM Landscape

Brief insight on key EPM software solution vendors across the world

Enterprise Performance Management (EPM) has evolved into a critical component of modern business strategy, enabling organizations to move beyond traditional financial planning toward more integrated, data-driven decision-making. Global vendors in this space offer robust platforms that consolidate functions such as financial planning, budgeting, consolidation, reporting, and forecasting into unified systems. These solutions are increasingly cloud-based, allowing real-time collaboration, scalability, and integration across enterprise functions. As industries grow more complex and data-intensive, EPM software helps leaders align strategy with execution by connecting financial objectives to operational performance.

The global EPM market is shaped by both established enterprise giants and innovative cloud-first providers. Large players such as **Oracle**, **SAP**, **and IBM** dominate with their comprehensive enterprise-wide systems, offering deep integration with ERP platforms and advanced analytics for complex multinational operations. At the same time, agile and user-friendly platforms like **Anaplan**, **Workday Adaptive Planning**, **and OneStream** are disrupting the market by focusing on real-time collaboration, predictive planning, and ease of deployment. These newer entrants cater to organizations seeking flexibility, speed, and scalability, particularly in fast-changing industries like retail, technology, and logistics.

Specialized vendors such as **Board International, CCH Tagetik, and Jedox** are carving out strong positions by offering niche capabilities in areas like financial consolidation, compliance, and performance visualization. Their solutions appeal to businesses that require targeted functionality without the overhead of large-scale enterprise suites. Collectively, these vendors are pushing the EPM industry toward more **Aldriven, cloud-native, and predictive systems**, reflecting the growing demand for agility, automation, and forward-looking insights. This shift positions EPM not just as a financial tool, but as a strategic enabler of enterprise-wide transformation.

Following are the major EPM Vendors operating across the global level:

Vendor	Key Offerings / Insights
	Oracle is one of the most established leaders in the EPM space, offering both on-
Oracle (Hyperion EPM	premise (Hyperion) and cloud-based EPM solutions. Its offerings cover financial
Suite / Oracle EPM	planning, budgeting, profitability management, and compliance. Oracle EPM Cloud is
Cloud)	widely used across Fortune 500 companies for its scalability, integration with ERP,
	and advanced analytics.
	SAP provides enterprise-wide EPM solutions integrated tightly with its ERP
SAP (SAP Analytics	ecosystem. SAP BPC (Business Planning and Consolidation) and SAP Analytics Cloud
Cloud for Planning /	support financial consolidation, planning, and predictive analysis. These solutions are
SAP BPC)	preferred by organizations with complex global operations requiring end-to-end
	integration.



	IDM2- Discrete Assistant in the state of TMI is a second state of the
IBM (IBM Planning	IBM's Planning Analytics is built on the TMI in-memory database, known for speed and scalability. It enables financial and operational planning, scenario modeling, and
Analytics powered by	
TMI)	Al-driven forecasting. IBM emphasizes flexibility, allowing users to design tailored
	models while integrating with enterprise data sources.
	Anaplan is a cloud-native platform specializing in connected planning across finance,
Anaplan	sales, supply chain, and workforce management. Its strong point lies in real-time
, mapian	collaboration and scenario planning, making it a favorite among agile enterprises
	looking for flexible, user-friendly EPM solutions.
	Formerly Adaptive Insights, Workday's Adaptive Planning offers intuitive cloud-based
Workday Adaptive	tools for budgeting, forecasting, and workforce planning. It is widely used by mid-
Planning	sized and large enterprises due to its ease of deployment, user-friendly interface, and
	integration with Workday's HCM and financial systems.
	Infor d/EPM integrates EPM functions with business intelligence and analytics. It
Infor (Infor Dynamic	provides deep industry-specific capabilities, particularly for manufacturing,
Enterprise Performance	healthcare, and retail. Its strength lies in blending performance management with
Management – d/EPM)	operational intelligence.
	Board offers an all-in-one platform combining business intelligence, performance
	management, and predictive analytics. It is used extensively for integrated planning,
Board International	
	profitability analysis, and KPI monitoring, with a strong reputation for flexibility and
	visualization capabilities.
	CCH Tagetik specializes in corporate performance management, with strong
Tagetik (Wolters	capabilities in financial close, consolidation, and regulatory compliance. Its solutions
Kluwer CCH Tagetik)	are particularly well-regarded in sectors with stringent compliance requirements
	such as banking, insurance, and energy.
	Jedox provides cloud-based EPM solutions with strong Excel integration, making it
Jedox	attractive to organizations transitioning from spreadsheet-driven planning. It
jedox	supports financial planning, sales forecasting, and operational budgeting while offering
	Al-assisted planning features.
	OneStream has gained rapid popularity for its unified platform that eliminates the
	need for multiple EPM tools. It is known for financial consolidation, planning,
OneStream Software	reporting, and analytics, all in one solution. Large enterprises favor it for reducing
	complexity and improving governance.



India scenario

In India, the deployment of Enterprise Performance Management (EPM) solutions often follows a **partnership model** where global vendors such as Oracle, SAP, IBM, Anaplan, Workday, and OneStream collaborate with Indian system integrators, IT service providers, and consulting firms. This approach bridges the gap between advanced global EPM technologies and localized implementation needs across industries such as BFSI, telecom, manufacturing, healthcare, and government enterprises.

Key Features of the Partnership Model

1. Global Vendor Expertise

- Vendors like Oracle, SAP, IBM, and Anaplan bring in their proven EPM platforms with capabilities in financial planning, consolidation, predictive analytics, and Al-driven forecasting.
- They provide the technology backbone, product updates, and advanced features to maintain global standards.

2. Local System Integrator (SI) & IT Services Role

- Indian IT majors such as TCS, Infosys, Wipro, HCLTech, Tech Mahindra, and midsized firms like Hexaware, Birlasoft, Sonata Software play a critical role in customizing, integrating, and deploying EPM solutions.
- They align the solutions with Indian regulatory requirements (SEBI, RBI, GST norms), local accounting standards (Ind-AS/IFRS), and sector-specific needs.

3. Implementation & Consulting Support

- Consulting arms like Deloitte India, PwC India, EY India, and KPMG India partner with global vendors to provide strategy, roadmap design, and change management support.
- Their involvement ensures adoption across finance, HR, supply chain, and operational functions within Indian enterprises.

4. Industry-Specific Adaptation

- Indian BFSI firms adopt EPM for regulatory compliance and risk-adjusted performance.
- Manufacturing and retail leverage it for supply chain optimization, while IT/ITES use it for project-based planning and resource allocation.

5. Cloud Adoption Acceleration

With India's rapid cloud adoption, most EPM deployments are now cloud-first, driven by
 Oracle EPM Cloud, SAP Analytics Cloud, and Anaplan SaaS offerings.



 Local partners assist in data migration, integration with existing ERP/CRM systems, and ongoing managed services.

Some of examples of Indian companies partnerships with global vendors:

On April, 2025, Tata Consultancy Services (TCS) has expanded its partnership with SAP to drive enterprise-wide cloud adoption and digital transformation, with a strong emphasis on generative AI integration. The collaboration is anchored on the RISE with SAP framework, aimed at simplifying the shift from legacy on-premises systems to agile, integrated cloud solutions. Through this alliance, TCS will establish a centralized ecosystem for SAP customers, enabling smarter service management, enhanced scalability, and improved end-user experiences. By streamlining operations and strengthening customer success metrics, the partnership is set to accelerate global business transformation initiatives.

The Oracle–Wipro partnership represents a long-standing strategic alliance in the EPM space, combining Oracle's robust cloud and on-premise EPM platforms with Wipro's deep domain expertise, certified talent, and delivery excellence. Wipro leverages methodologies like Zoom-to-Cloud and industry-specific accelerators to implement comprehensive EPM solutions, covering planning, budgeting, financial consolidation, master data management, and narrative reporting. This collaboration enables enterprises in India and globally to streamline financial processes, enhance decision-making, automate routine workflows, and improve performance metrics, while delivering measurable benefits such as faster close cycles, cost savings, and increased forecast accuracy.

On May, 2025, OneStream Software announced a strategic partnership with PwC, designating PwC as its 2025 Strategic Partner to accelerate financial transformation for organizations. The collaboration combines OneStream's unified Corporate Performance Management (CPM) platform with PwC's industry expertise and implementation capabilities. Key objectives include enabling smarter and faster EPM deployments, ensuring regulatory compliance and risk management, and delivering long-term strategic value through continuous transformation and insights. The partnership leverages PwC's global experience, establishing a Center of Excellence (COE), upskilling teams, and improving project tracking to ensure scalable, high-quality implementations, positioning enterprises to achieve efficient, integrated, and forward-looking financial management.

Impact in the Indian Market

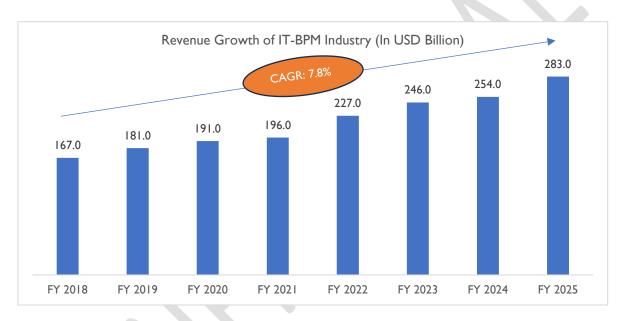
- Partnerships ensure cost-effective deployment by combining global software excellence with Indian IT talent.
- They help overcome challenges like skills gap, localization, and integration with legacy systems.
- This model has made India one of the **fastest-growing EPM adoption markets in Asia-Pacific**, particularly among large enterprises and digitally maturing mid-sized firms.



IT-BPM Industry in India

Market Scenario

The Indian IT-BPM industry has witnessed robust and sustained growth over the past several years, establishing itself as a global leader in technology and business process services. This growth has been driven by increasing digital adoption across industries, a strong talent pool, and rising global demand for cost-effective, high-quality IT solutions. From software development and IT consulting to customer support and analytics, the sector has expanded its capabilities while embracing emerging technologies such as cloud computing, automation, and artificial intelligence. The industry's consistent performance reflects its strategic importance to the Indian economy and its growing role in supporting digital transformation worldwide.



Source: National Association of Software and Service Companies (NASSCOM)

The graph showcases the historical growth trend of the Indian IT-BPM industry from FY 2018 to the projected FY 2025, highlighting consistent year-on-year expansion. The industry's revenue grew from USD 167.0 billion in FY 2018 to USD 283.0 billion in FY 2025 at a CAGR of 7.8%, marking a robust increase driven by rising global demand for technology services, digital transformation, and business process outsourcing. The period between FY 2021 and FY 2023 shows a particularly sharp rise, reflecting accelerated digital adoption during and after the COVID-19 pandemic. This upward trend underscores the sector's resilience and strategic importance in the global IT services landscape.

The graph also reveals the projected growth for FY 2025, estimated at USD 283 billion, indicating continued momentum in the sector. This future growth is likely to be fuelled by increased investment in advanced technologies such as artificial intelligence, cybersecurity, cloud infrastructure, and data analytics. Government initiatives like "Digital India" and enhanced focus on skill development and digital infrastructure are also playing a critical role in driving the sector forward. Overall, the graph reflects India's strengthening position



as a global leader in IT-BPM services and its expanding contribution to both the national and global digital economies.

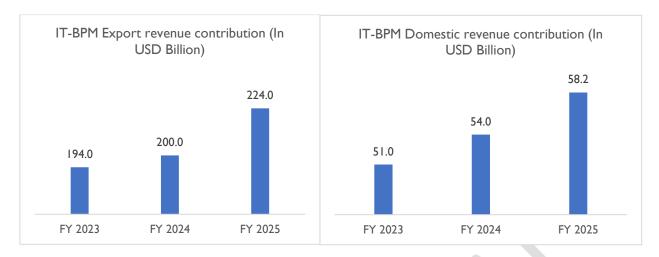
IT-BPM Segment

The IT-BPM (Information Technology and Business Process Management) industry encompasses a broad spectrum of services, including software development, IT consulting, infrastructure management, and outsourced business processes such as finance, human resources, and customer support. This sector plays a pivotal role in India's economic landscape, serving as a major driver of employment, innovation, and global trade. Positioned as a global leader in outsourcing and digital services, India has built a strong reputation for delivering high-quality, cost-effective IT and BPM solutions to clients across the world. The industry not only contributes significantly to foreign exchange earnings but also underpins India's digital transformation journey, reinforcing its stature as a strategic hub for technology and business services on the global stage.

The Indian IT-BPM sector has considerable impact on GDP and the employment rate of the country, where exports are a major contributor to the revenue from this sector. Strong supportive government policies are augmenting the consistent growth in this sector. The Software Technology Park (STP) scheme which is a 100% export-oriented scheme for development and export of computer software, including export of professional services using communication links or physical media, makes India attractive for multinational global participants to set up its presence providing employment opportunity.

In addition to STP scheme, the government prioritizes cybersecurity, hyper-scale computing, Artificial Intelligence (AI) as a technology, and blockchain technology. The country, with lowest data costs at INR10/GB (USD 0.12/GB) is complimenting for a wide customer base to use this technology, which is a big advantage to train the AI for any application.

Government has allotted INR 10,300 crore (around USD 1,200 Million) for IndiaAl Mission, aimed at boosting India's Al ecosystem. Similarly, the government is keen on building a cyber-lab for the 'Online Capacity Building Programme on Crime Investigation, Cyber Law and Digital Forensics' to strengthen cyber security capabilities in the country. These investments and government policies are poised to position India to be a major contributor in the IT-BPM sector globally, as the country is witnessing consistent year-on-year growth every year.



Source: National Association of Software and Service Companies (NASSCOM)

GDP Contribution:

The Indian IT-BPM industry continues to play a significant role in the country's economic development. In FY 2023, the sector contributed approximately **7.5% to India's GDP**, highlighting its central role in driving economic activity. By FY 2025, this contribution is projected to rise to **10%**, reflecting the sector's expanding influence across global and domestic markets, along with its growing value in digital transformation and knowledge services.

* Export Revenue Growth

Export revenue remains a key driver of the IT-BPM industry's performance. In FY 2023, exports were recorded at USD 194 billion, registering 9.4% year-on-year growth in reported currency and I 1.4% in constant currency terms. Despite global economic uncertainties, FY 2024 saw a modest rise to USD 200 billion, marking a 3.3% annual increase. Looking ahead, FY 2025 is expected to witness a stronger expansion, with export revenues projected to reach USD 224 billion an increase of 4.6% year-on-year. This growth is supported by increasing demand for digital services, the adoption of emerging technologies, and a strategic industry shift toward higher-value and domain-specific solutions.

Domestic Revenue Performance

The domestic IT-BPM market has shown consistent growth alongside its export counterpart. In FY 2023, domestic revenues stood at USD 51 billion, growing by 4.9% year-on-year. This momentum continued into FY 2024, with the market surpassing USD 54 billion, reflecting a 5.9% growth. For FY 2025, domestic revenues are projected to reach USD 58.2 billion, supported by an estimated 7.0% growth rate. Key growth enablers include rising enterprise IT spending, increased digital adoption across sectors, government investments in public digital infrastructure, and growing demand for cybersecurity and cloud-based services.



Analytics Segment

Analytics has evolved to become a cornerstone of India's Information Technology (IT) sector, playing a pivotal role in its rapid expansion and global competitiveness. Rather than being a standalone service, it is now deeply integrated into the offerings of major IT firms, providing crucial insights and value-added solutions to clients worldwide. This strategic shift has positioned analytics as a key driver of the industry's continued success and innovation.

According to a NASSCOM Strategic review released in June 2016, the Indian analytics market is set on a trajectory to reach USD 16 billion by 2025. This represents an eight-fold increase from a valuation of around USD 2 billion in the year 2016. This growth is a key contributor to the overall IT/ Tech sector's revenue, which is expected to reach a milestone of USD 300 Billion revenue in FY 2026, as per the estimates of NASSCOM's Strategic report released in February 2025.

Overall, the Indian big data Industry is anticipated to capture 32% of the net global market by 2025. Interestingly, BPM players are realizing that in order to achieve better outcomes, they need to deploy Analytics. In keeping with this recognition, the number of analytics firms rapidly surged. As of NASSCOM'17 the estimated Analytics companies were more than 600, including over 400 Analytics start-ups and about 1.3 lakh Analytics professionals in India, making the nation as a global Analytics hub. Report also revealed the overall BPM firms integrating Analytics with operations management were around 50-60%. The demand for Cloud-based (SaaS) and predictive analytics solutions is said to be the core driver for this integration alongside surge in Al and deep learning solutions into BPM offerings.

Analytics: Current Landscape

Analytics has become indispensable for making data-driven decisions. The adoption of analytics is widespread across sectors, with BFSI (Banking, Financial Services, and Insurance), retail, manufacturing, and healthcare being the top consumers of analytics services in India. Its adoption is widespread across sectors, with Banking, Financial Services, and Insurance (BFSI), retail, manufacturing, and healthcare emerging as the leading consumers of analytics services in India.

With the advent of big data technologies and sophisticated analytics tools, organizations can now process and analyse complex data sets at unprecedented speed and scale. This capability allows businesses to gain invaluable insights into customer behaviour, market trends and operational efficiency at fingertips in. A key driver of this growth is the increasing availability of data from diverse sources, including social media platforms, Internet of Things (IoT) devices, and transactional systems.

As data volumes continue to rise, the demand for skilled professionals—such as data analysts and data scientists—has surged likewise. These experts leverage statistical techniques, machine learning algorithms, and data visualization tools to extract actionable insights that inform business strategy.

Moreover, advancements in artificial intelligence and automation are making analytics more accessible, even to small and medium-sized enterprises. Industries such as healthcare, finance, marketing, and supply chain



management are increasingly adopting data-centric approaches to enhance decision-making, streamline operations, and elevate the customer experience. Thereby overall landscape of the analytics associated Tech segment seems healthy.

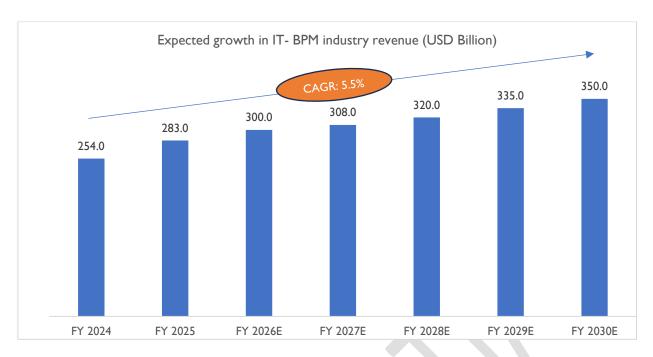
Growth Forecast

Over the next two to three years, India's IT-BPM industry is poised for sustained growth, underpinned by robust global demand for digital solutions, ongoing technological advancements, and strategic policy interventions. As digital transformation becomes central to business strategy across industries, Indian IT service providers are expected to see increased demand for services such as cloud migration, cybersecurity, Al/ML implementation, and digital infrastructure modernization. The shift from traditional outsourcing to digital-first engagement models is compelling IT firms to reposition themselves as transformation partners rather than just service vendors. This evolution is expanding opportunities not just in traditional markets like the US and Europe, but also in emerging geographies in Asia, the Middle East, and Africa.

A key driver of this expected growth is the accelerated expansion of Global Capability Centres (GCCs) in India. Hosting more than 1,580 GCCs, India has established itself as a strategic hub for multinational companies seeking talent-rich, cost-effective environments for innovation, R&D, and enterprise functions. The trend of GCCs moving up the value chain from transactional back-office roles to high-end product engineering and Al-driven innovation is expected to further boost revenue and talent development. In parallel, the domestic IT market is maturing rapidly with greater digital adoption in BFSI, healthcare, manufacturing, retail, and government services. Sectors like edtech, fintech, and health tech are gaining prominence, supported by platforms like UPI, DigiLocker, and Ayushman Bharat Digital Mission, thereby enhancing the scope for homegrown IT solutions.

Additionally, the Indian government's proactive stance on digital skilling and AI development is expected to sustain momentum. Initiatives such as FutureSkills Prime, IndiaAI, and the creation of AI Centres of Excellence are designed to bridge the digital talent gap and support innovation. With India being ranked first globally in AI skill penetration (Stanford AI Index 2023), the workforce is becoming increasingly future-ready. Combined with ongoing investments in infrastructure and digital connectivity in tier-2 and tier-3 cities, this creates a favourable ecosystem for inclusive growth in the IT-BPM sector. Overall, the next few years are likely to witness the sector consolidating its global leadership while evolving into a broader platform for technological innovation, job creation, and economic impact.

Based on the latest data from the National Association of Software and Service Companies (NASSCOM), the Indian IT-BPM industry is projected to continue its growth trajectory over the next few years:



Source: National Association of Software and Service Companies (NASSCOM)

The projected growth of the Indian IT-BPM (Information Technology- Business Process Management) industry revenue from FY 2024 to FY 2030 in USD billion. Starting at USD 254.0 billion in FY 2024, the revenue is expected to grow steadily, reaching USD 282.6 billion in FY 2025 and USD 300 billion by FY 2026. This positive trend reflects the sector's continued expansion, driven by digital transformation, rising global outsourcing demand, and increasing investments in cloud, Al, and cybersecurity technologies. The CAGR (Compound Annual Growth Rate) is marked at 5.5%, indicating a healthy and consistent pace of industry development.

Looking further ahead, the industry is projected to generate USD 308.0 billion in FY 2027, USD 320.0 billion in FY 2028, USD 335.0 billion in FY 2029, and ultimately reach USD 350.0 billion by FY 2030. The progressive increments highlight the resilience and global competitiveness of India's IT-BPM sector. Contributing factors include the rise of Software as a Service (SaaS), global capability centres (GCCs), and government policies supporting digital public infrastructure and innovation. This consistent upward trajectory underlines the IT-BPM industry's critical role in India's economic growth and its strategic importance in the global digital economy.



Private Sector IT Spending Pattern

In India's corporate sector, IT modernization has become a cornerstone of digital transformation, with enterprises rapidly shifting from legacy systems to cloud-first and hybrid infrastructures to enhance scalability, resilience, and cost efficiency. Driven by rising competition, regulatory compliance, and evolving customer expectations, companies are adopting advanced technologies such as artificial intelligence (AI), machine learning (ML), robotic process automation (RPA), and data analytics to streamline operations and enable smarter decision-making. Initiatives across banking, manufacturing, healthcare, and retail reflect a strong push toward digital-first strategies, with investments focused on cloud ERP, enterprise performance management (EPM), cybersecurity frameworks, and generative AI adoption. This transformation not only improves productivity and agility but also positions Indian corporates to compete effectively in global markets.

IT Modernization

- 1. Shift to Cloud & Hybrid Infrastructure: Indian corporates are rapidly moving away from legacy on-premises IT systems to cloud-first and hybrid IT models. According to NASSCOM (2024), nearly 65% of large enterprises in India have adopted hybrid or multi-cloud environments, aiming for cost optimization, flexibility, and business continuity. Initiatives like RISE with SAP, Oracle Cloud, and Microsoft Azure partnerships are driving ERP and EPM migrations to the cloud.
- Digital Transformation & Automation: Companies are investing heavily in automation technologies such as Robotic Process Automation (RPA), Al/ML-driven analytics, and intelligent process automation to streamline operations. BFSI and manufacturing sectors in particular are leveraging Al-enabled fraud detection, supply chain automation, and smart manufacturing systems.
- 3. Generative Al & Data-Driven Transformation: Corporates are now integrating Generative Al (Gen Al) for content creation, predictive modeling, and advanced analytics. IT modernization projects increasingly include Al-driven decision-making, enhancing financial planning, customer engagement, HR management, and supply chain optimization. For example, TCS, Infosys, and Wipro have launched enterprise Al platforms tailored to India's corporate sector.
- 4. Cybersecurity & Compliance Integration: With modernization, organizations are embedding cybersecurity frameworks into IT strategies. Industries like BFSI, telecom, and healthcare are prioritizing data privacy, regulatory compliance, and Zero Trust frameworks to mitigate risks associated with digital adoption.



Rise of technology start-ups and its impact on IT infrastructure industry

Late-stage Mergers & **Funding** Deal Operational New start-up investments: acquisitions: decline: Fell to volumes: challenges: Declined by creation: Fell Dropped to ~USD 6 Contracted to 82% of start-71%, signaling to about 30% pre-COVID billion, a 67% 824 deals, **ups** reported of 2022 reduced levels, drop year-onmarking a 48% longer sales reflecting a 2X investor levels. decline. cycles. year. appetite. decline.

India's start-up ecosystem, a major driver of IT infrastructure growth, slowed sharply in 2023 due to reduced funding, fewer deals, and weaker late-stage investments. The fall in new start-up creation and muted M&A activity curbed innovation and expansion opportunities. Founders faced cash flow pressures and delayed revenue cycles, while many had to shift priorities from aggressive scaling to cost efficiency and resilience. This funding winter directly impacted IT infrastructure demand, slowing modernization and altering investment focus.

Silver Linings & Recovery Momentum:

2023 Resilience Signals:	2024 Recovery Trends:
	•
60% of founders reported improved revenue & profitability	Tech funding: \$7.4 billion (+23% YoY)
25% of 2023-founded start-ups were DeepTech (vs ~12% in prior 2 years)	Tech funding: \$7.4 billion (+23% YoY) Deal volumes: +27% compared to 2023
100+ Generative AI start-ups emerged; 70% of founders embedding AI	New start-ups: 2.1X growth, totaling 32,000–35,000 active start-ups
65%+ start-ups hiring despite layoffs; 40% of new ventures from Tier-2/3 hubs	67% of funding into RetailTech & HealthTech
	DeepTech funding: \$1.6 billion (+78% YoY)
	DeepTech deal activity: +24%, with 2.7X growth in late-stage deal sizes

Despite funding challenges in 2023, India's start-up ecosystem displayed resilience with improved profitability, strong DeepTech adoption, and hiring momentum across emerging hubs. By 2024, the sector entered a recovery phase as funding rose to \$7.4 billion and deal activity strengthened, with new start-up creation expanding significantly. Mature sectors such as RetailTech and HealthTech led funding inflows, while DeepTech attracted substantial investor confidence, growing nearly 80% year-on-year with larger deal sizes, underscoring its strategic importance to India's innovation landscape.



Driving Forces: Policies and Partnerships

Government initiatives have played a catalytic role in driving growth. Programs such as **Start-up India** (2016), **Atal Innovation Mission**, and **Digital India** (2015), alongside incubators and accelerators, continue to nurture start-ups. Specific measures include the **Draft National DeepTech Start-up Policy** (2023), a ₹I lakh crore corpus announced in Interim Budget 2024, and a ₹I,000 crore Venture Capital Fund for the Space Sector. These steps emphasize support for Al/ML, robotics, quantum computing, and other deep technologies. Partnerships between corporates and academic institutions are further enabling collaborative R&D.

Implications for IT Infrastructure Industry

The rise of technology start-ups directly impacts the IT infrastructure sector in several ways:

- 1. Cloud and Data Centers The growth of SaaS, Al/ML, and analytics-driven start-ups has accelerated demand for scalable cloud infrastructure and localized data centers.
- 2. Cybersecurity With over 3,600 DeepTech start-ups (480 added in 2023, double from 2022), the need for enterprise-grade security frameworks has increased.
- 3. **Al/ML Integration** As **70% of founders embed Al**, infrastructure must adapt to high-performance computing and GPU-based systems.
- 4. Funding-Driven Growth With 67% of 2024 funding flowing into mature sectors, IT service providers must align offerings with RetailTech, HealthTech, and DeepTech requirements.
- 5. **Geographic Spread** The **40%** rise in start-ups in emerging hubs increases demand for IT infrastructure beyond metropolitan areas, pushing for edge computing and broader connectivity.

Growth in new technology applications and its impact

I. Consumer Segment:

- Personalized Experiences: Al-driven recommendation engines, voice assistants, and AR/VR applications are enabling highly personalized consumer interactions. For example, Al in ecommerce tailors product suggestions based on real-time behavior, increasing engagement and conversion rates.
- Smart Devices and IoT: The proliferation of IoT devices—smart home appliances, wearable tech, and connected vehicles—has shifted consumer expectations towards seamless integration and real-time monitoring. This growth drives demand for ecosystems that connect devices, apps, and services efficiently.



- Digital Payments & FinTech Expansion: Adoption of digital wallets, UPI, BNPL, and blockchain-based solutions is accelerating financial inclusion, enabling faster, secure, and convenient transactions, especially in emerging markets.
- Entertainment & Media Transformation: Streaming platforms, cloud gaming, and immersive content (AR/VR) are reshaping media consumption habits, pushing traditional content providers to innovate rapidly.

2. Enterprise Segment:

- Automation & Al Integration: Businesses are increasingly using Al/ML for process automation, predictive analytics, and customer service optimization. This improves operational efficiency, reduces human error, and enables data-driven decision-making.
- Cloud & Edge Computing: Enterprises are leveraging hybrid cloud and edge solutions to improve scalability, reduce latency, and optimize costs. This facilitates real-time analytics and enhances business continuity.
- Cybersecurity & Data Governance: With growing digitalization, enterprises are adopting advanced security frameworks, Al-based threat detection, and zero-trust architectures to protect sensitive data and ensure regulatory compliance.
- Sustainability Tech & Green Initiatives: Technologies like smart energy management systems, Al for carbon footprint monitoring, and IoT-based resource optimization are helping enterprises meet ESG goals and regulatory requirements.
- Collaboration & Hybrid Work Tools: Cloud-based collaboration platforms, VR/AR meeting solutions, and Al-powered productivity tools are reshaping workplace dynamics, enhancing remote work effectiveness, and reducing operational overhead.

Emergence of India as a Global Capability Center (GCC) hub

Global Capability Centres (GCCs), which began as support units, have transformed into strategic hubs for innovation, R&D, and digital operations. India has become a preferred destination for establishing GCCs, with leading global organisations consolidating their technology ecosystems in the country. This evolution has reshaped India's corporate landscape by embedding higher-value functions into the GCC model.

The number of GCCs in India has expanded from about 1,430 in FY19 to over 1,700 in FY24, employing nearly 1.9 million professionals. Engineering research and development-focused GCCs have grown 1.3 times faster than the overall GCC ecosystem in the past five years, underscoring a decisive shift towards advanced, innovation-led work. With India accounting for 28% of the global STEM workforce and 23% of global software engineering talent, the country continues to attract GCC investment at scale. Global



roles within these centres are expected to rise sharply, from 6,500 currently to over 30,000 by 2030, supported by strong leadership development programs.

Policy support is reinforcing this momentum. The central government has proposed a **National Framework** to promote GCCs in emerging Tier-2 cities, complementing state-level initiatives aimed at broadening the GCC footprint beyond metro hubs. Parallelly, the Ministry of Electronics & IT (MeitY) has been allocated over **INR 26,026 crore** for digital infrastructure, talent programs, cloud, cybersecurity, and smart city initiatives—investments that indirectly strengthen GCC capacity.

The expansion of GCCs has a direct bearing on IT infrastructure spending. Rising demand for cloud adoption, large-scale data centres, advanced cybersecurity frameworks, and digital workplace technologies is driving both private and public sector investments. Further, as GCCs increasingly adopt edge computing, Al, and sustainable IT models, enterprises are compelled to modernise infrastructure and build resilience at scale, cementing India's position as a global technology hub.

Changes in data security / cybersecurity landscape and its impact

India's cybersecurity landscape has undergone a rapid transformation, shaped by accelerated digital adoption, rising cyber threats, and sustained modernization of technology ecosystems. Between 2020 and 2022, the rise of remote and hybrid work models significantly increased the need for secure digital environments, with public cloud services witnessing strong double-digit growth—47.3% in 2020, 34.6% in 2021, 42.3% in 2022, and 26% in 2023. This momentum is expected to continue, with a projected growth rate of 34.4% in 2024.

The domestic cybersecurity market reflects this surge in demand, expanding from USD 1.98 billion in CY 2019 to an estimated USD 13.6 billion by CY 2025. Actual figures stood at USD 2.36 billion in 2020, USD 3.36 billion in 2021, USD 4.73 billion in 2022, and USD 6.06 billion in 2023, while the projected market size for CY 2024 is USD 9.08 billion, based on growth assumptions. This expansion is being driven by heightened enterprise spending on securing critical infrastructure and managing complex digital ecosystems.



Source: Data Security Counsil of India (DSCI), D&B Desk Research



E= Estimated

Note: All the values presented are based on the latest report released by DSCI in 2023. Since the official data for CY 2024 has not yet been released, the report includes actual figures only up to CY 2023 and provides projections (according to the DSCI Digest released in October 2024) for CY 2025. Therefore, the value for CY 2024 has been derived through assumptions and secondary research.

Adoption of advanced security technologies such as AI/ML, zero-trust architectures, cloud-native security, edge computing, and generative AI is accelerating market maturity. According to PwC, AI adoption is particularly strong in industrial products, manufacturing, TMT, healthcare, pharmaceuticals, and financial services, where over 90% of organizations report increased usage. Enterprises are increasingly deploying next-generation cybersecurity solutions including CNAPP, WAF, CIEM, CASBs, EDR, XDR, SASE, PAM, MDR, GRC, and advanced SOCs, alongside growing reliance on threat intelligence services and board-level cybersecurity leadership.

India's broader tech ecosystem further amplifies this demand. With 32,000–35,000 tech startups, over 40,000 tech firms, and 90,000 patents filed in CY 2024, cybersecurity is becoming integral to brand protection, compliance, and operational resilience. Organizations are formalizing response frameworks, conducting tabletop exercises, and allocating larger budgets to security operations.

The **Government of India** has emerged as a strong enabler of this growth. In FY 2023–24, **INR 400 crore** was earmarked for cybersecurity projects and **INR 225 crore** for CERT-In, while **INR 14,903 crore** was allocated under the Digital India initiative to expand cybersecurity infrastructure, indigenous tool development, and deployment of the **National Cyber Coordination Centre (NCCC) across 200 sites**. Parallel initiatives such as the National Centre of Excellence (NCoE) and cybersecurity R&D units are fostering innovation, skills, and industry collaboration.

Impact

- 1. **Enterprise Resilience:** Cybersecurity has shifted from being an IT function to a board-level priority, enabling enterprises to strengthen compliance, reduce risks, and protect brand value.
- 2. **Market Growth:** India is now positioned among the fastest-growing global cybersecurity markets, supported by expanding demand for advanced solutions across all sectors.
- 3. **Innovation & Ecosystem Development:** The rise of startups, patents, and indigenous tools is creating a robust domestic cybersecurity ecosystem aligned with global best practices.
- 4. **Government-Industry Synergy:** Public sector investments and private innovation are reinforcing India's defence against evolving cyber threats, ensuring long-term digital trust.



Emergence of cloud infrastructure:

India's IT landscape is undergoing a decisive transition from traditional, hardware-dominated setups to cloud-driven infrastructure that enables agility, scalability, and innovation at scale. Enterprises are increasingly moving mission-critical workloads to the cloud, driven by cost optimization, digital transformation priorities, and the rapid adoption of GenAl. This shift is not only reshaping enterprise IT spending but also positioning cloud as a strategic enabler of India's digital economy, with far-reaching implications for GDP growth and employment generation.

Market Growth:

Public cloud services (laaS, PaaS, SaaS) revenue reached USD 5.2 billion in 1H2024.
Projected to grow at 24.3% CAGR (2023–28), reaching USD 25.5 billion by 2028.

Economic Impact:

Cloud spending expected to sustain 25–30% growth over the next five years, reaching USD 18.5 billion.

Contribution to India's GDP projected at USD 310–380 billion by 2026 (~8% of GDP), up from USD 70–90 billion in 2021.

Employment opportunities expected to grow from 4.7 million (2021) to 14 million (2026).

Drivers of Adoption:

Cost efficiency via "as-a-service" models.

Migration of mission-critical workloads.

GenAl deployment, with cloud as the preferred platform.

Sectoral maturity: Cloud natives (E-commerce), cloud progressives (Financial Services), cloud aspirers (Government & Industrials).

Cloud adoption is no longer limited to IT cost savings but has become a cornerstone of India's digital competitiveness. By enabling scalable infrastructure, powering GenAl, and driving sector-wide transformation, cloud is set to generate significant economic and employment benefits, while decisively replacing the limitations of traditional hardware systems.



Brief insight on cloud adoption in India:

Cloud adoption in India has moved beyond being a cost-optimization tool to becoming a central pillar of digital transformation strategies across industries. Enterprises are increasingly migrating mission-critical workloads to the cloud, not only to enhance scalability and agility but also to support advanced use cases like AI/ML, GenAI, big data analytics, and IoT. The market reflects strong momentum, with hyperscalers expanding their presence and enterprises adopting hybrid and multi-cloud models to balance flexibility, compliance, and security.

Key Factors Driving Adoption:

Digital Transformation Priorities: Enterprises are re-architecting IT ecosystems to accelerate innovation, modernize legacy systems, and improve time-to-market.

Cost Efficiency & Flexibility: The shift from CapEx-heavy hardware to OpEx-driven "as-a-service" models reduces upfront investment and enables elastic scalability.

Al & GenAl Acceleration: Public cloud remains the preferred platform for Al/GenAl deployments, with enterprises viewing cloud service providers as strategic partners.

Remote & Hybrid Work Models: Post-pandemic workforce trends have driven demand for secure, cloud-enabled collaboration and productivity tools.

Government Push: Initiatives like *Digital India*, smart cities, and e-governance projects are fueling cloud adoption across the public sector.

Sectoral Uptake: BFSI, telecom, media, healthcare, and e-commerce lead adoption, while manufacturing, government, and industrials are progressing steadily.

Security & Compliance Enhancements: Advanced cloud-native security, zero-trust frameworks, and data governance have built enterprise confidence in cloud migration.

Overall, cloud adoption in India is at an inflection point—driven by a blend of cost benefits, innovation needs, and policy support—making it the backbone of the country's digital economy and a critical enabler of competitiveness in the global market.



Brief insight on digital adoption in Indian corporate section

Indian corporate IT spending is projected to reach approximately \$160 billion in 2025, with digital transformation initiatives accounting for around 50-55% of these budgets, underscoring a strong focus on modernization and automation. Over 90% of Indian corporates increased investments in Al and machine learning during 2024-25, and more than 70% have deployed Al in core business functions such as finance, supply chain, and customer support. These automation efforts have resulted in operational cost reductions of 15-20% within digitally mature firms. Cloud adoption has also become widespread, with over 60% of enterprises using cloud technologies, and hybrid cloud being the preferred model for 40%+ of firms seeking a balance of flexibility and regulatory compliance.

This surge in digital adoption is fundamentally shifting technology from a back-office support role to a central element of corporate strategy and innovation. Indian companies are advancing broad digitization efforts that include intelligent supply chains, personalized customer experiences, and enabling remote workforce productivity. These initiatives improve agility, reduce operational expenses, and open new revenue opportunities.

The impact is seen in enhanced operational efficiency, faster decision-making enabled by real-time insights, and deeper customer engagement. Digitally mature enterprises demonstrate stronger growth and resilience in navigating market disruptions. Despite these advances, challenges such as legacy system integration, talent shortages, and cybersecurity concerns persist.

In summary, the Indian corporate sector is rapidly evolving into a **digital-first environment**, where technology is a core driver of growth, competitiveness, and innovation domestically and globally.



Threats & Challenges

Key Threats & Challenges Facing the Industry

Threats & Challenges

High Implementation Costs and Return on Investment Concerns:

One of the most critical challenges is the high financial burden associated with implementing EPM solutions. From acquiring licenses to customizing software and training employees, the total cost of ownership is often prohibitive, particularly for small and mid-sized businesses. While large enterprises may afford these systems, many smaller organizations hesitate due to uncertainties around achieving a quick return on investment (ROI). The high upfront costs often delay decision-making and restrict adoption across industries.

Complexity in Integration with Legacy Systems:

A significant portion of Indian enterprises still run on older ERP, HRMS, or accounting systems that were not designed for integration with modern digital platforms. Bringing EPM systems into this mix creates integration bottlenecks. Disconnected systems may result in duplication of data, delays in workflows, and higher implementation timelines. This complexity often requires additional investment in middleware solutions, which further adds to project costs and risks.

Strategic Misalignment and Scope Creep:

EPM implementations frequently fail when organizations lack clear strategic objectives or strong leadership alignment. In some cases, projects start without well-defined goals, resulting in scope creep and shifting priorities. This misalignment between management expectations and the project's actual capabilities often leads to wasted resources and failed deployments. A lack of single-point ownership can further aggravate this problem..

Infrastructure and Digital Connectivity Gaps:

Although India has made significant progress in digital infrastructure, disparities remain between metropolitan areas and tier-2 or tier-3 cities where many industrial operations are based. Unreliable internet connectivity, insufficient IT infrastructure, and inadequate cloud adoption readiness hinder real-time reporting and collaboration, which are essential for EPM effectiveness.

Cloud Readiness and Vendor Lock-In Concerns:

Cloud-based EPM solutions offer scalability and cost-efficiency. However, in India, many organizations remain cautious about moving mission-critical data to the cloud due to concerns about security, data portability, and vendor lock-in. Conservative industries such as banking, insurance, and public sector entities, in particular, are hesitant to make the shift, slowing down the broader adoption of modern cloud-enabled EPM platforms.

Competitive Analysis & KPI

Competitive landscape:

The Enterprise Performance Management (EPM) market is shaped by a mix of established enterprise software providers and newer cloud-native entrants. Players such as Fractal Analytics Ltd.,SG Analytics Private Limited, Datatobiz pvt. ltd. maintains a strong presence by leveraging their existing ERP and business intelligence ecosystems, ensuring seamless integration across financial and operational processes. Alongside these incumbents, challengers like Anaplan, Workday Adaptive Planning, and OneStream are steadily gaining traction by offering flexible, cloud-first planning and analytics platforms that appeal to organizations seeking agility and real-time insights.

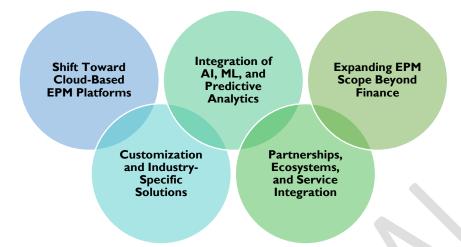
The increasing adoption of cloud technologies has redefined competitive dynamics in the EPM space. Oracle remains a leading provider of cloud EPM solutions, while Anaplan has distinguished itself with its "connected planning" approach, enabling organizations to unify financial, supply chain, and sales planning on a single platform. Workday's integration of Adaptive Insights enhances its HR and finance planning capabilities, while OneStream focuses on delivering a unified solution that combines financial consolidation, planning, and reporting. These differentiators allow vendors to target varying customer needs, from large enterprises with complex requirements to mid-sized firms looking for modular, scalable systems.

Innovation is a critical battleground within the EPM landscape. Vendors are investing heavily in artificial intelligence, machine learning, and predictive analytics to improve scenario planning and forecasting accuracy. For instance, SAP and Oracle emphasize Al-driven features within their EPM suites, while newer entrants highlight user-friendly interfaces and rapid deployment as key strengths. This ongoing innovation race ensures that enterprises have access to tools that support faster decision-making and greater organizational agility, which is particularly important in industries facing dynamic market conditions.

Niche players also contribute significantly to market diversity, focus on specialized offerings that combine planning, budgeting, and forecasting with targeted industry applications. Their solutions are often more cost-effective and adaptable, making them attractive to small and medium-sized enterprises or organizations in sectors like healthcare, retail, and education. By tailoring products to specific verticals or use cases, these vendors carve out defensible positions despite the dominance of global giants.

Strategic partnerships, acquisitions, and ecosystem expansion further influence competition in the EPM market. Leading vendors collaborate with cloud providers, analytics firms, and consulting partners to strengthen their portfolios and broaden market reach. At the same time, customers are increasingly demanding integrated platforms that reduce silos, enhance collaboration, and deliver real-time performance data. This has driven many providers to expand their solutions beyond traditional finance and accounting, covering areas such as supply chain, workforce, and sales performance management.

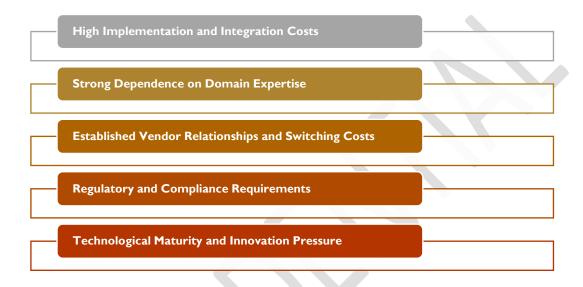
Analysis of key factor shaping competition in the sector



- > Shift Toward Cloud-Based EPM Platforms: A major factor driving competition is the rapid transition from on-premises systems to cloud-based EPM platforms. Cloud deployment allows scalability, faster upgrades, and lower upfront costs, which appeal to enterprises of all sizes. Vendors compete on their ability to provide secure, compliant, and seamless migration from legacy systems. This shift also favors new-age providers that can innovate faster compared to traditional incumbents.
- Integration of AI, ML, and Predictive Analytics: The use of artificial intelligence and machine learning in EPM is shaping competitive differentiation. Advanced forecasting, scenario planning, and anomaly detection are increasingly seen as must-have features. Vendors that integrate predictive and prescriptive analytics into planning processes are better positioned to attract clients seeking proactive decision-making capabilities. This technological edge creates pressure on all competitors to continuously innovate and add intelligence layers to their solutions.
- Expanding EPM Scope Beyond Finance: EPM solutions are no longer restricted to budgeting and financial reporting; they are now extending into supply chain, workforce, marketing, and operations management. Providers that offer cross-functional planning platforms are more competitive because they align with organizations' needs for integrated business performance visibility. This broader scope encourages competition among vendors to deliver enterprise-wide solutions rather than niche financial tools.
- Customization and Industry-Specific Solutions: Another factor shaping competition is the demand for industry-tailored solutions. Different sectors such as BFSI, healthcare, manufacturing, and retail require unique compliance, performance, and reporting frameworks. Vendors that offer customizable modules, pre-built templates, or sector-specific analytics gain an edge. This has also allowed smaller or mid-tier players to carve niches and compete effectively against large global providers.

Partnerships, Ecosystems, and Service Integration: The ability to build partnerships with cloud providers, ERP vendors, and system integrators significantly influences competitiveness. Enterprises increasingly prefer EPM solutions that integrate smoothly with existing IT ecosystems (ERP, CRM, BI platforms). Vendors that create strong partner ecosystems can expand reach, ensure interoperability, and deliver end-to-end transformation projects. This makes alliances and integration strategies key drivers of competitive positioning.

Analysis of entry barriers / other factors



- ➤ **High Implementation and Integration Costs:** Deploying an EPM system often requires significant investment in software licensing, customization, and integration with existing ERP, CRM, and BI platforms. For new entrants, competing against established vendors that already offer seamless integrations becomes challenging. Enterprises also weigh the cost of migration and change management, which creates a natural barrier to entry for smaller or newer firms that cannot provide end-to-end, cost-efficient solutions.
- > Strong Dependence on Domain Expertise: EPM solutions are not just about software but also about deep financial, operational, and industry-specific knowledge. New players must demonstrate expertise in areas like financial consolidation, planning, regulatory compliance, and analytics to gain credibility. Without proven frameworks and consulting experience, it becomes difficult to win client trust, particularly from large enterprises that require industry-tailored solutions.
- Established Vendor Relationships and Switching Costs: Many enterprises have long-term relationships with existing technology providers and consulting partners for their EPM needs. Migrating to a new vendor involves risks such as data migration issues, retraining staff, and potential disruptions in reporting cycles. These high switching costs discourage organizations from experimenting with new entrants, thus creating a protective barrier for incumbents and limiting opportunities for smaller players.

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- Regulatory and Compliance Requirements: EPM systems often support critical financial reporting and disclosure processes, which are subject to strict regulatory compliance across different geographies. Meeting global standards like IFRS, GAAP, and data privacy laws requires significant investment in compliance frameworks. For smaller or new vendors, building these compliance-ready systems is resource-intensive, which creates another barrier to quick market entry.
- Technological Maturity and Innovation Pressure: The EPM market is moving rapidly towards Aldriven forecasting, real-time analytics, and cloud-native architectures. New entrants must not only catch up with baseline functionalities but also invest heavily in innovation to remain competitive. Continuous R&D and updates are necessary to meet evolving enterprise demands, which can strain resources for companies without established funding or scale advantages.

Key Player Profiles

Fractal Analytics Ltd.

Fractal (formerly Fractal Analytics) is an enterprise Al company, established in 2000, with headquarters in Mumbai and New York. The company provides Al, engineering, and design-focused solutions to support decision-making for Fortune 500 clients. Its offerings include scalable, automated, data-driven platforms that aim to translate insights into actionable outcomes. Fractal serves multiple industries, including CPG, healthcare, financial services, retail, technology, and life sciences. The company has developed products such as Asper.ai, Flyfish, and Qure.ai. As of mid-2025, Fractal operates across 17 global locations with a workforce of several thousand employees and maintains technology partnerships with AWS, alongside capabilities in generative Al.

Products & Service offerings:

- Cogentiq Platform
- Cogentiq Modules
- Iqigai: GenAl powered recruiting platform
- Kalaido.ai: Text to image generator
- GenAl Accelerators & AIDE

Services:

- Al Strategy & Scalable Implementation
- Engineering & GenAl Infrastructure
- Financial Services Accelerators

Key Customer Segments Served



- Consumer Packaged Goods (CPG): Including packaged food & beverages, beauty & hair care, home care, personal & fabric care, and health & wellness.
- **Retail**: Covering merchandising, customer analytics, supply chain, store operations, retail media networks, and competitive intelligence solutions.
- **Financial Services**: Including retail banking, commercial banking, wealth management, payments, and capital markets.
- Insurance: With tailored Al-driven risk minimization and security-enhancing offerings.
- **Healthcare & Life Sciences**: Serving organizations focused on precision care and operational efficiency.

Key Strengths:

- **Investment in Innovation**: The company reinvests 5% of its revenue into R&D, operates multiple global Al innovation labs, and collaborates with leading academic institutions.
- Recognition & Expertise: Fractal is named a Leader in Customer Analytics by Forrester (Q2 2025)
 and holds the AWS Generative Al Competency, underscoring its technical proficiency in generative Al,
 prompt engineering, and model customization.
- Unique Neuroscience-Based Approach: Its methodology blends neuroscience-informed customer insights, engineering, and design thinking to bridge the gap between insight and action, further supported by partnerships with Al leaders like OpenAl and Nvidia.

SG Analytics Private Limited

SG Analytics, now part of Straive, is a global data, analytics, and Al consulting firm that helps organizations convert raw data into actionable, research-based insights and implement Al solutions at scale. The company employs over 1,600 professionals across multiple locations and serves industries including banking and financial services, capital markets, technology, media, telecom, healthcare, manufacturing, and architecture, engineering, and construction (AEC). Its service offerings include data activation, augmented analytics, decision intelligence, data products, and agentic Al workflows, supported by the Al Studio platform to facilitate Al-driven initiatives and business outcomes.

Products & Service offerings:

- Business Information Services (BIS)
- Data Solutions & Consulting
- Market Research & Insights
- Product Development Consulting Services
- Experience Design Services
- Clinical Trial Data Analysis Services
- ShastraX: Contextual Intelligence Framework for Scalable AI



Al-enabled Quality Assurance (QA) Testing Services

Key Customer Segments Served:

- BFSI (Banking, Financial Services & Insurance), Capital Markets, and Private Equity
- Technology, Media & Telecom (TMT) and High-Tech Corporates
- Healthcare, Manufacturing, and Quick-Service Restaurants (QSR)
- Indian Enterprise Conglomerates
- Market Research Clients
- Data-Intensive Organizations (Fintech, Banks, Corporates, Asset Managers, Exchanges)

Key Strengths:

Award-Winning Learning and Development: Recognized with the Excellence in Learning & Development award at the Global Awards for Leadership and Excellence in 2025, highlighting their proprietary skill matrix and structured programs that foster both technical and behavioural growth.

Consistently Rated a Great Place to Work: Certified as a Great Place to Work for four consecutive years (2021–2024), reflecting a strong, people-first culture grounded in trust, inclusivity, and accountability.

Strong Industry Recognition & Certifications: Acknowledged in multiple external benchmarks such as Everest Group's PEAK Matrix and AIM Research's PeMa Quadrants as a seasoned player in AI, MLOps, and analytics services. Plus, they've earned certifications like EcoVadis (Gold), SOC 2 Type 1, ISO/IEC 27001, and GDPR compliance.

India-Centric Delivery Capabilities: Possesses deep expertise in catering to Indian enterprise needs including regulatory alignment, local operational realities, scalable Al deployment via Al Studio, and cost-sensitive engagement models.

Datatobiz Pvt. Ltd.

Founded in 2018 DataToBiz is a data science company headquartered in Punjab, India, with regional offices in the U.S., Gaborone (Botswana), and Al Jubail (Saudi Arabia). The company provides services across data engineering, artificial intelligence, natural language processing, business intelligence, and digital transformation. DataToBiz serves a range of clients, including SMBs, enterprises, and global organizations, offering engagement models such as managed analytics, Al product development, staff/resource augmentation, Global Capability Center (GCC) setups, and Build-Operate-Transfer (BOT) arrangements.

Product & Service Offerings:

- Products: PrepAI, Tally BI, Marketing Cockpit, Virtual Try On Platform, HirelakeAI,
 SensiblyAI, DataToBiz CV Platform
- > Services: Data Engineering, Azure, AWS, GCP, Big Data, Data Warehousing, Data Pipeline



> Business Intelligence: PowerBI, Tableau

Key Customer Segments Served: Manufacturing, Healthcare, Retail, Transportation & Logistics, Hospitality, Media & Communications, E- commerce, IT, Energy, FMCG (Fast-Moving Consumer Goods), Surveillance, Wellness and Nutrition, Real Estate, Human Resources, Insurance

Key Strengths:

- ➤ Diverse Technology Expertise- Offers services across data engineering (Azure, AWS, GCP, Big Data, data pipelines), AI & machine learning (NLP, vision analytics, LLM), and business intelligence (Power BI, Tableau).
- Flexible Engagement Models- Supports varied collaboration frameworks including resource augmentation, managed analytics, Al product development, GCC (Global Capability Center), and BOT (Build-Operate-Transfer).
- > **Broad Use-Case Coverage-** Addresses a wide range of applications such as digital transformation, insurance AI, e-commerce analytics, manufacturing analytics, HR analytics, and procurement analytics.
- Product Offerings- Provides several in-house products like PrepAl, Marketing Cockpit, HireLake Al, and a CV platform built on computer vision capabilities.
- > Consulting in Data Science, AI, and BI- Identifies itself as a firm in data science, AI, and BI that caters to startups, SMBs, and enterprises seeking sustainable growth guidance

AION-TECH Solutions Ltd.

Company Overview

AION-TECH Solutions Ltd. (formerly Goldstone Technologies), established in 1994, is a publicly listed Indian technology and consulting firm headquartered in Hyderabad. It specializes in full-stack Business Intelligence, Data Analytics, and IT services. With operations spanning cities such as Hyderabad, Noida, Gurgaon, and Bengaluru, AION-TECH enables organizations to transform raw data into actionable insights using tools like AI, NLP, cloud and automation. Its mission is to drive data-driven innovation, enhance decision-making, and deliver operational efficiency across industries.

Products / Services Offered

Here are the main services / offerings of AIONTECH Solutions:

- BI (Business Intelligence) & Analytics
- Cloud Services
- Sustainability Services
- Data Science & Analytics
- E.g., "Tableau Support as a Service (TSaaS)"



- Data Lifecycle Diagnostics
- Digital Automation
- Al & NLP (Natural Language Processing) services
- Also they have a learning/training arm: Aiontech Akademia

Key Customer Segments Served

AIONTECH targets a range of industries. Their clients include sectors such as:

- BFSI (Banking, Financial Services & Insurance)
- Automotive & Manufacturing
- Telecom, Media & Entertainment
- Retail & E-Commerce
- High Tech
- Travel & Hospitality
- Healthcare

They emphasize business intelligence users, analytics teams, enterprises needing cloud, Al/NLP integration, automation, etc.

Key Strengths

- Partnerships with leading technology platforms: They are partners with tools/services like Tableau, Alteryx, Fivetran, Snowflake, AWS, Salesforce, Zoom, etc.
- Comprehensive suite of services: From data ingestion to diagnostics, analytics, AI/NLP, automation—offers end-to-end capabilities.
- Training and talent development via "Akademia": They provide capacity building, training services so clients aren't just buying tools but also gaining capability.
- Presence in multiple major Indian tech hubs: Hyderabad, Bangalore, Gurgaon, Noida etc.—helps with reach and talent.
- Strong emphasis on data-driven transformation: Their messaging focuses on turning insights into action, innovation, empowering clients with advanced analytics and Al.
- Client satisfaction / proof points: Testimonials indicate proactive service, technical expertise, success in BI journeys, and satisfaction in training engagements.



Latent View Analytics Ltd.

Latent View Analytics Ltd., founded in 2006 and headquartered in Chennai, India, is a global data analytics and digital consulting firm that empowers enterprises to become truly data-driven. With expertise spanning data engineering, data science, and advanced analytics, the company helps organizations unlock insights, solve complex problems, and drive growth.

By combining technical depth with domain expertise across customer, HR, financial, marketing, and supply chain analytics, Latent View delivers end-to-end solutions that transform data into business outcomes. The company also invests in GenAl-powered innovations and collaborates with leading technology partners like Microsoft Azure, AWS, Google, Databricks, and Snowflake to maximize value for its clients.

Products / Services Offered

Category	Offerings
Technical Expertise	Data Engineering Data Science Data Visualization
Domain Expertise	Customer Analytics
Advisory Services	Consulting & Analytics Roadmap • GenAl Readiness Assessments
Solutions (Flagship Tools)	• AccuPromo – Retail promotion optimization • Al Penpal – Personalized Al-driven email engagement • B2B Dynamo – B2B personalization at scale • ConnectedView – Supply chain visibility & efficiency • InsightLens – From dashboards to decision boards • LASER – GenAl-powered knowledge search • MatchView – Retail testing & optimization • MigrateMate – Secure cloud migration • MARKEE – Al-driven campaign workflow management • PRISM – Fraud prevention with reduced customer friction • OneCustomerView – Campaign personalization engine • Smart Innovation – Custom Al/analytics innovation

Partnerships

- Microsoft Azure, AWS, Google, Databricks, Snowflake, FiveTran
- IBM, Power BI, NVIDIA, Neo4j

Key Customer Segments Served

- Technology Companies
- Consumer Packaged Goods (CPG)
- Financial Services



- Retail & E-Commerce
- Industrials / Manufacturing

Key Strengths

- Comprehensive Analytics Expertise: Strong technical and domain knowledge covering end-to-end data lifecycle.
- Innovative Solutions Portfolio: Proprietary Al/GenAl tools (e.g., LASER, PRISM, MARKEE) enabling faster business transformation.
- Trusted Global Partnerships: Collaborations with top tech ecosystems (AWS, Azure, Google, Snowflake, NVIDIA).
- **Cross-Industry Impact**: Proven experience across technology, retail, CPG, finance, and industrial sectors.
- Advisory Leadership: Ability to design roadmaps, assess GenAl readiness, and provide strategic consulting.
- **Focus on Business Outcomes**: Data-driven solutions aligned with revenue growth, risk management, and customer experience.

Peer Financial Analysis:

		GenXAI Analytics Pvt. Ltd.			Fractal Analytics Ltd.			SG Analytics Pvt. Ltd.*	
Particular	Unit	As at end for Fiscal			As at end for Fiscal			As at end for Fiscal	
		Fiscal 2025	Fiscal 2024	Fiscal 2023	Fiscal 2025	Fiscal 2024	Fiscal 2023	Fiscal 2024	Fiscal 2023
Total Revenue	₹ in Crores	26.22	24.21	16.61	1,490.50	1,197.20	1,052.40	250.43	217.66
Revenue From Operations	₹ in Crores	25.83	24.07	16.57	1,436.60	1,159.00	994.10	244.38	216.82
Other Income	₹ in Crores	0.39	0.14	0.04	53.90	38.20	58.30	6.05	0.85
EBITDA	₹ in Crores	10.20	4.18	1.54	186.20	139.00	-24.30	52.51	54.88
EBITDA Margin	in %	39.49%	17.38%	9.28%	12.96%	11.99%	-2.44%	21.49%	25.31%
PAT	₹ in Crores	6.68	2.80	0.96	132.10	121.80	-31.10	42.04	41.59
PAT Margin	in %	25.85%	11.63%	5.80%	9.20%	10.51%	-3.13%	17.20%	19.18%
Operating Cash Flow	₹ in Crores	NA	NA	NA	38.10	151.60	-123.20	37.71	57.99
Net Worth	₹ in Crores	11.44	4.77	1.97	1,946.70	1,688.80	1,456.10	125.81	112.98
Debt Equity Ratio	In Times	0.63	0.86	0.42	0.00	0.00	0.00	0.21	0.24
Return on Equity	in %	58.36%	58.74%	48.86%	6.79%	7.21%	-2.14%	33.41%	36.82%
Return on Capital Employed	in %	54.45%	44.93%	49.09%	9.66%	7.77%	-0.77%	36.66%	38.34%
Return on Assets	in %	30.86%	24.96%	14.37%	5.71%	6.21%	-1.85%	23.05%	24.52%
Interest Coverage Ratio	In Times	16.65	16.09	21.17	11.57	48.95	-17.38	22.17	48.99
Key Operating Cost	₹ in Crores	16.09	20.22	15.24	1,292.60	1,114.30	1,026.80	194.57	163.88

 $^{^{*}}$ Financial data for SG Analytics Pvt Ltd and Datatobiz Pvt Ltd were available only for FY 2023 and FY 2024

		Datatobiz Pvt. Ltd.*		AION-Tech Solutions Ltd.			LatentView Analytics Limited		
Particular Unit	Unit	As at end for Fiscal		As at end for Fiscal			As at end for Fiscal		
		Fiscal 2024	Fiscal 2023	Fiscal 2025	Fiscal 2024	Fiscal 2023	Fiscal 2025	Fiscal 2024	Fiscal 2023
Total Revenue	₹ in Crores	5.48	5.36	90.20	80.24	76.00	407.92	360.73	321.17
Revenue From Operations	₹ in Crores	5.48	5.36	86.81	79.01	74.86	347.13	291.52	263.95
Other Income	₹ in Crores	0.00	0.00	3.40	1.23	1.14	60.80	69.22	57.22
EBITDA	₹ in Crores	0.05	0.45	17.52	3.80	3.76	78.22	95.85	102.38
EBITDA Margin	in %	0.90%	8.37%	20.18%	4.80%	5.02%	22.53%	32.88%	38.79%
PAT	₹ in Crores	-0.04	0.29	14.81	2.34	2.65	82.58	113.27	117.24
PAT Margin	in %	-0.71%	5.44%	17.06%	2.96%	3.54%	23.79%	38.85%	44.42%
Operating Cash Flow	₹ in Crores	NA	NA	-16.05	2.57	2.20	99.74	27.24	70.81
Net Worth	₹ in Crores	0.63	0.65	81.90	59.98	57.62	1,192.75	1,101.92	983.70
Debt Equity Ratio	In Times	0.00	0.00	0.03	0.06	0.00	0.00	0.00	0.00
Return on Equity	in %	-6.13%	44.54%	18.09%	3.90%	4.60%	6.92%	10.28%	11.92%
Return on Capital Employed	in %	-1.28%	61.19%	22.10%	5.40%	7.19%	10.83%	14.25%	15.47%
Return on Assets	in %	-4.05%	24.83%	13.04%	2.56%	3.39%	6.54%	9.91%	11.56%
Interest Coverage Ratio	In Times	-0.36	72.34	20.80	3.86	8.96	31.25	28.89	36.33
Key Operating Cost	₹ in Crores	5.49	4.95	87.22	76.81	71.85	278.69	203.75	168.99



Telecom Infrastructure

Overview

India's Telecom sector has emerged as the world's second largest telecommunication market and has experienced massive growth and expansion. It approximately contributes to about 6% to the country's GDP. The sector has grown at a compounded annual rate of 9.4% since 2020 to 2025. Key factors driving the growth are friendly regulation policies, low price, expanded accessibility of network and connectivity.

The sectoral growth relies on the strong and state-of art infrastructure which enables better connectivity, bridging the digital divide across the geography of the nation. Thus contributing to an unhindering progress of the telecom sector.

The industry is classified into four broad segments, based on the type of service provided and contribution to the overall industry. These are telecom service providers who form the crux of the industry as well as its most visible face. Other segments include infrastructure (active & passive), equipments (handsets and networking equipments), and network services.

Telecom Infrastructure segment became regulated since the year 2000 with the beginning of registrations or applications for IP-I. Prior to which the sector had numerous small entities putting up towers and other docile infrastructure independently without any partaking opportunities. After 2005, there was a change , bringing in individual entities which were responsible for the construction and maintenance of tower and other related infrastructure for sharing the facilities to provide cellular services. The trend of sharing infrastructure between players became quite functional as it happened in cost effective and fair manner.

Current Scenario

As on 30th June 2025, the total subscriber base in Indian telecom industry stood at nearly 1218.36 million with nearly 98% being wireless subscribers. Private sector dominates the industry, accounting for nearly 90% of the total subscribers with rest spread among public sector units (PSU). The industry which generates an annual revenue in the range of INR 37.21 billion ended the year 2024-2025

Indian Telecom Sector: Key Statistics	
Total Subscriber Base	1218.36 million
Share of Wireless Subscribers	98%
Urban Subscribers	679.86 million
Rural Subscribers	538.50 million
Tele-Density	85.36 %



Urban Tele-Density	133.56%
Rural Tele-Density	59.43%

Telecom infrastructure represents the physical hardware that enables smooth functioning of today's telecommunication services, including mobile service as well as internet & other digital services. These include telephone wires, cables (including undersea cables), satellites, telecom towers, and satellites. Based on its position within the telecom ecosystem, telecom infrastructure is broadly divided into Active, Passive and Backhaul. Based on its utility and its role in telecom ecosystem, telecom infrastructure is segmented into active and passive.

- Active: These include spectrum, switches, antenna, receivers, & microwave equipment, all of which form the front end of telecom ecosystem.
- **Passive:** These include telecom towers, power supply ecosystem (including battery, generators, and associated equipment), and all hardware required to maintain tower.

Considering the cost involved in setting up an end-to-end telecom infrastructure, a sharing business model has evolved wherein multiple operators comes together to share a common hardware. This shared model is mostly prevalent in passive infrastructure while active and backhaul are kept independent. Passive telecom infrastructure sharing first started in the US and Europe and spread to other markets. Indian telecom industry too has adopted this model, with tower sharing the most common practice.

Telecom Infrastructure Scenario in India: Telecom Towers

Telecom tower from an integral part of passive telecom network, as it hosts the antennas and other equipments required to transmit the signal.

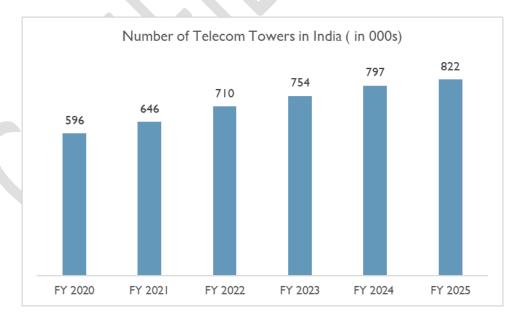
Key types of telecom towers	
Cell on Wheels (COW)	COW also known as a site on wheels is a portable cell tower that is easily deployed and retrieved. It includes a cellular antenna, transceiver device, battery, and other necessary equipment required to provide a stable wireless mobile network as needed. All of these platforms are mounted over vehicles such as trucks or trailers, which makes the entire setup portable.
Ground Based Mast & Tower	The ground-based towers are installed on the ground with a suitable foundation. The towers have a height of 30-200m; the height of a ground-based telecom tower is 40m to 60 m. These towers can support up to 12-panel antennas and up to three 0.6m diameter microwave solid dish antennas. These towers have a competitively



	higher load-bearing capacity. The terms "mast" and "tower" are often
	used interchangeably. However, in structural engineering terms, a
	tower is a self-supporting or cantilevered structure, while a mast is
	held up by stays.
Roof Top Tower & Pole	The rooftop towers are installed above the roof of a high-rise building.
	Above the roof, with raised columns and tie beams, the towers are
	installed. The height of the tower can vary from 9 to 30 m. The service
	provider evaluates the tower erection and the height to decide on the
	number of antennas that can be fixed with the tower.
	In urban area where there is a serious space crunch, due to which
	installation of ground-based towers can be a tough challenge. Hence,
	installing Roof Top Poles, is an ideal choice. Roof Top Poles are
	relatively lightweight and required lesser space. Roof Top Poles are
	meant to cater to the small antenna loads, and also help increase the
	deployments on weak building structures.

Telecom Tower Network in India

The rapid growth in subscriber base – which zoomed from less than 40 million to nearly 1.2 billion in two decades – has necessitated an equally strong growth in telecom towers. The total telecom tower base in India stood at nearly 816,763 while the number of Base Transceiver Station (BTS)¹ was nearly 3.04 million.



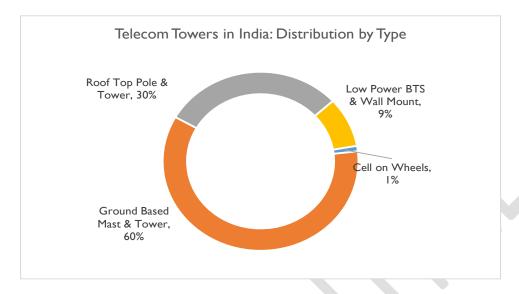
Source: Department of Telecom

1

¹ BTS is a network equipment that is mounted in the telecom tower and facilitates connectivity between handset / mobile and the cellular network. Depending on the technology the type of BTS deployed in India are BTS -2G, BTS – 3G, and BTS-4G LTE.

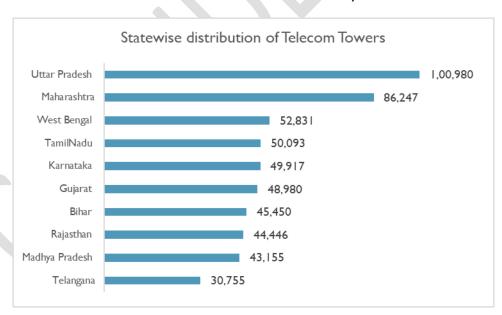


Ground based mast & tower dominates the Indian telecom tower sector, accounting for nearly 60% of total installed tower base. Roof top pole & tower is the second largest segment, accounting for nearly 30% of the total. Remaining 10% is made up of cell on wheels (COW), Low Power BTS (LPBTS) and wall mount towers.



Source: Department of Telecom

Nearly 68% of the installed towers is concentrated among top 10 states with Uttar Pradesh and Maharashtra being the top two states in terms of tower count.

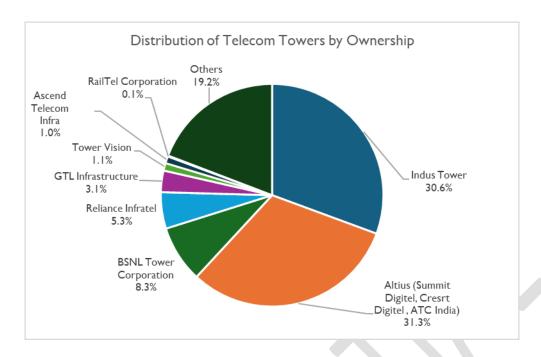


Distribution table of Telecom towers by state

Source: Department of Telecom, As on end of March 2025

Major Players

Telecom tower market in India is concentrated among three major players, who together accounted for nearly 58% of the total base of installed towers. Nearly 80% of the towers erected is concentrated among top ten players.



.A major player Altius networks has emerged with the recent merger of American Tower Corporations Indian entity, Summit Digitel and Crest Digitel under the management of Brookfield Asset Management .The other major stake holders include BSNL Tower Corporation ,Reliance Infratel and GTL Infrastructure. The share of these players is expected to increase given more emphasis on implementation at of 5G at a faster pace and anticipated launch of 6G services.

Key Demand Drivers

Growth in Internet Subscriber Base & Usage Pattern

India continued to see a meteoric rise in internet penetration, as it continued its journey to become one of the fastest growing digital communication markets in the world. By December 2020, the total number of internet subscribers in India reached 795.2 million, from 331.7 million in 2015 due to COVID 19 scenario. Mobile internet connections continued its dominance, accounting for nearly 97% of the total subscribers. Internet penetration in India has grown from 26.19 % in 2015 to 55.3% in 2025.

India is leading in the world in the use of wireless internet as it offers connectivity at an affordable price. Globally, the internet user is growing at annual rate of 2-3%. The Government's JAM platform will transform the entire population base towards progress. With India expected to be the most populous country in less than a decade, the complexity and scale of data usage will also increase. The need for Smart Cities based on its liveability standards is pivotal to India's goals as a productive global leader

Data usage is set to surge further because of higher number of connected devices, immersive applications experience (AR/VR), smart home, IoT and enterprise use-cases, factory and public safety use cases and surging data consumption per unit. While mobile networks are constrained by spectrum availability and coverage issues, optical fibre has fewer restrictions.



This strong growth in telecom data usage puts pressure on telecom infrastructure. Capacity expansion and equipment modernization is essential to provide customers a seamless telecom service. To support such a strong user base, and their ever-increasing telecommunication needs there is a need for an equally strong telecommunication infrastructure backbone. The strong user base and growing data consumption have helped in transforming the telecom infrastructure market in India to a multi-billion-dollar industry

Technology Upgrades: Roll out of 5G and proposed 6G

In India, a significant number of 4G sites need to be added to provide the adequate quality and coverage as there are several gaps in terms of network coverage across the country. Similarly, 5G networks have just started coming up in India. With higher competition among telecom operators, they are expected to invest in quality data networks and drive tower industry growth.

The 4G network has grown stronger with additional towers being erected. Currently, 4G covers about 95% of population and is rapidly reaching rural areas with the support of BharatNet initiative of GOI. Since the rollout of 5G in October 2022, it has been available across 99.6 % of country with 0.25 billion users as on March 2025. Out of the 822218 towers as on February 2025, there are 4.74 lakh 5G towers. This has been the fastest rollout of 5G networks. BSNL has tried to strengthen the remote connectivity across the nation has announced that it would install another 100000 towers this year.

Emerging Demand Drivers

As the landscape matures, tower companies need to look beyond traditional business models and capitalize on opportunities in adjacent areas such as data traffic offloading and need for end-to-end managed services to the telecom player while keeping their attention to the new business opportunities that can disrupt the current business model like IBS, small cell solutions, fiberized backhaul network and Wi-Fi solutions. Moreover, with the 'Digital India' campaign increasing the pool of opportunities, there are plenty of growth avenues in front of the Indian tower industry.

Going forward, the telecom infrastructure will have far more important role to play as the emerging technology would require tower densification and fabrication to support new applications like enhanced broadband, IoT applications, Artificial Intelligence (AI), Visual Reality (VR), Artificial Reality (AR) and block chain etc. over 5G. The existing Infrastructure would have to be complimented through small cell, Wi-Fi, and In building solutions. Thus, the role of telecom infrastructure providers will continue to be important and critical.

Infrastructure funds, pension funds and government funds are assigning high valuation multiples to telecommunications infrastructure assets such as mobile towers, data centres, submarine cable and fibre infrastructure. A new wave of M&A, network-sharing deals over the next two to three 3 years will continue to consolidate around the large mobile operators, Bharti Airtel, Vodafone Idea and Reliance Jio.

Government Initiatives

In order to support the domestic production and export of telecom and networking equipment, had announced the PLI scheme under the vision of Atmanirbhar Bharat. As per the scheme, the companies either MSME or non-MSME who meet certain criteria are provided with a financial expenditure of Rs 12195 crore. Preference is given to MSME companies is a separate allocation of funds (Rs 2500 crore) for it. The companies manufacturing products under four categories: Core transmission equipment, 4G/5G, Next Generation RAN and Wireless equipment, Access & CPE, IoT Access devices, and Other Wireless equipment, and Enterprise equipment: Switch and Router.

These domestic companies selected under the scheme are awarded incentives based on incremental sales of eligible products manufactured within the country. The scheme is implemented with the help of government assigned agency i.e SIDBI (Small Industries Development Bank of India) and the scheme would support these incentives for the five year duration (i.e from 2021-2026).

PM Wani (Prime Minister Wi-Fi Access Network Interface)

This government initiative was launched in December 2020 with an intention to increase public internet access through a large scale deployment of wi-fi hotspots. This project is helping narrow the digital divide between urban and rural (and remote areas). The project empowers the local entities which provide internet access to users in the respective regions. These entities are called Public Data Offices. The PDOs are managed by Public Data Office Aggregators who look into billing, registration and handling network connectivity. There is also a central registry which supervises the PDOS, PDOAs and app providers.

Telecommunications Bill 2022

The Draft Telecommunications bill was introduced in 2022 post consultations and modifications with experts and key stakeholders. It was worked on to regulate the telecom sector and replace older acts: i.e The Indian Telegraph Act 1885, the Indian Wireless Telegraphy Act ,1933 and the Telegraph Wires (Unlawful Possession) act 1950. The bill covered regulation of telecom service and networks along with managing OTT services. The bill focussed on all the stakeholders including the consumers who are looked out for by including issues on the Do not Disturb Register and also ensure the importance of cybersecurity, national security, and public safety concerns. This draft bill went through few modifications which evolved into the Telecommunication Bill, 2023. It was later introduced in Lok Sabha and it was passed on December 20, 2023. It was an historic moment as the bill replaced the 138 year old Telegraph Act. After passing the bill in both the houses and Presidential assent on Dec 24, 2023 and was passed ac Telecommunication Act 2023.

Expected Growth in Telecom Tower Infrastructure

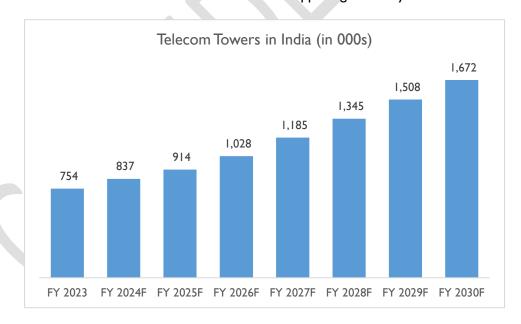
Steep drop in mobile tariffs and availability of affordable smart phones have helped in driving up the mobile subscriber numbers in India, elevating it to one of the biggest telecom markets in the world (in terms of mobile subscriber numbers). On the back of this, the tele density in India has increased manifold to reach approximately 83% as of September 2022. Although this is on the higher side (compared to many developing economies), its skewed in favour of urban markets.



As of June 2025, urban tele-density in India stood at nearly 131.45% while rural was only 59%. This wide variation shows the disparity in mobile connectivity, with penetration level still low in rural markets. Apart from number of subscribers, the coverage of 4G and 5G network is lower in rural and smaller towns as compared to metros and tier I towns.

The coming years would be a strong push by telecom service providers to increase their coverage in rural areas. The already in focus rural and remote area markets would achieve about 100 % of 4G network, and 5G coverage in the following future gradually. To make this push to rural markets, there is a need to broaden the telecom tower infrastructure in those markets. Subsequently, the telecom tower based would witness an organic growth. At present approximately 50 to 60 thousand telecom towers are added on an annual basis and even with Central governments pushing the growth by sanctioning approx. 100000 annually the telecom tower network players are expecting good progress. Going ahead, the net addition is expected to be slightly higher than that as India tries to extend the tower coverage as well as bridge the gap in tower density.

At present the tower density (number of towers per 1,000 people) in India is near 0.42 which is well below global standards. D&B is estimating a gradual and conservative build up in telecom towers, with tower density reaching nearly 1.0 to 1.1 by the end of this decade. Based on this, the total telecom tower base in India is expected to reach nearly 1,670 thousand (1.67 million) by FY 2030. This would translate into a cumulative addition of nearly 900,000 towers between FY 2023 and 2030, nearly 130,000 new towers per annum which would be more than double of the annual addition that is happening currently.



D&B Analysis and Estimates



Internet of Things (IoT)

Internet of Things (IoT) stands for the network of connected devices by technology which enables exchange of real time data between devices and cloud. The system also enables communication between devices and typically consists of three components i.e smart devices, IoT application and a graphical user interface.

The IoT is well supported by evolving and advancements in technologies like AI,5G and edge computing. Utilizing the technology many business applications such as smart solutions for connected homes, Smart building, smart cities, autonomous cars, smart factories, wireless sensors etc

Adopting IoT into businesses offers numerous benefits:

Increase in efficiency

With unified collaboration of data between devices, which enables programmed workflow and thus increases functional efficiency. This also improves the process efficiency as the devices give out information which in turn provides insights as to recognizing inadequacies. Based on the insights, the technology can suggest improving resources distribution accordingly.

Better and informed decision making

Given that the data collected between the devices which are real rather than recorded by humans or other means, it can be much reliable in gathering insights to rectify the process and make decisions modifying process to get desired or best output.

Cost Savings

The reduction in cost could make a huge difference lowering the business cost. Along with reducing cost of the product, it could help track the product or service for any breakdown thus prevent the charges

Applications of IoT in various sectors:

Currently the IoT applications have been utilized in few known sectors, but its potential remains untapped to many other sectors. In few cases, the application has been in nascent or in pilot study phases and only in few geographies. Major sectors harnessing the power of IoT are:

Industrial Automation:

Industrial Internet of Things, (IIoT) has been driven by automation since the past few years. Industrial devices like sensors, connectors, actuators, IoT gateways, interfaces, motion controllers, etc installed at manufacturing areas share real time information on the functioning condition remotely. This is beneficial in accessing or controlling the systems to function at desired pace and efficiency. IoT when connected with computer automation controls helps update industrial systems. At Industrial level currently, there are many layers of devices and systems setup to implement IoT solution. The usual layer of at the premises consists of actuators, robotic components share the data to local process control units monitored by Plant manager. Many such units report to the supervisory softwares such as SCADA monitored by central operation or



automation personnel. These systems can be thus regularly checked physically for other errors or so based on the data transmitted.

IIOT offers the advantage of being able to step up production based on the efficiency of the plant to achieve higher production thus increasing more probability of sales and generating huge revenue. Usually human workforce is not very reliable when ramping up the production owing to the their limited efficiencies.

Another value addition to industries is increased operation time, which enables functioning more hours and thus surplus production when compared to the usual schedule with breaks. The IoT application in industrial venue is aboon in complying with the regulations as it eliminates any errors or discrepancies with human interaction in the process.

Supply Chain and Logistics:

The sector utilize integration of physical devices within the logistics industry that communicate and exchange data. IoT devices such as sensors are placed on vehicles, shipments or shipping containers which in turn would provide real time data on where and at which stage of transport it would be. Similary in supply chain it would inform the inventory managers about the stock available and by when it could arrive. The implementation of IoT has offered numerous advantages such as better operational efficiency, enhanced customer satisfaction and improved revenue. It also benefits logistics company by using shorter and faster routes by optimizing the data, tracking inventory in better manner thus saving on fuel expenses.

Healthcare

Numerous benefits are awarded with the use of IoT technology in all aspects of healthcare. Patients, doctors, hospitals, insurance companies and other stakeholders are helped by the implementation of its solutions. It is beneficial in delivering seamless and remote tracking of health vitals which keeps both the physicians and patients informed.

Advantages offered by IoT to various participants in the healthcare :

Patients: Wearable devices which are wirelessly connected measure health parameters such as heart rate, blood pressure, blood glucose levels,etc remotely and helps them get individual attention. This can help in assessing patient care, modify medications and remind preventive healthcare tests and visits to physicians.

Physicians: Physicians with help of IoT can keep track of patients' health better and constantly. As mentioned earlier with either progressive or digressive health paramaeters, the treatment can be modified. The patients can be thus notified and enquired regarding sudden changes and schedule preventive checkups etc.

Hospitals: Hospitals and especially Emergency & outpatient departments are major sources of infections. Scheduling visits and remote care helps hospitals to avoid more infections spreading. Managing hospital systems i.e medical technology equipments such as in the lab, ventilation and other monitoring



equipments is made much easier with help of sensors lodged in these devices, predicting preventive maintenance.

Health Insurance Companies: Insurance companies can utilize the data captured through health monitoring wearables ordevices for their underwriting and claims operations. This will help them identifying fraud claims and prospects for underwriting. Global scenario with IoT applications in agriculture

As the worldwide population is increasing rapidly, there is a need to scale up food production thus the pressure on agriculture sector to produce huge number of crops with the best yield. The agriculture sector as predicted by FAO, would need to be increase production by 70 percent to cater about 9.1 billion population by 2050. However with adoption of technology and farm equipment, this demand is almost being met to some extent. This is where IoT helps farmers ramp up the cultivation and thus production. IoT devices connected to farm equipment, soil, water source are supporting smart cultivation with optimized resources.

The IoT devices though available have been utilized majorly in Pilot studies across the Americas, Europe and few Middle-Eastern Countries. The major application of IoT includes precision farming, Automated Irrigation, Environmental Monitoring, Crop Monitoring etc.

The major examples found were in the UK, Isreal, Columbia, the US .Few products such as The CropX Sensor, Tevatronic in Isreal are already helping to asses the crop requirement based on the inputs from sensors in the soil to automate irrigation and fertilization.

In the UK, sensors from Libelium Comunicaciones Distribuidas S.L have been implemented in the farms run by University of Leeds .Through this project the sensors and the equipment installed enables farmer to measure weather, soil and other parameter affecting the crops.

These pilot projects have brought about more efficient results, as they were affordable and easy to install and run.

IoT in Indian Agriculture scenario

Indian Agriculture sector is one of the few largest in the world. It contributes to about 18% to India's GDP and supports about 42-43% of population's livelihood. Other than contributing to the GDP it supports the related sectors such as food processing and exports. There is a lot of demand to support the food demand created by rapidly increasing population.

IoT application in agriculture sector is at a very nascent stage in India. The agriculture sector has been open to many startups and corporate which are providing agro solution updating information and educating farmers with soil, crops and other conditions of crops. The Government has already been prevalent doing this offline and through Kisan Suvidha App. In the private sector JioKrishi, Bharat Agri, CropIn these firms are providing app based information on the conditions such as weather, However there are few start-ups and medium sized firms which have developed product based IoT solutions. GramworkX for instance is a Bangalore-based startup which has developed an IoT devices which help in precision farming, powered through renewable energy source (i.e Solar). These solutions are tailored for indoor and outdoor type of cultivation. They also



have product called GMC 100 which is an GSM Internet based IoT pump controller handling the irrigation needs.

Fasal another startup develops sensors and sensor integrated product which check soil, weather 24X7 and inform the amount of care required for crops. They have various sensor based products as per the land parcel and type of cultivation. They have had success implementing and is being used in about 5 states in western and southern parts of India.

IoT applications in Dairy Sector

The dairy sector plays an important role in providing nourishment to the population and its growth is driven by rising incomes and urbanization etc. Milk production has been providing livelihoods to 150 million households. Though the production is increasing year on year, certain external factors such as trade policies, tariffs, labour shortages, fluctuating milk prices and others.

There was negligible growth in the milk production in the U.S , EU refion but however, India which os the largest producer of milk has had 5% increase since 2023 though it faced cattle disease outbreaks such as lumpy skin disease and sporadic droughts. India and China have contributed largely to the global market. The dairy sector was quite susceptible to the broader macroeconomics, climatic and geopolitical events. One of the examples was the supply chain vulnerabilities owing to the COVID-19 scenario and Ukraine war pandemic which affected the supply of dairy supplies across the EU .

Growth drivers in the sector include fortification of milk with essential nutrients. High protein, lactose free milk and flavoured milk.

IoT applications involved in this sector are currently limited to management of dairy animals and other resources. European countries such as Russia are moving towards smart dairy farming, but it also faces milk deficits.

ALAN-IT and Russian aggrotech company developed a dairy production management servive DPA (Dairy Production Analytics) when implemented the solution with help of feed manufacturer called Mustang, the production capacity increased by I8%. DPA system collects data from weather station, Libelium sensors, RFID tags, ERP system to an cloud based platform in farm. With help of data analytics tools such as Power I and Microsoft Azure, the farm managers were able to take better decision thus increasing production.

The Appleby creamery in UK utilized IoT applications to find out the varied temperature changes in the chiller and the amount of water used at the site of Lake District for the process of pasteurization. This helped them achieve the desired outputs and be more inquisitive in terms of utilizing the real time recorded by various sensors.

While the adoption of IoT in European countries is bringing changes, the same isn't true in India's dairy sector. Though India is the leading producer of milk in the world, StellApps ab Bangalore based Agro startup focused heavily on providing end-to-end solutions has been leveraging IoT, data analytics and machine learning to



improve dairy production, milk procurement and manage storage and supply of milk. IoT solution platform SmartMoo collects data through sensors embedded in milking systems, animal wearables, milk chilling equipment, and milk procurement peripherals. The data collected is communicated to the analytics platform to deliver insights on the dairy owner's mobile device, Such promising Agro Startups are provided a future to the Indian Dairy sector making it a consistent Global leader and exporter in future.



IT Staffing Industry

Staffing is the process of recruiting, evaluating, and hiring a workforce to fill vacant positions in the firms. During the past years, the Indian economy has witnessed robust growth backed by infrastructure development and substantial growth in sectors such as e-commerce, retail, FMCG, logistics, manufacturing, hospitality, tourism, aviation, energy, public administration, non-financial services, real estate, building, etc. Due to the ongoing growth in the above sectors, India has added 46.7 million workforces in FY 2024, making the total employment 643.4 million. Companies in the staffing industry, provide different types of staffing solutions to cater to the demands of their clients from a wide range of industries for recruiting, evaluating, and hiring staff for specific job roles. There are numerous staffing services to cater to numerous demands. One of the most growing spaces in staffing is flexi staffing in which employers can hire the workforce for temporary periods that can be long or short. The types of staffing are as follows.

IT Staffing

IT staffing is an outsourcing strategy, wherein the staffing service provider offers skilled employees to their clients (the IT firms) to achieve their business goals. IT staffing is the most efficient way of getting specialised and highly qualified staff on the long term as well as on a short-term basis at a considerably low cost.

Most IT companies do not have the required resources to keep and manage a bench strength of employees who can start working on new projects as and when they arrive. On top of it, searching and hiring specialised skilled staff on an immediate basis is a costly and time-consuming process. This is where IT staffing helps. It has a pool of specialised staff ready to be deployed when required by IT companies. This flexible workforce has huge potential which can lift the IT staffing market into a billion-dollar industry.

The IT staffing sector in India is currently driven by the demand for technically skilled professionals in Al/ML, Cybersecurity and analytics. Indian IT/ITes workforce are approximately 3.1 million ppl as per the recent publication by Indian Staffing Federation. About 5.5% of this workforce are taken as flexi staffing

Key staffing models

The current model in which the IT sector manages its staffing needs are as follows:

Temporary staffing: This type of staffing solution is usually preferred in Industry which has fluctuating staff needs such as logistics, healthcare, manufacturing and healthcare. It provides various benefits ranging from flexibility to increase or decrease the workforce count, non-long term costs.

Contract Staffing: Recruitment professionals from Staffing companies hired to recruit employees for shorter terms as per project needs. Instead of an in-house hiring staff, the costs of maintaining a department of people which hires and manages people, this model works for service based company and manufacturing sector.



Permanent Staffing: This model works in large organizations which hire workforce for a long term and permanent role. Permanent hiring ensures trusts and loyalty amongst the hires towards the organization. They absorb company's culture, monetary and non-monetary benefits and job security.

Flexi Staffing

Flexible staffing or flexi staffing is a dynamic model that allows business to adjust their workforce size and composition in response to varying requirements for specific projects. It integrates both temporary and contract staffing, offering enhanced flexibility. Temporary staffing under flexi staffing addresses short-term needs such as seasonal surges or urgent projects. Similarly, contract staffing provides workers for defined periods or projects, accommodating different contract lengths and scopes. Additionally, flexi staffing can involve outsourcing certain HR functions and leveraging external agencies to manage shifting staffing requirements. This method of hiring staff helps businesses remain agile, adapting quickly to changes in demand without the long-term commitments of permanent hires.

Temporary Staffing: Temporary staffing is also considered as flexi staffing or contract staffing. Temporary staffing refers to the short-term hiring of employees during a specific time. They are often assigned to work on projects or assignments of a client company. This solution is beneficial if there are special projects or when an organization experiences peak seasons. Due to its flexible nature in managing workforce needs, companies use temporary staffing to cover employees on leave. Companies don't incur long-term employment benefits or obligations, saving costs along the way.

Temp-to-hire: Starting with contract staffing, a staffing agency employee can work for a client for a trial period, during which the customer and the employee discuss the possibility of a long-term job arrangement. At the end of the trial period, typically 90 days or longer, the employer can decide if they want to make a long-term commitment with the employee or not.

Direct Hire: In this solution, the staffing agency is a recruitment partner that is on the lookout for a suitable candidate for the company. The agency will take most of the initial steps in the hiring process and the client is the one who makes the final call. This solution is suitable for organizations looking for candidates to fill open positions for an extended period.

Payrolling: Payrolling as a staffing solution engages an agency to manage payroll and administration for a certain number of workers. These workers may be temporary, rehired retirees, or even independent contractors. The agency typically handles tasks involving payroll processing, benefits, taxation, and more, allowing the company to concentrate on managing the worker's daily tasks without worrying about the burden of paperwork.

Flexi Staffing in India - Overview

According to the Indian Staffing Federation at present, there are nearly ~5.5 million flexi workers in India hired through contract or temporary staffing companies. The staffing companies ensure timely payout of salaries, and medical insurance to their contract workers. The average length of the contract has been rising



with more than 75% of the contract in 2023 over six months. Despite the growth, contract staffing or flexi staffing is about 1% of the total workforce compared to 2.2% in Europe and Asia Pacific. Flexi staffing is a growing trend in India that involves collaboration between workers, organizations, staffing agencies, Industry bodies, and the government to create formal employment opportunities with social security benefits. Key stakeholders involved in flexi staffing are as follows:

- Organization: Corporate or organisations across sectors like e-commerce, FMCG, logistics, and start-ups are using flexible staffing solutions to fulfil the changing needs.
- Flexi Workers: Individuals from a large segment of India's workforce, including gig workers, first-time job seekers, and those in the unorganized space.
- Staffing Agencies: These agencies work as mediators for organizations and flexi workers. They can handle all the steps for hiring flexi workers or they can collaborate with the client's human resources team. They formalize employment and offer benefits such as PF, ESIC, and paid leave.
- Government & Policy Makers: New labour codes of the Indian government aim to extend social security to gig and platform workers. Policymakers can regularize the Flexi staffing space with laws and legislation to protect Flexi workers.
- Industry Bodies: Industry bodies like the Indian Staffing Federation give trends and updates about the industry and engage with the policymakers to create a conducive environment for the flexi workers.

Key features of Flexi staffing

Flexi staffing has gained popularity due to its numerous benefits. Flexi staffing offers businesses a highly adaptable hiring solution, allowing them to smoothly adjust staffing levels in response to changing demands and requirements. Key features include cost efficiency by aligning labour costs with current needs, access to specialized skills temporarily, and reduced administrative burden. Flexi staffing provides a dynamic and responsive approach to workforce management. The key features of flexi staffing are as follows:

Cost advantage: Hiring temporary workers instead of permanent employees allows organisations to switch fixed costs to variable costs. Thereby minimising cost, as they have only the necessary number of employees on their roster and minimal bench. They save on hiring and training costs and reduced overtime for permanent employees.

Faster deployment: Staffing vendors have access to a vast candidate pool with varied skill sets, the latest tools for recruitment functions, and a larger team dedicated to talent hiring. It allows them to fulfil staffing requirements swiftly, efficiently, and effectively.

Flexibility: Flexi staffing permits organisations to increase or decrease employee strength corresponding to business requirements. It allows firms to be dynamic and bold in their business choices. Trying out an experimental product or service is less fraught with risk as it's easier to wrap up the project if it fails to deliver.



Competitive edge: A nimble team with the right skills is more effective than a cumbersome one. Especially in the tech industry, adding numbers does not necessarily mean an earlier resolution or project end-date. Hiring contingent workers who fit the project requirements is more likely to let the organisation be one-up on its competitors.

Specialist expertise: Some product development or project might require a specialist in a niche area on the team. Such experts usually are expensive resources. Moreover, their skill might not prove helpful for other ongoing projects or the ones in the pipeline. Additionally, these specialists would customarily be highly reluctant to switch or change to another field of expertise. A temporary hire is the best fit in such scenarios.

Complex projects: There are long-running projects with many highs and ebbs in the resource count according to the stage of the project. For example, the life cycle could consist of a small initial design team, a medium-sized development team, an extensive test team, and a small review team before the next iteration. Such projects are best done with a core team of permanent employees and an additional contingent unit that grows and shrinks as required.

Reduced administrative effort: Hiring a permanent employee entails more scrutiny and screening to ensure a culture fit, growth potential, and leadership skills than recruiting temporary workers. So, contract worker hiring is the way to go when a ramp-up is needed for a particular duration.

Reduced employee attrition: Employee burnout and stagnation are significant causes of attrition, especially for high-performing talent. Burnout can be avoided by bringing in temporary workers to ease the workload. An employee whose growth has stagnated can take on a change in role, while a contingent worker assumes the employee's previous responsibility. Economic downturns are a time of layoffs, and employees might quit if they get a more secure offer. Organisations can manage staff reductions by letting go of contingent workers and reassuring permanent employees about their job security.

On-the-job assessment: A temporary position can be offered to promising candidates to evaluate their performance on the job. This step ensures that only suitable candidates become permanent employees. It reduces attrition because the candidates get hands-on experience and can decide if the job interests them and whether they fit the organisation.

Whereas employment in IT staffing contracted by 4.4% during the fiscal year, Earlier in FY2023, the IT staffing had contracted by 7.7%. IT staffing industry witnessed a gradual recovery in demand impact coming from geopolitical scenario developing across the world including US markets, Russia- Ukraine war, global financial markets. The impact comes with clarity that companies are recovering in their demands after right sizing capacity in past 2 years. The companies are focussed towards enhancing productivity, in order to address the market pressures.

According to data provided by Layoffs.fyi — a website that has been tracking layoffs in the tech industry since the beginning of the Covid-19 outbreak — around 412 tech organizations have laid off nearly 134061



individuals globally in 2024. In India nearly 98,834 tech employees laid off from 330 companies in the first half of 2024. Major companies like Apple, Google and Meta are among the 333 companies that have had job cuts.

Key Growth Drivers

With the rapid integration of technology across all sectors, the demand for highly skilled workforce, which can be hired immediately for any specific project, has also been increasing. India is steadily catching up with the developed countries on increasing preference for flexi workers or formal contractual workers across all industries. The Annual Survey of Industries (ASI) reported that the share of contract workers in manufacturing has been increasing, with 28.3% of organized factories surveyed employing contract workers in FY 2012, which increased to 98.4% in FY 2020. This substantial increase shows the preference of businesses for flexi staffing. The key demand drivers of flexi staff are as follows:

Presence of large pool of resources: India has a large pool of working-age resources which has supported the growth of the Staffing Solutions market. Increasing preference for gig working among millennial is also contributing to the growth of this market. Deploying temporary staff with the required skill set lowers the time and effort spent on training.

Manpower scalability and flexibility: Workplace dynamics and requirements have changed radically over the last decade. Today organizations need skilled manpower to deal with the dynamic and bespoke industry demand. Opting for temporary staffing enables companies to recruit employees based on the demand situation. This helps in making the end user company agile to the needs of the industry while making the company lean and the manpower compliance management easy. Moreover, many organizations have fluctuating demand for manpower depending on seasonality economic scenario etc. where temporary staffing can address the issues. Choosing temporary staff enables user organizations to convert their fixed costs into variable costs.

Rise of the Gig Economy: As the gig economy grows, characterized by short term, project-based or freelance work, there is an increasing reliance on temporary staffing solutions. This shift is primarily driven by businesses' need for greater flexibility and agility in managing their workforce. Companies are now able to hire skilled workers for specific task or project without committing to long term employment contracts, which help them manage costs more effectively. According to a Nasscom Aon report, India's gig workforce is projected to reach 23.5 million by 2030 up from 7 million in 2021. This means gig workers will constitute 4.1% of the total workforce in India by the 2029-30 financial year, compared to 1.5% in the 2021-22 fiscal year.

Ease of compliance: India has a complex regulatory compliance requirement with more than 1,500 Acts, 72,000+ compliances and 6,600+ filings across central and state governments. Labour laws have the maximum number of compliance and filing requirements. Various states have implemented their own rules leading to variations in submission dates, formats, regulatory authorities, and duty structures among others. Non-compliance can result in severe legal and financial implications for companies. With the adoption of flexi-

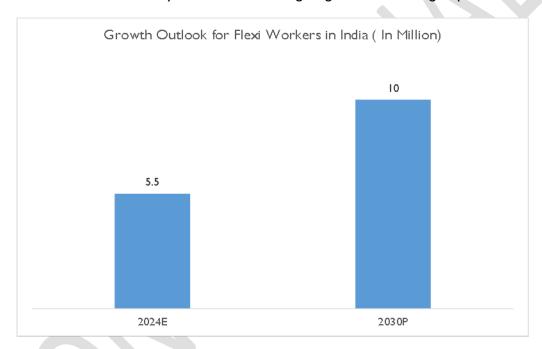


staffing or temporary staff, compliance related to labour laws become the responsibility of staffing companies and this significantly reduces the efforts required from clients.

Shorter Hiring Process: By rapidly providing pre-screened and qualified candidates, these services help companies quickly fill position and meet immediate need, which is a crucial for maintain operational efficiency.

Growth forecast

The demand for the flexi staffing model is expected to accelerate further in FY 2025. With improved communication technologies like 5G and advancements in IoT, more jobs will be location-independent, facilitating remote work, and this will, in turn, boost work-life balance and encourage skilled workers on breaks to explore going back to work, at least for specific gigs or part-time. Companies and contingent workers will connect more efficiently as more businesses go digital and online digital platforms evolve.



GenXAI Analytics Private Limited

Overview

Incorporated in 2007 and headquartered in Jaipur, Rajasthan, GenXAI Analytics Private Limited is a technology firm focused on delivering Al-driven enterprise solutions. The company offers a platform of intelligent tools including virtual assistants, prescriptive recommendation engines, and content-generation systems that integrate with existing IT infrastructures to support workflow optimization and operational efficiency. Its service offerings cover areas such as strategy & consulting, enterprise planning, data engineering, analytics, web and mobile development, and generative Al solutions.

With nearly three decades of experience in the technology services industry, the leadership at GenXAI Analytics has witnessed the evolution of India's digital landscape from its early stages. The company was founded on a customer-centric approach, shaped by years of engaging with clients to understand their challenges and deliver meaningful value. GenXAI represents the outcome of this collective expertise, trust, and commitment, blending advanced Next Gen AI solutions with a culture rooted in strong principles, continues to guide the company's vision of building a value-driven future in collaboration with its stakeholders.

The company serves multiple industries such as consumer goods, manufacturing, retail, technology, telecommunications, and BFSI using technologies like Anaplan, SAP, Power BI, and Microsoft Azure to tailor analytics and planning solutions. GenXAI also holds a Gold partnership with Anaplan in India, enabling it to align planning and process workflows across organizational departments. Its implementations support core functions such as finance, sales & marketing, supply chain, and workforce planning.

GenXAI maintains a presence across several regions, with offices located in Singapore, the United States (California and Texas), Malaysia (Kuala Lumpur), and multiple cities in India including Jaipur, Gurugram, Indore, Navi Mumbai, Mumbai, and Bengaluru. During FY 2024, it completed 2.3 million hours of training and awarded 78,000 digital credentials in areas spanning business, leadership, and technology.

Product & Service Offerings

Products:

- > **GenXAI- IP** (**Invoice Processing**): An intelligent invoice-processing tool designed to automate accounts payable operations and reduce manual errors.
- ➤ **GenXAI CT (Control Tower):** Provides a centralized visibility and predictive analytics engine for monitoring market behavior, spending trends, and supply chain dynamics.
- > Other products (e.g., MA, IA, WCA, IRM, PPA, FDM): These are slated for future release and encompass areas such as marketing analytics, incentive analytics, working capital management, intercompany reconciliation, predictive financial performance, and financial disclosure management.

Services:



- ➤ Enterprise Planning: Supports streamlined planning workflows across business areas, enabling integrated and coordinated planning processes.
- > Strategy & Consulting: Helps clients align their business strategies with data-driven planning and innovation initiatives.
- > Data Engineering: Focuses on transforming raw data into structured, actionable assets to support analytics and reporting.
- > Analytics: Delivers end-to-end analysis including Al-enhanced insights to foster informed decision-making across enterprises.
- ➤ Web Development and Design: Crafts tailored website and web application solutions with responsive designs, user-centric UX/UI, and full-stack implementation.
- ➤ **Mobile App Development:** Builds intuitive native and cross-platform apps for Android and iOS using technologies like Swift, Kotlin, Flutter, and React Native.
- ➤ **Generative AI:** Offers AI-powered capabilities such as virtual assistants, prescriptive recommendations, and content generation systems as part of an integrated platform.

Key Customer Segments Served

- Financial & Business Services (BFSI): GenXAI serves banks, insurance firms, and financial institutions with AI-powered solutions that strengthen risk management, ensure regulatory compliance, enhance system reliability, and drive digital transformation through intelligent automation and personalization.
- Manufacturing: The company aids manufacturers with Industry 4.0 aligned offerings such as manufacturing analytics, Al-based insights, predictive maintenance, production scheduling optimization, and enhanced process visibility across the plant floor.
- Consumer Goods & Retail: For consumer products and retail businesses, GenXAI delivers solutions that optimize inventory, synchronize demand and supply planning, support omnichannel strategies, merchandise planning, and enable data-driven decision-making to boost efficiency and customer satisfaction.
- Media & Telecommunications: The firm customizes web development and design services, including mobile-responsive applications, e-commerce platforms, and intranet systems, specifically tailored for clients in the media, telecommunications, education, healthcare, retail, and banking & finance sectors.
- Professional Services: GenXAI supports firms in this segment by enhancing operational efficiency, improving client engagement, and streamlining workflows through intelligent, smart technology integrations and consulting.



- Life Sciences & Healthcare: The company aids healthcare and life sciences organizations in harnessing Al-driven solutions for better patient care, regulatory compliance, operational efficiency, and integrating capabilities like telemedicine and diagnostics.
- ➤ Education: GenXAI brings modern learning platforms, AI-enhanced student engagement tools, and secure content management systems to educational institutions, supporting digital transformation in teaching and learning processes.
- ➤ **High-Tech / Technology:** The firm collaborates with high-technology enterprises to deliver scalable, secure, and innovative solutions ranging from cloud adoption to Al automation that facilitate digital advancement and differentiate them within their industries.

Key Strengths

- Responsible, Scalable Generative Al Implementation: GenXAl delivers generative Al solutions that are co-created with clients to align with business objectives. Their approach emphasizes ethics, transparency, and risk-aware deployment, covering everything from LLMOps to AlOps and FinOps.
- > Strong Data-Driven Analytics Foundation: The firm offers comprehensive Al-powered analytics, including data integration, visualization, governance, and advanced modelling equipping organizations with insights to drive action and improve decision-making.
- ➤ Robust Supply Chain and Connected Planning Expertise: Through an Al-infused connected planning platform, GenXAl provides end-to-end visibility across supply chains. It supports unified planning, real-time scenario simulation, risk mitigation, and alignment across functions like finance, operations, and demand planning.
- ➤ End-to-End Data Modernization and Infrastructure Integration: GenXAI enables scalable, Already data modernization including business intelligence, legacy system upgrades, automation, and cloud infrastructure integrated seamlessly with existing architectures to support strategic enterprise operations.
- ➤ Inclusive, Agile, and Impact-Driven Culture: Guided by values such as inclusivity, agility, and meaningful impact, GenXAI fosters a culture committed to innovation, integrity, and sustained client success.