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Redefining TMT with AI

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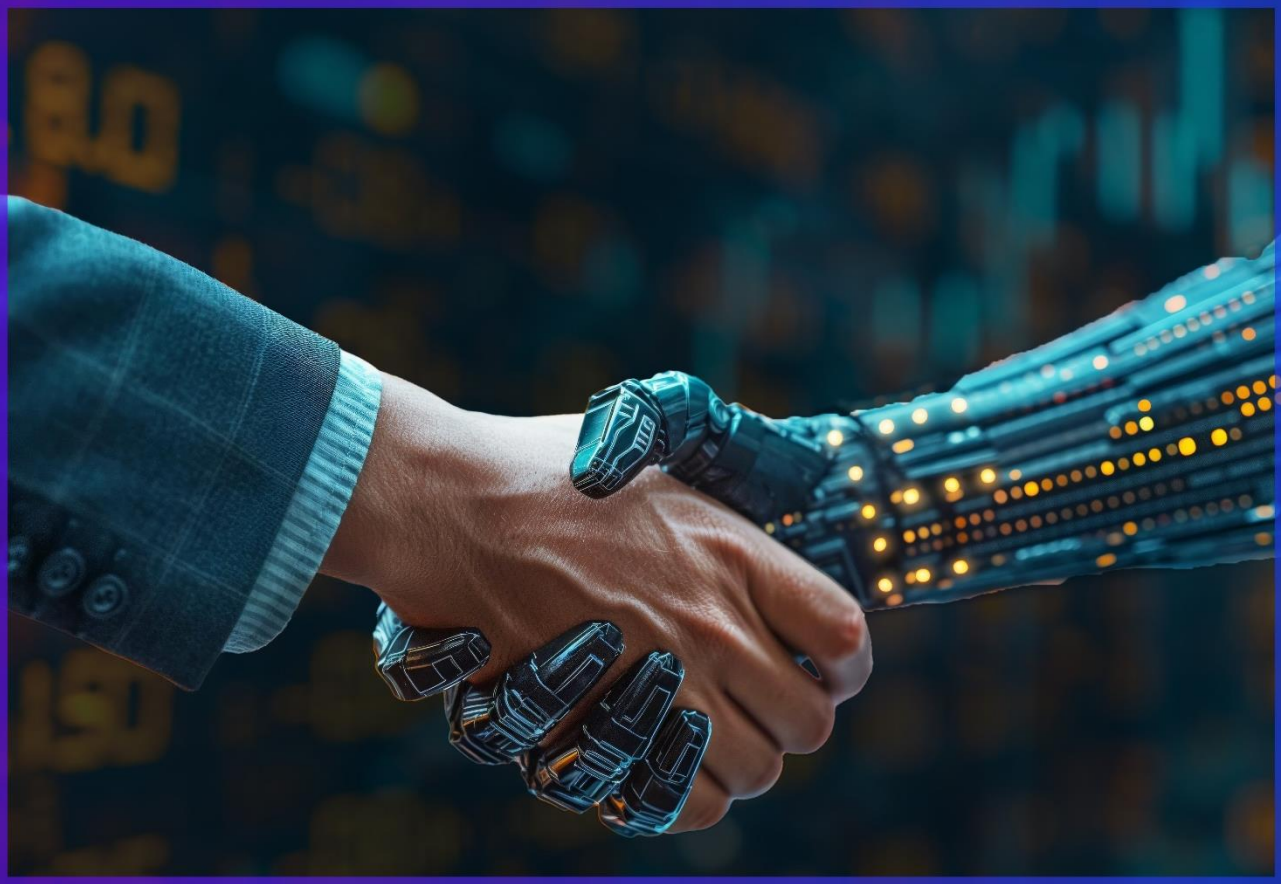


October 2024

kpmg.com/in

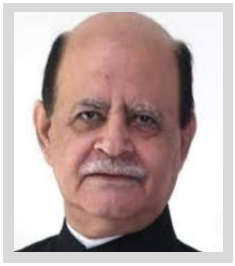
Message from the Honourable Director General of Cellular Association of India (COAI)

As we stand on the cusp of unprecedented technological evolution, India Mobile Congress 2024 serves as a powerful enabler for change under the theme “The Future is Now.” This event represents far more than just a showcase of groundbreaking innovations; it is a gathering of visionaries and industry leaders committed to redefining the future of industries and economies alike. IMC 2024 highlights India's growing prominence on the global stage, as the country takes bold strides towards becoming a leader in digital innovation. With its rapidly evolving digital ecosystem, India is set to shape the future of emerging markets, offering a blueprint for growth and transformation.

As India continues its journey towards becoming a global digital powerhouse, AI has emerged as a core driver of this transformation. AI’s role as a key enabler spans industries, unlocking new levels of efficiency, automation, and innovation. COAI remains steadfast in its commitment to fostering an environment where innovation flourishes, promoting the adoption of AI, and encouraging entrepreneurship.

This thought leadership report delves into the most recent developments and trends in AI, providing critical insights into how this technology is reshaping industries.

With India Mobile Congress 2024, we are excited to help shape a future that is both inclusive and forward-thinking, ensuring that India remains at the forefront of this global digital revolution.



Lt. Gen. Dr. S.P. Kochhar

Director General
COAI (Cellular Operators Association of India)

IMC Foreword

Welcome to the IMC 2024, a landmark event where the future of telecommunications and digital innovation takes center stage. The significance of this year's event is amplified as it coincides with WTSA'24. This unified occasion symbolises a major milestone for India in the international forum, gathering a global group of intellects, industry leaders, regulators, and innovators to create the roadmap for the future of telecom standards, regulatory frameworks, and technological progress.

IMC 2024 showcases India's growing prominence in the global TMT sector, with a special focus on cutting-edge technologies like 5G, the exciting strides being made towards 6G, and the profound impact of AI. AI is set to revolutionise the TMT landscape, driving innovations that will enhance everything from network observability to customer experiences (CX), and laying the groundwork for the digital infrastructure of tomorrow. The AI-focused discussions at IMC will explore how these technologies can be leveraged to build more resilient, secure, and efficient networks that support not only operational excellence but also transformative, personalised services for millions.

Additionally, this thought leadership report by KPMG in India we present at IMC 2024 delves deeply into AI's potential across the TMT industry, offering key insights into how AI-driven innovations can optimise network performance, enhance cybersecurity, and deliver superior customer experiences. These insights will serve as a valuable resource for industry players and policymakers alike, guiding them on the ethical, effective, and scalable deployment of AI technologies.

As IMC grows in stature year after year, it continues to serve as a global platform for collaboration, innovation, and strategic dialogue. The ideas shared here will not only shape the future of telecom in India but also influence the global digital transformation journey. We look forward to witnessing the groundbreaking advancements that will emerge from this event and the lasting impact they will have on the TMT sector globally.

P Ramakrishna

CEO

India Mobile Congress

KPMG in India Foreword

As the global landscape continues to shift towards a digitally-driven future, IMC 2024 stands as a pivotal event, embodying the theme "The Future is Now." KPMG in India is honoured to be a part of this transformative journey, where the convergence of 5G, AI, IoT, and other frontier technologies is set to revolutionise industries and drive economic growth.

In the TMT sector, AI is reshaping operations by driving efficiency, enabling personalisation, and enhancing decision-making processes. AI-powered network automation is streamlining operations for telecom companies, allowing them to optimise bandwidth usage, improve quality of service (QoS), and predict and maintain critical infrastructure. Media companies are leveraging AI for personalised content delivery, improving user engagement through real-time recommendations and optimised ad placements. Meanwhile, technology companies are deploying AI to enhance software development, accelerate cloud capacity planning, and build more resilient cybersecurity frameworks.

As the global landscape rapidly shifts towards a digital-first future, AI is emerging as a transformative force across the telecom, media, and technology sectors. Our Thought Leadership report includes survey results from the CxO's in the TMT sector. The survey revealed that 55 per cent of TMT organisation's have already achieved full-scale AI implementation, while 37 per cent are in the gradual scaling phase. AI is driving significant operational improvements, with 40 per cent of companies reporting 5-10 per cent cost reductions, and 67 per cent seeing returns above 10 per cent on AI investments. While challenges like a lack of skilled workforce and high implementation costs persist, 65 per cent of Indian CxOs believe generative AI will offer a competitive edge, underscoring the growing commitment to AI adoption.

The insights shared and the collaborations forged at IMC 2024 will undoubtedly shape the future of digital communications, not only in India but globally. As KPMG in India, we remain committed to supporting organisation's in navigating this complex yet promising landscape, helping them unlock the full potential of digital technologies to achieve sustainable growth and competitive advantage. Through innovation and collaboration, we look forward to contributing to a digital future that embraces inclusivity and promotes innovation.

Yezdi Nagporewalla
Chief Executive Officer (CEO)
KPMG in India

Akhilesh Tuteja
Partner & National Leader
Technology, Media & Telecommunications
KPMG in India

Purushothaman K G
Partner and Head
Technology Transformation and Sector Head - Telecommunications
KPMG in India

Executive Summary

The rapid adoption of AI in the TMT sector is fueling unprecedented growth and innovation. KPMG in India conducted an industry wide survey with Chief Digital Officers (CDOs), Chief Technology Officers (CTOs) and Chief Information Officers (CIOs) of telecom, media and technology companies to understand their view of AI in the industry and how the future looks.

The survey results reveal a dynamic landscape of AI adoption within the TMT sector, with organisation's at various stages of their AI maturity. A substantial portion of companies have moved beyond initial planning and are now either fully integrating AI into their core operations **(AI Pioneers)** or are gradually scaling AI initiatives **(AI Evangelists)** with only an insignificant portion representing who are yet to embark on their AI journey or are in initial planning phase **(AI Explorers)**. AI is proving to be a powerful tool in driving new revenue streams, operational efficiencies, fraud prevention enhancing customer engagement, and reducing costs. Key functions such as Sales and marketing, Finance, Human Resources (HR) and Operations (including Network planning and operations), are seeing the most significant AI adoption, as organisation's leverage AI to increase revenue, streamline processes, improve decision-making, and drive compliance.

Some key trends differentiating the AI Pioneers from AI Explorers were observed:

- Investment into AI is their strategic priority
- They have strong business objectives alignment with their AI strategy
- They have invested in the right partnerships
- They are building strong inhouse talent and skills
- They have got their data pipeline in place
- They have built trust through Responsible AI

Our survey indicates that AI is not only being leveraged by the TMT industry for their internal transformation but is also impacting their product and solution portfolio with 55 per cent of respondents expecting 30-50 per cent of product/ solution portfolio to be AI led which is expected to contribute 10-30 per cent incremental revenue

Despite these advancements, there are still notable challenges impeding wider adoption. Information Technology (IT) security concerns, the lack of skilled talent, cost of infra and computation capability and lack of adequate/ accurate data are some of the key inhibitors cited by organisation's.

To overcome these barriers, companies are investing significantly in building robust AI strategies, data pipelines, and ensuring the right organisational structure is in place. Access to advanced technology and skilled professionals remains critical for maximising the value of AI investments. While many organisation's are still working to unlock the full potential of AI, those that have successfully implemented AI-driven projects are seeing measurable returns in terms of cost savings, efficiency gains, and revenue growth.

Government initiatives have been a key contributor to the rapid adoption to AI in the sector. Not only is it through its various initiatives encouraging the AI adoption but is also deploying AI for governance. Some of the recent initiatives like AI-Machine Learning (ML) based detection system to act against spam callers or AI and facial recognition powered solutions for telecom Subscriber Identity Module (SIM) subscriber verification are strong use cases of AI adoption by the government. With TMT sector's strong potential to help achieve the Viksit Bharat ambition, the Government should further incentivise AI adoption and ensure there is an ecosystem that allows democratisation of AI innovation.

As AI continues to evolve, the TMT sector is positioning itself to capitalise on these advancements, making AI a critical component of their long-term strategic growth and competitive advantage. The commitment to scaling AI capabilities highlights its growing importance in driving innovation and operational transformation across industries.

Key takeaways

55% of organisation's in the TMT sector are AI Pioneers having achieved full scale implementation of select use cases whereas 32 per cent of survey respondents are AI Evangelists being in gradual scaling phase and 13 per cent are AI Explorers being still in the initial planning stages of AI adoption.

Generative AI

65% of Indian CxO's strongly agree that leveraging Generative AI will have a competitive advantage.

Revenue enhancement

38% of organisation's experience more than 10 per cent of their revenue coming from AI-driven initiatives.

Customer experience

52% of organisation's have been able to enhance their customer service by leveraging AI to improve technology and network performance metrics, achieving greater observability and enhancements.

Operational cost savings

40% of companies report a 5-10 per cent reduction in operational costs (including network deployment and operations) due to AI, while 35 per cent have saved more than 10 per cent.

Finance ad HR

19% of companies are adopting AI in Finance and HR to improve better predictability.

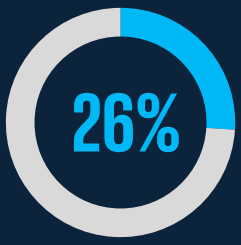
Return on Investment (RoI) in AI

67% of companies have started generating return in excess of 10 per cent on AI implementations, building a strong case of AI adoption.

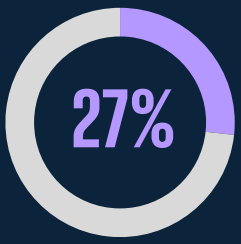
AI adoption in Telecom sector

30% Telecom sector executives are seeing highest adoption of AI to improve service quality (30 percent); grow revenue (26 per cent), fraud prevention (32 per cent) and deliver better customer experience (12 per cent).

Key challenges for implementing AI



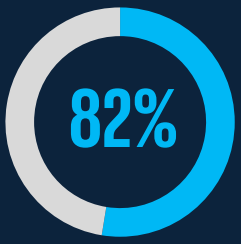
of respondents have highlighted a lack of skilled workforce and awareness as a major inhibitor of AI implementation



of respondents reported that high cost of implementation is amongst the top most inhibitors for AI deployment at scale. The other inhibitors are as follows:

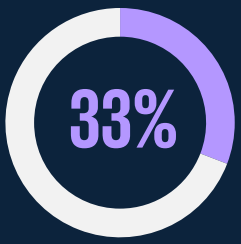
- lack of accurate data
- IT security and privacy.

Key enablers for maximising AI RoI



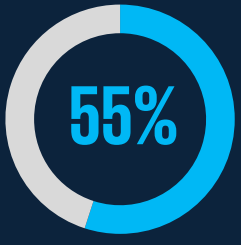
of respondents cite having a defined AI strategy and a strong data pipeline as critical for maximising AI RoI

AI Skills



of the survey respondents believe 31-50 per cent of their organisation workforce will be AI ready by FY26 highlighting a deep focus on reskilling people. As per KPMG's Global CEO survey, 80 per cent CEOs agree that organisation's must invest in skill development

AI redefining products and solutions



of respondents expect 30-50 per cent of product/ solution portfolio to be AI led and is expected to contribute 10-30 per cent incremental revenue

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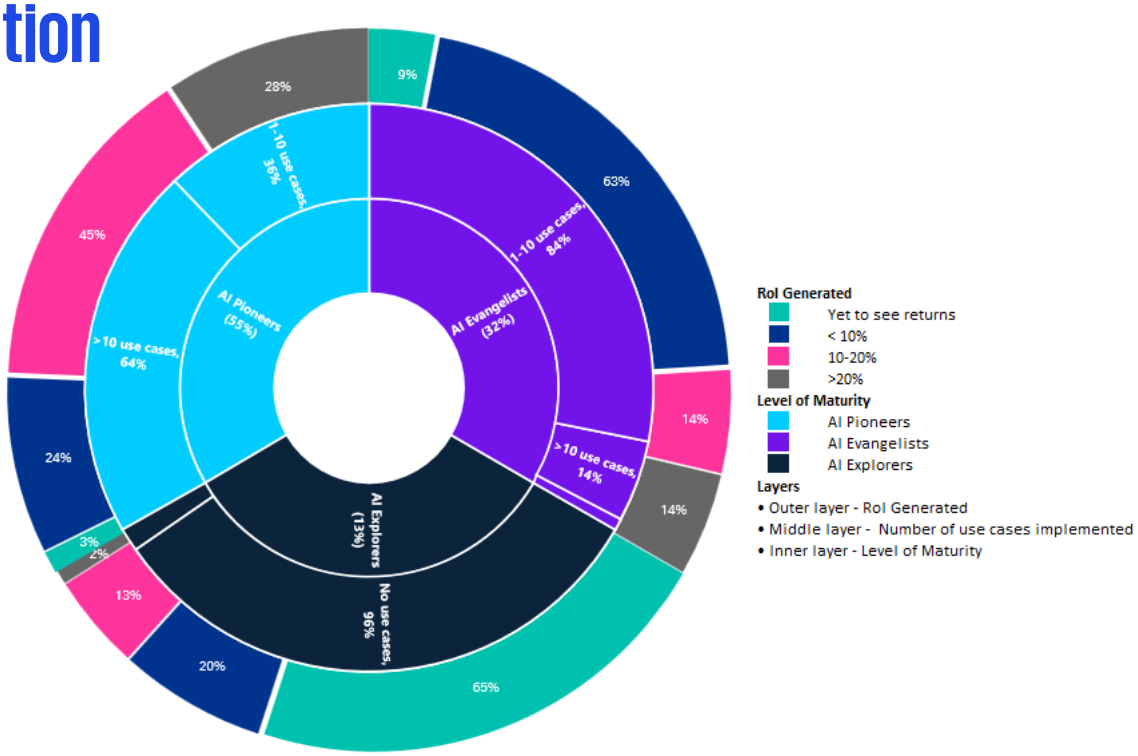
Chapter 1

AI adoption in TMT sector

The TMT sector has been a trailblazer in terms of adoption of emerging technologies and AI adoption has been no exception. Driven by the need for improved customer experiences, efficiency, and innovation, AI is being deployed by companies in the TMT sector to sustain a competitive advantage and stimulate development

1.1 The maturity spectrum – From exploration to full integration



AI adoption is varied across organisation's and based on the maturity of AI adoption; we have categorised our survey respondents into the following categories:

AI Pioneers

Organisation's that have achieved full scale AI implementations

AI Evangelists

Organisation's that are gradually scaling their AI adoption

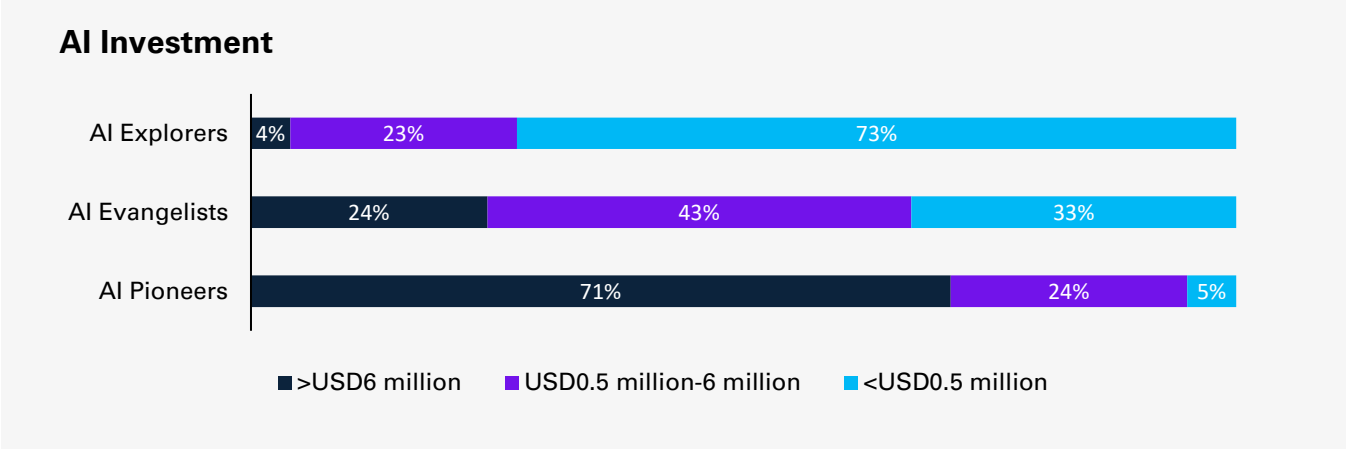
AI Explorers

Organisation's that are still in their initial planning phase when it comes to AI adoption

While it's encouraging to see 55 per cent of organisation's categorised as AI Pioneers, there is still some ground to cover, as 32 per cent of companies have yet to unleash the full potential of AI. The substantial divide between AI Pioneers, AI Evangelists, and AI Explorers underscores the significant opportunity for growth in AI adoption. The survey also identified a few success factors that have helped AI Pioneers accelerate their AI adoption journey

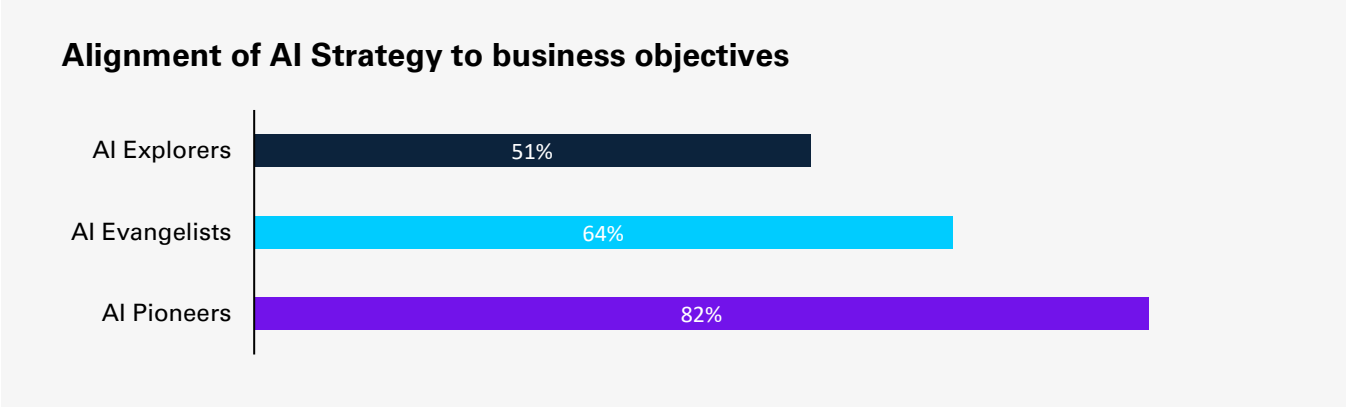
Investment in AI is their strategic priority

AI Pioneers are not shying away from investing big dollars towards AI adoption. Of the respondents surveyed, 71 per cent have allocated more than USD6 million towards their AI initiatives.



AI Pioneers have strong business objectives alignment with their AI strategy

82 per cent of the AI pioneers have identified alignment of AI strategy with business objectives as paramount for AI success



They have invested in the right partnerships and at the same time built strong inhouse talent and skills

Our interview with the key stakeholders at some of the AI pioneers indicated that having the right mix of partnership and internal skills is critical to achieve success through the AI initiatives. While partnerships accelerate the speed to market, investment in building internal skillsets ensures effectiveness, longevity and continuity to AI initiatives.

They have got their data pipeline in place

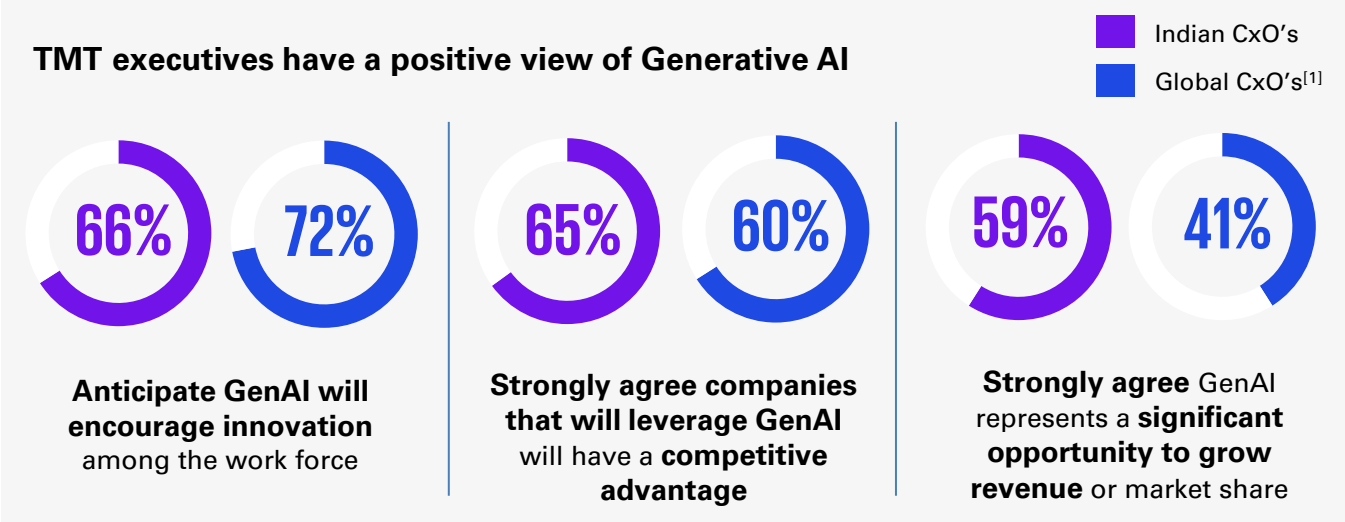
76 per cent of AI Pioneers have identified strong and reliable data pipeline as an essential foundational layer for success of AI. They have invested in ensuring data quality and governance, resulting in creation of data lakes and data warehouses. This infrastructure enables them to maintain a single source of truth for different AI use cases.

They have built trust through Responsible AI

AI Pioneers recognise the necessity for a comprehensive framework that oversees the responsible development and deployment of AI for building trust and scale enterprise-wide adoption. 46 per cent of AI pioneers have built inhouse controls to monitor AI adoption.

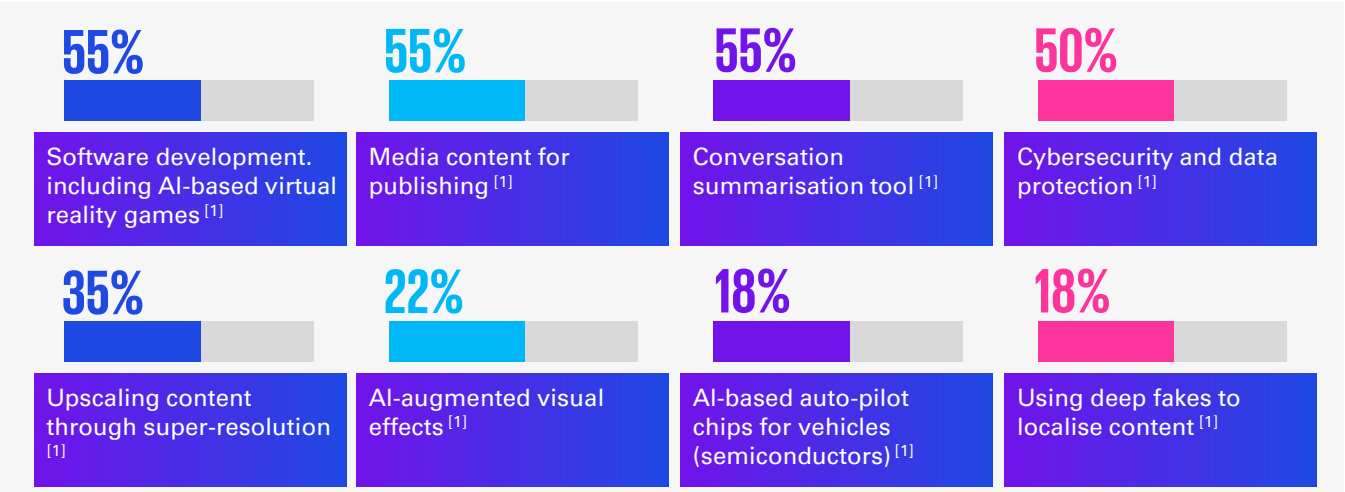
Acceleration through Generative AI

A KPMG in the US Global survey [1] has indicated that global executives in TMT industries are not just prepared for generative AI, but they are enthusiastically embracing it. They envision it enhancing productivity, conferring competitive advantages, and stimulating growth. They are more confident than most business leaders that their technological infrastructures are primed for this innovative form of AI, with their organisation's already exploring potential use cases:



In India, TMT executives exhibit the same enthusiasm, albeit with adoption occurring at a slightly slower pace than their global counterparts. Numerous use cases are presently being tested at the Proof of Concept (PoC) stage, while a handful of others are gradually transitioning towards full-scale implementation. Significant emphasis is being placed on domain-specific models.

Some of the top use cases identified by TMT professionals include:



[1] Technology, media, and telecom lead the charge on generative AI, KPMG in the US, 2023

The TMT sector is being redefined by AI, which is enhancing operational efficiency, increasing predictive capabilities, and optimising performance. In the telecommunications sector, AI enhances network reliability by employing complex algorithms.

Case Study

Reliance Jio

Jio, the world's largest operator by data traffic [2], is harnessing AI and Gen AI capabilities across its network, sales, and customer lifecycle journeys. Jio has implemented the Digital Twin technology, which provides a virtual representation of all assets, processes, and products, using real-time data to simulate the behaviour, traits, and performance of the actual network.

The Jio Digital Twin serves as the foundation for Jio's in-house AI and Gen AI platform, "Jio Brain." This platform delivers use cases across network planning, building, operations, sales, and customer service. Jio Brain applies advanced AI and ML techniques to enable optimal planning, rapid deployment, energy efficiency, and customer experience management, thereby enhancing the speed and effectiveness of its 5G deployments.

Jio Brain has also developed a broad range of 5G services and industrial applications, including image and video AI at the edge, probing at the edge, and solutions for healthcare, education, gaming, and entertainment.

The platform has been developed, integrated, and deployed at scale within the Jio network supporting 500 million customers served by over 5 million cells. Building on the scale and success of its deployment within the Jio network, the platform can be integrated with multiple telecom operators in a "plug and play" manner using open APIs to deliver hyper-efficient managed services.

Jio believes that the next level of AI value creation will come from "small, specialised, secure, and "sovereign" language models (SLMs). In Jio, these SLMs are being developed jointly by domain and digital teams. This method could create new opportunities for innovation and efficiency as AI becomes a fundamental driver of operational and product advancements at Jio.

[2] Reliance Jio now world's top mobile operator by data traffic, beats Chinese rival, The Economic Times (indiatimes.com), 2024

"Jio is revolutionising the telecom industry with AI and Gen AI, leveraging Digital Twin technology to boost network efficiency and customer experience. Through our Jio Brain platform, we are developing the next wave of AI with specialised, secure language models, fostering innovation and operational excellence, easily extendable to other operators using open APIs"

Shyam Mardikar
Group Chief Technology Officer (CTO) - Mobility
Reliance Jio Infocomm Limited

1.2 Key value drivers of AI adoption

The adoption of AI within the TMT sector is primarily driven by three key factors: revenue growth (40 per cent), compliance, security, fraud prevention, and risk management (30 per cent) across organisation's, and operational cost reduction (30 per cent). AI's potential to drive revenue growth and reduce costs underscores its holistic value proposition for TMT companies, aligning strategic objectives with financial performance. Simultaneously, the capacity to enhance security and manage risks more effectively distinguishes AI, particularly in industries where data security and regulatory oversight are paramount.

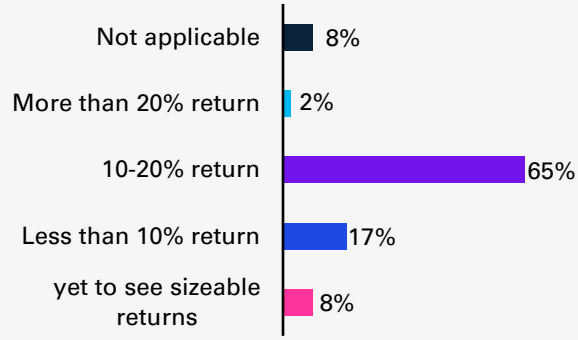
The survey data provides insights into the financial returns from the implementation of AI use cases across various sectors. A majority (65 per cent) of companies reported a RoI of 10-20 per cent, demonstrating that AI positively impacts their operations and revenue.

Meanwhile, 17 per cent of organisation's have realised a smaller RoI of less than 10 per cent, indicating modest gains from their AI initiatives. On the other end of the spectrum, 8 per cent of companies have achieved an exceptional RoI of more than 20 per cent, highlighting the significant potential for financial success with effective AI implementation.

However, not all are reaping benefits yet - 8 per cent of respondents have not observed notable returns, indicating challenges in scaling their AI efforts. Simultaneously, another 8 per cent deem a RoI assessment inapplicable, possibly due to being in the early stages of their AI projects

Key value drivers of AI adoption

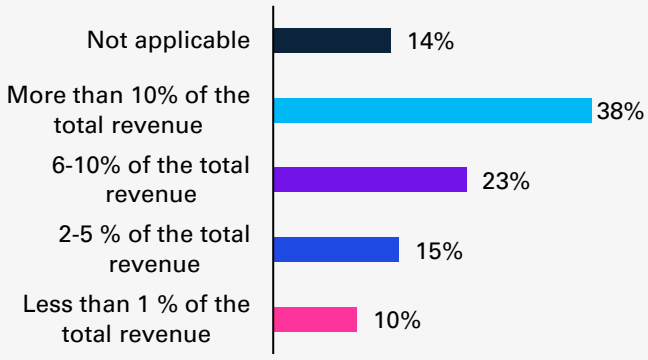
RoI on implemented AI use cases



1.2.1 How AI is driving revenue growth

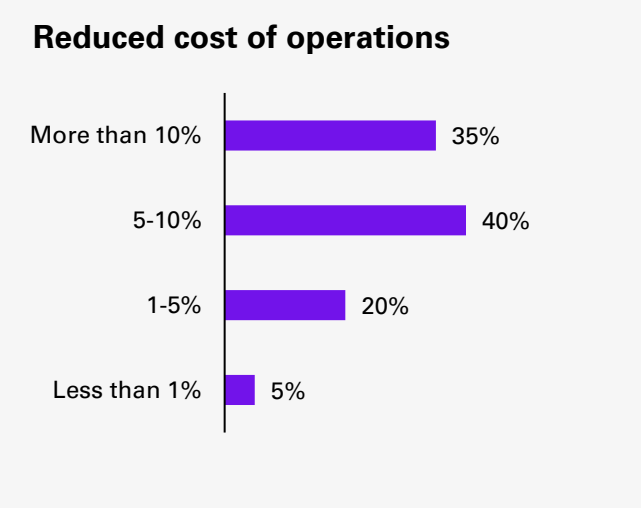
AI's contribution to revenue growth has become increasingly evident for many organisation's in the TMT sector. Remarkably, 38 per cent of companies report that AI initiatives have resulted in revenue growth of more than 10 per cent. Additionally, 23 per cent of companies have experienced a 6-10 per cent increase in revenue following AI deployment, illustrating the scalability and revenue-generating potential of AI solutions. organisation's are employing AI for churn prediction, sentiment analysis, customer value management, and customer issue prediction and resolution, which in turn promotes revenue growth and enriches customer service.

AI driving revenue growth



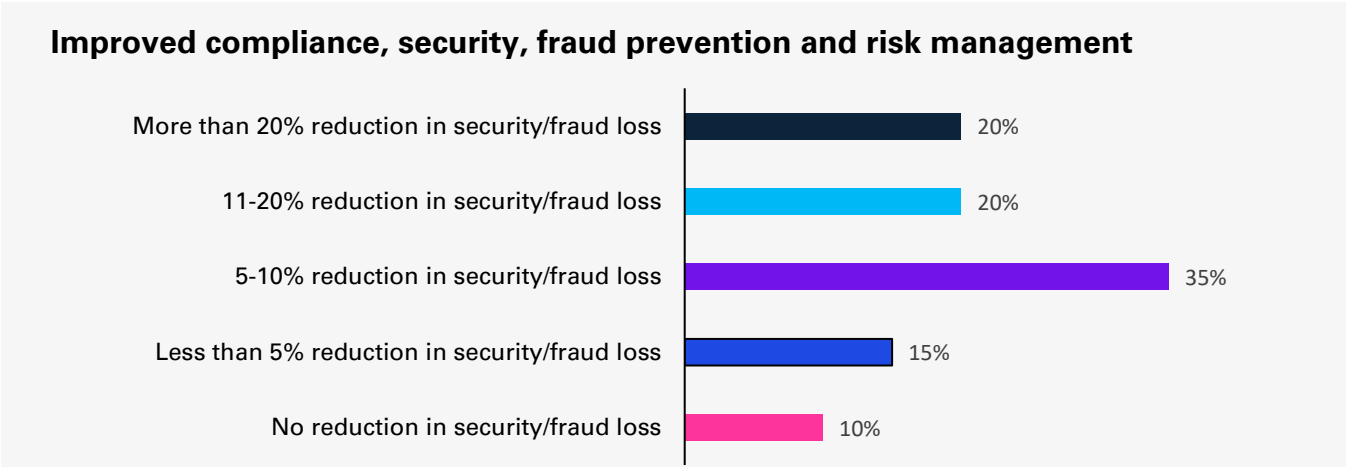
1.2.2 Achieving operational efficiencies

One of the most significant advantages of AI adoption in the TMT sector is the reduction in operational costs. AI-driven automation, optimisation, and data analytics have led to measurable cost savings for many companies. According to the survey, 40 per cent of organisation's report that AI has reduced their operational costs by 5-10 per cent, while 35 per cent of organisation's have achieved savings of more than 10 per cent. Moreover, 20 per cent of companies have witnessed operational cost reductions of 1-5 per cent. Some common use cases that drive operational efficiencies include capex and capacity planning, network deployment and quality audits, spectrum and network optimisation. These operational efficiencies are resulting in substantial returns on AI investments.

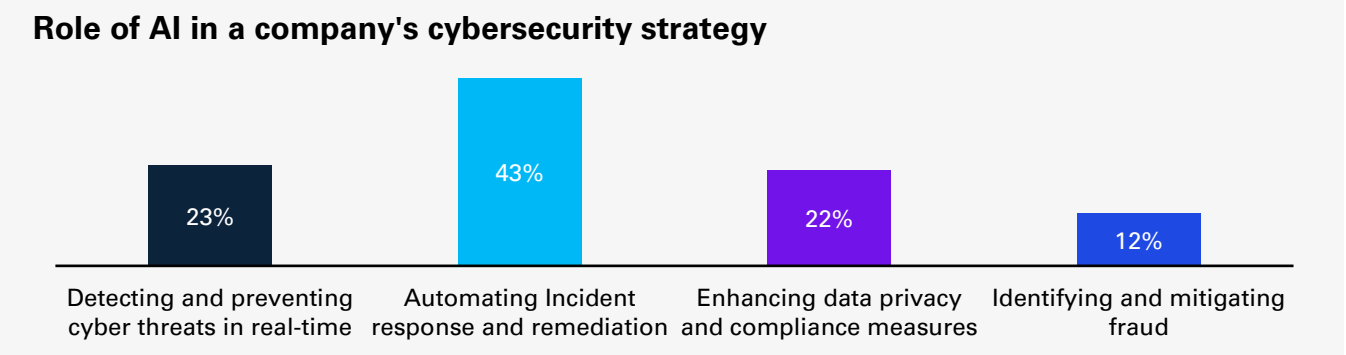


1.2.3 Improved compliance, security, fraud prevention and risk management

According to the survey conducted, CxOs reported significant enhancements in compliance, security, fraud prevention, and risk management through AI adoption. The findings reveal that 35 per cent of organisation's experienced a 5-10 per cent reduction in security or fraud-related losses. Furthermore, 20 per cent of respondents reported a reduction exceeding 20 per cent, while another 20 per cent observed an 11-20 per cent decrease in fraud or security losses. These figures underscore the significant contributions of AI-driven tools in risk mitigation.



In terms of AI's role in cybersecurity, 43 per cent companies are leveraging AI to automate incident response, demonstrating the significant focus on minimising response times and enhancing remediation. Moreover, 23 per cent of companies prioritise real-time threat detection, while enhancing privacy and compliance (22 per cent) is another critical area. Fraud detection remains relatively lower (12 per cent), reflecting a more specialised use case within broader AI-driven security strategies.



Case Study

Airtel

Airtel, a leading telecom provider in India, has been leveraging AI to optimize operations, enhance customer experiences, and improve business efficiency. While traditional machine learning has long been in use, the telco has also started harnessing the power of Generative AI since its arrival a couple of years back. The company's core data science team focuses on AI-driven solutions ranging from energy-saving algorithms to hyper-personalization strategies aimed at driving growth, improving customer experiences, and optimizing costs.

The company's approach to AI is underpinned on driving impact, while balancing between initiatives which drive near term impact as well as longer term structural actions. Not surprisingly, a number of actions are being driven in the Networks domain.

Airtel's in-house Self-Optimizing Networks (A-SON) solution which uses machine learning to enhance network performance and customer experience. As networks become more complex, A-SON addresses the limitations of existing solutions by offering flexibility, real-time monitoring, and AI/ML-powered automation. This gives complete flexibility to rollout new use case and tweaks per market in a short sprint cycle. ASON has already saved significant fuel cost by automatically optimizing the network, basis traffic patterns. Several other network areas are being explored for AI deployment – for example, AI-based fiber planning, Gen AI assist for the network field force to enable them with more knowledge and intelligence.

Airtel has also recently launched the world's first anti-spam network solution that harnesses the power of advanced AI and data analytics, processing 2.5 billion calls and 1.5 billion messages daily, providing real- time detection and alerts to customers at no additional cost. The dual-layered protection system, which integrates both network and IT system layers, ensures comprehensive coverage and enhanced security. This approach exemplifies the inclusive and responsible use of AI.

The telco is also focusing on key sales and marketing use cases. A critical part of which is the "Converged Data Engine" (CDE). The Converged Data Engine (CDE) is an AI powered plug-and-play data platform designed to overcome the complexities of a large-scale enterprise like a telco. CDE provides ability to integrate customer and network data across multiple systems such as clickstreams, databases, CRMs, files and APIs, transforming it to create a unified view of each customer quickly. AI capabilities of the platform then leverage this 360-view of the data to enable smart Next Best Action, recommendations as well as drive CLM activities. These capabilities are then linked to an omni-channel orchestration platform which powers external customer-facing channels as well as internal channels (e.g. workforce app). The CDE thus enabled faster decisions, better targeting, and service personalization.

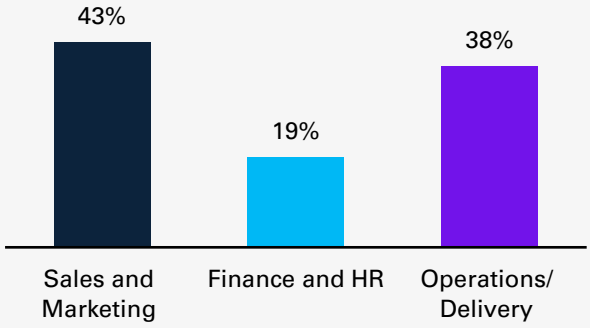
AI deployment is also underway across a number of other areas – e.g. AI-powered chatbot handles queries, AI-assist for different field fleets, among others.

The company is confident that AI's potential to generate business impact at scale is immense. Airtel is also focusing on governance, and responsible AI usage to ensure both technical robustness and business value.

1.3 Leading functions in AI Adoption – Sales & Marketing and Operations

AI adoption is spreading across various functions within the TMT sector. Leading this charge is the sales and marketing function, with 43 per cent of organisation's leveraging AI to reduce customer acquisition costs and improve customer engagement. Operations and delivery functions also show significant AI adoption at 38 per cent, highlighting AI's role in driving operational efficiencies, process optimisation, and productivity gains. Although finance and HR functions see a lower AI adoption rate of 19 per cent, they continue utilising AI to enhance predictability, accuracy, and compliance.

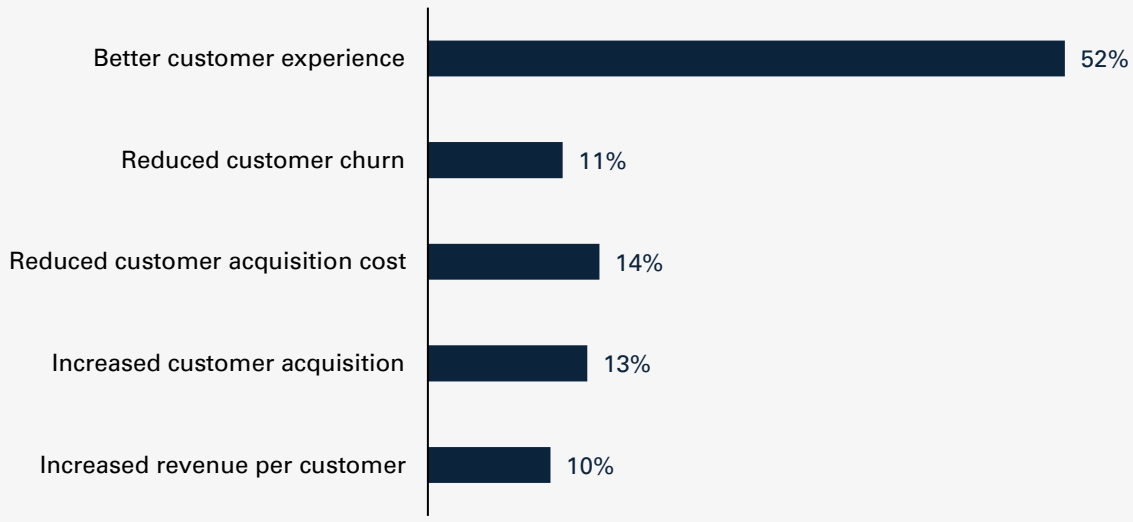
Functions seeing higher AI adoption



1.3.1 AI in sales and marketing – driving personalised customer engagement

In sales and marketing, AI is proving to be a powerful tool for enhancing customer experience and driving personalised customer engagement, with 52 per cent of organisation's reporting this benefit. Reduced customer acquisition costs and increased customer acquisition, reported at 14 per cent and 13 per cent respectively, continue to remain key objectives. Additionally, customer churn reported at 11 per cent, and reduced revenue per customer at 10 per cent, also play a significant role. These figures indicate that cost reduction and customer retention are key areas where AI is being leveraged, underscoring the importance of AI in optimising marketing strategies and driving overall performance improvement in sales and marketing functions.

Sales and Marketing function



1.3.2 AI in finance and HR function – enhancing accuracy and compliance

In Finance and HR, the adoption of AI is primarily driven by its ability to improve predictability (40 per cent) and improved compliance, security, and risk management (25 per cent). Furthermore, the 20 per cent impact of AI on improving accuracy is significant. AI's role in reducing operational costs is reported by 15 per cent of companies, illustrating its ability to streamline finance and HR processes, minimise errors, and heighten efficiency

Finance and HR function

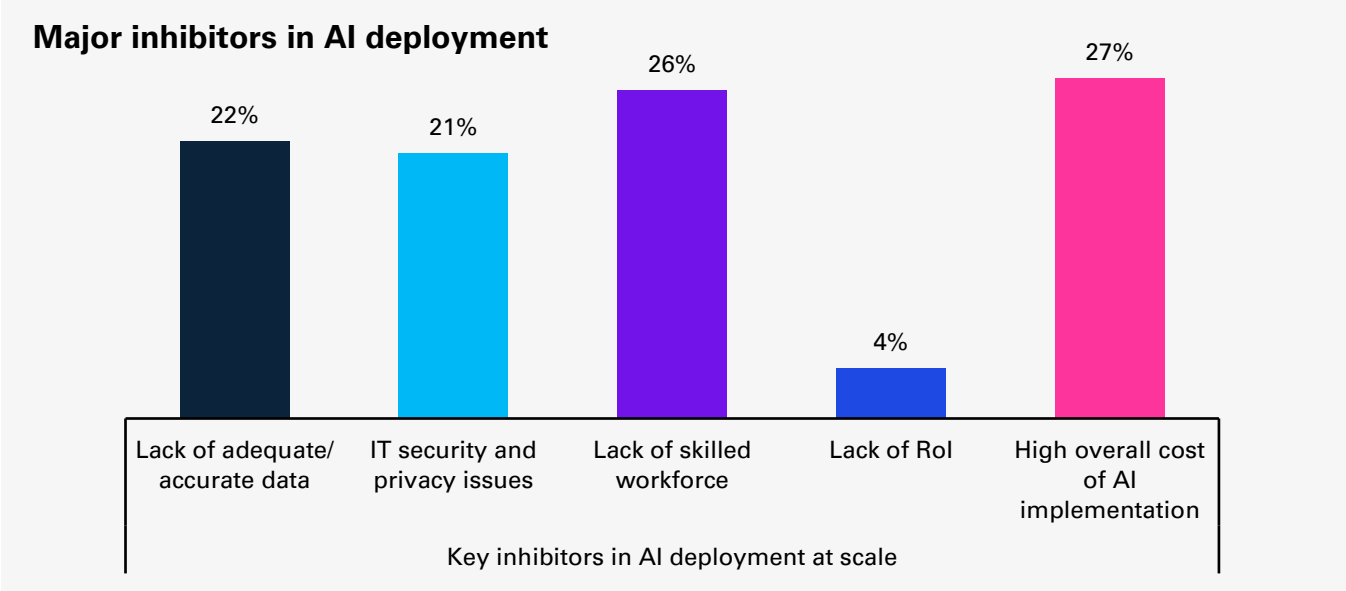
1.3.3 AI in operations – enhancing network performance and efficiency

AI is recognised as a significant driver of operational efficiency, with many respondents viewing it as a key enabler of improvements in productivity, network optimisation, and cost reduction. According to the survey, 40 per cent of respondents cited productivity gains as the primary use case for AI in operations. These include the use of AI in achieving improvement in operational performance through advanced network management and predictive maintenance. Around 30 per cent of respondents cited that AI can help in enhancing compliance, security, and risk management by enabling proactive threat identification and mitigation. Additionally, the survey respondents reported that AI can help reduce operational costs by 30 per cent , by automating routine tasks and optimising resource deployment, thereby increasing overall efficiency, and supporting sustainability objectives by minimising energy consumption

Operations and Delivery

1.4 Challenges in AI implementation

Despite the promising advances, several challenges inhibit AI deployment at scale within the TMT sector. The most significant barriers include the high overall costs of AI implementation (27 per cent), lack of skilled workforce (26 per cent) and inadequate or inaccurate data (22 per cent). IT security and privacy concerns also account for a substantial share (21 per cent). Additionally, 4 per cent of organisation's struggle with demonstrating a clear RoI from AI initiatives. These inhibitors indicate that while AI adoption is progressing, there are critical areas that need addressing to fully unlock its potential across the sector.



Next steps

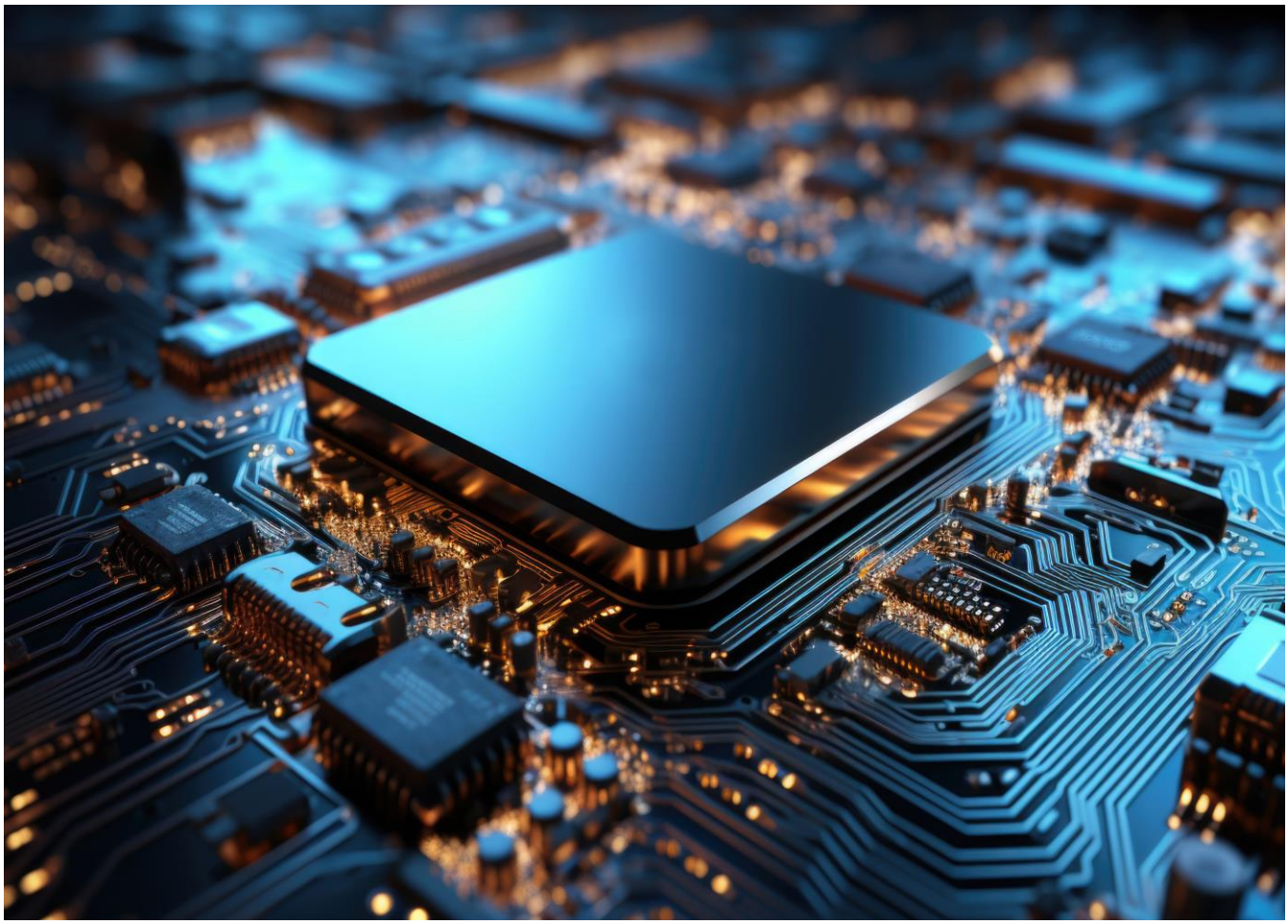
In light of the numerous potential applications of AI, TMT companies have a substantial opportunity to establish early-mover advantages. Companies can initiate five critical actions to expedite their AI initiatives:

- Begin by identifying a portfolio of AI use cases that could provide early wins, particularly in areas where knowledge workers are conducting repetitive tasks. Identify and pursue these use cases. Demonstrate measurable productivity improvements by launching secure PoC/ prototypes. Additionally, while conducting experiments to develop new AI-enabled offerings, gradually integrate AI capabilities into your primary products and services.
- The acceleration of AI transformation is contingent upon the establishment of an ecosystem of external partners. Seek out partners who possess the necessary expertise to integrate AI with internal data, create responsible use cases, and expand AI solutions throughout the organisation.
- The high density of experts in TMT companies will result in a more significant workforce transformation. The emphasis should be on the recruitment and training of essential personnel, such as AI engineers and data scientists, in order to effectively leverage AI. HR leaders should prepare to support this transition by developing scenarios for the potential evolution of the future workforce.
- Formulate an accelerated approach to the organisation's AI expansion. This entails the evaluation of the impact on technology, processes, and people, as well as the prioritisation of critical areas of competitive advantage. Additionally, business cases are developed. It is imperative to establish a strong governance framework in order to guarantee the responsible application of AI.

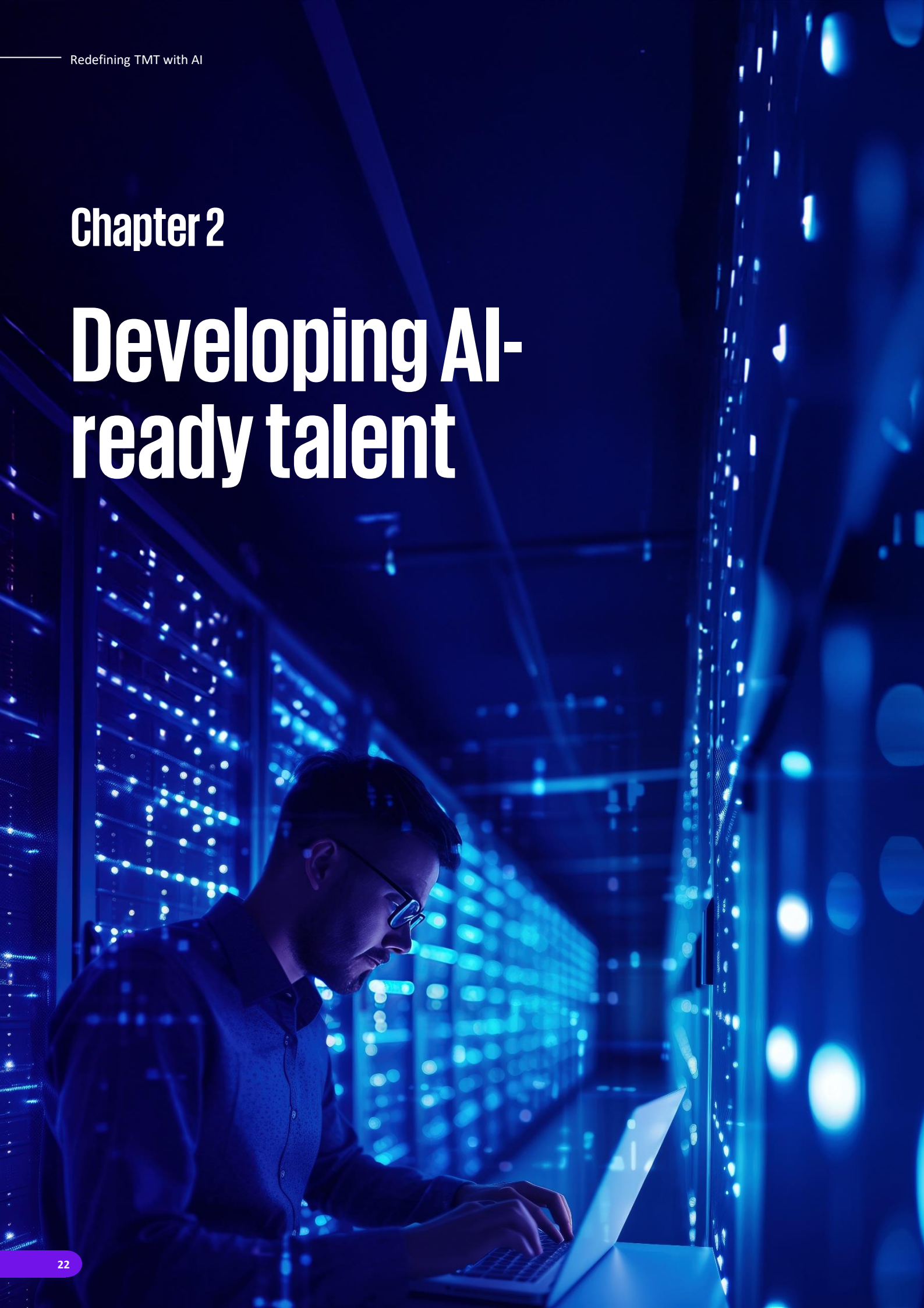
1.5 How government is enabling AI

The Indian government is dedicated to establishing the nation as a global leader in AI by means of strategic initiatives and funding, thus encouraging an ecosystem that promotes responsible AI deployment, research, and innovation across sectors.

- AIRAWAT, a national cloud infrastructure platform, facilitates the development of AI in sectors such as technology, while AI CoE's concentrate on areas such as speech recognition and natural language processing to accommodate India's cultural diversity.[3]
- The objective of projects such as Bhashini is to eliminate language barriers by creating AI platforms that process Indian languages, thereby improving technology accessibility. Furthermore, AI-based fraud detection and big data analytics are supported by the PARAM Siddhi supercomputing platform.[3]
- The National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) fosters the deployment of emerging technologies, which boosts connectivity and innovation [3]. India additionally ensures responsible AI development through its global partnerships, such as the Global Partnership on AI (GPAI).
- The IndiaAI Mission, for which the Cabinet has set a budget of over INR10,300 crores (or nearly USD1.35 billion) for 2024-25, is dedicated to the development of a comprehensive AI ecosystem. Key initiatives include the development of unified data platforms, innovation centers, and scalable computation capacity, all while promoting responsible AI development through governance frameworks and supporting AI startups. The mission's objective is to emphasize the transformative potential of AI for societal benefit, drive innovation, build domestic capacities, generate skilled jobs, and enhance India's global competitiveness.[4]



[3] Annual Report 2023–24, MeitY, 2024
[4] Exploring supercomputers in the world and the emergence of AIRAWAT, IndiaAI, 2023



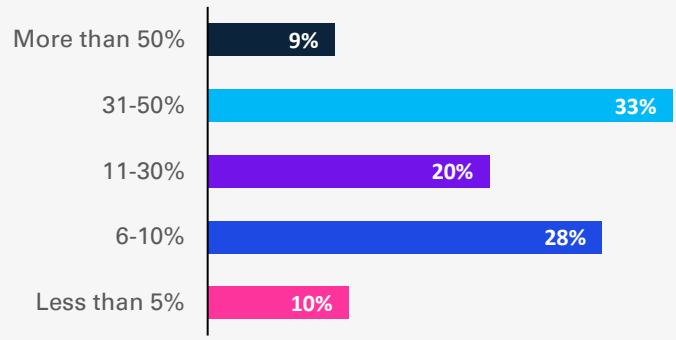
Chapter 2

Developing AI-ready talent

Organisation's focus on AI-ready workforce by FY26

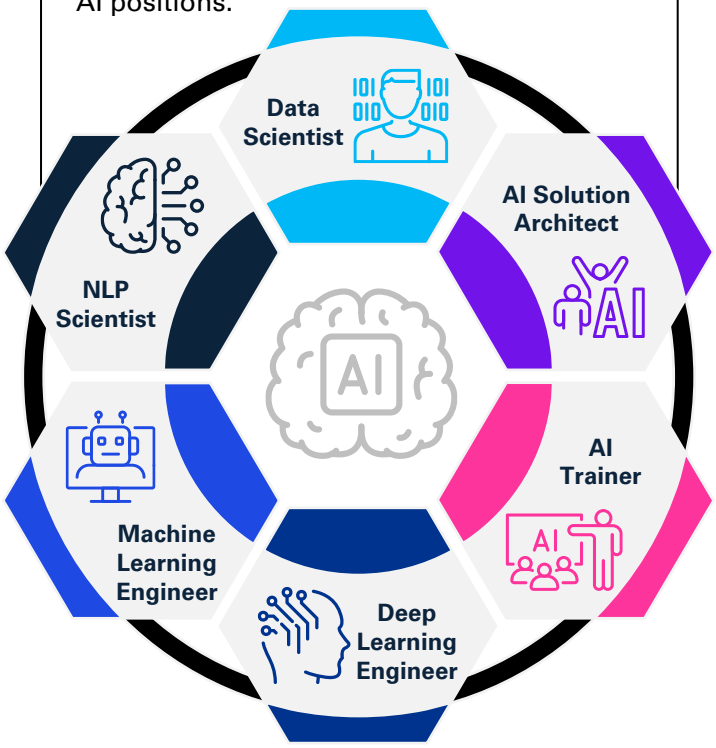
According to the survey responses from CxOs, the findings reveal that AI readiness within organisation's is steadily increasing. Over 33 per cent of respondents expect that 31-50 per cent of their workforce will be AI-ready by FY26, with more than 9 per cent anticipating that over 50 per cent of their employees will be AI-equipped. This shift suggests a growing emphasis on developing AI capabilities across teams

Percent of organisation's workforce to be AI-ready by FY26



Emerging AI roles

Several emerging AI roles have surfaced, each necessitating a distinct set of advanced skills. As AI's influence continues to expand, the following is a list of the most sought-after AI positions.



Creating talent pipelines for emerging technologies

It is anticipated that India will have a surplus of 1.3 million skilled laborers in the TMT sector by 2030 [5]. In areas such as 5G, AI/Big Data Analytics, and Robotic Process Automation (RPA), India is currently experiencing a disparity of 150,000 skilled professionals, despite this surplus [5]. It is imperative that telecom and technology companies act promptly to establish talent pipelines and address this disparity.

The opportunity to establish India as a leader in AI-driven transformations is significant. Companies that prioritise the development of talent pipelines in AI, cloud infrastructure, and RPA will be more effectively equipped to confront the obstacles of the digital-first consumer landscape and reduce risks [5]

[5] Telecom Talent in 5G Era, Telecom Sector Skill Council, 2024

Chapter 3

AI-driven use cases in TMT

Case Study

Vodafone Idea

Vodafone Idea (Vi), a key player in India's telecom industry, has undertaken its digital transformation by integrating AI into various aspects of its strategy and operations. From enhancing customer experiences to optimising network management, VI's AI initiatives are designed to drive business efficiency and revenue generation.

Vodafone Idea has implemented AI across its business, particularly in consumer, marketing, enterprise, digital, operations and network operations. Vi manages over 12,000 key performance indicators (KPIs) related to customer experience, operational efficiency, and revenue growth. AI is used to predict customer behaviour, optimise marketing campaigns, and hyper personalise its services and offerings. The company has built Big Data AI/ML Cloud Analytics Platform over cloud and on-premise Data Lake enabling a hybrid cloud approach for building and scaling machine/deep learning models, enhancing scalability, cost optimisation and overall efficiency.

Vi uses AI to analyse customer data, including demographics, usage patterns, social media tweets, customer service interactions with agents or IVR to gauge sentiments, to deliver hyper personalised offers.

AI plays a crucial role in identification and improvement in network performance at Vodafone Idea. The company uses AI-driven solutions to predict network congestion, helping to manage capacity more efficiently. Through telemetry data and the Customer Network Quality Score (CNQS), Vi can monitor network experience in near real-time, making proactive adjustments to enhance user experiences. The company is also experimenting with drone-based inspections of cell towers, utilising image/visual analytics to detect faults and ensure proactive & timely tower maintenance.

Vi is exploring generative AI applications to leverage its unstructured data and create hyper-personalised offerings and experiences for its customers. These include Generative Adversarial Network (GAN), Neural style transfer, LLM's deep learning transformer models for improving customer interactions and translating media content into different languages in real-time. The company is also experimenting with generative AI in areas like content creation, enabling real-time personalised communication. This is expected to enhance customer engagement while improving operational efficiency. To bridge the talent gap in AI, Vodafone Idea has begun training candidates in-house, sourcing talent from prestigious institutions and providing specialised training in AI and data science, big data analytics, edge and cloud computing

Despite its advancements in successfully scaling AI use cases and initiatives, Vodafone Idea sees several challenges/opportunities . One such significant opportunity area includes the gap between business needs and AI/Data Science capabilities, particularly in translating data insights into monetisable business strategies. Additionally, managing large volumes of unstructured data and achieving real-time analytics are ongoing challenges for the company/industry. Storing massive datasets and in sighting, particularly in real-time network operations, remains a challenge. Prioritising high-impact use cases over smaller ones due to perceived value outcomes seems to be an addressable challenge the company must navigate.

"Our AI team carries business growth targets which ensures our AI/ML and data science projects are not just academic but aligned with driving tangible business outcomes"

Dr. Sanjeev Chaube

Executive Vice President (EVP) & Head (India) - AI, Big Data & Advanced Analytics (AI, Data Science, Cloud AI Platform & Tech)

Vodafone Idea

3.1 Telecom sector use cases

Use Case	Description	Impact
Predictive network analysis & RPA	AI-driven predictive network analysis, in tandem with RPA, enhances network operations and quality of service. Automated scripts and algorithms are deployed to develop predictive models, thereby anticipating KPI or operational deviations ahead of any degradation and potential faults. Utilising supervised learning models for fault prediction, and Bayesian networks for root cause analysis, the system proactively manages network issues. RPA automates routine tasks such as alarm handling, trouble-ticket raising, configuration management, and generation of customised network-level reports. Furthermore, reinforcement learning assists by steering workflows to prioritise tasks and provide insightful recommendations for both immediate and long-term improvements	• Reduction in volume of alarms, faults and tickets • Improved Mean Time to Repair (MTTR) and reduced downtime • Automated repetitive & manual tasks, increasing operational efficiency
AI-driven traffic engineering for QoS	AI leverages machine learning models, including LSTMs, to optimise real-time traffic routing. This allows for the dynamic adjustment of traffic flows and ensures a high Quality of Service (QoS), particularly in 5G networks. Furthermore, reinforcement learning is utilised to optimise bandwidth use, while advanced network analytics aid in identifying traffic patterns and rerouting accordingly. A closed-loop feedback system continuously monitors network performance, providing real-time adjustments and rendering the network adaptable to congestion and high traffic volumes	• Improved QoS resulting in compliance with regulatory requirements • Optimized routing for bandwidth-heavy services • Reduced network congestion and packet/ data loss
AI in customer acquisition	AI driven tools for customer acquisition utilise predictive analytics and ML to identify potential customers and tailor marketing strategies	• Improved targeting accuracy • Increased rate of customer acquisition • Reduced cost of acquiring new customers
AI in Customer Experience	AI-powered systems analyse customer data to deliver personalised experiences. These include content recommendations, trends & insights, proactive solutions, predictive services, and interactive customer assistance through virtual bots and chat agents, all contributing to a greater customer experience	• Increased customer engagement and loyalty • Enhanced personalization improves user satisfaction • Reduction in customer churn

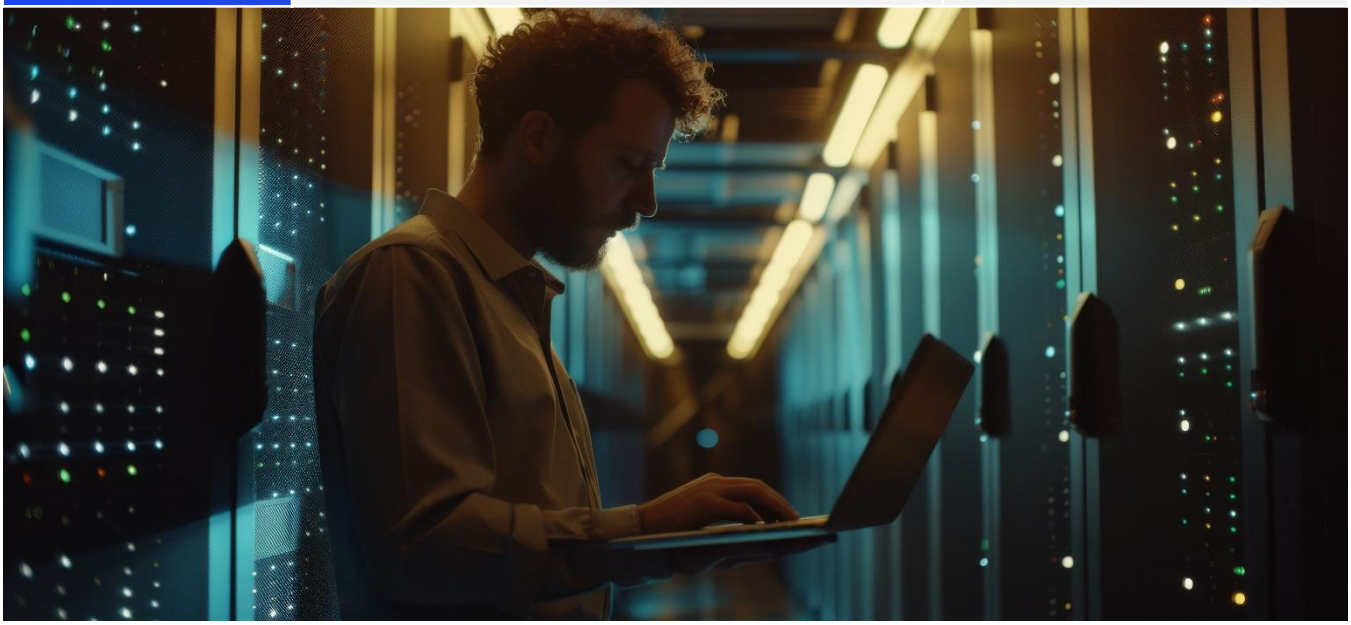
3.2 Media sector use cases

Use Case	Description	Impact
NLP for video dubbing	Natural Language Processing (NLP) enhances the efficiency and accuracy of video dubbing by automating the language translation process and synchronising the dubbed dialogue with the on-screen actors' vocal movements. Transformer models, are utilised for understanding and translating complex scripts, while Convolutional Neural Networks (CNNs) and Recurrent Neural Networks (RNNs) handle real-time lip-sync. This allows for faster, scalable dubbing without compromising quality[6]	• Reduced production time and costs • Accurate multilingual dubbing • Improved accessibility for global audiences
AI-generated games	AI powers procedural content generation in gaming, allowing developers to create expansive, explorable game worlds. Techniques like Perlin noise and Voronoi diagrams ensure no two worlds are alike. AI-driven narrative generation allows players to create unique adventures with every playthrough. Reinforcement learning enhances gameplay by adjusting difficulty based on player behaviour, creating adaptive, real-time responses and unique game experiences.[7]	• Infinite replayability • Enhanced player engagement through real-time adaptation • Personalised gaming experiences

[6] Automating Multilingual Video Dubbing Using Deep Learning and Audio Synthesis, International Journal for Multidisciplinary Research, 2024
[7] Getgud.io Leveraging AI for Procedural Content Generation in Game, 2024

3.3 Technology sector use cases

Use Case	Description and Technical Elements	Impact
AI-powered software development	AI is revolutionising software development by accelerating coding processes through various tools, which can generate code based on natural language prompts. Large Language Models (LLMs) and advanced pattern recognition enable real-time error detection and debugging. Additionally, Neural Machine Translation (NMT) can modernise legacy codebases, improving code readability and maintainability. By automating repetitive tasks, developers can focus on more complex problem-solving activities.[8]	• Accelerated development cycles • Reduced debugging time • Enhanced code quality and developer productivity
AI-driven cloud capacity planning	AI optimises cloud capacity planning by predicting future demand using predictive analytics techniques like linear regression and decision trees. Reinforcement learning models continuously adapt resource allocation based on real-time usage patterns. These models enable cloud infrastructure to dynamically scale resources during peak demand and de-allocate them when not needed, thus avoiding over-provisioning and minimising costs. This advanced approach ensures high availability, optimal performance, and a substantial reduction in cloud infrastructure costs.[9]	• Reduction in cloud infrastructure costs • Optimized resource allocation • Improved RoI on cloud investments



[8] Neural machine translation vs large language models: Are you choosing the right AI tool for the job, RWS, 2024
[9] Artificial Intelligence-Driven Predictive Analytics for Cloud Capacity Planning, Iconic Research And Engineering Journals, 2023

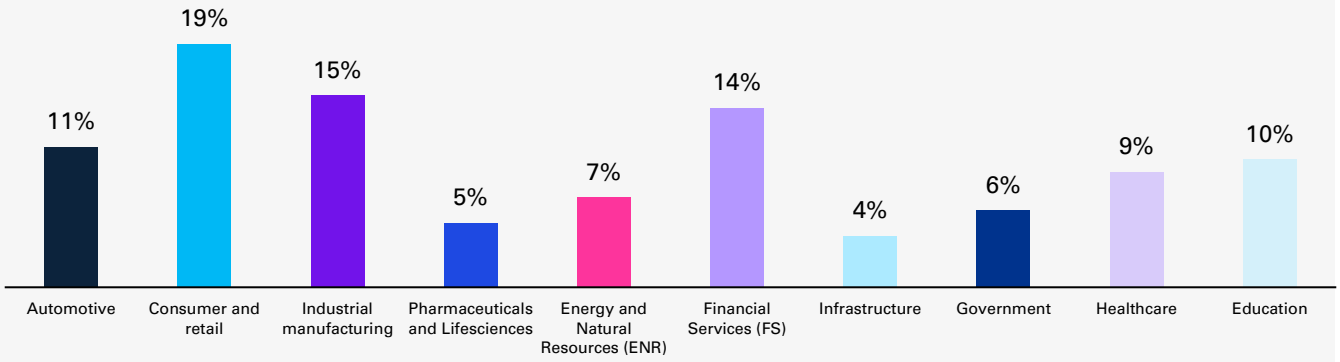
Chapter 4

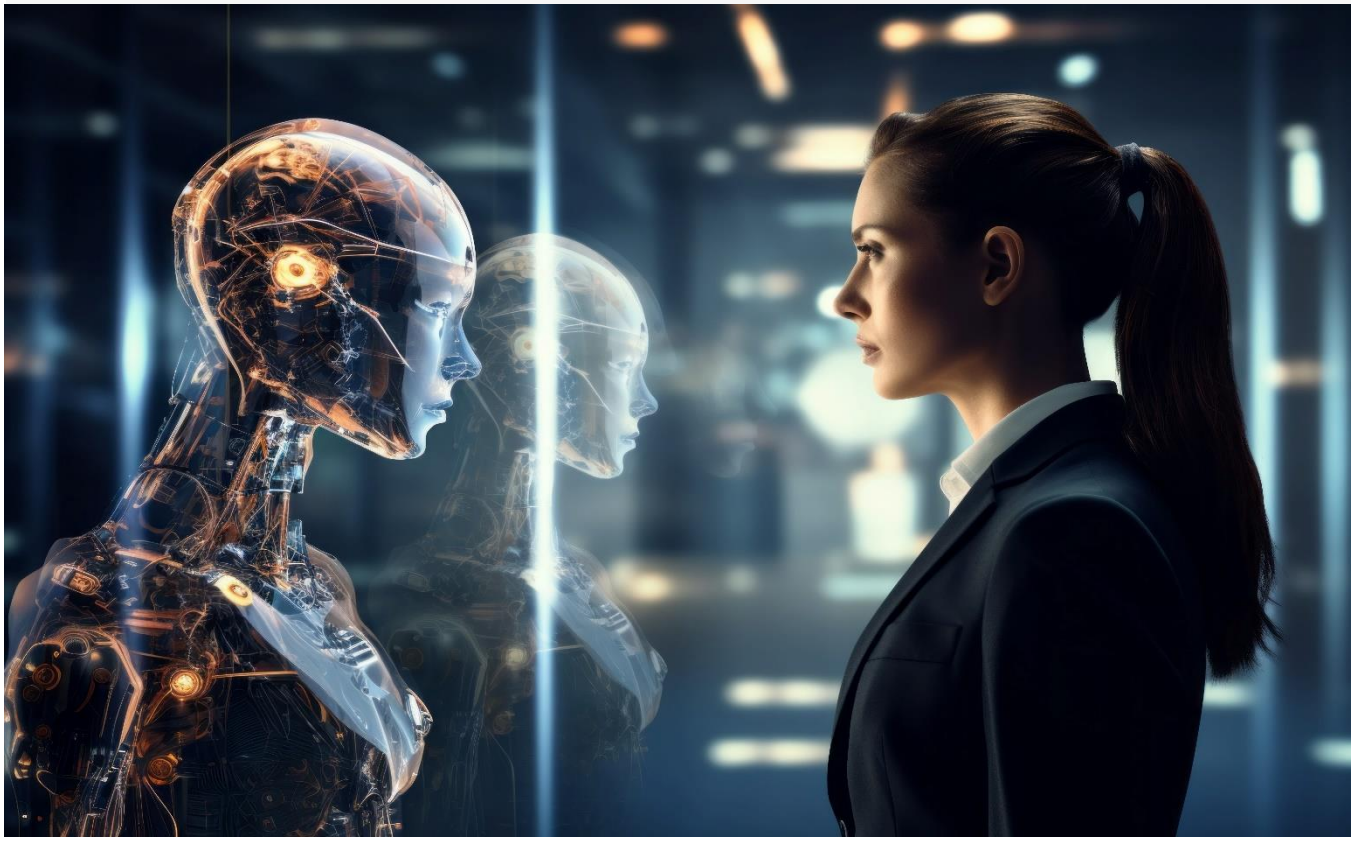
TMT enabling AI across industries

4.1 Diverse sectors embrace AI, Consumer & Retail, Manufacturing and Financial Services at the forefront

Our survey highlighted the sectors witnessing the highest AI adoption rates. Consumer and retail sectors are leading the pack with an adoption rate of 19 per cent, closely tailed by industrial manufacturing at 15 per cent and financial services at 14 per cent. The automotive and healthcare sectors are also experiencing considerable AI adoption at 11 per cent and 9 per cent, respectively. The education sector, with an adoption rate of 10 per cent, is increasingly leveraging AI to enhance personalized learning and to streamline administrative processes.

Sectors witnessing highest adoption rates

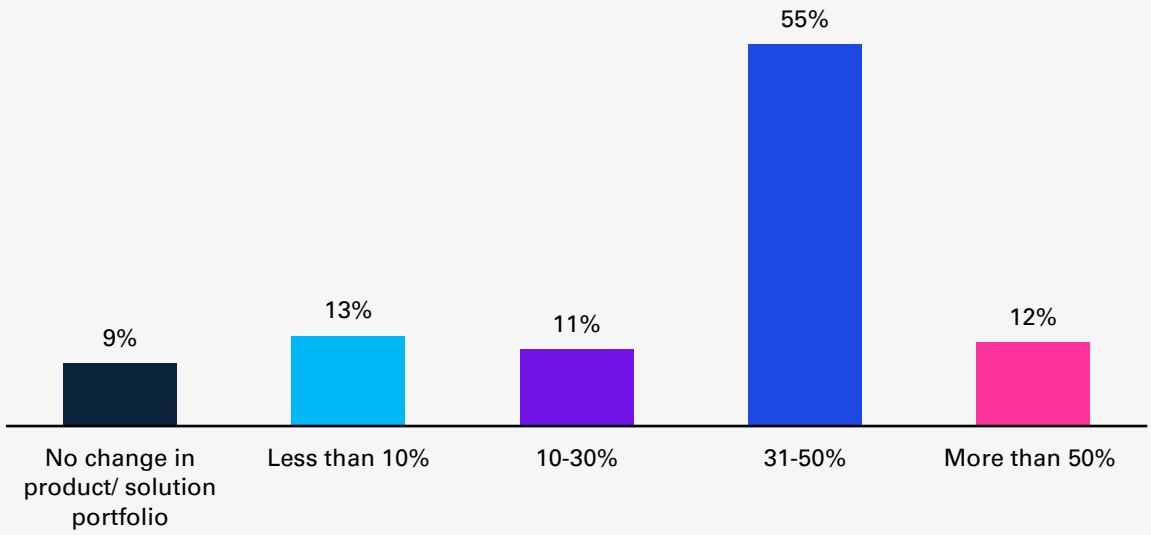




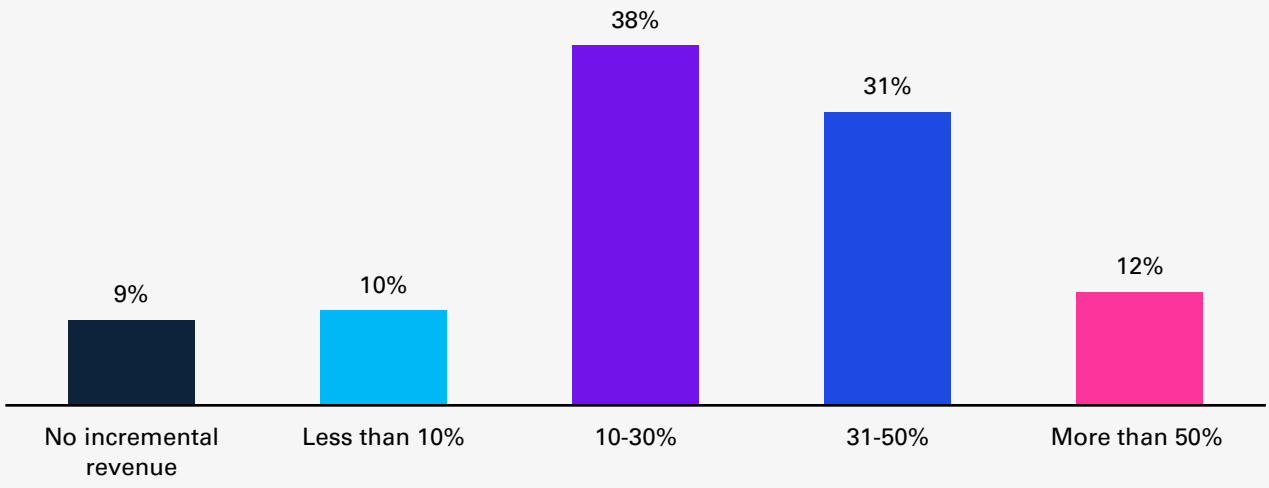
AI's impact on TMT is beyond just internal transformation

AI-driven solutions are transforming various sectors as more organisation's increasingly incorporate AI into their product and solution portfolios. As per the survey results, 55 per cent of organisation's predict that 31-50 per cent of their product or solution portfolio will be AI-led in the foreseeable future. Meanwhile, 12 per cent envision that AI will influence more than half of their portfolio. These figures underline the strategic emphasis that companies are placing on AI technologies. They are looking to enhance innovation and secure a competitive edge.

Percentage of product/solution portfolio is going to be AI-led



Incremental % of revenue expected to be generated by AI-led customer offerings



Chapter 5

Navigating the path to Responsible AI

The necessity for a comprehensive framework that oversees the responsible development and deployment of AI is increasing as it becomes more essential to industries. AI provides unparalleled innovations and efficiencies; however, it also introduces risks such as bias, data misuse, lack of transparency, and ethical challenges. It is imperative to establish ethical and accountable AI practices, particularly in industries that are deploying AI at a large scale.

5.1 Understanding Responsible AI

The development of AI systems must adhere to ethical, equitable, and transparent principles, ensuring the implementation of responsible AI. This involves key areas such as data privacy, accountability, explainability, and fairness. AI-driven processes, whether used for consumer interactions, decision-making, or content generation, must align with societal values. Fairness and bias mitigation are critical, Active efforts to mitigate bias are essential throughout the AI lifecycle, from development to post-deployment.

Data privacy and security are also paramount, as AI systems process vast amounts of sensitive data. organisation's must comply with regulations like India's Digital Personal Data Protection Act (DPDP) to safeguard privacy and prevent misuse. Finally, accountability is crucial—clear lines of responsibility must be established to address AI system errors, biases, or negative impacts, along with mechanisms to resolve any issues that arise [10,11,12].

5.2 Challenges in Responsible AI implementation

Bias in AI systems

Discriminatory practices may result from biases that develop during data collection, model training, or deployment. This presents legal and reputational risks, particularly in industries such as finance and customer service. In India, AI systems must be sensitive to cultural and linguistic diversity to ensure fair treatment across demographics [12].

Ensuring transparency and explainability

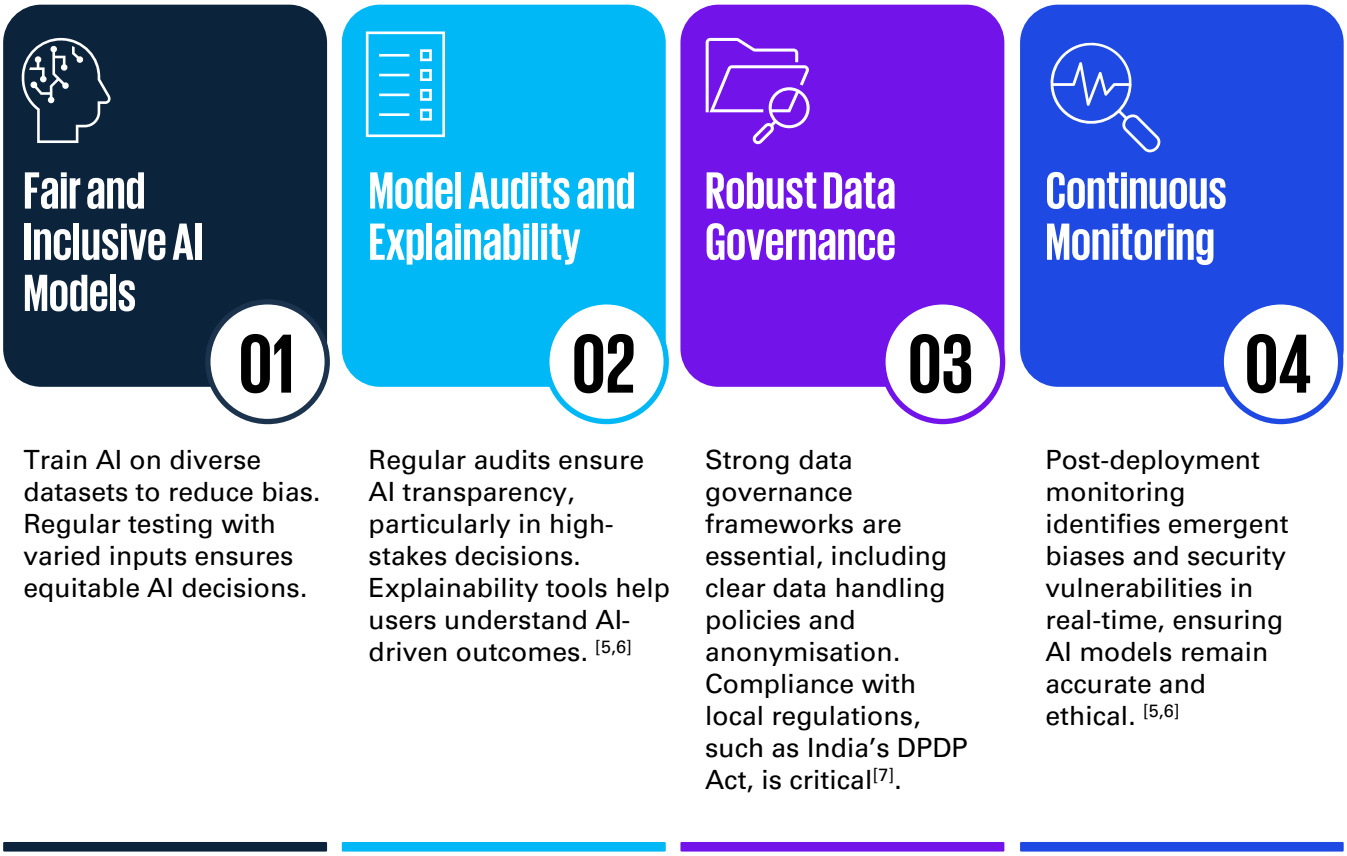
Complex AI models, particularly deep learning systems, can often be opaque. Transparency in decision-making is particularly important in high-stakes industries such as finance and telecom, where explainability tools are crucial (e.g., loan approvals or credit assessments). [10,11]

Ethical data use and privacy

The privacy and security of AI are at risk due to its dependence on a vast amount of data. The Digital Personal Data Protection Act (DPDP) Act of India underscores the importance of responsible data management, demanding that AI systems secure personal data and utilise it in a transparent manner [12]

[10] Responsible AI and the challenge of AI risk, KPMG in the US, 2023
[11] The flip side of generative AI: Challenges and risks around responsible use, KPMG in the US, 2023
[12] Generative AI: value, risk and regulation, KPMG in India, 2023

5.3 Best practices for Responsible AI



5.4 TRAI's recommendations for AI governance

India's Telecom Regulatory Authority of India (TRAI) emphasizes a regulatory framework for AI governance, particularly in telecommunications. TRAI proposes:

- Establishing an AI and Data Authority of India (AIDAI) to oversee AI regulations and ensure responsible development.
- Categorising AI use cases by risk level, with stringent legal obligations for high-risk applications that impact human lives.
- Developing ethical codes for AI use in public and private sectors, focusing on data privacy, cybersecurity, and intellectual property.

TRAI advocates for multi-stakeholder collaboration through a Multi-Stakeholder Body (MSB), consisting of industry, government, legal experts, and academics, to align India's AI governance with evolving global standards.

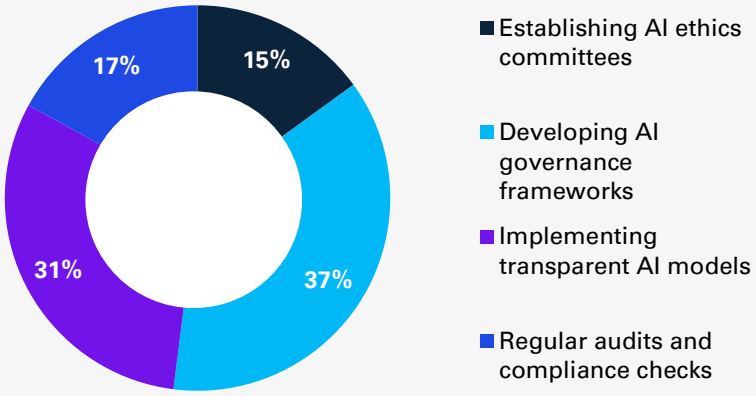
By prioritising responsible AI, companies can build trust, mitigate risks, and unlock AI's full potential for societal and economic benefit. TMT firms, as enablers of AI adoption, are key to implementing best practices and ensuring the ethical deployment of AI technologies [13].

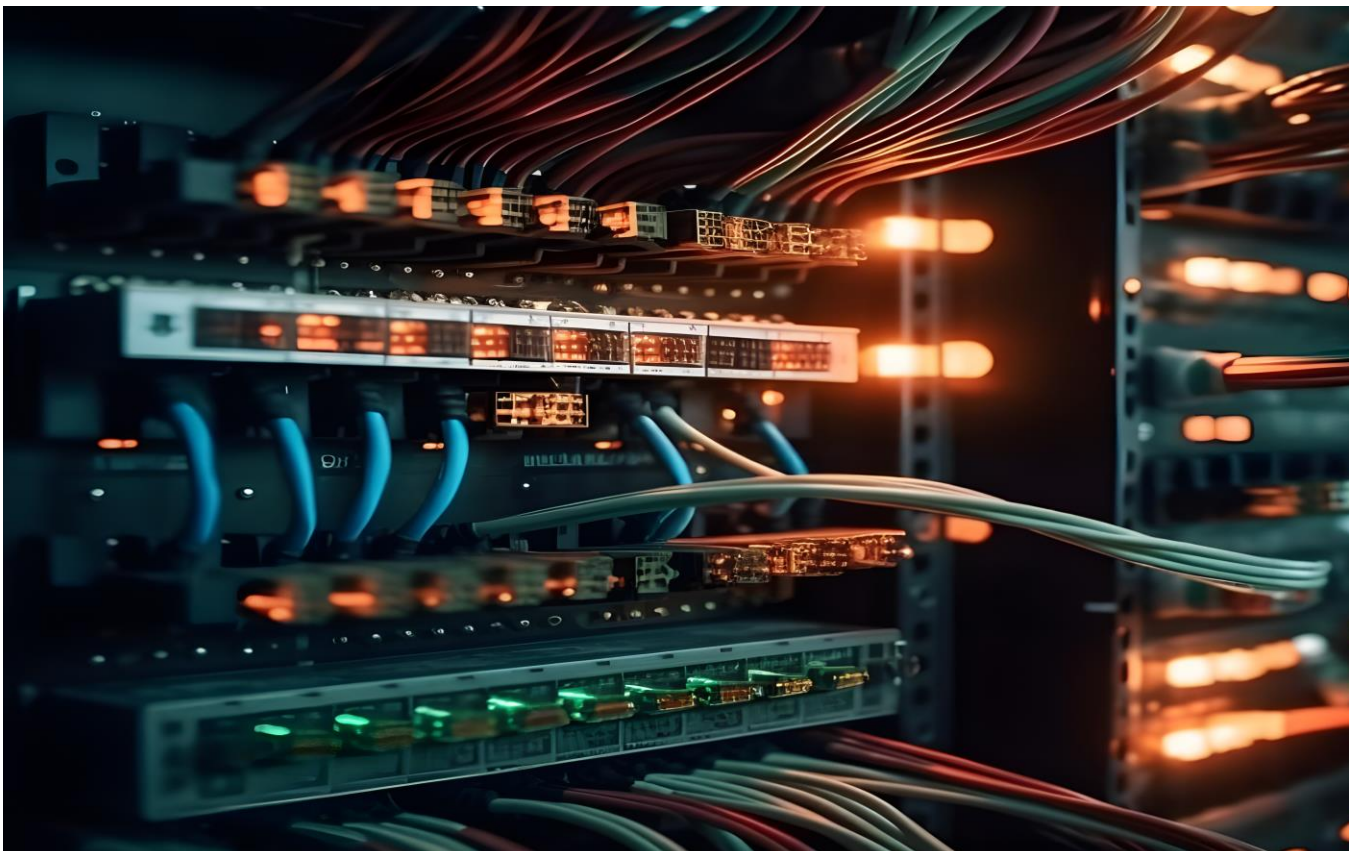
[13] Recommendations on Leveraging Artificial Intelligence and Big Data in Telecommunication Sector – TRAI, 2023

5.5 Growing focus on AI ethics and governance

From a CXO's perspective, the insights into responsible AI and its challenges focus heavily on governance, ethical concerns, and practical deployment challenges. The data implies that a majority of companies (37 per cent) are addressing governance by developing AI governance frameworks, while 31 per cent are focused on regular audits and compliance checks. This indicates that companies are moving toward establishing transparent models of accountability to manage AI's ethical risks. Only a smaller portion 15 per cent have established AI ethics committees, pointing to the need for deeper structural integration of ethical oversight.

How are companies addressing AI governance and ethical concerns





The way forward

As the country advances towards the next stage of evolution with AI, TMT sector has a unique opportunity to not only be the torchbearer of AI adoption but also the enabler for other sectors to reap the advantages of AI. Summarised below are some of the recommendations that can further turbocharge AI adoption in the sector:

Recommendations for TMT Industry

- **Strengthen AI infrastructure**: Companies need to direct investments towards scalable infrastructure, including 5G, cloud computing, and edge technologies, to bolster AI solutions. Particularly, telecom companies should emphasize AI-driven network automation and optimisation for enhanced service reliability and cost reduction
- **Foster cross-Sector AI solutions**: The TMT sector should spearhead AI adoption in related industries. Telecom and tech firms have the opportunity to collaborate with sectors such as healthcare, FS, and manufacturing, offering AI-based services like predictive analytics, customer engagement, and fraud detection tools.
- **Promote cross-sector AI partnerships**: In the rapidly evolving TMT landscape, collaborations are crucial for fully harnessing the power of AI. Through partnerships with specialised AI providers, TMT companies can tap into advanced technology and expertise, thereby accelerating AI adoption and fostering innovation. These alliances enable TMT firms to utilise external AI capabilities, minimise development costs, and expedite the time-to-market for AI-driven solutions.
- **Create a robust AI talent pipeline**: Industry players must emphasize upskilling and training initiatives. Forming collaborations with universities and research institutions to develop AI curricula is a crucial step, most notably for cultivating talent in areas such as network automation, AI-based media content creation, and cybersecurity.
- **Adopt Responsible AI practices:** The TMT sector must emphasize establishing responsible AI frameworks that ensure fairness, transparency, and accountability across operations. For instance, AI-driven customer acquisition and churn prediction models in telecom should undergo regular audits to prevent any form of bias.
- **Transitioning from general LLM's to domain specific LLM's -** TMT companies should consider transitioning from general-purpose LLMs to domain-specific LLMs to better address the unique challenges and jargon of their industries. By focusing on domain-specific data, these models can offer more precise insights, improve operational efficiencies, and enhance customer experiences. This transition will enable more effective AI applications ultimately driving better performance and value in the sector.

Recommendations for Policymakers:

- **Establish clear AI governance frameworks**: Regulatory frameworks that tread a balance between innovation and responsible AI usage should be developed by governments. This should include defining ethical standards, mandating transparency in AI systems, and enforcing robust data privacy laws.
- **Promote AI research and development:** Policymakers must offer incentives for AI research, particularly in sectors like telecommunications and technology where AI can spur national growth. Investing in research for AI will help ensure the TMT sector retains a competitive edge on the global stage.
- **Encourage public-private partnerships:** Strengthening collaborations between governments and the private sector is paramount to promoting AI adoption. Public-Private Partnerships (PPPs) can expedite the use of AI in critical sectors such as network infrastructure and public service delivery, thereby encouraging cross-sector innovation.

- **Expand the national AI Training programs**: With several programs already initiated by the Indian government, such as IndiaAI, to help bridge the AI skills gap, it's important for policymakers to invest in education and training initiatives. Collaborating with TMT companies to build a workforce skilled in AI technologies would be an effective approach. These initiatives should particularly target telecom engineers, cloud specialists, and data scientists.

Enhanced inter-ministerial and inter state collaboration

Inter-state and inter-ministry collaborations have played a pivotal role in advancing various sectors across India. Notable examples such as the Goods and Services Tax (GST) Council and the Gati Shakti initiative demonstrate how coordinated frameworks can yield significant benefits nationwide.

For effective collaboration in enhancing the TMT sector, focusing particularly on advancements in 6G and AI, a structured roadmap is crucial. To achieve this, the formation of a national committee that brings together ministries and state representatives could be beneficial. The committee's role would be to identify priority areas for collaboration and focus on emerging technologies crucial to the country's growth.

Setting up regional innovation hubs could provide a platform for states, private sector players, academia, and research institutions to collaborate on the development of smart solutions. These hubs could incubate local innovations, encouraging their scalability at a national level.

Knowledge-sharing initiatives between states, such as workshops, hackathons, and joint research grants, should be fostered to address specific challenges in the TMT sector. This collaborative problem-solving approach will allow states at different stages of technological maturity to advance together.

By integrating inter-state and inter-ministry collaborations in the TMT sector and focusing on 6G and AI technologies, India could pave the path to inclusive growth and technological leadership. Leveraging collective strengths and resources will ensure that the benefits of advanced technologies permeate all levels of society. As India embarks on this digital transformation journey, a coordinated and cooperative approach will be crucial in navigating the complexities of the evolving digital landscape.

About the Survey

This survey was conducted to explore the current state of AI adoption across the TMT industry, focusing on the maturity of AI initiatives, the challenges faced by organisation's, and the impact of AI on business outcomes. The goal was to provide a broad understanding of how telecom, media and tech companies are integrating AI into their operations, the expected returns on investment, and the key factors driving or hindering AI implementation.

Methodology & Participants

The survey was conducted online, targeting senior executives, including CTOs, CIOs, CDOs and other key decision-makers from companies across multiple industries. The participants were selected based on their involvement in AI initiatives within their organisation's, ensuring that the insights gathered were relevant and reflective of the current industry landscape.

The survey consisted of a structured questionnaire with both quantitative and qualitative questions. Participants were asked to provide specific details about their organisation’s AI maturity, budget allocations, implementation challenges, and the impact of AI on their product portfolios and revenue streams. The questions were designed to capture a broad range of perspectives, from organisation's just beginning their AI journey to those that have fully integrated AI into their operations.

This survey gathered insights from 123 respondents across key sectors within the TMT industry. The respondents represent a diverse cross-section of the industry, providing a broad view of AI adoption trends and challenges. The participant split included 32 per cent from telecommunications companies, 21 per cent from media organisation's, and 47 per cent from technology firms. The cohort comprised a broad range of companies, including Telecom Service Providers (TSPs), Internet Service Providers (ISPs), telecom infrastructure providers, tech startups, Original Equipment Manufacturers (OEMs), software companies, telecom equipment manufacturers, Information Technology enabled Services (ITeS) companies, Media broadcasting companies and advertising companies.

The data collected from the survey was rigorously analysed to identify key trends, common challenges, and successful strategies in AI adoption. Quantitative responses were aggregated and analysed to determine the distribution of AI maturity, budget allocations, and expected RoI across industries. Qualitative responses were carefully reviewed to extract insights into the specific challenges and benefits experienced by organisation's in their AI implementations.

The results were complemented by a few physical interviews to get qualitative inputs on level of AI adoption across the industry. This comprehensive approach allowed for a robust analysis of the current state of AI adoption, providing actionable insights for organisation's looking to enhance their AI strategies and achieve greater returns on their AI investments.

Completion

The findings from this survey are intended to guide organisation's in their AI adoption journey, offering a clear understanding of the landscape and practical recommendations for overcoming challenges and maximising the benefits of AI.

This report, based on the survey findings, aims to serve as a valuable resource for business leaders, helping them navigate the complexities of AI adoption and harness the full potential of this transformative technology.

Glossary

Abbreviation	Definitions
AI	Artificial Intelligence
AIDAI	Artificial Intelligence and Data Authority of India
CDO	Chief Data Officer
CEO	Chief Executive Officer
CIO	Chief Information Officer
CNN	Convolutional Neural Networks
CoEs	Center of Excellences
CTO	Chief Technology Officer
CX	Customer Experience
DPDPA	Digital Personal Data Protection Act
ENR	Energy and Natural Resources
FS	Financial Services
GPAI	Global Partnership on AI
GST	Goods and Services Tax
HR	Human Resources
IMC	India Mobile Congress
IoT	Internet of Things
ISP	Internet Services Providers
IT	Information Technology
ITeS	Information Technology enabled Services
ITU	International Telecommunication Union
LLM	Large Language Models

Glossary

Abbreviation	Definitions
LSTM	Long Short-Term Memory
ML	Machine Learning
MSB	Multi-Stakeholder Body
MTTR	Improved Mean Time to Repair
NLP	Natural Language Processing
NM ICPS	The National Mission on Interdisciplinary Cyber Physical Systems
NMT	Neural Machine Translation
OEM	Original Equipment Manufacturers
PLI	Production Linked Incentive
PoC	Proof of Concept
PPPs	Public Private Partnerships
QoS	Quality of Service
RNN	Recurrent Neural Networks
ROI	Return on Investment
RPA	Robotic Process Automation
SIM	Subscriber Identity Module
TMT	Technology, Media and Telecom
TRAI	Telecom Regulatory Authority of India
TSP	Telecom Service Providers
WTSA	World Telecommunication Standardisation Assembly

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