

Intellectual Capital

At Airtel, we are shaping a future-ready, digital-first brand by leveraging our intellectual capital, which is anchored in a highly skilled workforce, a technology-driven mindset and a robust, three-layered digital ecosystem. Innovation remains central to our strategy as we scale and transform our digital platforms into next-generation AI-powered platforms that unlock capabilities across our sales, operations and customer experience ecosystems. We are building intelligent customer experiences, automating processes and driving sustainable, innovation-led growth. Strategic partnerships further strengthen our ability to deliver value and maintain leadership in the AI era.

SDGs impacted



Material topics included

- Information security and customer data privacy
- Climate change, energy efficiency and emission reduction
- Enhancing customer experience and satisfaction
- Digital inclusion and enhanced access to ICT
- Innovation of products and services

BRSR Principle

Principle 2

Principle 9

Digital Pillars that Power Innovation at Airtel

Our digital excellence is enshrined in a robust, three-layered digital business model designed to deliver secure, reliable and innovative solutions for individuals and businesses alike. Our digital pillars form the foundation of our transformation journey and delivering measurable, long-term value for customers, partners and stakeholders.

Three-layered digital business model

Digital infrastructure

This foundational layer forms the backbone of all digital services, ensuring high availability, security and scalability. Our Converged Data Engine (CDE) is a part of this layer, built on deep telecom-specific data models to automate data ingestion, enforce governance and deliver real-time insights. It runs on the modular Air Cloud infrastructure. We have developed Airtel Cloud for our enterprise customers, offering them high-performance Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) at an optimised total cost of ownership (TCO).

Digital experience

The experience layer is designed to deliver seamless, intuitive customer journeys across our omnichannel ecosystem. The CDE aggregates signals from our network and channels to enable intelligent recommendations based on customer context and interactions. It powers the customer lifecycle management (CLM), enabling us to identify the right moments to engage our customers.

The integration of advanced analytics across network layers enables continuous optimisation and proactive engagement, resulting in higher ARPU and reduced churn. The B2C digital portfolio, including Airtel Thanks and Xstream, reach 165 million monthly active users (MAU).

Digital services

This layer encompasses a suite of digital platforms and solutions, including Airtel Thanks, Airtel IQ CPaaS, Xstream and Airtel Payments Bank, delivering secure, omnichannel experiences to our monthly active users. These platforms are supported by in-house tools and continuous innovation, such as Airtel IQ for Cloud-based communications, IoT, SD-WAN, Cloud and Airtel Finance, all built internally to align with Digital India's ambitions.

This powerful suite of digital platforms helps Airtel deliver seamless, secure and intuitive experiences across channels.

We have also developed in-house tools such as Airtel Cognitive Solutions (ACS), Customer Experience Index (CEI), Mutual NBR Identification and Broadband & Field Operations to enhance network efficiency, enable proactive complaint resolution and optimise cell relations, all of which improve overall operational performance and customer experience.



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Platform-led approach

A platform-led strategy is central to its ability to innovate and drive scalable growth. We have shifted from a product-based to a platform-based architecture, developing six key platforms: Channels, Buy, Bill, Pay, Serve and CDE to power the entire customer lifecycle in a cost-conscious, high-demand environment.

These platforms are now evolving with embedded AI to enable advanced analytics, optimise performance, enhance service quality and reduce churn. Central to this model is the strategic use of data science and digital tools. This approach is already delivering strong results, with significant improvements in customer engagement, convenience and satisfaction as demonstrated by the impact below.

Delivering measurable impact

The digital pillars collectively drive deep customer engagement with 165 million monthly active users across digital channels. Our Net Promoter Score (NPS) increased by 25 points after the digital transformation and customer churn decreased by 18%. Operational efficiency improved, with a 60% reduction in call centre volume and a 40% decrease in customer service operational costs. Continuous innovation and a digital-first mindset have resulted in industry-best ARPU, higher productivity and a secure, customer-centric digital ecosystem.

Enabling Digital Growth and Innovation with AI at the Core

Digital innovation, powered by AI, is a core pillar of our strategy. We offer a robust suite of customised digital solutions, including Airtel Advantage, Airtel IQ (CPaaS) and advanced IoT applications, designed to meet the evolving needs of both consumers and enterprises. These offerings are backed by our strong data infrastructure, advanced AI capabilities and deep collaboration with enterprise customers to co-develop scalable solutions.

Exporting innovation: Built by a Telco, for Telcos

The success and maturity of our internally-developed platforms have given us a new strategic direction, exporting our technology to other telecommunications companies globally. This 'Built by a Telco, for Telcos' model offers a unique and powerful value proposition. Given that our solutions have been created to solve the complex challenges of a large-scale operator like Airtel, they are inherently practical, scalable and perfectly attuned to the needs of other telcos.

We are actively executing on this vision, creating a new revenue stream and positioning our in-house talent as a global force in telecom innovation. This strategy transforms our internal R&D from a cost centre into a strategic asset, driving both domestic excellence and global growth.

Enterprise and Cloud solutions to support transformation

Airtel Cloud

We have developed comprehensive Cloud platform to deliver Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) solutions. This platform extends our telco-grade scale, speed, security and cost-efficiency to enterprise customers. It is being rolled out across four Availability Zones (AZ) in two regions, using a multi-AZ architecture for high availability and robust security with AES-256 encryption at rest and Secure Sockets Layer (SSL) in transit.

This intelligent infrastructure is being built with sustainability at its core. We use 31% renewable energy to power our data centres and are integrating energy-efficient cooling systems to support future AI workloads. This ensures we minimise our environmental footprint while meeting the expectations of today's eco-conscious customers.

IoT analytics

Our IoT analytics platform unlocks significant value from connected devices:

- The platform provides deep performance insights and diagnostics for over 50 million SIMs, supporting utilities and other projects at scale
- Additionally, it also enables high-value capabilities like location insights

AI-driven partnerships

A deep partnership with Google Cloud enhances our ability to deliver next-generation services to over 2,000 large enterprises and one million emerging businesses. This collaboration focuses on co-creating AI/ML-powered solutions, including:

- Geospatial analytics
- Multilingual voice analytics
- Intelligent marketing tools for segmentation and predictive targeting

Digitisation and AI-driven digital platforms have enabled us to operate more sustainably by significantly reducing physical waste. With 100% digital onboarding for customers and partners, we have cut down paper use, lowering our carbon footprint and ensuring more secure and efficient document management. Together, these innovations position us at the forefront of AI-led innovation, driving digital growth while building a secure, intelligent and customer-centric digital ecosystem.

Protecting our customers

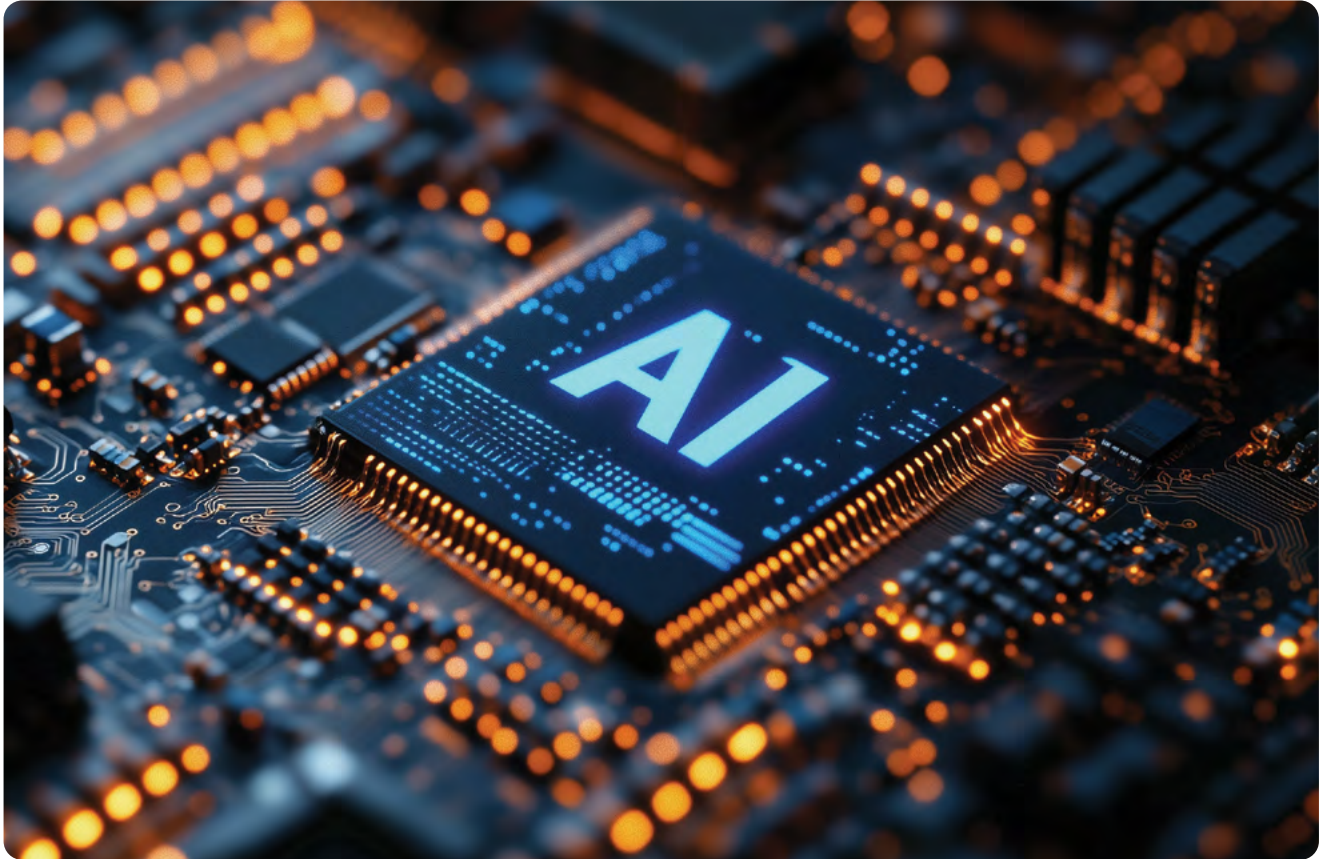
We leverage AI to create a more intelligent, secure and efficient network. In FY 2024-25, we deployed India's first network-based, AI-powered SPAM detection system across our customer base, alerting customers of unwanted spam calls and messages using real-time network intelligence. Today, we process over one trillion records daily to identify malicious activity. Within just six months of launch, the system flagged 26.2 billion spam calls and 1.4 billion spam SMSs. Every day, it identifies over one million spammers, reinforcing our commitment to protecting our customers.

1,600

SPAM calls identified per second

1 Mn

Unique spammers identified



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Driving Innovation through Our Own Digital Talent

Our intellectual capital is fundamentally powered by our people. A strategic shift from outsourced technology development to building a formidable in-house capability has been key to our evolution as a digital-first technology company. We have a world-class digital talent pool of engineers, product managers, designers, data scientists and data analysts.

2,840+

Digital talent base
(▲ 24% since FY 2021-22)

To power our transformation as a digital-first company, we have rapidly scaled our in-house digital talent pool by establishing dedicated technology hubs in Gurugram, Noida and Pune. These centres of excellence attract top engineering talent, including graduates from premier institutes like the IITs and NITs, with specialisation in critical domains such as Data Science, Machine Learning, Product Management, Design, Analytics and DevOps. This strategic investment in people has created a vibrant ecosystem of innovation, allowing us to build and iterate with speed, agility and deep domain knowledge.

Driving success with platforms developed in-house

Our exceptional in-house talent is the force behind our suite of market-leading digital platforms and products, most of which were built internally from the ground up. This includes:

- **Airtel IQ:** A fully in-house developed Cloud communications platform.
- **Airtel Cloud:** A comprehensive IaaS and PaaS offering.
- **Airtel Advantage:** A unified platform for global interconnect solutions.
- **Airtel Works:** A comprehensive workforce and task management platform used by field sales and engineering teams.



Research, Development and Intellectual Property Advancements

We drive technological advancement through sustained innovation, with several key capabilities and solutions currently under the patent filing process. These patent-backed innovations reflect our commitment to solving complex industry challenges through cutting-edge technology and a strong focus on research, development and intellectual property.

Patent-pending innovations

Our dedication to R&D has resulted in several proprietary technologies designed to enhance efficiency, safety and security:

- **Voice 2.0:** This foundational system for Cloud telephony powers Airtel IQ, enhances call processing efficiency and load management for high-volume enterprises. It is designed to minimise downtime and enable rapid recovery from call failures.
- **Buffering and throttling engine:** This engine optimises enterprise communications over OTT messaging channels, ensuring reliable and efficient message delivery.
- **Real-time EMF detection system:** To protect field teams working near high-voltage equipment, we have developed advanced Gated Recurrent Units (GRU)-based models to detect electromagnetic anomalies in real time, classifying potential hazards to warn our engineers and field teams.
- **Task allocation system:** Leveraging network intelligence, this system provides accurate, real-time demand forecasting. This enables smarter workforce planning, optimised resource allocation and improved operational efficiency.
- **Spoof detection system:** This system enhances security by improving face authentication with a novel encoder-classifier architecture. It provides robust liveness detection, effectively addressing challenges posed by previously unseen spoofing methods.

Strategic Alliances for Scalable Growth

Our digital prowess is further strengthened by strategic alliances with leading global and domestic partners. Notable collaborations include a long-term partnership with Google Cloud to accelerate Cloud adoption and deploy GenAI solutions and a multi-year managed services agreement with Ericsson for 5G infrastructure and intent-based operations. Partnership with Cisco has enabled the launch of Airtel SD-Branch, a Cloud-based, end-to-end-managed network solution for enterprises. Our alliance with Bajaj Finance is helping create one of India's largest digital financial services platforms.

Ericsson, Volvo Group and Airtel launch R&D partnership to drive industrial Metaverse

Ericsson, Volvo Group and Bharti Airtel have formed a research partnership to explore XR, Digital Twin and AI technologies in manufacturing, powered by 5G and 5G Advanced. The collaboration aims to accelerate Industry 4.0 and 5.0 adoption by enabling real-time process optimisation, immersive training and human-machine collaboration.

The R&D will be conducted at Volvo Group's Bangalore factory and R&D centre, focusing on Industrial Metaverse use cases. Our advanced 5G network will support low-latency simulations, virtual prototyping and disruption-free workflow testing.

This initiative not only enhances operational efficiency but also lays the foundation for future-ready networks and new revenue models in smart manufacturing.

We collaborate, engage and deliver solutions that drive growth across industries like Automotive, Banking and Financial Services, Energy, IT/ITeS, Logistics and Distribution, Manufacturing, Media and Entertainment, E-commerce, Telecommunications and Travel.

Partners such as Ericsson, Nokia Siemens Networks (NSN), Huawei, Cisco, IBM, Avaya, ZTE, Google, Apple, Bajaj Finance, Zscaler, Fortinet, Vonage, Volvo and Kia India play a vital role in accelerating innovation and enabling us to deliver next-generation solutions in connectivity, cybersecurity, Cloud, IoT and AI. These collaborations underscore our commitment to co-creating scalable, sustainable technologies that drive customer value and mutual growth.



Data Security and Cybersecurity

We place the utmost importance on safeguarding personal and sensitive data belonging to our customers, employees and partners. We uphold the highest standards of data privacy and security through robust policies aligned with ISO 27001:2022 and ISO 22301:2019. Our robust privacy and security framework, governed by the Chief Information Security Officer (CISO) and overseen by the Risk Management Committee, ensures compliance with evolving regulations and industry standards. Our Privacy Policy emphasises customer consent, offers data preference controls and is regularly updated to meet evolving regulations.

Our Privacy Policy can be accessed at this [link](#).

Our security framework includes the Bharti Airtel Information Security Policy ('BISP') and the Consequence Management. Standard, both reviewed annually and

backed by a zero-tolerance approach to breaches. We implement a comprehensive, multi-layered security strategy that includes Endpoint Detection and Response (EDR), Data Loss Prevention (DLP), continuous 24x7x365 Security Operations Centre (SOC) monitoring with real-time SIEM and cloud security posture management. In addition, we conduct regular vulnerability assessments, penetration testing and maintain robust application security processes.

We foster a strong security culture through awareness programs, targeted training and DevSecOps adoption. Active participation in forums like NullCon and Data Security Council of India (DSCI), along with bug bounty initiatives, further strengthens our threat response. Any non-compliance is promptly investigated and addressed.