



Tech Trends 2025 – India perspective

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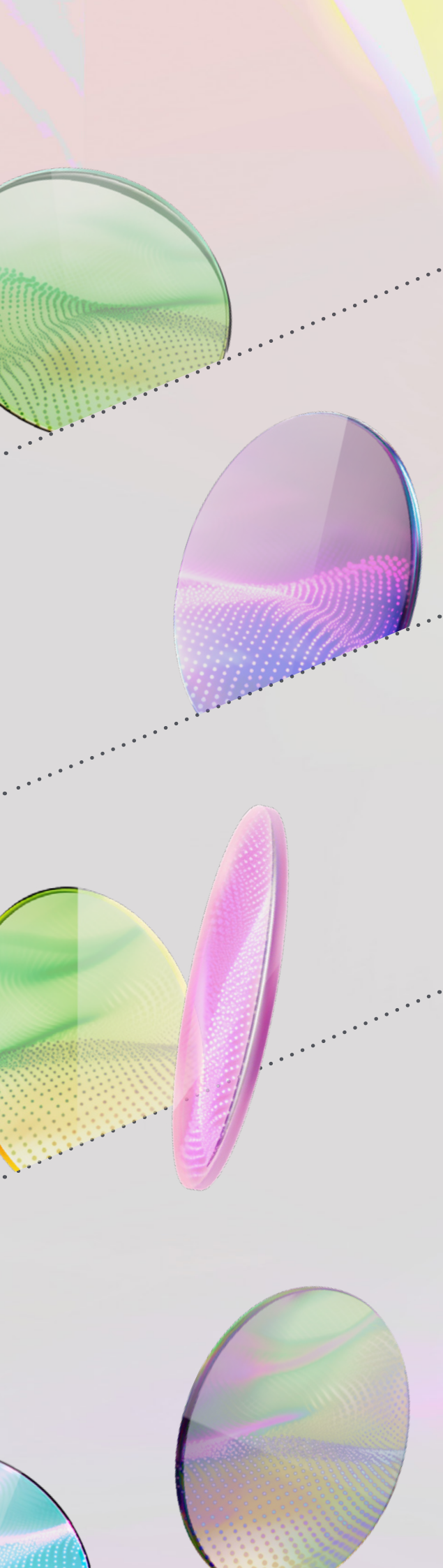
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Introduction

The "Tech Trends 2025" report marks a transformative moment for India, where cutting-edge technologies—powered by AI—fuel unprecedented innovation, efficiency and societal change. With its vast potential, India is uniquely positioned to use AI and digital advancements to unlock sustainable growth, bridge regional divides and solidify itself as a global technology powerhouse. This shift is more than just a digital upgrade—it is a complete transformation of how we live, work and connect.

In today's world, technology is so seamlessly woven into our daily lives that we barely notice it. That is the world AI is building, which is closer than you think. It is not about more AI—it is about ubiquitous AI. Just like we no longer marvel at the light turning on or the invisible HTTP protocol that powers the internet, AI is quietly becoming a foundational part of our world.

We will not need to "use" AI. It is about AI that is everywhere, quietly working behind the scenes to make everything smarter, faster and more intuitive. We will experience it, and it will work smarter,

faster and more intuitively. AI is not just a tool of convenience—it is becoming the fabric of our lives. As it evolves, it will quietly power everything, from smart cities to healthcare solutions and logistics to education systems.

From the bustling streets of Mumbai to the quiet corners of rural India, AI is quietly driving progress, enhancing everything from healthcare and education to city infrastructure. It is revolutionising how we live, work and interact with the world, making things work better without us even realising it.

This year's Tech Trends report highlights how AI is becoming the foundation of nearly every emerging technological trend. AI acts as the backbone, enabling and accelerating breakthroughs across various industries. It is not just about AI in isolation—it is about how it drives a wave of innovation and fuels advancements in complementary technologies. In India, this integration and diffusion of AI is already taking root across the tech ecosystem, reshaping industries and paving the way for transformative change.

Figure 1

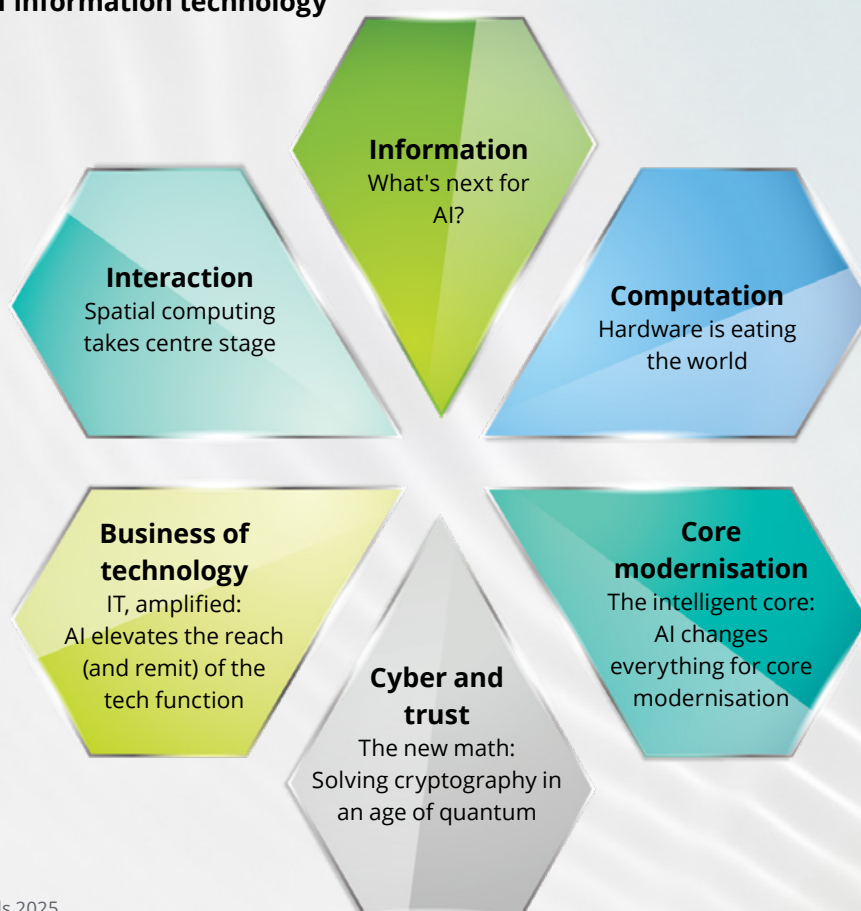
Six macro forces of information technology

Figure 1 Deloitte Tech Trends 2025

- **Spatial computing takes centre stage:** AI developments in India are set to enhance spatial computing simulations, paving the way for seamless, AI-powered spatial experiences. This will transform industries ranging from urban planning to healthcare and education, creating more immersive and intuitive digital environments.
- **What is next for AI?:** As AI evolves, Indian enterprises are shifting from large language models to smaller, more efficient ones, multimodal models, AI-based simulations and task-specific AI agents. This will lead to more personalised and context-aware solutions across fintech, healthcare and customer services.
- **Hardware is eating the world:** After years of software dominance, India is witnessing a hardware renaissance driven by AI's influence on computing chips. From the Internet of Things (IoT) to robotics, AI-powered hardware is transforming industries, enabling smarter devices and more efficient systems, creating new opportunities for innovation.
- **IT, amplified:** In India's thriving IT sector, AI is amplifying the capabilities of tech talent. It is increasingly applied to code generation, software testing and automation, reducing manual efforts and driving greater efficiency. This shift transforms how businesses approach IT, encouraging a move

from traditional virtualisation models towards more scalable and cost-effective AI-driven solutions.

- **The new math: Solving cryptography in the quantum age:** India faces rising cybersecurity threats, including AI-driven attacks and quantum risks. Proactively adopting quantum-safe encryption and stronger defences is essential to protect its digital future.
- **The intelligent core:** AI is reshaping core modernisation across India's public and private sectors. Core systems in government services, banking and telecom are becoming AI-first, enabling more efficient data sharing and smoother user experiences. However, these innovations are challenging, requiring complex architectural changes to ensure scalability, security and long-term sustainability.

Across India, AI is not just a trend—it is the powerful force weaving together technological advancements and driving India's growth as a global leader in innovation.

The future is now: AI's Impact on India's journey

India is not just preparing for the digital revolution but leading it. As AI continues to evolve, the country is poised to harness its full potential, creating a more innovative, more connected future for all. From bustling tech hubs to rural villages, AI will quietly power innovation, making governance more efficient, revolutionising transportation, enhancing healthcare access and transforming education. This AI-powered world will ensure that every Indian citizen, no matter where they live, can thrive in a future driven by smarter solutions.

India's strides in AI adoption are fuelled by strong government initiatives such as the IndiaAI mission, Digital India and AI for All, which are shaping the future of sectors like governance, healthcare and education while ensuring inclusivity for all. Ranked among the top five globally for AI start-up activity, India boasts a thriving IT, finance and healthcare ecosystem. In tandem, leading private companies invest heavily in AI research, collaborating with start-ups and using AI to revolutionise industries.

Inarguably, the spotlight is now on technology service providers. Amid this backdrop, Indian tech giants and nimble mid-scaled players are racing to harness the potential of AI, pouring investments into crafting innovative solutions. Micro, Small and Medium Enterprises (MSMEs) play a critical role as the engine of the Indian economy and stand at a crucial juncture in this era of rapid technological change. Integrating AI will help them to stay relevant and offer them a unique opportunity to unlock unprecedented growth, enhance productivity and fuel sustainable innovation.

Home to 1,800+ Global Capability Centres (GCCs), India has played a pivotal role in accelerating the next wave of technological revolution. Multinational companies set up R&D and innovation hubs across Indian cities, driving AI-powered solutions and pushing technological boundaries. Using its rich and diverse tech landscape, the country is nurturing localised AI innovations that address unique societal needs, including predictive

agriculture models and AI-powered healthcare diagnostics.

India must enhance its infrastructure—particularly high-performance computing and sustainable energy solutions—to accelerate growth while empowering its workforce through skill development and building ethical AI frameworks. With increased investments and continued innovation, India is set to scale its AI capabilities and lead the world in the next chapter of the digital revolution.

Trend 1

Spatial computing takes centre stage

In India, spatial computing, driven by AI and immersive technologies such as AR, VR and MR, is revolutionising retail, healthcare, education, and manufacturing industries. With a rapidly growing market, India's innovation and digital infrastructure drive localised, affordable solutions, positioning it as a global leader in this transformative field.

Spatial computing—a vision of now and beyond—is transforming industries worldwide. By seamlessly merging the physical and virtual worlds, it unlocks infinite possibilities. Whether through overlaying virtual elements onto the physical environment or immersing users in entirely virtual realms, spatial computing is reshaping how we design, collaborate and innovate.

Spatial computing represents the next significant leap in the evolution of computer technology, following Personal Computers (PCs) and mobile devices. Using advanced sensors, cameras and algorithms, spatial computing enables systems to perceive and interact with the physical environment. This technology shifts away from traditional input methods such as the mouse and keyboard, offering more intuitive and natural forms of interaction. One of its key features is the ability to seamlessly integrate digital content into the real world, allowing users to interact with information in their immediate surroundings. This opens up new possibilities for applications that go far beyond the confines of traditional screen-based interfaces, thus fundamentally transforming how we engage with technology.



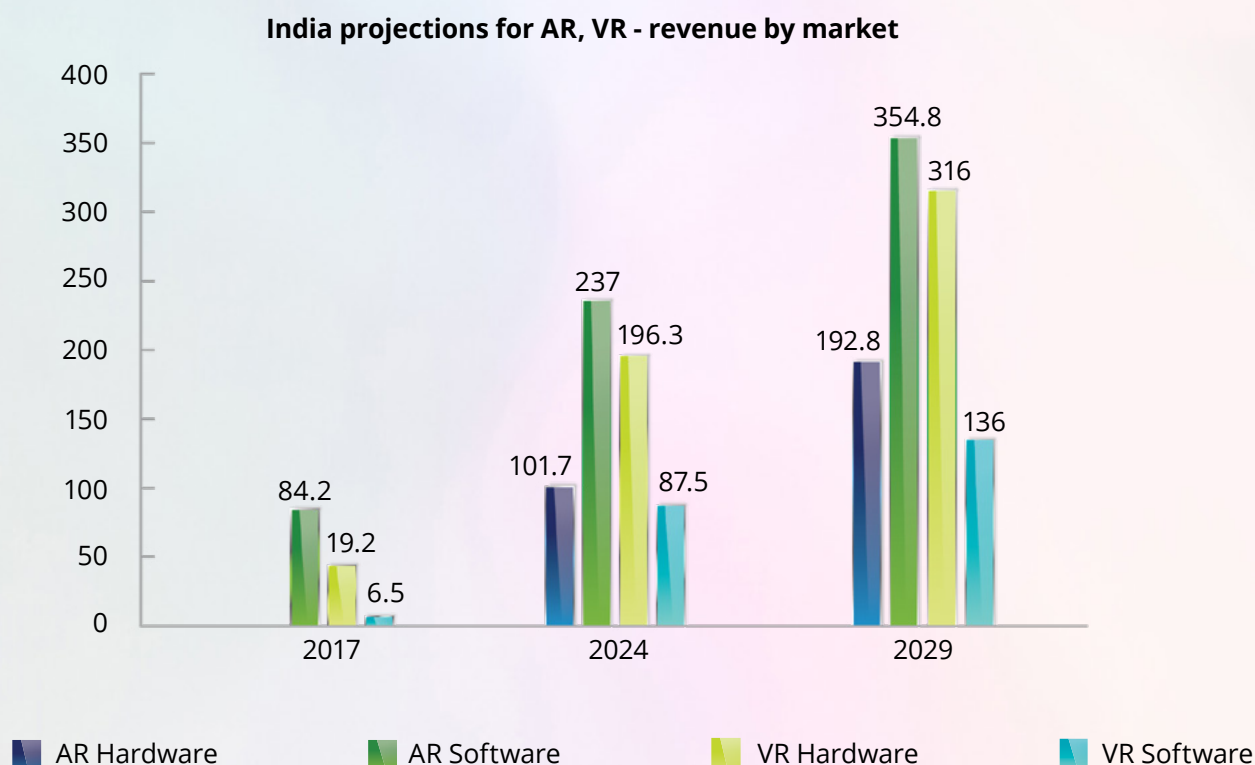
Now: The AI-driven spatial computing revolution is here

Spatial computing is transforming industries, with AI as the driving force behind this shift. From AI-powered medical training to virtual prototypes in manufacturing, AI is reshaping how industries across India design, collaborate and innovate. The future of spatial computing is already here, changing everything.

Picture this: Surgeons practising complex procedures on hyper-realistic virtual organs using VR, thus reducing the risks of errors during actual surgeries, or car manufacturers testing virtual prototypes of cars, optimising aerodynamics, safety and efficiency long before physical production begins. By streamlining workflows and proactively identifying errors, spatial

computing enables industries to solve problems before they arise.

The spatial computing market in India is expected to reach a projected revenue of US\$ 11,268.1 million by 2030. This represents a CAGR of 24.6 percent between 2024 and 2030.¹ India's AR and VR market is expected to generate US\$ 917.5 million in revenue by 2025, with a CAGR of 8.17 percent from 2025 to 2029. AR software is predicted to lead the sector, with a revenue share of US\$ 262.4 million in 2025. While the US remains the leader, India's AR and VR market is experiencing robust growth.



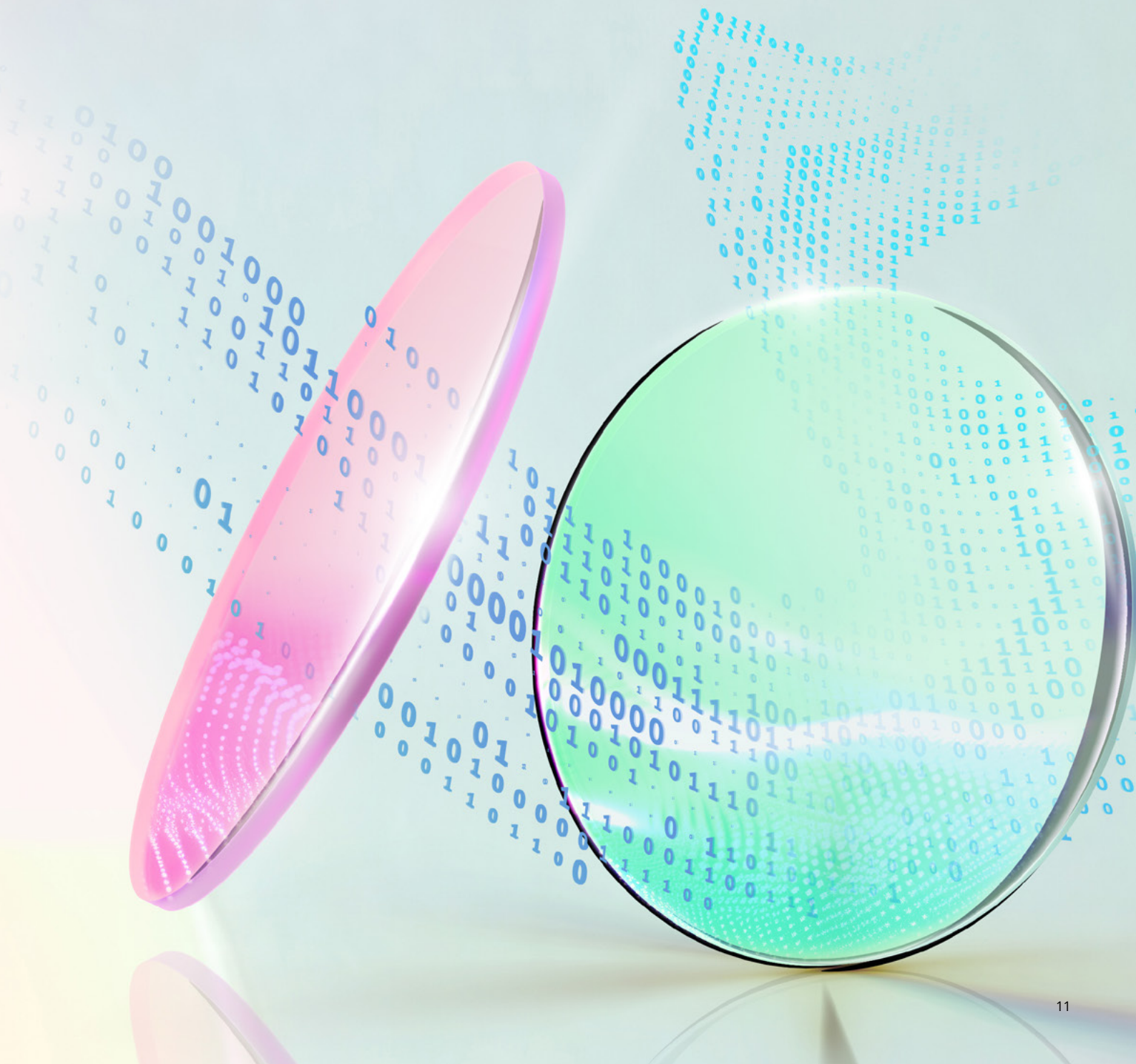
India projections for AR, VR – Revenue generation by market – Statista¹

¹ <https://www.grandviewresearch.com/horizon/outlook/spatial-computing-market/india>

New: AI driving innovations shaping India's tech evolution

AI will play a pivotal role in advancing spatial computing by enhancing the processing and analysis of data from sensors such as cameras, LiDAR and motion sensors. This will enable real-time understanding of the environment, allowing for more natural interactions through gestures, voice commands or eye-tracking and eliminating the need for traditional input methods. AI will also facilitate real-time decision-making, improving personalised and context-aware experiences for users and businesses.

Machine Learning (ML) will complement AI by enabling systems to learn from user behaviour and interactions, further improving the adaptability and accuracy of spatial computing applications. This is especially crucial in fields such as autonomous vehicles, where real-time data processing is essential for safety and efficiency. Together, AI and ML make spatial computing systems smarter, more responsive and capable of delivering highly personalised experiences.



Immersive technologies have rapidly evolved in recent years, offering various experiences across various industries. Among the most popular terms associated with these technologies are Augmented Reality (AR), Virtual Reality (VR) and Mixed Reality (MR). Extended Reality (XR) is an umbrella term encapsulating Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR) and everything in between. While each of these technologies offers distinct user experiences, they rely on spatial computing principles to make those experiences possible. Without spatial computing these technologies would face challenges in understanding and adapting to the real world. Let us dive deep into these technologies:

	Augmented Reality (AR)	Virtual Reality (VR)	Mixed Reality (MR)
Definition	Superimposes digital content on the real world, enhancing the user's perception.	Completely immerses the user in a simulated digital environment.	Blends the real world with virtual objects, allowing interaction in real-time. MR is more immersive than AR but not a fully immersive experience like VR.
User Interaction	User interacts with the real world while digital elements are overlaid.	User is fully immersed in a virtual world and interacts only with virtual elements.	User interacts with both real and virtual elements in real-time.
Environment	Real-world environment with digital enhancements.	Completely virtual, computer-generated environment.	Real and virtual worlds coexist and interact.
Applications	Retail, education, gaming	Gaming, simulations, training, entertainment, and virtual tours.	Medical training, design, manufacturing, and remote collaboration.
Level of Immersion	Low immersion, user sees and interacts with the real world while digital content is added.	High immersion, the user is completely immersed in a virtual environment.	Moderate immersion, blending the real and virtual worlds for interactive experiences.

Key drivers of spatial computing's mainstream adoption

The following factors are accelerating the adoption of spatial computing:

1. **Technological advancements:** Innovations in hardware, software and sensor technologies have made spatial computing devices more intuitive, accessible and user-friendly. India's IT sector, particularly in cities such as Bengaluru, Hyderabad and Pune, is quickly adapting to emerging technologies such as XR and AI. Start-ups and major tech players are developing spatial solutions tailored to the Indian market.
2. **Demand for immersive collaboration:** The shift from traditional to immersive collaboration is particularly relevant in India, where companies rapidly adopt hybrid work models to accommodate a geographically dispersed workforce, sparking interest in immersive technologies that bridge physical distances.
3. **Investment by major tech players:** Tech giants heavily invest in spatial computing, driving innovation and amplifying market interest. The funding and infrastructure provided by tech giants foster the growth of Indian start-ups in spatial computing.

Gaming

A tech company developed India's first VR sports app for Star Sports Pro Kabaddi 3D and VR zones in Hyderabad and Nandyala.

Education

A technology company trains students in AR, VR and MR through dedicated XR labs for immersive learning. An emerging player in India's AR and VR sector is making XR hardware more affordable by developing cost-effective XR controllers.^[1.1]

Healthcare

A medical institute in Chennai established India's first VR lab, offering medical students immersive training for surgical procedures in a safe, simulated environment.^[1.2]

Automotive

An automobile manufacturer launched an AI platform for virtual car customisation and 360-degree feature exploration, thus enhancing the car-buying experience.^[1.3]
A leading IT services provider uses a cutting-edge simulation platform to validate autonomous vehicle driving scenarios without physical testing.

Defence

Mixed Reality start-up collaborates with the armed forces to enhance weaponry and situational awareness through immersive training.^[1.4]

Retail

A men's clothing retailer launched AI-powered spatial computing experiences for immersive gaming. The game, playable on premium VR, rewards customers with gift vouchers redeemable at stores.^[1.5]

Agriculture

A leading IT services provider developed a smart farming digital twin that integrates real-world physics to simulate farming scenarios, improving equipment performance and operational efficiency.^[1.6]

Manufacturing

A major conglomerate uses a leading 3D simulation and collaboration platform to optimise operations for 3D data management, virtual collaboration and simulations. Developing virtual factory assets, such as factory buildings, robots and equipment, while simulating logistics and human processes.^[1.7]

Tourism

The Maha Kumbh Mela 2025 integrates AI for crowd management, safety and real-time guidance through drones, cameras and chatbots. AI-driven surveillance enhances public safety by monitoring crowds and tracking missing persons.^[1.8]

Government and public services

By 2025, an Indian state government has planned to equip 10 lakh students and 1 lakh teachers with digital safety knowledge and AR/VR skills.^[1.9]

The Indian XR industry – Preparing for a leap forward

Digital twins are increasingly being adopted in India across various sectors to improve operational efficiency, optimise processes and create innovative solutions. Large amounts of sensor data are gathered from IoT-enabled devices, transformed into digital format and then displayed in real-time using AR and VR. IoT is essential to AR/VR because it makes using motion sensors, motion-augmented reality, motion technology, voice control, gesture control and IoT-AR/VR connectivity easier.

In India, digital twin platforms aid urban planning by simulating infrastructure development. Cities such as Pune use digital twins to model growth, optimise

resource allocation, and improve spatial design for sustainable urban development, ensuring efficient use of limited resources.

To transform infrastructure planning, the Indian government's 'Sangam: Digital Twin' initiative integrates cutting-edge technologies such as 5G, IoT, AI and AR/VR. The Department of Telecommunications (DoT) launched this programme, which aims to break down planning silos across ministries to promote a cohesive approach to development. 'Sangam' will allow real-time physical asset monitoring and simulation by utilising unified data and collective intelligence, resulting in scalable and sustainable infrastructure projects. This initiative predicts India to become the most developed nation by 2047.^[1,10]



Next: From challenges to change: The rise of spatial computing in India

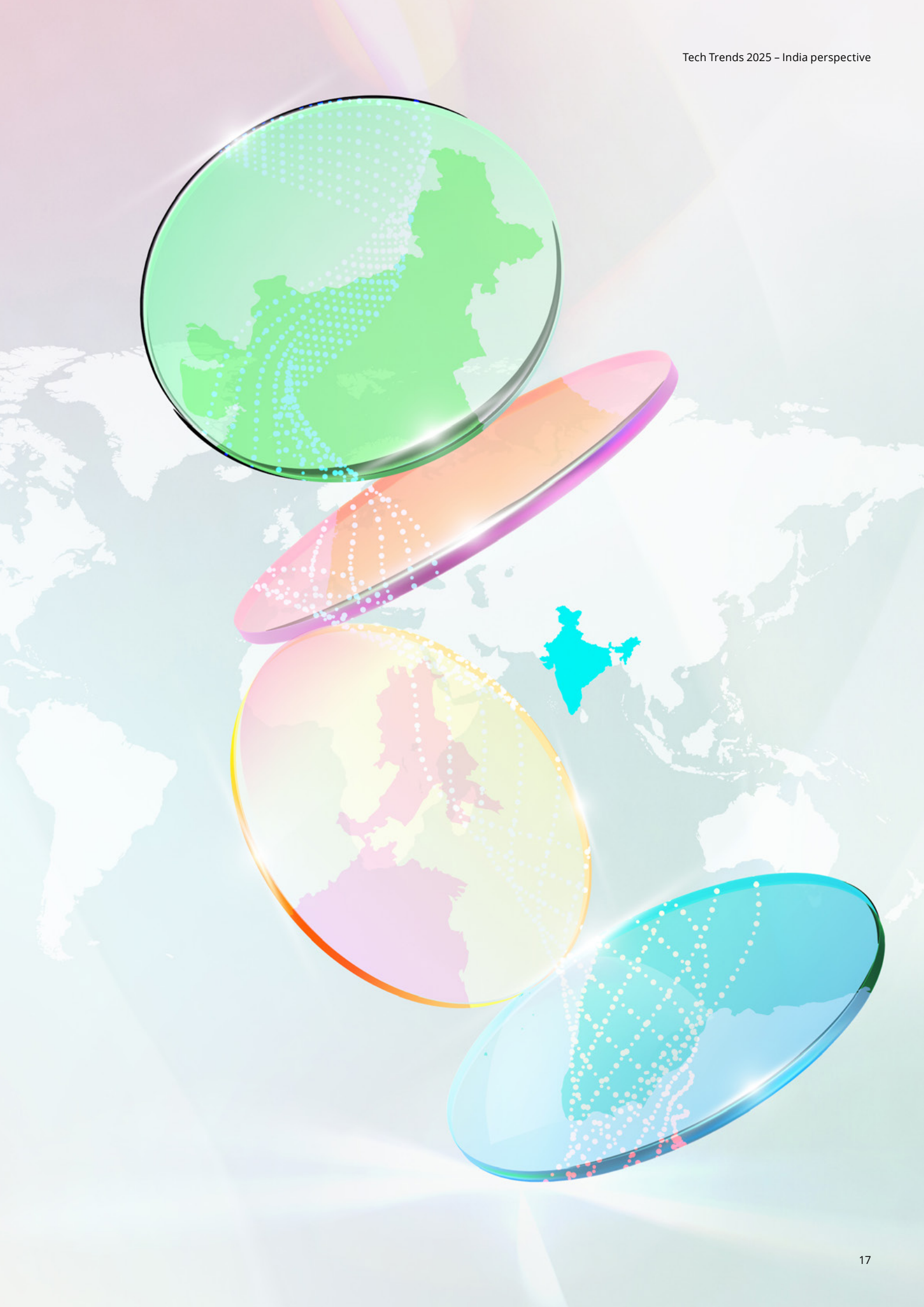
India's spatial computing landscape is on the brink of transformative growth. While challenges exist, they present opportunities for innovation and growth that are unique to India's market dynamics.

- The availability of advanced headsets remains limited as many global products are yet to launch in India. Limited availability of advanced headsets is fuelling domestic innovation, with start-ups creating affordable, high-quality alternatives in response to competition from Chinese manufacturers.
- Technical barriers, such as VR sickness and inconsistent end-user experiences, are being addressed through collaborative research and innovation. India's engineering talent is tackling technical barriers by improving display resolutions and haptic feedback and using the growing digital infrastructure to enhance XR adoption, even in rural areas.
- Cost has been a significant barrier to AR and VR adoption in India, but it also presents an opportunity to create affordable solutions. While high-end devices remain out of reach for many, gaming zones are introducing immersive experiences to a broader audience. These early interactions spark curiosity and drive advancements in more cost-efficient, powerful devices. Efforts to enhance performance and deliver localised content are key to making XR technologies more accessible and engaging for Indian consumers.
- Spatial computing is under-regulated, with no dedicated regulator overseeing the entire field, making creating a uniform regulatory framework challenging. As the technology relies on vast amounts of personal data for immersive AR/VR experiences, self-regulation is needed to protect consumers and minimise risks for organisations.^[1.11]

Efforts to overcome spatial computing adoption barriers in India are gaining momentum. With rising investments and government support, India is overcoming challenges and driving high-quality XR solutions. Leading educational institutions such as IIT Madras have launched initiatives that focus on developing advanced components such as headsets, haptic tools and specialised software. Their Experiential Technology Innovation Centre (XTIC) has formed a consortium of 400 start-ups, aiming to onboard 700 more to standardise XR technologies.^[1.12]

Spatial computing transforms how we interact with the world, seamlessly blending technology into our environment. It is about creating immersive, intuitive experiences that make daily life feel more natural—no more static screens. With AR, VR, AI and IoT breakthroughs and devices becoming more accessible, spatial computing is set to revolutionise everything from navigation to communication. Picture this: AR glasses syncing with your smartphone to deliver real-time information when needed. This is the future—where technology works effortlessly in the background to make life smarter and more connected.

As spatial computing becomes ubiquitous, India will face challenges such as ensuring digital inclusion, maintaining data privacy and managing infrastructure scalability. However, with its growing tech-savvy population and rapid innovation adoption, the country is well-positioned to become a leader in this transformative technology.



Trend 2

What is next for AI?

As AI continues to evolve, Indian enterprises are shifting their focus from large language models to smaller, more efficient ones, multimodal models, AI-based simulations and task-specific AI agents. This will lead to more personalised and context-aware solutions across industries.

Strengthening India's global role in AI

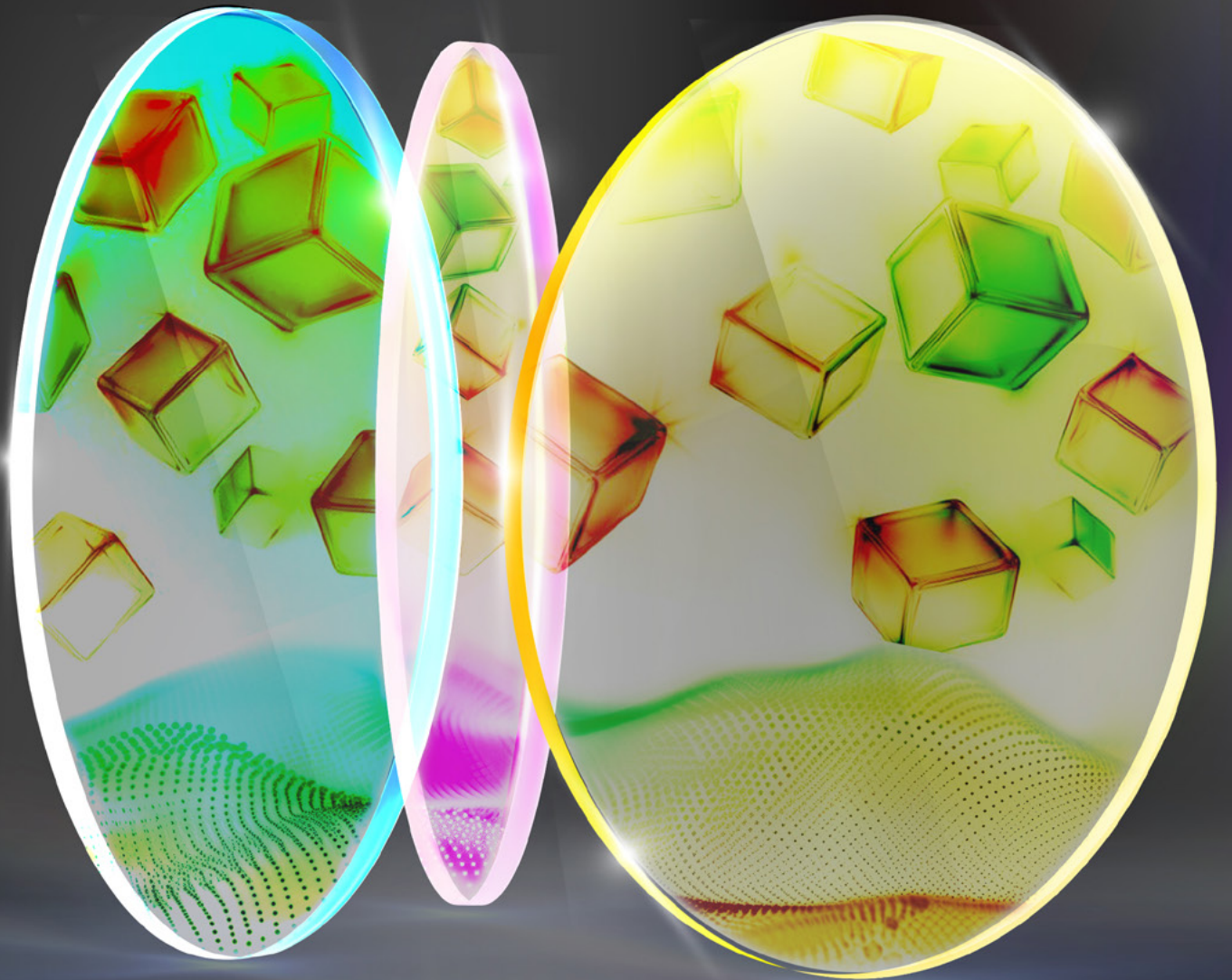
India is rapidly emerging as a leader in the AI revolution, driven by its exceptional tech talent, diverse demographics, booming economy and dynamic start-up ecosystem. Through strategic collaboration with industry tech giants leaders, alongside government, business and civil society, the mission is to shape an AI-powered digital future that is inclusive and transformative for everyone.

Now: India's AI momentum

Nowhere is AI's potential more evident than in India, home to 1.4 billion people and 22 officially recognised languages. Developing AI systems tailored to India's linguistic diversity and addressing its social and developmental challenges has become a top priority for the government. India's linguistic diversity offers a unique opportunity to develop AI language models catering to regional needs. The public and private sectors are advancing rapidly to drive AI innovation for the country's progress.

India's AI market is projected to reach US\$ 17 billion by 2027, growing 25–35 percent annually between 2024 and 2027.^[2.1] India has the highest AI skills penetration, with 3x more AI-skilled talent than other countries. Over the last seven years, India has witnessed a 14x growth in individuals skilled with AI. With the second-largest AI talent pool globally, India boasts 650,000 AI professionals. With its vast talent pool, growing digital infrastructure and government initiatives such as Digital India, India AI Mission and public-private partnerships, AI can expedite the transformation of India's economy, society and public services.^[2.2]

A major AI and computing firm is rolling out a new small language model, Nemotron-4-Mini-Hindi-4B, with 4 billion parameters for firms to use in developing their AI models. The model was pruned, distilled and trained using real-world Hindi data, synthetic Hindi data and an equal amount of English data.

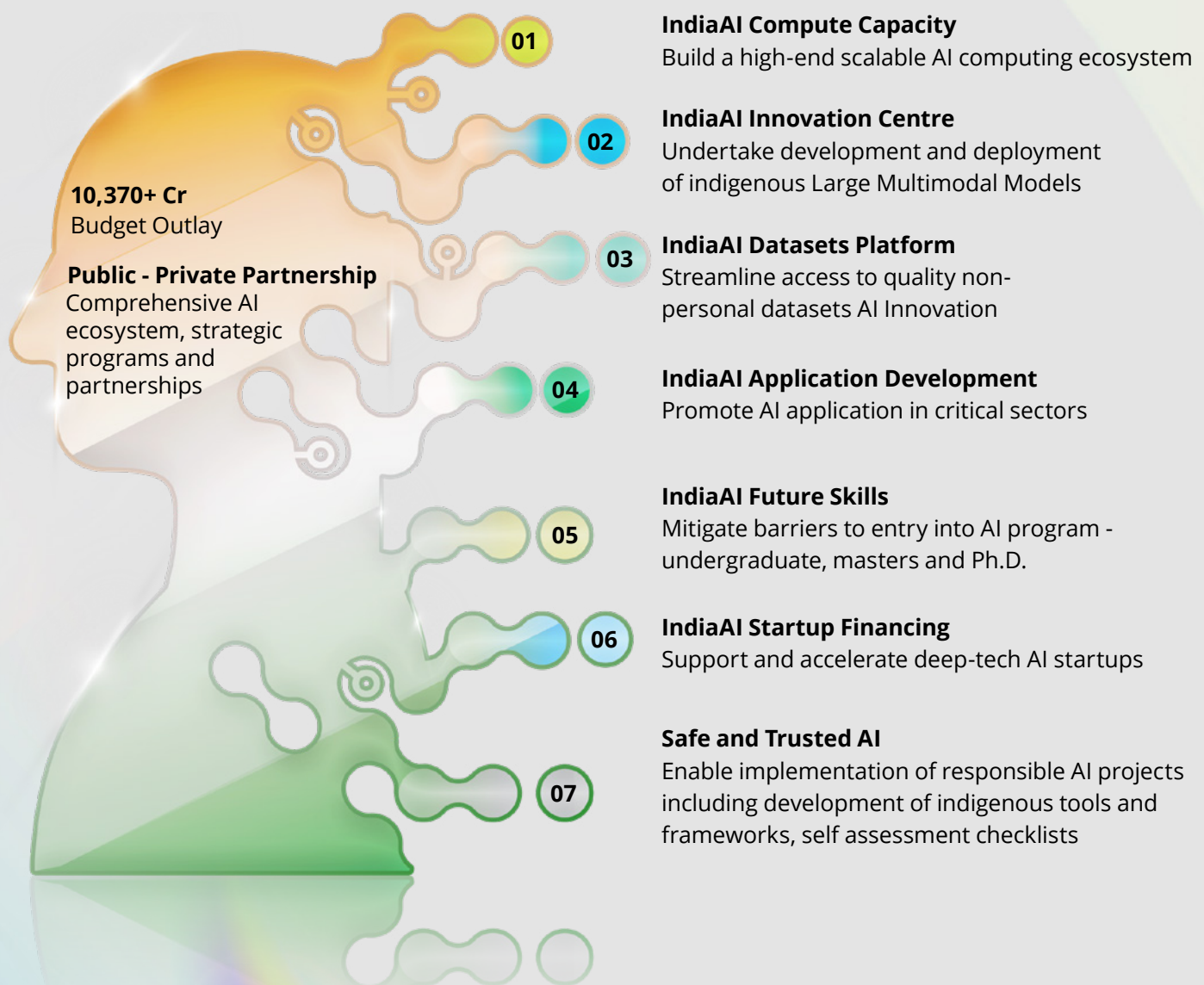


Government initiatives pioneering a future-ready, inclusive AI ecosystem

The IndiaAI Mission seeks to build a comprehensive ecosystem that fosters AI innovation by democratising computing access, enhancing data quality, developing indigenous AI capabilities, attracting top AI talent, enabling industry collaboration, providing start-up risk capital, ensuring socially impactful AI projects and promoting ethical AI. This mission drives responsible and inclusive growth of India's AI ecosystem.^[2,3]

As the Indian government seeks to unlock the potential of AI technologies for the betterment of society and foster greater public trust in AI, it has a pivotal role to play on the global stage. This involves shaping AI policy frameworks that effectively address safety, security, innovation and opportunities in a unified manner. By collaborating with industry giants such as Google and NVIDIA and key stakeholders from government, business and civil society, the goal is to build a digital future driven by AI that is inclusive and beneficial to all.^[2,4]

Figure 2: India AI Mission

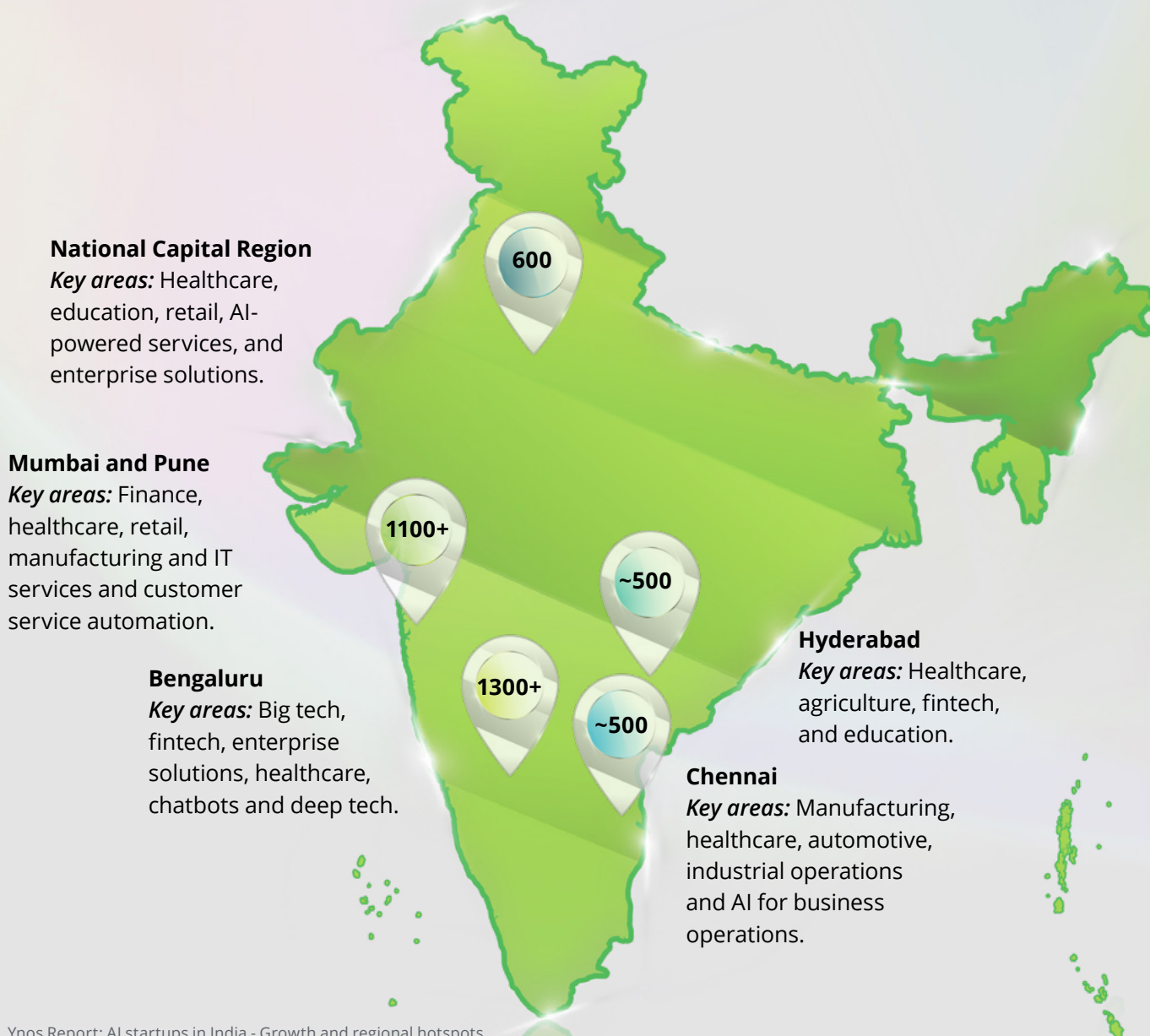


India's AI hotspots: Cities leading the charge in innovation and growth

India is rapidly emerging as a global hotspot for AI, with key cities such as Bengaluru, Hyderabad, Mumbai, Chennai, Pune and the National Capital Region (NCR) at the forefront of this transformation. Abundant talent, supportive policies, cutting-edge research institutions and a surging demand for AI-driven technologies power these AI clusters. Additionally, these cities serve as thriving hubs for GCCs, fuelling business innovation and accelerating technological advancements.

- **AI-powered hubs:** Leading multinationals use AI for predictive analytics, automated support, cloud services and supply chain optimisation, positioning India as a global leader in AI-driven business services.
- **AI-driven R&D:** GCCs are accelerating innovation in sectors such as pharmaceuticals, automotive, banking and telecom, fostering collaboration between global firms and India's talent pool.
- **Talent scaling:** The demand for AI expertise is surging. India's growing talent pool is key to maintaining its role as a global technology hub that delivers high-quality, cost-effective solutions.

AI Hubs in India - Number of AI startups across major cities



New: Driving India's next wave of innovation and societal impact

AI in India is evolving to meet local needs. Small Language Models (SLMs) are gaining popularity for their cost-effectiveness and efficiency, helping start-ups and SMEs deploy AI without heavy resource demands. Multimodal AI is transforming industries such as healthcare, retail and agriculture by integrating text, audio and video. Meanwhile, Agentic AI, which enables machines to make autonomous decisions, is proving valuable in sectors such as logistics, finance, and disaster response. The key challenge remains to make these innovations scalable and accessible to all.

Small language models

In 2025, India is entering a transformative AI phase driven by Generative AI (GenAI) and specialised models. Large language models (LLMs) like GPT-3 have dominated the spotlight as AI capabilities surge. While impressive, these models come with significant efficiency, cost and customisability trade-offs. As AI adoption grows, a shift toward smaller, more specialised language models is gaining momentum. Enter Small Language Models (SLMs) -more compact, resource-efficient alternatives with a growing impact across industries. Companies are scaling GenAI from PoCs to production, with 100+ global use cases executed in the past year—20-25% already in production.^[2,5]

SLMs offer potential solutions to key challenges identified by functional leaders, including budget constraints, data protection, privacy concerns and risk mitigation associated with AI. These cost-effective models offer enhanced adaptability, enabling tailored solutions across industries—from chatbots and virtual assistants to content creation and language translation. This shift is revolutionising how AI is deployed, making it more accessible, practical and impactful for businesses seeking efficiency without compromising quality.

- An AI company based in Mumbai has successfully implemented small language models for its chatbot solutions. The company has delivered accurate and efficient AI-powered interactions by targeting specific use cases while minimising resource requirements. This strategy enables them to cater to diverse sectors, such as e-commerce and healthcare, without incurring high operational costs.

- A leading global technology company is developing four small language models for banking, IT operations, cybersecurity and enterprise GenAI. The company also creates over 100 AI agents, many already in use, reducing work timelines significantly. Small language models, built on proprietary data, are gaining interest from clients seeking custom AI solutions.

With lower computational requirements, SLMs are ideal for Indian start-ups and SMEs tackling specific business challenges. Their ability to be customised and localised is particularly valuable in India, where diverse languages and cultural nuances often elude larger, globally trained models. These models offer a more accurate, relevant solution for the local context.

Multimodal AI

Multimodal AI is a cutting-edge technology that processes and integrates multiple data types—text, images, audio and video—to generate contextually rich and versatile outputs. Unlike unimodal AI, which relies on a single data type and produces limited results, multimodal AI combines various modalities to deliver enhanced adaptability, contextual awareness and diverse outputs. By interpreting patterns across different inputs, these systems achieve a deeper understanding of complex scenarios, enabling more accurate, human-like predictions. Multimodal AI, which processes and generates text, images and voice, is revolutionising critical sectors in India.

Agentic AI - The next big thing

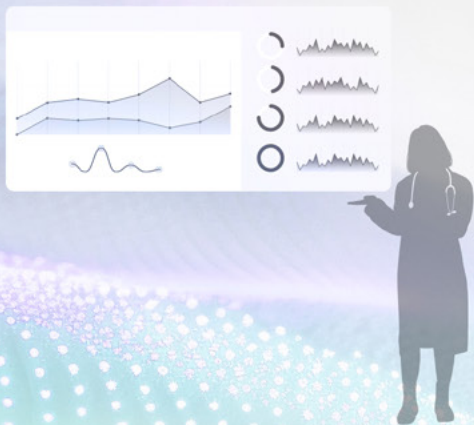
Agentic AI takes automation to a new level by functioning autonomously without constant human guidance. Unlike GenAI, which creates content, Agentic AI can make decisions, adapt to changing situations and solve complex, multi-step problems in real time. Many organisations have started adopting agentic AI, as it enhances security measures within firms, helps enhance threat detection, and, more importantly, allows them to act independently and make decisions without human intervention.^[2,6]

According to Deloitte Global's 2025 Predictions Report: Generative AI: Paving the way for a transformative future, 25 percent of companies using GenAI will pilot agentic AI initiatives in 2024, with adoption expected to rise to 50% by 2027.^[2.7] Industries like supply chain management and customer service could see agentic AI integrated into workflows as early as late 2025. Over US\$ 2 billion has been invested in agentic AI start-ups in the past two years, especially those catering to enterprise applications.^[2.8] Larger technology firms and cloud providers actively develop agentic AI solutions through acquisitions, licensing and recruitment from start-ups.^[2.9]

Agentic AI represents a transformative leap in artificial intelligence, enabling systems to perceive autonomously, reason and act in complex environments. Unlike traditional AI, which relies on predefined instructions, Agentic AI systems demonstrate adaptability, contextual awareness and continuous learning. These systems operate with minimal human intervention, dynamically adjusting their actions to suit environmental conditions while optimising outcomes for specific objectives.



Agentic AI makes waves across various sectors, enhancing automation and decision-making capabilities. Applications of Agentic AI span multiple sectors, offering transformative potential:



Healthcare

A tech giant has partnered with a Medtech start-up to deliver AI-powered healthcare solutions. Smart-ICU uses Cloud Vision API to monitor vital signs and analyse images and lab reports, helping assess patient health in real time.^[2.10]

A healthcare technology company uses AI to combine thermal imaging and medical data to detect breast cancer in the early stages, especially in rural areas.^[2.11]

A free multimodal health assistant assists in interpreting health reports, answering queries in multiple languages, providing context-specific information and improving healthcare accessibility for non-English speakers.^[2.12]



Financial Services

Indian Banks use agentic AI to detect fraud and approve loans by analysing customer profiles and risk assessments. The finance sector benefits from intelligent trading bots that dynamically adjust portfolios based on market trends.



Education

Two educational technology platforms are creating interactive, AI-driven educational content in regional languages to make learning accessible to underserved communities.

A prominent learning platform integrates vernacular AI into its platforms to cater to students in regional and rural India.

Education platforms use Agentic AI to grade assignments and offer personalised learning recommendations, improving productivity and student engagement.

Retail/e-commerce

A leading e-commerce platform uses agentic AI to make periodic product purchase recommendations (AI-personalisation as a Service) based on customers' actions and preferences.^[2,13]

Built Agentic AI agents for a marketing team to convert natural language segmentation requests into SQL queries. Combined LLM reasoning with data constraints for accuracy. The system uses an SQL generator agent and a refining agent that runs 25 iterations for optimisation. Currently in beta, it is showing strong results with a planned enterprise-wide rollout.

Developed an AI-driven virtual try-on solution for fashion retail, mapping apparel onto model images for men's and women's categories. Integrated seamlessly into existing digital marketing workflows, reducing the need for production photoshoots, cutting costs and accelerating time-to-market for new SKUs.



Agriculture

An AgriTech organisation uses satellite imagery, weather data and farmer inputs to provide AI-powered insights for precision farming and resource optimisation.



Media

Leading OTT platform utilises agentic AI to suggest entertainment options tailored to individual preferences.





Technology

A global tech company has launched a research project - Agent.ai, that focuses on developing AI agents that can perceive their environment and produce meaningful actions. The platform offers low-code tools for building custom AI agents for applications like health data analysis.

A major global Technology Company is deploying AI-driven language models to enable digital access in regional languages. The Project Relate supports speech recognition in Indian languages for better accessibility.

A global software company is building custom AI, multi-agent AI from India, focusing on three main sectors: consumer, discrete manufacturing, energy and natural resources.

A technology company has launched its AI sales agent, which aims to revolutionise the sales process for enterprises, enabling them to book 10x more meetings and engage efficiently with high-intent leads. The agent has advanced capabilities, including real-time lead identification and hyper-personalised outreach, which positions it as a game-changer for sales teams striving to enhance performance and close rates.^[2,14]

Bengaluru-based agentic AI start-up plans to accelerate the development of its AI-backed Quality Assurance (QA) agents. The start-up develops autonomous AI agents that perform end-to-end mobile app testing. The AI-driven solutions eliminate the need for manual testers by automating the entire testing lifecycle – from bug detection to resolution.

A conglomerate has funded the development of a new institute for AI and data science education and an AI Data centre to develop local AI models. Offering users nationwide 100 GB of free cloud storage to help new start-up ventures.^[2,15]

A software company is developing models in 10 Indian languages, collecting multilingual speech data and providing employment in rural India to support new AI models.


A software company offers AI co-pilots for SMEs, automating customer engagement, sales tracking and financial planning.



Defence


ISRO's Pragyan rover uses agentic AI to navigate and analyse data independently in the space sector.





Energy

Agentic AI also drives innovations in renewable energy, autonomously monitoring and optimising solar and wind energy systems.




A leading oil & gas company has built a GenAI-powered knowledge repository across engineering, operations and finance functions. Enhanced document search with NLP and GenAI-powered metadata, allowing seamless cross-functional queries. Experienced a 30% YoY cost reduction by eliminating rule-based constraints, improving usability and boosting employee productivity.



Manufacturing

In logistics, autonomous fleets optimise routes and schedules in real time using Agentic AI.



Government and Public Services

A technology company based in Bengaluru offers AI solutions for real-time translation, making government schemes and services accessible in multiple Indian languages. Their localised AI models help businesses connect with broader audiences, addressing India's linguistic diversity—something large, generalised models struggle to achieve.

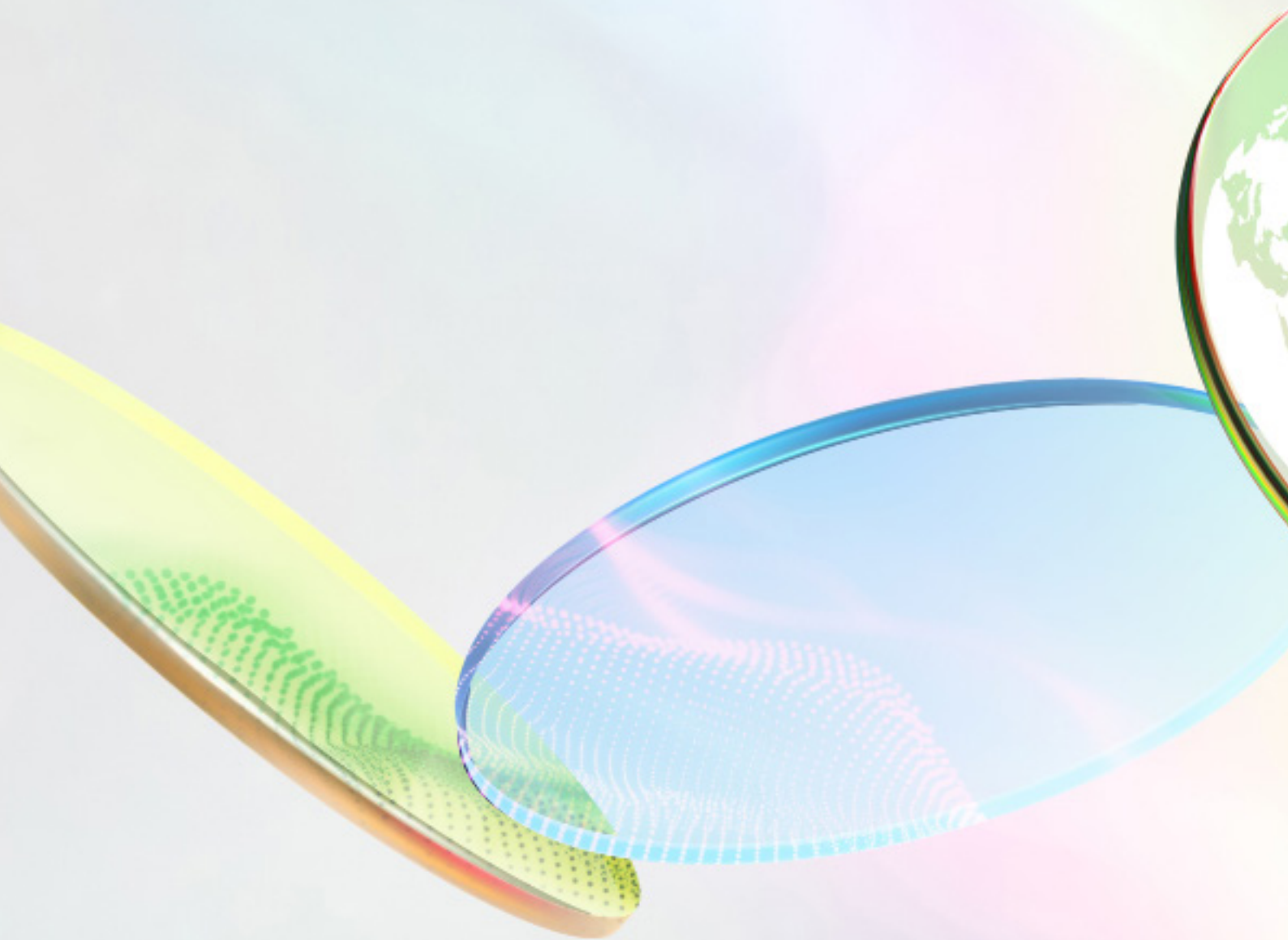
Two leading IT companies are developing AI-powered chatbots and virtual assistants to manage citizen queries and automate public service delivery.

Public Safety and Disaster Response: Agentic AI is pivotal in disaster response, where autonomous drones and robots navigate hazardous zones to locate survivors or assess damage.

Start-ups are deploying AI-driven video analytics and surveillance systems to improve urban safety and disaster response.

Next: Scaling AI for India's future

With the proper policy framework, AI has the potential to propel India into a new era of productivity, elevate living standards and address critical social challenges. As the country embraces AI, localised solutions will be key to tackling societal issues, boosting business efficiency, and establishing India as a global hub for innovation. The next phase of AI adoption in India will involve creating localised solutions that address societal challenges, enhance business efficiency and establish the country as a global hub for AI innovation. Several companies spearhead this change, making AI more accessible and impactful across sectors.





Trend 3

Hardware is eating the world

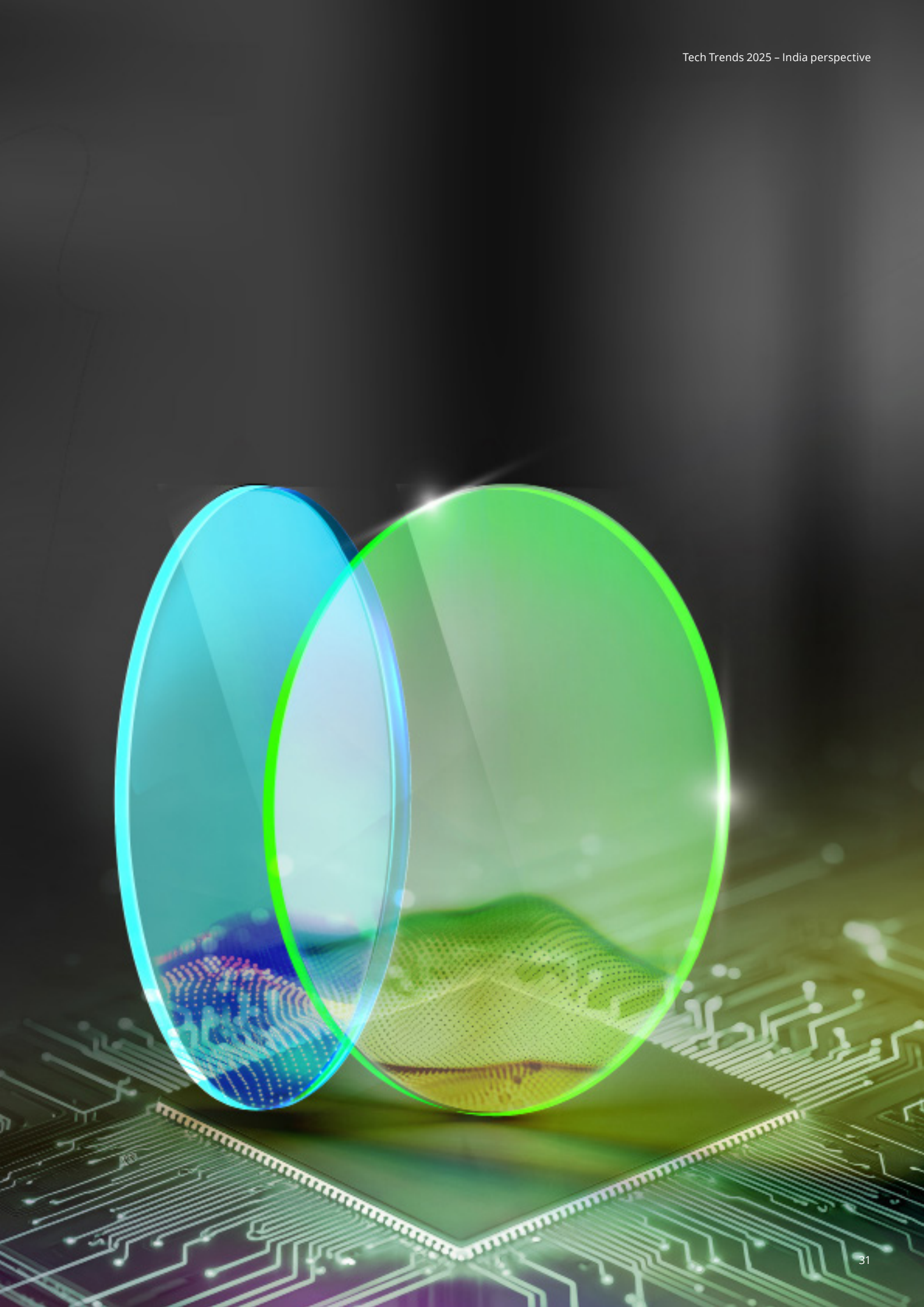
The rapid evolution of AI hardware is reshaping India's technology landscape, enabling industries to use powerful computing capabilities to address complex challenges and accelerate the country's digital transformation journey.

The global demand for AI-specific hardware—from training accelerators to inference chips—is skyrocketing as AI reshapes industries and drives economic transformation. Hardware innovations are at the core of this revolution, and India, traditionally known for its software prowess, is rapidly emerging as a key hub for AI hardware development. India's tech ecosystem is evolving to meet the growing demands of AI-powered applications, with advancements in AI processors, edge computing devices, GPUs (Graphics Processing Units) and NPUs (Neural Processing Units). This shift parallels the advancements in supercomputing, propelled by continuous breakthroughs in semiconductor technology.

As the world's largest democracy advances in AI capabilities, hardware infrastructure is becoming the

backbone of its digital revolution, paving the way for a future where AI transforms industries and enhances lives. Software ate the world, but now hardware is eating the world. This is evident across various sectors such as healthcare, manufacturing, agriculture, finance and beyond, where AI hardware is enhancing operational efficiency and helping India leapfrog into a new phase of technological growth.

The Indian semiconductor market is projected to post a 19.6 percent CAGR, reaching **INR 80.3 billion** by FY28.^[3.1] This growth is underpinned by the global semiconductor market, which is expected to reach US\$ 1 trillion by 2030.^[3.2] India's National AI Mission aims to develop infrastructure with over 10,000 GPUs through public-private partnerships, supported by an INR 10,000 crore investment over five years.^[3.3]



Now: Building the backbone of India's AI

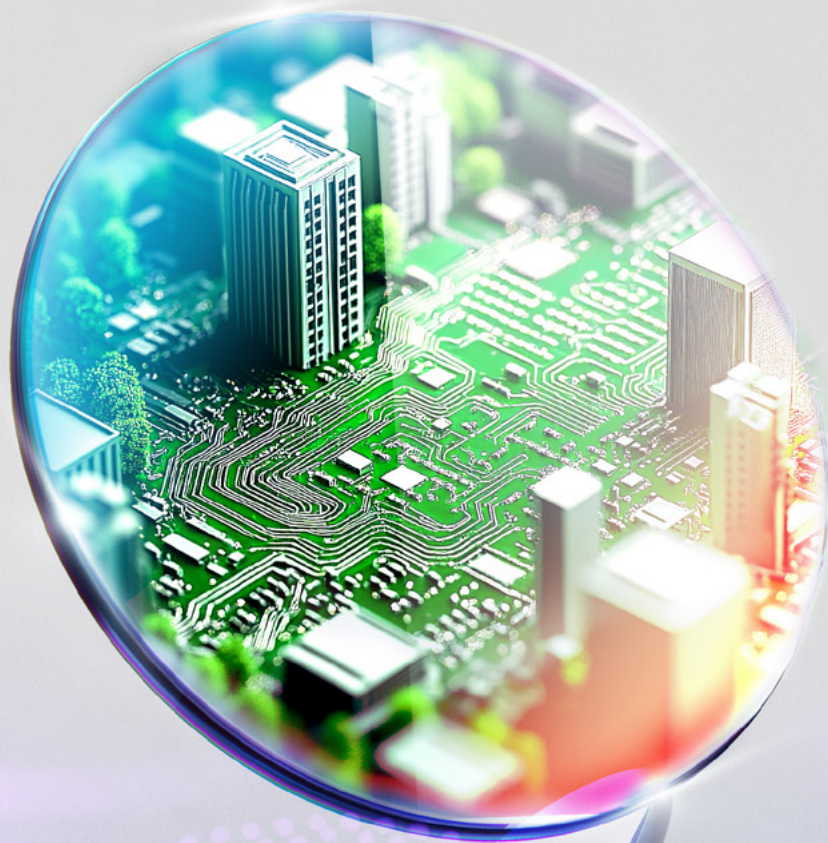
As Indian start-ups, large corporations and the government collaborate to create and deploy cutting-edge AI hardware, the entire ecosystem benefits from enhanced computational power, faster processing speeds and the ability to execute complex algorithms that were once considered impossible. The integration of AI into various aspects of life promises to drive economic growth and contribute to improving its citizens' living standards.

India's rise as an AI hardware powerhouse unlocks opportunities across established and emerging industries. Our strides in AI hardware development are addressing domestic demand and positioning the country as a global leader in the AI revolution. For instance, a leading Indian electronics manufacturer has partnered with a worldwide electronics organisation to establish semiconductor facilities in Gujarat and Assam, with an investment of INR910 billion in Gujarat, to support the development of chips for automotive, mobile devices and AI applications.^[3,4]

Indian companies increasingly prioritise on-premises AI hardware infrastructure to ensure greater control over data security, latency and compliance with regulatory frameworks. As AI adoption accelerates across industries, enterprises invest in dedicated AI data centres and high-performance computing clusters to run mission-critical workloads locally. This shift is driven by the need for real-time processing, reduced dependency on external cloud providers and cost-effective scalability. Companies in sectors such as banking, healthcare and manufacturing are using on-prem AI hardware, including GPUs and NPUs, to

enhance operational efficiency while safeguarding sensitive data. With government support and growing domestic semiconductor capabilities, India fosters a robust ecosystem that enables enterprises to deploy AI solutions on-premise, ensuring strategic autonomy and technological self-reliance.

A major electronics manufacturer has committed up to INR 4.24 billion in a semiconductor JV with a technology organisation specifically focused on developing the semiconductor manufacturing ecosystem in India, aligning with the country's growing needs for cutting-edge hardware solutions.^[3,5]



Government initiatives fostering AI hardware development

The government has created an ecosystem that nurtures AI hardware innovation.

India's AI revolution drives energy demand and advanced compute infrastructure. To support this ever-growing demand, the government has allocated INR 10,372 crore under the IndiaAI mission to provide easy access to state-of-the-art AI computing infrastructure featuring 18,000+ GPUs through public-private collaboration. India is set to offer the world's cheapest compute at ~US\$ 1/hour (vs. US\$ 2.5–3 globally).^[3,6]

Several initiatives are paving the way for AI hardware growth, supporting domestic development, manufacturing and adoption:

National programme on AI:

Fosters the development of AI chips and hardware to support India's AI strategy.



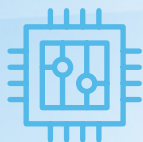
National Supercomputing Mission (NSM)

Focuses on developing high-performance computing infrastructure to handle AI-intensive workloads.



Chips to Start-up (C2S)

Encourages the creation of AI-specific chips and accelerators, contributing to India's semiconductor ecosystem.



Atal Innovation Mission (AIM)

Provides funding and infrastructure to foster AI and hardware innovations among start-ups.



India Semiconductor Mission (ISM)

A **US\$ 10 billion** initiative to build semiconductor manufacturing capabilities in India.



IndiaAI Mission

Seeks to establish India as a global hub for AI development.



Digital India Programme

Promotes the integration of AI-powered IoT devices in sectors such as healthcare, education and agriculture.



Private sector contributions to India's AI hardware ecosystem

The private sector is significantly contributing to AI hardware development through investments, collaborations and research partnerships:

- A leading Indian IT organisation pledged to invest US\$ 1 billion in its AI360 ecosystem.^[3.7]
- A leading technology major is collaborating with Indian institutions to drive AI research, development and deployment.^[3.8]

AI hardware in Smart Cities: Building sustainable urbanisation

India's smart cities are adopting AI hardware solutions to create more efficient and sustainable urban environments. AI-powered IoT devices and systems enable smart traffic management, resource optimisation, and waste management, improving citizens' quality of life while reducing their carbon footprint.^[3.9]

AI-powered IoT solutions

Devices monitoring traffic congestion, air quality and energy consumption are integral to India's smart city initiatives. These systems, powered by AI hardware, ensure real-time decision-making, enhancing urban infrastructure and making cities more efficient and environmentally friendly.^[3.10]

Sustainable urban solutions

AI hardware deployment in urban planning, such as solar energy systems and waste recycling technologies, is helping cities become more sustainable.^[3.11]

AI-powered data centres

India's data centre power demand, currently at 139 billion kWh, is predicted to rise by 160 percent by 2030, driven by AI-related demand.^[3.12] To ensure uninterrupted supply, the government is exploring dedicated power solutions, including direct lines from producers and small nuclear plants, as AI-driven data centres expand across the country.

Beyond this, the movement of AI towards robotics is noteworthy.

The rise of AI-powered robotics in India's automation revolution

India's AI hardware revolution is also fuelling advancements in physical robotics, enabling the deployment of intelligent machines across industries. From autonomous robots in manufacturing and logistics to AI-powered robotic assistants in healthcare and retail, Indian companies are increasingly investing in robotics to enhance productivity and operational efficiency. Start-ups and research institutions are developing next-generation humanoid and industrial robots, integrating AI-driven vision, motion control and decision-making capabilities. The push for indigenous semiconductor manufacturing and edge computing further accelerates the adoption of physical robots, allowing real-time data processing and reducing reliance on cloud-based AI models. As AI hardware continues to evolve, India is poised to become a major hub for robotics innovation, driving automation across sectors.

New: GPU, NPU and beyond: India's AI hardware leap

India's push towards AI adoption heavily relies on innovations in specialised hardware designed to run complex AI algorithms. From GPUs accelerating deep learning models to NPUs optimising real-time processing, these hardware components are driving the deployment of AI applications across industries.

Specialised chips for critical applications such as power management, telecommunications, digital signal processing and cryptographic acceleration are becoming indispensable. Innovations in Application-Specific Integrated Circuits (ASICs), material science and the integration of quantum computing are signalling a paradigm shift in the industry. Integrating heterogeneous computing, where GPUs and NPUs are combined on a single chip, unlocks new efficiency and performance levels for diverse AI workloads. AI-optimised field-programmable gate arrays enable greater flexibility and adaptability for evolving edge computing models, while neuromorphic chips, inspired

by the human brain's neural structures, power autonomous applications in robotics and complex sensor networks.

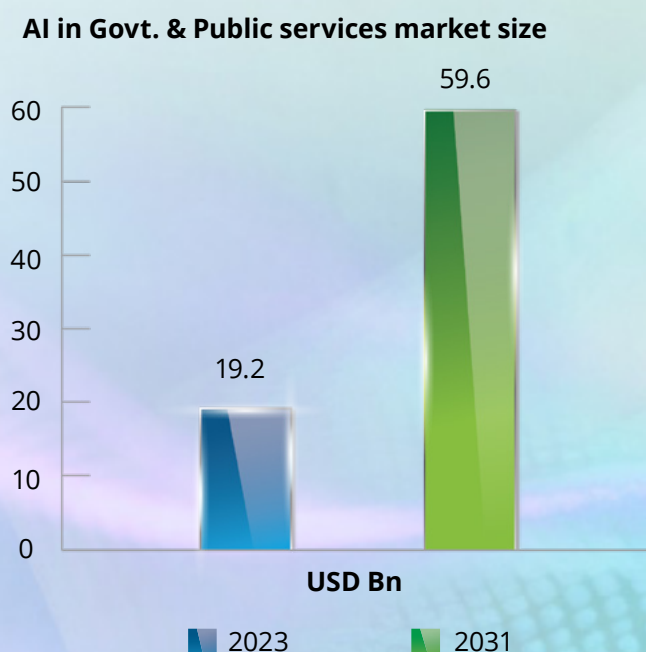
A key example is a collaboration between an Indian Conglomerate and a Technology leader. The leader will provide the GH200 Grace Hopper Superchip and DGX Cloud for AI supercomputing. The collaboration is set to deliver exceptional performance and massive memory bandwidth for AI applications.^[3.13]

- **GPUs:** Powering AI's growth: GPUs are at the heart of India's AI revolution, powering breakthroughs across industries from healthcare diagnostics and facial recognition to autonomous driving and robotics. With their ability to process data in parallel, GPUs enhance decision-making, improve system performance and unlock new possibilities in everything from precision engineering to real-time applications. In entertainment, GPUs transform gaming and media, delivering immersive experiences and personalised content. As demand intensifies, India is scaling up its GPU development to cater to domestic and global needs.
- **NPU:** The future of edge computing: NPUs transform edge computing by enabling real-time

data processing on devices without relying on centralised cloud systems. India's adoption of NPUs in smart city projects, industrial automation and IoT applications highlights their rising significance. Edge AI devices powered by NPUs allow for lower latency, making them ideal for critical applications in sectors such as healthcare, agriculture and security. These applications create vast system responsiveness and efficiency improvements, with less dependence on remote data centres.

- **Sustainability and AI hardware innovation:** With the rise in AI hardware demand, sustainability has become a critical focus. As AI hardware technologies evolve, India strives to ensure growth aligns with environmental and energy efficiency goals. A leading player in imaging technology is exploring opportunities to supply lithography equipment to India's semiconductor fabrication units, enabling sustainable and efficient chip production in the country.
- **Smart factories and Industry 4.0 in India:** The integration of AI hardware into manufacturing processes is driving the rise of smart factories. These facilities are powered by AI-driven automation and are central to the push toward Industry 4.0. This is part of a broader push to establish India's first semiconductor fabrication facility.

Figure 3: AI in government and public services market size ^[3.14]



India Emerges as a Global Tech Hub with Major Investments in Semiconductor Manufacturing, AI Infrastructure, and Data Centers

Semiconductor Fabrication, Manufacturing and Exports

Leading Taiwanese electronics manufacturer will invest up to INR 4.24 billion in a semiconductor JV for an OSAT plant in India. ^[3.15]

An Indian electronics leader and a Taiwanese partner have teamed up to establish India's first AI-enabled semiconductor fabrication plant in Gujarat, targeting power management ICs, display drivers, MCUs, and logic chips for AI, automotive, computing, and wireless applications. ^[3.16]

A leading Indian tech firm will invest over US\$ 300 million to launch a fabless chip company, aiming to design 15 semiconductor products by 2027. This initiative supports India's push to reduce semiconductor imports and build local capacity amid global supply chain shifts. ^[3.17]

An Indian electronics leader and a Japanese semiconductor firm have signed an MoU to support chip facilities in Gujarat and Assam, with a combined investment of over US\$ 14 billion. The partnership covers equipment, services, R&D, and workforce training for chips used in automotive, mobile, and AI applications. ^[3.18]

An American electronics giant is set to debut its first India-made chips from Sanand in 2025, marking a major milestone in India's export-driven semiconductor ambitions. ^[3.19]

A Japanese imaging leader is exploring opportunities to supply lithography equipment to India's emerging semiconductor fabrication units, a critical step for chip production. ^[3.20]

AI infrastructure, R&D and Deployment

Leading tech giant: Collaborating with Indian institutions to drive AI R&D and deployment.^[3.21]

A South Korean consumer electronics manufacturer inaugurated a semiconductor R&D facility in Bengaluru under Korean Technology leader Semiconductor India Research to enhance its capabilities.^[3.22]

AI Data Center

A major Indian conglomerate is building the world's largest 3 gigawatts AI data centre, powered primarily by solar, wind, and hydrogen from its adjacent green energy hub.^[3.23]

A leading Indian data centre and pioneer in GPU computing infrastructure in India is making rapid strides with its Shakti-Cloud, one of the largest supercomputers.^[3.24]

Next: AI factories to drive India's tech renaissance

India's ambition to become a key player in the global AI hardware sector is bold and achievable. With strategic investments in incentives and infrastructure and a focus on R&D and talent development, the country is well-positioned to lead the global semiconductor race. Drawing inspiration from leaders such as Taiwan and South Korea, significant strides in R&D can establish a thriving semiconductor ecosystem. Embracing these global best practices will drive innovation and attract global investments.

To realise its full potential, the country must push to establish AI factories. These hubs for innovation and collaboration will foster the creation of next-gen AI models by integrating computing power, data and talent. By focusing on accelerated computing rather than general-purpose computing, the country can take the next major leap in the AI revolution, manufacturing intelligence for domestic use and export.

Strategic investments in cutting-edge technologies such as advanced GPUs, NPUs, sustainable manufacturing practices, government support and partnerships with industry leaders such as technology leaders are positioning the country as the epicentre of AI innovation. This progress will amplify its global tech influence and solidify its role in shaping the AI-driven future.





Trend 4

IT, amplified: AI elevates the reach (and remit) of the tech function

In India's thriving IT sector, AI is amplifying the capabilities of tech talent. It is increasingly applied to code generation, software testing and automation, reducing manual efforts and driving greater efficiency. This shift transforms how businesses approach, encouraging a move from traditional virtualisation models to more scalable and cost-effective AI-driven solutions.

AI is rapidly transforming India's IT sector, shifting it from a support function to a key driver of innovation. IT professionals are no longer just maintaining infrastructure; they are now using AI to develop, operate and supercharge enterprise capabilities. AI is not replacing them but elevating their role up the value chain, enabling them to automate tasks, optimise workflows and extract deeper insights from data.

Enterprises are leading the charge, embracing AI tools to enhance operational efficiency and fuel groundbreaking advancements. The country is evolving from being an outsourcer and back office to becoming an exporter of AI.^[4.1]

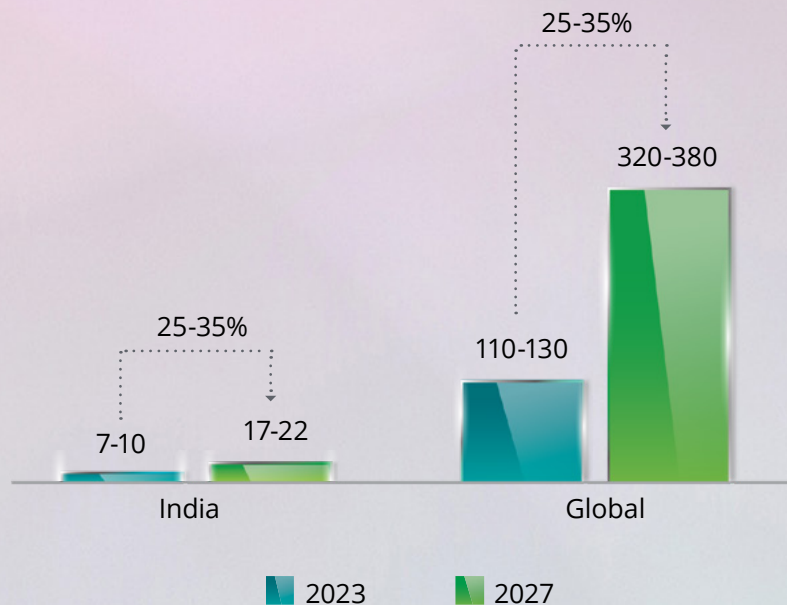
Indian IT departments have evolved from backend support teams to AI-powered innovation hubs. No longer just maintaining infrastructure, they now drive digital transformation, shape business models and lead strategic initiatives. With AI supercharging their capabilities, IT professionals are automating tasks, optimising workflows and unlocking data-driven intelligence like never before. IT is not just keeping the lights on anymore— it is the engine of competitive advantage, pushing businesses to be smarter, faster and future-ready.

Global and Indian AI markets are set to post 25–35 percent CAGR through 2027, with the lion's share of AI software and services and GenAI.^[4.2]



Expected Global and India AI market growth, 2023-2027

In USD Billion (\$ Bn)



Source: NASSCOM Report^[4,16]

AI's role in revolutionising IT is not confined to large multinational enterprises but has reached the core of India's tech ecosystem, spanning start-ups, mid-size companies and large conglomerates. This broad adoption signals a structural shift in how IT departments are perceived within organisations, ultimately influencing broader economic and technological landscapes.



64%

Optimisation



60%

Growth



57%

Innovation

Although optimisation is the primary driver for AI adoption, a shift towards innovation and growth has been noted. This is in line with expansion of AI from back office roles to customer centric ones.

Based on a report from the technology & digital advantage practice report, India's rapid AI adoption is redefining its global competitive edge, with 30 percent of companies fully realising AI's value, surpassing the global average of 26 percent. With companies actively experimenting with AI, the country stands out for its readiness to harness its potential.^[4.2]

A major IT Service provider has been at the forefront of using AI to drive business transformation through its innovative solutions. Their Topaz suite, comprising AI-first services, solutions and platforms, accelerates business transformation by introducing SLMs such as BankingSLM and ITOpsSLM, which are

designed for specific industry applications. Their product revolutionises contact centre solutions with multilingual support, real-time sentiment analysis and enhanced customer engagement.^[4.3]

Indian IT giants have driven AI-based solutions across industries. With a strong emphasis on automation, they have harnessed AI to improve operational efficiency and enhance customer experiences. By incorporating AI-powered chatbots, virtual assistants and self-service tools, they have helped businesses in the banking and retail sectors reduce operational costs while improving service delivery and customer satisfaction.^[4.4]



Now: AI sparks IT revolution

The 2024 sector analysis highlights that while most sectors in India follow similar patterns in AI strategy, budgeting, execution and use case adoption, strategic gaps remain in advancing to the expert stage. The manufacturing, telecom, media and entertainment sectors are led by long-term AI planning, leadership commitment, sustained funding and high PoC-to-production conversion. With 45 percent of companies in the expert stage, sector-wide momentum towards mature AI adoption is expected to grow.

Aggregate sector-level AI adoption index, 2024



Source: NASSCOM Report ^[4,5]

The table summarises initiatives by leading tech companies, showcasing AI's challenges and transformative potential across sectors such as software development, talent management, IT infrastructure, cybersecurity and cloud ecosystems. Each approach focuses on optimising operations, boosting efficiency and providing actionable insights for leaders to implement AI-driven solutions in a digital-first world.

Area	The problem	Necessary changes	Recommended actions
AI in software development	Manual, inefficient aspects of the traditional software development life cycle	Shift from writing code to defining the architecture, reviewing code and orchestrating functionality	Tech leaders should expect human-in-the-loop code generation and review to become the standard
AI for talent development	Executives struggle to hire workers with the right backgrounds, delaying projects	AI can generate rich learning and development media as well as documentation to upskill talent	Tech leaders should implement regular AI-powered learning recommendations and personalisation as a new way of working
AI in the cloud ecosystem	Runaway spend is common in the cloud, as resources can be provisioned with a click	AI-powered cost analysis, pattern detection and resource allocation can optimise IT spend at new speeds	Leaders should consistently apply AI to help it earn its keep and optimise costs
AI in IT predictive maintenance	Nearly 50 percent of enterprises are handling tasks such as security, compliance and service management on a manual basis	Automated resource allocation, predictive maintenance and anomaly detection could revolutionise IT systems	Leaders should work towards an IT infrastructure that can heal itself as needed through AI

IT spending on the rise

The AI revolution in India is already underway and its influence on business operations is unmistakable. This transition is more than just about hosting data on the cloud—it also involves optimising IT infrastructure to make it more agile, scalable and ready for AI-powered transformation. Cloud technology provides the ideal platform for AI, offering businesses the flexibility to innovate and scale rapidly, which is critical for staying competitive in today's fast-paced market environment.

This increased focus on cloud adoption is being fuelled by India's commitment to adopting smarter decision-making processes, faster product development and superior customer service. The shift to cloud-based IT infrastructure is accelerating AI deployment, allowing businesses to capture real-time data and perform sophisticated analyses that were once difficult to implement due to legacy IT limitations.

In India, software and IT services are key contributors to the growth in IT spending, with software spending rising by 16.9 percent to reach US\$ 17.9 billion, and IT services increasing by 11.2 percent to US\$ 30.1 billion in 2025.^[4,6]

While at a lower base, spending on data centre systems is expected to almost double in percentage terms at 19.1 percent this year to US\$ 5 billion, up from

US\$ 4.2 billion last year when it grew 10.3 percent, data from Gartner showed. The report showed that software spending is propelled by the price premium of GenAI-enabled solutions and IT services spending is fuelled by enterprises' need for cloudification, digitisation and consulting services.^[4,6]

Gartner said in a report that global IT spending is surging, driven by the rapid rise of GenAI. It is on pace to surpass US\$ 7 trillion in four years.

After years of enterprises pursuing lean IT and everything-as-a-service offerings, AI is sparking a shift away from virtualisation and austere budgets. Gartner predicts, worldwide IT spending is expected to total US\$ 5.26 trillion in 2024, an increase of 7.5 percent from 2023.

Hardware is eating the world, hardware and infrastructure are having a moment, and enterprise IT spending and operations may shift accordingly.

Major tech players are investing heavily in India, expanding AI and cloud infrastructure through new data centres and upskilling programmes to equip professionals with the expertise to drive AI innovation. A major tech product investment of US\$ 3 billion in India is expected to further solidify India's position as a global leader in technological innovation and expand its AI capabilities.^[4,7]



New: AI adoption reaches critical mass

One of the largest Indian IT firms is investing heavily in AI-driven solutions, focusing on supply chain optimisation, predictive analytics and enterprise automation. Transitioning to an AI-first company, it has trained over 220,000 employees with a US\$ 1 billion investment. Its ai360 ecosystem integrates AI across solutions, enhancing industries with automation, productivity and new revenue streams. AI-driven innovations in transportation and logistics optimise fleet management, predictive maintenance and customer engagement, improving efficiency, reducing costs and driving sustainability. The company continues investing in talent, acquisitions and partnerships to strengthen its AI capabilities.^[4,8]

Indian IT firms are harnessing low-code/no-code platforms and AI-powered code assistants to accelerate digital transformation and enhance client offerings. These solutions enable rapid application development, process automation and seamless integration without extensive coding expertise, empowering both technical and non-technical professionals. For instance, low-code platforms help clients streamline workflows, while code assistants enhance developer productivity through intelligent code suggestions, error detection and optimisation. By embedding these tools into their service ecosystems, such as Mendix & Out Systems and Appian are equipping industries with scalable, efficient solutions that address evolving business challenges and foster innovation at an unprecedented pace.^[4,9]

In response to the growing demand for AI expertise, Indian tech companies have significantly expanded their AI-focused talent pool in India. A large Indian IT company has launched several AI and machine learning certification programmes and training initiatives to equip national and international professionals with the skills required to tackle the most pressing AI challenges. This investment in talent development has empowered Indian organisations to provide high-quality AI solutions and positioned India as a leader in AI education and talent development globally.

Deloitte was engaged to implement advanced AI solutions that address a range of talent and leadership challenges across key industry players. For example, Deloitte assisted a major oil company in deploying an AI-driven succession planning solution that effectively identified and prepared successors, thereby strengthening the organisation's critical role pipeline. Similarly, Deloitte supported a global sportswear brand by implementing an AI-driven skill development solution that analysed labour market trends to forecast future skills needed across various roles, ensuring the company remained agile in a competitive market.

AI is fundamentally redefining India's tech talent landscape—fuelling enhanced productivity and advanced skill development. With AI tools empowering professionals, innovation hubs emerging in cities such as Bangalore, Hyderabad, Pune and even select Tier-2 centres and robust collaborations among academia, industry and government, India is poised for a significant economic leap. This transformation is not only creating new roles in AI, ML and data science but also positioning India's tech workforce as a global powerhouse in high-value service exports.

Additionally, Deloitte helped a leading e-commerce giant adopt a GenAI-driven leadership development programme, using large language models to process both structured and unstructured managerial feedback to generate personalised insights, strengths and actionable development recommendations.

This strategic engagement underscores Deloitte's commitment to using innovative AI solutions that resolve immediate business challenges and pave the way for sustained competitive advantage and long-term transformation across diverse industry sectors.

The move towards customised AI models

As Indian companies increasingly recognise the power of AI, they are investing in developing specialised AI models tailored to their unique business needs. A major driving factor behind this shift is the high cost

and complexity of relying on generic AI models, such as LLMs, which are often prohibitively expensive and have scalability issues.

To mitigate these challenges, businesses opt to create smaller, more cost-efficient models (SLM) that are customised to meet their specific operational requirements.

An IT service provider is helping clients build proprietary AI models, reducing reliance on costly, off-the-shelf solutions. By focusing on customised, industry-specific AI, such as SLM for finance and retail, businesses can optimise for unique challenges and drive innovation. AI is now essential to business success—companies that do not embrace it risk irrelevance. This provider is also launching internal platforms to offer these solutions to customers.^[4.10]

Similarly, another IT service management company is using AI to deliver cutting-edge solutions that optimise IT operations, improve business decision-making and foster real-time data analysis. Through its AI-driven platform, it enhances IT efficiency with features such as anomaly detection, intelligent automation and event correlation, enabling real-time analytics. These capabilities support retail, logistics and IT industries, where operational agility and seamless decision-making are crucial for success. Its scalable, AI-powered platforms are designed to meet the dynamic needs of businesses across various sectors.^[4.11]

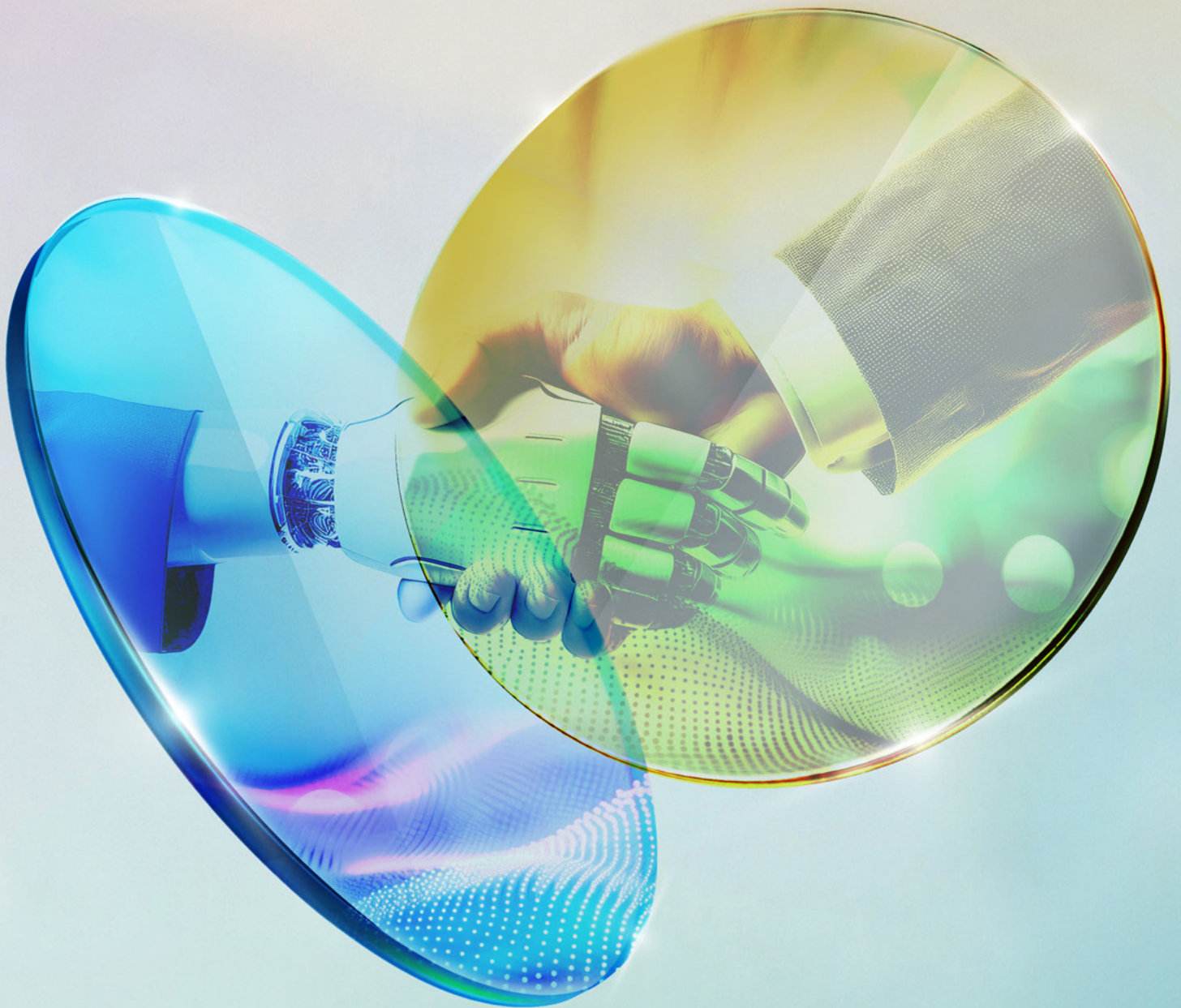
Next: IT as a service: A new era

India's IT sector is evolving from a cost-centric model to a strategic, service-oriented approach. Traditionally seen as a support function, IT is now becoming a key driver of business agility, fuelled by AI technologies that transform it into a strategic asset.

It is shifting to a model that provides reusable assets and AI-powered platforms, enabling business units to create their solutions. By offering code libraries, automated workflows and customisable tools, IT empowers non-technical teams, boosts efficiency and reduces time spent on the market.

A leading multinational technology giant's "IT as a Service" model, powered by cloud technologies and AI-driven automation, enables businesses to quickly deploy solutions, scale operations and eliminate traditional infrastructure overhead. This approach uses cloud-native tools for agility, while AI and automation optimise performance and reduce manual tasks. Strategic partnerships offer secure and scalable cloud environments, while AI and Robotic Process Automation (RPA) streamline workflows and enhance decision-making. Together, these capabilities drive digital transformation, improving operational efficiency, reducing costs and speeding up time-to-market.

A renowned global technology and IT services company, too, has developed a hybrid IT service platform that integrates AI and automation tools to offer businesses the flexibility to scale their IT services on demand. This hybrid model allows companies to choose the services they need based on their industry requirements and easily scale their operations as needed. By incorporating AI-driven features such as predictive maintenance and automatic load balancing, businesses can minimise downtime, reduce operational costs and increase the agility of their IT services.^[4.12]



Trend 5

The new math: Solving cryptography in the age of quantum

India faces rising cybersecurity threats, including AI-driven attacks and quantum risks. Proactive adoption of quantum-safe encryption and stronger defences are essential to protect its digital future.

India's cyber threat landscape is rapidly evolving, but a larger storm is brewing—quantum computing. While AI-driven cyberattacks dominate today's concerns, the impending Y2Q (Year to Quantum) era poses an even greater risk: the breakdown of traditional encryption. Cybercriminals and nation-states could steal encrypted data today and decrypt it later when quantum computers become commercially viable. The National Institute of Standards and Technology (NIST) is already advocating for quantum-resistant cryptography, signalling that businesses must act now to safeguard sensitive data.^[5,1]

The shift to Post-Quantum Cryptography (PQC) is no longer optional—it is a necessity. As Cryptographically Relevant Quantum Computers (CRQC) advance, industries such as banking, healthcare and national security—which rely heavily on encryption—face

the highest risks. Leading Indian enterprises are proactively adopting quantum-safe encryption and collaborating with global cybersecurity bodies, but small and mid-sized businesses (SMBs) remain highly vulnerable due to limited awareness and resources. This disparity could expose critical segments of India's digital economy to catastrophic breaches.

To stay ahead of this disruption, businesses must prioritise PQC adoption now. Organisations should begin by conducting quantum risk assessments, transitioning to NIST-recommended quantum-safe algorithms and building agile cybersecurity frameworks that can withstand quantum-driven decryption threats. The quantum shift is inevitable—the time to prepare is now.



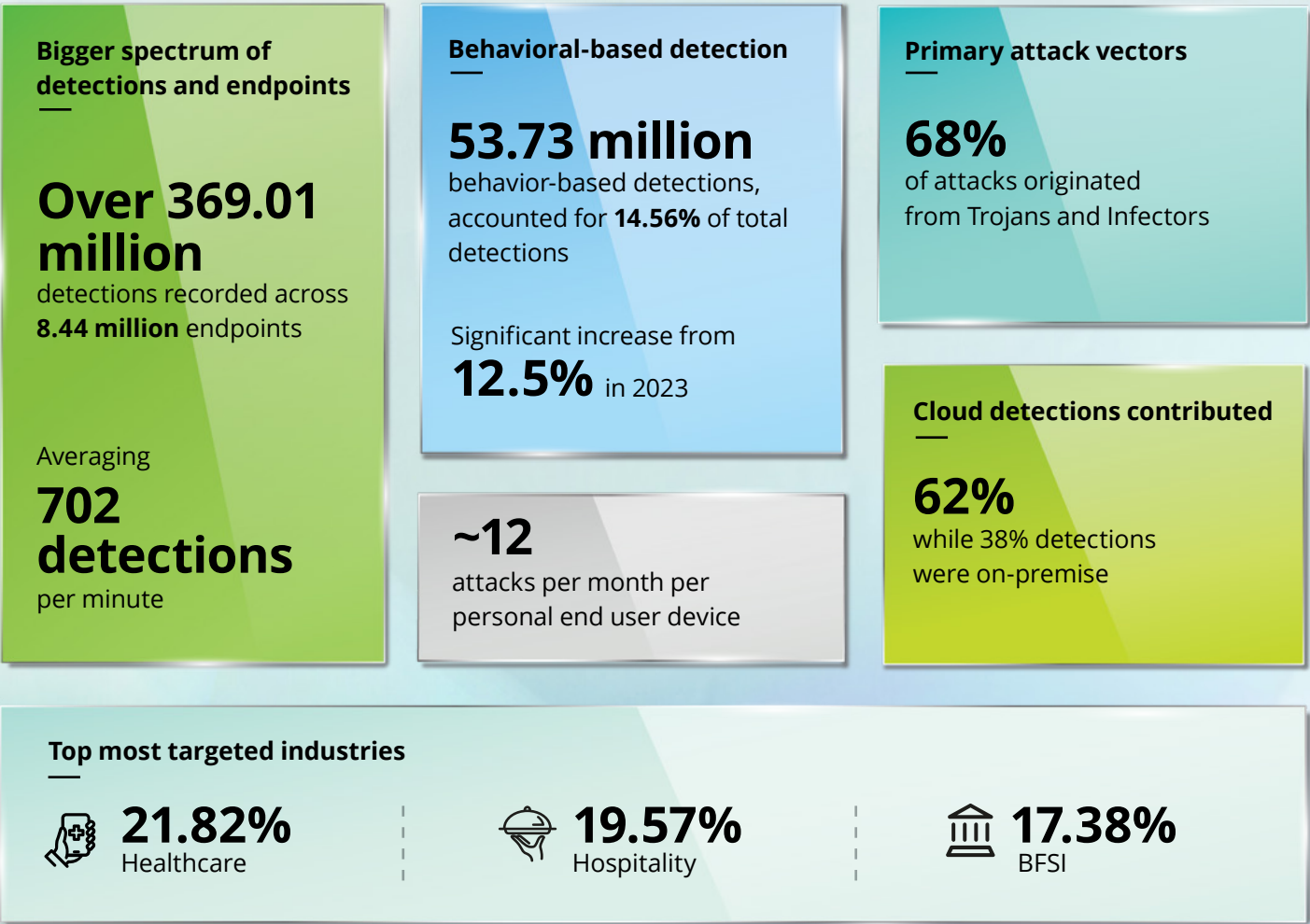
Now: The rise of AI-driven cyberattacks and the quantum threat

One of the emerging threats that is becoming particularly concerning is the rise of AI-driven cyberattacks, which have the potential to automate and scale attacks to an unprecedented level of complexity.

The scale of cyber threats is staggering. In 2024, **369.01 million** security incidents across 8.44 million endpoints were detected in India. On average, every minute sees 702 potential security threats.^[5,2] To put this in

perspective, this is roughly equivalent to having 11 new cyber threats emerging every second somewhere in the country. This volume of attacks demonstrates the relentless nature of modern cyber threats and the constant pressure on security systems. There is an increase in sophisticated threats targeting sectors such as healthcare, hospitality and BFSI, while government entities remain prime targets as well. Over 1 million ransomware attacks were seen over the year.

Figure 4: Cybersecurity attacks in India – 2024



Source: Data Security Council of India (DSCI)^[5,1]

While these current challenges demand immediate attention, a new and transformative risk is rapidly gaining focus—the advent of CRQC). Unlike traditional cybersecurity threats, the rise of CRQC poses a unique and pressing risk: the potential obsolescence of current public-key cryptographic methods.

India's cybersecurity market accounted by ~3 percent of the overall global cybersecurity market. It is expected to account for 5 percent of the global market by 2028.^[5.3]

Major cyber threats



Phishing attacks



Ransomware



DDoS attacks



Software and application vulnerabilities



Social engineering

Source – DSCI Report^[5.1]

Despite well-reasoned skepticism surrounding the timeline for CRQCs, advancements in qubit coherence, control, error mitigation and correction techniques, along with increasing investments, indicate that the achievement of fault-tolerant CRQCs could come sooner than expected. Governments worldwide have committed over US\$ 40 billion to quantum technologies, with the US investing US\$ 5 billion, China US\$ 15 billion, Europe US\$ 1.2 billion and India US\$ 0.75 billion. The sector saw 50 investment deals worth US\$ 1.5 billion in 2024, doubling from the previous year, and further acceleration is expected in 2025.^[5.4] With growing financial support and technical breakthroughs, the urgency to prepare for quantum-driven cybersecurity threats has never been greater.

In an increasingly complex cyber threat landscape, cryptographic systems are essential to safeguarding India's sensitive data and national security. However, the emergence of quantum computing presents an unprecedented risk, making the timeline to address this challenge uncertain and potentially short. To mitigate these risks, India must establish a robust framework for testing and certifying quantum technologies while developing a comprehensive crypto agility policy. Addressing challenges such as cryptographic key management, algorithmic vulnerabilities and supply chain risks will enable the Indian government to strengthen national security and proactively counter evolving cyber threats.

Strengthening India's cybersecurity framework

The Digital Personal Data Protection (DPDP) Act, 2023, recently enacted in India, plays a pivotal role in addressing these challenges. By establishing clear guidelines on data privacy, consent and accountability, the Act seeks to enhance the protection of personal data across digital ecosystems. For businesses, the DPDP Act emphasizes the importance of secure data handling practices, driving organisations to adopt robust encryption techniques, including quantum-resistant algorithms. As India prepares for the quantum era, the Act provides a critical legal framework for ensuring that data remains protected against

emerging threats, such as those posed by quantum computing advancements. This alignment of legislative efforts with technological readiness underscores India's commitment to safeguarding its digital infrastructure.^[5.5]

The National Quantum mission was launched by the Department of Science & Technology (DST) in April 2023 which aims to seed, nurture and scale up scientific and industrial R&D and create a vibrant and innovative ecosystem in Quantum Technology (QT).^[5.6] It promises faster problem-solving, improved security and enhanced AI, with the potential for unhackable communication and highly sensitive measurements. It could revolutionise industries by enabling more efficient, precise technologies in fields such as healthcare, finance and communication.^[5.7]

The ramifications of such a shift could be profound, potentially destabilising the very foundations of India's digital ecosystems. With the rapid digitisation and growth of the nation's economy, these vulnerabilities could pose a risk to businesses and national security and privacy.

Proactive identification and timely action have averted significant IT disruptions, but quantum computing poses a more complex challenge due to the uncertain timeline for CRQC. This uncertainty leaves small and mid-sized enterprises hesitant to act. Despite this, early preparation for quantum-driven disruption is crucial.

Large banking, telecom and e-commerce organisations are adopting quantum-resistant algorithms, investing in research and collaborating with global standards bodies to address quantum risks. In contrast, small and mid-sized businesses (SMBs) lag in awareness and readiness due to limited resources, making them vulnerable as quantum technologies advance. India's digital economy faces significant risks without adopting Post-Quantum Cryptography (PQC) and agile cybersecurity frameworks. Prioritising quantum-readiness is vital to securing the country's digital future.

Cryptography (PQC) and agile cybersecurity frameworks. Prioritising quantum-readiness is vital to securing the country's digital future.

Area	The problem
Deloitte India has partnered with a data privacy and security company to address growing data governance, privacy and compliance challenges.	→ Deloitte India partners with a data privacy and security company to address data governance, privacy and compliance challenges. Focus areas include automating privacy operations, enhancing Data Security Posture Management (DSPM) and improving compliance frameworks aligned with India's DPDPA, GDPR and CCPA as part of AI Security as a Service.
IT Company partnership with AI-based Cybersecurity solution company for GRC insights	→ IT company collaborates with a San Francisco-based autonomous security solutions provider to offer AI-driven cybersecurity services. The partnership will integrate with the autonomous penetration testing platform for threat detection, AI-powered pen-testing and Governance, Risk, and Compliance (GRC) insights.
Invisible Signature company raises US\$ 8.9M for AI-driven cryptographic anti-counterfeit technology	→ The company uses AI and cryptography to embed invisible signatures into digital packaging or products, enabling real-time authentication in supply chains and retail without altering product artwork.
A Financial Company, in partnership with a Cryptography giant, has completed a project to explore adopting post-quantum cryptography (PQC) technologies within its infrastructure.	→ In partnership with a cryptography giant, the company completed a project to adopt PQC, modernise encryption and strengthen defences against quantum attacks. Over four months, the initiative provided a roadmap for quantum resilience.

New: Cryptography everywhere

Highlighting a significant vulnerability in the nation's cybersecurity, a recent report reveals that while Indian businesses actively invest in AI and explore its potential, only 39 percent are adequately prepared to withstand ransomware attacks.^[5.8]

The Government of India is strongly promoting the growth of the cybersecurity sector, as reflected in its FY 2023–24 Union Budget. Key budget allocations included INR 759 crore for cybersecurity capital projects, up from INR 400 crore in 2023, and INR 238 crore for CERT-In, compared to INR 208 crore in the previous year.^[5.9]

As India continues to embrace digital transformation across various sectors, cryptography has become a cornerstone for protecting sensitive data and ensuring the security of online transactions. In an era where digital services are integral to everything from financial transactions to healthcare services, encryption plays a vital role in maintaining the confidentiality, integrity and authenticity of critical information. It ensures that personal data, financial records and other sensitive information remain safe from unauthorised access or tampering, essential for maintaining trust in India's digital systems.

India's expanding digital economy underscores the critical need for robust cryptographic measures. Key industries such as banking, telecommunications and e-commerce rely on secure encryption technologies to protect vast data volumes. Major enterprises are prioritising quantum-safe encryption to address risks posed by quantum computing, with initiatives such as partnerships between financial organisations and quantum cybersecurity providers driving modernisation. This is particularly crucial for the rapidly growing financial services sector, including UPI (Unified Payments Interface).^[5.10] While cryptography protects India's digital infrastructure, quantum computing poses new challenges by threatening traditional encryption algorithms. The National Payments Corporation

of India (NPCI) is actively evaluating quantum-safe encryption to secure digital payment systems. This commitment reflects broader efforts to future-proof critical infrastructure.^[5.11]

Recognising these risks, organisations are integrating quantum-resistant technologies. Experts predict quantum computing will revolutionise industries, especially finance and cybersecurity. Businesses must prepare by adopting quantum-resistant encryption algorithms to prevent breaches as traditional methods face obsolescence.^[5.12] AI-driven cybersecurity solutions are enhancing defences by automating threat detection and response, helping Indian organisations secure public and private platforms.

Additionally, innovative technologies such as AI-driven cryptographic signatures from Bengaluru-based companies are being developed to combat counterfeiting and enhance product authenticity. These advancements empower consumers to validate products while protecting digital transactions.

India is taking significant steps towards quantum resilience, guided by entities such as CERT-In and the defence sector, which are developing quantum-safe encryption for critical networks. A hybrid approach to cryptography, combining traditional and quantum-safe algorithms, is recommended to ensure agility in addressing vulnerabilities. IT giants are enhancing cybersecurity through integrated dashboards, GenAI for risk insights and AI-powered threat detection systems, securing sensitive data against cyber threats.^[5.13]

Under the Digital India Initiative, the integration of quantum-safe encryption in government services ensures data security in public infrastructure. India's comprehensive strategy across education, defence, innovation and public services positions it to navigate quantum-era challenges and safeguard its digital economy.



Next: Using postquantum cryptography to prepare for future threats

As quantum computing advances, India is adopting a long-term strategy to address quantum threats to its digital infrastructure. Transitioning to quantum-resistant systems requires more than encryption upgrades—it demands a comprehensive approach to enhancing cybersecurity across domains. Strengthening overall cybersecurity hygiene is essential for resilience against current and future threats.

India's leading technology companies are driving quantum-safe adoption by collaborating with global standards organisations like NIST to integrate post-quantum cryptography (PQC) algorithms.

Investing in a dedicated programme for PQC migration is crucial. Establishing a centre of excellence to guide application teams, prioritising applications through risk assessments and executing agile implementation plans ensure a seamless transition.

To build robust defences, Indian enterprises must go beyond updating encryption standards. Improving key management practices, adopting zero-trust frameworks and modernising legacy systems are essential steps to enhance India's preparedness for the challenges of the quantum era.

Indian organisations can boost resilience by adopting agile processes for cryptographic updates, enabling swift responses to emerging quantum threats. For example, an IT product company is exploring crypto-agile strategies to rapidly integrate new algorithms as needed. Rising interest in quantum technology is driven by breakthroughs such as quantum supremacy, industrial quantum computers and quantum-safe communication, marking key milestones towards greater quantum maturity.

India's strategy for preparing against quantum threats is not just a reaction to future risks but a forward-thinking approach that emphasizes strengthening the foundation of cybersecurity. As quantum computing advances, these measures will help Indian enterprises maintain data integrity, safeguard privacy and ensure the resilience of the country's growing digital economy.

Becoming quantum-safe cyber security is a long journey that requires continuous focus on several foundational capabilities that need to mature throughout the journey; this necessitates a pragmatic, tailored and step-by-step perspective on mitigating quantum risk.

Build capability: Make someone responsible for driving the project and getting results



Develop roadmap: Create a phased approach that allows for learning and maturing along the way



Build expertise and knowledge: Educate leaders and adjacent teams about their role in tackling quantum risk



Bolster cryptographic governance: Refine cryptographic policies and standards unique to your organisation



Inventory cryptography: First, define required data, then identify what tools or (manual) processes can yield them



Manage supply chain risk: Discern your supplier base and define where to lean in and engage vendors



Implement quantum-secure technologies: Create clear remediation options, including but not limited to configuring PQC yourself.



Quantum computing offers transformative potential but challenges traditional cryptographic security. Quantum Random Number Generation (QRNG), Quantum Key Distribution (QKD) and quantum machine learning enhance cybersecurity and introduce vulnerabilities. Its ability to break RSA encryption and develop advanced attack algorithms necessitates robust strategies to mitigate risks in a quantum-driven landscape.

The transition to quantum computers brings significant risks to cryptographic encryption. Quantum computers can easily break traditional algorithms, rendering conventional encryption and decryption methods less effective in a quantum environment.

Cryptography relies on a combination of encryption and decryption keys. The security of encrypted data depends on the time required to crack the key. The longer it takes, the more secure the data.

However, even with robust encryption, there is no absolute safeguard against decryption attempts. In the era of quantum computing, data can be cracked more easily, exposing companies to risks such as software vulnerabilities, unauthorised access and other security threats. With their ability to execute highly efficient algorithms, quantum computers give hackers new opportunities to compromise secured data.

Trend 6

The intelligent core: AI changes everything for core modernisation

AI is reshaping core modernisation across India's public and private sectors. Core government services, banking and telecom systems are becoming AI-first, enabling more efficient data sharing and smoother user experiences. However, these innovations are challenging, requiring complex architectural changes to ensure scalability, security and long-term sustainability.

In India, core system providers are embracing AI and transitioning to an AI-first approach that redefines enterprise modernisation. Commercial Off-The-Shelf (COTS) vendors are retooling their software to create more modular, decoupled and AI-optimised core systems, enhancing flexibility and scalability. This evolution empowers businesses with intelligent automation, predictive analytics and self-learning systems, streamlining operations and improving decision-making. As enterprises undergo digital transformation, AI integration into core systems becomes a key differentiator in achieving operational excellence and competitive advantage.

Core systems modernisation enhances operational efficiency, reduces technical debt and increases flexibility through cloud infrastructure. This process enables businesses to offer personalised services,

integrate with broader ecosystems and improve customer acquisition and retention.^[6.1]

The "4Rs" strategies (Replatform, Remediate, Revitalise and Replace) for transforming tightly-coupled legacy systems into modular, cloud-based applications. These strategies provide a customisable approach to modernisation that can align with specific business needs.^[6.1]

For years, businesses in India have heavily relied on their core and enterprise resource planning (ERP) as the central source of truth. Now, AI is transforming this model by analysing vast amounts of data, understanding operations and automating decisions. AI-powered tools deliver real-time insights, enhancing productivity and efficiency without needing direct access to traditional systems.





Build a connected and future-proofed business by ensuring your people and processes are armed with efficiency.



Remain agile in your ERP operations by addressing change at the enterprise level and working across organisational lines.



Drive decision-making based on KPIs so you can take the right actions on the right signals at the right time.

source: Deloitte ERP Core Modernisation^[6.18]

There are multiple offerings from the leading ERP solution providers that are championing AI adoption in their client's business processes. The ERP solution provider brings intelligent cloud ERP combining business data and processes using AI and GenAI – Relevant, Reliable and Responsible. Another ERP provider's HCM gets an AI-powered dynamic skills feature. Data intelligence gets gen AI-powered developer assistant. The ERP Solution provider updates Fusion Cloud CX with CDP and B2B buying features and adds agentic AI.^[6.2]

AI-driven modernisation reshapes enterprise architecture, making core systems more adaptable to changing business demands. Traditional monolithic architectures are replaced with decoupled, composable structures, allowing organisations to integrate AI-powered insights seamlessly across various business functions. Companies are using AI to automate complex workflows, optimise resource allocation and enhance regulatory compliance, addressing challenges such as cost pressures, workforce evolution and increasingly demanding customer expectations. This shift is also evident within major enterprise platforms, where AI-powered automation redefines service delivery models and accelerates innovation.^[6.3]

Despite its vast potential, AI-led core modernisation presents significant challenges, including talent shortages, data governance complexities and the need for seamless system interoperability. Indian enterprises must invest in AI-native talent, robust data management frameworks and governance models to ensure secure and compliant AI adoption. Looking ahead, AI is set to evolve from an enhancement layer to an intelligent core, driving autonomous decision-making and revolutionising enterprise operations. By fully integrating AI into their core systems, Indian businesses can unlock unparalleled efficiencies, future-proof their digital infrastructure and position themselves as leaders in the global AI-powered economy.^[6.4]

Businesses must build trust in AI for ethical decision-making, especially in high-stakes sectors such as finance and healthcare. Institutions are modernising technology infrastructure to support advanced analytics, real-time insights and engagement layers. Key focus areas include technology strategy, user experiences, scalability, hybrid infrastructure, product configurability and cybersecurity.

Robust strategy for building technology capabilities



Superior omnichannel journeys and customer experiences



Modern, scalable platform for data and analytics



Scalable hybrid infrastructure strategy for the cloud



Highly configurable and scalable core product processors



Secure and robust perimeter for access



Looking ahead, the potential for AI in India's business landscape is immense. In the coming years, AI could evolve from being a supporting tool to becoming the

primary system of record, with AI agents that analyse data, offer recommendations and take autonomous actions. This would enable enterprises to make faster, more informed decisions, driving growth and productivity in previously unimaginable ways. For businesses in India, the full integration of AI into core systems promises to unlock a new era of efficiency, innovation and competitiveness, positioning them at the forefront of the global digital economy.

Now: Businesses in India need more from systems of record

With the rise of AI, businesses are increasingly realising that simply building on existing core systems is no longer enough. How can organisations effectively respond to market demands and introduce innovative new services if they cannot easily adapt their systems? And how can they fully use AI without a solid foundation of clean, accessible data?

For years, core systems have been the backbone of enterprise operations, serving as the single source of truth. However, AI's integration challenges this model, enabling businesses to move beyond static data management and towards systems that can process and act on data autonomously. This shift will be particularly impactful in sectors such as manufacturing, retail and financial services, where AI can optimise supply chains, automate customer service and enhance decision-making.

As AI continues integrating into core systems, Indian businesses must decide between building in-house capabilities or relying on third-party vendors. This modernisation will lead to a more agile, data-driven business environment, allowing companies to stay competitive in an increasingly digital world.

For example, Deloitte India has helped a client embark on a strategic transition and expand its critical software development teams across borders. The specialised software player has operated in the market for over the last four decades and has over 90+ products across various business units. It faced challenges such as inadequate documentation,

language barrier between teams, high dependency on senior developers and significant training efforts. Deloitte helped with GenAI-powered solutions across various requirements, such as creating onboarding material by integrating information from internal files and external sources to summarise and generate customised PDF onboarding material and creating a Q&A chatbot to answer queries from a rich and diverse knowledge base. By incorporating a GenAI-powered solution, the client witnessed reduced training hours for onboarding new hires and created a single source of truth for a large, diverse knowledge base spanning business units and products.

However, the fear of risk often holds some companies back. Concerns about the potential commercial and reputational consequences of service disruptions or broken integrations have led many to postpone modernisation efforts. Yet, staying stagnant is no longer a viable option. Organisations that fail to make their systems more adaptable and reconfigurable risk losing their competitive edge, while more agile competitors that innovate and bring new products to market will outpace them.

The good news is that modernising your tech stack no longer has to be overly risky. Organisations can carefully manage the process and mitigate potential risks by combining data-driven strategies with human expertise.

Core systems, especially ERP platforms, are increasingly considered critical assets for enterprises in India. Their value is recognised because they hold all the information that describes how a business operates. For this reason, the Indian ERP market is expected to grow steadily, driven by the desire for greater operational efficiency and more data-driven decision-making.

However, many organisations in India are struggling to realise the full potential of these tools. Despite the clear benefits of having a centralised single source of truth, many ERP implementations fail to meet their business goals. According to Gartner, by 2027, over 70 percent of ERP initiatives in India are projected to fall short of their original business case objectives.^[6.5]

The gap between expectation and reality in ERP systems stems from their one-size-fits-all approach. Businesses had to bend their operations to fit the rigid ERP model, creating a disconnect between what they needed and what the system could offer. Enter AI. It breaks down these barriers, shifting businesses from cumbersome ERP setups to more flexible, data-driven approaches. AI unlocks vast data sets, empowering companies to transform their operations and work more efficiently.

Below are a few examples of how different companies are utilising AI to upgrade their legacy systems:

Area	The problem	Necessary changes	Recommended actions
Insurance core modernisation	Manual document processing delays underwriting and approval processes	Automation through AI and ML to process documents quickly and accurately	Implement AI-driven document processing solutions such as Vision API to automate and speed up approval processes, enhancing efficiency

Area	The problem	Necessary changes	Recommended actions
Banking core modernisation	Legacy systems leading to inefficiencies and limited scalability in core banking	Transition to cloud-native architectures and modular systems	Tech leaders should prioritise a phased modernisation plan, starting with high-impact core services
Federation architecture – AI layer agents	Lack of unified, intelligent interaction across systems and customer touchpoints	Deploy AI-powered agents to streamline interactions and integrate federated architecture capabilities	Leaders should ensure AI layer agents are designed for seamless cross-channel integration and scalability
AI in customer engagement	Customer service struggles with fragmented support and delayed resolutions	Use AI-driven virtual assistants and predictive analytics to anticipate customer needs as part of AI Banking as a Service	Leaders should integrate AI solutions for real-time personalisation and faster issue resolution
AI-based insights in digital twin	Challenges in manufacturing process monitoring and real-time tracking	The platform simulates and monitors production operations in real time, helping to improve operational efficiency, reduce downtime and optimise manufacturing workflows using AI-based insights	The company can enhance predictive maintenance using digital twins, resulting in faster time-to-market and improved product reliability. Integrating AI and digital technologies is key to accelerating Ola's production and innovation in the electric vehicle space.

The above table shows major efforts launched by prominent organisations, emphasising the issues they confront across multiple areas. These examples show how modern technologies such as AI, modular architectures and predictive analytics may reduce inefficiencies, increase scalability and improve decision-making processes. The table also identifies critical modifications and actionable recommendations. It serves as a road map for executives seeking cutting-edge technologies to drive transformation and achieve remarkable outcomes in their sectors.

New: AI augments the core in India

AI offers opportunities and risks to core systems, especially regarding privacy and security. Core systems in India manage highly sensitive HR, finance, supplier and customer data. Feeding this data into AI models without strong governance frameworks could create new risks.

This is where AI is helping transform core systems by enabling businesses to enhance customer experience and TCO and remain agile in a highly competitive market. The government promotes AI integration through multiple initiatives, such as the National Strategy for Artificial Intelligence, which focuses on using AI for inclusive growth and addressing key national challenges across sectors such as healthcare, education and agriculture. The IndiaAI Mission seeks to democratise and catalyse AI innovation. These efforts aim to bridge the gap between theory and practice by supporting cutting-edge research and applied activities in AI-related priorities.

Regarding the large OEMs/Enterprises, we see that the leading ERP solution provider is expanding AI-powered ERP in India (Labs, the largest R&D hub, has explicitly stated they are driving global AI innovations from India and are even growing). In contrast, another leading ERP Solution provider embeds AI across enterprise applications. A leading telecom provider's AI-powered intelligence and automation platform drives AI adoption across industries. A leading CRM provider has invested US\$ 500 million in AI innovation globally and five AI start-ups in India as they are optimistic about India's potential and ability to innovate agentic AI.

AI-driven enterprise systems assist businesses in forecasting demand, optimising supply chains and personalising customer experiences, ensuring long-term success. Additionally, they can bring about automated business data-driven decision-making.

As organisations modernise their IT infrastructure, those effectively using AI will gain a significant competitive advantage in the evolving digital economy.

Deloitte has been working with customers to adopt AI in core systems and processes. For example, Deloitte worked with an Indian Telco embedding AI alongside the customer management core, enabling better segmentation and driving customer personas-driven campaign offers. This enabled revenue growth of 36 percent and a 5 percent reduction in churn. For another CPG/FMCG customer, Deloitte led a 15–20 percent spend efficiency improvement across channels by embedding AI practices on transactional-level spend analysis.

One in five Indian companies is poised to benefit from GenAI, which is in its early adoption stages but faces significant challenges such as data quality, governance, security, biases and skill shortages. The push for GenAI adoption drives firms to modernise their core systems, addressing a decade of tech debt that has hindered innovation. With 91 percent of companies planning increased investments in GenAI by 2024, CIOs focus on data quality and modern infrastructure, including cloud adoption, to overcome integration issues.^[6,6] This modernisation also prompts a shift to IT financial management and FinOps practices to manage cloud spending effectively. As SaaS adoption grows, with 61 percent of firms moving to cloud-based solutions, late adopters are forced to abandon on-premises systems due to cost and integration challenges. GenAI's rise will also drive stricter SaaS policies as vendors use LLMs to offer advanced personalisation and revenue-impacting capabilities, though highly regulated sectors remain cautious.

Moreover, as AI integrates into core systems, the question of ownership arises. Who should be responsible for bringing AI into the core? This highly technical process requires IT expertise but also supports critical operational functions in which the business should be involved.

Companies must develop clear strategies in India before fully embracing AI within their core systems. AI should not be viewed as an isolated tool but as an integral, embedded capability across all business

processes. For businesses in India, a clear strategy based on business goals will be crucial for success.

Orchestrating the platform approach in India

In India, AI will likely be integrated into core systems through a platform-based approach, where today's systems serve as the foundation for AI-driven innovations. However, this raises critical questions for Indian enterprises: Should they use modules from vendors or third-party tools or develop their AI models? Relying on vendor solutions offers the benefits of seamless integration, but it may require waiting for vendors to provide new functionalities.

Achieving core modernisation requires identifying the essential building blocks for success. This begins with clearly capturing data, followed by adopting composable architectures for quick feature deployment and ensuring a comprehensive understanding of the workflows and business logic embedded within your systems.

Establishing these foundational elements will make the modernisation process more transparent and flexible, reducing risks.



Deploy Cloud and Embark on Digital Transformation Journey



Stay “Always On” Personalised Experience to client



Migrate Legacy to New Applications



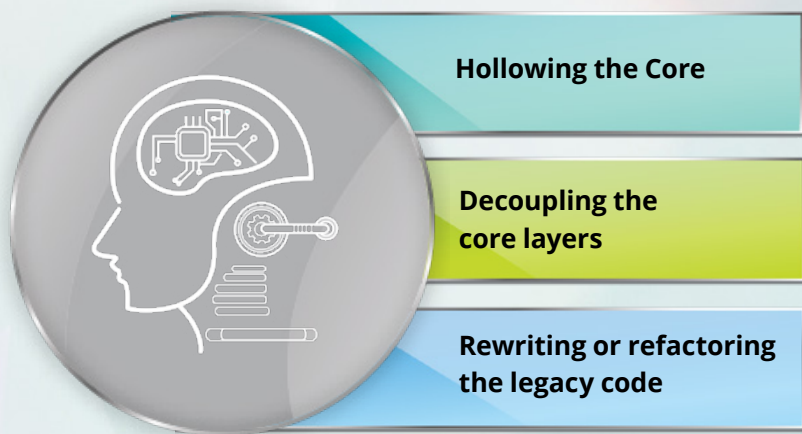
Deliver Business Outcomes optimising costs and predictability

A data-driven approach to modernisation offers substantial advantages, such as enhanced system clarity and efficiency. This approach can be revisited as needed, which is especially valuable when acquiring a new business, as it provides immediate access to critical data.

A phased roadmap also helps mitigate risks in the transformation journey. The first phase could involve migrating to the cloud or rewriting the application architecture. From there, AI can be integrated to advance the modernisation process further.

Using a methodology that blends the best of technology and human expertise, the core of our approach is a detailed analysis of legacy technology assets, driven by data automation and enhanced by patented capabilities that ensure a de-risked, cost-controlled and accurate end-to-end system transformation. However, this is only part of the equation; using client subject matter expertise to validate findings, not just help generate them, is also critical.

The decision to modernise is no longer a binary choice between doing nothing or going ahead with a complete overhaul. There are progressive forms of core modernisation:



- **Hollowing the core**, which involves transitioning a collection of technology layers to a modern core while rationalising redundant systems to reduce infrastructure footprint
- **Decoupling the core banking layers** from channels and downstream legacy applications and operating as a headless core, with the business logic remaining in the legacy to support the headless core
- **Rewriting or refactoring the legacy code**, where mining technologies make it possible to peer inside legacy code—regardless of language—to refactor the code, extract the business logic or remove the code and replace the application with a microservice.^[6,7]

Integrating AI into core systems requires a strategic approach. One must balance adopting prebuilt vendor solutions with developing proprietary models to maintain a competitive advantage.

AI enables new ways of working in India

Forward-looking enterprises in India are already answering these orchestration questions. For example, a leading logistics company in India is modernising its core systems with AI to streamline operations and improve customer service. By integrating AI in sales, customer service and inventory forecasting, the company is improving efficiency and driving revenue growth.

This transformation is also evident in industries such as retail and manufacturing. AI tools are deployed in inventory management, demand forecasting and predictive maintenance. These tools, powered by AI, enable workers to focus more on value-added tasks

such as business development and strategic planning rather than manual, repetitive activities.

ERP giants are leading the charge in AI-powered ERP systems, offering tools such as AI Copilot Joule, which connects and streamlines business processes across systems and Cloud ERP, which automates 96 percent of tasks, reducing manual intervention. Companies are piloting AI in narrow, focused areas to ensure data accuracy and human oversight, paving the way for broader AI adoption and revenue growth.^[6,8]

Many companies are piloting AI in narrow, targeted use cases in India. This ensures that AI tools are trained on specific databases, keeping human oversight in

the loop to verify the accuracy of AI-generated data before it is used in decision-making. As the use of AI in core systems expands, Indian enterprises are eyeing significant revenue growth from these advancements.

Predictive analytics is another powerful feature of AI in ERP systems. AI analyses large datasets to forecast trends such as inventory needs, demand fluctuations and potential supply chain disruptions, enabling businesses to make proactive, data-driven decisions. This helps optimise resource allocation, reduce waste and better plan for future financial trends.

In customer-facing operations, AI significantly improves the customer experience. Analysing customer behaviour helps businesses personalise products, services and marketing efforts. AI-powered chatbots and virtual assistants provide real-time support, resolving queries and issues instantly.

A leading technology services provider is focused on modernising its core services to serve its customers better. The company is upgrading its infrastructure and integrating advanced tools to enhance service delivery and operational efficiency. Focusing on core modernisation aims to improve its ability to deliver innovative solutions, provide faster service and respond to market needs with greater agility, positioning itself for long-term success in a competitive market.^[6.9]

The legacy systems continue to strain organisations that rely on outdated technologies. AI tools such as an AI and data platform by a leading tech company are being used to modernise COBOL-based applications by translating them into more contemporary

languages such as Java. This approach addresses the broader issue of technical debt and legacy systems, enabling companies to innovate and reduce the operational costs associated with maintaining outdated infrastructure. AI-powered tools make this transition smoother, helping businesses use the benefits of modern technologies.^[6.10]

An agro-tech company in India has developed a multilingual mobile app to support small farmers. Using a leading Global tech giant's Cloud technologies, the app enhances farmers' productivity by providing real-time insights on crop diseases, loan processing and supply chain logistics. The app's seamless performance and analytics capabilities are powered by a leading global tech giant's cloud infrastructure, which allows them to reach more customers and offer personalised services, ultimately helping farmers increase their crop yields and income.^[6.11]

A leading digital engineering company is focusing on simplifying core business processes and transforming with an ERP provider and AI solutions and is setting a new standard in the industry. By using ERP providers' advancements in business AI and machine learning, enterprises can unlock deeper operational insights, make informed decisions with greater precision and drive exceptional outcomes.^[6.12]

Across sectors, AI is enabling businesses to unlock operational insights, increase agility and innovate faster. AI's real potential lies in harmonising data from various systems, allowing organisations to make informed, data-driven decisions across the enterprise, driving new business models and innovation.

Next: Prioritising interconnect capabilities

Core modernisation is not an end; it is the means to unlock AI's full potential and prepare for future opportunities.

Take a moment to consider what this could mean for an organisation. With complete access to the data and clear visibility into how your systems interconnect, imagine what can be achieved with AI. This is why core modernisation is essential for enabling the next phase of digital transformation.

For many enterprises in India, core modernisation is an ongoing process that has evolved over several years. However, with AI, the speed and scale of change will likely be much faster than previous rounds of modernisation. Integrating AI into core systems is not simply about upgrading technology but about reshaping business processes and aligning them with the core's capabilities. This level of transformation demands new skills and expertise, both within IT departments and across the business. In India, businesses must develop a deep understanding of their operational needs and how AI can address those needs. This represents a major shift from traditional IT work, which was once focused on technical proficiency.

To enable scalable and efficient transformation, businesses should adopt a factory model to standardise and accelerate execution. Insourcing critical capabilities such as APIs and analytics platforms, maintaining rigorous documentation and focusing on a core technology stack are essential for speed and adaptability. The emphasis should be on automation, frequent deployments and DevSecOps to boost productivity by up to 30 percent. Using modern, modular core systems and adopting a value-driven approach to data platforms is necessary for iterative growth. Establishing labs for experimentation and factories for analytics at scale. Ensuring a cohesive cloud strategy with robust security, end-to-end visibility and compliance with data protection laws to safeguard operations and customer data.^[6,13]

As AI evolves, a broader, more holistic understanding of business and technology will be required.



Conclusion

From depth to breadth: Unlocking growth through tech convergence in India

In today's rapidly converging world, innovation is increasingly born at the crossroads of industries and technologies. For businesses in India, relying solely on deep specialisation may no longer suffice. Instead, success lies in adopting a broader, dynamic approach that actively seeks intersections capable of driving growth, sustainability and transformation beyond traditional boundaries.

The global trend of industry convergence and technological synergies is reshaping business landscapes, and India is no exception. As companies reimagine the ways they operate, they are finding that true innovation often emerges when they step outside the confines of conventional industry silos. By exploring these intersections, organisations can uncover opportunities that have the potential to redefine business models and accelerate growth.

The power of fusion: Industry convergence in action

The fusion of seemingly unrelated sectors unlocks unprecedented innovation and value-creation avenues. Consider the intersection of space exploration and life sciences. India's renowned space agency, ISRO, has historically led advancements in satellite technology, but the applications of these technologies now extend far beyond space. Precision farming, powered by satellite imagery, is revolutionising agriculture, while telemedicine solutions enabled by space-tech-derived AI are improving healthcare access in India's rural heartlands. Such cross-sector innovation is reshaping industries and creating value where none existed before.

Similarly, the convergence of the automotive and renewable energy sectors highlights the potential for interdisciplinary innovation. Their efforts are deeply intertwined with advancements in battery storage and

renewable energy, enabling a cleaner, more sustainable future for transportation in India. By breaking down barriers between automotive technology and sustainable energy solutions, Indian businesses are setting the stage for a green transformation.

Technology intersections: Fuelling exponential growth

While industry overlaps create new business opportunities, the true engine of exponential growth lies in the convergence of technologies. In India, emerging technologies are increasingly interconnected, compounding their potential to drive innovation and economic progress.

Take the synergy between AI and robotics. Indian manufacturing firms already use AI-driven robotics to streamline operations, boost efficiency and enhance product quality. This powerful combination merges AI's decision-making prowess with robotics' precision, setting the stage for more intelligent, more adaptable manufacturing processes. As these technologies continue to evolve, they promise to transform production lines and India's position in global supply chains.

Similarly, the convergence of blockchain and fintech is redefining the financial landscape. In an era of rapid digitalisation, India's fintech sector is pioneering solutions that rely on blockchain to enhance transaction security, transparency and efficiency. This convergence is vital as the nation strives toward financial inclusion and a cashless economy, providing a robust framework for secure, fraud-resistant digital payments.



Reimagining leadership: The rise of interdisciplinary thinkers

India's diverse and rapidly evolving landscape underscores the growing need for leaders who can think beyond narrow domains. While specialists excel in-depth, the modern era calls for generalists—visionaries capable of connecting the dots across industries and technologies.

For instance, the convergence of AI with smart city infrastructure offers transformative solutions for urban challenges such as mobility, waste management and energy efficiency. India's urbanisation demands leaders who can integrate diverse technologies to design future sustainable cities. Similarly, interdisciplinary expertise is crucial as India scales AI to address challenges in healthcare, renewable energy and digital governance.

Drawing parallels with the transformative power of electricity in the 20th century, AI promises to reshape every facet of Indian society—spurring innovation across sectors and redefining how people work, live and communicate. The future belongs to those who can harness the combined power of AI and emerging technologies to solve India's most pressing challenges.

The call to action: Embracing intersections for growth

As industries and technologies increasingly converge, the imperative for Indian businesses is clear: they must embrace interdisciplinary approaches to unlock transformative opportunities. Whether through partnerships that bridge agriculture and technology or by combining advanced AI with blockchain innovations, India is well-positioned to lead the global innovation race.

By looking beyond individual technologies and industries and focusing on their intersections, Indian organisations can drive innovation, create sustainable growth and redefine their futures. Those who embrace these synergies will lead the next phase of innovation and the broader transformation of India into a global powerhouse of progress and ingenuity.

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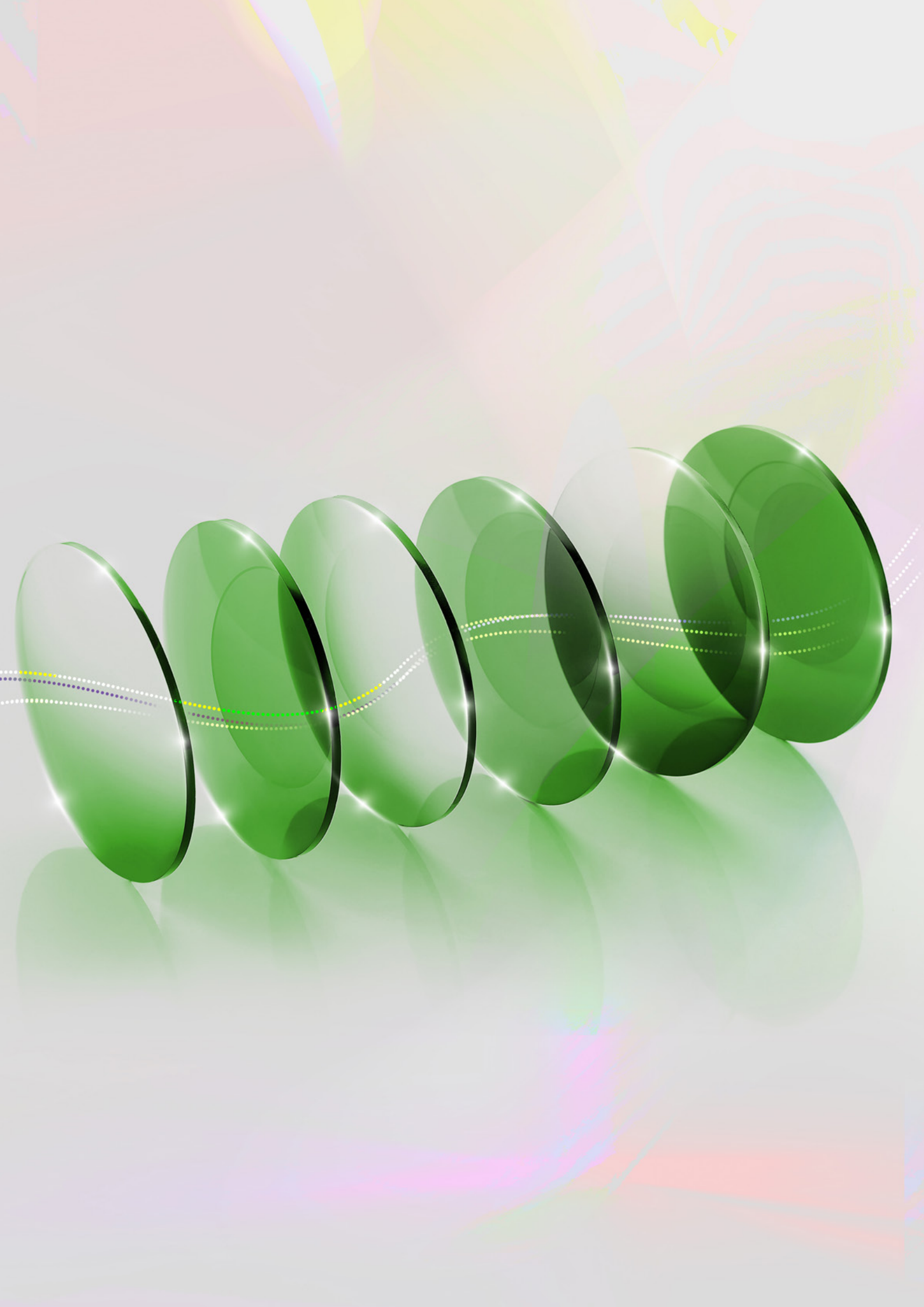
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