

THE RISE
OF INDIA'S

GENAI 
BRIGADE

REPORT, 2024



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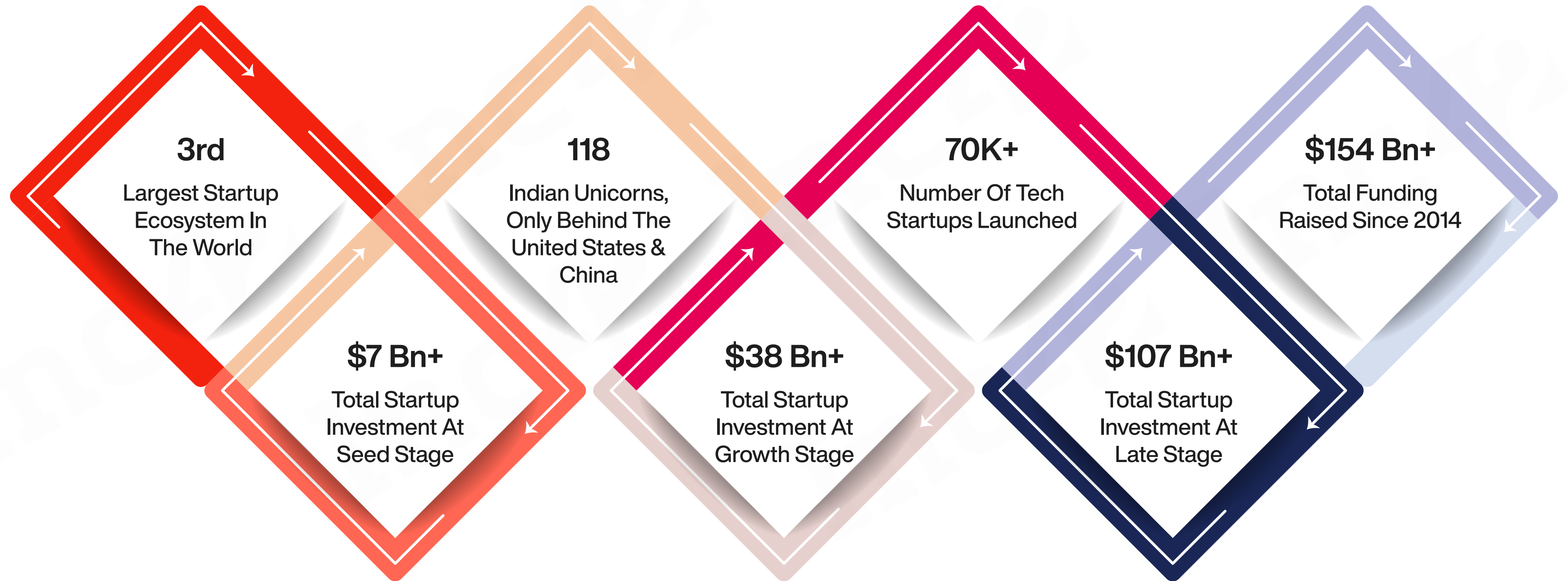
India To Have 900 Mn+ Active Internet Users By 2025

By 2025, 56% of new internet users in India will come from rural areas, with females making up 65% of this influx

	2023	2025 (E)	% Growth (Absolute)		
Smartphone Users	1 Bn+	1.1 Bn+	10%	Internet Penetration (Active Users)	55%
Internet Users	821 Mn+	900 Mn+	10%	Urban Internet Penetration (Active Users)	86%
Urban internet Users	378 Mn+	396 Mn+	5%	Cost Of 1 GB Internet	\$0.16
Rural internet Users	442 Mn+	504 Mn+	14%	5G Enabled Indian Cities/Towns	7.7K+
				Number Of Male Internet Users	443 Mn+
				Number Of Female Internet Users	378 Mn

Source: IAMAI, Inc42 Analysis

The State Of Indian Startup Economy



Source: Inc42

Note: Based on Indian startup funding deals recorded between January 2024 and September 2024.

The Evolution Of Artificial Intelligence

1990s: The Rise Of ML & Expert Systems

- ▶ Rapid rise in the development and industrial applications of machine learning algorithms
- ▶ The mid-1990s marked significant progress in natural language processing (NLP)
- ▶ In 1994, human-like spontaneous speech recognition was achieved
- ▶ IBM's Deep Blue defeated chess grandmaster Garry Kasparov in 1997

2000s: The Dawn Of Data-Driven AI

- ▶ In 2001, Google began using statistical machine learning to identify spam and enhance spelling suggestions for users' web searches
- ▶ In 2002, the launch of Roomba, the robotic vacuum cleaner, introduced AI into everyday household tasks
- ▶ The 2007 DARPA Urban Challenge greatly accelerated advancements in autonomous driving

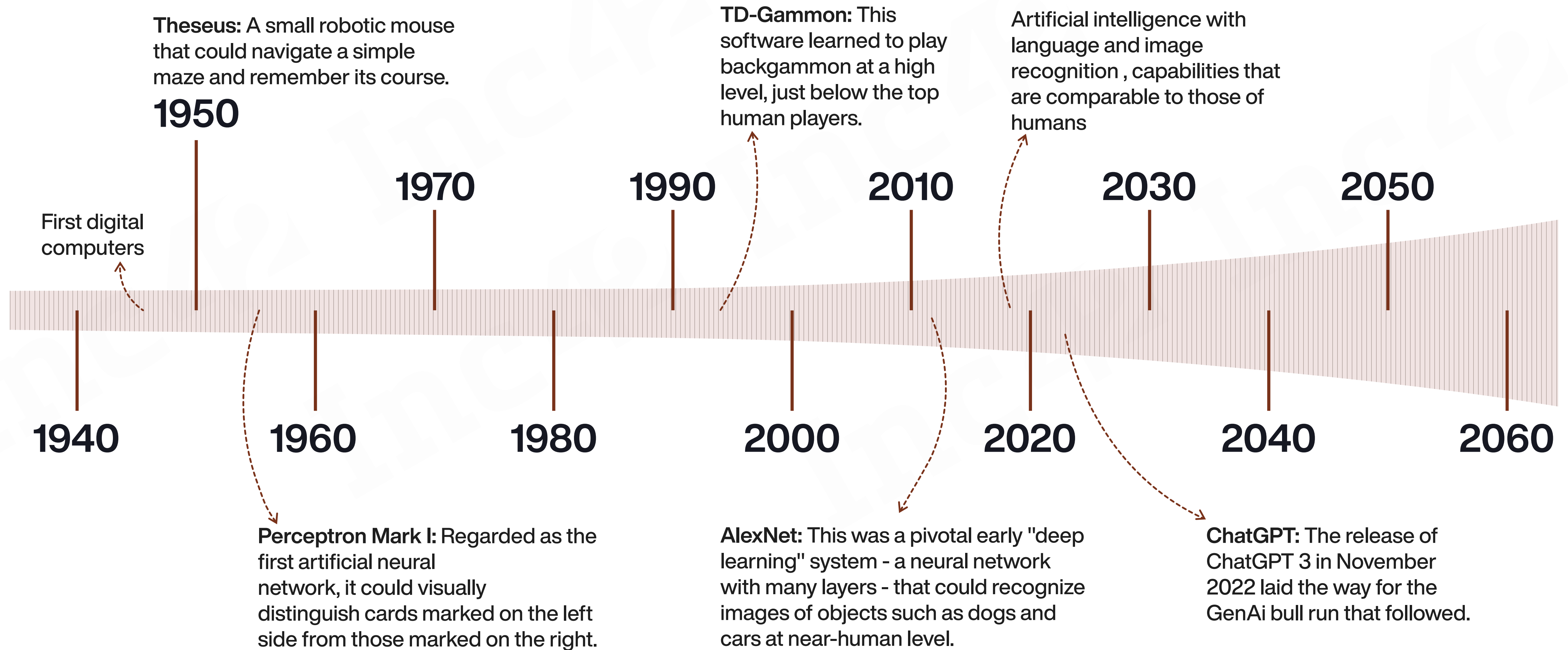
2010s: Deep Learning & AI Renaissance

- ▶ AlexNet, a groundbreaking Convolutional Neural Network (CNN) introduced in 2012, paved the way for modern deep learning models in computer vision
- ▶ In 2011, IBM Watson triumphed over Jeopardy! champions Brad Rutter and Ken Jennings.
- ▶ Apple acquired Siri, a virtual assistant utilising AI for speech recognition and natural language processing (NLP).
- ▶ In 2015, DeepMind's AI learned to play Atari games at a human-expert level, using only the game's visuals (pixels) and score as input
- ▶ The paper "Attention Is All You Need" by Google researchers introduced the Transformer architecture, revolutionising how neural networks process information

2020s: Generative AI & Multimodal Learning

- ▶ Open AI launched ChatGPT-3 for the public in November 2022.
- ▶ To capitalise on the booming generative AI market, Google introduced its powerful LLM, Bard, in 2023
- ▶ Microsoft invested \$10 Bn in OpenAI to further solidify their partnership
- ▶ Meta launched LLaMA in 2022 — an open source generative AI model for developers.
- ▶ LangChain was launched as an open-source framework designed to simplify the process of building applications powered by LLMs
- ▶ Rabbit Inc. introduced Large Action Model (LAM) based device "R1" capable of using AI agents to plan and execute tasks like trip planning, cab booking etc

The 2020s: Where AI Takes The Leap From Science Fiction To Fact



Source: Our World In Data, Inc42 Analysis

Understanding Generative Artificial Intelligence (GenAI)

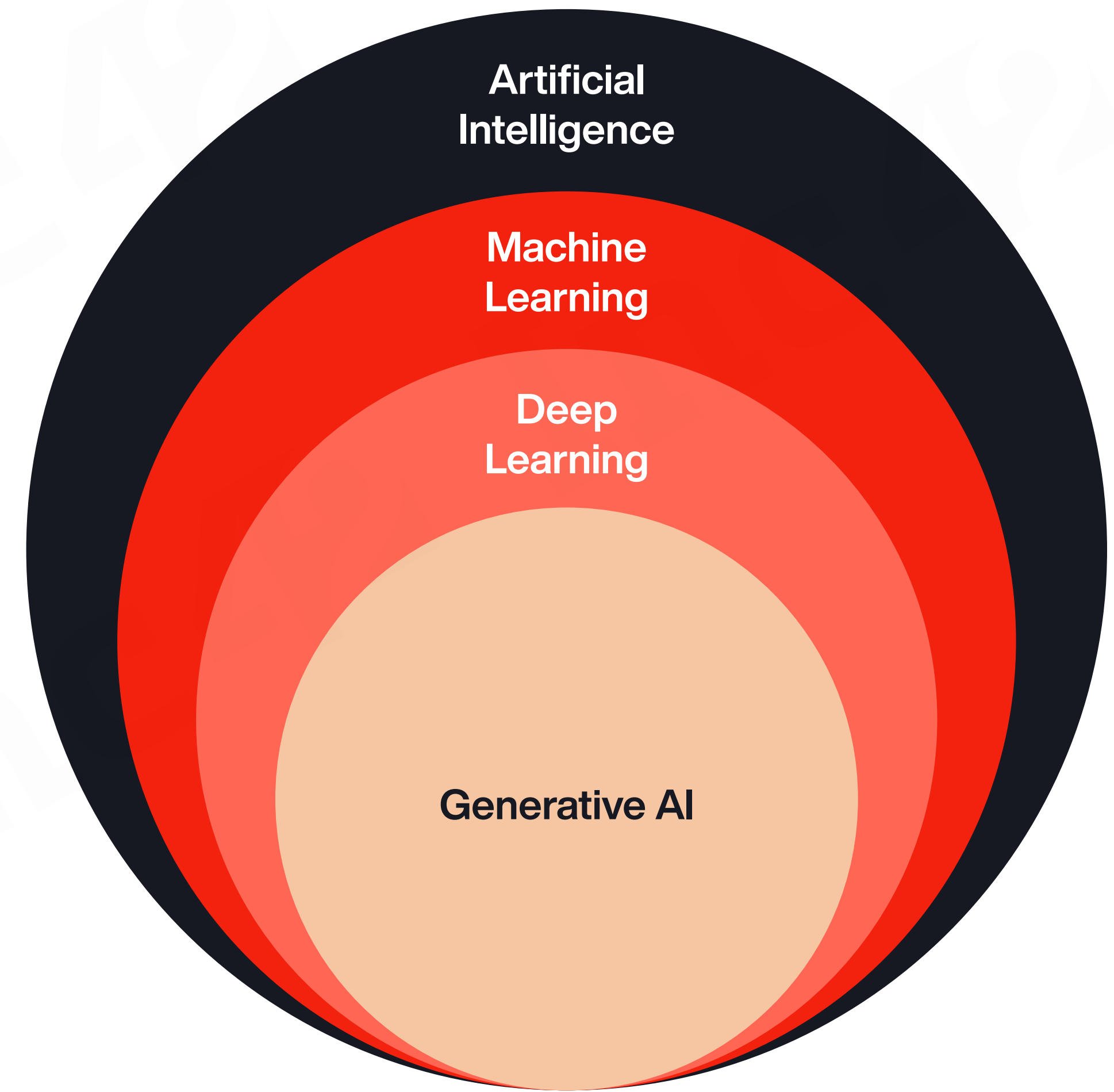
What Is Generative Artificial Intelligence (GenAI)?

Generative AI is a specialised branch of deep learning that utilises various models, including Large Language Models (LLMs) and Generative Adversarial Networks (GANs), to create new and original content that closely resembles or is inspired by its training data. GenAI can generate content across multiple formats, such as text, images, music, and code.

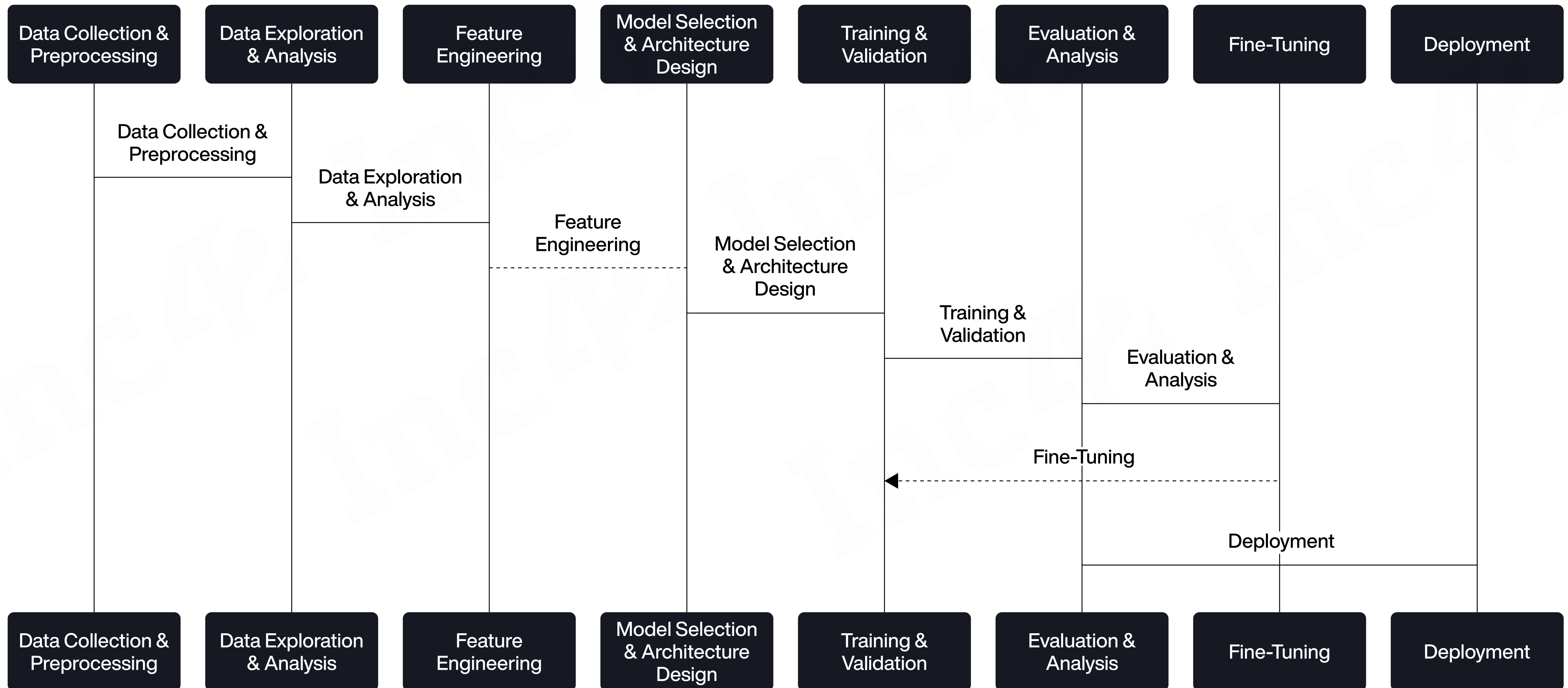
Popular Types Of GenAI Models

- ▶ Generative Adversarial Networks (GANs)
- ▶ Transformer-based Models
- ▶ Recurrent Neural Networks (RNNs)
- ▶ Variational Autoencoders (VAEs)
- ▶ Deep Reinforcement Learning
- ▶ Autoregressive Models

Source: Inc42, Michael Miao (Image Credit)

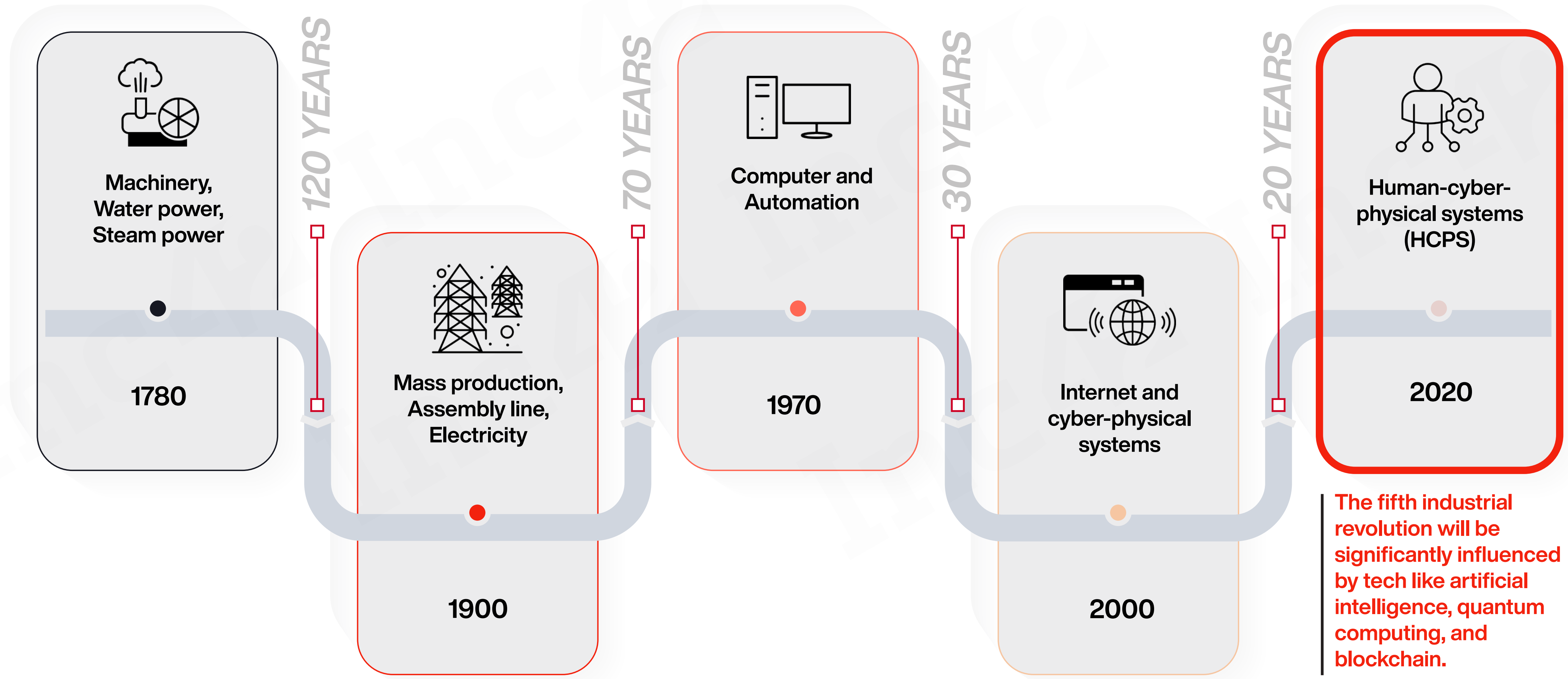


Understanding Generative Artificial Intelligence (GenAI)



Source: Inc42

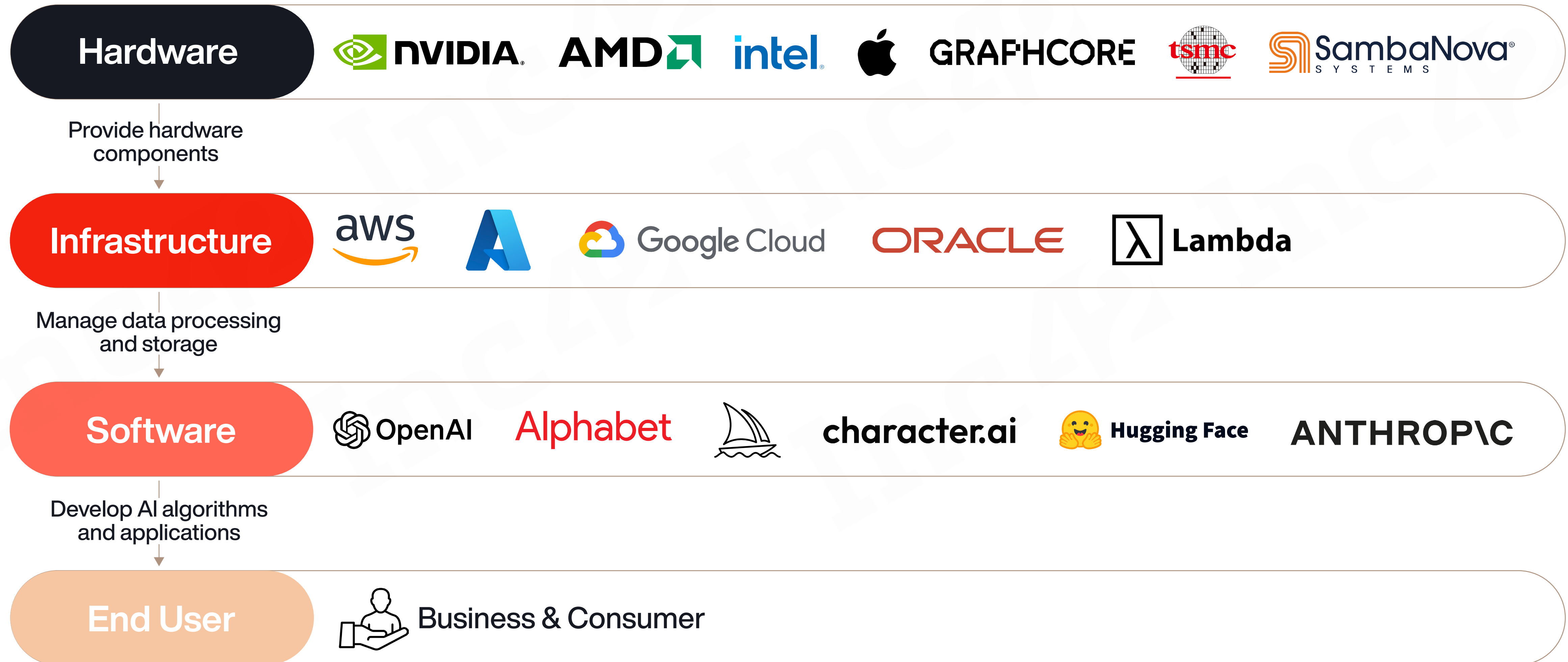
How Artificial Intelligence Is Shaping The Fifth Industrial Revolution



The fifth industrial revolution will be significantly influenced by tech like artificial intelligence, quantum computing, and blockchain.

Source: Research paper by Xiao Chen (Technical University of Denmark), Inc42 Analysis

The Global Artificial Intelligence Business Ecosystem



Source: Inc42

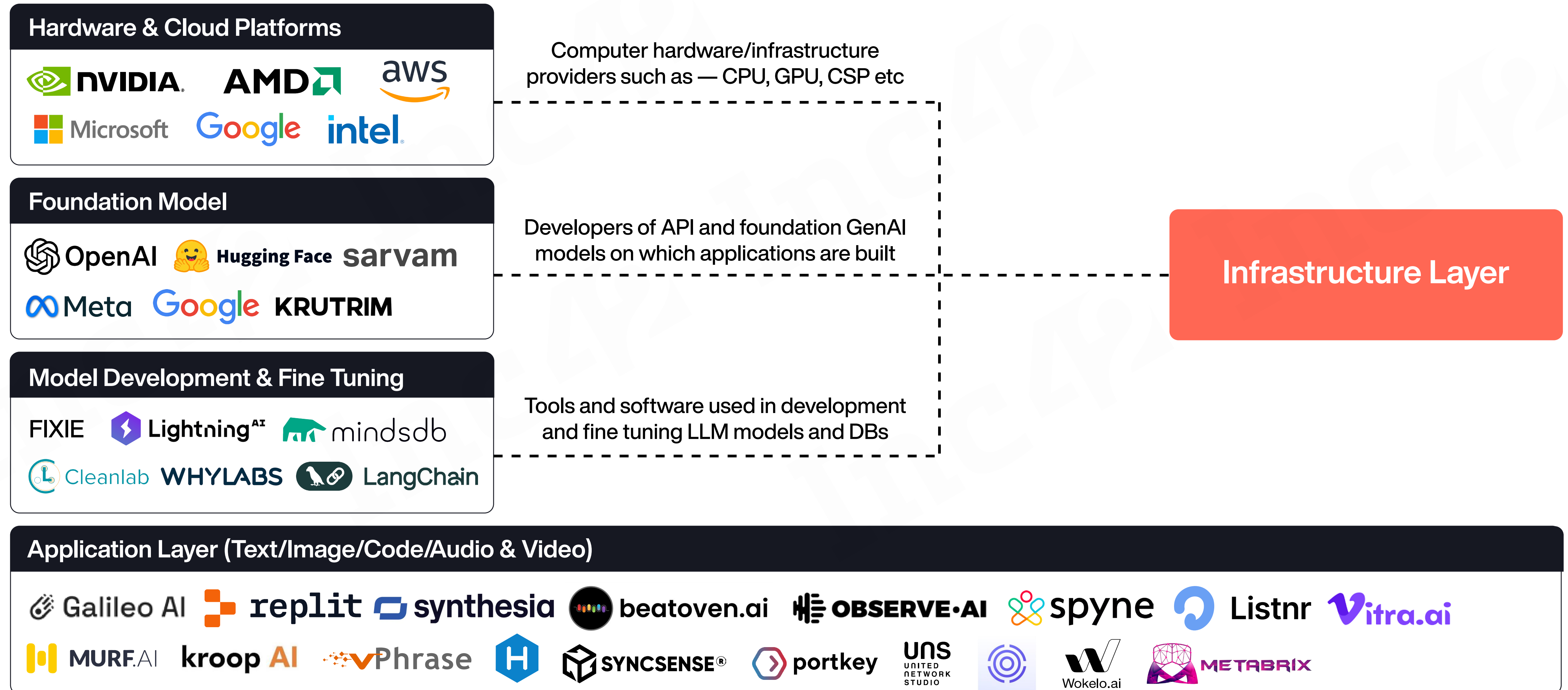
A Comparative Look At Top Generative AI Models

GenAI Models	Method	Strengths	Weaknesses	Applications
Generative Adversarial Networks (GANs)	Two competing neural networks: generator (creates data) and discriminator (evaluates real vs. generated)	Can create highly realistic and creative data	Training can be unstable, requires careful balancing of networks	Image/video generation, creative content creation, data augmentation
Transformer-based Models	Encode and decode information using attention mechanism	Powerful for complex language tasks, good at handling long sequences	High computational cost, limited interpretability	Machine translation, text summarization, question answering
Recurrent Neural Networks (RNNs)	Process sequential data, maintaining an internal memory	Effective for tasks with sequential dependencies	Can struggle with long-term dependencies	Speech recognition, text generation, sentiment analysis
Variational Autoencoders (VAEs)	Encode data into a latent space and reconstruct it	Captures underlying structure of data, useful for anomaly detection	Information loss during encoding/decoding, less efficient for complex data	Anomaly detection, image compression
Deep Reinforcement Learning	Agent interacts with environment, learns through trial and error	Achieves superhuman performance in complex games	Requires defining rewards and environment, slow learning process	Robotics, game playing, self-driving cars
Autoregressive Models	Predict next element in a sequence based on previous elements, one element at a time	Efficient for generating coherent text	Can be slow for long sequences, prone to errors	Text generation, music composition, language modeling

Source: Inc42 Analysis, Secondary Sources

Note: This table does not include an exhaustive list of applications and model types.

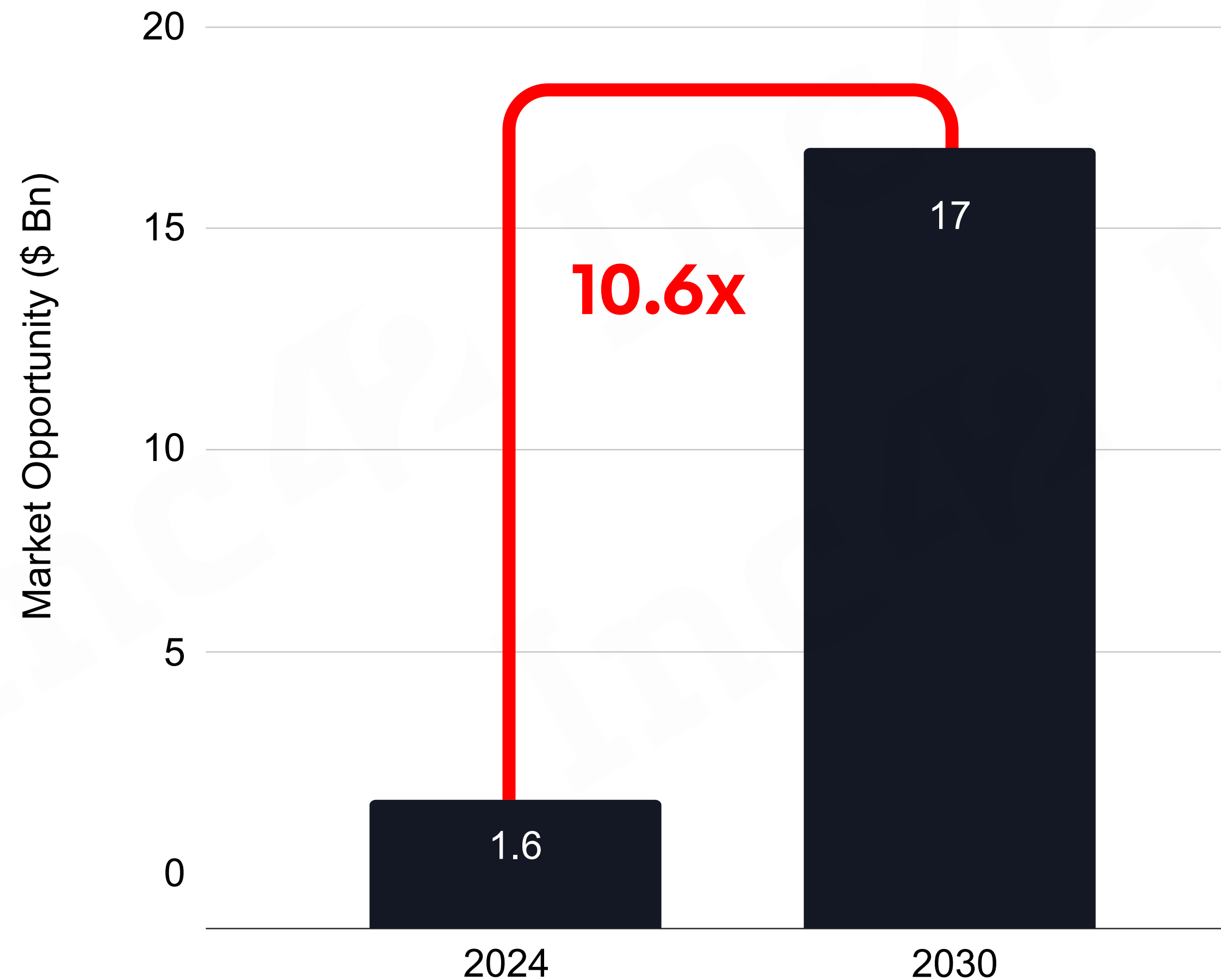
The Generative Artificial Intelligence (GenAI) Value Chain



Source: Inc42

Note: This representation includes both international and domestic organisations
This is not an exhaustive list of all the players in the ecosystem

The Future Of GenAI In India: A \$17 Bn+ Market Opportunity Awaits



Rising Demand For AI-Powered Consumer Devices: The Indian consumer electronics market is seeing a strong surge in AI-powered devices, including smart speakers, home automation gadgets, and autonomous vehicles. This upward trend is expected to continue, driving increased demand for AI software and hardware across India.

Dynamic Startup Ecosystem: India now ranks [seventh](#) globally for new AI startups, with over 338 newly funded ventures. Most Indian AI startups focus on applying GenAI technologies in business and consumer application, rather than building infrastructure. Since 2020, these startups have raised over \$1.2 Bn, illustrating a vibrant growth trajectory.

Expanding AI Talent Pool: Upskilling in AI is increasingly popular in India, with everyone from C-suite executives to entry-level employees gaining awareness of AI applications in their work. Recent [reports](#) also highlight Bengaluru as home to the world's second-largest AI talent pool, underscoring India's rapid development in AI expertise.

Source: Inc42 Analysis, Secondary Sources

Note: The market size indicated here represents the revenue potential for companies providing AI/GenAI-related products and services.

This estimate is calculated based on India's proportional share of global software product sales for the years 2023 and 2030.

Artificial Intelligence Takes Centre Stage In Indian Policy Push

Initiatives	Description	Key Objectives & Impact
IndiaAI Mission	The mission is guided by the principle of "AI for All", emphasising the technology's potential to enhance the quality of life for all Indian citizens whilst positioning India as an AI powerhouse on the global stage. In March 2024, the Indian government approved over INR 10.5K Cr for this mission.	<ul style="list-style-type: none"> ▶ Developing AI solutions for societal needs in areas like healthcare, education, agriculture, and smart cities. ▶ Establishing AI research, development, and innovation centers across the country. ▶ Addressing ethical concerns and developing responsible AI frameworks. ▶ Launch of BharatGen, government funded multimodal LLM which is being developed by IIT Bombay.
IndiaAI Compute Capacity	As one of the pillars of IndiaAI Mission. It aims to provide researchers, startups, and industry players with access to high-performance computing resources necessary for AI development and innovation.	<ul style="list-style-type: none"> ▶ Establish a cutting-edge AI compute infrastructure with 10,000+ Graphics Processing Units (GPUs) built through collaborative public-private collaborations. ▶ An innovative AI Marketplace that provides AI as a service and pre-trained models, giving AI innovators easy access to key resources. ▶ To develop indigenous AI solutions for India's unique needs.

Source: PIB, IndiaAI Mission, Inc42 Analysis

Note: This is not an exhaustive list of all the government initiatives

Initiatives	Description	Key Objectives & Impact
AI For Agriculture	A programme launched by the Ministry of Agriculture and Farmers Welfare to promote AI adoption in agriculture, through partnerships with industry, academia, and government.	<ul style="list-style-type: none"> ▶ To leverage AI for improving agricultural productivity and farmers' income. ▶ Kisan e-Mitra: An AI-powered chatbot assisting farmers with PM Kisan Samman Nidhi scheme queries, supporting multiple languages. ▶ Established 713+ Krishi Vigyan Kendras and 684+ Agricultural Technology Management Agencies to disseminate farm technologies.
IndiaAI FutureSkills	IndiaAI FutureSkills is an initiative aimed at developing AI-related skills across India's workforce.	<ul style="list-style-type: none"> ▶ Removing barriers to AI education by expanding undergraduate, master's, and Ph.D. courses, and establishing Data and AI Labs in Tier 2 and 3 cities. ▶ Fostering industry-academia partnerships to align skills training with market demands ▶ Enabling continuous learning in AI through dedicated platforms and resources

Source: PIB, IndiaAI Mission, Inc42 Analysis

Note: This is not an exhaustive list of all the government initiatives

Generative AI In Business



Retrieval Augmented Generation (RAG): Turbocharging Business With Intelligent Information Retrieval

RAG: Retrieval-augmented generation (RAG) is an AI framework for improving the quality of LLM-generated responses by grounding the model on external sources of knowledge to supplement the LLM's internal representation of information.

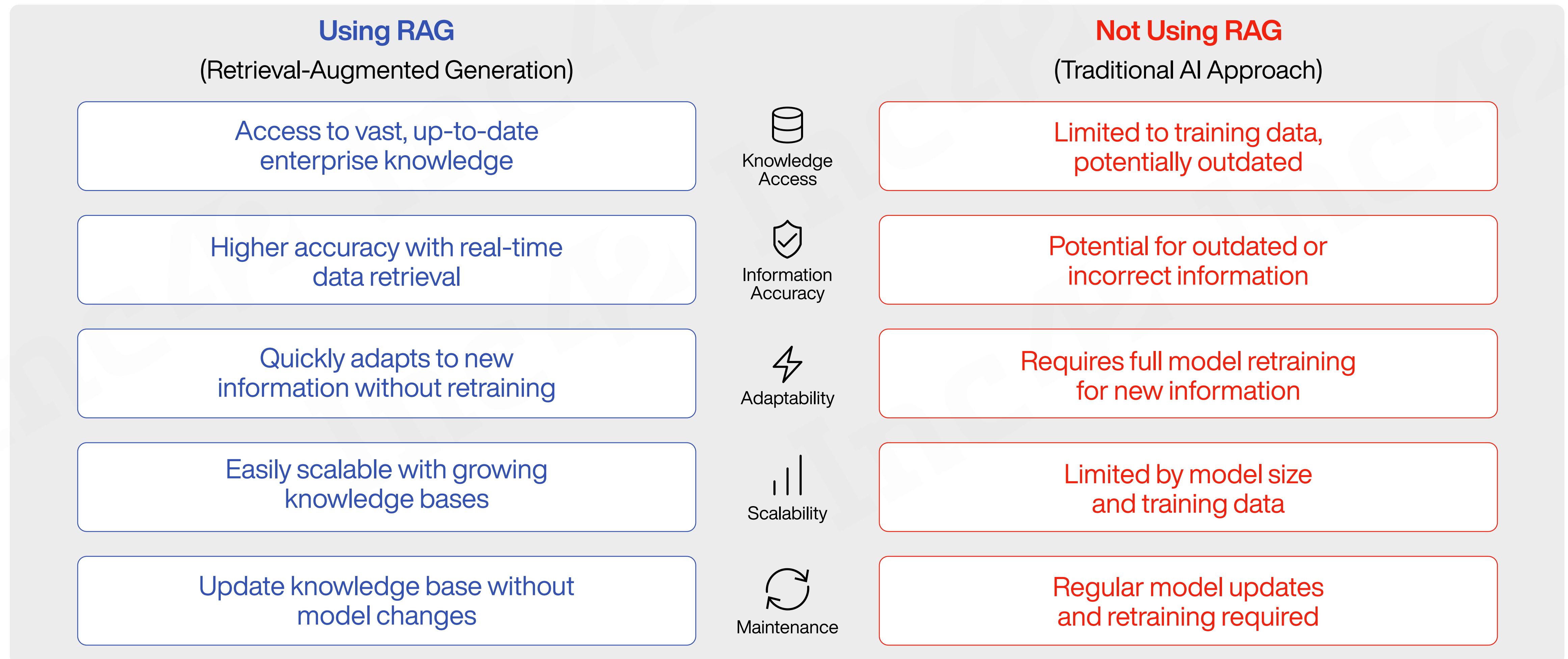
Best Practices Of Using RAG In Business

- ▶ **Domain Specific Knowledge:** Fine tune the RAG model with domain-specific information to better handle business-specific terms and use cases.
- ▶ **Maintain Data Quality:** Ensure RAG system data is accurate, relevant, and up-to-date. Regular data updates and a high-quality knowledge base are crucial for reliable assessments.
- ▶ **Employee Upskilling:** Provide employees with training on using RAG systems effectively, including navigating the technology and integrating its outputs into daily work.
- ▶ **Integration With Existing Workflow:** Integrate RAG into your existing business processes, whether it's customer support, sales, decision-making, or content generation.

Source: Inc42 Analysis, Secondary Sources



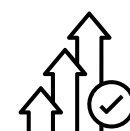






Retrieval Augmented Generation (RAG): Turbocharging Business With Intelligent Information Retrieval



Source: Inc42 Analysis, Secondary Sources

Key Advantages Of Incorporating Retrieval-Augmented Generation (RAG) In Business

Advantage	Brief	Impact on Business
 Improved Accuracy	Accurate responses reduce errors and inaccuracies.	Increased customer trust and loyalty.
 Enhanced Customer Experience	Tailored experiences and recommendations.	Increased customer retention and loyalty.
 Increased Efficiency	Automation frees up human agents for complex tasks.	Reduced operational costs and improved productivity.
 Scalability	Handle high volumes of customer inquiries.	Improved customer experience and reduced wait times.
 Cost Savings	Automation reduces operational costs.	Improved profitability and competitiveness.
 Compliance	Accurate responses ensure regulatory compliance.	Reduced risk of non-compliance and improved brand reputation.
 Personalisation	Tailored experiences and recommendations.	Increased conversion rates and customer engagement

Source: Inc42 Analysis, Secondary Sources

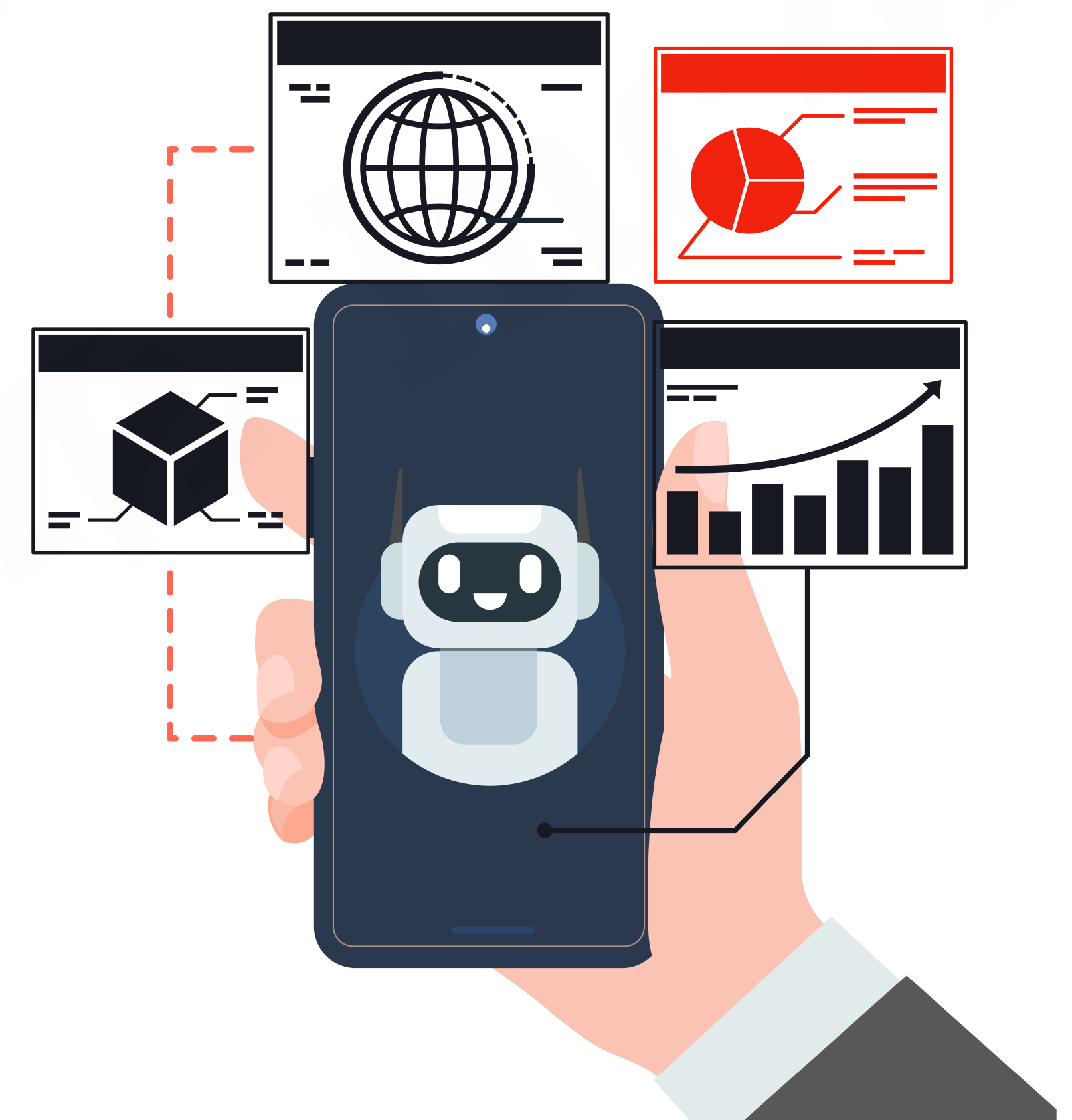
Edge AI: Breaking The Latency Barrier

Edge AI: Artificial intelligence at the edge involves running AI algorithms and models locally on devices or systems near the data source. Instead of centralised cloud computing facility or private data centre.

Notable Industries Where Edge AI Can Have Significant Impact

- ▶ **Healthcare:** Edge AI transforms patient care through instant vital sign analysis, enabling rapid response to emergencies. It powers remote monitoring and predictive health analytics, allowing timely interventions and improving overall healthcare delivery.
- ▶ **Smart Cities:** Edge AI is critical to the development of smart cities since it allows for effective resource management, such as energy and water. Real-time data analysis is used for applications such as traffic monitoring, waste management, and public safety advancements.
- ▶ **Agriculture:** In agriculture, Edge AI can boost the adoption of precision farming by analysing data from sensors and drones to optimise crop yields and resource use. This enables farmers to make data-driven decisions, thereby increasing production and sustainability.
- ▶ **Security & Surveillance:** Edge AI in the security and surveillance sector enables real-time threat detection and response by processing video feeds and sensor data at the edge of the network. This allows for faster identification of suspicious behavior, automatic alerts to security personnel, and optimised camera settings for higher-quality video feeds, ultimately enhancing security and reducing costs.

Source: Inc42 Analysis, Secondary Sources



Edge AI: Breaking The Latency Barrier

Cloud AI vs Edge AI

Cloud AI



Processing Location
Centralised data centres



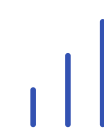
Connectivity
Requires constant internet connection



Latency
Higher latency due to data transfer

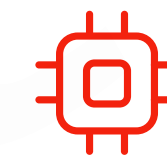


Data Privacy
Data leaves local environment



Scalability
Highly scalable for complex tasks

Edge AI



Processing Location
On-device or near data source



Connectivity
Can operate whilst offline



Latency
Lower latency, real-time processing











Data Privacy
Data remains on local device



Scalability
Limited by device capabilities

Key Advantages Of AI On Edge In Business

Advantage	Brief	Impact on Business
 Real-time Processing	Instant data analysis at source	Faster response times, enhanced operational efficiency, competitive edge through rapid insights
 Reduced Latency	Minimises delays in data processing	Improved performance in time-sensitive apps, enhanced user experience, increased system reliability
 Bandwidth Optimisation	Reduces need for raw data transmission	Lower data costs, improved AI scalability, deployment in limited-bandwidth areas
 Enhanced Data Privacy	Local processing of sensitive data	Better regulatory compliance, reduced breach risks, increased customer trust
 Offline Functionality	Operates without constant connectivity	Improved reliability in poor network areas, continuous operation in remote locations, reduced downtime
 Cost Optimisation	Reduces cloud and data transfer expenses	Lower operational costs, improved AI ROI, more predictable IT budgeting
 Energy Efficiency	Reduces data center energy consumption	Lower energy costs, improved sustainability metrics, better alignment with CSR goals
 Customisation & Flexibility	Allows for location-specific solutions	Better adaptability to diverse environments, meets specific industry requirements, increased local innovation potential

Source: Inc42 Analysis, Secondary Sources

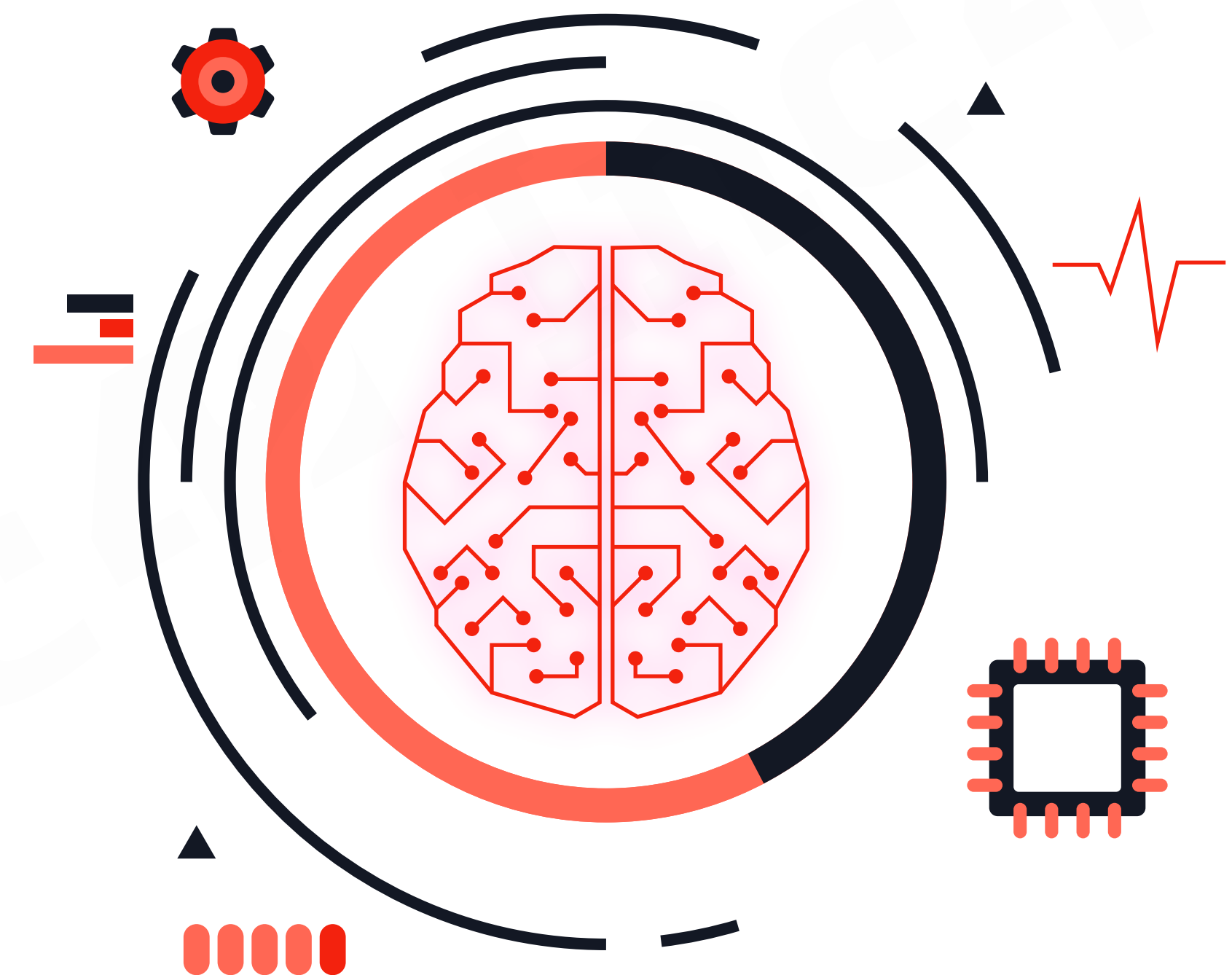
What Are Small Language Models (SLMs)?

SLMs: Small language models refer to artificial intelligence (AI) systems that are designed to process and generate human-like language, but with a smaller footprint in terms of model size, computational requirements, and training data.

Key Characteristics of SLMs

- ▶ **Compact Architecture:** Small language models have fewer parameters and require less computational power, making them more efficient and deployable on edge devices or resource-constrained environments.
- ▶ **Limited Training Data:** These models are trained on smaller datasets and can learn from limited labeled data, making them more adaptable to niche domains or applications with limited data availability.
- ▶ **Focused Capabilities:** Small language models are designed to excel in specific tasks, such as conversational AI, text classification, or language translation, rather than attempting to be general-purpose language models like LLMs.
- ▶ **Efficient Inference:** Small language models are optimised for fast inference, enabling real-time processing and response times, which is critical for applications like chatbots, voice assistants, or real-time language translation.

Source: Inc42 Analysis, Secondary Sources



What Are Small Language Models (SLMs)?

Small vs Large Language Models

Small Language Models

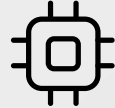
Lower resource requirements,
suitable for edge devices


Significantly lower
energy usage

Faster processing, ideal
for real-time applications

Can run locally,
reducing data exposure

Lower
operational costs


Computational
Efficiency


Energy
Consumption


Inference
Speed


Privacy


Cost-
Effectiveness

Large Language Models

Higher computational needs,
often cloud-based




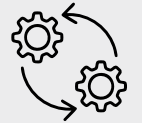




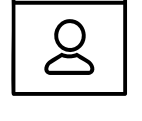

Higher energy
consumption

Potentially slower
due to model size

Often requires sending
data to external servers

Higher costs due to
resource requirements

Small Language Models (SLMs): Big Wins For Indian Businesses

Advantage	Brief	Impact on Business
 Cost Effective	Reduces data storage and computational power costs	Reduced operational costs, improved profitability
 Edge Deployment	Reduces latency and improves performance	Improved performance, reduced latency in areas with limited internet connectivity
 Faster Adaptation	Quickly adapts to changing market conditions and regulations	Improved responsiveness to changing market conditions, enhanced competitiveness
 Faster Deployment	Rapid deployment for quick response to market changes	Improved time-to-market, enhanced competitiveness
 Improved Security	Reduces risk of data breaches and cyber attacks	Improved data security, reduced risk of cyber attacks
 Increased Accessibility	Accessible on low-end devices, reaching a wider audience in India	Improved accessibility, increased market reach
 Lower Computational Requirements	Suitable for edge devices or areas with limited internet connectivity	Reduced infrastructure costs, improved accessibility in rural areas
 Offline Capability	Functions offline, ideal for areas with limited or no internet connectivity	Improved accessibility in rural areas, enhanced customer experience
 Personalisation	Enables personalised experiences for customers in Indian languages and dialects	Improved customer satisfaction, increased loyalty
 Real-Time Processing	Enables prompt response to customer queries	Improved customer satisfaction, increased loyalty

Source: Inc42 Analysis, Secondary Sources

Artificial Intelligence (AI) Agents: Business Operations On Autopilot

AI Agents: An artificial intelligence agent (AI) is a software programme that interacts with its environment, collects data, and uses it to perform self-defined tasks in order to attain human-set goals.

Types Of AI Agents

- ▶ **Simple Reflex Agents:** A simple reflex agent operates based on predefined rules and immediate data, responding only to specific event-condition-action rules. It's suitable for simple tasks that don't require extensive training.
- ▶ **Model-Based Reflex Agents:** A model-based agent evaluates probable outcomes and consequences before deciding, using an internal model of the world it perceives, built from supporting data. This allows for more advanced decision-making compared to simple reflex agents.
- ▶ **Goal-Based Agents:** A goal-based agent evaluates the environment and compares different approaches to achieve a desired outcome, choosing the most efficient path. With robust reasoning capabilities, they're suitable for complex tasks like natural language processing (NLP) and robotics applications.
- ▶ **Utility-Based Agents:** A utility-based agent uses complex reasoning to maximise desired outcomes by comparing different scenarios and their utility values. It chooses the option that provides the most rewards, allowing users to optimize their goals, such as finding the fastest flight regardless of price.
- ▶ **Learning Agents:** A learning agent continuously improves its results by learning from previous experiences, adapting to new data and feedback. It also generates new tasks to train itself, refining its performance over time to meet specific standards.
- ▶ **Hierarchical Agents:** A hierarchical agent is a multi-tiered system where higher-level agents break down complex tasks into smaller ones, assigning them to lower-level agents. Each agent operates independently, reporting progress to its supervisor, who coordinates and integrates the results to achieve collective goals.

Artificial Intelligence (AI) Agents: Business Operations On Autopilot

AI Agents Framework Vs Traditional AI

AI Agents

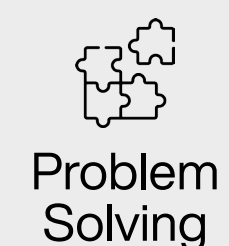
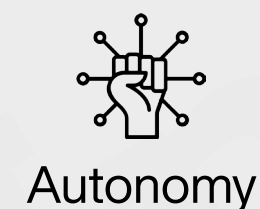
Can make decisions and act independently

Learns and adapts to new situations in real-time

Can work together with other AI agents and humans

Capable of handling complex, multi-step tasks

Can approach problems from multiple angles



Traditional AI

Requires human oversight for most decisions







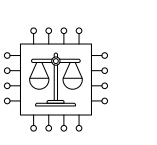
Often requires manual updates or retraining

Generally operates in isolation

Better suited for specific, predefined tasks

Usually follows pre-programmed solutions

Key Advantages Of AI Agents In Business

Advantage	Brief	Impact on Business
 Autonomous Decision-Making	Agents can make decisions independently, without human intervention, and adapt to changing situations	Increased efficiency, reduced operational costs, and enhanced competitiveness
 Real-Time Responsiveness	Agents can respond to events and requests in real-time, providing immediate support and feedback	Improved customer satisfaction, reduced response times, and enhanced business agility
 Personalised Interactions	Agents can tailor interactions to individual customers, employees, or stakeholders, providing a more human-like experience	Increased customer loyalty, improved employee engagement, and enhanced business relationships
 Proactive Problem-Solving	Agents can identify potential problems and take proactive measures to prevent or mitigate them	Reduced risk, improved business continuity, and enhanced reputation
 Continuous Learning and Improvement	Agents can learn from experiences, adapt to new data, and improve their performance over time	Improved decision-making, increased efficiency, and enhanced competitiveness
 Scalability and Flexibility	Agents can be easily scaled up or down to meet changing business needs, and can be adapted to new tasks and environments	Improved resource allocation, reduced costs, and enhanced business agility
 Enhanced Transparency and Accountability	Agents can provide detailed records of their decision-making processes and actions, enabling greater transparency and accountability	Improved regulatory compliance, reduced risk, and enhanced business reputation

Source: Inc42 Analysis, Secondary Sources

Responsible AI: Governance In Artificial Intelligence

Responsible AI: Responsible AI involves using artificial intelligence in a way that prioritises human oversight and societal benefit. This means developing and deploying AI models, datasets, and applications ethically and lawfully, without causing harm or perpetuating biases.

Best Practices Of Incorporating Responsible AI In Business

- ▶ **Alignment Of C-Level Leadership:** AI governance practices should be closely aligned with an organisation's overarching AI strategy, ensuring that top management's business objectives and responsible AI practices are mutually supportive. A misalignment between these two can undermine the effectiveness of AI initiatives.
- ▶ **Risk Management & Monitoring:** Establish a comprehensive governance, risk, and compliance framework to standardise best practices and ensure the systematic monitoring of AI-related activity. It is essential to consider the full lifecycle of an AI-powered system within this framework, encompassing data used for training, AI models, application usage, human impact, and security.
- ▶ **Agriculture:** In agriculture, Edge AI can boost the adoption of precision farming by analysing data from sensors and drones to optimise crop yields and resource use. This enables farmers to make data-driven decisions, thereby increasing production and sustainability.
- ▶ **Security & Surveillance:** Edge AI in the security and surveillance sector enables real-time threat detection and response by processing video feeds and sensor data at the edge of the network. This allows for faster identification of suspicious behavior, automatic alerts to security personnel, and optimised camera settings for higher-quality video feeds, ultimately enhancing security and reducing costs.

Source: Inc42 Analysis, Secondary Sources



Responsible AI: Governance In Artificial Intelligence

Benefits of an Organisation-Wide Responsible AI Strategy

With Strategy

◆ Enhanced Ethical Decision-Making

▲ Increased Stakeholder Trust

↑ Responsible Innovation Legal

✕ Mitigated Risks

✓ Regulatory Compliance

Without Strategy

+ Potential Bias and Unfairness



✕ Reputation Damage

■ Legal and Regulatory Issues

— Inefficient Resource Allocation

● Stakeholder Mistrust

Decoding The AI Strategy Of India's Top-Tier Listed Enterprises



Organisation	AI Offerings/Use Case	AI Strategy
 <p>Reliance Industries Limited</p>	Cloud based AI development tools & Data Centres	<ul style="list-style-type: none"> ▶ RIL is a leading champion for the development and deployment of indigenous AI technologies in the country. ▶ The company is developing a suite of infrastructure-level AI tools under the brand name "JioBrain" to allow industry and consumer adoption of the technology. ▶ The company is building data centres for AI operations that are powered by renewable energy. To establish an end-to-end AI development ecosystem in India.
 <p>TCS TATA CONSULTANCY SERVICES</p>	Consulting Services, Sector-specific business tools, Cyber Security	<ul style="list-style-type: none"> ▶ The company has formed an "AI.Cloud" division that provides AI- embedded solutions. Additionally, over 300K employees are trained in AI skills. ▶ The company also assists its clients in industries such as BFSI and Retail in implementing a knowledge-based technology architecture that can enable the usage of AI/GenAI technologies to improve the efficiency of their business operations. ▶ TCS has integrated AI into its BFSI core banking suite "TCS BaNCS" and its AI-powered e-commerce platform "TCS OmniStore" that helps retailers manage omnichannel customer experience.

Source: Inc42 Analysis, Company Filings

Note: The top tier enterprises are ranked based on their market capitalisation as of November 7, 2024.

The AI strategy of the organisations featured are sourced from their latest AGM and annual reports.

Decoding The AI Strategy Of India's Top-Tier Listed Enterprises



Organisation	AI Offerings/Use Case	AI Strategy
 <p>HDFC BANK We understand your world</p>	AI-powered banking assistant, Use of AI to enhance customer experience	<ul style="list-style-type: none"> ▶ HDFC Ergo has partnered with Google Cloud to set up an AI Centre of Excellence, showcasing how the insurer can leverage AI to enhance customer experience. The collaboration can position HDFC Ergo as a thought leader in applying AI innovations to the Indian insurance market. ▶ HDFC Bank has developed a proof-of-concept (PoC) for employing AI technology to extract important information from credit approval memos (CAMs). Using AI technology, the Bank was able to demonstrate a more efficient and successful method of loan assessment. ▶ The bank has developed an AI-powered assistant prototype to serve as a copilot for branch executives. Once implemented, this can help shorten response times to customer queries, resulting in more efficient banking operations.
 <p>airtel</p>	AI-powered network optimisation, Reducing carbon footprints, Enhancing customer experience	<ul style="list-style-type: none"> ▶ As of FY24, Airtel had created over thirty commercial use cases using AI technology across its digital products, including Airtel Cloud, Airtel IQ, and Airtel Payments Bank, among others. ▶ Airtel is using AI/ML technology to reduce carbon emissions. Airtel employs AI/ML technology to pinpoint and terminate underutilised radios within its telecom infrastructure. Resulting in increased operations efficiency. ▶ The company has also invested in an Indian startup, "Vahan.ai," which offers an AI-powered platform to hire and manage blue-collar workers.

Source: Inc42 Analysis, Company Filings

Note: The top tier enterprises are ranked based on their market capitalisation as of November 7, 2024.

The AI strategy of the organisations featured are sourced from their latest AGM and annual reports.

Decoding The AI Strategy Of India's Top-Tier Listed Enterprises



Organisation	AI Offerings/Use Case	AI Strategy
	AI-powered banking assistant, Use of AI to enhance customer experience	<ul style="list-style-type: none"> ▶ ICICI Bank has introduced an AI-powered virtual relationship manager (VRM). This enables relationship managers to cater to customer needs in a more personalised and effective manner. ▶ ICICI Bank is actively building an ecosystem through strategic partnerships with early and growth-stage startups. The bank is seeking startups that align with its digital roadmap and have the potential to address innovations in financial services. ▶ Given the sensitive nature of data, ICICI Bank is taking a more cautious and responsible approach towards incorporating AI technology in its technical infrastructure. A trend that is observed across the BFSI sector.
	AI-powered banking assistant, Use of AI to enhance customer experience	<ul style="list-style-type: none"> ▶ SBI leverages AI to enhance customer experience across its digital platforms YONO and YONO Business. AI helps personalise banking, improve customer service, and identify network issues. ▶ The bank is open to partnerships with startups that offer AI solutions, indicating a strategic focus on leveraging external AI expertise. ▶ Business Rule Engine (BRE): SBI has developed an AI-powered BRE risk model based on logistic regression to predict default events and assess creditworthiness.

Source: Inc42 Analysis, Company Filings

Note: The top tier enterprises are ranked based on their market capitalisation as of November 7, 2024.

The AI strategy of the organisations featured are sourced from their latest AGM and annual reports.

Decoding The AI Strategy Of India's Top-Tier Enterprises



Organisation	AI Offerings/Use Case	AI Strategy
	Consulting Services, Sector-specific business tools	<ul style="list-style-type: none"> ▶ Infosys Topaz: This platform acts as a primary hub for Infosys' AI capabilities, offering a diverse range of AI-powered solutions across multiple business functions. ▶ Infosys emphasises collaborations with hyperscalers and startups, indicating a strategy of leveraging external AI expertise to enhance its offerings. ▶ Infosys assisted Danske Bank in building DanskeGPT, a secure and ethical chatbot assistant, leveraging generative AI to enhance personal productivity.
	Brand Marketing, Business Operations, Customer Experience	<ul style="list-style-type: none"> ▶ AI Integration across diversified Businesses: ITC's use of AI extends all over its diversified business portfolio, from agriculture to FMCG and education, suggesting widespread use of AI technologies. ▶ Smart Agriculture: The ITCMAARS platform uses artificial intelligence to provide farmers with real-time information, personalised guidance, and market access. ▶ ITC used GenAI technology to generate content for its campaign “ #hardilkifantasy” for its brand ‘Sunfeast Dark Fantasy”, and “Bingo!”.

Source: Inc42 Analysis, Company Filings

Note: The top tier enterprises are ranked based on their market capitalisation as of November 7, 2024.

The AI strategy of the organisations featured are sourced from their latest AGM and annual reports.

Decoding The AI Strategy Of India's Top-Tier Listed Enterprises

Organisation	AI Offerings/Use Case	AI Strategy
 <p>Hindustan Unilever Limited</p>	<p>Brand Marketing, Business Operations, Customer Experience</p>	<ul style="list-style-type: none"> ▶ HUL aims to use AI to improve consumer experiences by personalising omni-channel journeys, using intelligent data to better allocate resources, and supporting the expansion of digital commerce. ▶ HUL utilises AI to optimize media planning and deployment, leveraging data analytics for real-time spend optimisation and improved audience targeting. ▶ HUL uses AI to personalise consumer experiences across its brands. For example, beauty firms such as Lakmé, Pond's, and TRESemmé use AI to deliver personalised skin and hair care regimens.
 <p>LARSEN & TOUBRO</p>	<p>Operational Efficiency, Improve Project Delivery</p>	<ul style="list-style-type: none"> ▶ L&T has established a dedicated platform to foster AI innovation. This platform brings together data scientists, domain experts, and tech leaders to collaborate on advanced solutions. ▶ L&T's strategic investments in AI, data centers, cloud services, and semiconductor technologies demonstrate its commitment to embracing emerging tech for future growth and business sustainability. ▶ L&T Technology Services (LTTS's) partnership with Nasscom Gen AI Foundry to support AI startups shows its strategy to tap into startup innovation and talent.

Source: Inc42 Analysis, Company Filings

Note: The top tier enterprises are ranked based on their market capitalisation as of November 7, 2024.

The AI strategy of the organisations featured are sourced from their latest AGM and annual reports.

Key Risks & Challenges In Adopting Generative AI For Business

Explainability & Transparency

The **complexity and lack of interpretability** of GenAI models make it difficult for Indian businesses to ensure transparency and explainability in AI-driven decision-making.

Data Quality & Availability

Indian businesses often face challenges with data quality and availability, which are essential for training and deploying generative AI (GenAI) models. Poor data quality can lead to biases and inaccuracies in AI outputs.

Cultural & Organisational Changes

Implementing GenAI often necessitates **significant cultural and organisational changes**, which can be difficult for businesses, particularly those with traditional or hierarchical structures.

Infrastructure & Computational Power

High computational power and infrastructure are required for GenAI, posing a challenge, particularly for companies in Tier II and III cities where infrastructure may be less developed.

Talent Attraction & Retention

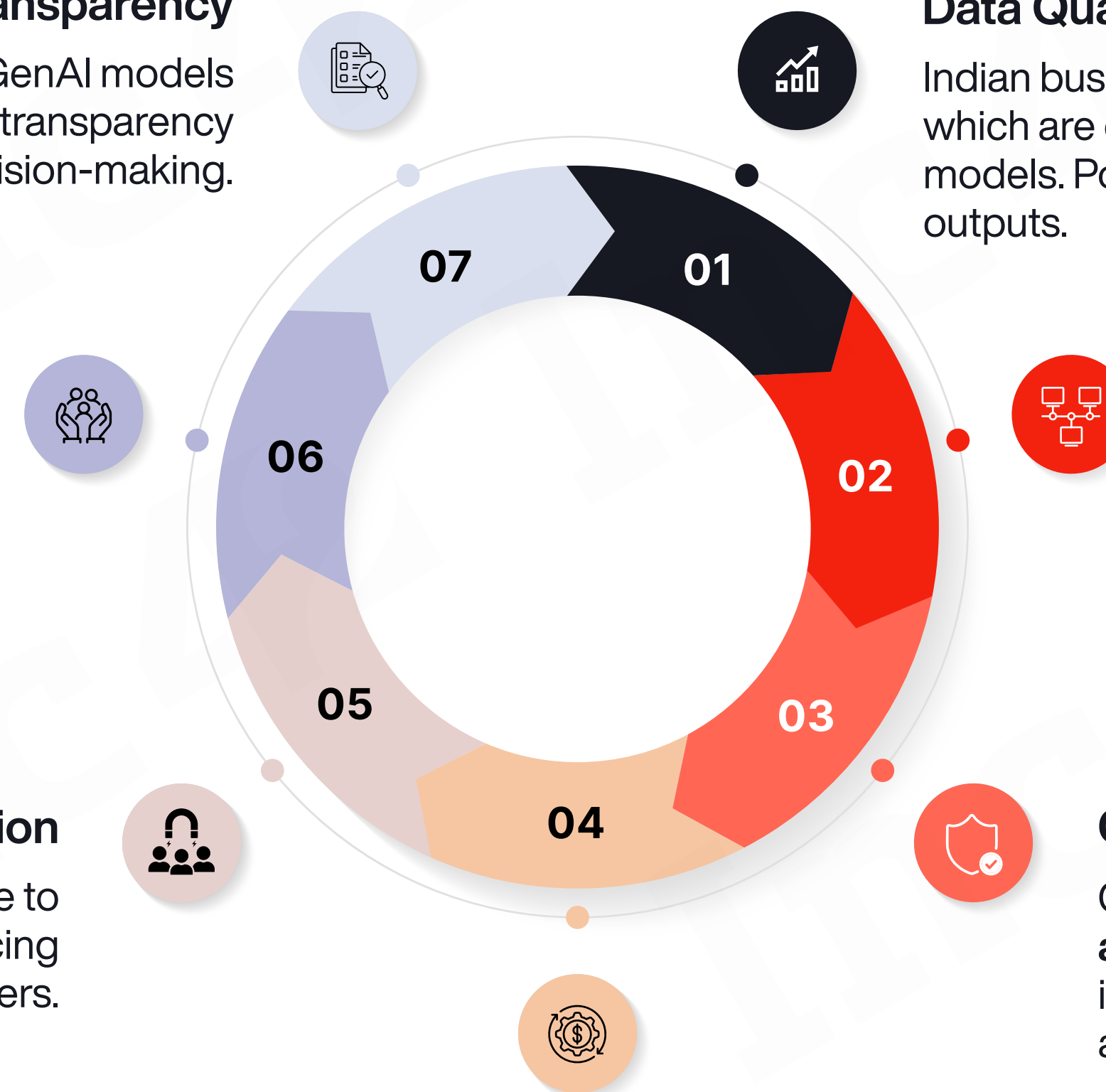
Attracting and retaining AI talent is challenging due to high global demand, with Indian companies facing competition from international offers.

Cybersecurity Risks

GenAI systems handle vast amounts of data, making them **attractive targets for cyber threats**. Indian businesses must invest in strong cybersecurity measures to prevent data breaches and cyber-attacks.

Cost & ROI

The **high cost of developing and implementing GenAI technology** can be a barrier for Indian businesses, especially if short-term ROI is unclear.



Generative AI Startup Ecosystem In India



India's GenAI Startup Ecosystem: Key Statistics

200+ GenAI Startups In India

\$1.2 Bn+ Total Funding Raised Since 2020

4.4X Surge In Cumulative Venture Capital Inflow From 2020 to 2024

63% Of GenAI Startups Operate In Code & Data Segment

70% Of GenAI Startups Are Offering Solutions Only For Enterprise Clients

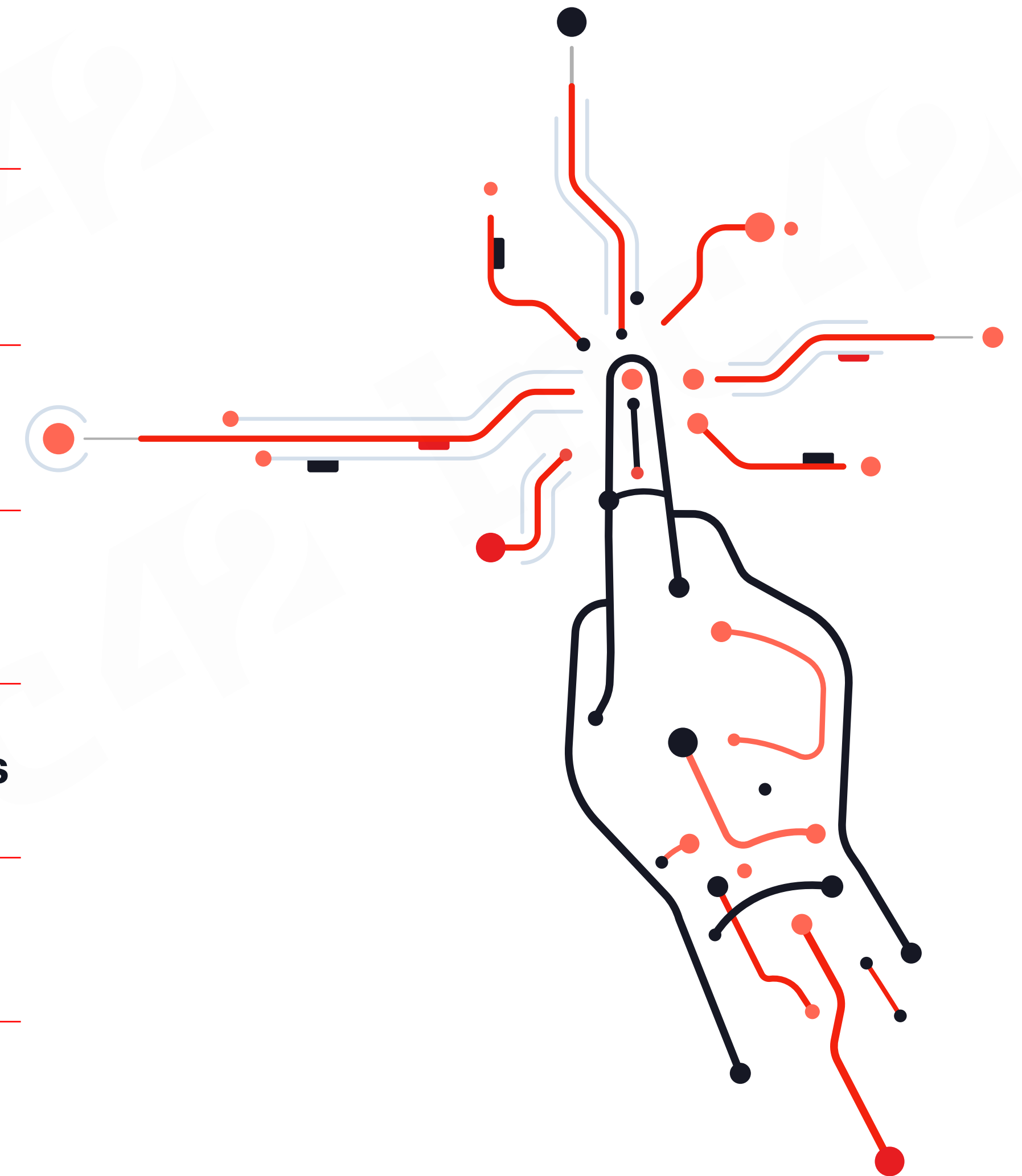
Bengaluru Makes More Than One-Third Of The Total Funding

360+ Total Number Investors Actively Backing Native GenAI Startups



















































Source: Inc42

Note: Funding data is for the period between 2020 and Q3 2024.

This analysis is based on a sample set of over 120 VC funded native generative AI startups in India.



India's GenAI Startup Landscape: Natives Vs Adopters

GenAI Natives			GenAI Adopters	
 auraml	 LimeChat	 PostifyAI	 cult.fit	 Flipkart
 beatoven.ai	 LONGSHOT	 Predis.ai	 freshworks	 glance
 Blend	 METABRIX	 RagaAI	 gupshup	 haptik
 CodeMate.ai	 OnFinance	 Rephrase.ai	 Healthify	 innovaccer
 CONVIN	 invideo	 sarvam	 Myntra	 NYKAA
 dubdub.ai	 kroop AI	 unscript	 OLA ELECTRIC	 Paytm
 dubpro.ai	 Listnr	 vidyo.ai	 peppercontent	 PharmEasy
 Dübverse	 meritic.ai	 VisualDub	 policybazaar.com HAR FAMILY HOGI INSURED	 Razorpay
 Kombai	 MURFAI	 VODEx	 SWIGGY	 Vue.ai
 KRUTRIM	 Pixis	 Zocket	 ZOH O	 zomato

GenAI Natives:

Indian startups that have been anchored with Generative AI (GenAI) technology in their products and services from day one.

GenAI Adopters:

Established Indian tech startups that have subsequently integrated GenAI technology into their business offerings, as opposed to those that were founded with GenAI at their core from day one.

Source: Inc42

Note: This is not an exhaustive list.

India's GenAI Startup Application Landscape: Horizontal vs Vertical Solutions

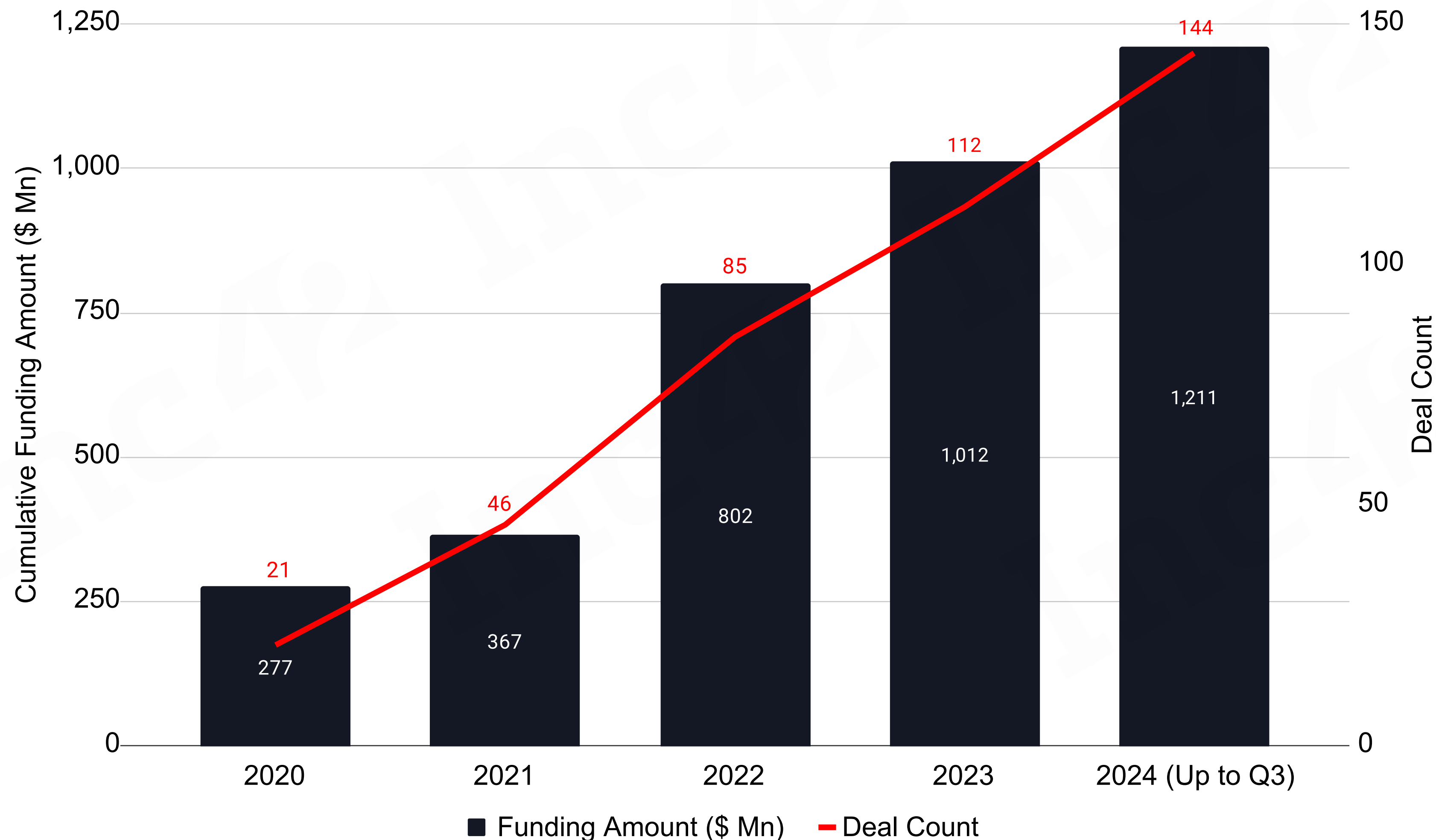
Notable Startups		
Horizontal Solutions (Sector Agnostic)	Audio/ Speech	beatoven.ai dubpro.ai Listnr dubdub.ai Dübverse MURFAI
	Video	Rephrase.ai VisualDub vidyo.ai unscript Animaker
	Code & Data	OBSERVE.AI Pixis Vue.ai kroop AI auraml RagaAI
	Image & 3D Modelling	METABRIX Blend PostifyAI Zocket Predis.ai Pixis
	Text & Conversational AI	gupshup skit.ai yellow.ai CONVIN LONGSHOT VODEX gnani.ai
Vertical Solutions (Sector Specific)	Fintech/Financial Services	OnFinance SIGNZY Medius Arya.ai Prudent AI nimeya.ai
	Ecommerce/ Retail	avataar NeuroPixel.AI ORBO FLIX STOCK FOUNTAIN9 boxx.ai IMPACT ANALYTICS
	Healthcare	RedBrickAI Suki cureskin Zini - The Healthcare AI immunitoAI qure.ai boltzmann
	Education	SuperKalam BODHI AI MethdAI MIKO ZuAi beta
	Robotics	CONTROL ONE OTTONOMY.IO GreyOrange CYN:LR

Source: Inc42

Note: This is not an exhaustive list.

This list includes both GenAI natives and adopters.

Over \$1.2 Bn Poured Into India's GenAI Startups Since 2020



▶ One-third of all investments in Indian GenAI startups between 2020 and Q3 2024 occurred during 2022.

▶ Venture capital investment in India's native generative AI startups has surged, growing 4.4 times from \$277 Mn in 2020 to over \$1.2 Bn by 2024

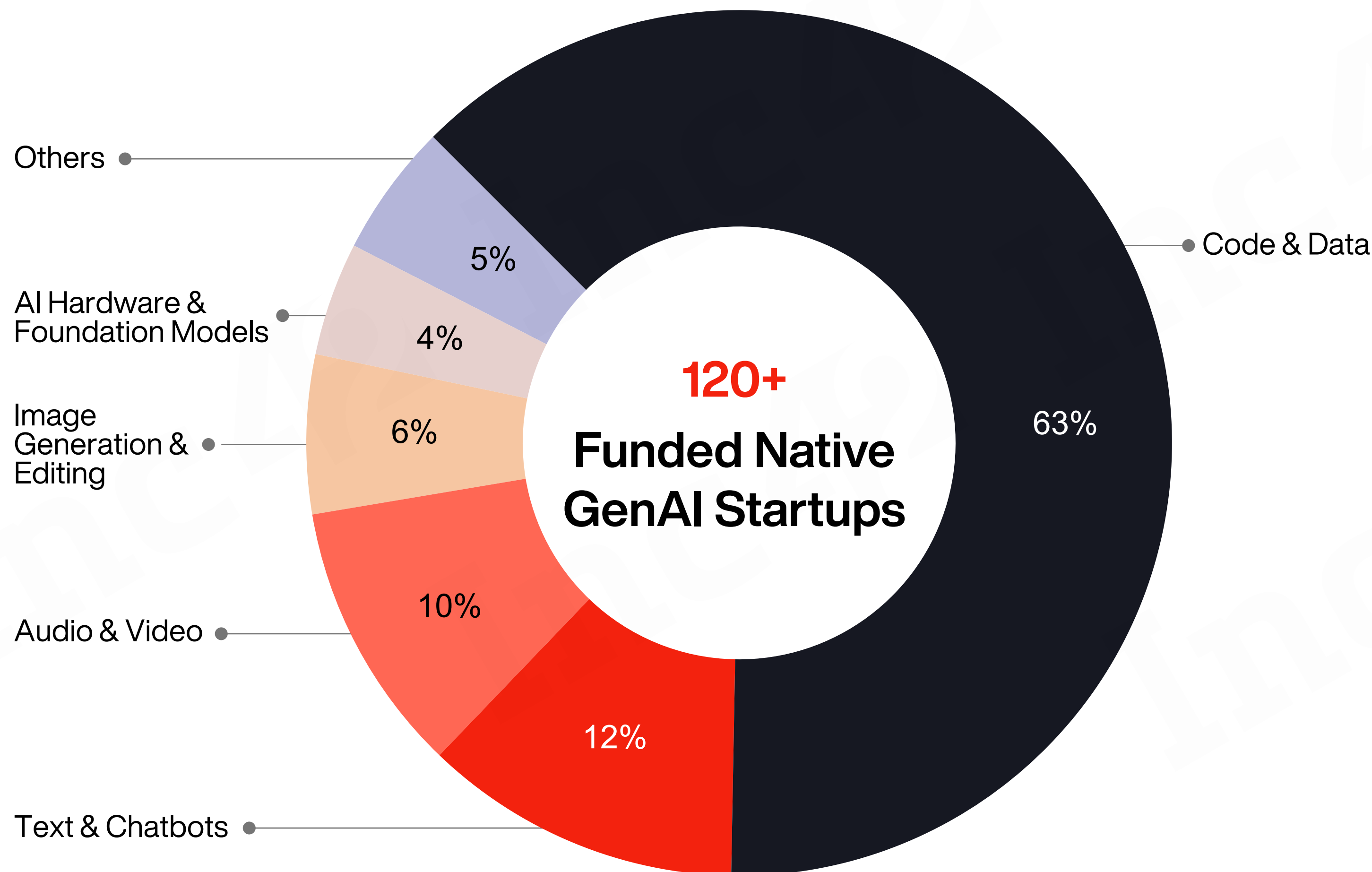
▶ Among the top-funded native generative AI startups in India are Pixis, Qure AI, Eightfold AI, and Krutrim

Source: Inc42

Note: 2024 data is for the period between January 1 and September 28.

This analysis is based on a sample set of over 120 VC funded native generative AI startups in India.

Over 60% Of India's GenAI Startups Are All About Code & Data



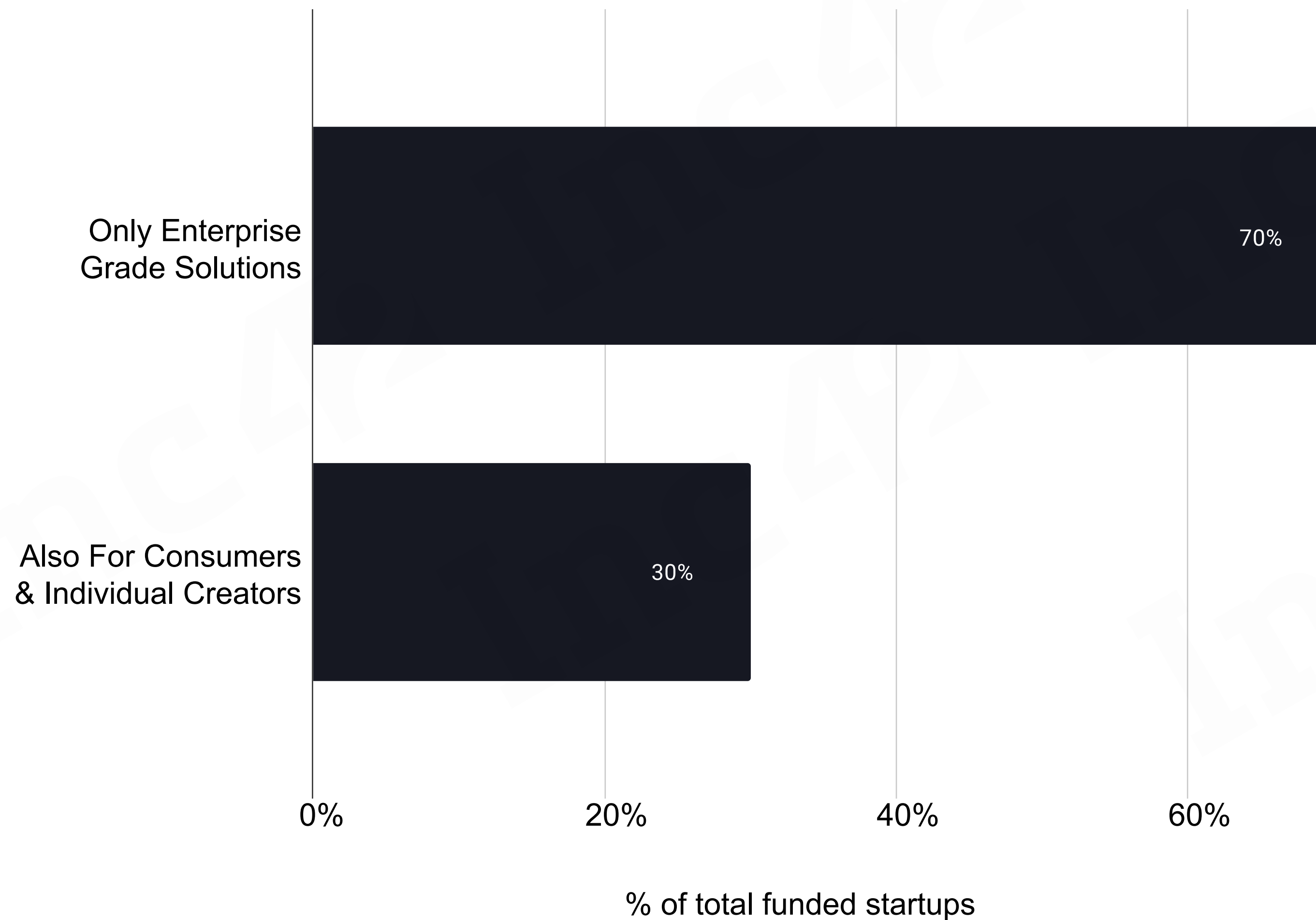
- ▶ Startups offering products in the code and data segments make up nearly two-thirds of all funded GenAI startups in India.

- ▶ Key applications in these areas include model fine-tuning, AI-powered report generation, and data orchestration.

Source: Inc42
Note: Funding data is for the period between 2020 and Q3 2024.
This analysis is based on a sample set of over 120 VC funded native generative AI startups in India.

India's GenAI Startups Bet Big on Enterprise Solutions

Over 70% of Indian GenAI startups are only chasing enterprise clients



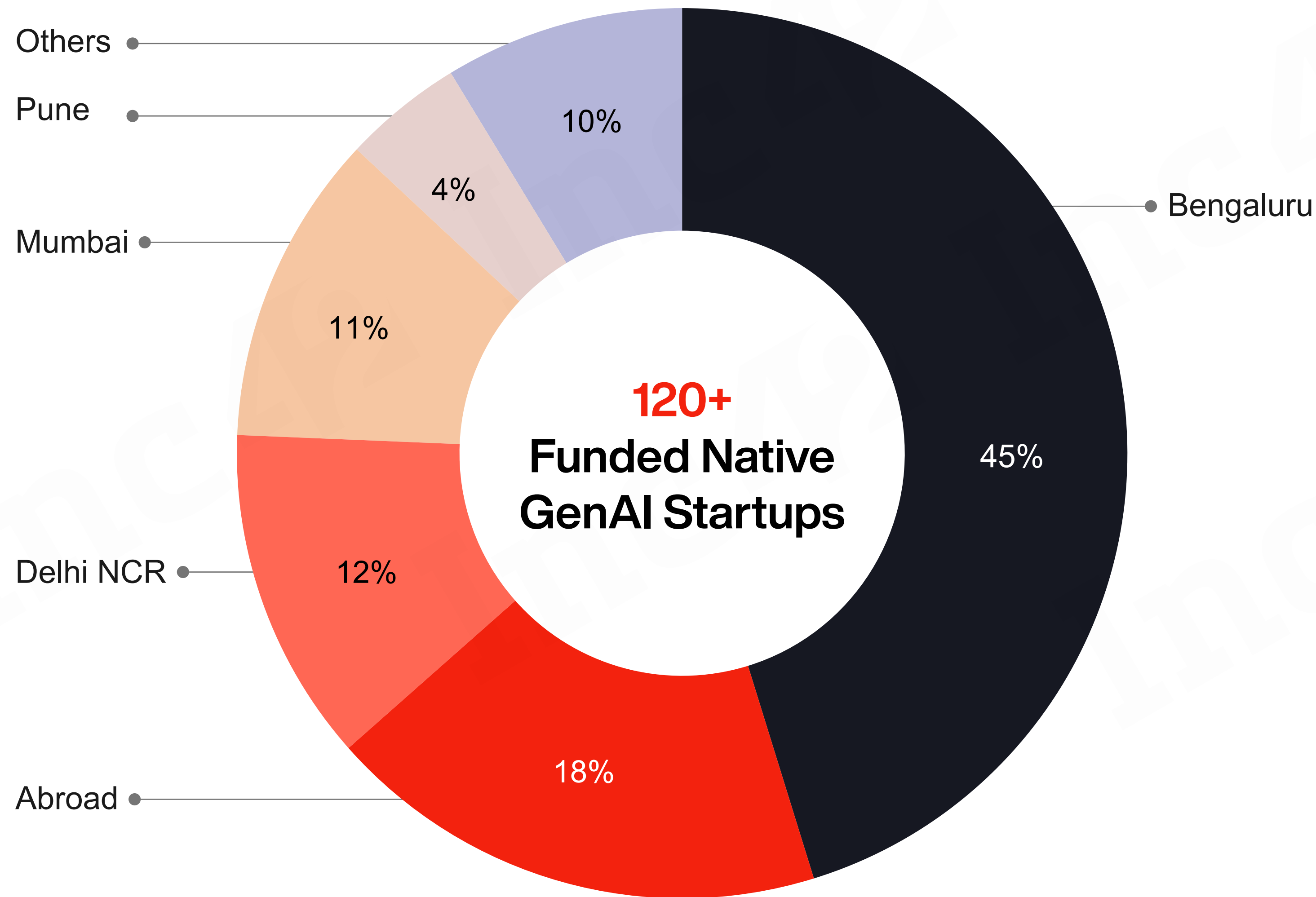
▶ Global tech giants like OpenAI, Anthropic, and AI have established strongholds in the consumer application space, making it challenging for Indian startups to break into this segment. As a result, Indian entrepreneurs find greater potential in focusing on localised, enterprise-grade solutions rather than competing in the crowded consumer market.

▶ India's creator economy is on a steep growth trajectory, projected to exceed \$3.9 Bn by 2030. Despite the dominance of global players, localised solutions with competitive pricing are well-positioned to achieve higher adoption among Indian creators compared to their international counterparts.

Source: Inc42

Note: This analysis is based on a sample set of over 90 VC funded native generative AI startups in India. Majority of the GenAI startups offering solutions for consumers and individual creators also have an enterprise plan.

Bengaluru Powers India's GenAI Boom With 45% Of Funded Startups

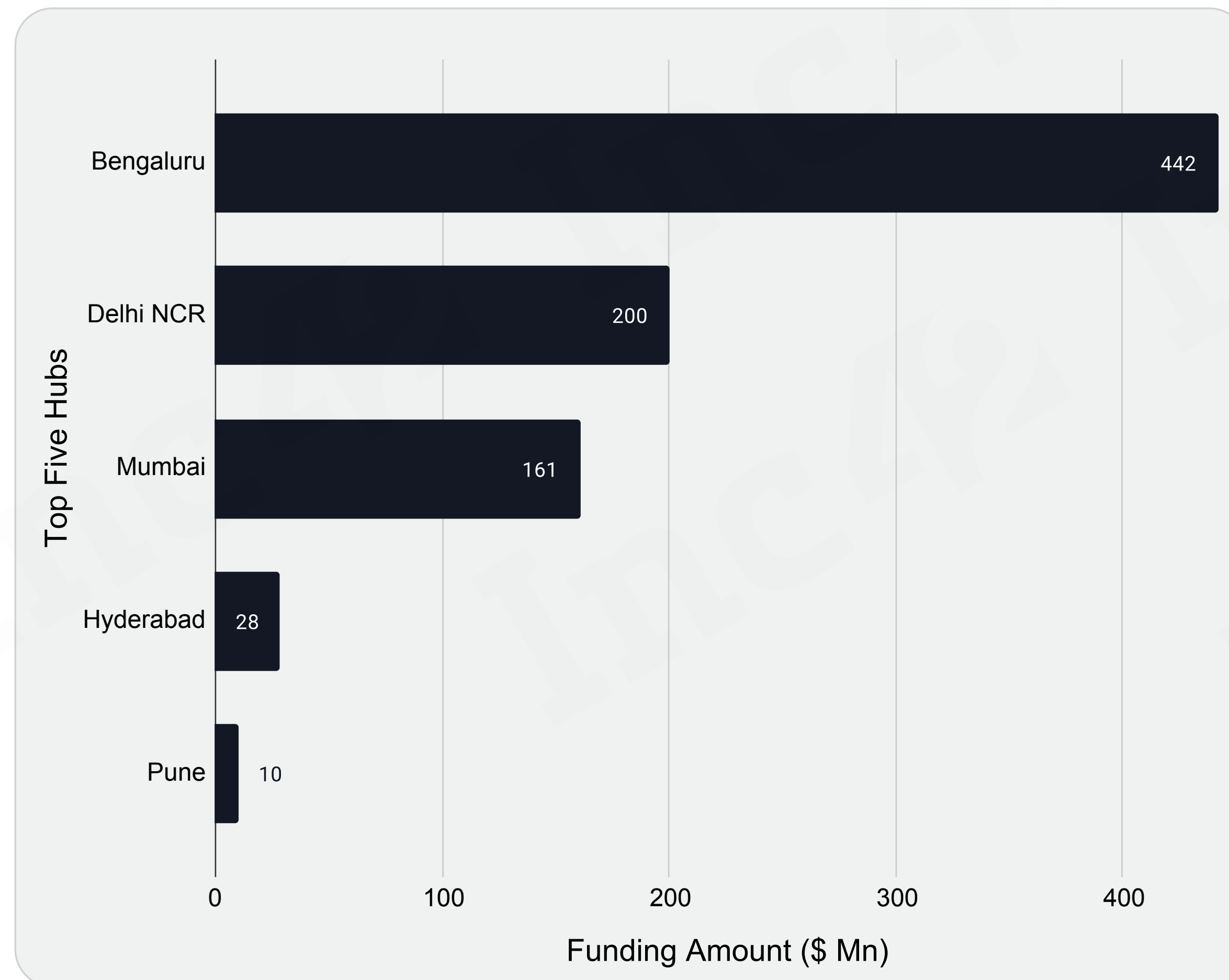


Bengaluru has the most developed investor ecosystem in India for new-age technologies, making it easier for GenAI startups in the city to access venture capital compared to other cities in India

Source: Inc42
Note: Funding data is for the period between 2020 and Q3 2024.
This analysis is based on a sample set of over 120 VC funded native generative AI startups in India.

One-Third Of GenAI VC Funding In India Flows To Bengaluru

Native generative AI businesses in India have raised a total of \$1.2 Bn, with over one-third of this amount \$442 Mn (or 36%) — going to startups headquartered in Bengaluru












Source: Inc42

Note: Funding data is for the period between 2020 and Q3 2024.

This analysis is based on a sample set of over 120 VC funded native generative AI startups in India.

Hubs	Notable Funded Startups
Bengaluru	
Delhi NCR	
Mumbai	
Hyderabad	
Pune	












Investors Actively Backing Indian AI Startups

Investor Name	Investor Type	Deal Count	Notable Startups Backed
 100 UNICORNS	Accelerator/Incubator	5	Alchemyst AI, Dubpro.ai, vverse.ai
 LOOX	VC Firm	10	Anyway.ai, whitetable.ai, Datavio, gocodeo.com
 3ONE4 CAPITAL	VC Firm	3	Blend, Fego.ai, Nektar.ai
 Accel	VC Firm	6	Finbots.AI, Nanonets, Nurix AI, Spyne
 ALL IN	VC Firm	7	Segmind, magicstudio.com, suitable.ai
 ANTLER	VC Firm	16	figr.design, tradomate.one, plotch.ai, segwise.ai
 ARKA VENTURE LABS	VC Firm	4	enkryptai.com, RagaAI, daxa.ai, brieflyai.com
 Better	VC Firm	5	Autodraft AI, Honestly AI, rapidclaims.ai
 BLUME	VC Firm	5	Agara, Kusho, Segwise, SiftHub

Source: Inc42

Note: This is not a ranking of any type rather a representation of select notable investors backing Indian AI/GenAI startups.












The deal count mentioned is sourced from our internal database and survey titled "Inc42's List Of Most Active GenAI Investors 2024"

Investor Name	Investor Type	Deal Count	Notable Startups Backed
 chiratae VENTURES	VC Firm	6	Expertia AI, Lightbulb Ai, Locale.ai, Pixis AI
 ELEVATION	VC Firm	4	drivetrain.ai, factors.ai, murf.ai
 Endiya	VC Firm	5	Myelin Foundry, Expertia.AI, slanglabs.in
 ENTREPRENEUR FIRST	Accelerator/Incubator	5	Beatoven.ai, vidyo.ai, expertia.ai
 FIRST/CHEQUE	VC Firm	5	Dubpro.ai, inspektlabs.com, predis.ai
 GSF	Accelerator/Incubator	3	we360.ai, param.ai
 HUDDLE	VC Firm	6	Unstudio, NeuroPixel.AI
 Indian Angel Network Fund	VC Firm/ Angel Network	5	OnFinance AI, AuraML, Skit Ai, Uniphore
 IIMA VENTURES	VC Firm	4	kosha AI, axai.ai, Clodura.AI , vphrase.com
 IndiaQuotient	VC Firm	3	Llumo AI, Maino.ai
 INFLECTION POINT VENTURES	VC Firm	3	Alchemyst AI, LiaPlus AI

Source: Inc42

Note: This is not a ranking of any type rather a representation of select notable investors backing Indian AI/GenAI startups.






The deal count mentioned is sourced from our internal database and survey titled "Inc42's List Of Most Active GenAI Investors 2024"

Investor Name	Investor Type	Deal Count	Notable Startups Backed
 Inflexor	VC Firm	3	getayna.com, Vitra.ai
 infoedge ventures	CVC	10	Gnani.ai, dview.io
 ITI GO	VC Firm	3	subtl.ai, CureSkin
 IvyCap Ventures	VC Firm	3	Pintel.AI, Beatoven.ai, Expertrons
 kalaari capital	VC Firm	4	Hyperbots, Convin, Haptik
 Lightspeed	VC Firm	3	Qure AI, Sarvam AI, AI4Bhārat
 MARS SHOT VC	VC Firm	5	sifthub.io, Peoplebox.ai
 nexus venture partners	VC Firm	6	Neysa, Observe.AI, Neuron7.ai
 peak xv	VC Firm	4	Sarvam AI, AI4Bhārat, gan.ai
 PENTATHLON ventures	VC Firm	4	Rezolve AI, Spyne AI
 π pi Ventures®	VC Firm	4	Pixis, LimeChat, Ai Palette, Raga AI

Source: Inc42

Note: This is not a ranking of any type rather a representation of select notable investors backing Indian AI/GenAI startups.

The deal count mentioned is sourced from our internal database and survey titled "Inc42's List Of Most Active GenAI Investors 2024"

Investor Name	Investor Type	Deal Count	Notable Startups Backed
 rtp global	VC Firm	3	Agara, InVideo
 UNICORN INDIA VENTURES	VC Firm	6	Vodex AI, Boxx AI
 Venture Catalysts++ India's 1 st Multi-Stage VC	Accelerator/Incubator	7	CoRover, plotch.ai, Dubpro.ai
 Y Combinator	Accelerator/Incubator	8	Leena AI, Nanonets, Observe.AI, RedBrick AI
 247 digital nation building	VC Firm	3	GreyLabs AI, SiftHub, Krutrim

Source: Inc42

Note: This is not a ranking of any type rather a representation of select notable investors backing Indian AI/GenAI startups.

The deal count mentioned is sourced from our internal database and survey titled "Inc42's List Of Most Active GenAI Investors 2024"

India's GenAI Startup Investor Survey 2024: Key Highlights

84% Of Indian VCs Prefer Industry-Focused Startups Over General-Purpose Solutions

Fintech Emerges As The Top Choice For Developing Specialised AI Solutions

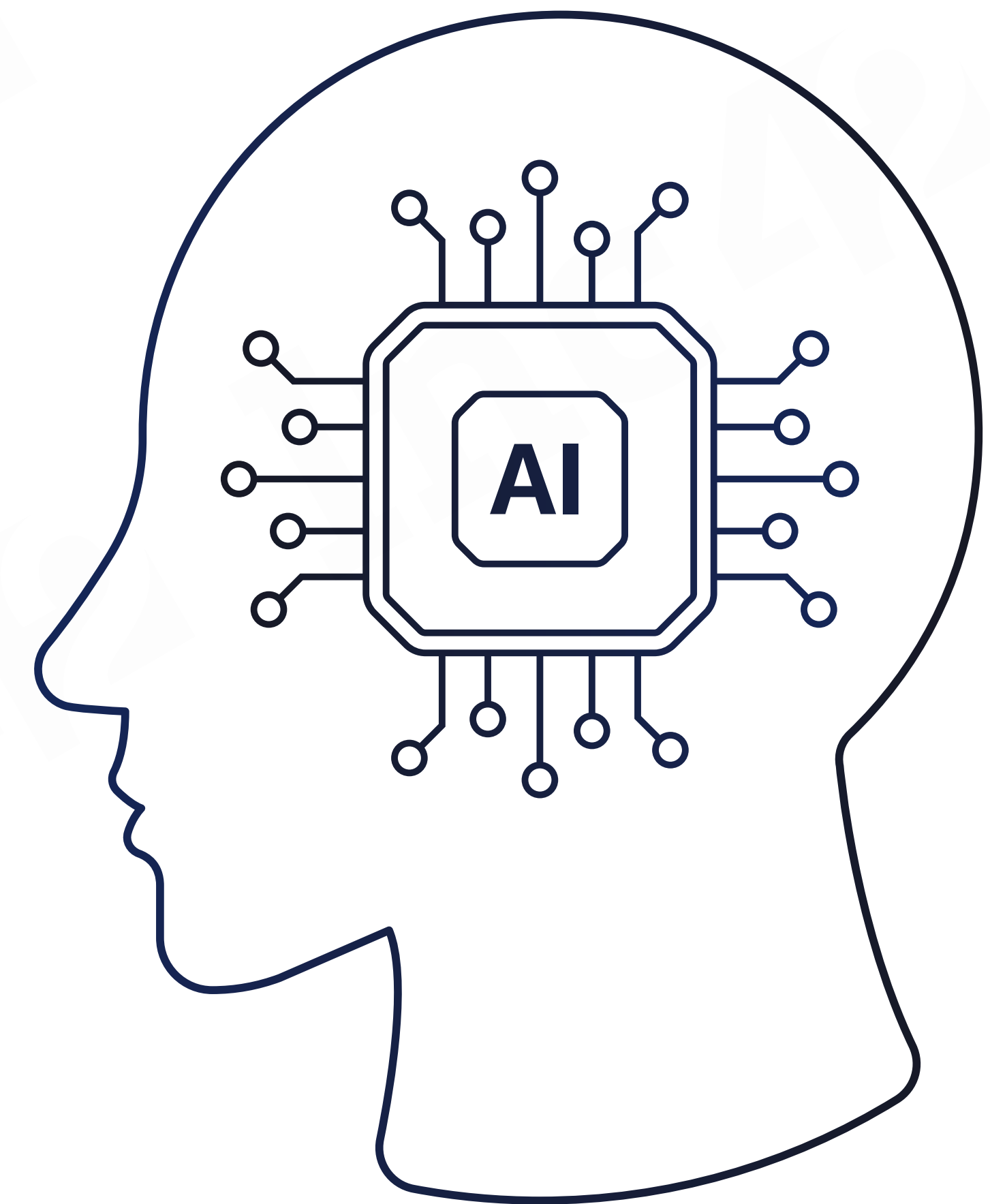
70% Of Indian VC Firms Have Implemented Generative AI Solutions In Their Operations

65% Of Startup Investors Show A Preference For Backing Early Stage Ventures Over Growth Or Late Stage Ones

Lack Of Skilled Talent Is Seen As The Biggest Challenge For Indian GenAI Startups

46% Of Indian VCs Are Pushing For Startups To Focus On Retrieval-Augmented Generation (RAG) Solutions

84% Of Indian VCs Say The Gen AI Funding Boom Is Heavily Driven By FOMO

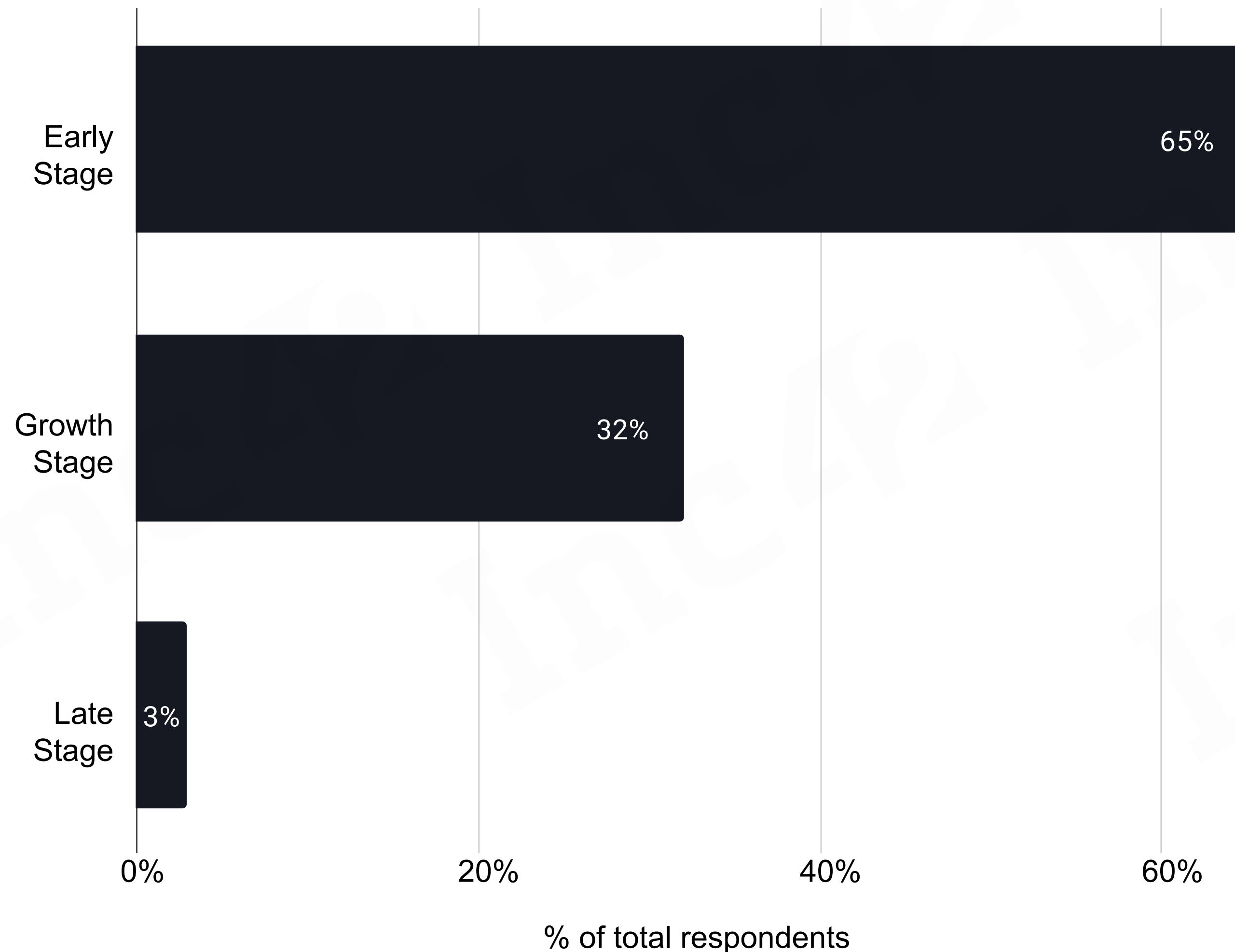


Source: Inc42

Note: Funding data is for the period between 2020 and Q3 2024.

This analysis is based on a sample set of over 120 VC funded native generative AI startups in India.

Early Stage GenAI Startups: The Investment Of Choice For 65% Of Indian Investors



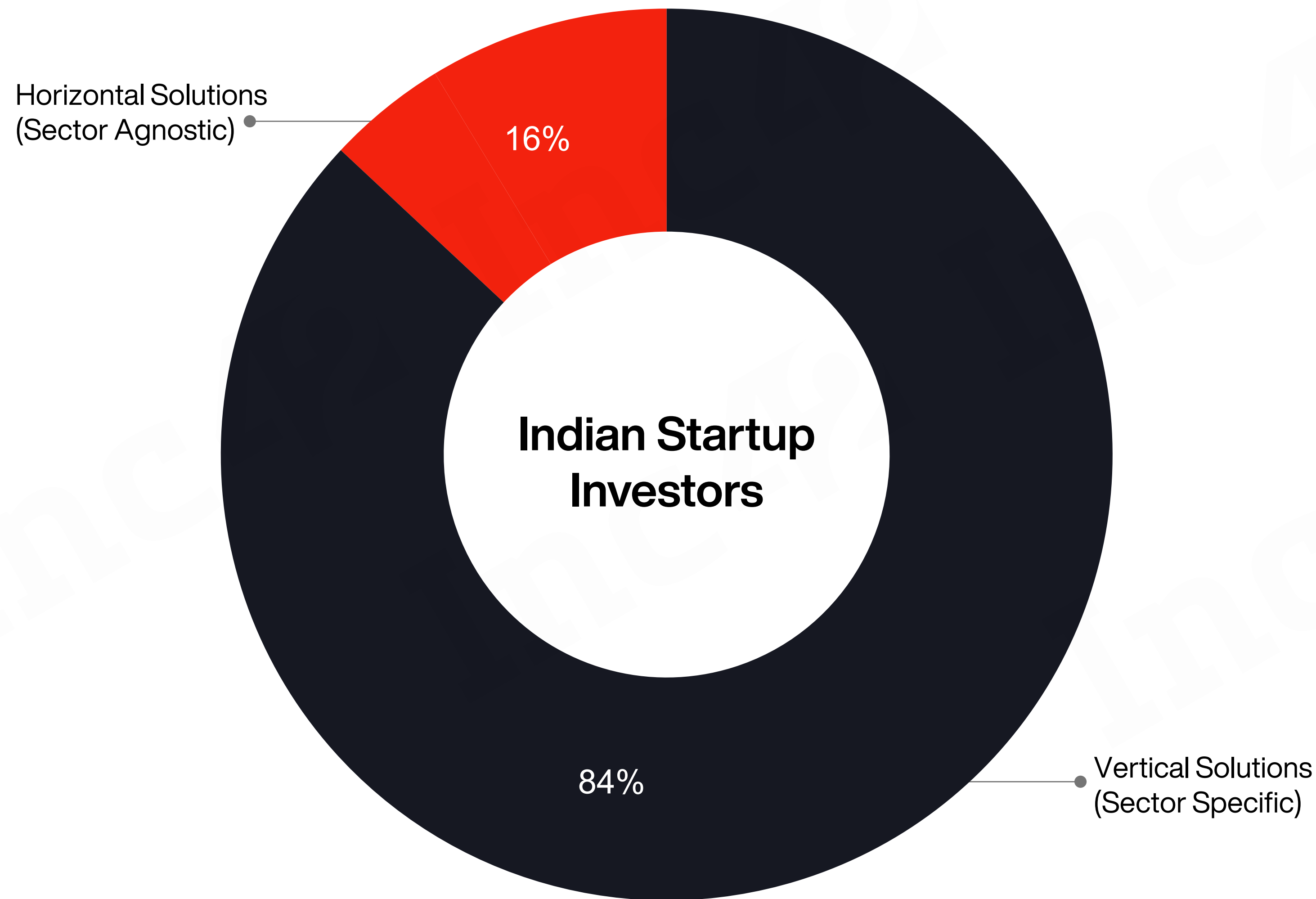
- ▶ India's GenAI startup ecosystem is still in its early stages. This is evident from the fact that more than **65%** of native GenAI startups in India were founded in or after **2020**.
- ▶ **75%** of all funded native GenAI startups in India are at the seed stage. Most investors favour application-focused businesses (beatoven AI, OnFinance) to infrastructure-focused firms (Ola Krutrim, Sarvam AI).
- ▶ The popularity of AI/GenAI applications among Indian consumers and enterprises has increased demand for **indigenous chips**, particularly those focussing on EDGE and matrix data processing.

Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

Question asked: What stage do you prefer for funding Indian AI/GenAI startups?

Indian VCs Bet Big On Industry-Specific GenAI Startups Over Horizontal Solutions



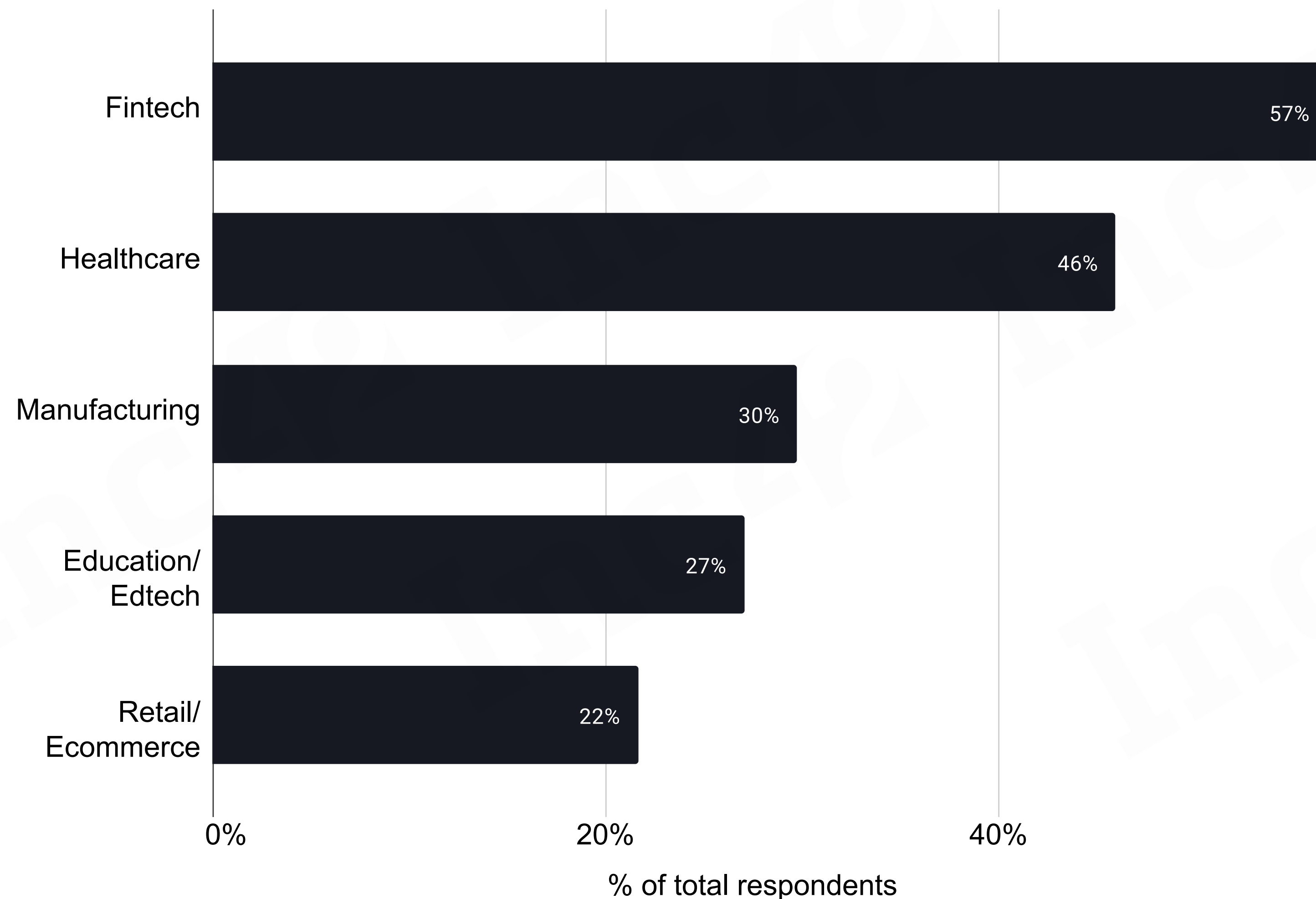
With the proliferation of infrastructure-level and horizontal solutions by global players, Indian investors are showing a stronger preference for domestic GenAI businesses that offer niche, sector-specific solutions.

Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

Question asked: Which of these two GenAI segments do you believe holds the most potential in the Indian market over the next decade?

Fintech Leads The Pack: Indian Investors' Top Choice For Vertical AI Solutions



The banking and financial services sectors are among those where GenAI technologies are expected to have the most significant impact. Major players like JP Morgan, BlackRock and Bank of America have already started integrating GenAI solutions into their operations.

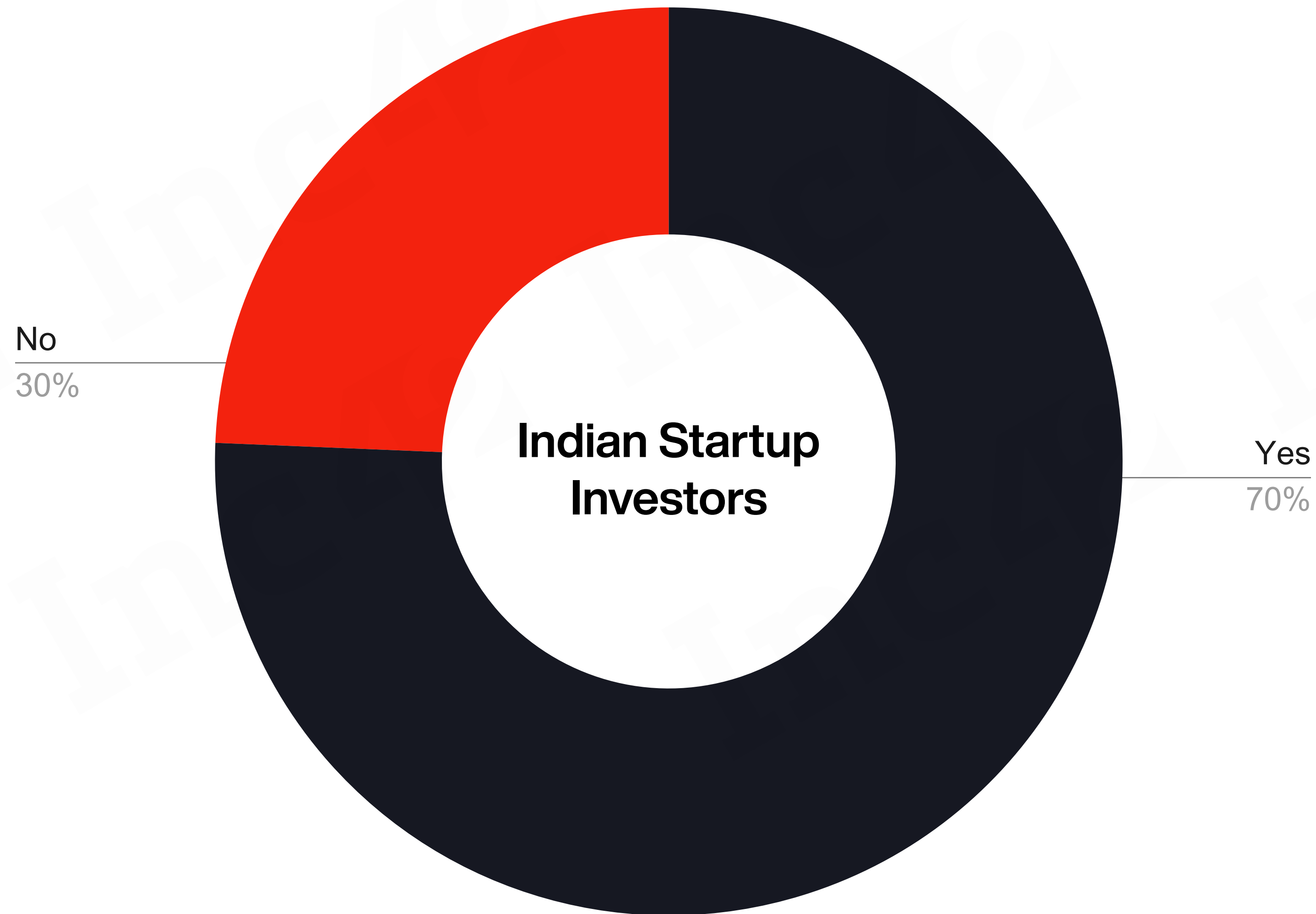
Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

The percentage values do not add up to 100 since the responses were not mutually exclusive, multiple selection was enabled

Question asked: Which of the following segments do you have the most confidence in for vertical GenAI solutions?

Indian VC Firms Embrace GenAI: 70% Already Using AI Solutions For Business Operations

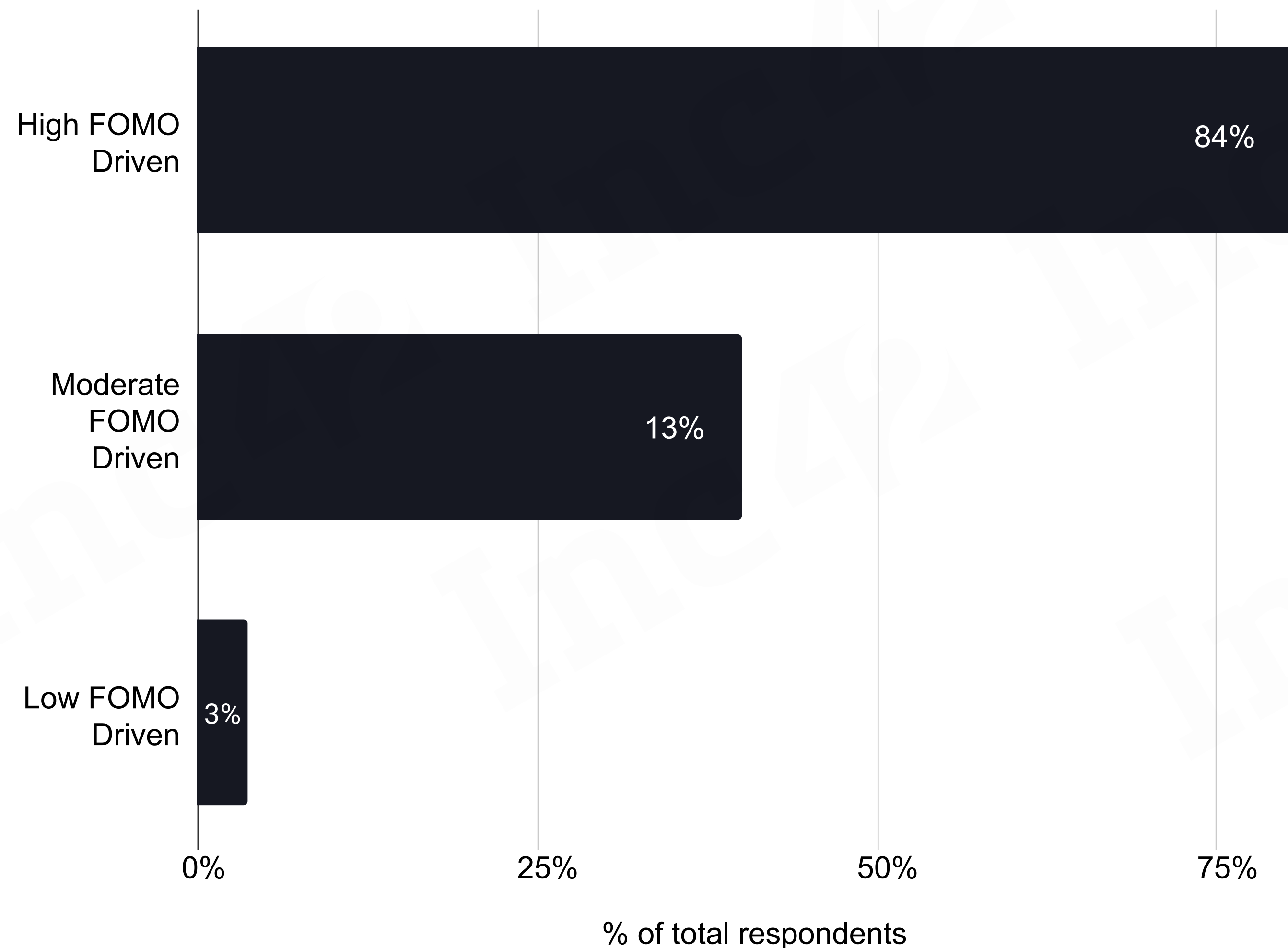


Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

Question asked: As an organisation are you officially using any GenAI-based products/services in your business operations?

Fear Factor: 84% Of Indian VCs See GenAI Investment Boom As FOMO Fueled



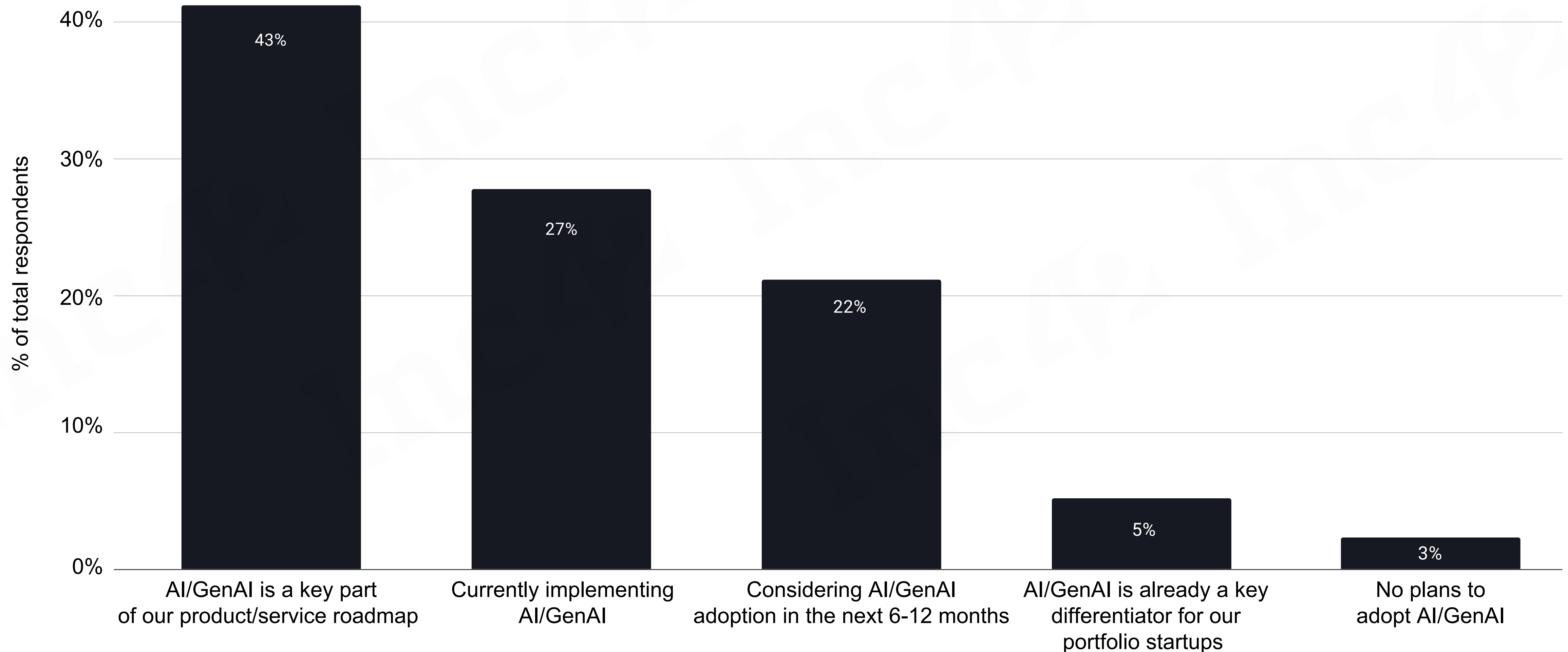
Startup funding in native Indian GenAI startups increased **4.4X** times in 2024 compared to 2020. This indicates that Indian startup investors are optimistic about backing GenAI startups founded by Indian entrepreneurs.

Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

Question asked: On a scale of 1 to 10, how would you rate the extent of FOMO-driven investment in India's AI/GenAI startup ecosystem?

The New Normal For Indian Startups: Startups Embrace GenAI Technology, Investors Confirm

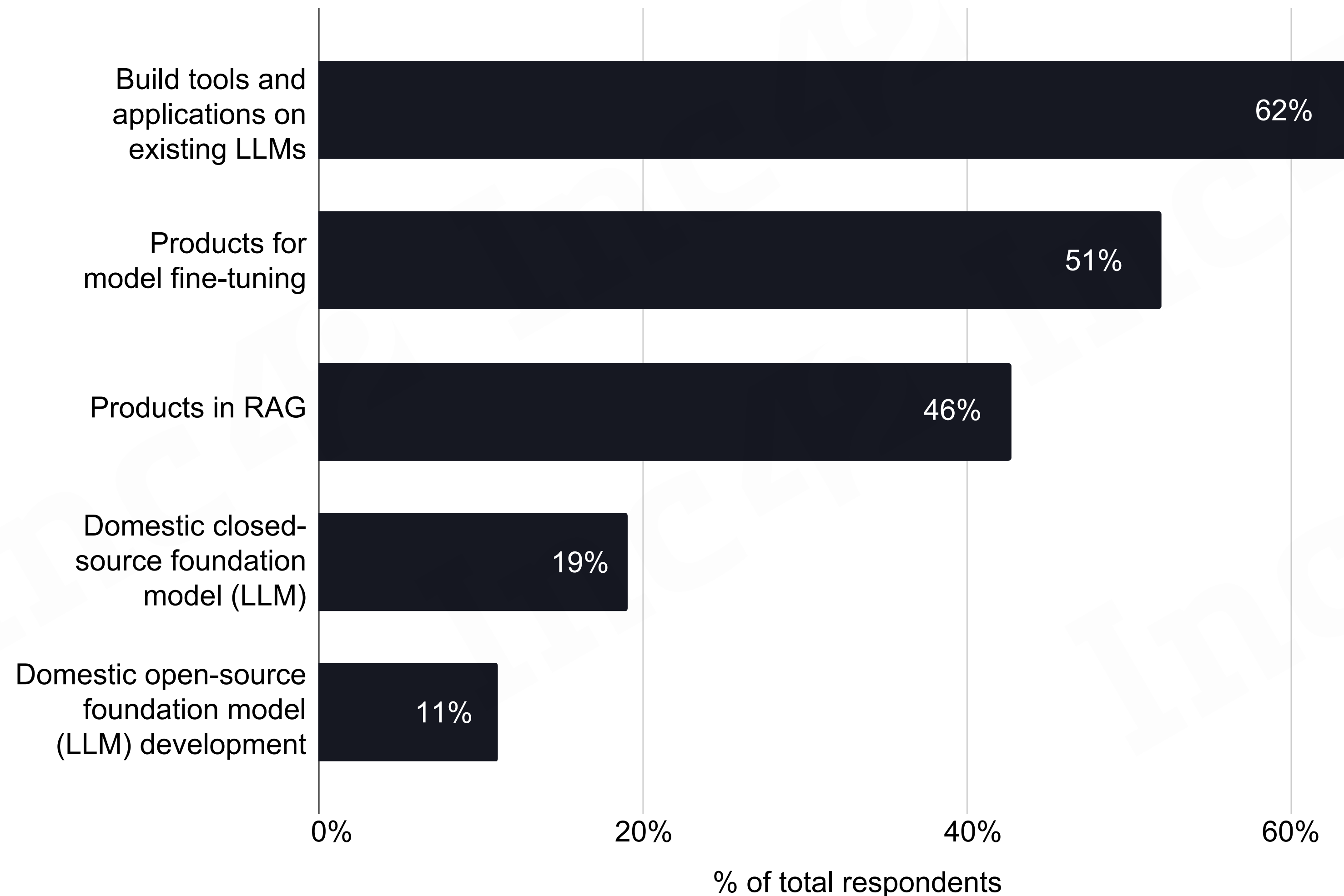


Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

Question asked: How would you assess the tech readiness of your portfolio startups (non-GenAI) for the adoption of GenAI technology?

VCs To Indian Startups: Build The AI Skyscrapers, Not The Foundations



91% of the money invested in Indian native GenAI startups to date went to companies building business or consumer applications on GenAI technology. As opposed to foundational solutions like the LLM model and cloud infrastructure.

Source: Inc42 Survey

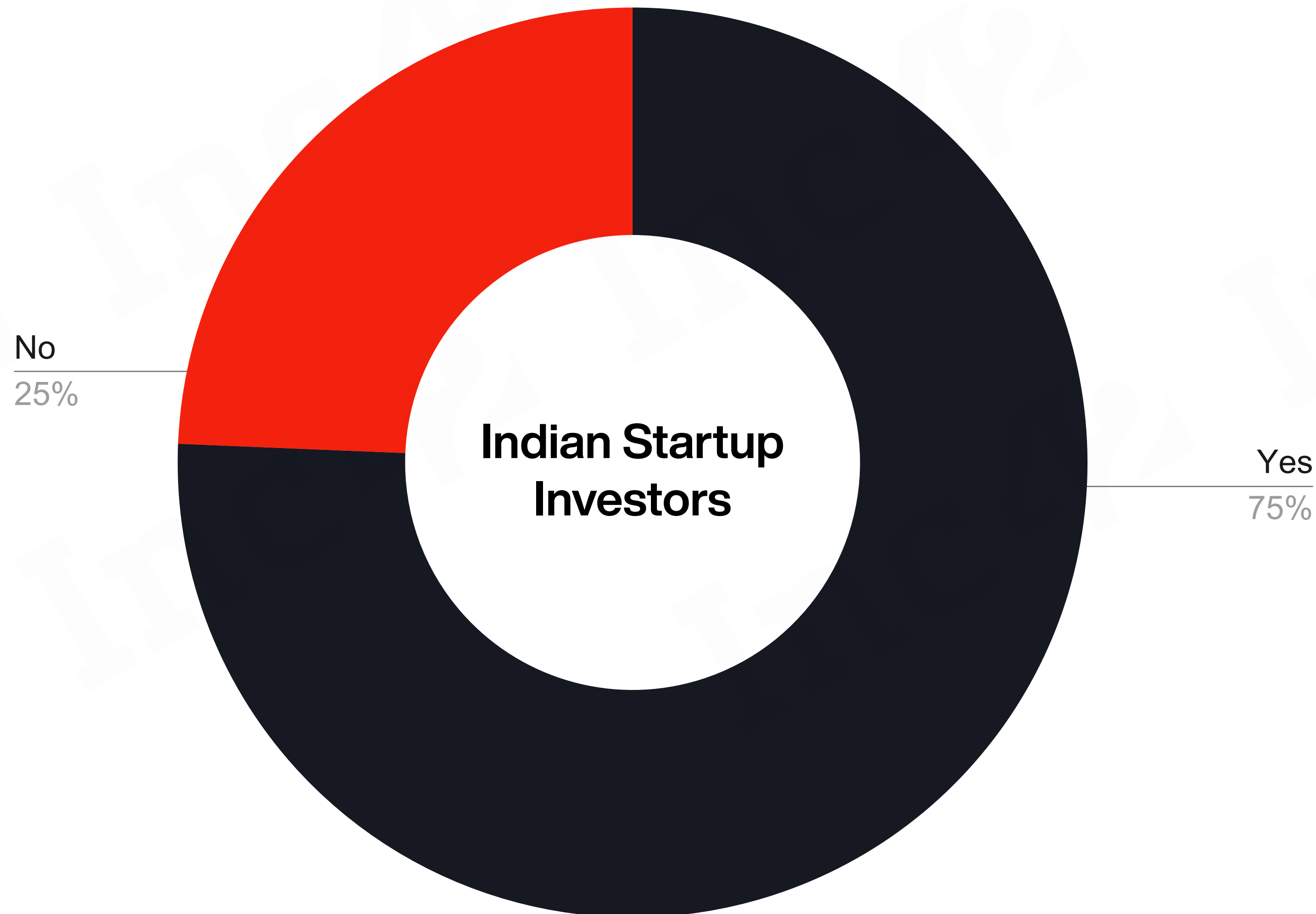
Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

The percentage values do not add up to 100 since the responses were not mutually exclusive, multiple selection was enabled

Question asked: In which areas of GenAI should Indian entrepreneurs concentrate when building a startup in 2024?

Large-Scale Indian Enterprises Trail Globally In AI Adoption, Say 75% Of Startup Investors

Most large-scale organisations in India struggle to convert their AI use cases from proof-of-concept to organisation-wide deployment

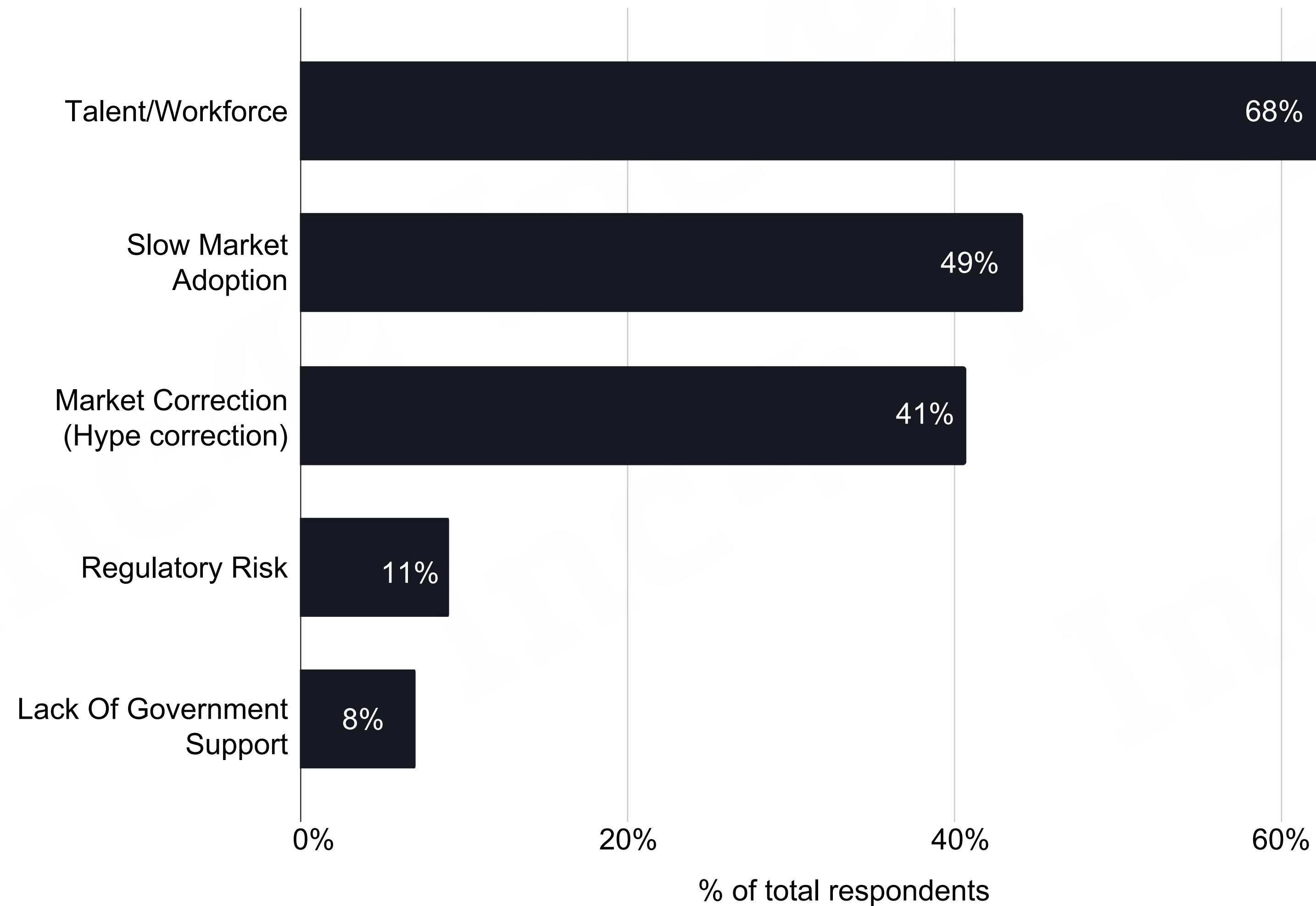


Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups.

Question asked: Do you think the rate of AI/GenAI adoption among large Indian enterprises lags behind that of their global counterparts?

Talent Acquisition: The #1 Hurdle For India's GenAI Revolution



According to a recent Amazon Web Services (AWS) survey, 79% of Indian businesses found it challenging to acquire AI talent that met their expectations. The lack of suitable AI talent in India's workforce can hinder the growth and development of the country's GenAI startup ecosystem.

Source: Inc42 Survey

Note: These insights are based on survey of more than 50 venture capital investors that have backed Indian GenAI startups. The percentage values do not add up to 100 since the responses were not mutually exclusive, multiple selection was enabled
Question asked: According to you which among the following are the biggest challenges faced by Indian GenAI founders?

Key Growth Drivers Of GenAI In India

- ▶ **Advances In AI Technology:** The push to make AI foundation models more cost-effective is accelerating, especially in emerging markets. Recent innovations like Microsoft's Phi-3 family, OpenAI's GPT-4o mini, and Mistral's Mixtral introduce compact language models, offering an exciting opportunity for countries like India where cutting-edge digital hardware is still evolving.
- ▶ **Upskilling & Reskilling In AI:** AI skills are in high demand across India as professionals at all levels—from executives to entry-level employees—acknowledge the importance of AI in their roles. Bengaluru, with the world's second-largest pool of AI talent, stands as a key hub for innovation and expertise in this growing field.
- ▶ **Growing Demand For Business Automation:** With India on track to become a \$5 Tn+ economy by 2030, business automation is set to play a transformative role. Indian companies are already adopting AI-driven chatbots to streamline customer support, and automation is expanding rapidly into digital marketing, sales, software development, and client service.
- ▶ **Generative AI In Consumer Electronics:** India's consumer electronics market is witnessing a boom in demand for AI-powered products like smart speakers, home gadgets, and autonomous vehicles. The launch of Apple's iPhone 16, with a focus on on-device AI, could pave the way for other electronics brands to bring more AI/GenAI-enabled devices to Indian consumers.
- ▶ **Government Support For Semiconductor Development:** India's government is enthusiastic about positioning the country as a leading hub for semiconductor manufacturing and design. In August 2024, the government boosted its Semiconductor Manufacturing Policy budget from \$10 Bn to \$15 Bn, and major Indian players like Tata, HCL, and Bharat Electronics are already investing in this critical industry.

Source: Inc42 Analysis, Secondary Sources

Key Challenges For GenAI In India

- ▶ **Few Startups In GenAI Infrastructure Solutions:** Essential GenAI infrastructure tools like GPUs, large language models, and model fine-tuning capabilities are key for practical AI applications. Yet, less than 5% of funded Indian startups are focusing on building these foundational tools, with most choosing to work on application-layer solutions instead.
- ▶ **Risks Of Deepfake & Misinformation:** With India home to the world's second-largest internet user base, the rise in AI-generated content could lead to serious risks. There's growing concern about potential misuse, including spreading false information, swaying public opinion, or even interfering with political matters.
- ▶ **Unclear Regulations & Legal Ambiguity:** India currently lacks specific laws governing artificial intelligence. While the government has introduced "Niti Aayog's Responsible AI #AIFORALL" as a blueprint for future AI policies, uncertainty still surrounds how AI regulations will evolve, leaving a gap in guidance for companies and innovators.
- ▶ **Slow Adoption Among Large Enterprises:** Although startups like Zomato and Flipkart have embraced GenAI, larger enterprises are slower to adopt it. A report by EY India shows only 30-40% of GenAI proof-of-concepts by Global Capability Centres (GCCs) and 15-20% by large domestic companies in India are progressing to production. In contrast, 66% of India's leading unicorns are already integrating GenAI into their offerings.
- ▶ **Challenges In AI Governance:** While larger firms are developing AI governance structures, smaller businesses are falling behind. According to an IBM survey, 71% of Indian CEOs believe AI cannot work effectively without robust governance. Public-private collaboration will be crucial in establishing guidelines to harness AI's full business potential responsibly.

Source: Inc42 Analysis, Secondary Sources

Methodology

Since 2015, Inc42 has been the go-to source for identifying Indian startups transforming industries and shaping society.

For this reports:

- Native GenAI startup funding data in this report is from 2020 to 28 September 2024, unless mentioned otherwise
- **Seed stage:** Startup at angel or seed stage
- **Growth stage:** Startups at Series A and B funding stage
- **Late stage:** Startups at Series C or above funding stage
- Unicorn refers to any digital / tech company valued at or above \$1 Bn or have touched this valuation once in their business lifecycle
- A soonicorn is any public or private digital/tech company valued at or above \$200 Mn
- Our database enrichments and corrections are done on a regular basis, therefore slight variations in funding-related data compared to previously released reports may exist
- Unless specified otherwise, the market size cited in the report represents the calculated value of the total addressable market (TAM) using both top-down and bottom-up methodology

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