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India's GenAI Startup Ecosystem Accelerates, but Funding and Infrastructure Gaps Persist

Bridging capital, compute, and talent challenges will be critical for sustaining India's AI leadership momentum.

National, August 07, 2025: India's generative AI (GenAI) startup ecosystem is witnessing rapid growth, emerging as a key innovation hub in the global AI landscape. Over the past 12 months, the total number of GenAI startups in India has surged 2.8X, with patents rising 1.7X. These are some of the latest findings from the **Nasscom GenAI startup landscape report 2025**, released today on the sidelines of FutureForge 2025, in partnership with Hitachi Digital Services.

The ecosystem now comprises over 890 startups, growing 3.7X in the past year, with application-focused ventures making up more than 83% of the landscape as founders pivot toward vertical AI, SaaS offerings, and faster commercialization.

Agentic AI is emerging as a new frontier, where startups are building model infrastructure, orchestration layers, and workflow automation tools that could fundamentally reshape enterprise workflows. Major tech companies globally are increasingly acquiring agentic startups or developing in-house capabilities to embed AI agents into their core platforms.

However, despite a 30% year-on-year increase in total funding to $990 million in H1 of CY2025, India lags significantly behind global peers. Early-stage funding remains the primary source of capital as late-stage investments continue to shrink, constrained by a risk-averse investment culture and infrastructure challenges such as high compute costs.

Verticalization is emerging as a survival strategy, with specialist AI models targeting regulated sectors like BFSI, healthcare, and legal gaining traction. Enterprise customers are showing greater maturity in GenAI adoption, with Business Units now driving nearly 70% of purchasing decisions.

A lack of production-ready talent and expensive compute infrastructure remain major barriers to innovation. Founders cite high infrastructure costs as the top scaling challenge this year, overtaking talent shortages as the primary constraint on growth. Meanwhile, regulatory hurdles and IP protection concerns continue to hamper partnerships and collaborations, stalling ecosystem maturity.

Rajesh Nambiar, President, Nasscom said, *"GenAI startups have the potential to shape the future of AI innovation for emerging markets and beyond. The next leap will depend on how effectively the ecosystem can come together to unlock capital, scale compute access, and nurture world-class talent. With collective action, India can transform its GenAI momentum into a lasting global leadership position, creating AI solutions that are trusted, inclusive, and transformative for billions worldwide."*

Indian startups have a unique opportunity to build a strong competitive edge by developing domain-specific AI agents tailored for regulated sectors such as BFSI, healthcare, and legal, where generic models often fall short on compliance, auditability, and explainability.

A massive untapped market also exists for lightweight, multi-indic LLMs and voice-first assistants designed for India's linguistic diversity and mobile-first population, particularly in Tier 2 and Tier 3 cities where costly, large models are impractical.

As enterprises progress from experimentation to scaled GenAI deployment, demand is rapidly shifting from core models to orchestration and infrastructure layers that power agentic

workflows, an area where Indian startups can establish global leadership by building agent-as-a-service stacks integrating orchestration, hybrid compute, and open-model tuning.

To accelerate India's GenAI ecosystem, a focused national strategy is essential. This includes mobilizing strategic investments through co-funding models and tax incentives, establishing a National AI Compute Grid with subsidized access, and expanding initiatives like Bhashini to create rich, secure datasets. Fostering open innovation and supporting lightweight model R&D, alongside proactive governance such as regulatory sandboxes and a 'government as first customer' approach, will further de-risk innovation and scale trusted AI applications.

About Nasscom

Nasscom represents the voice of over $284bn technology industry in India with the vision to establish the nation as the world's leading technology ecosystem. Boasting a diverse and influential community of over 3500 member companies our network spans the entire spectrum of the industry from DeepTech and AI start ups to multinationals and from products to services, Global Capability Centres to Engineering firms. Guided by our vision, our strategic imperatives are to accelerate skilling at scale for future-ready talent, strengthen the innovation quotient across industry verticals, create new market opportunities – both international and domestic, drive policy advocacy to advance innovation and ease of doing business, and build the industry narrative with a focus on Trust, and innovation. And, in everything we do, we will continue to champion the need for diversity and equal opportunity.

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