

Let platform-building be pattern, not an aberration

- *Amitabh Kant* *

On July 18, 2026, a Hyderabad-based startup did something no private Indian company had ever done: it put a rocket into orbit. Skyroot Aerospace's Vikram-1, launched from the Satish Dhawan Space Centre in Sriharikota and placed two satellites in low Earth orbit. It made India only the third country in the world, after the United States and China, with a private orbital launch capability.

Skyroot was founded nearly eight years prior by former Indian Space Research Organisation (ISRO) scientists, and first tested its capabilities through Vikram-S, a suborbital rocket launched in 2022. It then spent four years developing and testing the larger Vikram-I.

These leaps required scientific expertise, patient investors, access to public infrastructure, regulatory support, and close engagement with ISRO and the wider space ecosystem.

That is the nature of deep technology. A company may spend years developing a product before it can demonstrate that the product works safely and reliably. Even after a successful demonstration, the company still has to manufacture it, find customers, raise more capital, meet certification requirements and build a business that can survive beyond its first breakthrough and eventually become a commercial success

Skyroot has crossed several of these barriers. Most startups do not. To understand why, let's start at the beginning.

Deciding to build a deep-tech company

You are an engineer who has spent a decade working on battery systems. You want to build a grid-scale storage technology that can help Indian utilities manage renewable power more reliably.

You and your team spend the first few years in research and development. You design cells, build prototypes, test them in controlled conditions and try to show that the technology is safe, reliable, and actually works.

At this stage, India does have entry points for a founder like you. An Atal Incubation Centre may provide early mentoring, facilities, and connections. If the technology has a defence application, the Innovations for Defence Excellence programme can help

support its development. A biotechnology startup may turn to BIRAC, while companies working in semiconductors, artificial intelligence, quantum technology or space can draw on the wider mission architecture that the government has built around these sectors.

There is also evidence that public funding can bring private capital into the ecosystem. The original Fund of Funds for Startups, launched in 2016 with a ₹10,000 crore corpus, committed its full corpus to 145 Alternative Investment Funds. Those funds went on to invest more than ₹25,500 crore in over 1,370 startups, including companies working in AI, robotics, space technology, and biotechnology.

For your battery company, this support might help pay for laboratory equipment, early experiments and a first demonstration with a utility. Eventually, the utility runs a pilot and your system performs well. You have shown that the technology works in a real environment, like Skyroot did.

But now, things get interesting. The nature of the problem changes. You no longer need only to prove that the technology works; you need to sell it.

For many startups, a successful pilot does not automatically turn into a commercial order. The market likes your system, but wants more evidence. It asks whether an independent body has tested your batteries under full operating conditions, and if you can manufacture it in larger quantities. It wants to know who will stand behind performance guarantees and warranties over the next decade. Lenders and insurers are cautious because the technology has no proven long-term track record.

That is where many startups encounter the missing middle. A successful pilot may demonstrate technical performance, but it does not necessarily produce a commercial order or create a path to the next hundred deployments.

Searching for capital in the missing middle

Your financing needs have changed. Seed equity was enough to build prototypes, but now you need money for tooling, plant, certification, inventory, and working capital. Meanwhile, conventional loans are hard to obtain because you have limited revenue and few assets. You are too far along for a small grant and too early for regular project finance.

India has created new instruments to tackle this problem. The Startup India Fund of Funds 2.0 has a corpus of ₹10,000 crore and is explicitly weighted toward deep tech

and technology-driven manufacturing, with the aim of widening India's shallow domestic venture capital base.

The Research, Development and Innovation (RDI) Scheme adds a ₹1 lakh crore corpus of long-tenure financing, including unsecured loans at under three percent interest, routed through fund managers to alternative investment funds, development finance institutions, and non-banking finance companies. Nearly ₹20,000 crore has been earmarked for the first year of the RDI Fund. It can support projects at higher technology readiness levels and finance up to half the cost of qualifying projects, with the rest arranged by promoters or commercial sources. For a company like yours, this is potentially transformative. It offers capital designed for the commercialisation stage, not only for basic research.

Yet the broader funding picture remains sobering. Indian deep-tech startups raised a mere 1.65 billion dollars in 2025, while American deep-tech companies raised roughly 147 billion dollars and Chinese companies about 81 billion dollars. India's cumulative deep-tech funding of around 8.54 billion dollars is still a fraction of what a single strong year can produce elsewhere. These numbers show us why new schemes must move quickly from cabinet approval to money actually reaching founders at startup speed, not government speed. Execution is key.

India also needs a shift in its attitude towards risk. Deep-tech companies will not scale if government, investors, and customers are willing to fund only technologies that have already become safe bets. The Startup India Fund of Funds 2.0 and the RDI Scheme give the government tools to absorb some early technology risk, while mechanisms such as SIDBI's Partial Risk Sharing Facility can help make unfamiliar technologies more acceptable to lenders. But public money cannot carry the system alone. Domestic venture funds, insurance companies, pension funds, family offices and high-net-worth individuals must become more willing to invest patiently through the years between a working prototype and a commercially proven company.

Finding anchor customers and partners

But even with better capital, your company still needs a market. This is where government procurement must change. India's innovators need scale to survive, and the government can help by becoming the first serious buyer of technologies that meet clearly defined standards. It can consolidate demand across departments, commit meaningful procurement budgets for successful products, and update technical codes and purchasing rules so that "Make in India" results in actual orders rather than another round of pilots.

A bureaucratic L1 approach, which awards contracts mainly on the basis of the lowest upfront price, will undermine this effort by disadvantaging young companies whose technologies may cost more initially but deliver greater value over their lifetime. The Indian Army's first procurement order under the iDEX programme, awarded in 2023 to startup Hyper Stealth Technologies for an indigenously developed mobile camouflage system, shows what this pathway can look like. The challenge is to make such examples routine rather than exceptional.

Government challenge programmes should also be open enough to attract the best solutions, including partnerships involving global expertise. At the same time, projects built around national priorities should be led by Indian-headquartered consortia with majority Indian ownership and manufacturing. That way, when a battery company solves a problem for India's power system, the value created through the technology, production and jobs remains largely with Indian companies and workers. Export incentives and a coordinated global market strategy can then help those products move beyond India.

The goal is not to protect every startup from failure. It is to ensure that a startup with a tested product does not fail simply because no institution is willing to buy the first meaningful batch.

Corporate India can also make this journey easier. They bring distribution, manufacturing scale, procurement relationships, and domain expertise that startups cannot easily build on their own. The India Deep Tech Alliance, launched in September 2025 and expanded through late 2025, brings together venture capital firms such as Accel, Blume Ventures and Premji Invest with corporate venture arms including Qualcomm Ventures and InfoEdge Ventures. Nvidia joined as a founding member and strategic adviser.

For a company like yours, a partnership like this would mean a first paying customer, access to manufacturing capacity, specialised know-how and a route into global markets. For the corporate, it offers a live pipeline of innovation, early sight of technologies in semiconductors, robotics and AI, and a way to share the risk of betting on new tech by co-investing alongside specialist venture capital funds.

Building the wider system around you

Your company also depends on a wider ecosystem to be successful. You need access to shared laboratories, compute infrastructure, certification facilities, and

pilot-manufacturing lines, rather than having to build all of them from scratch. You need institutions that can underwrite technology risk by providing guarantees and validation. You need public-sector buyers who can judge lifecycle performance and strategic value.

Behind all this lies India's research base. Gross expenditure on research and development remains below 0.7 percent of GDP, well below the OECD average of about 2.7 percent and far behind research-intensive economies such as South Korea and Israel (each at >5 percent). The private sector contributes only about a third of India's R&D spending, compared with roughly four-fifths in South Korea and more than 90 percent in Israel. This must change structurally to provide impetus to corporate R&D and stronger links between companies, universities, and public laboratories.

India stands at a genuine inflection point. It has proven, through Startup India and DPI, that it can build platforms at civilisational scale. Skyroot has now shown that an Indian company, backed by the right mix of talent, public infrastructure, and patient capital, can build frontier hardware from scratch and take it all the way to orbit.

Our next test is harder: can this become a repeatable pattern rather than a singular achievement, producing depth across AI, semiconductors, quantum and biotech, built on sovereign frontier technology from the ground up?

The policy scaffolding is largely in place, and corporate India is beginning to show up as a genuine capital and market partner rather than a bystander. What India needs now is relentless, high-velocity execution. Manufacturing and agriculture remain the primary engines of India's climb toward a \$30 trillion Viksit Bharat by 2047, but neither can carry India there alone. Deep tech is the decisive third pillar, the one that will determine whether India's growth is powered by technology built elsewhere, or by technology sovereignty built at home.

**Amitabh Kant is the Chancellor of NIIT University, Chairman, Fairfax Centre for Free Enterprise, former G20 Sherpa, India, and former CEO, NITI Aayog.*