

From Research to Real-World Impact: Inside iTIC-IITH's Journey of Building India's Deep-Tech Ecosystem

KID: 20260206

When people talk about innovation, they often imagine a single, dramatic moment: a researcher staring at a laboratory bench as a breakthrough technology comes to life. But for those of us working closely with founders and scientists every single day, we know that initial breakthrough isn't the finish line - it is barely the starting line. Taking a promising scientific concept, turning it into a tangible product, building a viable business around it, and ultimately deploying it where it can solve real human problems requires an entire ecosystem capable of sustaining deep, complex work long after the excitement of the initial discovery wears off.

At iTIC Incubator, creating and nurturing that exact ecosystem has been our single-minded focus for the past ten years. Founded in 2015 by IIT Hyderabad as a non-profit organization, iTIC was designed to bridge the gap between academic ingenuity and entrepreneurial execution. Today, we have supported more than 240 startups across every phase of growth - generating over INR 1,400 crore in revenues, creating more than 1,100 high-value jobs, and sanctioning over INR 10 crore in direct funding. Yet, as impressive as these numbers are, they are merely indicators of a much larger mission: helping transformative technologies move off the lab bench and into the real world.

The Hard Work of Commercializing Science

The leap from academic research to market enterprise is notoriously difficult in deep tech, where turning a discovery in quantum mechanics, robotics, or materials science into a market-ready solution requires navigating intellectual property, prototype validation, customer discovery, capital deployment, and complex sales cycles. This is why we view incubation as comprehensive ecosystem engineering rather than simply renting out desks or hosting pitch events. Our job is to surround deep-tech founders with specialized physical infrastructure, software tools, legal guidance, capital, and hands-on operational mentorship so they never have to pause technological progress to independently piece together a support network. Crucially, we connect them directly to the research capacity of IIT Hyderabad, alongside our global network of investors, corporate partners, and government channels. Our underlying philosophy is straightforward: if a technology holds genuine potential to solve a meaningful problem, it deserves a clear, structured pathway to market viability.

Navigating the Convergence of Emerging Tech

The portfolio of companies emerging from iTIC spans Artificial Intelligence, Generative AI, Quantum Computing, Digital Twins, Robotics, Cybersecurity, Advanced Materials, Biotechnology, Industry 4.0, Drones, and Next-Gen Communications.

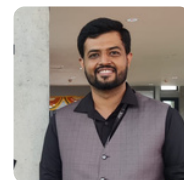


Figure 1. iTIC organised Founder's Meet

What excites me most right now is how these fields are colliding: AI is integrating into autonomous robotics, digital twins are reshaping heavy industry, advanced materials are unlocking clean energy breakthroughs, and synthetic biology is merging with computational engineering. With IIT Hyderabad's interdisciplinary strengths, our community sits in a unique position to lead this shift, but technology cannot stay trapped in an academic bubble. If a solution remains technically brilliant but commercially isolated, we haven't done our job; real impact happens when technologies are validated by industry and adopted by markets at scale.

Defining the Next Decade of Deep Tech

As we look toward the next phase of Indian innovation, the defining question for the next ten years cannot simply be how many startups we can incubate, but how effectively we can translate India's world-class research talent into globally competitive enterprises. Achieving this requires us to redefine success beyond quick revenues or fast valuations to include technological maturity, robust IP portfolios, strategic industrial adoption, global competitiveness, and societal impact. India has never had a shortage of brilliant ideas; what we need are stronger, more resilient pipelines that convert those ideas into scalable enterprises.

At iTIC, our first decade was about laying the foundation, and the decade ahead is about scaling our impact to see more lab discoveries reaching end users, more researchers taking the leap into founding companies, and more Indian deep-tech solutions setting global benchmarks.



Figure 2. Greenko BUILD Program Launch

[1] Mr Keyur Punjani
COO, iTIC, IIT Hyderabad