

S&I Article

InnovaTN

Where Young Minds of Tamil Nadu Turn Ideas into Impact

By Swagata Sarkar, Arunima Thappa & Suman Pandit



India today stands at a remarkable moment in its innovation journey. As the nation advances toward the vision of Viksit Bharat 2047, the emphasis on nurturing scientific temperament and creativity at the school level has never been stronger. As Prime Minister Narendra Modi emphasises, "Young innovators of India will drive our journey from developing to a developed nation." With this belief at its core, India is shaping a generation driven by purpose, curiosity, and a problem-solving mindset. In this larger national mission, state-level innovation movements like InnovaTN are becoming powerful catalysts in elevating India's innovation rank and preparing young minds for a future defined by ingenuity.

On a pleasant Saturday morning in Chennai, the campus of Sri Sairam Engineering College was alive with excitement. The air buzzed with creativity, curiosity, and a stir of visionary ideas. In every corner, students adjusted circuits, tested sensors, and refined prototypes that could one day change lives. This was InnovaTN 2025, Tamil Nadu's State-level Atal Tinkering Lab Hackathon; it was the celebration of imagination and a glimpse of the future of Tamil Nadu and India's innovation journey from the lens of school students.

Organised by the Atal Innovation Mission (AIM), NITI Aayog, in collaboration with Sri Sairam Engineering College, InnovaTN 2025 brought together more than 500 student teams from the nooks and corners of every district of Tamil Nadu. What united these young innovators was a single dream – to use science, technology, and creativity to build solutions for a better tomorrow.

At the heart of InnovaTN lies the spirit of the Atal Tinkering Labs, the flagship initiative of AIM, NITI Aayog. These labs are dynamic makerspaces where students from Classes 6 to 12 learn through hands-on exploration. They build, test, and innovate using robotics kits, sensors, 3D printers, and coding tools, transforming ideas into reality.

Tamil Nadu today has 975 ATLs, each a hub of curiosity and creativity. Together, they form part of India's massive Innovation Movement, now reaching lakhs of students across the country.

The aim is to nurture a future-ready generation equipped with new-age skills, preparing them to become future entrepreneurs, scientists, and innovators; building capabilities to make them the job creators of tomorrow, a shift from being job seekers.

As India works toward its vision of Viksit Bharat by 2047, these young innovators are becoming the driving force behind a new kind of learning: one that values curiosity and uses that curiosity to purposefully solve emerging and existing problems. Among the hundreds of projects that dazzled the jury at InnovaTN, two innovations from Amrita Vidyalayam, Trichy, captured hearts for their creativity and compassion.

Among the top innovations at InnovaTN was VAYURA, the Asthma Relief Belt, created by Class 9 students S. Sreevanth, B. Jaivant, and S. Sai Sujan. It is a smart wearable device designed to help asthma patients breathe easily during cold weather. By providing gentle warmth around the chest, it relieves wheezing and ensures comfort. Stylish, safe, and effective, VAYURA is not just a student project – it's a ready-to-use product with genuine social impact, advancing Sustainable Development Goal 3 of Good Health and Well-being.

Another exciting project was Krishi Sashtra in the Artificial Intelligence domain, designed by Krithik Nair, Gautham V., and Gowshin Raj S. (all Grade 8 students). Krishi Sastra identifies the struggles that farmers face due to unpredictable soil health, pest attacks, and weather changes. Their AI-powered farming system analyses soil, temperature, and humidity through sensors, predicts issues in advance, and alerts farmers via an app with real-time solutions. The system automates irrigation, fertilisation, and pest control to ensure higher yield and lower costs. Their vision is to empower both traditional and new-age farmers with technology-driven precision farming to make agriculture smart, efficient, and profitable.



The success of InnovaTN and Tamil Nadu's innovation movement is not a matter of chance; it is the result of a strong, supportive ecosystem built by NGO partners, AIM's Mentors of Change, Incubation Centres, and the Entrepreneurship Development and Innovation Institute (EDII) Tamil Nadu. Thanks to this synergy, Tamil Nadu today boasts an innovation ecosystem valued at over \$28 billion, supported by more than 120 incubators and growing at over 20 percent annually. Chennai, in particular, has emerged as one of Asia's leading startup hubs, demonstrating how education, innovation, and enterprise can come together to transform lives.



As Dr. A.P.J. Abdul Kalam once said, "Creativity leads to thinking, thinking leads to knowledge, and knowledge makes you great." These collaborations ensure that innovations born in classrooms continue their journey into society, creating meaningful impact.

What makes InnovaTN special is not just the innovations, prototypes, or prizes - it's the mindset and attitude it cultivates. Every participating student learns the power of teamwork, design thinking, and resilience.

Every teacher learns how to nurture curiosity and recognises that innovation can begin anywhere, even in a small school lab. Most importantly, it brings together a community united by the belief that young minds can shape a better world.

The journey of InnovaTN itself tells a story of growth. The first edition in Thottukodu saw around 80 teams. The second edition in Erode continued the momentum with 200 teams. And now, with over 502 teams in Chennai, the hackathon stands as a symbol of Tamil Nadu's unstoppable innovation spirit.

At the national level, the movement is gaining greater momentum. As announced in the Union Budget 2025, the Government of India plans to expand the ATL network to 50,000 schools, meaning one in every three schools across India could soon have a makerspace dedicated to tinkering, experimenting, and inventing. Imagine millions of children across India designing prototypes, testing ideas, and learning how to build upon their innovative ideas - transforming their dreams into reality. This is the foundation of an innovation-driven Viksit Bharat by 2047.

As the lights dimmed on the final day of InnovaTN 2025, the sight was unforgettable - young innovators proudly holding their creations, surrounded by teachers and mentors who believed in them. The event was not merely a competition; it was a mirror reflecting India's future: creative, confident, and compassionate.



InnovaTN hence gave us concrete evidence that by giving every child the space to imagine, innovate, & implement, India is actively shaping its future as a global innovation leader, one student at a time. These rising innovators will author the nation's next chapters - a future fueled by imagination, anchored in innovation, and propelled by the limitless potential of our children.