



STARTUP
INCUBATION AND
INNOVATION
CENTRE
IIT KANPUR



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TECH की बात

Abhivyakti 2025: Unleashing Emerging Innovations

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MENTOR MANTRA



MR. RONY BANERJEE

Advisor, EY

Rony Banerjee is a seasoned professional with 27 years of experience in development initiatives. He specializes in policy interventions, feasibility assessments, and inclusive marketing strategies. Rony is also a storyteller and the author of "Is there a Rocket Fuel for Startups?" presented by the UK Asian Business Council in India.

BREAKING BARRIERS: UNLOCKING INDIA'S \$100 BILLION SPORTS ECONOMY

India's sports industry is at a transformative juncture, offering diverse opportunities for sports-focused startups. Driven by initiatives like Khelo India, a burgeoning youth population, and increasing corporate investments, the sector is projected to reach multi-billion-dollar growth by 2027, with a long-term focus on the Olympics 2036.

In 2023, India's sports economy surpassed \$1.9 billion in spending, with media contributing 53%. The Indian Premier League (IPL) leads with a market value of \$15.4 billion. Diversification into sports like football, kabaddi, badminton, and athletics is gaining momentum, fueling demand for infrastructure, digital platforms, and innovative products.

Startups can capitalize on government support for eco-friendly stadiums, gyms, and facilities. Rising fitness trends drive demand for smart wearables and training equipment tailored to Indian consumers. Platforms for talent scouting and training resources are essential to nurture emerging athletes, particularly in non-cricket sports and new trends like pickleball, wushu, and chess boxing.

Corporate giants such as Reliance Industries, Tata Group, DLF, and JSW are heavily investing in sports. These investments, along with sponsorships and endorsements, create a robust financial ecosystem for startups to thrive.

Tech-driven companies like Khel Now exemplify this potential. With 44 million unique users and 103 million page views in FY 2023-24, Khel Now demonstrates the demand for live scores, fantasy tips, and AI-powered user engagement. Starting with \$350K in seed funding, the platform expanded to cover multiple sports, generated 502.2 million YouTube views, and launched AI-enabled mobile apps, showcasing how innovation meets market needs.

KEY STRATEGIES FOR SPORTS STARTUPS:



Leverage Technology: Enhance user experience and operational efficiency.



Prioritize Sustainability: Attract environmentally conscious consumers.



Build Strategic Partnerships: Collaborate with sports federations, OTT platforms, and fitness communities to establish credibility and scale.



Explore Sports Equipment and Goods: Tap into India's growing sports manufacturing sector.

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New startups with novel and innovative technologies have been incubated at SIIC, IIT Kanpur during December. Read on to learn about the startups.

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NEW INCUBATION



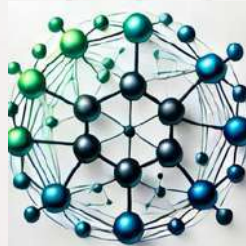
FLAMEBACK TECH

Founded by Samarth Vasdev and Stark Vasdev, Flameback specializes in advanced drone components, propulsion systems, and engineering services. The company delivers innovative hardware design and reliable solutions to meet the evolving demands of modern industries.



KARMA YANTRA

Founded by Abhilash Patel, Saikat Majumder, Sathyanarayanan Seshsayanan, and Soumya Ranjan Sahoo, Karma Yantra specializes in advanced unmanned and robotic systems, including UAVs, AUVs, AGVs, robot manipulators, and cutting-edge hardware/software. The company delivers high-performance solutions for diverse industrial and research applications.



PHEROMONE RESEARCH SOLUTIONS

Founded by Hurria Aijaz and Barkat Hussain Bhat, Pheromone Research Solutions specializes in eco-friendly, pheromone-based pest management technologies. The company applies powerful natural signals to effectively manage insect pests in horticulture, agriculture, and forestry, enhancing crop yield while promoting environmental sustainability.



JARBITS

Founded by Hurria Aijaz and Barkat Hussain Bhat, Pheromone Research Solutions offers eco-friendly alternatives to chemical pesticides, enhancing crop yield while promoting environmental sustainability.



23rd December 24



SIIC IIT Kanpur signed an MoU with IIM Nagpur to enhance the startup ecosystem through co-incubation support. This collaboration will provide startups incubated at SIIC, particularly those from Maharashtra and surrounding regions, access to incubation resources at IIM Nagpur. The partnership aims to bring valuable expertise and mentorship in business and management to foster the growth and success of these startups.



9th January 25



SIIC IIT Kanpur and PSIT Kanpur have signed an MoU to jointly incubate startups, providing access to shared resources and expertise. The collaboration, witnessed by key officials from both institutions, will also enhance mentorship through a combined network of industry experts, fostering growth and innovation in the startup ecosystem.

PROGRAM

HIGHLIGHTS



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On December 20, 2024, iDEX hosted a Gurukul Session as part of the INDUS-X educational series, focusing on global collaborations. The session featured Prof. Deepu Philip from SIIC IIT Kanpur, who discussed strategies to strengthen collaborations between academia in India and the USA. It highlighted the vital role of SIIC in bridging innovation ecosystems for defense and allied sectors, reinforcing their shared vision with iDEX to nurture defense startups and foster innovation-driven partnerships for national and global security.

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On December 24, 2024, SIIC, IIT Kanpur, hosted 100 students from Royal Dream Inter College, Bithoor for an engaging session on innovation and entrepreneurship. Mr. Vikash Prakash and Mr. Charles Avinash from SIIC shared insights into the startup ecosystem, innovation mindsets, and the journey of turning ideas into impactful solutions. Highlights included live demonstrations of student-led projects, a Q&A session with startup founders, and an interactive workshop on the innovation mindset.

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SIIC, IIT Kanpur, in partnership with StartinUP, hosted the 'AI Launchpad for Startups' workshop on December 27, 2024. Led by Dr. Sarvesh Sonkar, the session offered key insights on leveraging AI/ML for a competitive edge and successful implementation strategies. The event also introduced opportunities under AIIDE-CoE Cohort-4, providing startups with incubation, mentorship, funding, and a collaborative ecosystem to drive AI innovation. This impactful session reinforced SIIC's and StartinUP's commitment to advancing the AI startup landscape.

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On January 3, 2025, SIIC, IIT Kanpur hosted an insightful session with Mr. Nitin Deshmukh Founding Partner & Adviser at Kotak Equity Asset Group. Mr. Deshmukh shared his expertise in biotech, pharmaceuticals, and investment strategies, offering invaluable insights to biotech and medtech startups. The session provided a unique opportunity for startups to learn from one of India's leading experts in the field.

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PROGRAM

HIGHLIGHTS



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SIIC IIT Kanpur hosted 30 women entrepreneurs from FICCI FLO, led by Chairperson Ms. Nalini Sanwal and Mentor-Coordinator Dr. Shefali Raj. The group explored IIT Kanpur's startup ecosystem, engaging with founders from Just Data Analytics, DREAM AEROSPACE, Medantrik®, and Jetson Robotics. The visit included a tour of the Drone Center and a session on India's startup ecosystem by SIIC COO Mr. Piyush Mishra. Ms. Sudha Selvaraj also shared inspiring success stories of women entrepreneurs supported by SIIC.

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In celebration of National Startup Day 2025, SIIC IIT Kanpur hosted a webinar titled "Strategies to Split Equity Amongst Startup Founders," featuring renowned entrepreneur Dr. Avijit Bansal, Co-Founder of Windmill Health Technologies. Dr. Bansal shared valuable insights on effective equity distribution strategies and avoiding common pitfalls, which are crucial for startup success. With support from BIRAC, SIIC IIT Kanpur remains dedicated to fostering innovation and entrepreneurship, empowering healthtech startups to turn groundbreaking ideas into impactful solutions.

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Abhivyakti 2025, the flagship event of the Startup Incubation and Innovation Centre (SIIC) at IIT Kanpur, was held from January 17-19, 2025, celebrating fostering innovation and entrepreneurship. Themed "Unleashing Emerging Innovations," the event showcased over 100 startups and featured a vibrant lineup of panel discussions, leadership talks, product launches, engaging competitions, and the inauguration of new startup cohorts in CoEs of drones, MedTech, and AI. Abhivyakti 2025 concluded on a high note, inspiring the community to embrace collaboration and drive transformative innovations for the future.

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SIIC, in partnership with the Ministry of Housing and Urban Affairs (MoHUA), has welcomed 38 startups into Cohort 2 of the Startup Gateway for Garbage-Free Cities. Focused on urban waste management, the initiative supports innovative solutions like advanced recycling, smart waste collection, and waste-to-energy technologies. With SIIC and MoHUA's backing, these startups will access resources and mentorship to scale their innovations and drive lasting environmental impact.



Abhivyakti 2025 hosted a panel discussion titled "Roadmap to Making India a Tech-Powerhouse in Emerging Technologies," featuring experts like Prof. Ajit Kumar Chaturvedi, Prof. Ankush Sharma, Mr. Anuj Mohan Sherry, Mr. Rajesh Kumar Pathak, and Mr. Tejas Goenka, moderated by Prof. Sharma. The discussion highlighted India's potential in technologies such as 5G, 6G, fintech, and advanced manufacturing, stressing the need for collaboration between academia and industry, startup support, and localizing global solutions. The event concluded with an inspiring Q&A session.





OPENSPECTRUM AI

has successfully launched its cutting-edge smart farming solution, AgroTrace, in Palla Village, Delhi. This advanced device effectively monitors crucial soil health parameters, including water potential and temperature, while accurately estimating both water and nutrient requirements. During a site visit, SIIC officials observed significant improvements in crop yields for tomatoes, cucumbers, zucchinis, and bottle gourds following its implementation. This initiative signifies a major advancement in the realm of Indian agriculture.

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LCB FERTILIZERS

inaugurated an Organic Fertilizer Production Unit in Batiya Garh, Damoh, Madhya Pradesh, coinciding with the 100th birth anniversary of Shri Atal Bihari Vajpayee. The initiative, in collaboration with Express-E-Connect Pvt. Ltd. and Akhil Bhartiya Panchayat Parishad, received support from the Madhya Pradesh Government. Shri Prahlad Singh Patel, Minister of Rural Development, emphasized the project's focus on sustainable agriculture and rural development. LCB also signed an MoU with Farmers' Producer Organizations (FPOs) under the Uttar Pradesh State Livelihood Mission. The event was attended by Honorable Deputy Chief Minister Shri Keshav Prasad Maurya, and facilitated by the Transforming Rural India Foundation (TRIF), promoting the production of Navyakosh.

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TIDE 2.0 SCALE-UP INVESTMENT GRANT AWARDEES

have been announced as Simactricals Private Limited, Treacle Technologies Private Limited, and Industill FarmTech Pvt. Ltd. These startups have been recognized for their innovative use of emerging technologies to address societal challenges. The selection process involved a thorough evaluation of proposals based on product innovation, scalability, and team dynamics, followed by a pitching session before an expert committee.

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IIT KANPUR'S BFI-BIOME COHORT

in collaboration with Blockchain for Impact, announced its inaugural awardees recognizing significant advancements in medical technologies. Awarded fellows include Ashwani Yadav for SMART AI Glasses for the visually impaired and Subhadeep Mitra for a microfluidic biosensor for early oral cancer detection. The Kickstarter Initiative also honored Pratik Raghuvanshi of Ksham Innovation for Able Glasses for the hearing and speech impaired, and Tanmaya Gulati of RNT Health Insights for an AI system for gastric cancer lesion detection during endoscopy.

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SIMACTRICALS

successfully completed the PoC handover of their Wireless EV Charger to Toyota Tsusho India Pvt. Ltd., Gurgaon. This achievement marks a significant step toward advancing smart and sustainable EV charging solutions.

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AIRTH

a climate tech startup supported by SIIC, IIT Kanpur, impressed investors Aman Gupta and Vinita Singh on Shark Tank India, successfully securing funding for their innovative air conditioner filters. These filters transform standard air conditioners into highly effective air purifiers, capable of removing up to 99% of airborne pollutants and significantly improving indoor air quality. SIIC takes pride in supporting AIRTH's development of this groundbreaking technology, which exemplifies its commitment to fostering impactful solutions to real-world problems.

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unveiled a Phase-Change Material (PCM)-based thermal management system at Abhivyakti'25. Developed by Prof. Sri Sivakumar, the system ensures energy-efficient, sustainable cooling with higher thermal conductivity and storage density, ideal for ice cream storage, food preservation, and cold chain logistics. It maintains consistent temperatures (-20°C to -10°C) and overcomes environmental limitations.

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TECH VIEW

PIONEERS OF INNOVATION



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RAKESH BHARGAVA

In this edition of TechView: Pioneers of Innovation, we feature Mr. Rakesh Bhargava, a leader in pharmaceuticals, medical devices, and medical nutrition. As the former Chairman of Fresenius Kabi Oncology Limited, he has driven industry advancements and mentored numerous health-tech startups. Beyond business, his humanitarian work, including tsunami relief efforts, earned him recognition from the Rotary Foundation. In 2021, IIT Kanpur honored him with the Distinguished Alumnus Award for his contributions to industry and society. He is currently based out of Pune, where he serves as a mentor for different medtech startups. In this interview, he shares insights on leadership, innovation, and the future of healthcare.

Prof. Amitabha Bandyopadhyay (AB): How do you compare the growth of the automobile industry over the last 25 years and the future of the medical device industry in the next decade?

Rakesh Bhargava (RB): That's a great question, Dr. Bandyopadhyay. The evolution of the automobile industry parallels the current trends in medtech. Cars have transitioned from purely mechanical to advanced smart machines with electronics, just as medical devices have evolved from basic mechanical models to sophisticated devices with precise control, such as robotics. Sustainability is another shared focus; the auto industry has shifted from traditional combustion engines to hybrids and electric vehicles, while medtech is moving towards energy-efficient solutions. And if we look at how the Indian automobile industry grew—from relying on imports to building a strong indigenous manufacturing base—I believe we are on a similar path with medtech, where innovation and local production will drive the industry forward.

AB: How do you think the medtech ecosystem will evolve?

RB: A strong medtech ecosystem relies on several key elements: skilled design engineers, affordable capital, a reliable supply chain for components, and robust testing facilities. The design process can be conducted locally or use imported technology; in both scenarios, access to quality components and testing infrastructure is essential. Testing plays a vital role at multiple levels, including validating individual components, ensuring mechanical, electrical, and regulatory compliance, and ultimately guaranteeing safety. Like the automobile industry, medtech is a highly regulated sector with strict safety and environmental standards. These regulations are in place to ensure patient safety and proper management of medical waste.

AB: Please share your thoughts on how startups like Noccara Robotics and Intignus, which you've mentored, have navigated regulatory challenges and succeeded in this ecosystem.

RB: Noccara Robotics is close to my heart, as it's founded by two IIT Kanpur graduates and incubated here at SIIC, with a strong bond due to my IITK background. Initially focused on cleaning solar panels, the company pivoted to ventilators during the pandemic when India faced a shortage. The challenges were immense—imagine sourcing components during a complete lockdown. Sourcing components during the lockdown was a huge challenge, but with the help of resourceful people and our alumni, Rakesh Gangwal, who arranged air shipments through Indigo Airlines, they were able to get the parts from across the world. We had daily meetings for three months to overcome design and logistics challenges, and Noccara successfully delivered a ventilator that met government specifications.

AB: How do you see the launch of the MedTech Mitra program by ICMR, impacting the speed and development of medical devices in India?

RB: The launch of the MedTech Mitra program by ICMR is a huge step for the Indian medtech ecosystem. It's bringing together all the key players—regulators, hospitals, engineers, and startups—on one platform. This means that as medical devices are developed, there's easier access to things like funding, safety standards, and technical expertise. Plus, with the CDSU's single-window clearance system in place, approvals and the entire process of getting products to market should move a lot faster. All in all, I see this making the development of medical devices much smoother and more efficient.

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UPCOMING

GRANTS/EVENTS/WORKSHOPS



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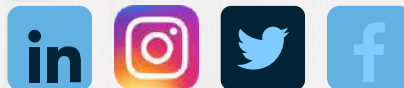


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www.siicincubator.com

SIDBI Building, Sixth Avenue
IIT Kanpur Kalyanpur, Kanpur Uttar
Pradesh 208016



Innovation Hub, IIT Kanpur Outreach
Center, Block C, Sector 62,
Noida