



STARTUP
INCUBATION AND
INNOVATION
CENTRE
IIT KANPUR

VOLUME 3

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JANUARY 2024

TECH की बात

Indian Defence: Emerging Frontiers



MENTOR

Mantra



MR. TARUN BHARGAVA

Strategy, Planning, Financing, Governance,
Risk, Cash Flow Management.

MANAGEMENT DISCUSSIONS AND DUE DILIGENCES

SUCCESS IS A JOURNEY, NOT A DESTINATION.

The journey of raising funds starts with preparing an investor pitch to capture the interest of potential investors, leading to subsequent "management discussions."

During these discussions, investors delve deeper into the details presented in the pitch and seek to understand the founders' journey, motivations, commitment, passion, and skills. They aim to gain clarity on the addressed problem, technology employed, market size, customer adoption, go-to-market strategy, and the startup's revenue and profitability prospects.

Once investors are confident in the startup, the next step is a due diligence process. Since this involves significant time, effort, and cost, management discussions serve as a necessary precursor to the due diligence exercise. The specifics of the due diligence may vary based on the startup's stage, investment size, and the investor's preferences.

- ✓ Background checks of Founders are essential for assessing integrity and verifying key claims about their achievements.
- ✓ Technical Diligence, a constant requirement for startups, focuses on comprehensively understanding the product, technology, and future prospects.
- ✓ Legal and Compliances Diligence involves reviewing contracts, agreements, IPs, and regulations.
- ✓ Finance and Tax Diligence include books of accounts, planning, budgeting, and assessments of direct and indirect taxes. ESG assessment is particularly relevant for startups in energy transition and sustainability.
- ✓ Business Plan and Funds requirement involve a thorough examination of the financial model, including investment outlays, profitability, and cash flows to determine funds needed and valuation.

Investors can perform the diligence exercise internally or delegate it to experts. The results obtained during due diligence aid the investor in comprehending potential risks, formulating covenants in the Shareholder Agreement (SHA), and influencing the valuation. Key criteria include maintaining consistency, honesty, and transparency in disclosures, responding in writing for effective communication, and ensuring understanding. All statements made from the outset will be considered 'Representations' under the Share Subscription Agreement (SSA) and Shareholder Agreement (SHA), carrying legal and business implications for the future.

Contents



New Incubation

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

Refer to the section for more details.

Page No:

01



Monthly Timeline

Take a deeper look into the exhilarating developments within the thriving SIIC-IIT Kanpur ecosystem throughout the month.

Refer to the section for more details.

Page No:

02



Program Highlights

Learn about some outstanding accomplishments in the various program verticals that are currently up and running at SIIC, IIT Kanpur.

Refer to the section for more details.

Page No:

03-04



Success Stories

Know more about the inspiring startups that have elevated our incubation ecosystem with their remarkable accomplishments on a national scale.

Refer to the section for more details.

Page No:

05-06



From the IPR and Tech-Transfer Cell

This section provides insight into the key happenings within the IPR domain and Tech-Transfer Cell, which can enhance the understanding of the technology licensing process at SIIC, IIT Kanpur.

Refer to the section for more details.

Page No:

07



Innovators se Baat

Discover the unique and advanced technologies that are currently being incubated at SIIC, IIT Kanpur. Refer to this section to learn more.

Refer to the section for more details.

Page No:

08



Upcoming Events/ Workshops/Grants

Explore the upcoming events, workshops, and grants at SIIC.

Refer to the section for more details.

Page No:

09



Mechatronics, established by Yogesh Walimbe, specializes in developing microprocessor-based motion control and power drive products. These products are specifically crafted for cost-effective automation in precision positioning applications, with a focus on machine tools. They are designed to facilitate the automation and retrofitting of high-precision grinding machines and other related equipment.



Ardhan Research Labs Pvt. Ltd. is a full-stack design & development company focused on building Asia's first autonomous hypersonic, modular unmanned aircraft in Bharat. Founded by Vaibhav Bhatnagar, their goal is to create truly innovative AI-driven solutions for armed forces, homeland security, paramilitary and private enterprises.



Ensoverse Pvt. Ltd. works on sustainable, protective, and defence apparel domains. The founders, Ajay Sangwan, and Vasundhara Sharma are currently working on an indigenous, cost-efficient, lightweight, and eco-friendly fire proximity suit (NFPA 1971), made from biomass and microbes.



Brela Innovations Pvt. Ltd., founded by Shreya M. Nair, and Mohd. Zahid Khan, has developed a smart bra pad for breast health monitoring which can turn any bra into a personalised breast health monitoring tool. It is efficient in monitoring post-lumpectomy patients and patients with undiagnosed small lumps.



E-Karigari Systems Pvt. Ltd. (Krishi Mandi), founded by Varun Tiwari, is developing an image processing platform to predict crop production and evaluate the quality of post-harvest crops like potatoes and mushrooms. The platform assigns a rating to the produce, establishes fair prices according to market trends, and ensures mutual benefits for farmers and consumers. Additionally, E-Karigari manages logistics and addresses customer requirements.



Genomiki Solutions Pvt. Ltd., founded by Dr. Deeksha Bhartiya, employs an AI-powered platform with a genome-informatics algorithm to analyse raw genome testing data. The platform generates personalised reports and uses custom-built analysis modules to identify causal variants precisely. It provides accurate insights for cancer diagnosis and treatment decisions, offering therapy recommendations.

MONTHLY Timeline



29th Nov 23



SIIC, IIT Kanpur, and AIMED collaborated to enhance medical device research and development, addressing the nation's healthcare needs. Amitabha Bandyopadhyay, Co-Professor In Charge, SIIC, IIT Kanpur, Ms. Shreya Malik, Domain Head of Biotech/Medtech Vertical, SIIC, IIT Kanpur, and Mr. Rajiv Nath, Managing Director of HMD Healthcare and Forum Coordinator for AIMED were present during the collaboration.

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4th Dec 23



Samak Technologies and ICAR-IIMR signed an MoU to enhance food security and farm productivity for dairy farmers. The ICAR Director attended the event, and the collaboration seeks to bring transformative advancements to agriculture, benefiting dairy farmers by integrating technology and expertise.



11th Dec 23



IIT Kanpur, IIT Madras, and SAMEER licensed 5G RAN to Tejas Networks, a Tata Group Company. Prof. V. Kamakoti, IITM Director, Dr. P. Hanumantha Rao, SAMEER DG, Prof Rohit Budhiraja, IITK, and others collaborated on the project. Supported by the Department of Telecommunications, Government of India, the multi-institutional 5G testbed aims to boost India's innovation in telecommunications, fostering growth opportunities.



8th Jan 24



SIIC and LAVA Mobiles signed an MoU at IIT Kanpur's Noida Campus in the presence of Dr. Rishi Mohan Bhatnagar, President of LAVA Mobiles, and Prof. Ankush Sharma, the Person-in-Charge (PIC) at SIIC, IIT Kanpur. This collaboration, focused on developing indigenous 5G mobile technology in India, will offer valuable opportunities for startups and innovators to bring their ideas to market. Dr. Bhatnagar expressed interest in partnering with the 5G lab to test his 5G device for the creation of India's most secure 5G phone.



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Program

HIGHLIGHTS



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On 29th November 2023, Amitabha Bandyopadhyay, Co-Professor in Charge, SIIC, IIT Kanpur, met with Dr. Jitendra Kumar, Managing Director of BIRAC. The meeting aimed to assess the current collaborations between SIIC and **BIRAC**, explored additional partnership prospects, and coordinated efforts to address India's government-set national priorities.



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ASSOCHAM, with MSME support, organized a 2-day IPR training program, "**IP Yatra**," on December 5th and 6th, 2023, at Kanpur. The sessions involved discussions on patents, designs, copyrights, trademarks, and technology transfer. Mr. Ravi Pandey from IIT Kanpur's IPR Cell shared insights into Intellectual Property Rights.



SIIC, IIT Kanpur, participated in **GlobalBioIndia 2023** on December 12, 2023, organized by BIRAC and the Department of Biotechnology, Government of India. The event featured SIIC showcasing innovative startups and success stories to dignitaries. Additionally, SPARSH fellows from SIIC received Certificates of Appreciation for their achievements in completing the Maternal and Child Health Cohort 2 under the BIRAC SPARSH Program.



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A 5-day hands-on **training on the Internet of Things (IoT)** was organized from 27th December. This training was a joint initiative by IIT Kanpur and the Ministry of MSME. Participants immersed themselves in cutting-edge technologies and unlocked the potential of IoT.



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HIGHLIGHTS

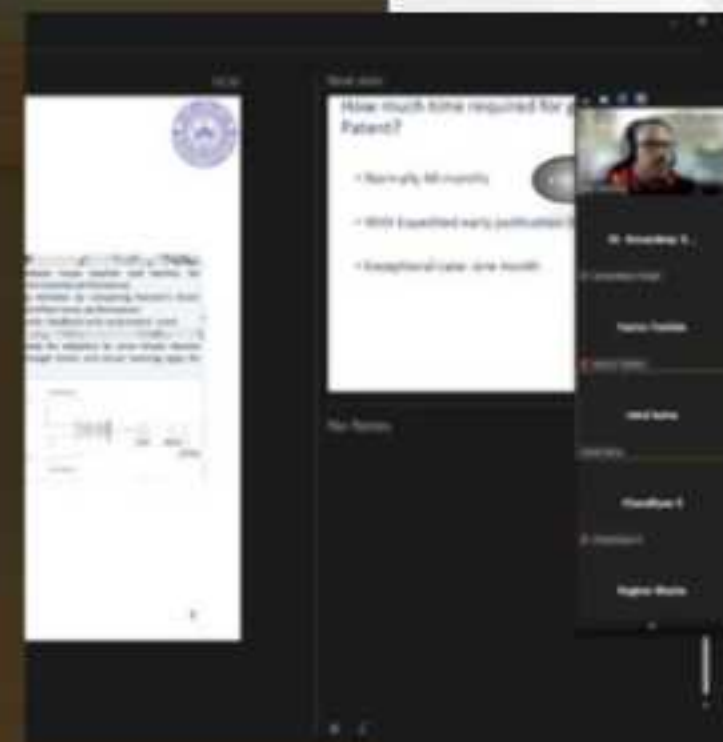


On 5th January 2024, the **Healthcare Innovation & Ideation Programme** hosted a talk show to foster entrepreneurial thinking among students. IIT Kanpur alumni Ajay Dubey and his wife Rooma Dubey endorsed the event. Presentations by IIT Kanpur students Ankush Yadav and Saksham Gupta, along with insights from Prof. Amitabha Bandyopadhyay, enriched the program.



The **SIB-SHInE** program's second cohort, launched on January 6, 2024, marked a new era of innovation in bio-design. Notable attendees included Mr. Durga Shankar Mishra, Chief Secretary of Uttar Pradesh, Prof. Soniya Nityanand, Vice Chancellor of KGMU Lucknow, Prof. Amitabha Bandyopadhyay, and Prof. Rishi Sethi. The spotlight shone on seven new fellows from IIT Kanpur and KGMU.

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As part of the **'MSME Talks'** initiative, SIDBI Bank and Imagineering Lab, IIT Kanpur conducted an online IP awareness workshop on January 12, 2024. Mr. Ravi Pandey, Research Establishment Officer at the IPR Cell, IIT Kanpur, emphasized the significance of Intellectual Property Rights (IPRs) for MSMEs, highlighting their role in product/service protection and licensing agreements.



TREACLE TECHNOLOGIES PVT. LTD.

won the prestigious AWS x Campus Fund Grand Challenge 2023. Specializing in defensive security, this startup ensures businesses stay secure amid the dynamic digital landscape.

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SAMAK TECHNOLOGIES

has secured the second position in the esteemed 4th Edition of the START-O-VATION National Startup Summit. This event, conducted by the Indian Chamber of Commerce in partnership with Invest India, provided a platform to highlight and commend innovative startups throughout the country.



AETHRONE AEROSPACE

has been granted a patent for their dual-purpose autonomous aerial vehicle which can be used for both defence surveillance as well as precision agriculture. This startup, equipped with technology applicable to both civilian and military sectors, aims to offer innovative aerial solutions across various industries.

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AGRONXT

CEO, Rajat Vardhan, recently appeared on 'Vichar Vimarsh,' a DD KISAN program. The episode, centred on 'Millets: Climate Resilient Crops for Small Farmers,' highlighted the transformative role of agricultural technology and stressed the significance of climate-smart solutions for sustainable farming.



UNEAKO

a participant in the 'Startup Gateway for Garbage Free Cities' (SGGFC), has earned recognition as one of the top 8 single-use plastic alternatives. This contribution aligns with the plastic-free initiative at Ram Mandir, Ayodhya, inaugurated by Chief Minister Shri. Yogi Adityanath. The acknowledgment comes from the Directorate of Environment, Ayodhya Nagar Nigam, and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

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ANGIRUS

an SIIC, IIT Kanpur startup from the 'Startup Gateway for Garbage Free Cities' (SGGFC) program, secured a patent for its technology, 'A rotary dryer system for drying raw material for making bricks.' Specializing in the green sector, Angirus provides sustainable solutions, creating lightweight, damp-proof, and durable bricks and paver blocks from a combination of plastic and other wastes.



LIFE AND LIMB

has secured approval from the Central Drugs Standard Control Organization (CDSCO), affirming adherence to regulatory standards for clinical investigation. This milestone underscores the product's dedication to meeting rigorous safety and efficacy criteria. The startup has also been recognized in the Top 5 of the Lexus Design Award India 2024 for its innovative and impactful design elements.

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IIT Kanpur filed an astounding 122 **Intellectual Property Rights** (IPRs) with an impressive licensing rate of approximately 14%. This achievement is particularly noteworthy as it continues a three-year trend of securing the highest number of IPRs in the institution's history. The total count now stands at 1039 IPRs.

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Professors Siddhartha Panda and Braj Bhushan from IIT Kanpur's National Centre for Flexible Electronics received the AssisTech Foundation (ATF) Awards 2023 for their contributions to assistive technology during the Bengaluru Tech Summit (BTS) on December 1, 2023. Prof. Panda is from the Chemical Engineering department, while Prof. Bhushan is from Humanities & Social Sciences.

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INTELLECTUAL
PROPERTY



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INNOVATOR KE SATH



Innovators

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SE BAAT

AETHRONE AEROSPACE

Aethrone Aerospace is a Pune-based start-up incubated at IIT Kanpur and supported under the iDEX scheme. The journey started in June 2015, when two co-founders, Prakhar Nandi & Farzin Behram Irani collaborated to establish the company. They started with the design and development work, to make India self-reliant in the defence sector, with a focus on drones and aerospace-based technologies. The conversation with Mr. Suyash Soni, head of sales and SIIC FIRST provided us with the details of their work.

SIIC: How has your journey been since 2015?

SS: In 2015, we began bridging the gap between end-users and manufacturers. From 2017 to 2019, we collaborated on projects with IITs, ISRO, and DRDO, addressing concerns of incursions in Kashmir. In 2020, we secured iDEX projects for search and rescue drones with the Indian Navy and paraglider development with Gliders India Limited. Testing challenges for paragliders led us to travel, but our journey was successful despite obstacles.

SIIC: Please elaborate on Aethrone Aerospace's current sector involvement in technology.

SS: We are currently engaged in designing and developing advanced technologies for the aerospace and defence sectors. Our focus is on creating propellers, rotor blades, and complete structural designs for drones. In addition, we are also working on niche technologies such as launcher systems for drones and parachute-based recovery systems. These systems are crucial components that serve as fail-safe mechanisms in case of any failure during drone flights.

SIIC: How do you see Aethrone Aerospace in the next five years?

SS: In the coming five years, we have planned new events. The ongoing iDEX projects, along with collaborations with Gliders India Limited (GIL), the Indian Navy, and HAL, are slated to conclude this year, enhancing our product segment. Our primary focus for the next five years is client expansion on both national and international fronts. International partnerships will support the costs of developing new products, aiming to increase our sales rates to twenty times higher than current levels.

SIIC: What help did you receive from SIIC?

SS: SIIC incubation boosted our global presence and fostered strong ties with National Defence agencies. Since 2020, it provided access to on-site labs for technology testing. We regularly communicated our innovations, presenting detailed insights through videos or PowerPoint presentations for clarity.

SIIC: How do you manage funds for the smooth functioning of your startup?

SS: As a self-funded startup, we prioritize generating revenue independently. For the iDEX project, we received government funds in milestone-based increments. Focusing on profitability, we expanded our client base, nurtured existing relationships, and secured a patent for our versatile autonomous aerial vehicle, designed for both defence surveillance and precision agriculture.

“A strong foundation is crucial to a company's growth, aligning with our national goal of Atmanirbhar Bharat.”

.....Suyash Soni



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Volume - 03 | Edition - 01 | January 2024

UPCOMING

GRANTS/EVENTS/WORKSHOPS

The poster for 'Abhivyakti' 24 is set against a dark blue background with a faint image of the IIT Kanpur building. At the top left, it features the IIT Kanpur and Incubation and Innovation logos. The text reads: 'India's Largest Startup Festival', 'ABHIVYAKTI' 24', 'IIT KANPUR'. A large, stylized 'A' is filled with various startup-related icons. Below it, the word 'abhivyakti' is written in a lowercase, modern font, followed by 'INNOVATING A SUSTAINABLE FUTURE'. A yellow banner at the bottom of the poster states 'STARTUP SHOWCASE 15-16 MARCH 2024'. At the very bottom, there are icons for a calendar (14-17 MARCH), a location pin (IIT KANPUR), and a QR code labeled 'SCAN TO REGISTER'.

Abhivyakti' 24

14-17 March



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NIDHI BY DST



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