TECHकी बात

Nurturing nationally acclaimed next-gen startups of disruptive innovation

India is now home to around 60,000 startups across multiple sectors. Its startup ecosystem is the 3rd largest in the world after the US & China. In 2021 there were 42 new unicorns (market valuation of greater than 1 billion USD) to bring India's tally to 83 within 5 years. The year 2021 also saw a steep rise in startup funding with 42 billion dollars raised across multiple stages of the startup's journey. This includes a host of IPOs from Zomato, PayTM, Nykaa, PolicyBazaar etc. This created enormous business for all the eco-system participants including the employees. At PolicyBazaar there were reportedly over 100 millionaire USD employees post IPO!

There are a number of players in the Startup Ecosystem – incubators, accelerators, angel investors, venture capitalists (VCs), private equity players & strategic investors. If we consider this a game of passing the parcel, then the startup moves from one set of investors to another. The startup receives growth capital and mentorship at each stage and the investors get returns on their risk capital from subsequent stage investors.

Incubators are typical entities that are housed in academic institutions like the IITs, IIMs, NIITs, Pvt Universities etc. They provide startups with grants, debt, equity etc. under various Govt. and privately sponsored schemes. Funding and mentorship help startups to validate their product to fit into the market. Accelerators are typically shorter duration incubators (3 months) sponsored by Corporates like Google, Microsoft, Shell, CISCO etc. where these Corporates get to select and work with a cohort of startups with strategic interest for them. As part of CSR (Corporate Social Responsibility), several Corporates run sponsored accelerator programs to foster social entrepreneurship that creates impact at the bottom of the pyramid.

Effective incubation ensures that startups survive and thrive once they exit the incubator.

Angel Investors are HNI's or High Net worth Individuals who invest individually or through angel networks like Indian Angel Network, Keiretsu Forum, Lead Angels, IPV, Let's Venture etc. The Angel network screens applicants and presents them to members in the monthly meetings. Angels write their own cheques whereas VCs invest on behalf of their individual and institutional investors. As the startup moves from one stage to the next, the size of the investment ticket increases. In fundraising parlance, these are referred to as Series A, B, C, D rounds. Both Angels and VCs participate in multiple rounds – but the former typically exits at Series B. These days there are lot of collaboration of Angel networks for co-investment. Equally VCs collaborate among themselves to co-invest as the lead or as the follower.

Eventually all startups aspire to be an IPO or to get acquired by a Strategic Investor. Corporate India is fully grown today and is ready to acquire startups that have a good strategic fit.

Corporate executives, professionals, family businesses and entrepreneurs are embracing angel investing as an asset. They are also participating in AIFs (Alternate Investment Funds) launched by VCs.

Chand Das
BT/ME/77 IIT Kanpur
Angel Investor – Keiretsu Forum
StartUp Mentor – IITK, IIMB, Villgro incubators

CONTENT

1

2

SNAPSHOT MAY 2022

Three new startups joined the incubation ecosystem at IIT Kanpur. The application reviews and knowledge webinars achieved some impressive statistics too. Head to the section to find out!

SUCCESS STORIES

The innovators at SIIC IIT Kanpur are the driving force behind the innovative entrepreneurial ventures that strengthen our incubation ecosystem. The incubated startups have set newer benchmarks on the nationally recognized platforms. Read on to know more!

CONTENT

Volume- 01 | Edition - 05 | May 2022

SNAPSHOT
MAY 2022

SIIC's startups aim to create impact at the bottom of the pyramid leveraged by their path-breaking innovations. IIT Kanpur's technology business incubator has become one of the top-notch startup incubators in India with a rich experience in nurturing multi-disciplinary startups across their journey in product development.

73
Applications Received

03
Startups incubated at SIIC

112+
Attendees reached through events

NEW INCUBATED STARTUPS

Arculus Labs Pvt Ltd
Founder - Mr. Shamsher Bahadur
Arculus Labs is a deep tech R&D Startup that is focused on exclusive Anti-Ransomware Tool development, analysis of Ransomware specific Malwares and Threat Intelligence.

Xpanso Technologies Pvt Ltd
Founder - Mr. Vaibhav Kamble
Xpanso Technologies' exclusive product Cloud Optimo provides OptimoSecurity and empowers companies to identify risks through security assessments and automated compliance monitoring.

Infinicue Solutions Pvt Ltd
Founder - Mr. Deepak Choodappanavar
Infinicue has built a smart wallet and an authentication platform - Salvus SeQUr. It is designed to prevent illegal access to personal data by cyber fraudsters. Users can configure various cards like debit, credit, AADHAR, PAN, SSN, healthcare cards, driving licence, etc. This solution also offers an option for card removal in real-time, monitors it to come back into the wallet within a threshold time, and regular alerts for cards on the paired mobile phone about the same.

SUCCESS STORIES

SIIC is currently running with a portfolio of 100+ incubated startups across programs and initiatives. The section highlights our innovative startups achieving newer benchmarks as they successfully take their innovations to global platforms.

Ms. Kajal Shrivastava, Co-founder Nadipulse receiving the award from Hon'ble Prime Minister Shri Narendra Modi, at the Global AYUSH Innovation and Investment Summit

Saptkrishi Scientific, Co-founder Mr. Nikky Jha, presented his innovative product Sabzikothi to Hon'ble Prime Minister, Shri Narendra Modi

SIIC's incubated startup Saptkrishi Scientific was among one of the 200 exhibitors at the Indian National Trust for Art and Cultural Heritage (INTACH) Expo organized in Palli Village, Jammu. Hon'ble Prime Minister Shri Narendra Modi visited the Expo which was conducted by the Ministry of Panchayati Raj. Out of the 200 stalls, Saptkrishi founder Mr. Nikky Kumar Jha also interacted with the Hon'ble Prime Minister Shri Narendra Modi at the Expo.

The Indian National Trust for Art and Cultural Heritage (INTACH) organized the exhibition in Palli Panchayat to commemorate the National Panchayat Day in the Samba district of Jammu on the 24th of April'22.

Nadipulse Prognostic has won the AYUSH Startup Challenge under the category of AYUSH IT Solutions.

NadiPulse Prognostics, one of SIIC's incubated startups, has won the AYUSH Startups Challenge in the sector of AYUSH IT Solutions for Ayurveda. The startup's co-founder Ms. Kajal Shrivastava was felicitated by the Hon'ble Prime Minister Shri Narendra Modi. She received the award at the Global AYUSH Innovation and Investment Summit, organized at Gandhinagar, Gujarat.

NadiPulse is an Ayurveda tech startup that is building diagnostic devices based on Ayurvedic concepts.

Cultech Wave was one of the exhibitors at the Indian Art Fair 2022.

Our incubated startup - Cultech Wave was one of the exhibitors at The Indian Art Fair organized recently in Delhi. The team presented their flagship product, the Cultre BOX, at the fair, which is India's first Archeological Excavation simulation kit. Their product has been built in close collaboration with historians, artisans, and archaeologists.

The co-founder, Ms. Anjchita B Nair, also interacted with Mr. Amitabh Kant, CEO NITI Aayog, at the Fair.

STARTUP INCUBATION AND INNOVATION CENTRE IIT KANPUR

AiRTH : Our Air Doctors

Founder- Ravi Kaushik

AiRTH is an IIT Bombay startup on the mission to save lives from airborne disease transmissions like Covid-19 and the harmful effects of air pollution that lead to heart and lung diseases. The startup has been founded by Mr Ravi Kaushik, with Mr. Abhimanyu Kumar – as the manufacturing head, and Mr Pushaan Singh – as the business development head. This most advanced air purification technology is developed at IIT Kanpur's Startup Incubation and Innovation Centre (SIIC), IIT Bombay, and IISc Bangalore. Airth's vision is to enable the healthiest and cleanest air in homes, businesses and frontline warriors and protect them from the dangers of unseen viruses and germs. They create healthy workplaces and ensure the healthiest and the cleanest air. AiRTH Air Doctors are here to keep you and your loved ones safe. We conducted an interview with the team and the conversation led us to understand their visionary technology.

The team members Abhimanyu and Pushaan both aimed to work for a cause and make an impact, which led them to join alongside Ravi with his visionary idea of building AiRTH. In fact, the team saved many lives during the Covid-19 pandemic with their technology. At first, the team faced a lot of challenges and even no one's family agreed upon leaving their respective jobs and joining a startup. However, their minds changed quickly when they saw the team's dedication which ultimately led them to raise funding along with the national media coverage i.e. NDTV, Aaj Tak, and DD News recognizing their impact and covering their work live on television.

Ravi Kaushik had worked for years pursuing research on aerosol science which led him to identify a dangerous problem in the current air purification technologies. He states that there are innumerable viruses and germs in the air which can infect us to cause deadly diseases. Any other air purifier in the market, which claims to remove these germs from air, works on only capturing them and becoming a breeding ground for these germs, which is dangerous. These captured germs can be conveniently re-suspended in the air in case of pressure drop making the air purifier itself a source of disease transmission. He worked on the development of a solution to this dangerous problem along with aerosol scientists and experts to develop 'Anti-Microbial Air Purification' technology, which after capturing these germs also deactivates them.

The innovation "Anti-Microbial Air Purifier" has been a result of collaboration between **IIT Kanpur**, **IIT Bombay**, and **IISc Bangalore** making every other air purifier in the market obsolete. **IIT Bombay** has helped in conducting research with aerosols and studying its behavior with air. **IIT Kanpur** collaborated through the development of various microbial testing on the technology for the deactivation component. IIT Kanpur's **SIIC** has been a consistent support as the startup's incubator.

IISc Bangalore is currently helping AiRTH in the material science domain. The department at the institute has studied the coating of enzymes collected from plants and has successfully developed technology to ensure the physical properties of fibres remain unchanged. It has been achieved by the development of the special filters that use the immune power of thousand plants to destroy germs and purify the air. This product has gone through rigorous testing and validations from nationally accredited **CSIR** and **NABL** labs for virus deactivation and microbial reduction.

AiRTH is protecting the most immunocompromised cancer patients at Balco Cancer Hospital who have undergone bone marrow transplants with zero immunity susceptible to the dangers of a common cold. AiRTH's Anti-Microbial Air purifier is being used for these cancer patients, to enable a near-sterile environment that has even led to many successful discharges.

During the COVID-19 pandemic, Black Fungus created a havoc and induced fear among people. Some of them even committed suicide. AiRTH rose to the occasion and took the initiative by deploying their technology at various hospitals after successfully testing at CSIR IMTECH to capture and deactivate Black Fungus with the proven 99.9% efficiency. We asked the team about their source of motivation to start such a startup and their answer was simple: It was to save lives.

AiRTH has completed one and a half years of many challenges and has set a benchmark to expand. They are already protecting some of the esteemed organizations in India like the Reserve Bank of India – primary functioning pillar of Indian Economy, ONGC, Stockholding Corporation which manages e-stamp for the entire country, Balco Hospital, DST, Rusan Pharma, and Schindler.

At present, there are twelve members at AiRTH working for a cause with a collective vision. The interview gave us an insight into their product and the benefits of using it.

INITIATIVES
AT SIIC

SIIC IIT Kanpur consistently channelises initiatives towards strengthening the country's entrepreneurial ecosystem to achieve the actual vision of an Atmanirbhar Bharat. Initiatives at the incubation centre cater to some of the critical technological and infrastructural gaps at a pan India level.

Gaurav Katiyar, Arpit Katiyar from Cycle Spirit with Portfolio Manager Animesh Mishra

Cycle Spirit, supported by the Green Gas Limited (GGL) CSR initiative, has developed 35 Semi-automatic battery-powered electric tricycles within 12 days.

Two young innovators - Gaurav Katiyar and Arpit Katiyar from Cycle Spirit, have developed 35 Semi-automatic battery-powered electric tricycles within 12 days. They received the funding support of Rs. **13.8 Lakhs** by Green Gas Limited (GGL).

The E- Tricycle is designed for the specially-abled people with the purpose of their day-to-day travel. It is equipped with removable batteries so the users can charge it at their convenience. It also has an inbuilt horn with light and disk brake support.

It is a remarkable achievement for both the young innovators. At such a tender age, the innovators delivered quality, assured products that were designed with perfection in a stipulated time period.

Semi-automatic battery-powered Electric Tricycle, developed by Cycle Spirit

NIDHI EiR supported the startup Proplant Foods which has won GFI's India Smart Protein Innovation Challenge, is among the top 3 Winners in the Innovation Channel at the global Future Food-Tech summit.

Proplant Foods was founded by young graduates from NIFTEM, Kundli, who are food technologists by profession, Soutrick Paick, Pranjuli Garg, and Debabrata Das. The team started its journey, following its win, at the India Smart Protein Innovation Challenge in December 2020. Proplant envisions its flagship product, ProMeat, as a leading catalyst towards leveraging a significant change in people's preference for better protein, i.e. from unsustainable to sustainable proteins. The startup has been receiving support under the NIDHI EiR fellowship since May 2021 and later started its incubation at SIIC IIT Kanpur in September 2021.

Ms. Swati Pandey, recipient of the BIG -15 at SIIC IIT Kanpur, received the NITI Aayog's Women Transforming India 2021 award.

Ms. Swati Pandey's startup Arboreal Stevia is working on a commercial process for manufacturing Enzymatically Modified Stevia (EMS) extractions. She has been honoured under NITI Aayog's flagship initiative - The Women Transforming India Awards, which aims to identify and honour women entrepreneurs who strive to bring transformative changes in the country.

Phool.co, which is backed by celebrity Alia Bhatt, has raised $8 Million in Series A funding

Phool.co, India's first biomaterial startup with a fragrance-centric wellness theme, has raised $8 million (Rs 60.5 crore) from Sixth Sense Ventures in a Series A round. The existing investors Alia Bhatt and IAN fund also participated in the round. Ankit Agarwal and Prateek Kumar found Phool.co, a technology startup for flower recycling, in 2017. Their startup is focused on the circular economy, which converts floral waste into Charcoal-free Luxury incense products and other wellness products.

EPIC Foundation has signed an MOU with IIT Kanpur for collaborative R&D on electronics of national importance

To revive the Indian electronics manufacturing industry, the EPIC Foundation has partnered with IIT Kanpur at the foundation's launch event on 13th April'22 at the Indian Habitat Centre, New Delhi.
Prof. Ankush Sharma, Co-PIC Innovation and Incubation, Dr. Nikhil Agarwal, CEO FIRST IIT Kanpur, were present at the event. The launch function received participation from some distinguished personalities like Dr. VK Saraswat, NITI Aayog, DG DRDO, along with the board members Mr Ajai Chowdary, founder EPIC Foundation, Arjun Malhotra, Co-chair EPIC foundation, Dr Satya Gupta, CEO EPIC Foundation, Prof Abhay Karandikar, Director IIT Kanpur, and Mr Nitin Kunkolienker, President MAIT.

IPR IIT Kanpur conducted an interactive session on 'Faculty Entrepreneurship Policy'

The IPR and Tech Transfer Cell at IIT Kanpur conducted an interactive session on 'Faculty Entrepreneurship Policy' (FEP) at IIT Kanpur's Campus to promote a holistic startup and innovation-driven ecosystem. Twenty-five faculty members attended the session. The FEP allows faculty members to conceive and register their technology startups while they pursue their academic duties on the campus.

SIIC organized a PAP meeting in IIT Kanpur's campus

Project Assessment Panel (PAP) Meeting was organized by SIIC which was led by MSME DI Kanpur and Industry veterans. The discussion was focused on uplifting the MSME landscape in Uttar Pradesh. The team also had a preliminary discussion about the newly launched MSME Innovative scheme by the Ministry of Micro, Small & Medium Entreprises. The panel also reviewed 26 applications under the Design component of the MSME Innovative Scheme.
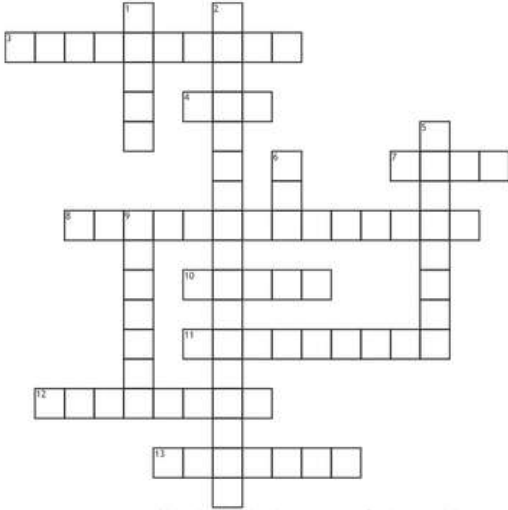
FUNTECH THEME - Cyber Security

For the below crossword, answers will be given in the next edition of the newsletter.

Apr 2022 CROSSWORD Answers

ACROSS
2. Peripheral 4. Cookie 7. ROM 9. Gateway 10. Chipset
12. Clockspeed 13. Integrity 14. Firewall 15. SMTP

DOWN
1.IP Address 2. Cryptography 5.Confidentiality 6. Availability 8. Motherboard
11. LAN

ACROSS

3.It is important to have antivirus installed on your computer and on your _____. (10)

4.This is commonly assigned to bank customers for use with ATMs and for use with debit cards. (3)

7.You should _____ a device before stepping away from it. (4)

8.Cyber security is a shared _____. (14)

10.A malicious code that can infect your system. (5)

11.A clean desk policy is important in order to protect _____ information from being revealed. (9)

12.You should never share your _____. (8)

13.You should _____ your administrator if an incident occurs. (7)

DOWN

1.The "s" in _____ stands for secure and indicated that communications with a webpage is encrypted. (5)

2.The use of deception to manipulate individuals into divulging confidential or personal information that may be used for fraudulent purposes. (17)

5.You should be careful when downloading _____ because it could be malicious. (8)

6. Any data that could potentially be used to identify a particular person. (3)

9. For a password to be secure, it should contain upper and lower case letters, numbers, and _____. (7)

QUICK FACTS
Cyber Security Incidents in India
Source : securityboulevard

- In May 2020, Edutech startup Unacademy suffered a data breach that resulted in the compromise of the accounts of 22 million Indian users. The email addresses, usernames and passwords of the compromised accounts were put up for sale on the dark web.

- In October 2020, the user data from the giant online grocery platform called BigBasket went up for sale in an online cyber crime market. The personal information of around 20 million Indian users was being sold for $40,000. The information on sale included names, email IDs, PINs, mobile numbers, password hashes, addresses, locations, dates of birth and IP addresses.

- In January 2021, COVID-19 lab test results of thousands of Indian patients were leaked online seemingly by government websites. The leaked data was made publicly accessible on Google. The sensitive information included patients' dates of birth, full names, centers in which the tests were held and testing dates.

- In February 2021, personally identifiable information (PII) of 500,000 Indian police personnel went up for sale on a database sharing forum. The data was traced back to a police exam conducted on 22 December 2019. The leaked information included full names, email IDs, mobile numbers, dates of birth, criminal history and FIR records of the exam candidates.

- India's second-largest stockbroker, Upstox, suffered a data breach in April 2021 that affected its 2.5 million customers. Over 56 million KYC data files were leaked including email IDs, date of birth, passports, PAN, etc. The infamous hacker group ShinyHunters gained access to the KYC details and contact data by compromising a third-party warehouse.

- In November 2020, the data of 1.4 million Indian job seekers was leaked online after a cyber attack on the job portal IIMjobs. The compromised data included their names, email addresses, phone numbers, the exact location of users, links to their LinkedIn profiles and their industry of work.

ECO-SYSTEM ENABLERS

CSR

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FUNDING & MONITORING

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KNOWLEDGE

futureskills prime A MeitY · NASSCOM Digital Skilling Initiative · DWIH New Delhi Land of Ideas

INDUSTRY

FICCI · AiMED Encouraging Responsible Manufacturing Association of Indian Medical Device Industry

SERVICE

freshworks

AI ENABLEMENT

PELTARION

CLINICAL

AIG HOSPITALS · Grant Medical Foundation Ruby Hall Clinic · NH Narayana Health Health for all. All for health.

CELEBRATING
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