

The ICFAI University, Tripura



**INSTITUTION'S
INNOVATION
COUNCIL**
(Ministry of Education Initiative)



**MoE's
INNOVATION CELL**
(GOVERNMENT OF INDIA)

THE ICFAI UNIVERSITY

*Institution's Innovation Council (IIC) 6.0
Annual Report 2023-24,
The ICFAI University, Tripura*



The ICFAI University, Tripura

Institution's Innovation Council (IIC) 6.0

Annual Report 2023-24

About the Institute of Chartered Financial Analysts of India University-Institute Innovation Council (IIC-ICFAI):

In 2018, the Ministry of Education (MOE) launched the Institution's Innovation Council (IIC) program in collaboration with AICTE, aimed at systematically fostering a culture of innovation and startup ecosystems in higher educational institutions (HEIs). The IIC at ICFAI University envisions creating a national-level innovation ecosystem. Its primary goal is to help students establish their startups before graduating, transforming them from job-seekers into employment generators. Students with innovative ideas have a valuable opportunity to seek guidance from their college e-cells.

IIC is also crucial in preparing institutions for the Atal Ranking of Institutions on Innovation Achievements (ARIIA) Framework. Its main objective is to involve a large number of faculty, students, and staff in innovation and entrepreneurship-related activities, such as intellectual property rights (IPR), problem-solving, and management at the pre-incubation/incubation stage. IIC emphasizes supporting students with pre-incubation ideas, encouraging and nurturing them to work on new concepts and transform them into prototypes during their formative years.

The IIC at ICFAI University is dedicated to motivating students and faculty to continually engage in innovation, incubation, startups, and the pursuit of sustainability goals.

VISION-ICFAI University Tripura: To be a premier institution of higher education that equips students to become responsible global citizens and leaders in their fields, fostering an innovative, interdisciplinary, and inclusive learning environment. We emphasize purposeful education, preparing students for meaningful and impactful careers.

VISION-IIC-ICFAI (IIC ID: IC201810223): To promote innovation, incubation, and entrepreneurial environment in the organization by offering students, faculty and alumni opportunities to renovate their business ideas to prototype into business.

MISSION:

- To foster a dynamic local ecosystem that incubates and supports innovative ideas.

- To create entrepreneurial opportunities for students, faculty, and the community.
- To nurture startups by offering essential support.
- To assist in the commercialization of innovative and sustainable ideas.
- To prepare the institution for the Atal Ranking of Institutions on Innovation Achievements (ARIIA) Framework.

The compositions of the IIC – ICFAI team are as follows:

Designations	Number
President & Convenor	2
Coordinators	4
Faculty members	4
Student members	11
External members	3
Total	24

Sr. No.	Name of Member	Member Type (Teaching/ Nonteaching /Student /External Expert)	Key Role /Position assigned in IIC
1	Dr. Priyangshu Rana Borthakur	Teaching	President
2	Dr. Tufan Singha Mahapatra	Teaching	Convener
3	Dr. Shantanu Acharya	Teaching	Member
4	Prof. Rajib Chowdhury	Teaching	Internship Activity Coordinator
5	Prof. Ashim Paul	Teaching	Member
6	Dr. Aditya Shankar Sengupta	Teaching	Member
7	Dr. Pritam Majumder	Teaching	Member
8	Dr. Debabrata Roy	Teaching	IPR Activity Coordinator
9	Dr. Pritam Bose	Teaching	Office, Member
10	Dr. Camelia Das	Teaching	Member
11	Dr. Bibhabasu De	Teaching	Member
12	Dr. Nilay Mandal	Teaching	Member
14	Dr. Subhadip Roy	Teaching	Member
15	Ms. Reshmi Rakshit	Teaching	Member
16	Mr. Bishal Saha	Non-Teaching	NIRF Coordinator, social media
17	Mr. Dipta Chakraborty	Non-Teaching	Startup Activity Coordinator, Innovation Activity

Activities Conducted:

Sl No.	Event Details	Nature of Activity	Date of Conduct
1.	Organize an Inter/Intra Institutional Innovation Competition/Challenge/Hackathon and Reward Best Innovations	IIC Calendar Activity	11th & 12th January, 2024
2.	National Youth Day Celebration	Celebrations	12th January, 2024
3.	Mentoring Event: Demo Day/Exhibition/Poster Presentation of Innovations/Prototypes & linkage with Innovation Ambassadors/Experts for Mentorship Support	IIC Calendar Activity	9th February, 2024
4.	Visit of Startup India Representatives to ICFAI University's Startup and Incubation Centre	Self-driven Activity	15th February, 2024
5.	ASCEND Startup Financial Literacy Bootcamp	Self-driven Activity	16th February, 2024
6.	A Cultural and Technological Extravaganza at ICFAI University, Tripura	Self-driven Activity	23rd & 24th February, 2024
7.	National Science Day Celebration	Celebrations	28th February, 2024
8.	Peer-Learning Workshop: "Building Innovation & Startup Ecosystem for North-East"	Self-driven Activity	29th February & 1st March, 2024
9.	Session on "How to plan for Start-up and legal & Ethical Steps"	IIC Calendar Activity	26 March, 2024
10.	Session/ Workshop on Business Model Canvas (BMC)	IIC Calendar Activity	2nd April, 2024
11.	One-Day Online Workshop on Fundamentals of Vacuum Science and Technology: Process Design and Developments	Self-driven Activity	5th April, 2024
12.	One Day Workshop on IPR Regime	Self-driven Activity	25th April, 2024
13.	Workshop on Intellectual Property Rights (IPRs) and IP management for start-up	IIC Calendar Activity	24th May, 2024

14.	World Environment Day Celebration	Celebrations	5th June, 2024
15.	Workshop on Career Opportunities and Industrial Applications in Electrical Engineering.	Self-driven Activity	27th June, 2024
16.	Organising Innovation & Entrepreneurship Outreach Program in Schools/Community	IIC Calendar Activity	22nd July, 2024
17.	Technology Transfer Meet at TIT	Self-driven Activity	23rd July, 2024
18.	Demo Day/Exhibition/Poster Presentation of Business Plans & linkage with Innovation Ambassadors/Experts for Mentorship Support	IIC Calendar Activity	1st & 2nd August, 2024
19.	Organise Session on "Lean Start-up & Minimum Viable Product/Business"- Boot Camp (or) Mentoring Session	IIC Calendar Activity	12th August, 2024
20.	Demo Day/Exhibition/Poster Presentation of Start-Ups & Linkage with Innovation Ambassadors/Experts for Mentorship Support	IIC Calendar Activity	12th August, 2024
21.	Independence Day- Celebrating Aazadi Ka Amritkal	Celebrations	15th August, 2024

Important Events at The ICFAI University, Tripura, 2023-24:

(1) Hackathon and Reward Best Innovations Named 'IDEATHON'

Dated: 11th and 12th January 2024.

Venue: Ground Floor Auditorium, The ICFAI University, Tripura Campus.

Organised by: The Startup and Incubation Centre and Institution's Innovation Council (IIC), The ICFAI University, Tripura.

Brief: The "IDEATHON" event, held on January 11-12, 2024, at ICFAI University, Tripura, was a two-day internal hackathon focused on fostering innovation and creativity among students. Organized by the Startup and Incubation Centre and the Institute of Innovation Council, the event featured workshops, discussions, and a competitive hackathon where students presented innovative solutions. Distinguished guests, including Mr. Shymal Debbarma and Mr. Asish Biswas, delivered insightful sessions on hackathons, ideation techniques, and

entrepreneurship. The event concluded with an award ceremony recognizing the top projects, including "Tinder Based on Zodiac Sign" as the first prize winner. Participants gained valuable experience, collaborative skills, and a deeper understanding of the intersection between innovation and entrepreneurship. The event successfully inspired students to pursue excellence in both academic and entrepreneurial ventures.

(2) Peer-Learning Workshop: "Building Innovation & Startup Ecosystem for North-East"

Date: 29 February and 1st March 2024

Venue: Hotel Polo Towers, Agartala & IT Bhawan, Agartala

Organizers: Directorate of Information Technology, Government of Tripura, in collaboration with NITI Aayog.

Brief: The two-day Peer-Learning Workshop titled "Building Innovation & Startup Ecosystem for North-East," held on February 29 and March 1, 2024, in Agartala, was organized by the Directorate of Information Technology, Government of Tripura, in collaboration with NITI Aayog. The workshop brought together key dignitaries, government officials, and startup representatives to foster collaboration and strengthen the innovation ecosystem in the North-East. Key discussions centered on promoting entrepreneurship, addressing regional challenges, and building a supportive network for startups.

ICFAI University, Tripura, was represented by Mr. Dipta Chakraborty from its Startup and Incubation Centre, who actively engaged in discussions and shared insights on ICFAI's efforts to promote student entrepreneurship. The event also included a farewell ceremony for outgoing IT Director Dr. Naresh Babu N, commending his contributions to Tripura's IT and innovation development. The workshop was a valuable platform for knowledge-sharing and collaboration, advancing the region's startup ecosystem.

(3) Report on ASCEND Startup Financial Literacy Bootcamp

Date: 16th February, 2024.

Venue: Hotel Polo Towers, Agartala, Tripura.

Organised by: Directorate of Information Technology, Government of Tripura, in collaboration with DPIIT (Startup India)

Brief: The ASCEND Startup Financial Literacy Bootcamp, held on February 16, 2024, at Hotel Polo Towers, Agartala, was organized by the Directorate of Information Technology, Government of Tripura, in collaboration with DPIIT (Startup India). This event aimed to equip startups with essential financial knowledge and practical skills for their business growth. Distinguished dignitaries and industry experts provided valuable insights on financial literacy, startup management, and business scaling strategies.

ICFAI University, Tripura, actively participated through its Startup and Incubation Centre, with student entrepreneurs representing ventures like BOOKMART, ESTATE4U, and the Security Surveillance System. Mr. Dipta Chakraborty accompanied the students, who gained valuable knowledge to enhance their entrepreneurial journey. The bootcamp was a key initiative in strengthening Tripura's startup ecosystem and empowering local entrepreneurs to make informed financial decisions, fostering regional economic growth.

(4) A Cultural and Technological Extravaganza at ICFAI University, Tripura

Date: 23rd and 24th February, 2024

Venue: The ICFAI University, Tripura.

Brief: ICARIA 2024, a vibrant cultural and technological fest at ICFAI University, Tripura, was held on February 23-24, 2024. Organized with support from the Startup and Incubation Centre and the Innovation Council, the event featured a variety of competitions, including the popular Robo Fight and Drone Fight.

In the Robo Fight on February 23, ICFAI University faced a tough challenge, losing to Techno College of Engineering. However, the university redeemed itself in the Drone Fight on February 24, defeating Tripura Institute of Technology. The fest showcased both cultural creativity and technological innovation, with participation from external institutes adding to the competitive excitement.

ICARIA 2024 was a great success, providing students with an opportunity to display their skills, learn through competition, and embrace teamwork. The event highlighted ICFAI University's commitment to fostering both cultural and technological growth.

(5) Talk Session on Business Model Canvas (BMC) with “Susanta Shome, Founder and CEO of *SHOMISH*”

Dated: 2 April, 2024

Venue: Auditorium, The ICFAI University, Tripura Campus.

Organised by: The Startup and Incubation Centre and Institute of Innovation Council, The ICFAI University, Tripura.

Brief: On April 2, 2024, ICFAI University, Tripura, held a talk session on the Business Model Canvas (BMC) with Susanta Shome, CEO of SHOMISH, organized by the Startup and Incubation Centre. Susanta shared his entrepreneurial journey and encouraged students to pursue startups, highlighting how ideas can become businesses. The session saw active student

participation, sparking interest in the startup ecosystem. The event successfully motivated students to explore entrepreneurship as a career path, emphasizing its importance for regional and national growth.

(6) Talk Session with “Mr. Amit Ghosh, Founder and CEO of aAharan”

Dated: 9 February, 2024

Venue: ACCA302 no. Room, The ICFAI University, Tripura Campus.

Organised by: The Startup and Incubation Centre and Institute of Innovation Council, The ICFAI University, Tripura.

Brief: On February 9, 2024, ICFAI University, Tripura, hosted a talk session with Mr. Amit Ghosh, Founder and CEO of aAharan, organized by the Startup and Incubation Centre and the Institute of Innovation Council. The event aimed to motivate students to explore entrepreneurship and startups, highlighting the challenges and rewards of building a business. Amit Ghosh shared his journey, offering valuable insights on the startup ecosystem and how to turn ideas into successful ventures.

The session also featured a Q&A and one-on-one interactions where Mr. Ghosh provided personalized guidance to student entrepreneurs, encouraging them to pursue their startup dreams. The event ended with great student enthusiasm, sparking curiosity and interest in entrepreneurship as a viable career path.

Pictures & Screenshots of Important Events Organised:

"When you accept that failure is a good thing, it can actually be a huge propel toward success" Whitney Wolfe Herd

   **Meet the Executive Chairman and CEO of SHOMISH**

The ICFAI University SHOMISH

- Founded in 2021
- Got Top 10 best Virtual Tutor and Coaching Startups 2022 from Silicon India
- Startup India and Startup Tripura Registered Company
- Shomish has won the Octane 2.0 and Churnauti 2.0 competitions at the national level



Susanta Shome

11am on 2nd April at Ground Floor Auditorium

You don't build a business, you build people, then people build the business

 aAHARAN is a learning app for the students of TBSE

 Top 20 Startups at the NEEDP Startup Summit

 "Portrait" as a short inspirational film In Netflix

 Recognise as a best startup in Tripura of 2022 by Tripura Govt.

11:00 am at The ICFAI University, Tripura

Meet the Founder & CEO of aAHARAN



Amit Ghosh

The ICFAI University, Tripura

Startup & Incubation Centre and IIC Organizes a Mentoring Event

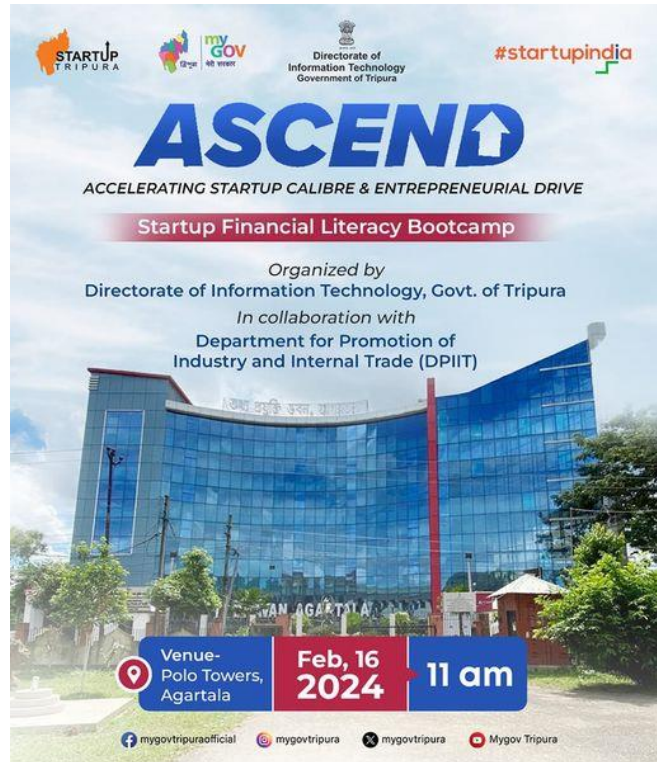
'Experts for the Mentorship Support'

by **The ICFAI University Student Entrepreneur** Chair

Date: 1st August 2024
2nd August, 2024



Dr. Priyanshu Borthakur
Dean, FST, IU Tripura







Achievements:

SI No.	Title	Total
1.	No. of Students and Faculty ideas generated	24
2.	No. of Students and Faculty Innovation/ Prototypes developed	63
3.	No. of IPs generated, Published and Granted	6
4.	No. of Student and Faculty Start-ups / Ventures established (Pipeline)	0 (5)
5.	Amount spent on promotion and awareness generation on innovation Entrepreneurship on the campus	Rs. 30000/-
6.	Amount grant or fund supported to student and Faculty lead Innovations, Start-ups and IPR	Rs. 454835/-

Start-up and Incubation Centre:

Subsidised by the Directorate of Information Technology, Govt of Tripura, the StartUp and Incubation Centre was established in 2022 at the University and is filled in as a centre for development. Solution-driven thinking supports the soul of advancement, which might prompt business improvement among the youthful ideas of business. The start-up and development focus means constructing a lively environment inside Tripura and across the northeastern provinces of India.

Under this Incubation Cell of the University is doing well. There many business ideas are nurtured under the incubation cell. We can assume that by seeing the execution level of the market's ongoing response to their StratUp. Many startups are incubating like:

Bookmart is an online platform where people can buy and sell their used and new books on a single platform. Where a university 3rd year Computer Science Engineering (CSE) student is running his startup, his market capture is escalating day by day, we can assume that by seeing his revenue of last year which was around 6 Lakh. He is targeting to close this year at 20 Lakh.

Estate4U is another platform for the people of Tripura's real estate needs. It is a platform that provides all types of services like Buy, Rent, Sell and also construction material and planning with other real estate services. That idea is also working in the ground level solution by the student of the university of B. Com 3rd year.

Pandas Choice is a platform where a group of 3rd year CSE students are working on developing a platform that is a one-stop solution for home decor and bamboo products. It is an online platform where craftsmen can list their products and sell them.

Security Surveillance System and **The Watcher** is a tech-based idea for startup development that is also working in the incubation cell. These are developing a system for smart security door system and A revolutionary watch for the blind equipped with object detection sensors, which emit a sound or vibration upon detecting objects nearby.

Two new ideas are going to be launched this year named **MyClassesTripura** and **ApniVidya** are the platform for the Edtech market for the Tutor solution for Agartala.

As we have mentioned that have organised ideation in the university, so that we abled to find out some of business ideas from our students of incubation. So we are trying to give them the exposure for the market or establish the business or startup and as we will provide the guidance to them regarding them some of are mentioning below.

Here's a brief write-up of the previous business ideas:

Sehat Sathi: A health assistant platform designed to provide access to affordable medical services, facilitating doctor consultations and healthcare guidance for rural and underserved communities.

HAEU Medilink: A medical communication platform that connects hospitals, clinics, and patients to streamline healthcare services, appointment scheduling, and patient record management.

Rasagaurava: A business concept focused on delivering natural, organic food products sourced directly from farmers, promoting healthy eating habits and supporting local agriculture.

Kinetic Pavement: An innovative pavement system that harnesses the kinetic energy of footsteps or vehicles to generate electricity, contributing to sustainable energy solutions.

Nimo: A minimalist wearable device designed to track physical activity and vital signs, offering real-time health data for users to monitor their well-being.

Internal Door Lock: A smart door lock system providing enhanced security with remote access control and monitoring features via a mobile application.

Mini Heart Beat Machine: A portable medical device that allows users to monitor their heart rate and rhythm, especially for individuals with heart conditions, ensuring timely health management.

ICFAI University Tripura, is fostering a culture of innovation with a range of impactful projects across various technical fields. Some of these ideas include:

1. **Low-Cost Solar Powered Wheelchair with Hybrid Charging for the Elderly and Specially Aabled:** A sustainable and affordable wheelchair designed to assist individuals with mobility challenges. It includes both solar and traditional electric charging options, making it eco-friendly and efficient for rural areas.
2. **Wireless EV Charging:** This project focuses on the development of a wireless charging system for electric vehicles, removing the need for physical cables. It enhances convenience and safety while promoting clean energy solutions.
3. **Automatic Dry and Waste Segregator:** A smart waste management system capable of automatically segregating dry and wet waste, which aids in effective recycling and reduces the burden on landfills.
4. **Design and Fabrication of a Low-Cost Underwater Vehicle:** A cost-effective underwater vehicle designed for exploring submerged environments, especially for scientific, archaeological, and environmental monitoring purposes.
5. **Smart Vehicle System with Tracking, Monitoring, Accident Detection, and Anti-Theft Features:** A comprehensive vehicle management system that includes real-time tracking, accident detection, and anti-theft measures, providing enhanced safety and security for users.
6. **Induction Heater by ZVS Circuit:** This project involves designing an efficient induction heater using Zero Voltage Switching (ZVS) technology, improving energy efficiency while reducing losses during the heating process.
7. **Automated Safety System for Gas Leakage:** A smart safety system that detects gas leaks in real-time, triggering alarms and automatically shutting off the gas supply to prevent accidents, ensuring a safer environment in homes and industries.
8. **F.R.I.D.A.Y. (The AI-based image authenticator & voice assistant):** F.R.I.D.A.Y. is an AI-based image authenticator and voice assistant designed to enhance security and user interaction. It verifies the authenticity of images and provides seamless voice-controlled assistance for various tasks, ensuring a smarter, more secure experience.
9. **Drowsiness detection from eye blinking:** Drowsiness detection from eye blinking is a technique used to identify fatigue by monitoring the frequency and duration of eye blinks. It typically employs computer vision and AI to analyse blink patterns, helping to prevent accidents by alerting users when signs of drowsiness are detected.
10. **Military hand signal recognition model using open OpenCV:** A military hand signal recognition model using OpenCV is a computer vision system that detects and interprets hand gestures used in military communication. By leveraging OpenCV's image processing capabilities, the model can analyse live video or images, identify hand signals, and recognize specific gestures. This technology enhances communication in environments where verbal cues are impractical, such as combat or tactical operations, by providing real-time gesture recognition.
11. **Experimental assessment of mechanical strength improvement of rammed earthen wall units using locally available waste materials:** The experimental assessment of mechanical strength improvement of rammed earthen wall units using

locally available waste materials focuses on enhancing the structural properties of traditional earth walls. By incorporating waste materials such as fly ash, recycled aggregates, or agricultural by-products, the study aims to increase the compressive and tensile strength of rammed earth walls. This approach promotes sustainability by reducing waste and utilizing eco-friendly construction practices, while also improving the durability and performance of earthen structures.

12. Seismic analysis of structures using ETABS considering various soil conditions:

The seismic analysis of structures using ETABS under various soil conditions involves evaluating a building's response to earthquake forces, considering how different types of soil affect its stability and behaviour. ETABS, a structural analysis software, helps model the dynamic interactions between the structure and the underlying soil, accounting for factors like soil stiffness, liquefaction, and damping properties. This analysis is crucial for designing earthquake-resistant buildings, ensuring they perform optimally under seismic loads across different geological conditions.

These projects showcase the technical expertise and innovative mindset at ICFAI University, Tripura, aimed at solving real-world challenges.

ICFAI University, Tripura, is engaged in groundbreaking research, and several innovative ideas from its faculty members have been granted patents. These projects reflect cutting-edge advancements in various fields such as cybersecurity, communication, healthcare, and more. Here is a brief write-up on the patented ideas and their inventors:

Patent Details (2023-24): Total No. 6

Sl. No.	Patent Application No.	Status of Patent (Published / Granted)	Inventor/s Name	Title of the Patent	Patent Filed Date (DD/MM/YYYY)	Patent Published Date / Granted Date (DD/MM/YYYY)
1	202331080255 A	Published	Dr. Arunangshu Pal	A method for secure message transfer using steganography with dynamic coordinates	25/11/2023	12-01-2023
2	202331076794 A	Published	Dr. Saptarshi Chakraborty	Design and Implementation of Adaptive Cluster Approach in CRN for 5G Applications	:09/11/2023	24/11/2023

3	399331-001	Granted	Dr. Prem Shankar Srivastava	Intelligence quotient iq level checking device	11-06-2023	01-11-2024
4	382360-001	Granted	Dr. Subhrajyoti Deb	IOT-based wearable device for monitoring of vital information	27/03/2023	23/05/2023
5	20243104345A	Published	Dr. Subhrajyoti Deb	An advanced mathematics and machine learning based method for proactive cybersecurity threat detection and mitigation	27/03/2023	23/05/2023
6	202022107204	Granted	Dr. Ankita Chakraborty	Film for colorimetric measurement of volatile organic compounds (vocs), gasoline and pollution in automobile exhaust.	23/12/2022	28/03/2023

Conclusion: The Institution's Innovation Council (IIC) Annual Report 2023-24 of ICFAI University, Tripura, reflects a year filled with innovation, creativity, and a strong focus on entrepreneurship. Throughout the academic year, the university has undertaken a variety of impactful initiatives that not only fostered the entrepreneurial spirit among students but also encouraged technological advancement and problem-solving skills. Through activities such as hackathons, innovation challenges, mentorship programs, and workshops, the university created a platform for students to ideate, experiment, and execute their ideas. Events like the "Internal Hackathon," "IDEATHON," and participation in national-level competitions like the Smart India Hackathon (SIH) offered students opportunities to engage in critical thinking and collaboration, while also pushing the boundaries of innovation.

The Startup and Incubation Centre played a pivotal role in nurturing several innovative projects, including promising startups like Bookmart and Estate4U, which demonstrate the entrepreneurial potential within the university. These startups not only contributed to the local entrepreneurial ecosystem but also underscored the importance of financial literacy, business acumen, and sustainable growth strategies, with initiatives like the ASCEND Startup Financial

Literacy Bootcamp providing students the tools to navigate the complex startup landscape. Moreover, the university's emphasis on intellectual property rights, as seen in its various patented ideas and inventions, showcases its leadership in fostering cutting-edge research and technology development.

The university's dedication to sustainability was also reflected in events like the "Tree Plantation Program," which emphasized environmental responsibility alongside innovation. Furthermore, the council's efforts in guiding students through the startup ecosystem, combined with the collaborative efforts of faculty, staff, and external stakeholders, have paved the way for a thriving culture of innovation.

In conclusion, the IIC Annual Report 2023-24 of ICFAI University, Tripura, highlights the institution's commitment to building an entrepreneurial ecosystem that promotes innovation, skill development, and sustainable growth. The university's focus on both academic excellence and real-world application continues to empower students, preparing them to be future leaders and innovators in their respective fields.