THE **IHFC** STORY

I-Hub Foundation for Cobotics (TIH, IIT Delhi)

DEFENCE

MEDICAL

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INDUSTRY X.0

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AGRICULTURE

Bringing together Academia, Industry and Government to promote product oriented research & development incubate/accelerate startups, empower innovators, and prepare youth for future innovation.

WHO ARE WE?

IHFC, the Technology Innovation Hub of IITD was established in 2020 by Department of Science & Technology (DST), Ministry of Science and Technology, Govt. of India under National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS). This brings together 3 major pillars of success, Academia, Government, and Industry.

VISION

To become the most coveted initiative in India which empowers to develop and nurture ideas offering world class solutions.

IHFC will help ascertain the right kind of training, guidance, and necessary resources required by all the bright individuals to create a seamless collaboration between industry, research, and academia, ensuring fast-track development and turning ideas into reality.

MISSION

To empower growth through collaboration and build a community of innovation leaders.

To create and offer an ecosystem for all, by coordinating and integrating, knowledge generation, academia support, technology and product development, innovation and commercialization to support projects for a quick turnaround in the field of Cobotics.

WHAT DO WE DO?

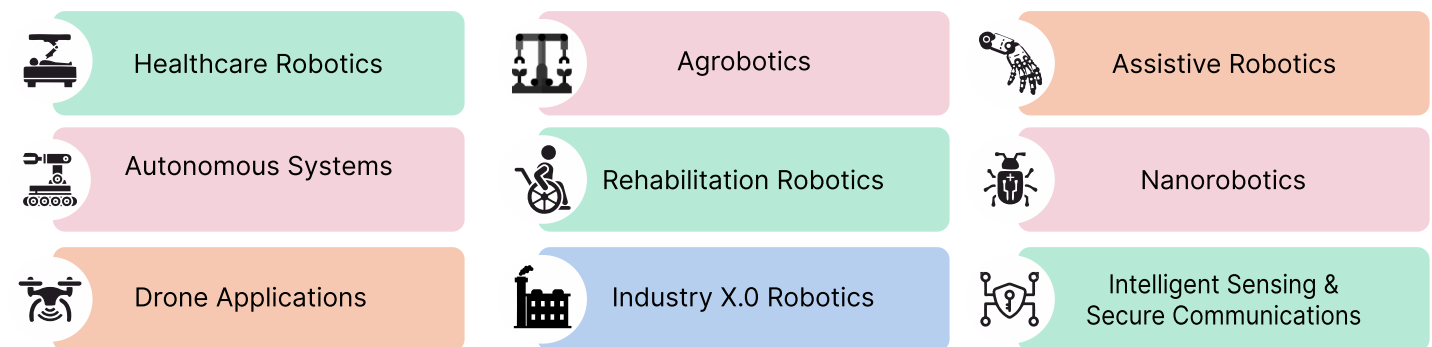|	
	Propel innovation across India by serving as a dynamic launchpad for R&D for product development.
	Incubate and accelerate startups, guiding them towards developing products and solutions that contribute to the vision of an Atmanirbhar Bharat.
	Torch bearers for developing an unique STEM driven curriculum across different educational boards and provide essential skills and training empowering youth in STEM in area of Robotics and Cobotics.
	Foster international collaborations across the world to drive forward the future of Innovation in India.
	Developing state of the art infrastructure such as Drone Technology Park (DTP) and Medical Cobotics Centre (MCC) for R&D and development of indigenised products and solutions for India.

HOW DO WE DO IT?

1. Research & Development (R&D)

IHFC drives Research and Development collaboratively in cutting-edge technologies such as Robotics , AI, Machine Learning (ML), IoT, Sensors and Communication, with applications across Defense, Industry, Healthcare and Agriculture. At present, we are leading more than 45 projects that covers diverse domains like Autonomous Mobile Robots & Vehicles, Healthcare Robotics, Drone Applications, Agrobotics, Rehabilitation Robotics, Industry X.0 Robotics, Assistive Robotics, Nanorobotics, Intelligent Sensing, and Secure Communications.
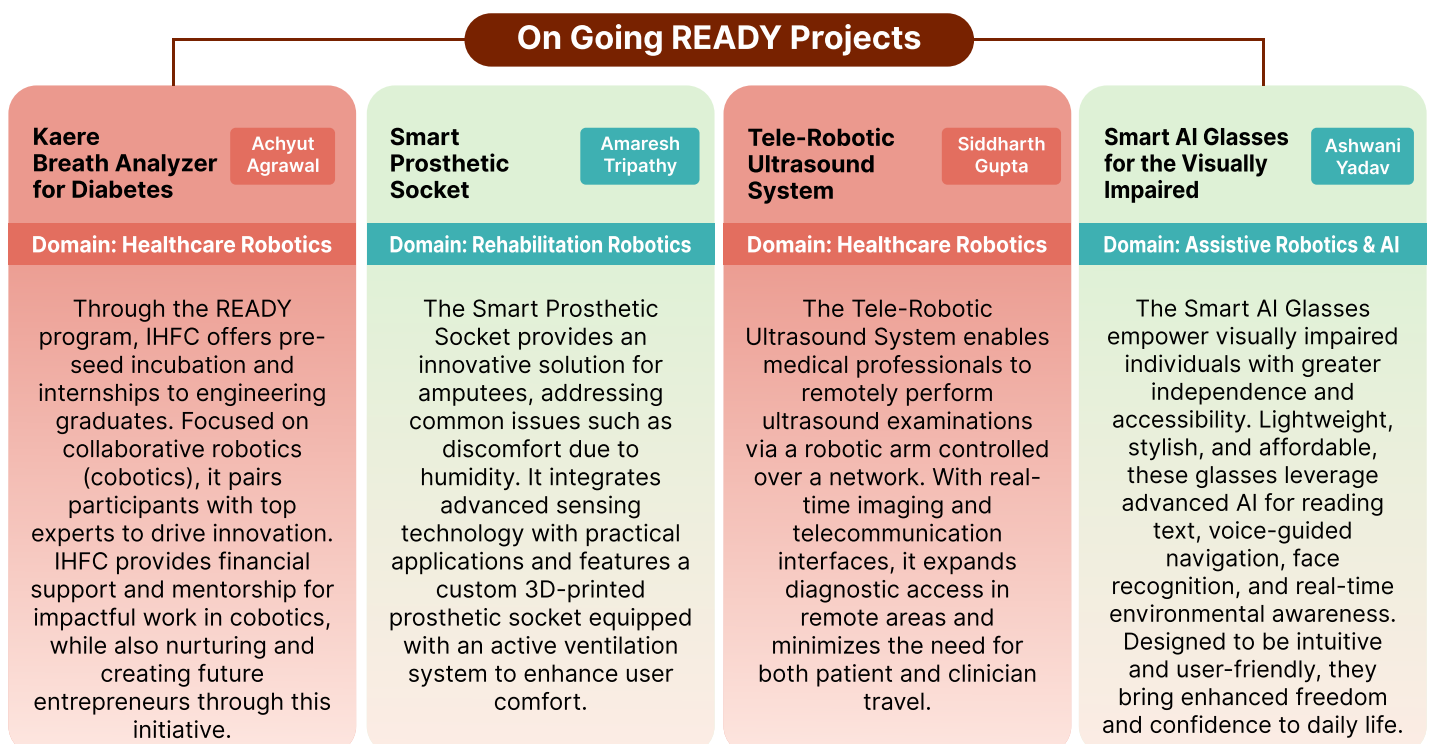
We actively partner with industry to commercialize solutions at TRL ≥ 4, bridging the gap between academia and industry. Our R & D projects covers a large footprint with PI's from National and International Acedemia like under DST–NSF (USA), we jointly worked on 12 out of 45 R&D projects.

Our Grand Project focus areas include:

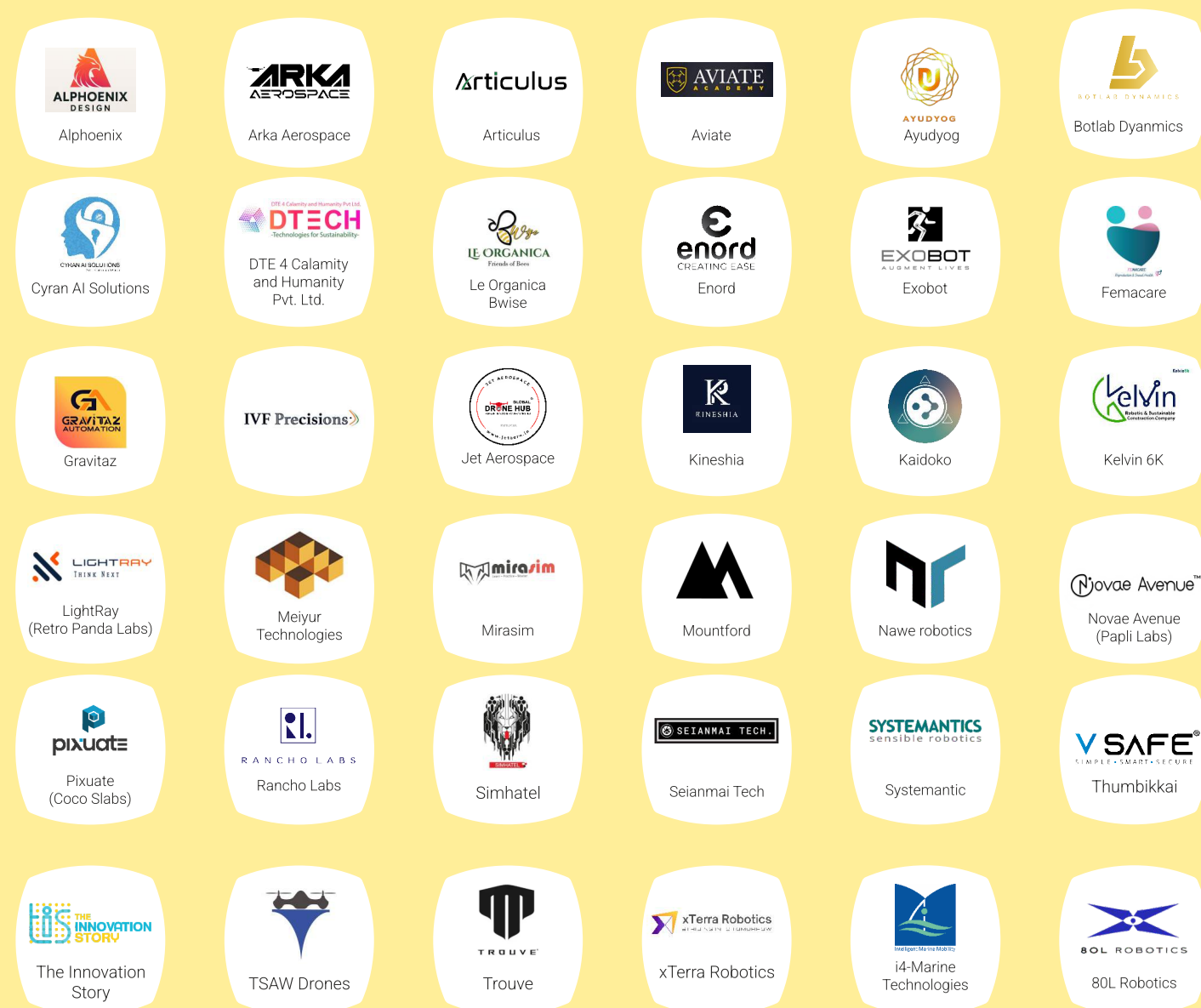| Healthcare Robotics	Agrobotics	Assistive Robotics
Autonomous Systems	Rehabilitation Robotics	Nanorobotics
Drone Applications	Industry X.0 Robotics	Intelligent Sensing & Secure Communications

2. Research Entrepreneurship and Development for You (READY) Program

Through the READY program, IHFC offers pre-seed incubation and internships to engineering graduates. Focused on collaborative robotics (cobotics), it pairs participants with top experts to drive innovation. IHFC provides financial support and mentorship for impactful work in cobotics, while also nurturing and creating future entrepreneurs through this initiative.

On Going READY Projects

Kaere Breath Analyzer for Diabetes — Achyut Agrawal

Domain: Healthcare Robotics

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Smart Prosthetic Socket — Amaresh Tripathy

Domain: Rehabilitation Robotics

The Smart Prosthetic Socket provides an innovative solution for amputees, addressing common issues such as discomfort due to humidity. It integrates advanced sensing technology with practical applications and features a custom 3D-printed prosthetic socket equipped with an active ventilation system to enhance user comfort.

Tele-Robotic Ultrasound System — Siddharth Gupta

Domain: Healthcare Robotics

The Tele-Robotic Ultrasound System enables medical professionals to remotely perform ultrasound examinations via a robotic arm controlled over a network. With real-time imaging and telecommunication interfaces, it expands diagnostic access in remote areas and minimizes the need for both patient and clinician travel.

Smart AI Glasses for the Visually Impaired — Ashwani Yadav

Domain: Assistive Robotics & AI

The Smart AI Glasses empower visually impaired individuals with greater independence and accessibility. Lightweight, stylish, and affordable, these glasses leverage advanced AI for reading text, voice-guided navigation, face recognition, and real-time environmental awareness. Designed to be intuitive and user-friendly, they bring enhanced freedom and confidence to daily life.

3. Supporting and Accelerating Startups

Supporting and accelerating startups: IHFC actively nurtures the collaborative startup ecosystem by incubating and supporting startups at different stages of development, from READY Program to Startup, fostering the creation of indigenous products for India's grand vision.

Alphoenix	Arka Aerospace	Articulus	Aviate	Ayudyog	Botlab Dyanmics
Cyran AI Solutions	DTE 4 Calamity and Humanity Pvt. Ltd.	Le Organica Bwise	Enord	Exobot	Femacare
Gravitaz	IVF Precisions	Jet Aerospace	Kineshia	Kaidoko	Kelvin 6K
LightRay (Retro Panda Labs)	Meiyur Technologies	Mirasim	Mountford	Nawe robotics	Novae Avenue (Papli Labs)
Pixuate (Coco Slabs)	Rancho Labs	Simhatel	Seianmai Tech	Systemantic	Thumbikkai
The Innovation Story	TSAW Drones	Trouve	xTerra Robotics	i4-Marine Technologies	80L Robotics

4. Empowering the Youth from School to Entrepreneural Journey

IHFC supports STEM education and cognitive development through Academic Leadership and Immersive Learning Programme, shaping the future of education in Robotics, AI, and ML. Partnership with Delhi School Board of Education, UBTE and SoSe schools. IHFC is Knowledge Partner to events like DD Robocon and organizing immersive learning competitions at school and college level; like Delhi Robotics League and Delhi Hackathon, Inter-School Robotics Challenge for CISCE and Robotics for Good international competition for ITU (UN Entity).

HRD/Education Activities

The goal of IHFC is to empower students and professionals with the relevant technical skills, innovative mindset and industry insights needed to become leaders in the evolving deep tech fields like Robotics & AI.

PROGRAM OBJECTIVES

INSTITUTIONS & PROGRAMS

School Students

Grade 9 – 12

To collaborate with educational boards and institutions to design and introduce robotics and AI that align closely with current industry standards and requirements, equipping students with relevant, future-ready skills.

Under Graduate

Technical Institutes & U Colleges

To bridge the gap between academic learning and industry needs by introducing practical, cutting-edge knowledge in fields like robotics and AI.

Industry Professionals

Government & Corporates

To empower professionals by upskilling them with the essential knowledge & skills needed to thrive in the rapidly evolving fields of robotics & AI. This initiative aims to enhance their career growth while simultaneously contributing to the overall advancement of the industry.

5. International Collaborations

At IHFC, we build bridges across borders through impactful global partnerships. From the National Association of Entrepreneurship (Embassy of Vietnam) to Odense Robotics in Denmark, and the International Telecommunication Union (ITU) in Geneva we are connecting innovators, industries, and institutions worldwide. And this is just the beginning. With more collaborations in the pipeline, IHFC remains committed to driving innovation on a truly global scale.

National Science Foundation, USA

DST – NSF Joint Research and Development Project Kick-off Workshop was organized by IHFC on August 8th, 2022 in association with the DST, Government of India. The workshop was the first milestone towards the USA-India Bilateral Research Collaboration program, which was initiated in February 2022.

Odense Robotics, Denmark

IHFC at IIT Delhi welcomed a delegation from Odense Robotics, Denmark, as part of the launch of their Global Innovation Networking Program, with IHFC serving as the Indian partner. This visit marked a significant step toward strengthening Indo–Danish collaboration in robotics and innovation focussing on R&D and startup growth and exchange.

Robotics for Good Youth Challenge India 2025

IHFC, the Technology Innovation Hub of IIT Delhi, in collaboration with the International Telecommunication Union (ITU), hosted the Robotics for Good Youth Challenge India — a UN-backed robotics competition under WTSA and the AI for Good Impact India initiative.

Indo–Vietnam Collaboration

IHFC (IIT Delhi – Technology Innovation Hub) has signed an MoU with the National Association of Entrepreneurship, Vietnam, to foster a vibrant startup ecosystem. This collaboration is designed to empower future entrepreneurs through innovation, technology transfer, and comprehensive startup support.

Collaborations in Japan

1. Nedo, Japan

A delegation from the IHFC team visited Japan from June 25–30, 2023, to participate in the Japan Drone Expo 2023, held in Chiba. The visit provided valuable exposure to Japan's drone ecosystem. IHFC, along with three Indian startup companies, participated in the event and showcased the capabilities of Indian drone technologies through videos. The startups presented a mix of hardware, software, and training-related innovations. As the ecosystem enabler, IHFC facilitated this initiative with the support of NEDO Japan.

2. Shibaura Institute of Technology, Japan

In collaboration with Shibaura Institute of Technology under the Sakura Science Exchange Program, IHFC participated in a week-long visit focused on the future of science and robotics. The program included robot building, applications of robotic techniques, knowledge exchange on each country's advancements in robotics, and discussions on future scientific developments at an international level.

3. Keio University, Japan

Sripaad M began his journey with IHFC as an intern under the IHFC READY program, where he received mentorship in product development and applied research. His innovative idea of a multibody system for disaster response and rescue, aligned with UN SDG goals, has evolved into a startup with IHFC's guidance.

6. Our Facilities:

a. Drone Technology Park (DTP)

At IIT Delhi Sonipat campus is a premier hub for drone enthusiasts, providing state-of-the-art facility for testing and flying drones. For start-up to create Drones of the future and use the centre for R&D for young students to work on their Drone projects. Regular workshops and trainings are held in Drone Technology for training and upskilling.

b. Medical Cobotics Centre (MCC)

A collaborative initiative between IHFC (Technology Innovation Hub of IIT Delhi), and iHub Anubhuti (Technology Innovation Hub of IIIT Delhi) fostering excellence in medical technology through education, training, and startup support. A CoE for R&D Projects and Startups to provide long term sustainable healthcare solutions which are indigenized.

The first Medical Cobotics Centre (MCC) has been inaugurated as the Medical Innovation Centre (MIC) at Maulana Azad Medical College. The second state-of-the-art facility has been launched at SGT University, designed to redefine the future of MedTech and healthcare.

c. Co-Innovation Centre (CiC)

Our 10 CiC aims to promote entrepreneurship and startups in Deep Tech Domains (Robotics, AI, Machine Learning, IoT, etc). The Co-Innovation Centres (CiC) aims to promote entrepreneurship and startups in Deep Tech Domains (Robotics, AI, Machine Learning, IoT, etc).

The establishment of the Co-Innovation Centers aims to support aspiring entrepreneurs and students to undertake new product development, research translation and build high potential startups/companies in Deep Tech Domains.

CO-INNOVATION CENTRE
Nurturing Excellence in Deep Tech

| People's Education Society University, Karnataka | SRM Institute of Science and Technology, Tamil Nadu | Thapar Institute of Engineering and Technology (TIET), Punjab | Indian Institute of Technology, Gandhinagar | Indian Institute of Engineering Science & Technology (IIEST), Kolkata | B S Abdur Rahman Crescent Institute of Science and Technology, Tamil Nadu | Karunya Institute of Technology and Science, Tamil Nadu | Nitte Meenakshi Institute of Technology, Karnataka | Delhi Technological University, Delhi | Indraprastha Institute of Information Technology, Delhi |

7. **Tech for good: Corporate Social Responsibility (CSR)**

Impacting Lives Through Technology Innovation and Upskilling

At IHFC, we are committed to shaping a technologically advanced and self-sufficient India, while making a meaningful difference in the lives of the lesser privileged

Guided by our mission and CSR vision, we strive to create maximum societal impact through innovative solutions that truly matter

With a user-centric approach, IHFC delivers 360° technology solutions that seamlessly integrate with human workflows to simplify critical and repetitive tasks. Through science and innovation, we are transforming lives

What do we deliver as your CSR partner

| Deep-Tech Innovation with Government | Real-World Validation | Multi-Sector Reach | Upskilling for Inclusive Growth | Full Innovation Lifecycle | Amplified Social Impact | Scalable, Sustainable Solutions |

Our Technology Innovation Product for Social Impact

Unmanned Coconut Harvesting

In partnership with Parachute Kalpavriksha Foundation (MARICO), IHFC is co-developing a robotic coconut harvesting device with ICAR-CCARI and Goa University to address safety and labour challenges in traditional coconut harvesting.

Drone-Based Precision Pollination

A drone-based pollination system, developed by Thanos Agri Drones in collaboration with Prof. Spandan Roy (IIIT-Hyderabad) and IHFC, offers a safer, automated, and efficient alternative, reducing human risk and improving crop yields.

Tech Upskilling Workshops

Upskilling Workshops in Drones

As part of our commitment to skilling underprivileged youth, IHFC partnered with IRCON, a Government of India undertaking, under its CSR initiative to conduct a specialized Drone Technology training program. By February 2025, 50 students were trained for roles such as Drone Technicians, Engineers, Programmers, Instructors, and Quality Control Specialists boosting their employability and advancing the vision of Atmanirbhar Bharat. The initiative also supported women empowerment, aligning with the Namo Drone Didi scheme, which equips women-led SHGs with drone technology.

Upskilling Workshops in Robotics

With CSR support from Addverb Technologies (Reliance Group Company) nd in partnership with Edunnovate Technologies, IHFC helped train 150 underprivileged students in robotics. These students, from NGO teams like Salaam Bombay, Avasara Academy, and Abhyudaya, received 150+ hours of hands-on training in CAD, Java, and robot building. The training prepared them to compete in the international FIRST Tech Challenge, held in Pune in March 2023, giving them a chance to showcase their skills on a global stage.

Some of our success stories

READY Program

Meet Amresh Tripathy, founder of Hybionics and a dedicated participant in the IHFC READY Program. Amresh has created something truly impactful—a 3D-printed prosthetic cover plate designed for a 6-year-old pediatric patient who survived a traumatic accident early in life.

Meet Ashwini Yadav, founder of Neuro Drishti. Our Smart AI Glasses empower the visually impaired with greater independence through seamless text reading, voice-guided navigation, face recognition, and real-time audio cues — all in a lightweight, stylish, and affordable design.

Research & Development

Enrich by Prof. Nayan Kakoty A cost-effective prosthetic hand designed for upper-limb amputees from wars, road accidents, and industrial mishaps, enabling them to perform multiple grasping tasks in daily life.

IHFC-incubated R&D project — the Orthopedic Plate Bending Machine, developed by Prof. Sunil Jha (IIT Delhi) and Dr. Lalit Maini (MAMC). This fully automated innovation digitally pre-bends plates, cutting operative time and removing manual adjustments during surgery.

Startups and Incubation

TSAW Drones successfully demonstrated the use of unmanned aerial vehicles for corneal tissue transportation.

Developed by ayudyog, metaspeq is a compact nir spectrometer that delivers chemical-free, real-time quality results in under 5 minutes.

2020

→ Establishment of IHFC by DST under NM-ICPS
→ First Startup incubation - Botlab Dynamics

2021

→ Launch of our newsletter - Cobonews
→ Launch of READY Program

2022

→ First MoU with Education Board: CISCE Board
→ First International Collaboration with National Science Foundation, USA

2023

→ First Drone Training Workshop at Drone Technology Park in collaboration with Jet Aerospace
→ Launch of our first CSR Nurture Program
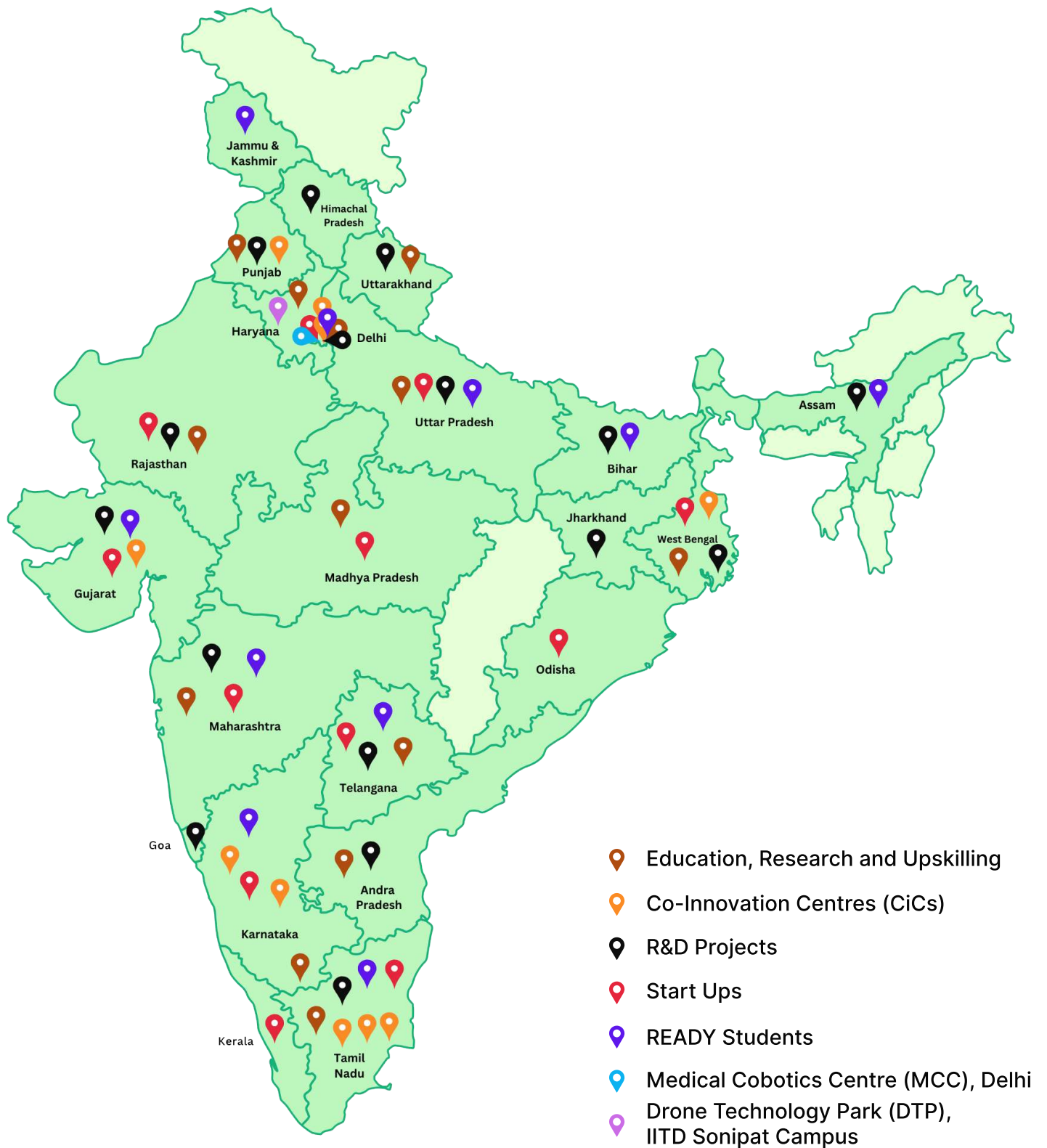→ Our first collaborative Medical Cobotics Centre Inauguration

2024

→ First Lab to Market Workshop
→ DTP Inauguration at IIT Delhi Sonipat Campus

2025

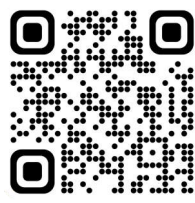→ Inauguration of our first ever 10 Co Innovation Centres all over India

Jammu & Kashmir

Himachal Pradesh

Punjab

Uttarakhand

Haryana

Delhi

Uttar Pradesh

Assam

Bihar

Rajasthan

Jharkhand

West Bengal

Gujarat

Madhya Pradesh

Odisha

Maharashtra

Telangana

Goa

Andra Pradesh

Karnataka

Kerala

Tamil Nadu

Education, Research and Upskilling

Co-Innovation Centres (CiCs)

R&D Projects

Start Ups

READY Students

Medical Cobotics Centre (MCC), Delhi

Drone Technology Park (DTP), IITD Sonipat Campus

We Incubate, We Accelerate, We Mentor,
We Connect, Future is US!

We are IHFC

IHFC.CO.IN

INSTAGRAM

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