

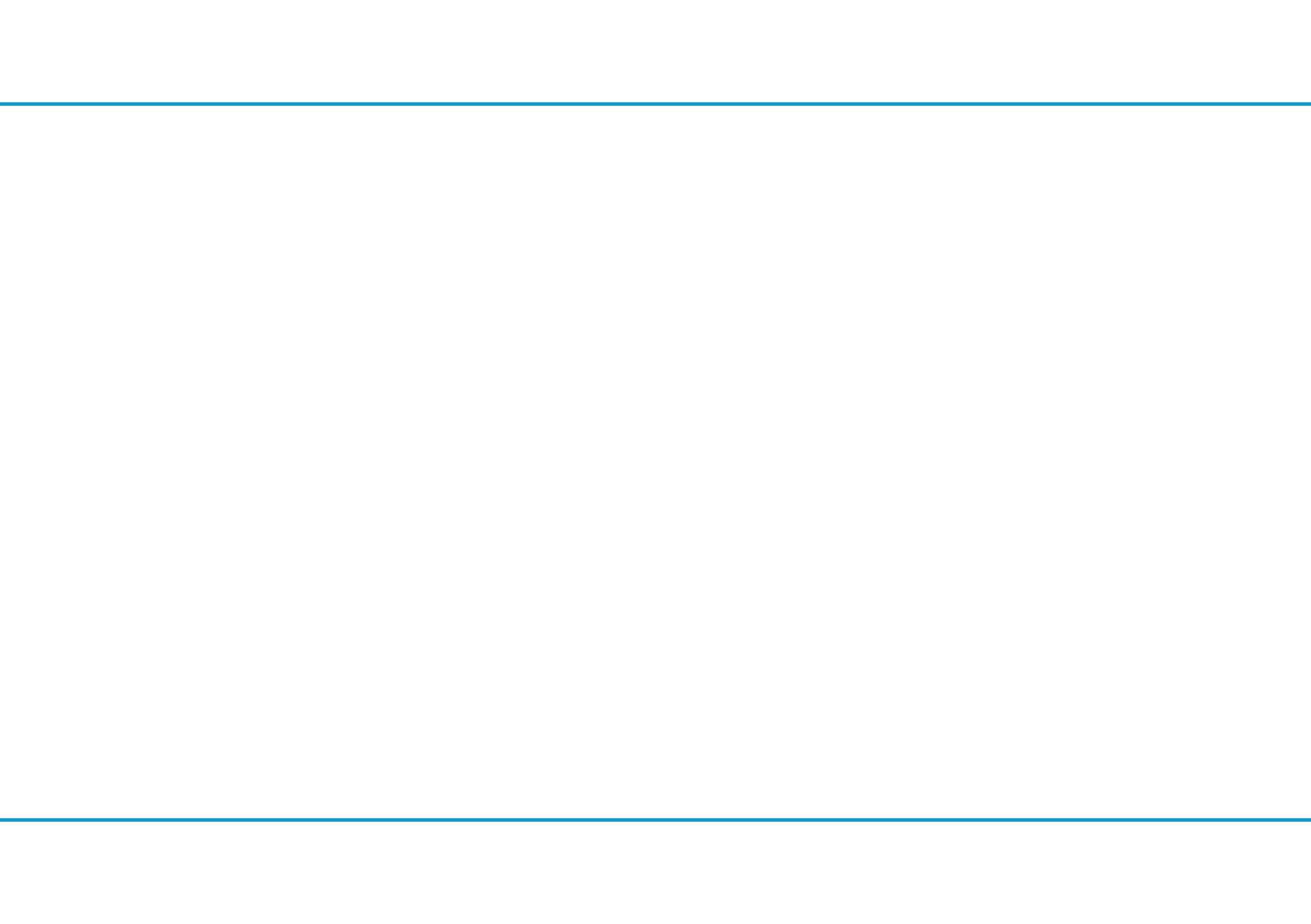


iDEX Innovations for
Defence Excellence
PM Awardee

A Runway for

INNOVATIONS







Shri Narendra Modi

Hon'ble Prime Minister
Government of India



आज भारत अपने डिफेंस सेक्टर को आत्मनिर्भर बना रहा है। इससे भी हमारे युवा स्टार्टअप्स को बहुत से मौके मिल रहे हैं। डिफेंस में इनोवेशन के लिए हमने Innovations for Defence Excellence यानी, iDEX भी शुरू किया है। iDEX जैसी स्कीमों ने स्टार्टअप्स को गति दी है और बीते 5-6 वर्षों में ही भारत में करीब 1,000 नए डिफेंस स्टार्टअप्स बने हैं।

Hon'ble Prime Minister
Shri Narendra Modi

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Raksha Mantri



Shri Rajnath Singh

Hon'ble Raksha Mantri
Ministry of Defence
Government of India



Secretary, Defence Production & Chairman, DIO



Shri Sanjeev Kumar, IAS

Secretary, Defence Production & Chairman, DIO
 Department of Defence Production,
 Ministry of Defence
 Government of India



iDEX - Runway for Innovations

In 2018, the Hon'ble Prime Minister laid the foundation for a transformative shift in the nation's defence ecosystem with the launch of Innovations for Defence Excellence (iDEX). Before iDEX, India's defence innovation landscape was at a nascent stage, lacking the structured support needed to foster indigenous solutions. Recognizing this gap, iDEX was conceived to drive innovation, encourage development of disruptive technologies and accelerate their adoption by the Armed Forces. What began as a strategic initiative has now become a pivotal cornerstone of India's ambition to lead in defence innovation on the global stage.

iDEX has evolved into a dynamic innovation hub, offering grants of up to Rs. 1.5 crore under the Defence India Startup Challenge (DISC) and Open Challenge (OC) for the development of innovative products and technologies and up to Rs. 25 crore under ADITI (Acing Development of Innovative Technologies with iDEX) scheme for the development of critical and advanced technologies. Today, iDEX is more than just an initiative—it is a launchpad for reshaping India's defence capabilities and advancing the vision of an "Aatmanirbhar Bharat" in defence.

Over its journey, iDEX has emerged as a key driver of transformation in the defence sector. Having received over 10,000 applications across its challenge categories and actively collaborating with more than 600 startups and MSMEs, iDEX has fostered a thriving ecosystem of creativity and collaboration. Initiatives like the DISC and OC have allowed iDEX to directly address pressing defence needs, driving India's technological edge forward.

The tangible impact of iDEX is clearly visible. So far, over 40 prototypes developed under iDEX have received clearance for procurement and 31 procurement contracts worth more than INR 1560 crore have been signed. These milestones highlight the growing confidence of defence establishments in iDEX's framework and its ability to deliver impactful solutions.

The evolution of iDEX is a testament to vision, determination, and collaboration. From its modest beginnings to its current achievements, it embodies the spirit of 'Aatmanirbharta' in defence. As India builds a robust defence ecosystem, iDEX remains at the forefront, shaping a secure and technologically advanced future.

**With iDEX,
the path to
innovation has
transformed
from a mere
vision into a
dynamic
reality, driving
India's defence
renaissance
forward.**

iDEX Journey so Far

2018

- Launched in DefExpo 2018
- Launch of Defence India Startup Challenge 1 (DISC 1)

2019

- Launch of DISC 2
- Startup Manthan at AeroIndia 2019
- DefConnect 1.0
- Launch of Open Challenge
- Launch of DISC 3

2020

- Startup Manthan at DefExpo 2020
- Launch of Innovate4Defence (i4D) Internship
- Launch of DISC 4

2021

- Startup Manthan at Aero India 2021
- iDEX at Combined Commanders Conference 2021
- Launch of DISC 5



2022

- PM Award for Public Policy in Innovation Category
- DefConnect 2.0
- Launch of DISC 6 & DISC 6 Prime
- iDEX-DIO signs 100th contract
- Swavlamban 1.0
- Launch of DISC 7 (SPRINT) & DISC 7 Prime (SPRINT)
- Startup Manthan at DefExpo 2022
- Launch of DISC 8 (Mission DefSpace) & DISC 8 Prime (Mission DefSpace)

2023

- Manthan at Aero-India
- Launch of DISC 9
- Launch of iDEX Investor Hub (iIH)
- iDEX-DIO signs 200th contract
- Launch of INDUS-X
- Swavlamban 2.0
- Launch of DISC X & DISC X Prime
- Launch of IMPACT Challenges (INDUS-X)
- iDEX at Combined Commanders Conference 2023
- iDEX-DIO signs 300th contract

2024

- 2nd Edition of INDUS-X
- DefConnect 2024
- Launch of ADITI 1.0 & DISC 11
- Announcement of SIDBI seed fund for iDEX Startups
- iDEX & AFMS sign MoU
- 3rd Edition of INDUS-X
- MoU with Defense Innovation Unit (DIU), US DoD
- DefConnect 4.0
- Launch of ADITI 2.0 & DISC 12
- Swavlamban 3.0
- Launch of ADITI 3.0 & DISC 13
- iDEX-DIO signs 400th contract
- Launch of FRIND-X



Nodal Agency(s)

1. Tri-Services



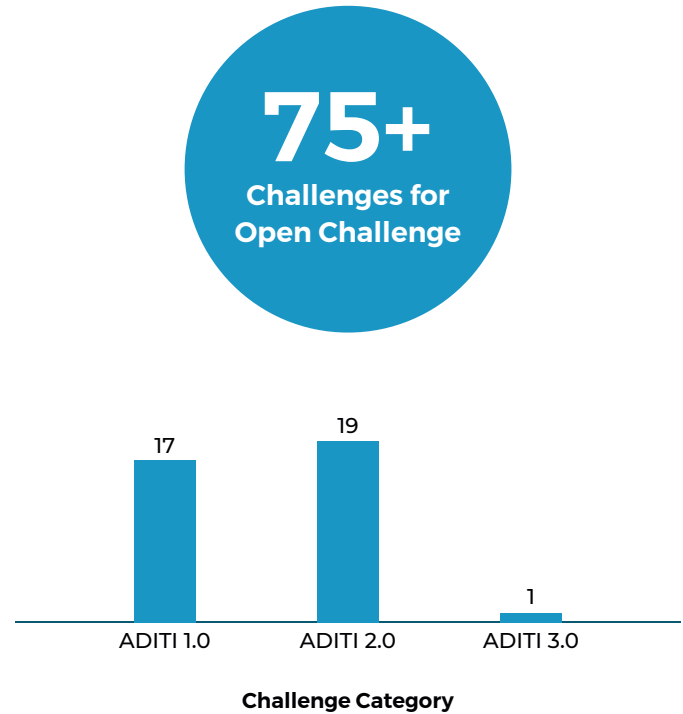
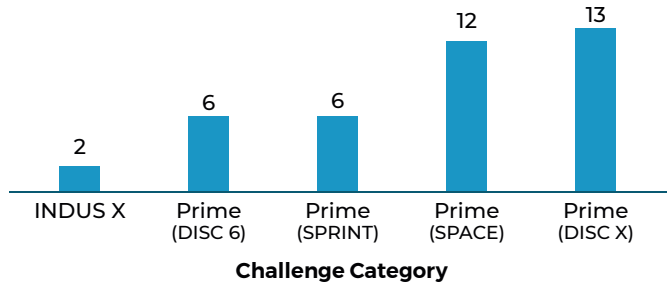
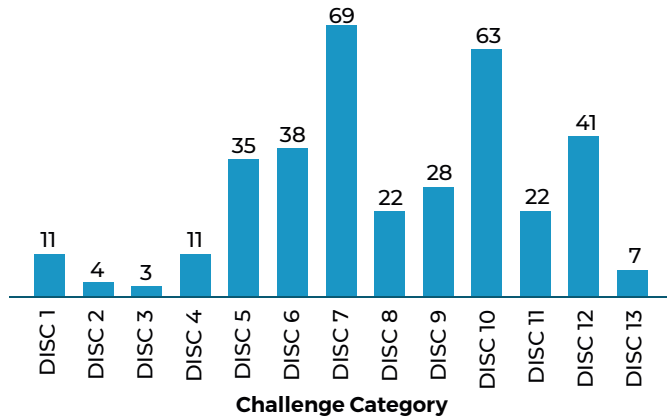
2. Others



3. DPSUs



Category Wise - Challenges



Major Technology Domains



AI/ML



Unmanned/
Autonomous
Systems



Communication
Systems



Cybersecurity



Smart Human
Protection
Systems



Ammunition
Systems



Navigation
Systems



Structural
Engineering



Cryptography



Radiofrequency



Telemetry
Systems



Energy
Engineering



Cubesat
Technology



Non-Contact
Defence System



Simulation
System



Chemical/
Bio-Engineering



Material
Science



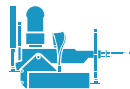
Automotive
System



Instrumentation
/ Control
systems



AR/VR



Smart-Weapon
Systems



Electro-Optical
Systems



Mechanical
Systems



Radar
Systems



Subsystem/Com
ponents
Engineering

ACHIEVEMENTS

iDEX has achieved remarkable success, with the impressive numbers below highlighting its impact*

600+ No. of iDEX winners
(Start-ups/MSME/
Individual Innovator)



400+ No. of
contract signed

500+ Total No.
of challenges

31 Total No. of
procurement
contracts signed with
iDEX winners

worth
₹ 1567 Cr.
(Approx.)

*As of 31st Dec 2024



Shri Rajnath Singh

Hon'ble Raksha Mantri
Ministry of Defence
Government of India



iDEX is a decisive step towards achieving self-reliance in the true spirit of the atmanirabhar bharat campaign.

Hon'ble Raksha Mantri
Shri Rajnath Singh

iDEX Winners - Success Stories



Founder Details: Capt. Javed Hasan (Retd.), Aditya Sharma

Challenge Category:

DISC - 7

Challenge Title:

Development of indigenous morpene compound with firefighting capacities and Reeled Compressed Air Foam System (RCAF)

Sector of Innovation:

Fire Safety technology Solutions

Technology Used:

Advanced Chemical & Biochemical Engineering and RCAF System.

Product Details:

Indopene is a versatile firefighting foam designed to effectively extinguish Class A and Class B fires. It features a multi-diversity foam generator that can be adjusted for various fire scenarios. This foam is part of the RCAF, making it suitable for a wide range of firefighting needs. Its adaptable properties allow for efficient use in different fire types, ensuring reliable fire suppression in critical and emergency settings.

Product Images:



Founder Details: Gp Capt Sudhir Varma (Retd), Kanishk Varma, Anant Dhir

Challenge Category:

Open Challenge - 4.0

Challenge Title:

Aviral- A Tethered Drone System for Surveillance & Monitoring Purpose

Sector of Innovation:

Indigenous Tethered Drone Technology

Technology Used:

Unmanned Aerial Vehicle (UAV)

Product Details:

Aerial IQ's Tethered Drone, AVIRAL, is an indigenous UAV with a flexible wired link for continuous power and communication. Unlike battery-powered drones, it operates for up to 12 hours. Its fiber-optic tether ensures secure data transmission, supporting various mission-specific payloads.

Product Images:



Founder Details: Sundaram Ramaswamy

Challenge Category:

DISC - 7

Challenge Title:

Underwater Navigation System for AUVs

Sector of Innovation:

AUVs, Navigation Systems

Technology Used:

AI/ML

Product Details:

This product enhances operations in Anti-access/Area Denial (A2AD) environments, enabling covert infiltration and over-the-horizon capabilities. Easily deployable by special forces, it supports mass deployment with various payloads—kinetic, electromagnetic, cyber, or sensors—without requiring vessel integration, threatening adversary fleets and logistics.

Product Images:





Armor Grandeur pvt ltd

**Armor Grandeur
Pvt Ltd**

Founder Details: Dr.K.Porkumaran, K. Naresh Raj

Challenge Category:

DISC-7

Challenge Title:

Autonomous operation of starting, running and shutting down of diesel alternator suitable for charging lithium ion batteries

Sector of Innovation:

Power electronics Controller and Battery management system

Technology Used:

Control systems and Battery management systems.

Product Details:

Developed a controller and battery management system for the Indian Navy, integrating a 50 kW battery and 62.5 kVA generator. A custom dashboard enables remote monitoring and real-time control. Designed for Extra Large Unmanned Underwater Vehicles (XLUUV) using diesel-alternator and lithium-ion batteries.

Product Images:



Founder Details: B Satya Prashant, Arun Devaru Bhat

Challenge Category:

DISC - 7

Challenge Title:

Portable rugged, waterproof and lightweight torch for Damage Control /Fire Fighting activities including underwater

Sector of Innovation:

Rugged Electronics & Tactical Equipment.

Technology Used:

Rechargeable Lithium-Ion Battery Powered MIL Grade Multipurpose Torch with IP68 rating.

Product Details:

The military-grade rechargeable torch is built for tough environments, offering portability, durability, and waterproofing. Ideal for firefighting and damage control, it functions underwater and in extreme weather, ensuring reliable performance in dense fog and harsh conditions for critical operations.

Product Images:





Founder Details: Dr. Neha Satak, Dr. Prasad H L Bhat

Challenge Category:

DISC - 1

Challenge Title:

4G/LTE Tactical LAN Radio

Sector of Innovation:

Secure Communication Products

Technology Used:

MM Wave communication with a prime focus on E-Band

Product Details:

Tac-Lan radio is a high-throughput wireless solution with multi-beam technology for long-range, point-to-multipoint communication. Self-aligning and low-maintenance, it reduces infrastructure costs, making it ideal for defense, disaster management, and rural broadband by enabling secure, scalable, and resilient connectivity in remote areas.

Product Images:



Founder Details: Praveen Dwarakanath, Dr. Shivaraman Ramaswamy

Challenge Category:

DISC - 2

Challenge Title:

Illegal usage of Drones

Sector of Innovation:

UAV Countermeasure Systems and Electronic Warfare

Technology Used:

AI/ML, Computer Vision, RF Countermeasures, Anti-Drone

Product Details:

This AI-powered Anti-Drone Defence System detects, tracks, and neutralizes unauthorized UAVs using RF jamming, spoofing, and computer vision. With autonomous detection and a multi-layered defense, it ensures continuous protection against evolving drone threats, addressing the growing risks of illegal drone activities.

Product Images:





Founder Details: Kannan G

Challenge Category:

DISC - 3

Challenge Title:

Friend or Foe Identification System

Sector of Innovation:

Wireless communication

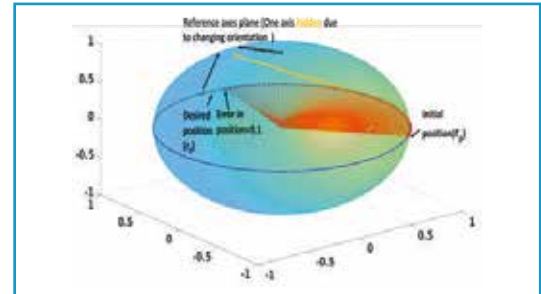
Technology Used:

SDR / Transponder

Product Details:

The Friend or Foe system with Blue Force Tracking enhances AFV battlefield awareness, preventing fratricide with real-time identification and communication. With a 5 km range, extendable to 50 km, it features loudspeakers, visual lamps, and haptic alerts for effective coordination.

Product Images:



**BigCat Wireless
Pvt Ltd**

Founder Details: Amit Mahajan, Ameya Kandalkar

Challenge Category:
DISC – 7

Challenge Title:
AI based barrel crawling bot inspection system (Software & Hardware)

Sector of Innovation:
AI-based video analytics fused with advanced laser scanning and modular robotics

Technology Used:
AI and Robotics

Product Details:
The Laser Inspection Robot is an automated system for inspecting armament barrels, torpedo tubes, and rocket launcher tubes. It uses an onboard camera and laser technology to detect defects, generating detailed reports with real-time, high-precision 3D point cloud visualization.

Product Images:



**Bit Mapper Integration
Technologies Pvt Ltd**

Founder Details: Roshan Raj, Avinash Kori

Challenge Category:

DISC - 5

Challenge Title:

Motion Pattern Classification on online/active data

Sector of Innovation:

Maritime and Defence

Technology Used:

Geospatial Intelligence, Sensor Fusion, Spatio-temporal Analysis, Multi-modal Data correlation, Autonomous Decision Support system, Predictive Digital Modelling.

Product Details:

Trident (software) is an AI-driven platform for maritime and defence, integrating multi-domain sensor data into a unified system. It uses AI for target identification, anomaly detection, and predictive intelligence, enhancing vessel traffic management, offshore security, and defense surveillance with real-time insights.

Product Images:



Founder Details: Col Sunil Prem (Retd)

Challenge Category:

Open Challenge - 2.0

Challenge Title:

Rapid Foldable Infantry Assault Bridge (RFIAB)

Sector of Innovation:

Water Crossing Expidients

Technology Used:

Modular floating footbridge Systems.

Product Details:

RFIAB is a portable, durable crossing solution for water bodies up to 50 m wide. Its strolley design allows easy transport by one or two soldiers, with auto-locking mechanisms for quick deployment. It's resistant to small arms fire, shrapnel, and debris.

Product Images:





Founder Details: Mohan Kumar Jindal

Challenge Category:

DISC - 1

Challenge Title:

Secure Hardware Encryption device

Sector of Innovation:

Cybersecurity

Technology Used:

Semiconductor solution for high grade security applications

Product Details:

Abhed1 is a hardware-based encryption device that operates without an operating system or software. It securely encrypts data from a USB 3.0 source to a USB 3.0 or Ethernet 1G destination using AES256 encryption, ensuring safe data transactions over public networks. Its hardware-only design eliminates vulnerabilities like backdoors or trojans, providing enhanced security.

Product Images:



Founder Details: Ganesh Pandit Suryawanshi, Gaurav Vikhe, Prateek Nagras, Yuvaraj Karoshi

Challenge Category:

DISC - 7

Challenge Title:

Smart Shore Supply And Charging Cable Mobile Unit

Sector of Innovation:

AI and Robotics

Technology Used:

Automation and Robotics

Product Details:

The Smart Shore Supply Cable Mobile Unit, powered by Combat Robotics' mobile robot platform, is designed for efficient shore supply line management in the Indian Navy. It handles payloads over five tonnes with holonomic drive steering, reducing manual labor, enhancing safety, and minimizing downtime in challenging maritime conditions.

Product Images:



Founder Details: Debendra Pradhan, Biswajit Swain

Challenge Category:

DISC - 7

Challenge Title:

Tethered underwater ROV for underwater inspection and repairs

Sector of Innovation:

Deep-tech

Technology Used:

4K Camera, Pan-Tilt Camera, 3-DoF Robotic Arm, Scanning Sonar, Probes for NDT, Surface GPS, Doppler Velocity Log (DVL), Ultra-Short Baseline (USBL), Powerful Thrusters

Product Details:

Jalasimha is a high-performance Remotely Operated Vehicle (ROV) designed for defense, naval, and industrial use in extreme underwater environments. Tested at 311 meters and rated for 450 meters, it features DVL, USBL positioning, multi-beam SONAR, a 3-DOF (Degree of Freedom) robotic arm, and ultrasonic thickness gauge for precise tasks. Its efficient movement includes a descent speed of 0.8 m/s and forward speed of 3 knots.

Product Images:





Crimson Energy Experts Pvt. Ltd.
An ISO 9001:2015 Company

Crimson Energy
Experts Pvt Ltd

Founder Details: Cdr. Binu Tom Jacob (Retd), Cmde. RD Mane (Retd)

Challenge Category:

Open Challenge - 2.0

Challenge Title:

Machine Learning Algorithms for Maritime Analysis & Anomaly Detection

Sector of Innovation:

Maritime Analytics, Tracking and Anomaly detection

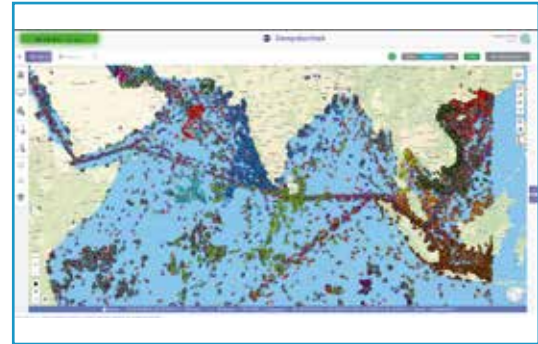
Technology Used:

Artificial Intelligence and Machine Learning

Product Details:

DeepDarshak™ is an AI-driven maritime analytics platform that uses machine learning on AIS data to monitor vessel traffic, detect anomalies, and support security agencies. It offers predictive analytics, real-time alerts, and big data processing to enhance maritime domain awareness, ensuring safety and national security.

Product Images:



Founder Details: Prof. Manan Suri

Challenge Category:

DISC - 4

Challenge Title:

AI Based Satellite Image Analysis

Sector of Innovation:

AI/ML, Space Technology, GIS

Technology Used:

Fusion of advanced AI, Computer vision and Geospatial Technologies

Product Details:

This secure, enterprise-grade full-stack (HW/SW) solution is designed for smart management, quality improvement, and analytics of downstream earth observation data. It provides real-time geospatial situational awareness, leveraging AI and multi-sensor data fusion for actionable insights. The indigenized platform enhances data accuracy and precision for aerial and space platforms, fine-tuned to meet diverse security requirements.

Product Images:



Founder Details: Anil Athri, Preeti Athri, Jayashree Athri

Challenge Category:

Open Challenge - 6.0

Challenge Title:

Deep Fat Fryer Gimbaled Frame

Sector of Innovation:

Customized Factory & Warehouse Automation Systems

Technology Used:

Gravitational pull & counter weights

Product Details:

This oil fryer is designed for ships with deep fryers in their galleys, ensuring cook safety during rough sea conditions. Its gimbaled frame with adjustable counterweights keeps it level, preventing spills due to pitching and rolling. Equipped with tilt sensors, it maintains stability and triggers alarms if roll and pitch exceed safety limits.

Product Images:





Founder Details: Pankaj Raut, Abhishek Tomar, Abhijit Patil

Challenge Category:

DISC - 1

Challenge Title:

See Through Armour

Sector of Innovation:

Virtual & Augmented Reality, Mixed Reality

Technology Used:

Extended Reality (XR) and Artificial Intelligence (AI)

Product Details:

that integrates Augmented Reality and AI to improve defense and security decision-making. It offers 360-degree views, night vision, zoom, and live threat detection for better tank navigation. AI-driven analytics provide predictive insights, while seamless integration with AjnaOne AR headsets ensures hands-free operation in high-pressure situations.

Product Images:



Founder Details: Harshad Dave, Sonika Sehraya

Challenge Category:

DISC - 2

Challenge Title:

Illegal Usage of Drones

Sector of Innovation:

RF Counter UAS System

Technology Used:

Software Defined Radio, RF Countermeasures, Anti-Drone

Product Details:

The Gurutvaa Systems Dronaam-R is a modular, state-of-the-art system designed for comprehensive protection against hostile Unmanned Aerial Systems (UAS). It features a handheld, rifle-style configuration for ease of operation and portability. The system jams GNSS, control, video, and telemetry signals, disrupting drone navigation and control for soft-kill defense. Built to withstand harsh environments, it is compact, durable, and easy to maintain.

Product Images:



Founder Details: Prof. Shankar Narasimhan, Prof. Raghunathan Rengasamy

Challenge Category:

DISC - 1

Challenge Title:

AI in supply chain management

Sector of Innovation:

Time series forecasting and inventory management

Technology Used:

AI/ML applications for assessing required procurement quantity

Product Details:

AI in supply chain app developed in the context of defense procurement and deployed for use by the Naval Aviation Materials Organization of the Indian Navy. The application forecasts demand for spares and manages unanticipated consumption in a bid to right-size inventory towards lean operations.

Product Images:





Founder Details: Manish Dalmia

Challenge Category:

Open Challenge - 1.0

Challenge Title:

Integrated Mobile Camouflage System (IMCS)

Sector of Innovation:

Stealth and Camouflage

Technology Used:

IR and Thermal signature suppression, Radar Wave Absorption, Passive Visual Camouflaging

Product Details:

IMCS is a multi-spectral stealth solution that combines coatings and fabric panels to manage IR, thermal, and radar signatures. It adapts to surroundings in real-time, reducing Radar Cross Section (RCS) and blending objects into the environment, ensuring superior stealth against enemy sensors.

Product Images:



Founder Details: Vikram Singh, Ajay Singh

Challenge Category:

DISC - 2

Challenge Title:

Data Analytics (Anomaly Detection) in Air Trajectory

Sector of Innovation:

Airspace surveillance

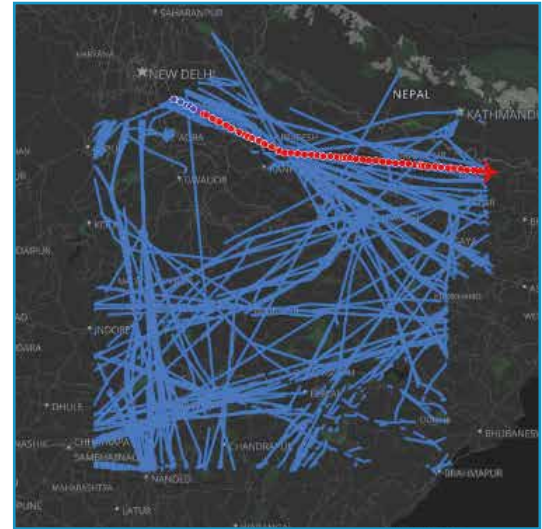
Technology Used:

AI, radar integration, autonomous learning, situational awareness, low-power optimization

Product Details:

Flightpath is an AI-based air defense system that autonomously monitors and classifies suspicious aerial objects without relying on flight plans. It integrates with radar outputs for real-time and historical monitoring, offering low power consumption and operating on standard CPUs and GPUs. Its autonomous learning and prediction capabilities reduce manpower requirements.

Product Images:





Founder Details: Johns T Mathai, Kannappa Palaniappan P

Challenge Category:

DISC - 7

Challenge Title:

Underwater Remotely Operated Vehicle (UWROV) for Underwater Inspection and Repairs

Sector of Innovation:

Underwater Robotics and Marine Technology

Technology Used:

Marine Robotics technology for underwater inspections and bathymetric survey

Product Details:

EyeROV TROUT is a cutting-edge Remotely Operated Vehicle (ROV) designed for deep-sea operations, capable of reaching 300 meters underwater. It is connected to the surface via a 400m neutrally buoyant tether cable, transmitting both power and data. Offering unparalleled maneuverability, autonomous navigation, and advanced imaging, it excels in challenging environments.

Product Images:





Latent Heat2Comfort Technologies Pvt Ltd

Founder Details: Dr. Satyanarayana Kuchibhatla

Challenge Category:

DISC – 7

Challenge Title:

Instant Cooling Vests for Firefighters

Sector of Innovation:

Composite Materials

Technology Used:

Instant Portable Non-electric cooling technology

Product Details:

Latent Heat2Comfort (H2C) Instant Cold Vest (ICV) regulates body temperature for Navy personnel in heat-stress environments. It is portable, requires no electricity, and features eight pockets with cooling inserts that activate by squeezing, ensuring rapid and efficient cooling.

Product Images:



Founder Details: Amarnadha Reddy & TS Ramu

Challenge Category:

DISC - 1

Challenge Title:

Development of 4G/LTE based Tactical local area network

Sector of Innovation:

Military Communications

Technology Used:

3GPP Standard protocol used for LTE Radio

Product Details:

Lekha's Vyapi LTE eNodeB is a military-grade solution tested with the Indian Navy. It supports tactical networks and features an interactive configuration tool, integrated GUI, and secure SNMPv3-based design for efficient network monitoring and management.

Product Images:



Founder Details: Srinivas M Reddi, Lt. Gen Vinay Shankar (Retd.) PVSM, AVSM, VSM

Challenge Category:

Open Challenge - 6.0

Challenge Title:

Next Generation File Transfer Solution Capable of Overcoming High Latencies and Packet Loss over limited bandwidth

Sector of Innovation:

Video Streaming on low bandwidth, high latency and lossy networks

Technology Used:

AI & ML, Cloud & P2P Integration

Product Details:

Vegazel is a next-gen file transfer solution, 30x faster than FTP, ensuring secure and reliable transfers across all file types and platforms. It features hot folder transfers, advanced scheduling, AES 256 encryption, CRC integrity checks, and detailed logging for seamless data management.

Product Images:





Founder Details: Lakshmi Vijay Ratnaparkhe, Shreyasi Sunil Hasabnis

Challenge Category:

DISC - 7

Challenge Title:

Lightweight filtration based breathing apparatus

Sector of Innovation:

Personal Protective Equipment (PPE)

Technology Used:

Powered Air Purifying Respirator, a battery-powered air respirator that filters particles and gases.

Product Details:

The Optrel PAPR (Powered Air Purifying Respirator) is a battery-powered respirator that filters particles, gases, and pathogens, providing enhanced protection and comfort. It includes a facepiece, breathing tube, blower, and filters, offering 40x more safety than FFP2 masks and 100% eye protection, ideal for seafarers.

Product Images:



Founder Details: Darshan Singh

Challenge Category:

DISC - 7

Challenge Title:

3D Forward Looking SONAR

Sector of Innovation:

SONAR

Technology Used:

Sound Navigation and Ranging in Real time underwater vessel

Product Details:

3D Forward Looking SONAR (PARTH FLS) operates at 200 kHz or 400 kHz, offering 110° horizontal and 24° vertical coverage. Its multibeam technology provides quick sonar image updates, ensuring cost-effectiveness and future upgrade potential for various marine applications.

Product Images:





Founder Details: Satheesh N, Mahadev H K

Challenge Category:

DISC - 7

Challenge Title:

GNSS based 3-D helo approach and landing aid for IN helicopters for assistance in approach on landing in bad weather/ reduced visibility/ night at sea states

Sector of Innovation:

Aviation and Defence Navigation systems

Technology Used:

C++, OpenGL, 3D visualisation, Embedded systems

Product Details:

PathFinder is a GNSS-based helicopter take-off and landing aid system for moving ships, improving safety during challenging sea states, poor visibility, and harsh weather. It combines ground and air-based GNSS technology to guide pilots from 15 nautical miles, ensuring precise, safe landings on small decks.

Product Images:



PARALLAX

Founder Details: Krupalu Mehta, Neha Thakkar**Challenge Category:**

DISC - 5

Challenge Title:

Virtual Reality and Artificial Intelligence based Operation and Maintenance Training Simulator for SU-30 MKI

Sector of Innovation:

Training Simulation, Design and R&D

Technology Used:

Virtual, Augmented and Mixed Reality

Product Details:

XR Maintenance Platform offers guided learning with step-by-step instructions and real-time feedback for skill mastery. Its intuitive authoring tool enables easy creation of training modules without coding. High-fidelity virtual environments and interactive machinery replicas provide realistic, immersive maintenance training.

Product Images:

Parallax Labs Pvt Ltd



Founder Details: Manish Srivastava, Sarthak Saksena

Challenge Category:

Open Challenge - 6.0

Challenge Title:

Material movement shifting onboard ship over hatch door coaming

Sector of Innovation:

Movement of materials in marine conditions

Technology Used:

Mechanics

Product Details:

System for “Material Movement Onboard Ship Over Hatch Door Coaming” consists of seven modular components for efficient horizontal and vertical material transfer in tight ship spaces. Made from carbon fiber and stainless steel, it offers durability, reliability, and easy storage and maintenance.

Product Images:



Founder Details: Sunil Gupta, Srinivasa Alluri

Challenge Category:

Open Challenge 2.0

Challenge Title:

Generation of Quantum Secure Keys between two nodes connected directly over 200Kms

Sector of Innovation:

Quantum Communications

Technology Used:

Quantum Key Distribution (QKD), DPS decoy algorithm for secure communication.

Product Details:

QNu Labs' **Armos** QKD system offers ultra-secure encryption by using quantum mechanics, making it resistant to both classical and quantum attacks. It supports scalable configurations and integrates easily with existing networks, providing future-proof security for industries like defence, and telecom.

Product Images:



Founder Details: Nagendra Prasad Kumble

Challenge Category:

DISC - 1

Challenge Title:

AI in Supply Chain Management and Logistics

Sector of Innovation:

AI, Deep Learning, Big Data Analytics, Data Science

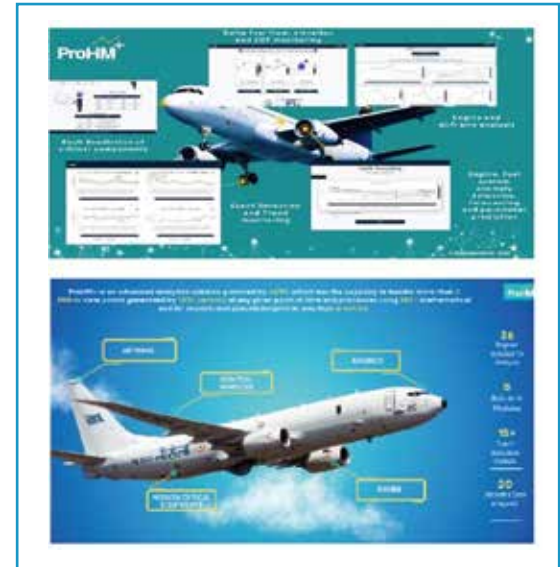
Technology Used:

AI/ML

Product Details:

ProHM+ is an AI/ML asset health monitoring tool that tracks parameters, detects anomalies, and predicts asset lifespan. It processes over 3 million data points from 180+ sensors, enabling predictive maintenance, minimizing downtime, and reducing costs by identifying potential issues early.

Product Images:



Founder Details: Avinash Manerahimatpurkar

Challenge Category:

DISC - 7

Challenge Title:

Multi-Sensor Monitoring of Machinery onboard submarine

Sector of Innovation:

Industrial IoT, Predictive Maintenance using AI

Technology Used:

Internet of Things, AI

Product Details:

This solution provides condition monitoring and predictive maintenance using AI to predict equipment failures. It features a dashboard for insights from vibration analysis, builds a health profile over six months, and processes various parameters to ensure reliability and timely interventions.

Product Images:



Founder Details: Aditya Nawab

Challenge Category:

DISC - 7

Challenge Title:

AI based collision avoidance system for unmanned vessels

Sector of Innovation:

Maritime Autonomy

Technology Used:

Internet of Things, AI

Product Details:

Voyager AI is revolutionizing the maritime industry with advanced technology, including IMO Degree 4 autonomy and edge processing. As India's first certified autonomous vessel, it sets new standards in safety and sustainability, showcasing the future of maritime operations and autonomy.

Product Images:



Founder Details: Capt. Nikunj Parashar, Mridul Babbar, Lakshay Dang

Challenge Category:

DISC - 7

Challenge Title:

Autonomous Weaponized Boat Swarm

Sector of Innovation:

Industry 4.0 (Robotics)

Technology Used:

Unmanned and autonomous solutions enhance maritime, aerial, and terrestrial security through the Self-Learning Command & Control Module for Navigation (GENISYS).

Product Details:

The Autonomous Weaponized Boat Swarms for the Indian Navy support naval and security missions, including ODA (Offshore Development Area) patrols, interdiction, surveillance etc. These unmanned surface vessels optimize low-intensity maritime operations, enhancing situational awareness and operational efficiency in complex environments.

Product Images:





Founder Details: Ahmed Shaikh Abdeally, Taher Ahmedbhai Calcuttawala, Aliasgar Calcuttawala

Challenge Category:

DISC - 1

Challenge Title:

Battery Powered Self Propelled Life Buoy

Sector of Innovation:

Marine Safety

Technology Used:

Dual jet Propulsion & battery tech

Product Details:

The Remote-Controlled Life Buoy, developed with India's Ministry of Defence, enhances water rescues with a 1 km remote range, dual jet propulsion, and a lightweight design. It operates for 40 minutes, recharges quickly, and is durable for both freshwater and saltwater use.

Product Images:



Founder Details: Dr. Vishwas Udpikar, Manoj Laxmeshwar, Girish Vyas

Challenge Category:

DISC – 3

Challenge Title:

To create a portable Spoof Emitter for surveillance and ground based air defence weapons.

Sector of Innovation:

Surveillance & counter measure, RADAR Signal spoofing.

Technology Used:

Spoofing & jamming, Signal generation, RADAR & Communication.

Product Details:

POSERAD-1.0 is a portable, power-efficient system that generates configurable RF emissions, mimicking main emitter signals. It allows user-defined pulse characteristics, including frequency, power, and duration, and can emit RF pulses in specified azimuth and elevation angles for targeted applications.

Product Images:



Founder Details: Karthikeyan Manoharan, Balasubramanian Manoharan

Challenge Category:

DISC - 9

Challenge Title:

Intelligent System for Identification of Phishing Emails, Fake Websites, and Sandboxing Targeted Entities

Sector of Innovation:

Cyber Security

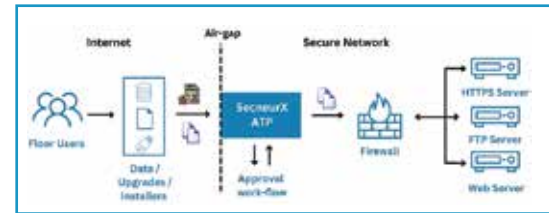
Technology Used:

Generative AI / Machine Learning

Product Details:

SecneurX Email Security uses AI-driven detection and behavioral analysis to combat advanced phishing and BEC (Business Email Compromise) attacks. It analyzes emails in real-time, detecting malicious links, fraudulent attachments, and deceptive content. With sandboxing, dynamic threat analysis, and anomaly detection, it prevents zero-day threats effectively.

Product Images:



Founder Details: Chethan Anand, Dr Sashank Dara

Challenge Category:

DISC - 9

Challenge Title:

Attack surface monitoring tool for continuous discovery, analysis, remediation and monitoring of cyber security vulnerabilities and potential attack vectors for inventory

Sector of Innovation:

Governance, Risk, and Compliance (GRC) Automation

Technology Used:

AI/ ML, Data analytics

Product Details:

Seconize's solution integrates Attack Surface Management (ASM) and Vulnerability Management for proactive cybersecurity. It continuously monitors digital assets, detects shadow IT, identifies attack vectors, and prioritizes vulnerabilities based on risk, providing actionable remediation to enhance security across an organization's entire attack surface.

Product Images:





Founder Details: Dr Prem Chand, Gopakumar Thekkedath, Dinakar Medavaram

Challenge Category:

DISC - 7

Challenge Title:

Hardware enforced solution against advanced, persistent and coordinated attacks which acts by executing a privilege greater than that of OS Kernel to prevent kernel mode malware.

Sector of Innovation:

Cyber Security, Kernel Protection, Hardware Security

Technology Used:

Hardware Enforced Safety and Security using security hypervisor

Product Details:

SecurWeave's CHES-P protects Linux systems from kernel-mode attacks using a patented secure hypervisor. It detects and prevents threats like code injection and privilege escalation. With integration, policy-driven architecture, and multi-level logging, it ensures a robust, non-bypassable security layer.

Product Images:





Founder Details: Anurag Rana

Challenge Category:

DISC - 5

Challenge Title:

Part Task Trainer for Mirage 2000 I/TI

Sector of Innovation:

Modeling and Simulation

Technology Used:

Virtual Reality, Flight Simulation, Real-time Networking

Product Details:

Threye Interactive's Part Task Trainers (PTTs) are compact, PC-based networked simulators for individual/group training in VR and Non-VR configurations, offering cost savings. Successfully trialed for Mirage-2000 I/TI in the IAF, they can scale across fixed-wing and rotary platforms.

Product Images:





Founder Details: Sai Teja Peddineni

Challenge Category:

DISC - 7

Challenge Title:

Moisture Wicking Hydrophobic Weapon Cover

Sector of Innovation:

Advanced Materials – Nanomaterials

Technology Used:

Computational Modeling, Advanced Manufacturing, and Precision Material Engineering

Product Details:

Moisture-Wicking Hydrophobic Weapon Cover is a flame-resistant, moisture-wicking fabric that reduces corrosion, optimizing costs and maintenance. It enhances equipment performance, minimizes downtime, and improves availability aboard naval vessels, ensuring greater efficiency during operational cycles.

Product Images:



**Veera Tactical
Dynamics Pvt Ltd**



Founder Details: Falgun Doshi

Challenge Category:

DISC - 7

Challenge Title:

Fire Suppressant material that can suppress fire in the initial stage only

Sector of Innovation:

Fire Safety and Emergency Response Technologies

Technology Used:

Firefighting Safety Equipments

Product Details:

A compact material in a sticker form for fire extinguishing. Once the fire comes in contact with the microcapsules it combusts emission of gas from the sticker. The gas ensures fire is extinguished. The gas causes least damage to the area affected by the fire. Can be customized according to the requirement of the client.

Product Images:



Founder Details: Basant Kumar Gupta, Irshad Khan, Abhishek Jain, Prasanna Shevare

Challenge Category:

DISC - 5

Challenge Title:

Precision Guidance Kit (PGK) for 81mm Mortar

Sector of Innovation:

Smart & Autonomous Munitions

Technology Used:

Rugged Electronics up to 17,000g loading, Aerodynamically Stable Design, GPS/IRNSS+INS for Navigation, Advanced guidance algorithms based on proportional navigation.

Product Details:

PGK is a 40mm retrofit solution that enhances mortar accuracy, enabling fire-and-forget capability and shoot-and-scoot tactics. It reduces rounds per target from 15 to 2, minimizes counter-battery detection, extends barrel life, and operates autonomously, reducing safe distance from 400m to 50m.

Product Images:



Founder Details: Mrutyunjay Hegde, Shruthi Dixit

Challenge Category:

DISC - 1

Challenge Title:

Remote pilot Aerial Vehicle

Sector of Innovation:

Unmanned Aerial Vehicle, Loitering Munition System

Technology Used:

Loitering munition systems capable to loiter upto 45+ mins with 1kg of warhead.

Product Details:

LM0 is a man-portable electric UAV designed for precision strikes and real-time reconnaissance. It delivers GPS-guided strikes with 2m CEP (Circular Error Probability) accuracy and features EO/IR cameras for day-night surveillance. Its modular 2.2m wingspan disassembles into six parts, fitting into two 30 kg backpacks. A parachute recovery system enables up to 10 reuse cycles, ensuring versatility and efficiency in modern combat.

Product Images:



Partner Incubators (PIs)



FITT, IIT-Delhi

FITT is an industrial interface organization established at the IIT-Delhi as a Registered Society on 9th July 1992. The mission of FITT is to be an effective Interface with Industry to foster, promote & sustain the commercialization of Science & Technology in the Institute for mutual benefit.

PI for both iDEX and ADITI Scheme



FSID – IISc, Bangalore, Karnataka

Foundation for Science, Innovation, and Development (FSID), was established by the Indian Institute of Science to harness the knowledge within IISc to help industry and society. FSID acts as an interface between the university and the rest of the world.

PI for both iDEX and ADITI Scheme



FORGE Coimbatore, Tamil Nadu

FORGE offers holistic incubation services covering innovation labs, incubation grants, product & business acceleration, and seed capital investment to transform innovative hardware products/systems into successful enterprises with potential for growth, impact, and profits.

PI for both iDEX and ADITI Scheme



IITM Incubation Cell, IIT Chennai, Tamil Nadu

IITMIC coordinates and leverages the synergies in various strands of excellence driving innovation entrepreneurship at IIT Madras, consisting of cutting-edge research, industrial interactions. India's first university-driven Research Park with focused incubation also in rural, social and industrial technologies.

Partner Incubators (PIs)



SIIC IIT Kanpur, Uttar Pradesh

The Start-up Incubation and Innovation Centre (SIIC), IIT Kanpur, is one of the oldest technology incubators, with a successful track record of exiting notable startups like Curadev Pharma, Geokno, and WeatherRisk Management among others.

PI for both iDEX and ADITI Scheme



SINE, IIT Mumbai, Maharashtra

Society for Innovation and Entrepreneurship (SINE), established in 2004 at IIT Bombay, is among the earliest incubators in academia with a proven track record of creating economic growth, strategic value, and social relevance. Over 140+ startups and 380+ innovators supported by SINE have created 3600+ jobs.

PI for both iDEX and ADITI Scheme



iTIC, IIT-Hyderabad, Telangana

IITH is known for its academic strength, research, publications, and proximity to IT and industrial hubs. The very foundation of IITH is based on research & innovation.

PI for both iDEX and ADITI Scheme



T-Hub, Hyderabad, Telangana

T-Hub is a unique public/private partnership between the government of Telangana, 3 of India's premier academic institutes (IIIT-H, ISB & NALSAR), and key private sector leaders. It stands at the intersection of the start-up, academic, corporate, research, and government sectors.

Partner Incubators (PIs)



Maker Village, Kochi, Kerala

Maker Village is the largest electronic hardware incubator and ESDM facility in the country, which is a pioneering startup initiative of MeitY, GoI with the IIIT-Trivandrum as the implementation agency and Kerala Startup Mission as the supporting partner.



TIDES, Uttarakhand

TIDES facilitates the incubation of new enterprises with innovative technologies by admitting them at its Incubation Centre and provides physical, technical, financial, and networking support and services.



(IITG-TIC), Guwahati, Assam

IITG-TIC is registered as a Society under the Registration of Societies Act XXI of 1860. Its goal is to encourage entrepreneurial initiatives amongst the faculty and alumni of the IITG community in particular and other State or Central Government Technical Institutions of the Northeast.



CIIE, IIM Ahmedabad, Gujarat

CIIE at IIMA helps entrepreneurs turn ideas into viable businesses. In partnership with their mentors, corporates, development agencies, IIMA community, and investors, CIIE cultivates a rare breed of entrepreneurs by incubating, accelerating, mentoring, and funding innovative startups.

Partner Incubators (PIs)



Venture Center, Maharashtra

Venture Center (registered service mark) is a non-profit company incorporated as Entrepreneurship Development Center hosted by CSIR-NCL, Pune, and the first incubator in CSIR. Its mission is to nucleate and nurture technology and knowledge-based enterprises in India.



Mach33.aero, Karnataka

mach33.aero is a multi-stage innovation curation and venture development platform for deep tech ventures in aerospace & defense to address commercial, environmental, and social challenges through the power of innovation and entrepreneurship to make India self-sustainable in these sectors of national strategic importance.



MaDeIT Innovation Foundation, Tamil Nadu

MaDeIT Innovation Foundation is a design-driven Technology Business Incubator promoted by the IIITDM, Kancheepuram, funded by the Ministry of Human Resource Development, Govt. of India.



MAGIC, Maharashtra

MAGIC is India's first Regional Industry Association-led Business Incubator & SME accelerator promoted by members of the Chamber Of Marathwada Industries & Agricultural (CMIA). MAGIC is a Not-For-Profit section 8 company, driving entrepreneurship and innovation, with a special focus on student & grassroots innovators.

Partner Incubators (PIs)



KIIT-Technology Business Incubator, Odisha

KIIT-TBI is a non-profit incubator set up in 2009 as the Sec (8) company at KIIT University, Odisha. It is generously supported by various Government bodies i.e. DST, BIRAC, MeitY, MSME, TDB, DFID, UK, and other industries to boost the entrepreneurial ecosystem in the country.



TBI KIET, Uttar Pradesh

TBI-KIET jointly established by DST-GoI & KIET Group of Institutions in 2007 under society registration act 1860. They are Supported by DST, Govt. of India, MEITY, Govt. of India, Startup In U.P., Govt. U.P. ,etc.



PSG-STEP, Tamil Nadu

The PSG-Science & Technology Entrepreneurial Park (PSG-STEP) was established in 1998 with support from the DST-GoI, to promote technology-based enterprise in the areas of Software, Electronic Products, Eco-friendly Textile Products, Bio-Technology, and Nano Technology.



Incubation Centre IIT Patna, Bihar

Incubation Centre IIT Patna is the ideal destination for startups taking early entrepreneurial steps in Electronic System Design and Manufacturing, with a focus on Defence and security applications, Medical Electronics, & Information and Communication Technology domains.

Partner Incubators (PIs)



PIIDS-TBI, BITS Pilani, Rajasthan

PIIDS-TBI initiatives are spread across incubation, acceleration, seed funding, and innovation. They aim to provide world-class support for DeepTech Innovations, bringing advanced tech labs, mentoring experts, product innovation, and acceleration programs.



AIC-RNTU Foundation, Madhya Pradesh

AIC-RNTU Foundation, supported by AIM, NITI Aayog is one of Central India's leading Incubator which has been working to support Start-ups across all the functions viz. funding, business & technical mentoring, handholding, industry connects, workshops, investor connects, competitions, etc.



SASTRA, Gujarat

SASTRA is India's first National Security Innovation Center which facilitates a three-way engagement between the Academia, Industry, and the Government for Innovation, Incubation and Technology Acceleration in the National Security domain.



CIIC, Tamil Nadu

CIIC is being supported by 7 Union Ministries and the Government of Tamil Nadu. CIIC acts as a "One Stop Shop – Startup Incubator" for startups that facilitate entrepreneurial & innovative ecosystems to all the stakeholders including the Students, faculty members, industries, investors, and society at large.

Partner Incubators (PIs)



Amity Technology Incubator (ATI), Uttar Pradesh

ATI takes pride in introducing the incubator as the most comprehensive ecosystem across the Entrepreneurial world with 360-degree support by way of Infrastructure, Mentoring, Human Resource Support, IPR protection, Funding Support, Technology, and product development support.



TBI NITC, Kerala

TBI-NITC, at NIT Calicut, was established in 2003-04 with the support of NSTEDB DST-Gol to develop technology-based entrepreneurs. TBI-NITC is a sector-agnostic incubator that supports ventures from the IT, Electronics, Electrical, Mechanical & agriculture sectors.



IIITB Innovation Centre, Karnataka

IIITB-IC takes pride in handholding innovators in their challenging phases of building thriving enterprises in the earliest - the pre-incubation and incubation stages. Their vision is to contribute to India's economic development & social well-being by improving the survival and growth of new tech ventures.



IIIT - Hyderabad Foundation, Telangana

CIE-IIITH was supported by DST (TBI) and MeitY (TIDE). Since 2015, has been financially self-supporting. Under the CIE umbrella, there are 3 active incubators: Deeptech, MedTech, and Social Tech.

Investments by iDEX Partners

INR
700 Cr
Investment
Pledged

INR
90 Cr +
Investments
Made by
Partners

14
Startups
Supported

31
Funding
Partners

iDEX Investor Hub (iiH) - Investor Pool



SIDBI-iDEX SEED Fund - PIs



Banks Onboarded



iDEX Team



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CAB Experiences, A unit of Meraki Communications Pvt Ltd

