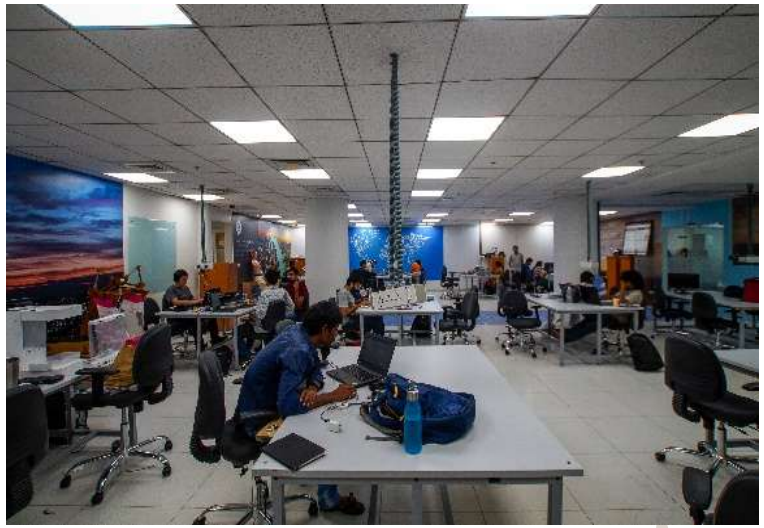
सत्यमेव जयते

Ministry of Electronics and Information Technology
Government of India

NASSCOM®
Center of Excellence-IoT & AI
A MeitY Initiative with Govt. of Karnataka, Haryana, Gujarat & AP



Innovate2Build

Largest Deep Tech Collaboration Platform

www.coe-iot.com

Deep-Tech Ecosystem for Innovation

Start-ups

- Access to Industry Use Cases
- Organize Investor Connect
- Promote Creation of IP
- Provide Mentorship Connect
- Access to Hardware Innovation Labs

Industry

- Peer Group Collaboration
- Proof of Concept, Experiment & Research
- Reduced Time to Market
- Build / Buy Strategy
- Agile Solutions for Real World Challenges

Academia & Research

- Better Students/ Digital Workforce
- Commercialization of Products/ Solutions
- Industry Oriented Research / Projects

Government

- Policy Discussion
- Sample Procurement agreements
- Sand Box environment for public data
- Solutions with Societal Impact
- Government Requirements

CoE-Overview

Fostering the sustained engagement between Enterprise and innovative technology

Overview

- Digital India initiative (MeitY + State)
- Largest deep tech innovation ecosystem of Industry, Startups, Academia & Government
- Innovation arm of NASSCOM serving the needs of Enterprise

Objective

- Building an Innovation ecosystem/community.
- Accelerate the implementation of solutions in adjacencies
- Focus on solving real-world challenges utilizing Deep Tech technologies

Startup Programs | **Enterprise Programs** | **Community Programs**

Bangalore | **Gurugram** | **Gandhinagar** | **Visakhapatnam**

5+ years| **4** centers with innovation labs | **1200+** Market opportunities provided |

220+ Industry use case Engaged

Experts in driving large collaborative Platforms

Affordable and Accessible Innovation Models

Access to vibrant Deep Tech Ecosystem

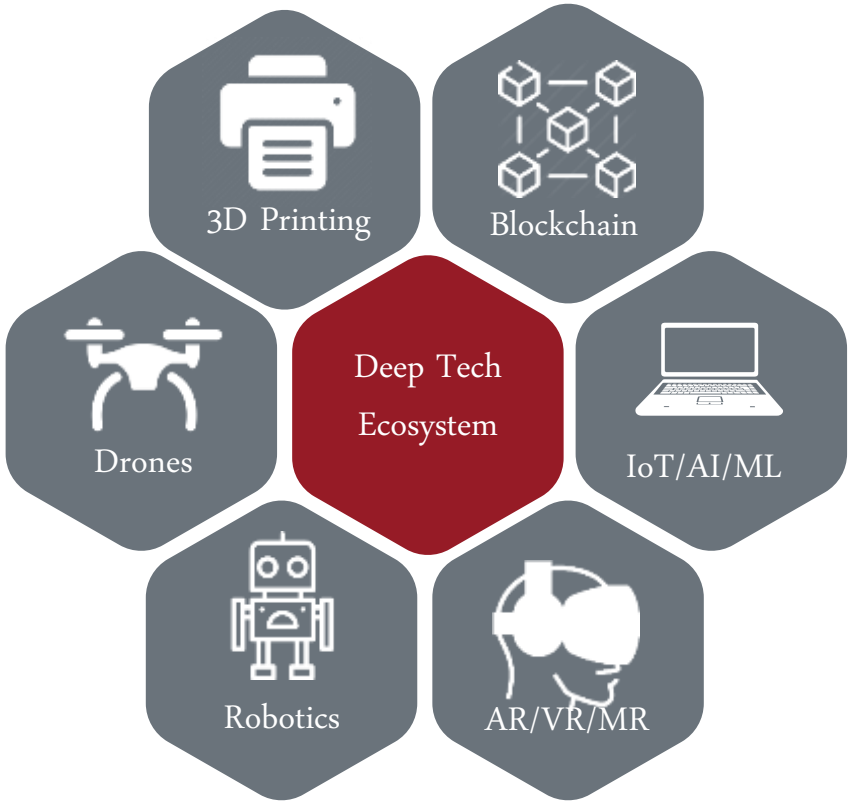
India's most vibrant Start-Up Ecosystem

2500+
Largest network of Deep Tech Startups

75+
No. of IPs Filed

250
Number of prototypes showcased

290+
Use cases engaged with startups



Med-Tech

Industry 4.0

Energy/RE/EV

Smart Cities

Some examples of the Prominent visitors at CoE

Sweden April 22

GoK Minister May 22

Morocco Minister Jun 22

Denmark Jun 22

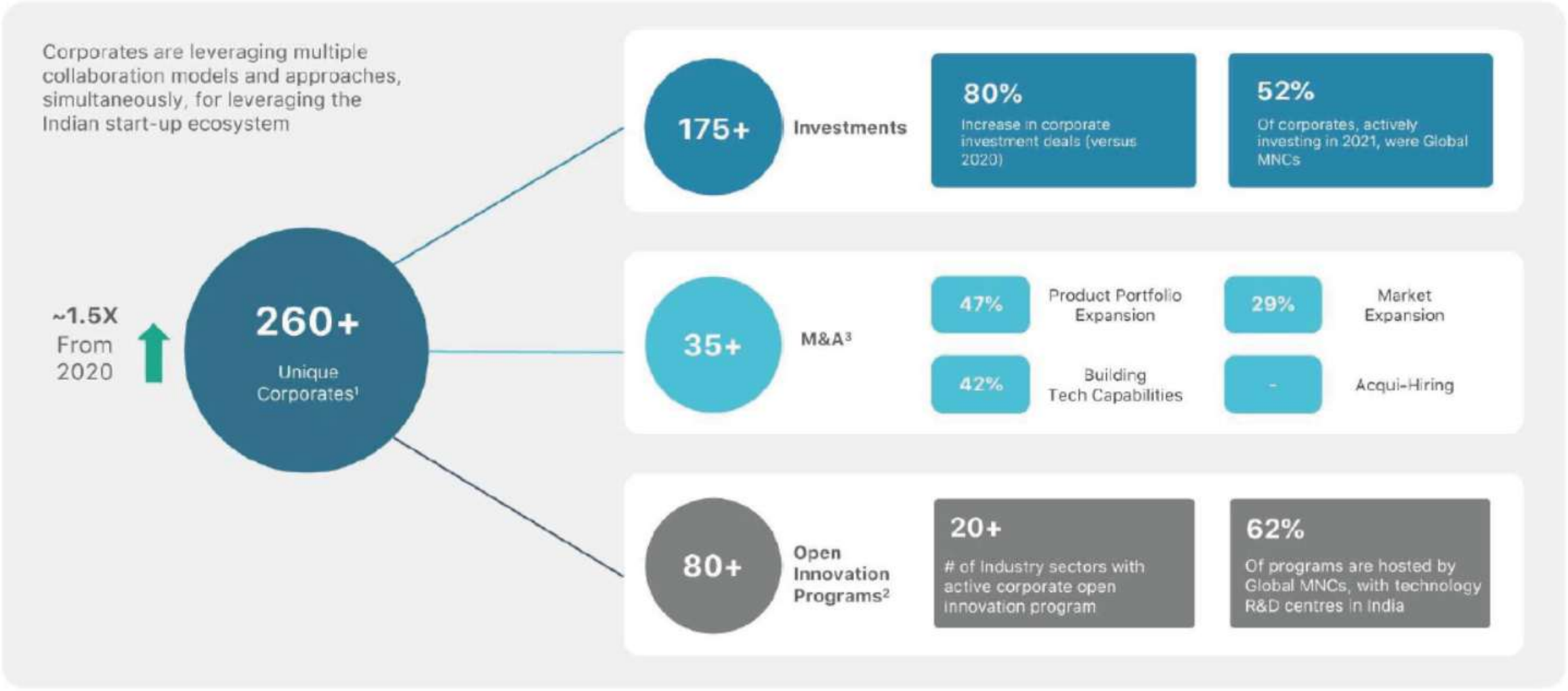
100+ IAS group July 22

German CG Nov 21

Japan JETRO Nov 21

Dutch Agri expert Sep 21

1.5X higher corporate participation in the year as compared to 2020



Corporate continue to register success stories via structured collaboration programs

Platform Evangelization

Corporates offer access to their platforms to start-ups

mastercard

Mastercard's Start Path program helps start-ups scale by helping them build and launch new products using Mastercard's Fintech tools and APIs.

EDISON

GE Healthcare's Edison X Platform allows healthcare start-ups to develop, deploy, manage, secure, and distribute new solutions

License or Vendor Agreement

Corporate leverages start-up for internal challenges or integration

SASTRA ROBOTICS + BOSCH

Sastra Robotics created various robotic solutions for automated functional test of physical devices

scapic + wipro

Scapic partnered with Wipro's consumer BU, to develop a SaaS solution that allows easy creation and management of 360-degree, 3D product visualization

Joint Go-To-Market

Corporates partner with start-ups to cross-sell solutions

SatSure + CISCO

SatSure, a provider of satellite-based data, leveraged Cisco's always on network connectivity and IoT infrastructure for remote crop monitoring services

Addverb Technologies + intel startup program

Addverb, a robotics company and provider of intra-logistics automation solutions, leverages Intel hardware platforms and software toolkits for its deployments

Co-Innovation

Start-ups and corporates collaborate to co-create new solutions

PayU + Kreditech

PayU and Kreditech together launched PayU Monedo, a cardless EMI system to finance online purchases of consumers

MAX LIFE INSURANCE

The engagement focused on co-innovating solutions pertaining to conversational ability powered by technologies such as AI.

Current Innovations in India

AI and cloud-based energy intelligence platforms

250 industrial clients are using Ecolibrium's SmartSense with an average energy savings of 15% to 20%

Prescinto increased generation for a 25 MW solar power project by 8.6% unlocking 431K $ in revenue

ADITYA BIRLA GROUP

Logic ladder's AI ML powered Sustainability Cloud is helping ABRL in managing emission, energy, effluents and achieve net zero

Noctua.AI has enabled Intelligent Inspection of Transmission Lines & EHV Towers by analysing visual or thermal data feed

Current Innovations in India

IoT based energy systems

*Larsen & Toubro (L&T) teams with **Kalki's SyncNet** solution to enhance its Advanced Metering Infrastructure (AMI) meter product*

***Zenatix** helped a global sporting goods retailers achieve its sustainability goals and comfortable customer experience*

***EI measure** helped AB carter India Pvt ltd monitoring electrical parameters and process status which ensures quality of surface coating*

***Zunpulse** has saved over 50 crores in electricity bills for their customers through IoT devices and has smartified 1,00,000 Indian households*

Current Innovations in India

Smart EV charging systems

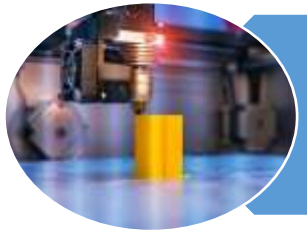
Battery Smart *announced it has completed 1 million swaps, from its 200+ swap stations. 4,000+ registered drivers and powered 30 million emission-free km*

Hero Electric Partners with ***Bolt*** *to Set Up 50,000 Charge Stations powered by AI and SaaS-enabled charge management platform*

BSES ties up with startup ***Kazam*** *to install around 30,000 EV charging stations in the in the next three years (subsidized)*

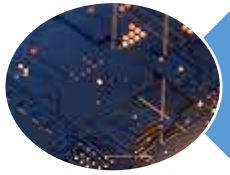
Hyderabad-based ***RACEnery****, has announced partnering with Hindustan Petroleum Corporation Limited (HPCL) to launch its first battery-swapping station in the city*

Digital twins for Power Grid



Blockchain in distributed energy resourse

Grid Integrated vehicles



Energy trading marketplace (power purchase agreement)

Tech pioneer: Level ten Energy(USA), Pexapark (SWISS) etc

3D printing in Energy

Tech Pioneers: Shell (UK), Oerlikon AM (Germany), etc

Advanced Energy Storage Systems (Pumped hydro, iron flow, Thermal, etc)

Tech Pioneers: Energy Vault (Swiss), Antora energy (USA),etc

Digital Twin for energy and utilities

Tech pioneers: Siemens, GE, etc

Current technological innovations in EV Charging

Battery Swapping

Indian Start-ups

Sun Mobility, Battery Smart, eChargeUp, etc

Success story

Lets Transport to adopts Sun mobility swapping tech by adding 2000 EV's in 7cities[1]

AI Charge Management Solutions (SaaS)

Indian Start-ups

Bolt, Flextron, etc

Success story

Hero Electric Partners with Bolt to Set Up 50,000 Charge Stations in India[2]

Charging Infra Aggregator

Indian Start-ups

Electricpe, EVplugs, etc

Success story

JSW Group partners ElectricPe to develop EV charging infra across their properties[3]

Wireless Charging

Pop-up Pavement Charging

Electrified Roads

Lamp Post Charging

Roadside Street Cabinets

Swappable Batteries

New generation Batteries ***(Graphene,Na-ion, Zinc Air, Li-S, organosilicon, etc)***

Indian Startups: Log 9 Materials, Gegadyne, IIT's etc

Wireless Charging

Startups: Ossia (USA), Witricity (USA), etc

Advanced Battery Management Systems

Indian Startups: Exponent, Ion energy, Matter, etc

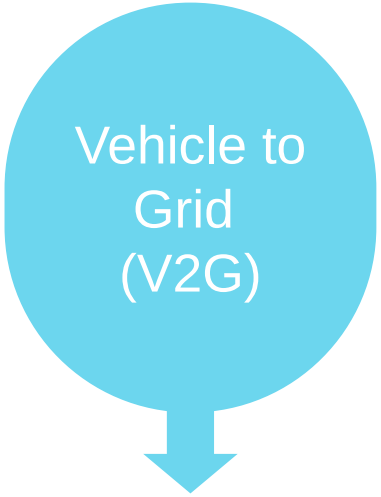
Hydrogen powered EV charging

Tech pioneers: Loop Energy (Canada), AFC energy (UK), ABB, etc

Mega Watt charging for trucks

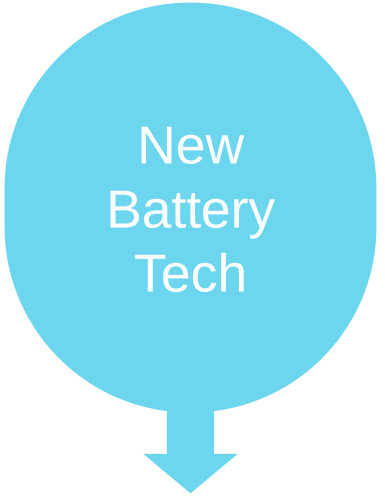
Tech Pioneers: CharIN (Norway), Scania (Sweden), Lilium (Germany), ABB,etc

DC Fast Chargers that can fill up your battery to 80% in just about a half-hour



V2G is a pivotal aspect of EV charging energy management, allowing the two-way energy interchange among the vehicle and the grid.

Wireless charging for vehicles works similarly to the wireless phone chargers, that is by applying the inductive charging technology.



Graphene-based technology EVs which need only 15 minutes to get charged. It is suspected of supplementing, and not replacing traditional EV batteries.

Thank you

- https://www.linkedin.com/in/navratank/
- Navratan@mail.nasscom.in