Deep Dive

December 2024

An E-Newsletter from Tamil Nadu Technology Hub

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Foreword

Dear Innovators & Stakeholders,

It gives me great pleasure to pen this foreword for Deep Dive, the monthly newsletter of iTNT Hub - a testament to the spirit of innovation and collaboration thriving within Tamil Nadu's Deep & Emerging technology ecosystem. As the President of the Indian STEP and Business Incubator Association (ISBA), I have had the privilege of witnessing the transformative role of iTNT Hub in shaping our innovation and entrepreneurial landscape.

Tamil Nadu, with its rich history of industrial prowess and academic excellence, has emerged as a leader in embracing next-generation technologies. The iTNT Hub stands at the forefront of this evolution, fostering a vibrant ecosystem where startups, academia, industry and organizations like ISBA converge to drive impactful innovation. ISBA is closely working with iTNT Hub to accelerate and transform early and growth stage startups.

From advancing cutting edge technologies to scaling AR/VR applications, iTNT Hub exemplifies the integration of cutting-edge technology with practical solutions for real-world challenges. I am glad to note that TBIs are collaborating with iTNT Hub for co-incubation, to extend the best of iTNT Hub's support to co-incubate and accelerate startups, at par with the support provided by the Hub for its Pathfinder incubatees and iAccelerate acceleration startups.

As we navigate this era of rapid technological transformation, the role of incubators and accelerators becomes even more critical. iTNT Hub's initiatives align perfectly with ISBA's vision of fostering innovation, inclusivity, and sustainability across India. Together, we are building a future where ideas are not only nurtured but scaled to create lasting impact.

This edition of Deep Dive highlights the remarkable progress being made across sectors, with a special focus on how Tamil Nadu is positioning itself as a global technology destination. Be it Chennai's emergence as an innovation hub, or pioneering work of local startups, the stories captured here reflect a state and ecosystem poised for extraordinary growth. I invite you to immerse yourself in this edition of Deep Dive.

Let it inspire you to explore new possibilities, forge meaningful collaborations, and contribute to the technological renaissance shaping Tamil Nadu and beyond.

With optimism and excitement for the future,

Warm Regards,

Dr. K. Suresh Kumar

President, Indian STEP and Business Incubator Association

iTNT Delegation at West Tech Fest, Australia

iTNT Hub made a significant presence at the West Tech Fest (Western Australia Technology & Innovation Festival) in Perth, from December 2 to 6. The Fest, now in its 13th year, is renowned as one of Perth's longest-running technology, innovation, and investment festivals. The focus was fostering global partnerships, exploring investment opportunities, and showcasing the vibrant startup ecosystem in Tamil Nadu.

The delegation was led by the Hon'ble Minister for Information Technology & Digital Services (IT & DS), Government of Tamil Nadu, Dr. Palanivel Thiaga Rajan. The minister and delegates engaged with key stakeholders in the Western Australian tech ecosystem. Forging global connections and showcasing Tamil Nadu's burgeoning startup community on an international stage.

Prior to West Tech Fest, Thiru. Kumar Jayant, I.A.S., Additional Chief Secretary to Government, IT & DS Department, iTNT Hub CEO Ms. Vanitha Venugopal engaged in a series of deliberations with key deep and emerging tech innovation ecosystem stakeholders in Sydney, Melbourne and Perth from 28th November 2024 to 1st December 2024.

The startup delegation included Mr. Suseendar Marimuthu, Founder of Blunav Technologies; Mr.Ananth Arumugasamy, CEO of CRUD Operations; Mr. Anand Vetrivel, Founder & CEO of Farmwise AI; and Mr. Mohana Krishnan Ethirajulu, Co-founder & CEO of Xera Robotics.
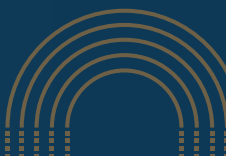
Minister Highlights TN's Tech Future!

The Hon'ble Minister Dr. Palanivel Thiaga Rajan, delivered a compelling address at the West Tech Fest in Western Australia. He positioned Tamil Nadu as a progressive technology innovation hub and emphasized the critical importance of global partnerships in driving technological advancement.

The Minister articulated a robust set of government support initiatives, outlining Tamil Nadu's startup policy framework and potential assistance mechanisms.

His approach was distinctly personalized, interacting individually with each startup representative, demonstrating a deep commitment to understanding the challenges and aspirations of emerging entrepreneurs.

Thiru. Kumar Jayant, I.A.S., and iTNT Hub CEO Ms. Vanitha Venugopal was present on the occasion.

Global Robotics & Automation Technology Showcase

The Hon'ble Minister Dr. Palanivel Thiaga Rajan, addressed the international audience at the Global Robotics and Automation Technology Showcase at the Australian Automation and Robotics Precinct. He highlighted the burgeoning collaboration between the innovative ecosystems of Tamil Nadu and Western Australia. Mr. Kumar Jayant, I.A.S., Additional Chief Secretary to Government, IT & DS Department, was present at this significant event.

The industry panel discussion, moderated by Mr. Chandra Sundareswaran from Curtin University, featured diverse perspectives from global technology leaders, including CEO of iTNT Hub Ms. Vanitha Venugopal. The panel discussion centred on bridging local, national, and global innovation networks, with panelists exploring strategies to support innovators in robotics and sustainable technologies.

Govt. of Western Australia

Thiru. Kumar Jayant, I.A.S., along with iTNT Hub CEO Ms. Vanitha Venugopal and team had a productive discussion with Ms. Jodi Cant, Director General of the Department of Finance, Government of Western Australia. Ms. Cant shared insights into the state's innovative financial initiatives, highlighting the modernization of government processes through technology-driven solutions, strategic reimagining of financial mechanisms, and the development of digital platforms to enhance efficiency and streamline transactions.

FundWA

Dr. Palanivel Thiaga Rajan, Thiru. Kumar Jayant, I.A.S., Ms. Vanitha Venugopal, and the team had a discussion with Dr. Murray, Venture Partner at FundWA. Dr. Murray elaborated on FundWA's recent recognition as a key recipient of the Western Australian Venture Capital Initiative, emphasizing its role in supporting local and international startups.

FundWA offers comprehensive guidance on Western Australian market dynamics, assisting Indian startups in navigating the business environment. iTNT Hub and FundWA exchanged interest in extending support to Deep & Emerging Tech startups.

JTSI

Thiru. Kumar Jayant, I.A.S., along with iTNT Hub CEO Ms. Vanitha Venugopal and team had a fruitful discussion with Ms. Linda Dawson, DDG – Industry, Science and Innovation, Department of Jobs, Trade, Science and Innovation (JTSI), Government of Western Australia and Ms.Ophelia Cutler, CEO, Spacecubed.

The Department supports research and development across government departments and attracts investment in Western Australian innovation. The meeting provided key understanding on the Government of Western Australia's support services and the Western Australia Strategic Plan for innovation & startups.

West Tech Coast

On the road towards leveraging technology to achieve sustainable development goals Thiru. Kumar Jayant, I.A.S., with iTNT Hub CEO Ms. Vanitha Venugopal and team took part in The West Tech Coast event hosted by the Government of Western Australia. It was a pivotal platform for sustainable technology and green innovation, bringing together thought leaders to discuss purpose-driven economic development.

Mr. Stephen Dawson, Minister for Emergency Services, Innovation and the Digital Economy, Medical Research, Western Australia, highlighted the importance of purposeful innovation, impact investing, and technological solutions for environmental challenges. The summit ultimately emphasized the need for collaborative approaches to technological innovation that prioritize sustainability and social impact.

SpaceCubed

iTNT Hub CEO Ms. Vanitha Venugopal and team had a discussion with Ms. Ophelia Cutler, CEO of Spacecubed, on a joint accelerator program alongside "Plus Eight", providing structured programs with world-class mentoring, growth networks and seed funding for both first-time entrepreneurs and seasoned executives.

iTNT Hub spoke about creating possibilities of Tamil Nadu startups interested in expanding to Western Australia. Both sides also discussed building a stronger culture of innovation and entrepreneurship in Western Australia that will help WA solve difficult problems and the impacts of disruption, and explore pathways into new markets.
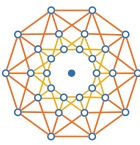
Outcome

The 4 startup delegation with iTNT Hub had a memorable run at West Tech Fest, generating nearly 40 B2B leads in total, initiating collaborations for pilot orders and prototype testing, and explored investment opportunities.

West Tech Fest in Pictures
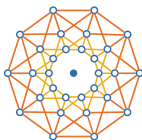
West Tech Fest in Pictures

Democratizing Deeptech: Accelerating Deeptech-Driven Innovation

iTNT Hub in collaboration with PSG STEP organized "Democratizing Deeptech: Accelerating Deeptech-Driven Innovation" sensitization programme for engineering colleges, incubators and innovators at PSG College of Technology, Coimbatore, on 10th December 2024. The programme was aimed at increasing stakeholders accessibility to iTNT Hub and promoting innovation state-wide by engaging with the Hub.

iTNT Hub encouraged researchers from engineering colleges and startups in the Deep and Emerging Tech sectors to get onboarded to the JIGSAW (Joint Innovation Gateway for Synergistic Startup-Academic-Industry-Investor Work) platform, to facilitate commercialisation of research works and patented technologies. The event studded with expert talks and interactions proved to be a platform that initiated collaborations to strengthen the deep and emerging tech ecosystem in western Tamil Nadu.

Thiru. Kumar Jayant, I.A.S., Additional Chief Secretary to Government, Information Technology & Digital Services Department, in his virtual Chief Guest address underscored the importance of addressing societal challenges with sustainable deeptech solutions. He emphasized that society is encountering new challenges that require innovative approaches to address them effectively.

He emphasized that deep tech extends beyond IT, influencing key sectors such as healthcare, energy, and agriculture by driving systemic transformations through technologies like AI, robotics, and blockchain. In healthcare, it improves diagnostics, enables predictive care, and increases accessibility, he said and added that in energy and agriculture, it addresses issues such as climate unpredictability and supply chain efficiency.

The Additional Chief Secretary also highlighted iTNT Hub's role in supporting such innovations, fostering startups, and promoting transformative technologies. He encouraged collaboration to develop impactful solutions for societal challenges, advancing industries and communities alike.

Ms. Vanitha Venugopal, CEO of iTNT Hub, in her keynote address highlighted iTNT Hub's role in fostering DeepTech synergies among startups, academia, and industries and the mission and objectives behind the outreach program. She dwelt in detail about iTNT Hub's support to startups in pre-incubation, incubation, acceleration, and go-to-market stages. She also elaborated how JIGSAW cultivates collaboration between industries, academia, and startups in the deep tech domain.

In his opening remarks, Dr. K. Suresh Kumar, Executive Director of PSG-STEP, emphasized the critical role of innovation and collaboration in advancing DeepTech and collaboration between the 25-year-old incubation centre with iTNT Hub to support new age companies in the target sectors. Dr. A. Prakashan, Principal, PSG College of Technology, reflected on the historical evolution of technology and emphasized its transformative impact across sectors like AI and aerospace.
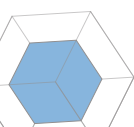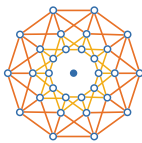
Highlighting pioneering contributions from institutions like ISRO and entrepreneurs bridging aerospace and healthcare, Dr. Prakashan encouraged stakeholders to explore opportunities for technological applications. He commended the Tamil Nadu Government's initiatives in skilling and entrepreneurship and wished everyone a fulfilling and insightful experience.
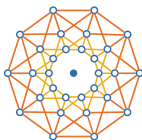

iTNT Hub team dived deep into JIGSAW portal's features, and its detailed workflow. They demonstrated how different stakeholders - like startups, researchers, students etc. - can sign up on www.itnthub.tn.gov.in. With a user-friendly dashboard, users can register, create profiles, and connect with others to co-create solutions, share expertise, and seek support. Jigsaw boasts 4,900+ researchers, 180+ startups, and 40+ investors, enabling seamless interaction and virtual meetings.

Experts Share Experiences

Prof. Satya Chakravarthy, Founder of deep-tech startups Agnikul Cosmos, The ePlane Company, and TuTr Hyperloop, delivered an inspiring virtual address, highlighting the transformative potential of deep-tech innovations. He shared the journeys of his ventures, with Agnikul advancing small satellite launch solutions, the ePlane Company revolutionizing urban mobility through eVTOL aircraft, and TuTr redefining high-speed transportation inspired by hyperloop technology. He emphasized the need for a robust deep-tech ecosystem driven by collaboration between startups, academia, and industry.
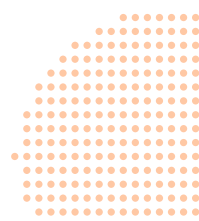
Dr. Vivekanand Kamaraj, Founder of Ardor Biomed India Pvt. Ltd., shared his journey of addressing critical medical challenges through innovative solutions. He recounted overcoming regulatory hurdles and breaking new ground in patient-specific implants, showcasing the potential of biomedical innovation. Dr. Kamaraj encouraged students to explore this field, emphasizing both its challenges and the immense satisfaction of creating solutions that make a tangible difference in people's lives.
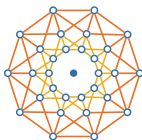
Ms. S.A. Udhayabharathi, Director of Finance, Administration, and Client Relations, Aerospace Engineers Private Limited, shared her experiences in fostering innovation and entrepreneurship, highlighting the importance of a strong support system for startups. She discussed strategies for creating sustainable business models and fostering collaborations. She also underscored the significance of partnerships between academia, industry, and innovation centers like iTNT Hub to cultivate a thriving ecosystem.

Mr. Solomon Jones, Founder & CEO, Terracarb Private Limited, highlighted how his deep-tech startup that specializes in graphene commercialization is addressing challenges in advanced materials, cost-efficiency and carbon footprints, by leveraging India's abundant graphite resources. Using proprietary technology, Terracarb produces ISO-certified graphene, achieving global recognition and supporting industries like construction by enhancing concrete properties and reducing CO_2 emissions, he said.

Ms. Niveditha Ramalingam, CXO and co-founder of All Real (Machenn) addressed the gathering, sharing insights drawn from her extensive expertise in technology, product development, marketing, and branding, she focuses on creating innovative solutions to enhance customer experiences. As a biomedical engineer turned entrepreneur, she leads All Real Man Innovations Pvt. Ltd., a deep-tech company specializing in extended reality for training, branding, and education. Her journey exemplifies passion for design, learning, and building impactful technologies.

Panel Discussion: Democratizing AI for Startups and SMEs


Ms. Vanitha Venugopal moderated a highly-engaging panel discussion on "Democratizing AI for Startups and SMEs". Dr. Vivekanand Kamaraj, Ms. S.A. Udhaya Bharathi, Mr. Solomon Jones, and Ms. Nivedita Ramalingam actively engaged as panelists in the session that fostered engaging conversations and valuable insights from these accomplished leaders.

The iTNT Hub CEO highlighted the transformative impact of AI in democratizing technology across industries, from corporate environments to manufacturing. The panel explored AI's evolution from a theoretical concept to a vital tool adopted by businesses of all sizes in sectors like material discovery and aerospace, where it has revolutionized research, optimized processes, and supported decision-making.

Startups benefit from partnerships with tech companies that provide access to costly AI infrastructure, and government, academia, and industry play crucial roles in fostering innovation through grants and collaborations. AI startups are leveraging industry-specific data to offer real-world solutions, attracting investments and driving growth. The panel emphasized that AI should be seen as a productivity tool, enabling more to be achieved with fewer resources while allowing employees to focus on innovation.

The discussion was followed by an interactive session with the participants raising questions to the panel on startup policies and AI's broader implications, emphasizing data's role as the foundation of AI advancements across sectors.
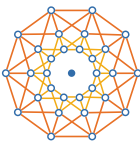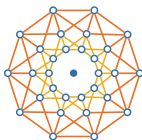
Charge Ahead - Accelerating smart solutions for tomorrow's mobility Innovate X - South Zone

InnovateX is a premier event dedicated to fostering innovation and collaboration in the transformative world of electrification, electric mobility, and connected automotive solutions. Bringing together industry experts, thought leaders, investors, and innovators. InnovateX serves as a catalyst for groundbreaking ideas and impactful change, driving advancements in the rapidly evolving electric automotive landscape.

The South Zone (Chennai Edition) of Innovate X was hosted by Mathworks, Meity Startup Hub (MSH) and Tamil Nadu Technology (iTNT) Hub at Anna Centenary Library on 17th December 2024. The event sported engaging keynote sessions, panel discussions, speed mentoring sessions for aspiring entrepreneurs and startups to engage with Industry experts, and networking opportunities.

The event commenced with an insightful presentation by Mr. Utkarsh Mathur, Senior Manager at MSH. Mr. Mathur shed light on MSH's multifaceted efforts to foster a thriving startup ecosystem in India. He emphasized key initiatives such as the India Semiconductor Mission, the MSH Partnership Pool, and strategic collaborations with industry giants like Samsung, Google, Meta, and Dell. Mr. Mathur also highlighted the significance of Startup Mahakumbh and India's active role in the G20 Digital Innovation Alliance.

In the introductory note Mr. R. Vijayalayan, Senior Manager, MathWorks, presented the ways and modes of MathWorks' tools being used in various sectors for precise operation of everyday activities. This provided a valuable overview of how MathWorks technology contributes to advancements in various fields. His presentation highlighted the importance of these tools in modern engineering and scientific practices.

Ms. Vanitha Venugopal, CEO of iTNT Hub, spoke of the Hub's robust ecosystem for emerging and deep-tech-oriented startups. As a pioneering initiative, iTNT is dedicated to driving advancements in sectors such as artificial intelligence, biotechnology, advanced manufacturing, climate tech and space technology.

By nurturing cutting-edge innovation, the Hub aims to position Tamil Nadu as a global leader in innovation and technology. "With its well-rounded support ecosystem, iTNT Hub is actively contributing to the growth of startups, in turn promoting innovation, economic development, and technological advancements in Tamil Nadu and beyond," she concluded.

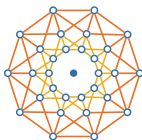# Powering the Future – The Electric Shift in Automotive

The keynote address by Mr. Shankar Venugopal, Vice President, Mahindra & Mahindra, charged the audience with a drive of optimism and intellectual clarity. Blending optimism with a practical roadmap for innovation in the rapidly evolving automotive landscape, he inspired the audience to see through his eyes a future where there will be Zero Emission, Zero accidents, Zero traffic Jams and Zero carbon footprint.

Mr. Shankar emphasized the convergence of industries such as automotive, infrastructure, and energy, highlighting how these domains must synergize to accelerate the electric shift. Central to his address was the integration of design thinking as a problem-solving approach, fostering innovation through empathy, ideation, and iterative prototyping.

He also introduced the audience to the Theory of Inventive Problem Solving (TRIZ) framework that equips startups and corporations with structured methodologies to tackle complex challenges and craft impactful solutions. Mr. Venugopal further explored how startups and large corporations can forge meaningful collaborations, terming it "Dancing with the Gorilla."

He underscored the mutual benefits of such partnerships, where startups bring agility and disruptive ideas, while large corporations provide resources and market access. "Start Small, Scale Fast," he concluded.

Building the EV Ecosystem of Tomorrow

A highlight of the day was the panel discussion on Building the EV Ecosystem of Tomorrow, moderated by Mr. Sanjay Gopinath, Head of Marketing and Communications, MathWorks. The discussion had active engagement from Prof. Satya Chakravarthy, Aerospace Engineering, IITM and Founder of The ePlane Company; Mr. Arthi Sivakumar, Delivery Manager – ADAS Modeling & Simulation, Ford Motor Company; and Mr. Dinesh Arjun, Co-Founder and CEO of Raptee Energy.
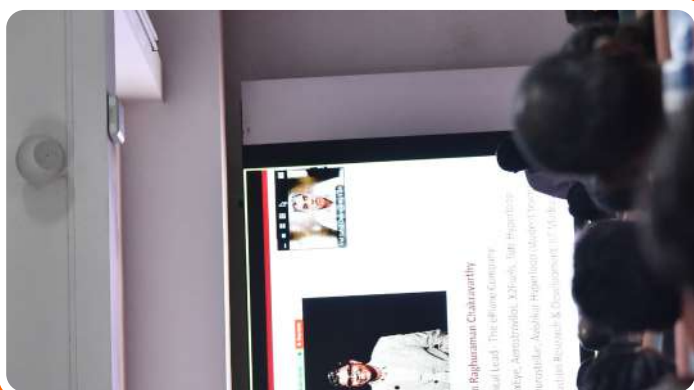
Prof. Satya Chakravarthy shared critical insights, emphasizing the irreplaceable role of analysis in shaping the future of electric mobility. The EV ecosystem is a complex and interdependent network of technologies, markets, and regulations. To navigate this complexity, startups and innovators must ground their efforts in thorough research and data-driven insights. "There is no substitute for analysis," he remarked.

He pointed out that startups need a comprehensive suite of tools to accelerate their journey from concept to market. A key takeaway from Prof. Chakravarthy's address was the importance of beginning any innovation with a clear problem definition. He advised startups to resist the temptation to jump to solutions without first identifying the problem they aim to solve.
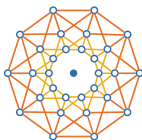
"Start with a problem definition," he urged, "and find out who cares about the problem." Understanding the needs and motivations of stakeholders—whether they are individual users, businesses, corporates or government bodies.

Ms. Arthi Sivakumar brought forth invaluable insights into the role of simulation and validation in advancing automotive technologies. The Advanced Driver Assistance Systems (ADAS) modeling and simulation expert highlighted critical strategies for enhancing product development and accelerating time-to-market for innovative mobility solutions.

She emphasized the transformative potential of simulation in modern automotive product development. "Simulation helps to get to market faster," she stated, underlining how virtual environments enable engineers to test designs and functionalities comprehensively before moving to physical prototypes. She stressed on selecting the right set of tools to ensure robust and reliable systems.

Mr. Dinesh Arjun shared valuable perspectives on entrepreneurship and the automotive industry. He emphasized that automobiles are often an emotional purchase, with consumers investing significant resources when buying a bike or car. This emotional connection underscores the importance of understanding user needs and aspirations during product development.

He highlighted the necessity of design thinking in creating products that resonate with customers, urging startups to adopt a user-centric approach that prioritizes innovation and functionality. Discussing investments, Mr. Arjun stressed the need to be strategic in bringing in funding.

"You have to be wise about how you bring investments into your startup," he remarked, adding that investors should not only provide capital but also enhance the morale and confidence of your team. The right investor, he explained, can act as a catalyst for both financial and psychological growth within the organization, driving the startup towards long-term success.

The panel discussion and presentations was followed by a Speed Mentoring session by Mentors from MathWorks and industry experts from companies like Mahindra, Ford, and Simpson.

What Brewing @ iTNT?

LoI with Rutgers to Foster DeepTech Innovation!

To foster innovation in the deep technology sector and create collaboration opportunities for both institutions, including research and development, academic research, and startup entrepreneurship, a Letter of Interest (LoI) was exchanged between Tamil Nadu Technology (iTNT) Hub and Rutgers, the State University of New Jersey at iTNT Hub on 11th November, 2024.

Ms. Vanitha Venugopal, iTNT Hub CEO, and Mr. Bill Noonan, Chief Business Development Officer, Choose New Jersey, exchanged the LoI in the presence of Thiru. Kumar Jayant, I.A.S., Additional Chief Secretary to the Government, Information Technology & Digital Services Department, Government of Tamil Nadu, and Mr. Christopher W. Hodges, Consul General, U.S. Consulate General in Chennai, India.

Nitto Denko Delegation

iTNT Hub on 20th December 2024 hosted delegates from Nitto Denko Corporation including Mr. Masuda Ryota, President of Nitto Denko Asia Technical Center; Mr. Kumar Vedantham, Senior Manager - Clinical Innovation and compliance; Ms. Amornsri Khitwongwattana, Senior Manager - Engineering; Mr. Ashish Kansak, India Manager - Business Development; Mr. Otsubo Hideyuki, Business Development Manager. Ms. Vanitha Venugopal, CEO of iTNT Hub, provided an overview of iTNT Hub's mission and ecosystem, focusing on its role in fostering innovation and supporting startup growth.

The delegates were introduced to the iAccelerate framework, designed to propel startups through mentorship, resources, and tailored support. The discussion covered iTNT Hub's focus domains, highlighting areas such as technology, sustainability, and health, where the Hub seeks to make a significant impact. Attendees had the opportunity to meet several portfolio startups, learning about their progress and innovations. Finally, potential joint programs were discussed, with an emphasis on collaboration opportunities that could leverage iTNT Hub's ecosystem to support mutual growth and innovation.

Deep Tech Roundtable

Thiru. Kumar Jayant, I.A.S., Additional Chief Secretary to Government, Information Technology and Digital Services Department chaired a Deep Tech Policy Roundtable with US Corporates from the American Chamber of Commerce in India (AMCHAM India) at Tamil Nadu Technology (iTNT) Hub, on 13th December 2024.

iTNT Hub Chief Executive Officer Ms. Vanitha Venugopal and team participated in the discussion where inputs were gathered to draft the State Deep Tech Policy. The discussion was aimed at sharing valuable insights on futuristic global best practices that would make the policy holistic.
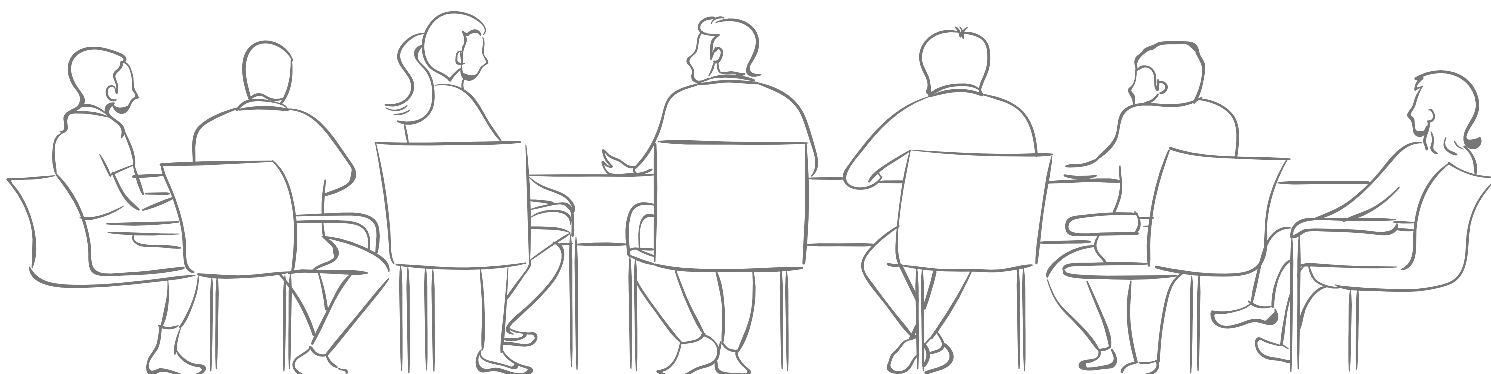
Taiwan Ministry of Digital Affairs Delegation

On 2nd December 2024 iTNT Hub hosted delegates from the Taiwan Ministry of Digital Affairs and Taipei Computer Association, including Mr. Yueh-sen Wu, Director of the Policy Planning Division at the Administration for Digital Industries; Ms. Jill Chang, Project Manager and Ms. Iris Chang, Business Strategy Specialist. Accompanying them were Ms. Woan-yuh Tsou and Ms. Sneha Grace Thomas, Assistant Professors at the Taiwan Education Center and Saintgits College of Engineering, along with Ms. Wan-Chin Chien, a Mandarin Language Teacher at the Taiwan Education Center.

The delegation engaged in mutual discussions with senior iTNT Hub representatives aimed at fostering collaboration between innovation ecosystems in the two regions. The discussions focused on initiatives such as Market Access and Soft-Landing Programs, the establishment of Academia-Industry Training Centers, and the organization of joint innovation challenges.

Beacon Cohort 3

Cohort 3 of BEACON, iTNT Hub's bootcamp for early-stage deep and emerging tech startups and researchers culminated in December 2024 in an enriching journey filled with expert-led sessions designed to empower aspiring entrepreneurs.
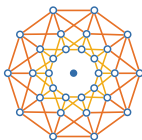
Over a period of four weeks, participants explored key aspects of startup success, including crafting value propositions, competitive analysis, rapid prototyping, and the art of pitching. The program also delved into branding strategies and design principles, providing a holistic toolkit for navigating the startup ecosystem.

Week 1

Mr. A.J. Balasubramanian, Director of Agilix Health Pvt. Ltd. and noted startup ecosystem enabler handled a session on "Value Proposition and Revenue Streams". He shared his wealth of experience with the aspiring entrepreneurs, providing invaluable insights into crafting compelling value propositions and identifying sustainable revenue streams. His expert guidance empowered startups to refine their business models and scale better heights.

Mr. Madhanagopal, CoE Additive Manufacturing, Sathyabama Institute of Science and Technology, shed light on the "Power of Rapid Prototyping Techniques and Design Sprints", emphasizing their role in accelerating product development and enhancing user experience.

Mr. Pradeep Kumar, Vice President Strategy, Broadridge India & Chevening Research, Science, and Innovation Leadership (CRISP) Fellow, University of Oxford, shared insights on conducting thorough competitive analysis and implementing effective positioning strategies to gain a competitive edge in the market. His expertise helped startups differentiate themselves and gain market competency.

The final leg of the Beacon 3 bootcamp kicked off with a deep dive into the "Art of Pitching" by Dr. Sridevi Arunachalam, Founder, Indo UAE Economic Chamber of Commerce. The session focused on crafting compelling pitches that resonate with investors and industry experts alike. Participants honed their storytelling skills, learned to articulate their value proposition effectively, and practiced delivering mock pitches and obtained valuable feedback.

The final leg concluded with a session on "Branding and Design" by Mr. Senthil Kumar, Founder & Consultant - Reachwell Brand Consulting. Participants gained valuable insights into creating strong brand identities and visually appealing designs to elevate their startup's market presence.

Beacon Cohort 3 concluded with a series of insightful sessions that equipped aspiring entrepreneurs with the essential tools to navigate the complex startup landscape. From refining value propositions and understanding competitive dynamics to mastering the art of pitching and crafting compelling brand identities, the program provided a comprehensive toolkit. By leveraging the expertise of industry leaders and seasoned professionals, participants gained invaluable knowledge and practical strategies to launch and scale their ventures.

Virtual Mentor Meet

iTNT Hub on 3rd December 2024 hosted a Virtual Mentor Meet on "Semiconductor Technology and Electronics" to help startups navigate their entrepreneurial journey by engaging in personalised 1:1 sessions with a subject matter expert, for tailored insights to tackle their unique challenges. The mentor for this session was Dr. Karthik Sankaran, Professor of Practice, Indian Institute of Information Technology (IIIT) Dharwad & Former CEO of Deshpande Startups.

Dr. Karthik Sankaran advised a healthcare robotics startup to identify market segments, validate the product with hospital decision-makers, and navigate EMC testing and certification. He also offered assistance by connecting to an experienced electronics engineer and resources for certification. The meeting concluded with encouragement and plans for ongoing support.

For a startup in the high rise construction segment, Dr. Karthick Sankaran suggested a semi-automated approach, combining 80% automation with 20% manual control. He advised the founder to focus on core competencies before expanding into a new range of services and to rework their pricing strategy. The participant startup mentees found the virtual meet of great value and that they would implement the strategies suggested by the mentor.

Stay tuned for updates on the upcoming virtual mentor meets of iTNT Hub and get connected with mentors.
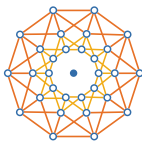
Virtual Pitch Fest
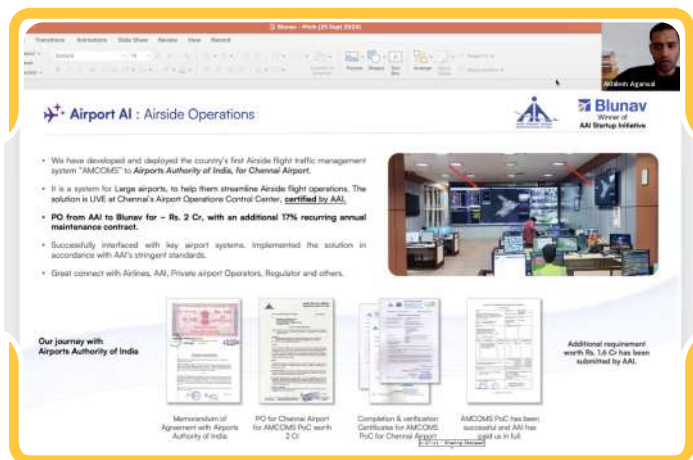
iTNT Hub conducted a series of dynamic startup pitching sessions for the Hub's PATHFINDER incubation and iAccelerate acceleration portfolio startups on 12th & 18th December 2024. It offered promising ventures the opportunity to present their innovative ideas to investors. In the pitching session on 12th December, startups pitched their innovations to Mr. Akhilesh Agarwal of Blume Ventures.

In the subsequent pitching session on 18th December, startups pitched before Ms. Amanda Sequeira of Ankur Capital. The pitching session served as a valuable learning experience for all involved. The feedback and insights shared by the investors provided startups with actionable advice to refine their strategies and strengthen their value propositions to raise investment.

Tech Transfer Webinar
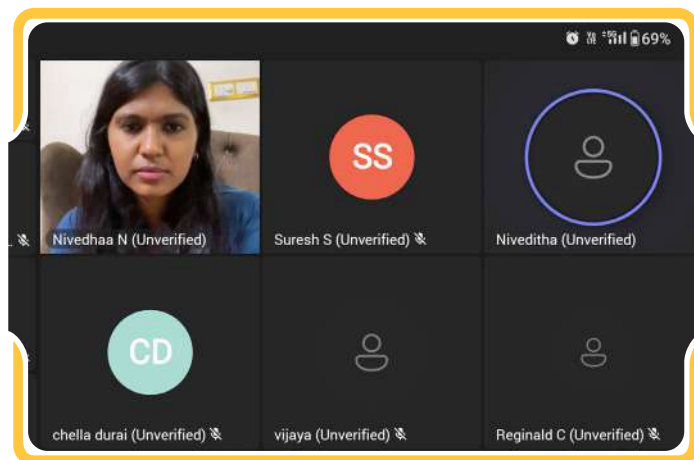
A Webinar hosted by iTNT hub and presented by Ms. Nivedhaa an intellectual property rights attorney on 13th December 2025 provided key insights on Intellectual Property Rights and Technology Transfer and the multifaceted world of IPR and its critical role in facilitating innovation and commercialization. Ms. Nivedhaa elaborated how IP plays a pivotal role in translating research into real-world applications.

IP serves as a bridge in this process, fostering collaboration between researchers and industries, she said. The webinar also elaborated on the Types of IPR and the processes involved in filing for Patents, Trademarks, Copyrights, Design and Trade Secrets. A significant discussion point during the webinar was the emerging challenge of patenting AI-generated inventions.

As artificial intelligence increasingly contributes to innovation, questions about authorship, ownership, and the patentability of such creations have gained prominence. Case studies were presented to give clarity to the participants. The webinar underscored the indispensable role of IPR in innovation and technology transfer. The insights empowered inventors, researchers, and entrepreneurs to navigate the complexities of IP management.

iAccelerate Cohort 1.0
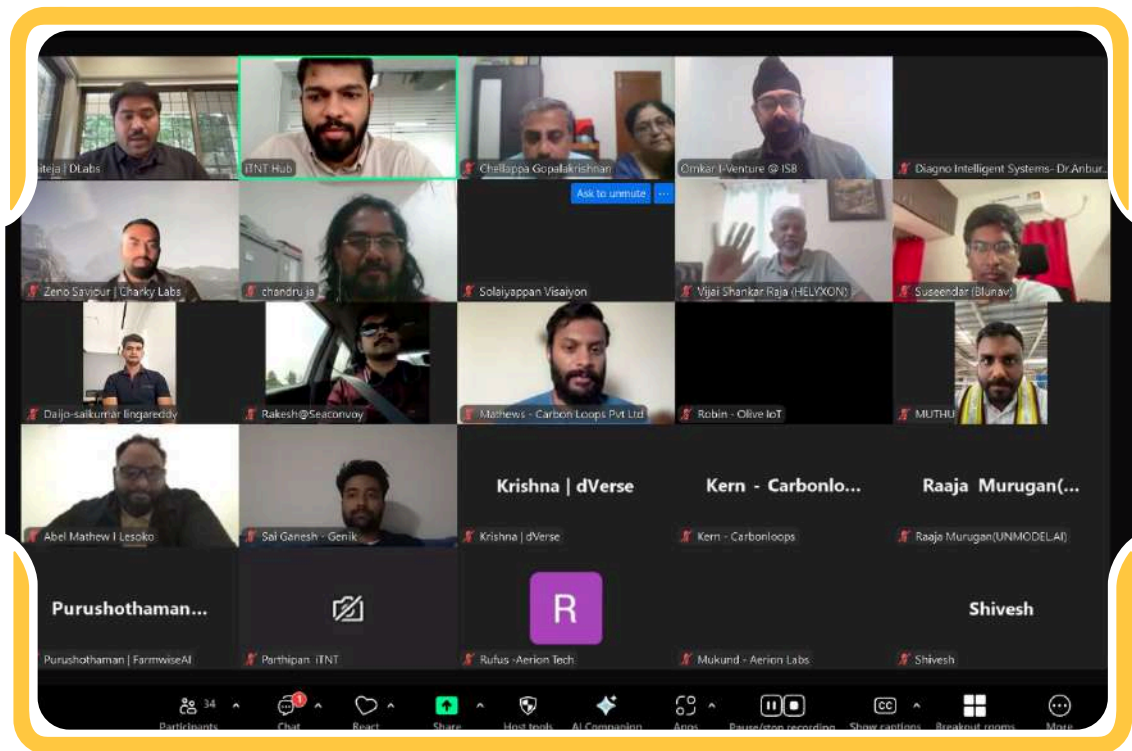
By Tamilnadu Technology Hub

iAccelerate, iTNT Hub's acceleration program, is an intensive catalytic cohort to catapult early-stage startups to scaleup and emerge as successful ventures. Focusing on startups at TRL 5 and above, iAccelerate provides comprehensive support for product validation, market analysis, fundraising, and market access.

Launched by the Hon'ble Minister for Information Technology and Digital Services Dr. Palanivel Thiaga Rajan, the 1st Cohort started in December 2024 with an orientation programme by iTNT Hub and the cohort knowledge partners DLabs.

The orientation started with a brief introduction to the program structure and various interventions that will take place in the weeks to come.

The program will help startups with business model refinement, scaling, and investment readiness. It comes with a startup toolkit, loaded with benefits to supercharge the startups with renewed energy, expert mentorship and fresh perspectives. Stay tuned for interesting updates on the growth trajectory of the iAccelerate startups.

Fostering Synergies Through Academia-Industry Collaboration

iTNT Hub hosted a virtual sensitization program on 24th December 2024 for engineering colleges in the Coimbatore region. The session brought together 52 principals, and heads of departments and distinguished professors. The iTNT Hub team provided an insightful overview of the Hub's dedication to advancing deep-tech innovation across cutting-edge domains such as AI, IoT, robotics, space tech and climate tech.

The sensitization, and the interactive session that followed, illuminated the myriad opportunities for collaboration between iTNT Hub and academic institutions, emphasizing the seamless process of formalizing partnerships through MoU. The discussion underscored the essential role of faculty in fostering enduring, innovative solutions, setting the stage for meaningful collaboration.

Founder Stories @ iTNT hub
Krishna Thiruvenkadam: dVerse Technologies

There are many who travel the path paved and traversed by the multitudes to reach the destinations of their desire, but a fraction of our humanity discover uncharted places and create a path that will serve as a passage of light for years to come.

Mr. Krishna Thiruvengadam the founder with co-founder Mr. Raakesh Madhavan of dVerse technologies - an iAccelerate portfolio startup of iTNT Hub - have developed CuriO, a unique and affordable refreshable tactile tablet, enables visually impaired students and professionals access digital graph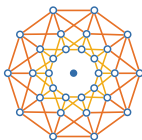ics and text through touch and audio feedback. Currently, the only option they have to access graphics content such as images, graphs, charts, maps is Alt- text (Alternative text) which is essentially a description of an image that a screen reader can read out. But it doesn't allow users to interact with various parts of the image and get to understand the specifics.

Currently, the only option they have to access graphics content such as images, graphs, charts, maps is Alt- text (Alternative text) which is essentially a description of an image that a screen reader can read out. But it doesn't allow users to interact with various parts of the image and get to understand the specifics.

Imagine, a visually impaired senior sales manager who needs to analyse graphs in reports to understand the past year's sales patterns to arrive at inferences and make necessary changes in the sales strategy.

The only way to do it now is to ask an opinion from a sighted colleague or listen to thousands of rows of sales data in a table, and mentally map the patterns, before arriving at the closest inference. This is not just time consuming and challenging but also extremely frustrating.

CuriO, instantly converts the visual graph in the report into a tactile graph by raising hundreds of pins sequentially to form a graph. The finger tracking system reads out the data point from exactly where you touch the graph, empowering you to make inferences on your own, independently. Similarly, students who otherwise omit content in STEM due to its visual nature, like geometry and trigonometry in Math, biology, physics in sciences, can now access instantaneous tactile diagrams with CuriO.

Mr. Krishna, a Masters in Integrated Product design from Delft University of Technology, Netherlands, has quite a few other commendable inventions to his credit. He has worked extensively in Rural Villages of India, inspiring children and youth to innovate and come up with solutions for their day-to-day problems while he was in Lobhi village, Maharashtra as a Fellow for 13 months.

Krishna's drive to innovate started right from his Undergrad years. Some of his notable inventions include:

💡 **High Efficiency Oxygen Concentrator:** Life saving oxygen concentrators capable of generating 96.5% pure oxygen at a capacity of 12 Litres per minute, with in-built variable oxygen control mechanism, developed within 45 days in association with Makers Asylum during the second wave of COVID-19 pandemic in India

💡 **GoSafe Wearable:** A safety wearable with optical incapacitation technology, capable of temporarily blinding assailants, improving the way women commute

💡 **Excelscope:** An AI- based automated diagnostic tool for Malaria, to reduce workload for healthcare workers at Primary health centres in developing countries

💡 **UVfy:** A Computer Vision (AI) based Autonomous UV sterilizer for elevators and other indoor spaces with high traffic of people

💡 **Automated Pomegranate Aril Extractor:** A fully automated equipment to extract pomegranate arils (edible parts) with the capacity of 200kg/hr with >1% mechanical damage

💡 **Off-Grid Rice Grader:** Tool to clean rice grains faster with less effort, saving rural women from everyday drudgery
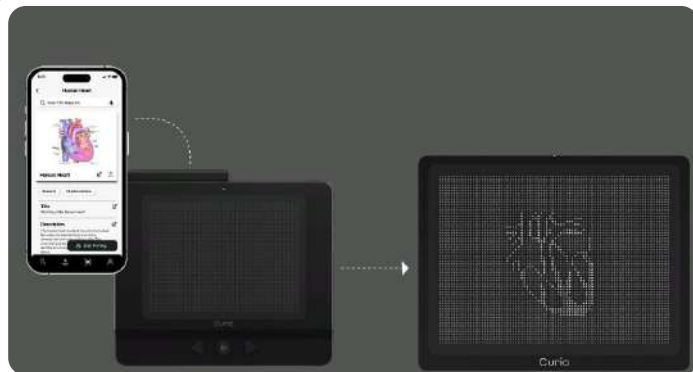
Mr. Krishna's ability to identify pressing societal challenges and devise practical, technology-driven solutions reflects his commitment to creating a better world. His inventions, ranging from tools that alleviate the physical labor of rural women to life-saving medical devices and personal safety technologies, demonstrate a rare combination of empathy, ingenuity, and technical expertise.

Through his work, Mr. Krishna has shown how innovation can bridge the gap between technology and social impact. His contributions have not only addressed immediate problems but have also paved the way for sustainable and scalable solutions, impacting countless lives across diverse communities.
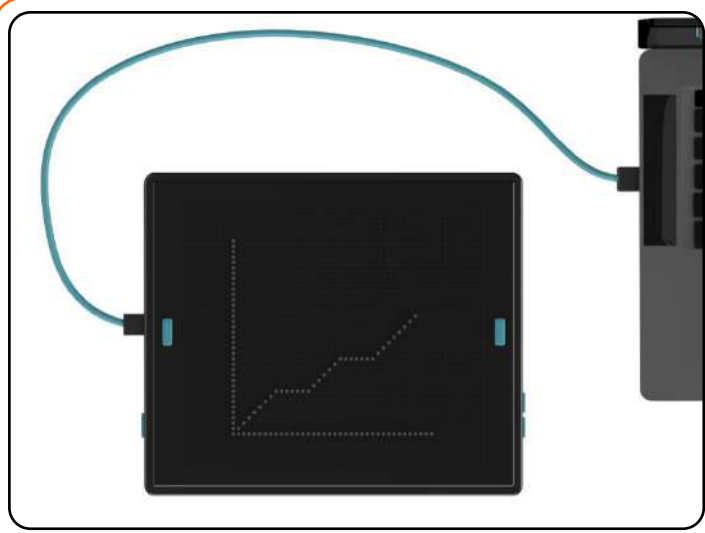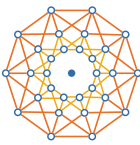
Founder Stories @ iTNT Hub
# Iyyapan Madaswamy: Imrobonix

The journey of Imrobonix, took root with a real life problem highlighted by a renowned surgeon Dr. Palani from Tenkasi, Tamil Nadu. The doctor shared with Mr. Iyyappan difficulty operating an existing minimally invasive tool. Mr. Iyyappan the founder of Imrobonix, a Ph.D. holder in Medical Robotics along with his team analyzed various existing devices used for high precision surgery.

In conventional existing manual devices, the user is unable to control the amount of pressure that should be delivered to the gripper for closure movement. After analyzing the technical problem in a manually controllable MIS tool and high cost robotic systems, they decided to design and manufacture a multifunctional high-precision, bio-medical device developed entirely in Tamil Nadu.

After arduous R&D and careful design, this iTNT Hub's PATHFINDER incubated startup developed "Surgikot", a first-of-its-kind thumb-controlled, robotic surgical device, with functions mimicking the human hand. Surgikot uses thumb controls for maneuvering and performing advanced surgical procedures. This movement is designed for ease of operation to function in direct alignment to the hand gestures of the surgeon.
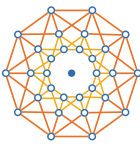
The most novel feature is thumb control analogue ball movement for moving the grippers, which falls back to the default position with the help of the pre-programmed switch. The device also comes with bipolar and monopolar features. The overall functional design is very user friendly, high precision and most efficient ergonomics is achieved during advanced surgical procedures.

In the fast moving world where healthcare professionals are looking for ways to implement procedures to be more cost-effective and operate with utmost precision, Imrobonix is creating a new wave by offering ways to navigate challenges which will elevate the man machine connection to a greater degree in the world of Robotics and Artificial Intelligence.

Imrobonix stands as a shining beacon of innovation, charting a bold course towards a future where cutting-edge medical robotic equipment is not only developed but entirely manufactured in Tamil Nadu. With a vision deeply rooted in excellence, Imrobonix is shaping a legacy of technological advancement and self-reliance, exemplifying the true spirit of the "Make in India" initiative.
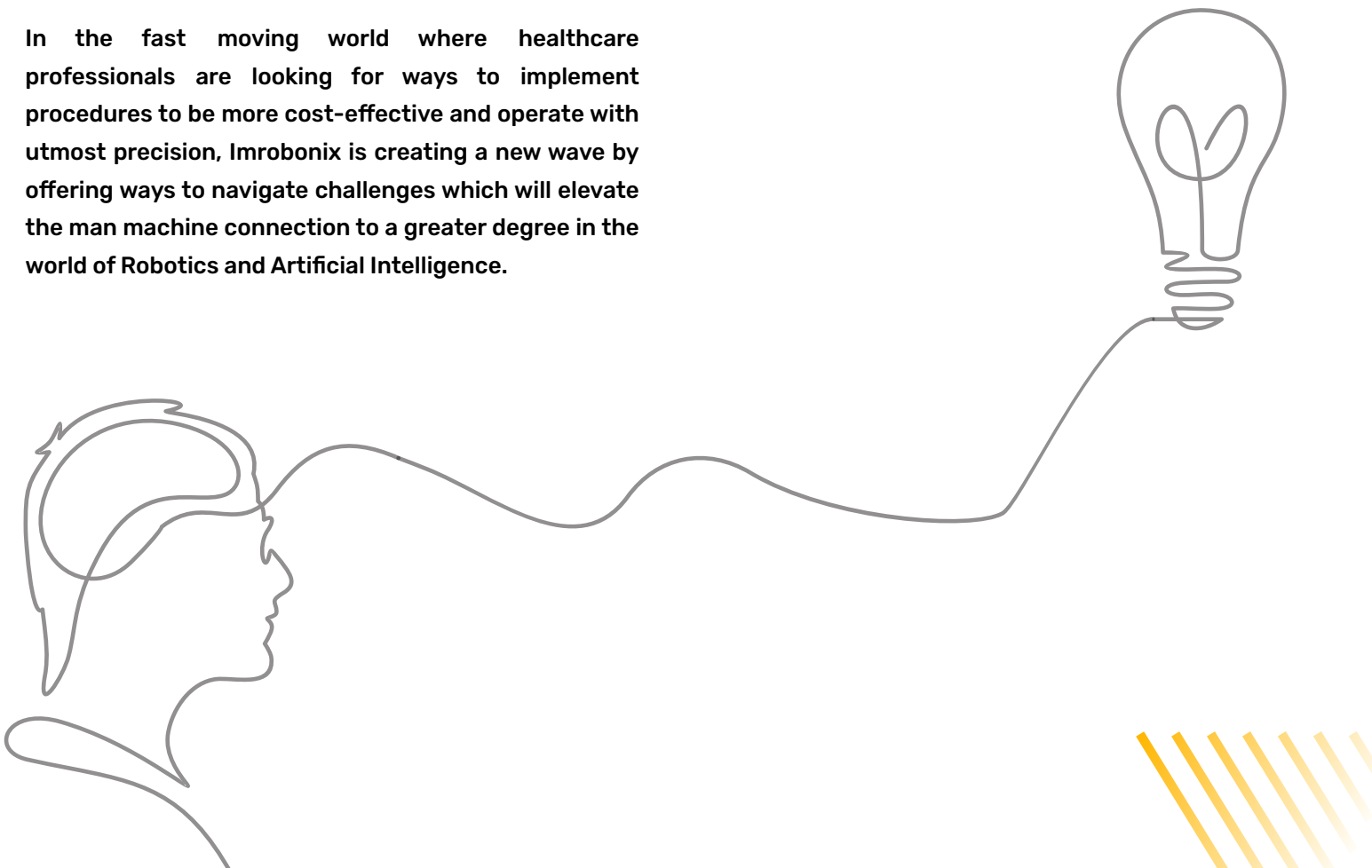
Collaborations in December

Exploring Excellence:
Visit to KSUM & Maker Village

iTNT Hub CEO Ms. Vanitha Venugopal and AVP - Investments Mr. Nirmal Panicker visited Kerala Startup Mission and Maker Village Centre of Excellence for Electronic Hardware, Kochi, on 12th & 13th December 2024.

Mr. Nasif NM, Head - Programs & Communications, KSUM, gave a detailed presentation on KSUM and its activities. The delegation had a virtual interaction with Mr. Anoop Ambika, CEO of KSUM. iTNT and KSUM agreed to collaborate to promote the DeepTech Startup ecosystem in respective states and to share best practices in running CoEs.

The team visited Maker Village, India's largest electronic hardware incubator & ESDM facility, and had an engaging meeting with Mr. Venkat Raghavendra, the CEO in-charge. Mr. Venkat shared valuable insights into Maker Village's best practices and their strategic approach. The team then explored the CoE and the advanced laboratories in the facility, gaining a comprehensive understanding of its capabilities and infrastructure.
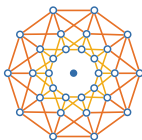
AI in Action:
Real-world Innovation Redefining industries

Ms. Vanitha Venugopal, CEO of iTNT Hub participated in an enlightening panel discussion on "Quantum Leaps: Preparing for the Next Generation of Technology" at the CII Connect event in Chennai on 18th December 2024. The session was moderated by Mr. C.R. Srinivasan, CEO of Sify Digital Services Ltd.

The other distinguished panelists included Mr. M Easwara Prasad, Head of Azure Quantum and High-Performance Computing (HPC) at Tata Consultancy Services; Ms. Archana Ramanakumar, Senior Vice President & Head of Industry Solutions Group at Cognizant Technology Solutions India; Mr. Chandra Nandakumar, Associate Vice President & Delivery Head at Infosys Cobalt (Cloud & Infrastructure services); and Dr. Prabha Mandayam, Associate Professor from the Department of Physics at IIT(M).

The panelists explored quantum computing's potential and its integration with emerging technologies, addressing both opportunities and challenges in the evolving digital landscape. iTNT Hub was an ecosystem partner of CII Connect.

Deep Tech Insights

2024 Wrap-Up: Record Funding Propel Indian Startups; Deep Tech & Sustainability Key for 2025

2024 saw record-breaking IPOs and $16.11 billion in VC funding for Indian startups, with Swiggy's $1.35 billion IPO as a highlight. Looking ahead, 2025 promises more IPOs, a focus on early-stage startups, and increased funding in deeptech, sustainability, and consumer tech sectors.

Scan to read the full article

Why India Needs to Make Inroads into Deep Tech

India's startup landscape has been dominated by consumer-focused ventures. As India aspires to the world's table of economies, it must develop deep tech ventures. A report by venture investors Speciale Invest and Oister Global notes the changing contours of this shift.

Scan to read the full article

India's Deep Tech Sector has Potential for Global Leadership

India's deep tech sector, encompassing AI, green hydrogen, space tech, and biotech, is poised for remarkable growth, targeting a $7 trillion economy by 2030. Driven by returning scientists, strong academic institutions, rising investments, India aims to secure 10% of the global space economy.

Scan to read the full article

India's Deeptech Seed Deals Surge 5.3X in 8 years, Lag Behind Global Averages

The average seed cheque size of Indian deeptech deals has grown steadily over the past eight years, increasing 5.3 times between 2016 and 2023, according to a new report titled India's Deep Tech Revolution. The report was jointly launched by Speciale Invest & Oister Global.

Scan to read the full article
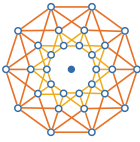
Events on the Radar
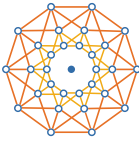
Startup Hiring

Helping You Hire The Right Talents!

Emerging and Deep Tech startups in Tamil Nadu can now publish job openings **(both Technical & Non-Technical)** in the iTNT Monthly Digest newsletter **free of cost.**

FOR MORE DETAILS, CONTACT

Mr. Daniel @ 91766 08820

office@tnthub.org

Submit the required details by **JANUARY 20, 2025**

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Email ID:
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VEYYIL

Positions Vacant: 2

Role: ML Intern

For More Details

Mobile:
7904599095

Email ID:
info@veyyil.com

Apply Soon
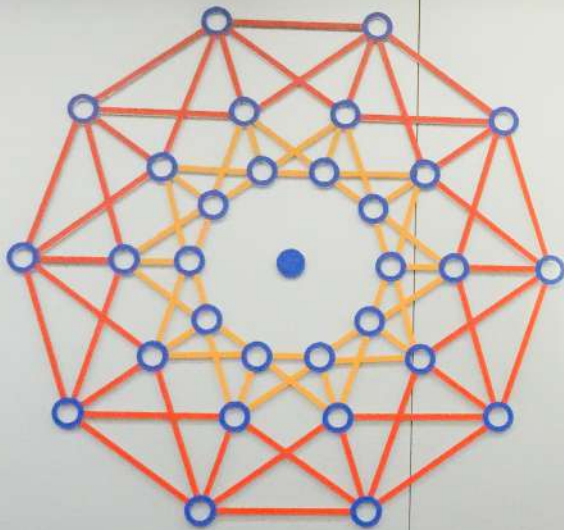
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