

I-NFORM

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Dear Readers,

GDC has completed five eventful years since it commenced operations in October 2017.

During this period GDC has enjoyed success in igniting the spirit of innovation and entrepreneurship at IIT Madras and 57 STEM institutions/incubators across India. Over the five years, we have helped in transforming the thought processes and entrepreneurial capabilities of more than 1200 academic faculty, researchers, and students - specifically sparking innovative thinking, sharpening business acumen, and developing an entrepreneurial mindset in them.

Encouraged by our success from the first years, we launched the next phase of our Mission (christened **GDC 2.0**) in January 2023.

GDC 2.0 will focus on three facets of innovation and entrepreneurship, namely:

- (1) Scaling GDC's programs to 500 STEM colleges/incubators across India.
- (2) Building a partnership with Government in channelling development finance to the Indian deep-tech startup ecosystem in a manner that catalyses the flow of commercial capital.
- (3) Fostering a culture of Open innovation in Indian STEM universities by enabling partnerships between Corporates and the academic fraternity to commercialise scientific research and creating socio-economic impact at scale.

In this Newsletter, we chronicle the major developments at GDC in terms of programs, knowledge sharing, and outreach initiatives over the preceding two quarters.

Happy Reading !!!

Ecosystem Engagement

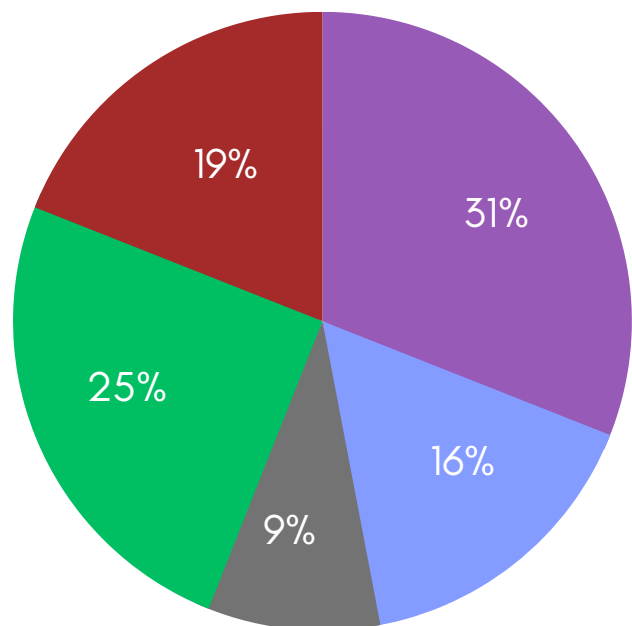
Knowledge Partnership

GDC is a Knowledge Partner for the Carbon Zero Challenge 2022, an All-India Eco-Innovation and Entrepreneurship Competition being held at IIT Madras. The competition aims to accelerate the lab-to-market transition of eco-innovations in India by funding innovations from proof-of-concept /lab-scale solutions to working prototypes or pilot projects. CZC enables faculty and students to come onto a platform and provides the training, mentoring, and support they need to turn their ideas into marketable ventures.

As a Knowledge Partner, GDC trained about 30 Startup teams (55 participants in all) over a three-week-long I-NSPIRE Bootcamp, in December 2022 and January 2023. The bootcamp focused on improving the entrepreneurial capabilities of the participants focusing on developing an entrepreneurial mindset, sharpening business acumen, and formulating business models.

Teams Composition

Material	●
Energy	●
Soil	●
Water	●
Air	●



Testimonials

Aruneeswarar, Founder, Grow Ur Farms

I-NSPIRE Cohort 14

Thanks to the entire GDC Team, the “Customer Discovery Bootcamp” was of immense help to me. I have already started implementing many of the tools and techniques learned during the training. I found great value in the customer interview techniques, and I am now able to communicate better with various stakeholders and manage competing expectations.

Team Bhaskara- Ms.Indumathy (Entrepreneur Lead)

I-NSPIRE Cohort 12

I thank all the GDC instructors in helping me realize certain blind spots I had regarding my end users and applicability of my product. The bootcamp was an amazing experience. It pushed my thought process and challenged my ideas. It made me think more about the customer and not the solution. I began to understand the problem at a level that I never saw before.

GDC's Seminar on: “Sparking a Lab to Market Transformation in India with Deep-Tech Startups”

GDC hosted a seminar on “Sparking a Lab to Market Transformation in India with Deep-Tech Startups” on January 12, 2023, to stimulate debate and discussion on ways to commercialize translational research and achieve socio-economic impact through deep-tech startups. This well-attended seminar attracted the attention of students specializing in science and technology, entrepreneurs at different stages of concept and organizational development, researchers, faculty leaders and industry experts.

Dr. Gururaj Deshpande, co-founder of GDC and successful serial entrepreneur, spoke at the seminar on the importance of translational research, saying that both pure science and translational research are crucial to solving societal problems. Around 10% of research funding needs to be dedicated to business development at the laboratory stage for research to have an impact.

He added, “**Getting thinkers to act and doers to think is at the core of the GDC's work,**” further stating that the GDC will seek the support of industry leaders and government agencies to turn it into an all-India program.

Mr. Kris Gopalakrishnan, co-founder of the GDC, congratulated the GDC on its fifth anniversary and said that there is a need for translational research to solve problems unique to India. Appreciating the local talent and low research costs in India, he went on to say that there is a need to collaborate with global teams and attract global investment to scale up translational research.

Delivering the first keynote address at the seminar, Dr. Chintan Vaishnav, Mission Director, Atal Innovation Mission, highlighted various government initiatives to promote a culture of innovation and entrepreneurship and pointed to the existing gaps in education, funding and models for collaborative research in science-based entrepreneurship in India. He congratulated GDC on its fifth anniversary and said that institutions like GDC could play an important role in filling these gaps.

Delivering the second keynote of the day, Prof. Rishiksha Krishnan, Director, IIM Bengaluru, said India has a long history of research and development in academic and research institutions, which has resulted in significant social impact.

Mr. Raghuttama Rao, Chief Executive Officer, GDC-IIT Madras added: In GDC 1.0, we demonstrated that innovation is not only an innate talent, but that entrepreneurship and business acumen can be learned when structured scientifically. The GDC programs I-NCUBATE and I-NSPIRE have been successful in 40 STEM colleges and 25 incubators across India. In GDC 2.0, we plan to scale our programs by collaborating with companies (aiming to partner with university startups on open innovation) and governments (aiming to strengthen the innovation and entrepreneurship ecosystem) across India. Disruptive deep tech startups, which today make up less than 1% of the number of startups in India, will soon take a step forward as the GDC will help several STEM colleges and incubators build a bridge from lab to market.

The seminar also had two panel discussions.

- The first panel discussion was with IIT faculty members who have participated in the GDCs program. The panel concluded that there was a need to build on the strengths of colleges and faculty leaders to create a transformative learning environment. This, in turn, would help support entrepreneurial leaders and students to put their knowledge into action to find innovative solutions to societal problems.
- The second panel discussion featured entrepreneur alumni of GDC who shared the impact of GDC's I-NCUBATE program on their entrepreneurial journey. The discussion mainly focused on the real-time challenges they faced in their startup journey and their motivation to pursue entrepreneurship as a mainstream career.

Earlier, Prof. V. Kamakoti, Director of IIT Madras, said that innovation and entrepreneurship are now given as much weight at IIT Madras as academics, so that students can put into practice what they learn in class.

Prof. Krishnan Balasubramanian, Professor-in-charge of GDC said, "GDC is showing the way to build capacities and enhancing the skills of faculty and students in IITs and STEM colleges to create new deep-tech innovations, tech transfers and Startups, and thereby help innovate the new India."



Click the play button to watch the seminar

I-NCUBATE Cohort 24 FINALE

GDC conducted the 24th cohort of its I-NCUBATE program from December 2, 2022, to January 28, 2023. Seven teams took part in their idea validation and customer discovery under the guidance of GDC experts and mentors. The seven teams came from five different institutions, namely, IIT Madras, IIT Palakkad, MIT-ADT Pune, IIITDM Kanchipuram and VIT, Vellore. The teams consisted of research scientists, students, and young entrepreneurs.

The FINALE of I-NCUBATE Cohort 24 took place on January 28, 2023. The startup teams presented their insights and shared how the I-NCUBATE program transformed their entrepreneurial journey.

Addressing the participants, the Chief Guest, Professor K.N. Satyanarayana, Director of the Indian Institute of Technology, Tirupati, appreciated the efforts of the GDC founders in guiding and nurturing the academia and encouraging them to take their ideas to the market. He expressed his appreciation for the teams and was able to see the teams move past the product-solution bias and focus on customer needs.

He said that the focus of IIT, Tirupati, in addition to research and expanding academic programs, was to create a robust startup ecosystem and he looks forward to collaborating with GDC to sensitize IIT Tirupati, faculty, researchers, and students on entrepreneurial mindset.

Speaking on the occasion, Mr. R. Raghuttama Rao, CEO GDC, said that many startups fail due to a lack of entrepreneurial mindset and business acumen in the founders. He further explained that I-NCUBATE is not just a customer discovery program but is a program for seeding in entrepreneurial education among academics and students.

TEAMS PROFILE

I-NCUBATE 24 COHORT

Team 1: Clowak

Team Clowak from VIT Vellore developed a portable dental kit. Based on their preliminary research, they identified National Oral Health Programme (NOHP) as their early adopters. They concluded that the NOHP is falling short of its goal in treating a sizeable number of rural patients because the dental ambulance used in the programme has only one dental kit, and only one of its six dentists can treat patients at a time. The insights from the Customer Discovery exercise invalidated their assumption. This was a good finding for the team. The team is currently testing other customer segments of the dental market to build nuanced needs and requirements of different segments.

Team 2: IND Classic

For the convenience and comfort of elderly patients using Indian toilets, Team IND Classic from IIT, Palakkad has developed a prototype hydraulic lift. The team had assumed that all elderly and old age homes would be their early adopters, but their customer discovery exercise proved these presumptions false. The team is currently building upon these insights and is continuing their customer discovery journey.

Team 3: Kriya

Kriya Neurotechnologies Private Limited, IIT Madras, is a startup that provides a product for the patients suffering from restricted hand and finger movements. The virtual rehabilitation glove, developed by them, allows the patient with a paralyzed hand to mimic the movement of a healthy hand in virtual reality space, facilitating early recovery. Their initial target customers were neurologists; however, after talking to neurologists as part of their customer discovery exercise, they realized that their market lay with multi-chained physiotherapy centres, large rehabilitation centres, and rehabilitation centres affiliated with corporate hospitals, as they are more disposed to the adoption of any new technology for hand movement restoration. The team is persisting with its customer discovery to further validate these assumptions.

Team 4: InsituMicron

Team InsituMicron from IIT Madras, came up with an affordable miniaturized multi-functional mechanical testing setup. Thinking that academic institutions, government and R&D labs as their potential customers, the team set out to validate their assumptions and identify early adopters. The customer discovery exercise invalidated all their initial assumptions. Over the course of eight weeks, the team, guided by GDC mentor and instructors, kept redefining its customer segment, until it identified composite material industries which needed special kind of testing requirements as its potential early adopters.

Team 5: Munnarivan

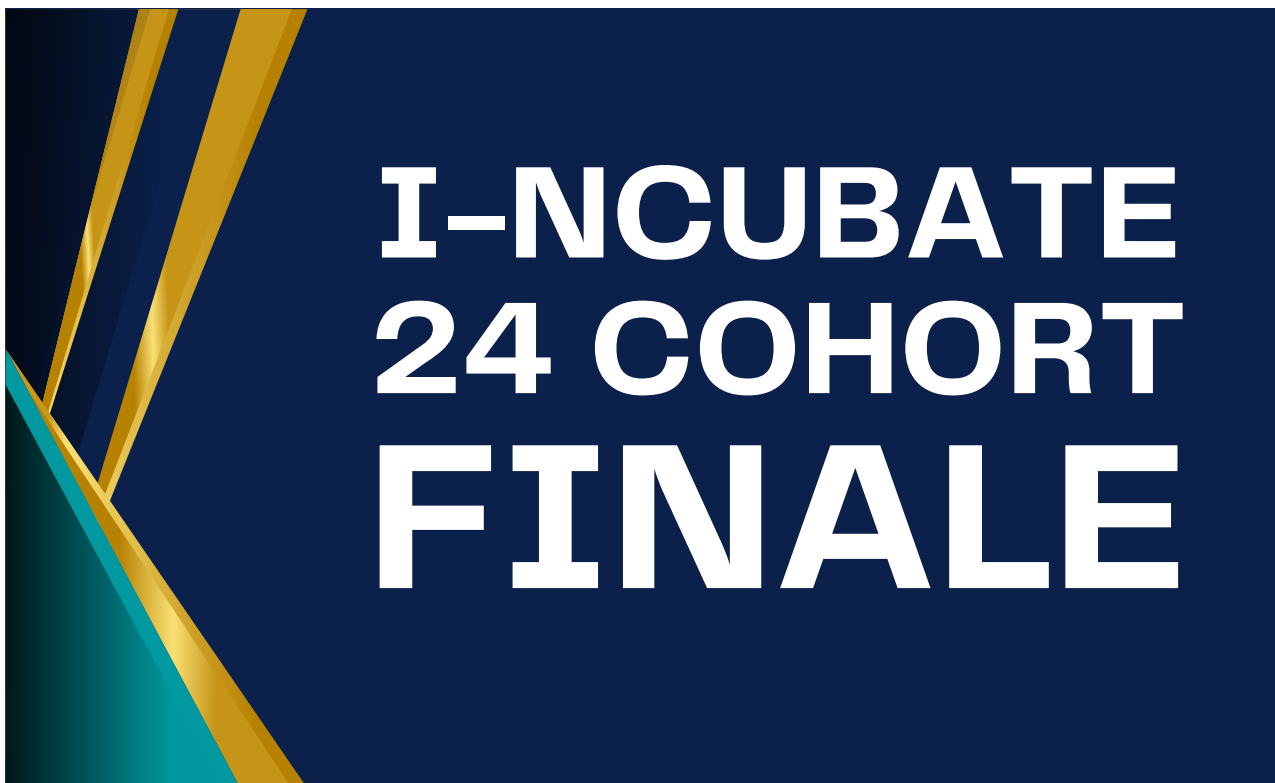
Team Munnarivan from IIT Madras came up with the idea of building an IoT integrated lavatory, as they firmly believed that continuous urine monitoring could help in the early detection of specific diseases in individuals. The team was pre-incubated at TECHIN, IIT Palakkad, and, upon their suggestion, joined the GDC's I-NCUBATE program to examine the commercial viability of their idea. The team identified diabetologists as their initial customers. As part of their customer discovery, the team interviewed diabetologists and realised that blood is a better biofluid for detection of diabetes. To determine the usability of their idea, the team interviewed other medical professionals only to realise that they needed to conduct more work on their proof of concept. The team is currently continuing its customer discovery to find a suitable customer segment.

Team 6: ProLeg

Team ProLeg, from IIITDM Kanchipuram, wants to build an affordable and technically superior product to help above-knee amputees improve their gait, reduce fatigue, and walk faster. After the first few sessions, the team assumed that the proposed device would be purchased by premium prosthetic centers to be sold as an accessory to patients. To validate this assumption, the team interviewed the owners of these centers and came to the finding that overcoming fatigue and a faulty gait symmetry did not figure as key requirements for amputees. Instead, amputees wanted processes to be inconspicuous so that they could become socially acceptable. They turned their attention to other possible product applications such as warehousing assistance, gait training, and post-stroke therapy. The discussions with customers and stakeholders did not provide a clear set of needs. The team has decided to go back to the lab and re-examine their innovation.

Team 7: For Health

Team "For Health" from MIT- ADT Pune, is developing an assistive device for physiotherapists that would help them attend to a higher number of patients suffering from injuries and disorders. They believe that this device would also be a big relief to patients, as it would reduce their waiting time for receiving physiotherapy. The initial customers identified by them were hospitals, orthopedic centers, rehab clinics, fitness centers, and old age homes. Soon after attending the first few sessions of the I-NCUBATE program, the team realized that they were trying to solve a multitude of problems and were therefore unable to clearly define their customer segment. Accordingly, they decided to focus on one segment: physiotherapists in small clinics. After the customer discovery exercise, they realized that not all physiotherapists were interested in this product. Having discovered the segment of physiotherapy where they could make a difference, the team intends to dive deeper and continue their customer discovery process with the aim of developing the right solution for the right segment.



[Click the image to watch the Finale](#)

GDC I-NITIATE PROGRAM

Entrepreneurship is seen as a cornerstone of development and the solution to many of our current socio-economic problems. STEM institutions in India are now increasingly embracing entrepreneurship as part of the academic experience, creating a culture where innovative thinking is stimulated and encouraged. Therefore, within these entrepreneurial STEM institutions, there is a strong trend towards policies and mechanisms to improve the generation, evaluation and exploitation of entrepreneurial ideas.

Although entrepreneurial activity is growing in many STEM institutions, management and faculty lack perspectives on structured entrepreneurship development. Innovation as a practice is still in its infancy as traditional faculty members fail to discern how idea generation through research can be further developed for solving societal problems.

To address this gap, GDC offers the I-NITIATE program to build institutional capacity in administrators and the management of STEM colleges to strengthen their innovation & entrepreneurship ecosystems. Through a hands-on learning journey, the I-NITIATE program helps students and faculty conduct a self-assessment to understand their core motivations for entrepreneurship, develop an entrepreneurial mindset, and cultivate the managerial acumen needed to understand what business and startups entail. The program's primary goal is not to transform a large number of students into entrepreneurs; rather, it is to get students to understand that entrepreneurship is a sensible career option for them, sensitise them to entrepreneurial thinking, and to increase their confidence and capabilities in making the right career choice.

The second cohort of the I-NITIATE program on "Technology Commercialization and Entrepreneurship" was conducted at the SSN College of Engineering in Chennai with the aim of furthering the institutional ecosystem for innovation and entrepreneurship and fostering a culture of innovation-driven entrepreneurship among staff, faculty, and students.

Using the case study of the innovation and entrepreneurship ecosystem of IIT Madras, participants were aligned to identify the needs of institutional entrepreneurs in the different stages of entrepreneurship and how these are supported by formal organizational units within the organizational architecture of an entrepreneurial institution.

The workshop ended with a round of feedback on the business ideas of the participating teams.

Some snapshots from the GDC I-NITIATE program at SSN College of Engineering



OUTREACH

GDC showcased its work in fostering innovation-driven entrepreneurship amongst STEM colleges, Research Institutions, and Technology Incubators throughout India as part of the exhibition organized on the side-lines of G20 Education Working Group meet at IIT Madras Research Park (IITMRP) from Jan 31st to Feb 2nd, 2023. Startup founders, young entrepreneurial enthusiasts, faculty members from various STEM colleges visited GDC stall.



GDC was invited to organize a workshop on “Entrepreneurship - Catalysing ‘Lab to Market’ Innovation” as part of Prime Minister's Research Fellows (PMRF) Annual Symposium 2023 on 18th Feb 2023. By emphasizing GDC's role in the “Lab to Market” space through its various programs, the workshop sought to further introduce the PMRFs to entrepreneurship and research commercialization.



[Click the play button to watch the PMRF Annual Symposium 2023](#)

Mr. R. Raghuttama Rao, CEO GDC, chaired two panel discussions at the “LAB to MARKET CONCLAVE” an initiative of PALS planned in line with the PALS theme of the academic year 2022 - 23 “Think like an Entrepreneur” on 18th Feb 2023 at IITM Research Park. The focus of the discussion was to foster an entrepreneurial spirit among faculty and students.



Mr. R. Raghuttama Rao, CEO GDC, at the PALS “LAB TO MARKET” Conclave

Click the play button to watch the PALS “LAB TO MARKET” Conclave

Mr. R. Raghuttama Rao, CEO GDC, was invited by Ashok Leyland Limited, Chennai to deliver a keynote speech on “Innovation and Sustainability” at their annual Technology Day 2023. Speaking to more than 250 engineers and managers from R&D and product development teams, he emphasized the need for rapid deployment of new technologies, innovation in governance and finance, and collaboration with industrial partners, civil society partners, startups, and academia for the transition to sustainable transport at scale.

THANK YOU

CONTACT US:

For queries and feedback reach out to us at Email Id: manager-communication@gdciitm.org

To stay updated about GDC’s program and events, visit: www.gdciitm.org