

How I-NCUBATE helps deep-tech startups go from the lab to market

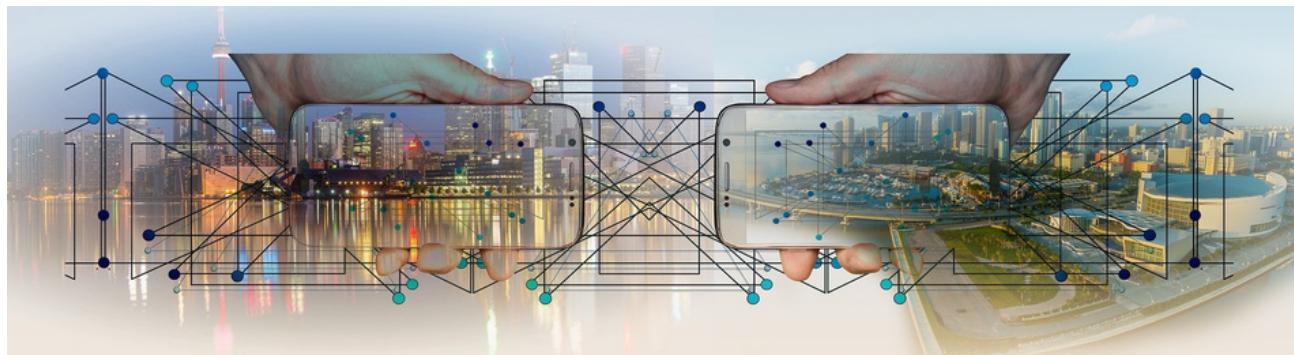
The Gopalakrishnan-Deshpande Centre for Innovation and Entrepreneurship, IIT Madras, has completed 18 cohorts of its flagship I-NCUBATE program. Almost every startup that participated in the eight-week program found it to be transformational. What happens during those eight weeks? A gist:

The I-NCUBATE program caters to early-stage, science-based startups emanating from STEM research labs across India. The program equips startup founders to look beyond their innovation and assess the market potential for their product. Each cohort brings together about 10 startup teams, to undertake a Customer Discovery exercise for their innovation. The teams are selected after a detailed interview.

The applicants explain their research idea or innovation, and its potential social or business impact, to the GDC team during the interview. Our alumni are working in diverse fields – from Artificial Intelligence to agrobiotechnology to healthcare. Invariably, the startups tend to be focused on their technology or product development aspects while joining the program. They have little understanding about taking their research out into the market.

Once the teams are selected, every team is assigned an exclusive business mentor by GDC. The mentors are industry veterans with decades of corporate experience, handpicked by GDC. The mentors help the teams by accelerating their learning process and guiding them through the eight weeks of the program. Many startups that have gone forward in their journey continue to seek guidance from their GDC mentors.

The Learning Journey: I-NCUBATE follows a flipped-classroom approach. Participants are given learning material to study ahead of the classroom sessions, paving way for enhanced and informed interactions. On Day-1, concepts of Secondary Research, Market Types, and Customer Segments are explained. This helps teams define their core product or service, the problem they aim to solve, and the assumptions they have about their potential customers.



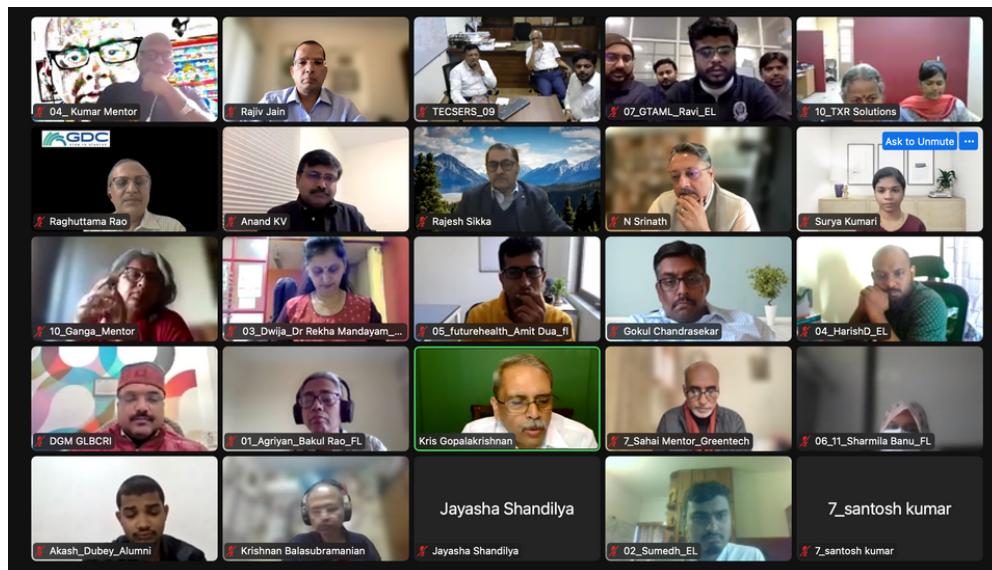
In the beginning, most participants are of the assumption that every individual facing a problem is actively seeking a solution – ergo, a potential customer. The participants are sensitised to validate that assumption, while also defining their Customer Segment. Day-2 introduces them to Value Proposition Canvas, methods to sift facts from assumptions, the importance of validating assumptions through Customer Discovery interviews, etc. Participants conduct mock interviews among themselves to better understand the art of gaining insights from conversations.

The startups begin their Customer Discovery exercise soon after the first two days of classroom sessions. This involves identifying the stakeholders and conducting exploratory interviews. The teams are forbidden from discussing their solution to avoid Confirmation Bias. Online workshops 3 & 4 prodded the teams to test their core assumptions and frame their business hypothesis. Every Friday, the teams convene online to discuss their learnings. Through the week, they work closely with GDC instructors and mentors to refine their takeaways from conversations with stakeholders.

By the midpoint of the program, the learnings are substantial. Startups that validate their assumptions continue to study the chosen Customer Segment. Those that invalidated them realise that they are targeting the wrong segment, go back to the drawing board and begin with a fresh segment.

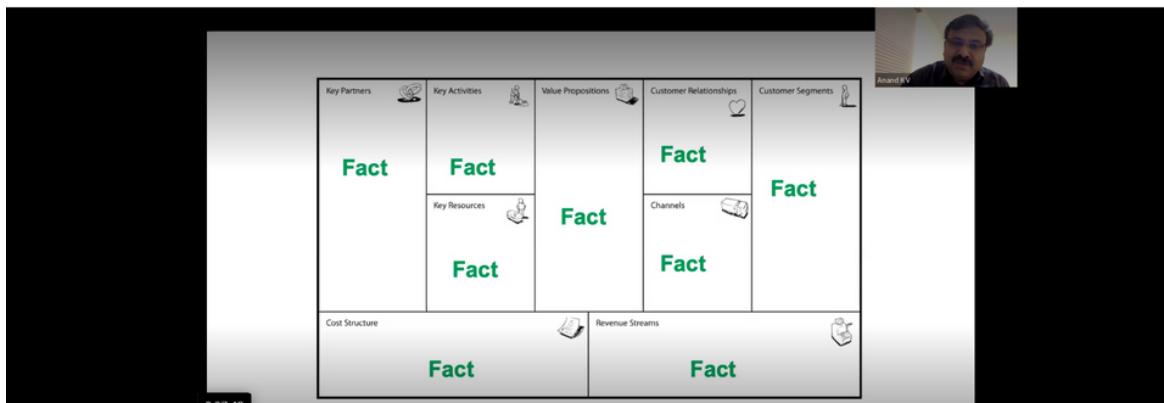
At the end of eight weeks, the teams realise that their Customer Discovery journey has not ended. It has just begun. The I-NCUBATE program has equipped them to test the waters before taking the big plunge. At FINALE, the teams present their learning journey to key stakeholders in the ecosystem – corporate executives, investors, academics, and policymakers.

I-NCUBATE Cohort 18 - A journey of transformation



Participants at the FINALE of I-NCUBATE Cohort 18.

The 18th cohort of the I-NCUBATE program was a holistic learning experience, not just for the startup teams that participated in it but also for GDC's instructors, mentors, and team members. Eleven startup teams with disruptive ideas were selected for the eight-week-long cohort, from 13th November 2021 to 12th January 2022, to undertake a Customer Discovery exercise for their respective innovations. Among them, eight teams came from research labs of STEM institutions – including IIT Bombay, IIT BHU, BITS Pilani, IIIT Delhi, Vellore Institute of Technology, and Thiagarajar College of Engineering – while the remaining three were already incorporated entities helmed by young entrepreneurs.



An online session of I-NCUBATE Cohort 18

Meet the startup participants of I-NCUBATE Cohort 18

Team Agriyan from IIT Bombay is building an 'agribot' to help farmers tide over labour scarcity and increase productivity. The Customer Discovery exercise helped the team validate one of its critical assumptions –farmers are facing an acute labour shortage. Subsequently, the team also identified medium-scale farmers to be its customer segment. The team is also scoping the crop insurance sector for opportunities.



Team Meredio from IIIT Delhi came to GDC with an idea to build a super-app, a one-stop solution, to address various micro-needs of college students. Soon after attending the first few sessions, the team realised that they were attempting to address a wide array of problems. As a result, they were unable to clearly define their customer segment. They, hence, decided to focus on one segment – students seeking guidance to study abroad. But why would they come here instead of going to an education counsellor? Can those unable to afford counselling become potential users of the platform? Is there a third category that does not get enough attention from counsellors? The team, right now, is busy finding answers to these questions.

Team Wimpy from Vellore Institute of Technology came to the I-NCUBATE program with a patented idea – a smart pill bottle built with touchpoint technology that can detect and identify medicines when placed on top of a smartphone. The innovation, the team believed, would help senior citizens remember to take their daily medicines. The learnings gained from the Customer Discovery exercise, however, came as a rude surprise for the team. It indicated that there was no market need for their product. Around the same time, the team members learnt about PillPack, a US-based company revolutionizing the pharma delivery market by addressing a crucial pain point. Team Wimpy has stopped pursuing its patented technology and is now studying a model similar to that of PillPack, which will work in the Indian context.

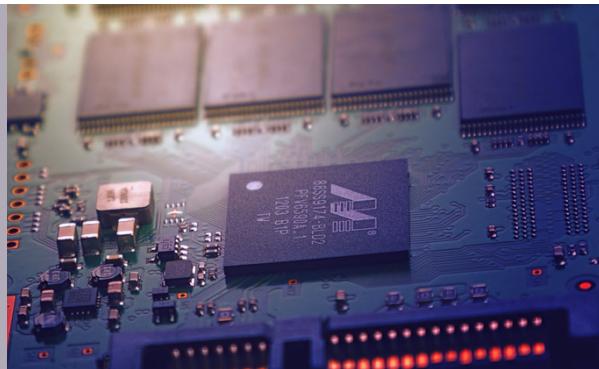


Team Future Health from BITS Pilani had developed a speech to text conversion application for medical practitioners. The application could be installed on a smartphone and would integrate the captured data into patients' electronic health records. The team spent several hours at hospitals, accompanying doctors on rounds and observing how they manage to record medical data. Learnings from the hospital visits and interviews suggested that a good segment to target was psychiatrists. Team Future Health's Customer Discovery journey continues in this segment.



Team Gray Walk from Vellore Institute of Technology aspired to make exercising a fun-filled activity by gamifying workouts using Bluetooth-enabled immersive technology. The idea was also to end the notion of gaming being a sedentary activity. However, after conducting exploratory interviews with stakeholders in the fitness and gaming industries, the team realised that its concept had better application in the Virtual Reality (VR) gaming industry, rather than in the fitness industry. Having unlocked an entirely new segment of potential customers, the team is now testing the waters to better understand the ecosystem.

Team Dwija, led by a practising dentist, is developing an eco-friendly, biocompatible teether for toddlers. The team joined the cohort after filing a patent for their innovation. The members believed that all parents concerned about their children's safety would be their potential customers. Over the next eight weeks, the team kept redefining its customer segment, until it landed on "urban, affluent, eco-conscious, first-time parents" as its potential early adopters.

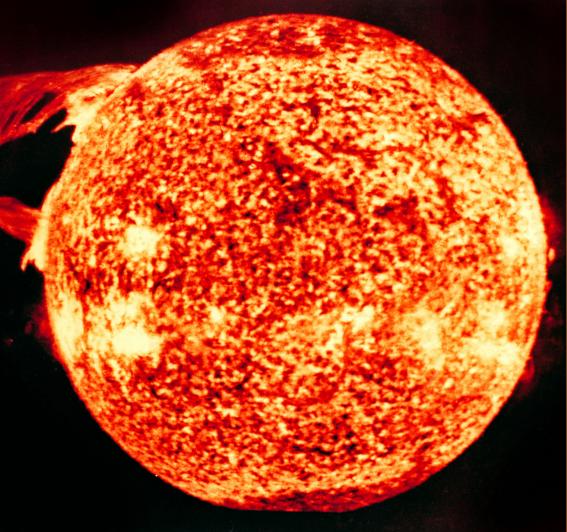


Team Antriksh Labs is building an autonomous platform to handle complex Artificial Intelligence (AI) use cases across industries. The team considered Small and Medium Enterprises (SMEs) across verticals to be their potential customers, as such units lacked the capability and resources to afford AI-based solutions. However, after talking to stakeholders in the ecosystem, the team decided that large-scale automobile manufacturers would be their potential early adopters. Most players in this space struggled with unplanned downtime, which could be mitigated with predictive analytics solutions.

Team Emids has built an on-demand connectivity platform for real-time subject monitoring. The platform created by Emids can capture data from multiple healthcare devices, including wearables, to provide meaningful insights. The team interviewed an entire cross-section of stakeholders in the healthcare ecosystem – such as care providers, physicians, medical insurance companies, wellness program managers, and pharma companies – before deciding that Clinical Research Organizations could be their early adopters.



TXR Solutions from Thiagarajar College of Engineering has built a VR-based head-mounted device to help people with Autism Spectrum Disorder (ASD) develop their social skills through perception-based learning processes. The team was grappling with the question, 'Who would buy our product?' when they came to the I-NCUBATE program. While they had focused on parents and schools for special needs children during product development, after interviewing over a hundred stakeholders, they decided their early adopters would be occupational therapists.



Team Greentech AM Lab from IIT BHU published a research paper on building a portable, affordable, solar cooker that is suitable for Indian environmental conditions. To ensure that the benefits of the research reach the community, the team continued with product development and enrolled on the I-NCUBATE program to take it to market. The team aspired to see their cooker in rural homes that are still dependent on Chulhas, or the traditional Indian cooking stoves. However, interviews revealed that such homes could not afford the solar cooker. The team was disappointed with the learning as their product was developed for the benefit of the rural poor. With guidance from the GDC mentor and instructors, the team was able to refocus on a fresh segment – mass cooking centres such as community kitchens, orphanages, religious centres, and charities.

Team TECSERS from Thiagarajar College of Engineering is developing an eco-friendly process for plating on plastics. Electroplated plastics are widely used to make automobile body parts. But the conventional method of doing it is expensive and highly time-consuming. The team started its Customer Discovery journey in Madurai, Tamil Nadu, where the members are based, but soon realised that its market could be in another part of the country or the world. The team interviewed coaters in the home appliances segment, automobiles segment, and electric vehicles (EV) segment. It realised that the EV market could become their early adopters, thanks to a multitude of factors.



Commercializing indigenous research key to reaching \$5 trillion economy: Kris Gopalakrishnan at Cohort 18 FINALE



The FINALE of I-NCUBATE Cohort 18, held on 12th January 2022, was attended by around a hundred special invitees from the academia, corporate sector, policy-making bodies, and investor community. The startup teams presented their learnings from the I-NCUBATE program and how it had transformed their entrepreneurial journey. Mr Kris Gopalakrishnan, Co-founder of Infosys and GDC, and Mr Srinath N, CEO of Tata Trusts addressed the participants.

Mr Kris Gopalakrishnan spoke about the need to take indigenous research-based innovations out into the market to bolster India's growth to attain a \$5 trillion economy in the future. "GDC's efforts are to enable this lab-to-market transition by working with academicians and scientists to commercialize their research and transform the basis of value creation in the Indian economy," he said.

He lauded the startup teams for having let go of their initial assumptions about their product and its customers in line with learnings from the Customer Discovery exercise. "The mantra is 'fail early and fail safe', rather than wasting time and resources by chasing the wrong customers or product idea," he said.

Speaking about scaling up the I-NCUBATE program, Mr Gopalakrishnan said that GDC has managed to reach out to faculty and students in several colleges across tier 1 and 2 cities and will continue to widen its impact.

Mr Srinath said local innovations were the need of the hour. "We have tremendous capability in our people, and we have tremendous capability in the infrastructure that we are creating. If we put them together, we have an opportunity to create truly world-class enterprises," he said.

Mr Srinath explained how the Tata Trusts was working with communities at the grassroots to address fundamental socio-economic problems that are national priorities. He stressed the need for 'process innovation' on the same scale as 'product innovation' to address some of these problems.

"Using today's solutions to address today's problems is not enough. To truly make a difference, we need to look at tomorrow's solutions for today's problems," he said. In future, Mr Srinath pointed out, "there would be increased consumer demand for sustainable solutions. Hence, futuristic solutions must be sensitive to the environment and offer social inclusivity." A report on the FINALE was published in The Hindu BusinessLine on 14th January 2022 (in picture).

News

'Commercializing India-based STEM research key to reach a \$5 trillion economy'

BL Chennai Bureau | Updated On: Jan 14, 2022



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'Kris' Gopalakrishnan speaks at the finale of the I-NCUBATE program offered by the Gopalakrishnan-Deshpande Centre, IIT Madras

GDC CEO part of faculty panel for CII-CEIES Master Class for C-Suite Executives

The CII Centre of Excellence for Innovation, Entrepreneurship & Startups (CEIES), held a two-day Master Class for C-Suite executives on the subject, "Why Corporates should work with startups on Innovation and R&D," on 27th and 28th of January 2022. Experts from the industry and academia were empanelled as faculty members to address the Master Class, which included:

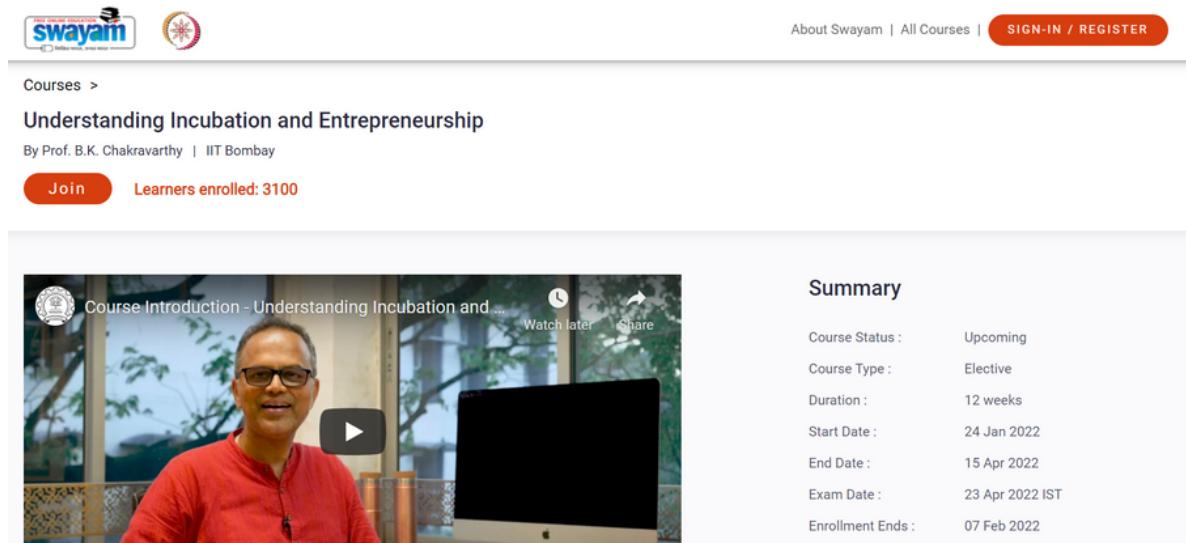
1. Mr Kris Gopalakrishnan, co-founder of Infosys and GDC
2. Mr Raghuttama Rao, CEO of GDC
3. Mr R. Dinesh, MD of TVS SCS
4. Prof Srivardhini K Jha, IIM Bangalore
5. Mr Sven Harmsen, Director, NOVA Saint-Gobain
6. Mr Niranjan VS, Quality Head, Infosys
7. Mr Ashok Chandavarkar, Director, Intel India



R Raghuttama Rao, CEO, GDC

The gradual shrinking of the average lifespan of a company - from 60 years in the 1960s to less than 20 years now – was the context for the Master Class. The Master Class explored means and measures by which established corporate companies can partner with startup enablers to access emerging talent pools, innovative technologies, lean management practices, and, thereby, diversify their investment portfolio. It discussed the importance of innovation in an organization's success and how working with startups can help large organizations improve their innovation capabilities.

GDC delivers modules for an NPTEL course on entrepreneurship



The screenshot shows the Swayam platform interface. At the top, there's a logo for 'Swayam' and a circular emblem. To the right are links for 'About Swayam', 'All Courses', and a red 'SIGN-IN / REGISTER' button. Below this, a breadcrumb navigation shows 'Courses >'. The main title is 'Understanding Incubation and Entrepreneurship' by 'By Prof. B.K. Chakravarthy | IIT Bombay'. There are two buttons: a blue 'Join' button and a red 'Learners enrolled: 3100' button. The central part of the screenshot displays a video thumbnail featuring a man in a red shirt, identified as Prof. B.K. Chakravarthy. The thumbnail includes a play button, a 'Course Introduction - Understanding Incubation and ...' text overlay, and 'Watch later' and 'Share' options. To the right of the thumbnail is a 'Summary' section with the following details:

Course Status :	Upcoming
Course Type :	Elective
Duration :	12 weeks
Start Date :	24 Jan 2022
End Date :	15 Apr 2022
Exam Date :	23 Apr 2022 IST
Enrollment Ends :	07 Feb 2022

Prof. BK Chakravarthy of IIT Bombay has designed a 12-week online course titled, "Understanding Incubation and Entrepreneurship" that went live on the Swayam platform on 24th January 2022. The content for the first two weeks of the program was delivered by GDC and its alumni. Lecture 1 of the program, "Introduction to Entrepreneurship" explores how GDC is catalysing evidence-based entrepreneurship through its offerings and activities. The lecture is a recording of a live session delivered by GDC for students of IIT Hyderabad. Over 3,000 people have subscribed for the online course. To join, visit: https://onlinecourses.nptel.ac.in/noc22_de08/preview

An 'inspiring' twist to GDC's I-NSPIRE program

The 9th Cohort of GDC's I-NSPIRE program, which began on 31st January 2022, is significantly different from its earlier avatar. The four-week-long boot camp has been rebooted based on the learnings from the past eight cohorts and is now being offered to early-stage, science-based startups across the country. The pedagogy and course content of the boot camp has been refreshed to suit this segment of applicants.

GDC's experience with over 200 startups that have attended our programs suggests that founders tend to misread their potential customers and target markets as they view opportunities through the lens of their innovation. The I-NSPIRE program enables founders to keep aside their biases during this crucial exercise. The program is targeted at science-based startups that have started to interact with paying customers - or is getting close to it - but the founders are not clear if the early successes are repeatable and constitute a sustainable revenue stream.

The 9th cohort of I-NSPIRE garnered the interest of a wide variety of startups. Seven startups – working on various streams of deep technology – were shortlisted from a total of 13 applicants to the program. Following an onboarding session and interactions with fellow participants, the startups doubled down to define their target market and early adopters.

They were introduced to Business Model Canvas - a strategic management tool for entrepreneurs – and concepts such as Customer Segmentation and Value Proposition during the first three days of the Online Workshops, which ended on 2nd February 2022. Equipped with these learnings, the teams have set out to conduct exploratory interviews with stakeholders in their business ecosystems. The 9th Cohort of I-NSPIRE will conclude on 28th February 2022.

