



Closure Report

LOW CARBON TECHNOLOGY ACCELERATOR 2020

Acceleration Partner



Name of the consignee	Sangam Capital Advisors Pvt. Ltd
Address of the consignee	91Springboard Building No. 145, Sector 44, Gurgaon Pin 122003
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1 Executive Summary

The Low Carbon Technology Accelerator program, under Facility for Low Carbon Technology Deployment (FLCTD) - a project implemented by United Nations Industrial Development Organization (UNIDO) and Bureau of Energy Efficiency (BEE) and supported by Global Environment Facility (GEF), brings together early stage start-ups and innovators from academia with seasoned mentors from the UNIDO-GCIP (Global Cleantech Innovation Program) and FLCTD ecosystem to provide them with hands-on guidance to improve their business prospects.

The below table shows the sectors and subsectors from which the startups have been shortlisted in the FLCTD Acceleration program.

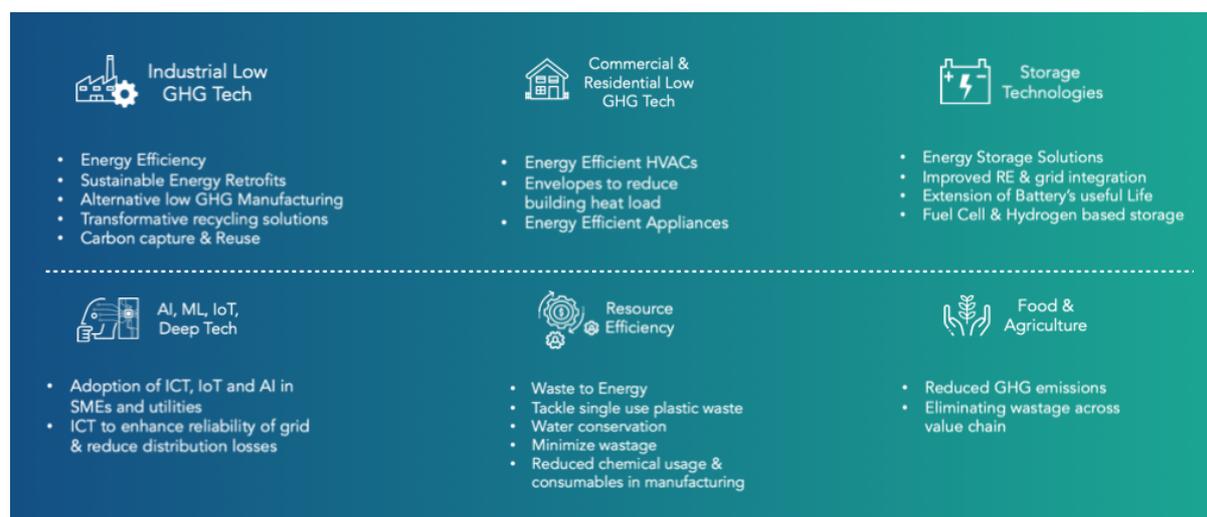


Figure 1: Low Carbon Technology Accelerator Focus Sectors

Sangam Capital Advisors (Sangam), the acceleration partner to UNIDO for the program, took the cohort through a series of pragmatic workshops and related practical exercises that systematically moved them towards commercializing their innovation.

The program required extensive pre-work in June, July and August to select participants and mentors, and developing the curriculum and program-design to specifically cater to the start-up's needs, incorporating learnings from the first cohort. Unlike for the first cohort, the entire program was conducted virtually due to COVID-19. The program-design included weekly online webinars, mentor-mentee calls and office-hours with the Sangam team to keep things moving forward, a mid-term review and a DEMO week at the end of the program. A group of 30 mentors from diverse backgrounds joined the accelerator to guide start-ups over the course of the program.

The second cohort comprised of net 28 companies and the program ran over 5 months from end of August 2020 to early January 2021. The program was virtually launched on 24th August 2020 over a web-conferencing platform with R. Ramanan, Mission Director of the Atal Innovation Mission (AIM) delivering the keynote. The keynote was followed by a panel discussion moderated by Karthik Chandrasekar, Sangam with insights from our eminent panellists namely Dr. René Van Berkel,

Regional Head, UNIDO India, Professor Dr. Ambuj Sagar, IIT Delhi and Sidharth Choudhary, Invest India. The launch event saw the innovators and mentors get to know each other for the first time, with the innovators doing a 30 – second pitch, that the Sangam team hosted a workshop on in a pre-launch event, and a quick round robin introductions by the mentors. Since the Launch Event happened virtually, separate meetings were also organized with the start-up and the mentor groups, for everyone to get acquainted with each other and layout expectations from each one within the cohort.

Post the launch, all startups were allocated 1 internal mentor from the Sangam Team and 2 external mentors to guide them over the course of the program. The mentor-mentee mapping was done giving due consideration to domain expertise and to get the maximum out of the relationship.

The first half of the program from the launch to the mid-term review was focused on getting the cohort to focus on their customers and their value-proposition, the essentials for getting the start-ups to ‘Product-Market Fit’ (where the start-up has developed a solution that meets the customer’s needs and gives the start-up the opportunity to make a profitable sale) and calculating the annual GHG mitigation potential of their innovation.

The mid-term review was organized in October 2020 as one-on-one calls with each startup, their respective mentors and UNIDO and Sangam team. The review was designed as a platform for mentors and start-ups to review the progress of the companies with respect to learnings covered in the first half of the program, understand overall status of the company and for constructive feedback from mentors, UNIDO and Sangam team. A mentor feedback session was also organised on 3rd of November to interact with the mentors to understand their assessment of the startups and the program.

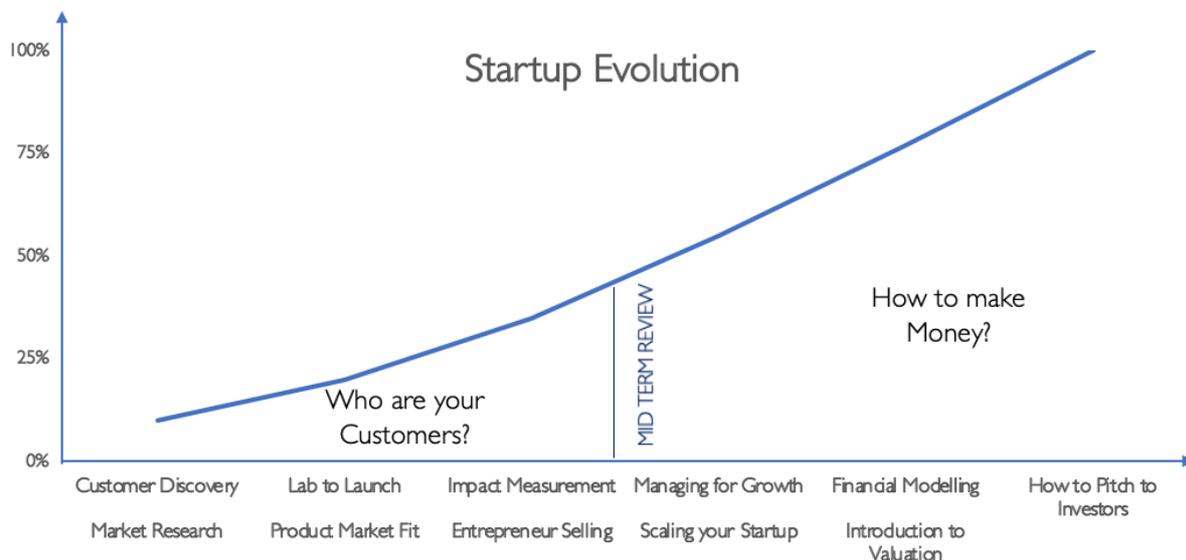


Figure 2: Startup Evolution Chart

Post the mid-term, the startups focused on building their financial models, primarily to understand the cost and revenue drivers of their businesses and completing their pitch decks and pitch delivery for the DEMO event. The Sangam team organized one-

on-one sessions with all startups throughout December 2020 and early January 2021 to discuss their Financial Model. Mock pitching sessions were also conducted by the Sangam team with both the cohorts to refine the startups' pitch decks and their pitch deliveries.

On basis of the level of engagement of the mentors in program, each mentor will be given an honorarium for supporting and engaging with start-ups during the tenure of the Acceleration Program.

35 start-ups from both cohorts were brought together for the DEMO event to pitch to an esteemed jury panel of 20 investors. The DEMO Day was a three-day event with two days of Semi Finale on 18th and 19th of January'21 and one day of the Grand Finale with 8 finalists on the 22nd of January'21, where the below mentioned 3 winners of the FLCTD Low Carbon Technology Accelerator were announced:

1. TGP Bioplastics – WINNER
2. REVY Environmental Solutions – 1st Runner-up
3. Birds Eye Energy – 2nd Runner-up

Throughout February 2021, the Sangam team is organizing follow up calls between investors and startups, on the basis of feedback received from the jury members and the audience of the DEMO Day sessions.

To understand the effectiveness and value-addition of the program and to shape the content and program-design for future cohorts, the program management unit conducted a survey of the start-ups and mentors. The overall feedback from both the start-ups and mentors was positive with a lot of constructive suggestions on how we could potentially improve the program going forward.

2 Background

The Low Carbon Technology Accelerator program, under FLCTD - a project implemented by UNIDO and BEE and supported by GEF, brings together early stage start-ups and innovators from academia with seasoned mentors from the UNIDO-GCIP and FLCTD ecosystem to provide them with hands-on guidance and take through a series of pragmatic workshops and related practical exercises that systematically move them through the steps to commercialize their innovation including finding their first pilot customers and initial investors.

The program ran over 5 months with the cohort and mentors meeting for the first time at the online launch event at the end of August 2020, with a mid-term review in mid of October 2020 and concluded with 3 day DEMO event in January 2021. The entire program was conducted over online video conferencing platforms due to the ongoing COVID-19 crisis.

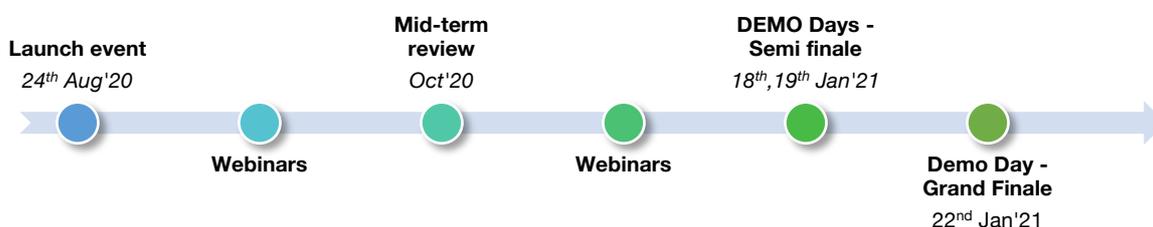


Figure 3: Low Carbon Technology Accelerator Timeline

In the first phase of the Acceleration Program, the areas of focus were restricted to Pumps and Pumping Systems, Space Conditioning Systems and Waste Heat Recovery Systems. In order to bring more diversity to the cohort and to allow for more low carbon technology startups to participate in the FLCTD Acceleration, new verticals were added. The below table shows the sectors and subsectors from which the startups have been shortlisted in the FLCTD Acceleration program.

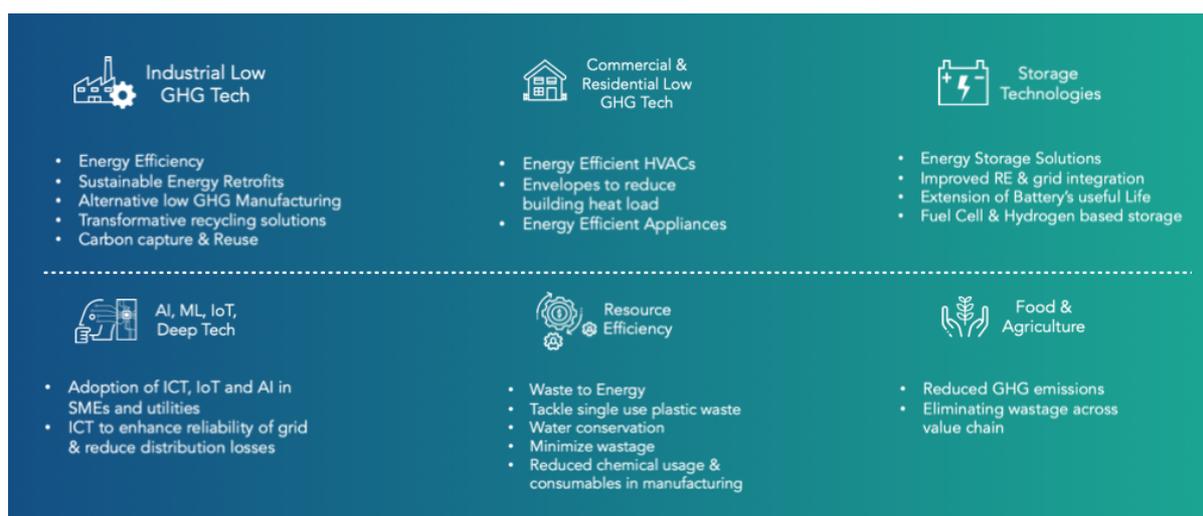


Figure 4: Low Carbon Accelerator Focus Areas

3 Cohort Building

For participants to make the most out of the program and taking cognizance of last year's learnings, emphasis was given to identify early stage innovative start-ups that are trying to develop cutting-edge technology and are earnestly looking to gain maximum out of the 5-month accelerator program.

3.1 Start-up Selection to the Acceleration Program

The participants in the second acceleration program were identified by the Sangam team and the FLCTD Program Management team by partnering with Start-up India and Invest India. The Sangam team partnered with Start-up India to leverage their platform to host the call for applications for the program and help proactively scout for cleantech start-ups. Start-up India is a flagship initiative of the Government of



Figure 5: Startup India Cohort Application

India to build and strengthen the start-up ecosystem of India, which provides start-ups access to a network of mentors and investors and other ecosystem stakeholders, access to free knowledge tools & resources and an opportunity to participate in programs & challenges.

The UNIDO-FLCTD Program Management Unit also collaborated with AGNli (Accelerating Growth of New India's Innovations) - Invest India to have the call for applications publicized in their weekly newsletter that reaches innovators across the country. AGNli is a program of the Office of the Principal Scientific Adviser to the Government of India which helps commercialise Indian technological innovation.

The call for applications was launched on 4th June 2020 with Start-up India and was open till the 20th July 2020 during which time we received 155 applications.

In order to channel more applicants to apply for the Accelerator Sangam conducted 2 sessions on "Ask Me Anything (AMA)" where the main focus was to give an insight into the program to the prospective entrepreneurs. Sangam kept the session open for all innovators working in the low carbon space to participate and get to know about the program and its benefits. The sessions provided an opportunity to innovators to freely speak with the Program Management Unit and the previous cohort participants to understand about what the program offers and how the innovators can leverage out of the program.

The 1st AMA session was held on 15th June 2020 with Sandeep Tandon, the National Project Manager of FLCTD project, UNIDO along with Karthik Chandrasekar, founder

of Sangam Ventures. The session gave participants an idea about the program and they were able to ask queries about the Accelerator.

The 2nd AMA session was held on 22nd June 2020. Sangam invited a few ex-participants of the FLCTD Challenge 1.0 along with Reshmi Vasudevan, the Program Expert of FLCTD, and Ashwin KP, one of the mentors in the first cohort and a recipient of the FLCTD Challenge award. The session was quite interesting as the ex-cohort members shared their experiences about the Accelerator and how they have benefited from the Accelerator over a period of time. In this session, Ashwin KP, founder Promethean Energy shared his journey with the FLCTD



Figure 6: AMA Session with Cohort I Startups

Program starting from being a participant in the program and winning the Innovation Grant to also being a mentor to the program. The prospective entrepreneurs engaged in learning about the program in an interactive way. These AMA sessions made a great contribution in boosting the applications count for the program.

In search of quality applicants, Sangam also reached out to different Incubators across the country and shared details about the program. The Incubators shared about the program with their incubations that they felt were doing great work in the field of low carbon technology.

Sangam and UNIDO also regularly posted on social media handles (Twitter/Facebook and LinkedIn) to reach out to maximum entrepreneurs.

Out of the 155 applications, a shortlist of 50 applications was brought forward for evaluation by a panel of Karthik Chandrasekar, Sangam, Reshmi Vasudevan, UNIDO PMU and Kiran Ananth, CII.

The 25 finalists were selected on basis of their innovation and the potential for impact at scale. The team also conducted a final round of due diligence before finalizing the cohort. Refer to start-up details in Annexure 4.

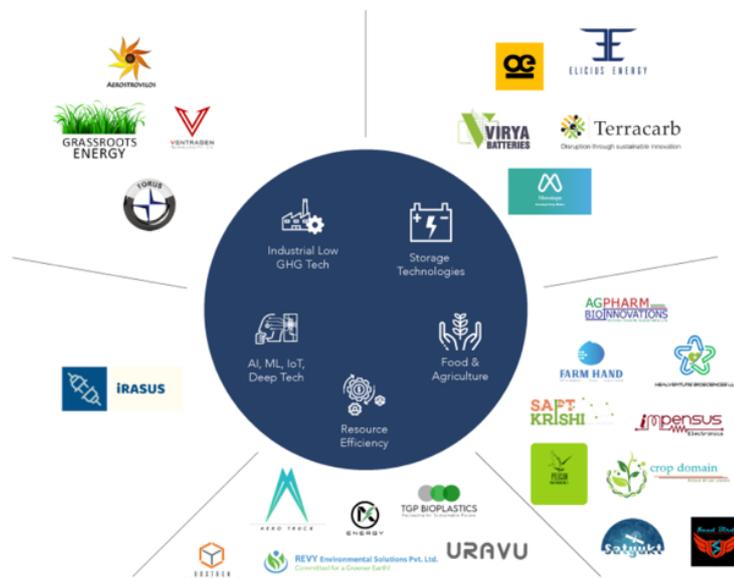


Figure 7: Startup Cohort Sector Wise

The program also included 5 additional start-ups who were in the final rounds of selection of the Accelerator to give them an exposure to the training of the FLCTD Accelerator. Two startups dropped out of the program as they couldn't dedicate time to the Accelerator.

3.2 Mentor Ecosystem Building

Learning from the first iteration of the FLCTD Accelerator program experience, the FLCTD program management team gave special focus to develop the mentor ecosystem as it plays a key role in nurturing the start-up cohort. A group of 30 mentors from diverse backgrounds joined the accelerator to guide start-ups over the course of the program. The mentors were chosen on basis of their expertise in working with clean-tech start-up and the technology commercialization topics that will be covered through the accelerator. The seasoned mentors selected by the accelerator team belong mainly from Incubators, Early stage Venture Capitals, Industrial Experts or Start-up Founders.

The mentors chosen for the program belong from the following sectors namely storage technologies, impact and venture investment, AI-ML-IoT, operations, quality management, GHG mitigation, energy efficiency, clean technologies, policy, electric vehicle, and last but not least, entrepreneurial strategy.

The details of the Mentor Cohort is mentioned in Annexure 6

4 Program Design and Modality

The second cohort of the accelerator has been meticulously planned taking into consideration the current ongoing situation of COVID-19. The Sangam Implementation Team invested a lot of time in designing the program to help startups achieve program objectives and network within the cohort.

4.1 Training Webinars

A series of detailed training webinars were hosted followed with assignments. Startups were given 2 weeks to complete the assignments. Discussion sessions to clarify any doubts related to the webinars were scheduled a week subsequent to the respective webinar. Mentors and internal mentors were readily available to clarify any doubts, if any.

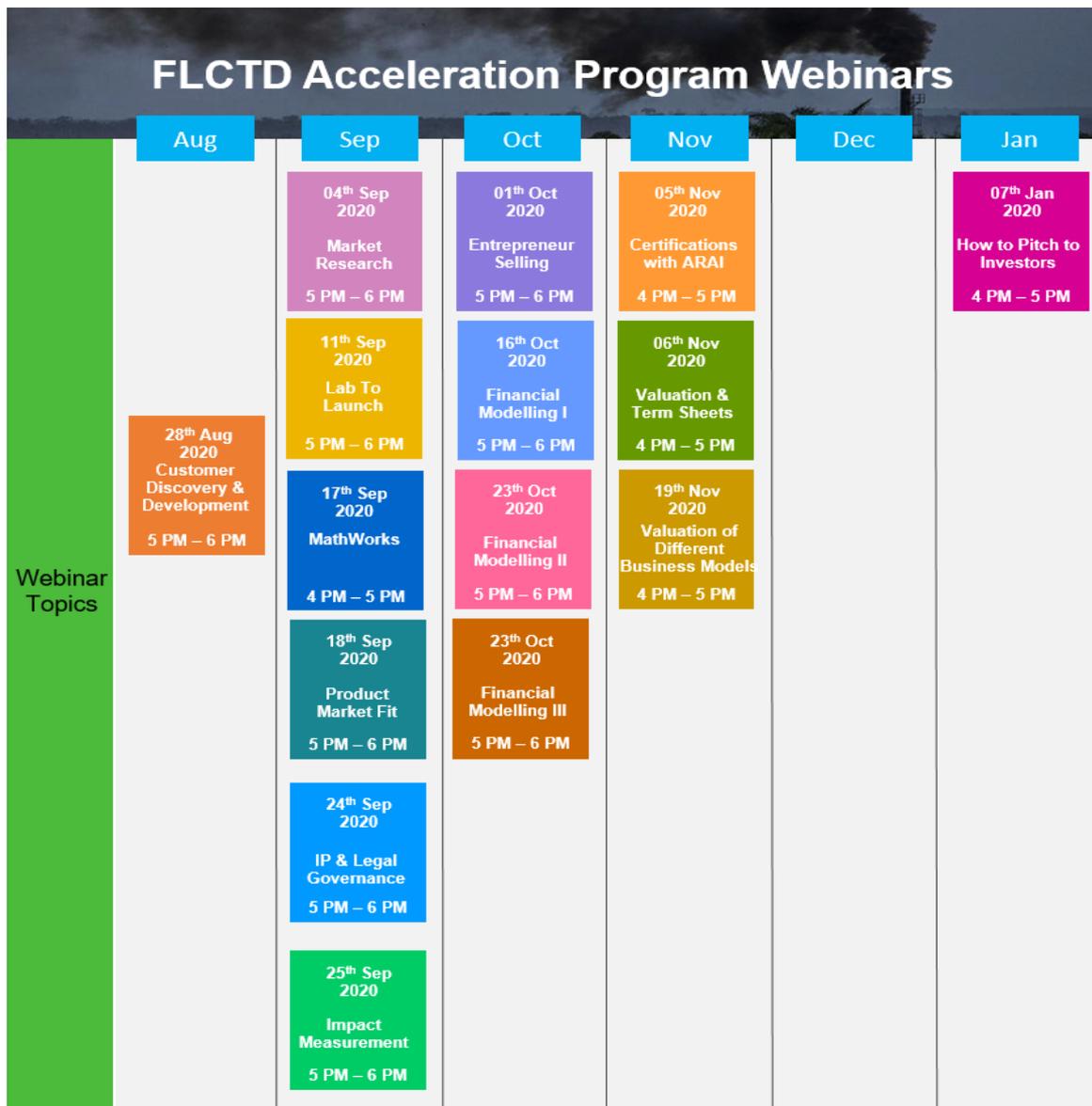


Figure 8: Webinar Calendar

A total of 15 webinars were hosted out of which 12 webinars were part of core curriculum and remaining 3 were guest webinars. 7 training webinars and 2 guest webinars were conducted prior to the Mid Term.

Training Webinars

Pre Mid Term	Post Mid Term	Guest Webinars
Customer Discovery	Financial Modelling II	MathWorks
Market Research	Financial Modelling III	IP & Legal Governance
Lab To Launch	Valuation & Term Sheets	Certifications with ARAI
Product Market Fit	Valuation of Different Business Models	
Impact Measurement	How to Pitch to Investors	
Entrepreneurial Selling		
Financial Modelling I		

Figure 9: Webinar topics covered during the program

Intense sessions targeted the fundamental blocks of the start-up evolution journey and provided start-ups an exposure to the jargons used by investor. Detailed review of the learnings from these webinars was conducted in the Mid Term in the presence of mentors, UNIDO and Sangam Team.

Post the Mid Term, 5 training webinars and a guest webinar on Certifications with ARAI were conducted. These webinars wrapped up the curriculum and was followed by completing the essentials to get ready for DEMO Day.

Keeping in mind the ease of access, webinar recordings were archived and shared with the cohort.

The screenshot shows a 'Webinar Archive' interface on Basecamp. It features a grid of 10 webinar thumbnails, each with a title and a small preview image. The thumbnails are arranged in three rows: the first row has four thumbnails, the second row has four, and the third row has two. The titles of the webinars are: #10 Fundraising Pitch, #9 Financial Modeling 103, #8 Financial Modeling 102, #7 Financial Modeling 101, #6 Webinar: Entrepreneur Selling, #5 Webinar: Impact Measurement, #4 Webinar: Product Market Fit, #3 Webinar: Lab to Launch, and #2 Webinar: Market Research. There is also a 'Mathworks' thumbnail in the third row. The interface includes a '+ New...' button at the top left and a 'Unsorted' dropdown at the top right.

Figure 10: Webinar Archive on Basecamp

4.2 Key Deliverables by Start-ups

The program focuses on various aspects of growth of a start-ups and learning is proportional to participation from start-ups end. It is expected that by end of the program, entrepreneur should be able to confidently answer the following questions:

- Who are the Customers?
- Why would people buy your product?
- How will you make money?
- Where is the money?

Key deliverables will also include the insights gained through the assignments associated with the training webinars. An attractive yet informative pitch deck along with concise presentation at the end of the program compiles all the individual deliverables.

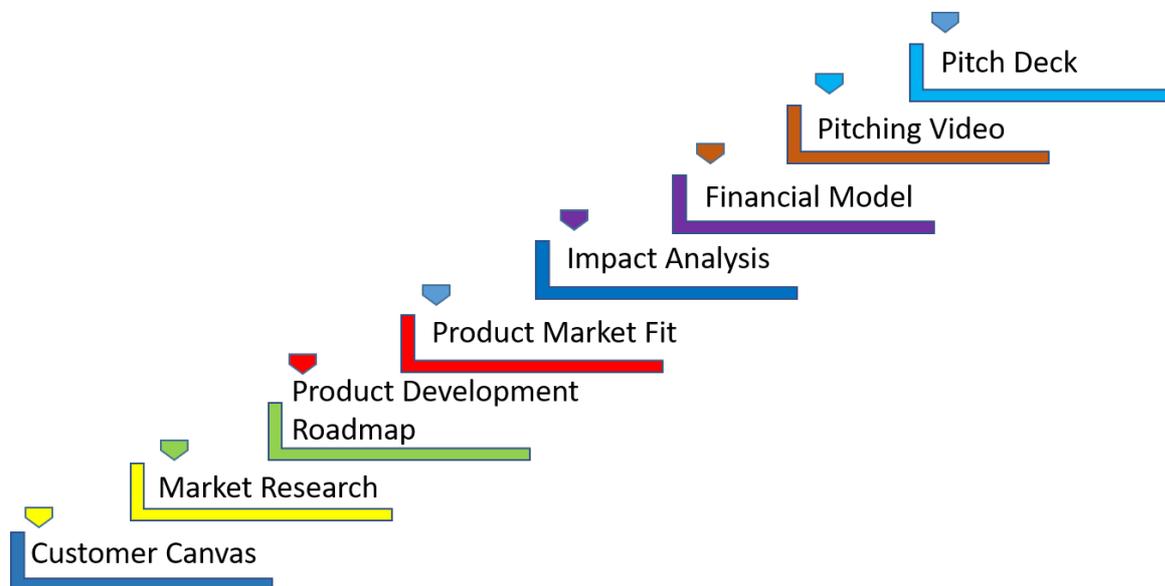


Figure 11: Key Deliverables by Start-ups

Customer Canvas

The Customer Canvas is an important tool to improve the understanding of the customer. To help in customer validation. The cohort reached out to their potential customers, their mentors and Sangam team to depict their customer's persona, pain points while addressing their immediate and aspirational needs. This led to the formulation of better value proposition statement for their product.

Market Research

In this assignment, the start-ups had to estimate their Total Addressable market (TAM), Serviceable Available Market (SAM) and Share of Market (SOM). Knowing to calculate this market size would help them to understand the scalability of their business to the investors.

Product Development

The product development assignment was to create an understanding within the start-ups on the stage of product development. It was also to make them laydown on their own on what all they have completed in the different stages such as idea screening, concept development, lab testing etc.

Business Canvas & Product Market Fit

A Business Model Canvas draws a picture of the way, an organisation creates delivers and captures value. The start-ups brainstormed internally and discussed their ideas with the Sangam Team to identify their cost and revenue drivers involved in their entire operation to drive customer value proposition. This finally helped to formulate their financials while translating their business model into numbers

Impact Analysis

During the impact Measurement and Management Webinar, the start-ups were given an assignment to calculate the impact of their product and technologies on the climatic, customer and industry. The focus was to calculate the annual emission reduction (GHG) because of their products / technology usage and hence showcase the lifetime GHG reduction potential while creating economic gains for the customers.

Financial Model

This assignment was based on financial modelling sessions that were held during the events and webinar. The start-ups had to put together a business plan based the multiple rounds of discussion during that happened during the mid-term event. Focus was to help the start-ups understand the cost and revenue drivers while looking into their working capital and cash flows. Some of the advanced stage start-ups had previously formulated a financial model which they started refining on basis of the discussions.

Pitching Video

Compiling insights from the previous assignments, start-ups were instructed to record a short video of 60 – 80 seconds about briefing their business. Start-ups worked out a pitching script with discussions with the mentors and Sangam team. These videos are intended to help start-ups to understand how they can seize any one minute opportunity by emphasizing on the key aspects of their company. It is also an asset for the start-ups that can be used to approach various investors at any point of time.

Pitch Deck

Based on their learnings in the previous assignments, the start-ups were supposed to put together a final pitch deck about their business in front of investors. At the end of all the assignments, the Sangam Team interacted with the start-ups on one and one basis. The Sangam Team went through multiple iterations with each start-ups and finalised the financial model and the pitch decks. Once these were finalised, the start-ups had one on one session with the mentors and incorporated and finalised the documents.

4.3 Launch Event

The second cohort of the FLCTD Acceleration Program was launched on 24th August 2020. The Launch event was held over a web-conferencing platform. The event was attended by 75 participants, including co-founders of the cohort of 25 start-ups, 30 mentors, panellists, UNIDO, and the Sangam team.

R. Ramanan, Mission Director of the Atal Innovation Mission (AIM) delivered the keynote. He kicked off the session with words of encouragement to the founders.

His talk was focused on how the current pandemic has affected the whole world. He also interlinked the scientific evidence that links the global crisis of COVID-19 with that of climate change. So he encouraged the start-ups to focus on developing solutions that will help to reduce carbon footprint and also enunciated the role of Accelerator Programs such as FLCTD to provide leadership guidance, tools etc. to promote growth of start-ups.

Mr. Ramanan also spoke about the 5 pillars Atmanirbhar Bharat which is an opportunity for innovators to create climate friendly products and technologies to serve communities at scale. “If every solution is climate friendly and aligned to the SDGs, we all will create a better world for our future generation.”

- Pillar 1: Talks about India being a Demographic Dividend I, e a young country where it is possible to engage more with India’s youth
- Pillar 2: Leverage technology and to build technologies which are cost effective and scalable.
- Pillar 3: To enable the start-ups to be successful, they should also have access to digital and physical infrastructure which will help to develop world class solution.
- Pillar 4: India’s demand is going to rise exponentially which is an opportunity for entrepreneurs to cater to the aspirational needs of the people.
- Pillar 5: It is only possible for India to make social and economic progress by making paradigm shifts. This will only be possible by newer technologies to serve rural and urban markets.

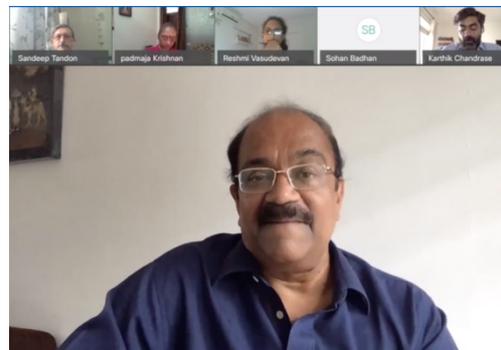


Figure 12: Dr. Ramanan, CEO NITI Aayog delivering Keynote Address

The keynote was followed by a panel discussion on “Decarbonizing Industrial and Commercial Sector”, moderated by Karthik Chandrasekar, with insights from our eminent panellists namely Dr. René Van Berkel, Officer in Charge, UNIDO, Professor Dr. Ambuj Sagar, IIT Delhi and Sidharth Choudhary, Invest India. Dr. Berkel asked start-ups to focus on multiple aspects to reduce emissions by using less materials, less water and less energy. Both Dr. Ambuj Sagar and Sidharth Choudhury encouraged the start-ups to associate with Government of India (GOI) initiatives aimed at decarbonizing the economy and reducing GHG emissions. Emphasizing the GOI objectives for providing support to low carbon technology start-ups, Sidharth Choudhury spoke about the dedicated de-risking vertical in Invest India that is

focused on building partnerships with MSMEs which can license out technologies to start-ups. Invest India is also building partnerships with R&D partners and testing labs that can validate the technologies as well as be a source of technologies for various start-ups.

Dr. Ambuj Sagar concluded the panel discussion by highlighting the relevance and importance of initiatives like FLCTD. Customized assistance to start-ups is extremely important as every start-up's journey is unique. The FLCTD platform turns out to be helping the country in a way to identify possible innovations and to enhance the chances of success of the start-ups.



Figure 13: Panel Discussion

4.3.1 Pre and post Launch Events

Since the Launch Event happened virtually, separate meetings were also organized with the start-up and the mentor groups, for everyone to get acquainted with each other and layout expectations from each one within the cohort.

Start-up Meet and Greet Session - The start-up session was delivered on 21st Aug just before the launch of the event. The webinar helped the start-up cohort to come together to build acquaintance with each other and the working team of Sangam and UNIDO. The webinar was quite interactive and beneficial to the start-ups, as a session on “How to pitch in 30 secs” was conducted by Karthik Chandrasekar. The cohort huddled up and practiced their speech which gave them a sense of comfort to deliver their pitches during the Launch Event.

Mentor Meet and Greet Session - The mentor Meet and Greet session, held on 26th August, was kicked off by Sandeep Tandon from UNIDO. The session focused on the program structure and expectations from the mentors during the course of the program. It was an interactive session, where the UNIDO team shared their long-term goal about the FLCTD program while the mentors from FLCTD Cohort I shared the experiences of their previous engagement. The newly on-boarded mentors engaged in discussion with the ex-mentors to discuss the expectations from the startups and what can be done to make this interaction much more meaningful for the cohort.

Your 30 second pitch

Amazon’s early positioning statement

For World Wide Web users
Who enjoy books,
Amazon is a retail bookseller
That provides instant access to over 1.1 million books.
Unlike traditional book retailers,
Amazon provides a combination of extraordinary
convenience, low prices and comprehensive selection.

Amazon is an Equal Opportunity Employer. Minorities and women are encouraged to apply.

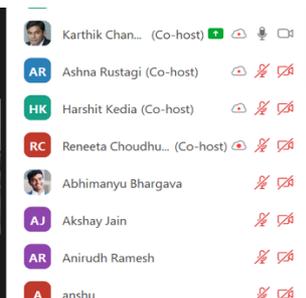
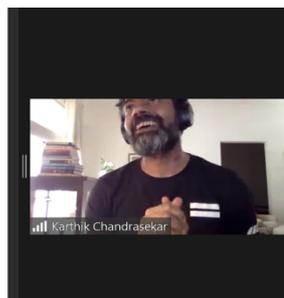


Figure 14: Startup Meet & Greet Session

4.4 Mid Term

Mid-term was designed as a platform for mentor and start-ups to review the progress of the companies with respect to assignments, understand overall status of the company and get constructive feedback from mentors, UNIDO & Sangam team.

4.4.1 Design of the Review

The purpose of the mid-term review was to bring both the start-ups and mentors together for a discussion on the following:

- Understanding of the overall status of the start-ups. The start-ups actively participated in various training webinars held during the entire course of the program.
- To review the progress of the companies with respect to assignments and deliverables. The start-ups were given the opportunity to speak one-on-one with their mentors and the Sangam team along the entire program. The start-ups were able to complete their positioning statements and also discussed about their current progress and pain points with the mentors.
- To give constructive feedback to the companies to improve upon. After listening to the start-ups pitch about their positioning statements, progress and pain points, a feedback session was held where UNIDO and their mentors and members of the Sangam team gave their constructive feedback to each start-up.

4.4.2 Description of the Review

- Each review session was scheduled for 30 minutes which was attended by Start-ups, mentors and Sangam's internal mentor. During the review session, the start-ups reflected their learning's and deliverables from the program, which was then reviewed by the mentors, UNIDO-PMU and Sangam team.
- During the review, the start-ups presented their Mid-term deck to the panellists who comprised of representatives from UNIDO, Mentors and Sangam team members. All the 28 start-ups were divided into 3 groups of 10, 9, and 9 for their presentation. The start-ups presented their pitch within 7-10 minutes and after that, a 20 minutes discussion with the mentors was allowed. The companies also took notes of the key takeaways.
- Post the presentation, the panellists shared their feedback with the start-ups and also scored them on the basis of their review. A 25 - 28 minutes group discussion was held, where the start-ups talked about their takeaways from the discussion with the mentors.

4.4.3 Output of the Review

- Post the review, the transcript of the individual session is shared with each start-up so that they can work on their decks based on the feedback received from the Panellists.
- Each start-up is also ranked on the basis of the individual start-up performance basis the scores shared by the panellists questionnaire.

- On the basis of the progress of the start-up, the UNIDO and Sangam team will decide the companies who will be pitching to the investors on the DEMO day.

4.4.4 Performance Indicators of the Review

- Understanding of the overall business with respect to the program indicates the learnings of the start-ups in their assignments. By the end of the assignment session, the Sangam team interacted with the start-ups on one-on-one basis and went through multiple iterations with each start-up and finalized the financial model and pitch decks. After the finalization, the start-ups had a one-on-one session with the mentors and incorporated the finalized documents. The main purpose of these assignments was to ensure that each of the start-ups have a basic understanding of the business plan and finally help them apply for the FLCTD grant.
- Quality of the Mid-Term Pitch indicates the start-up’s presentation on the basis of the template that has been shared with the start-ups. The start-ups have presented their mid-term pitch to UNIDO, their mentors and Sangam team. Based on how they spoke and formulated their pitch, the innovators have reviewed and rated the start-up’s performance.

4.4.5 Start-up Performance

The Start-up performance mainly indicates about the basic performance of the start-ups along the entire length of the program. It also indicates how responsive the start-ups were, how well they understood the program and their process of evolution during the entire program. From the start of the program, the start-up entrepreneurs were being tracked to understand the progress of each company and their participation in the program. Therefore, tracking each start-up helps in pushing the ones who are lagging behind.

4.4.6 Start-up Ranking and Participation in the Program

The graph below gives the average scores given by UNIDO Team, Sangam and Mentors on the basis of the Mid Term Review. On an average, the start-ups scored an overall of 67% based on their understanding and interactions with the start-ups.

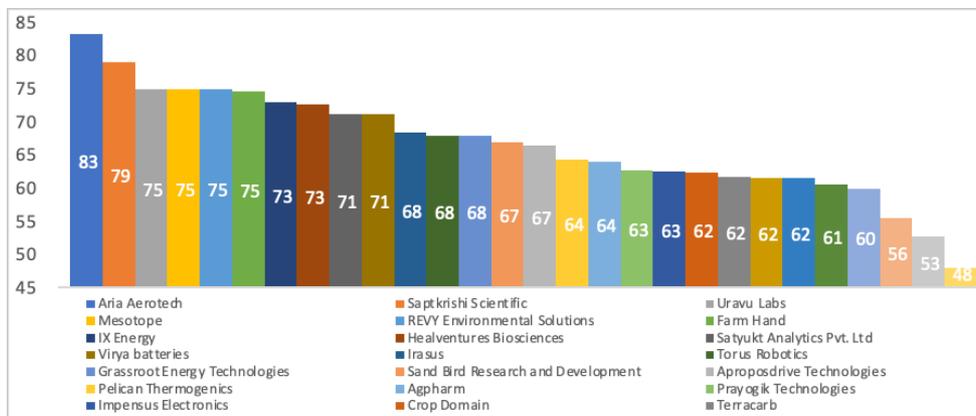


Figure 15: Mid Term Scores of Start-ups

The graph below shows the participation of the start-ups in the program and their midterm review scores. It explains about the percentage of start-ups participation versus the percentage of output deliverables (assignments submitted by the start-ups). The graph also shows the companies which are ahead and behind of the curve.

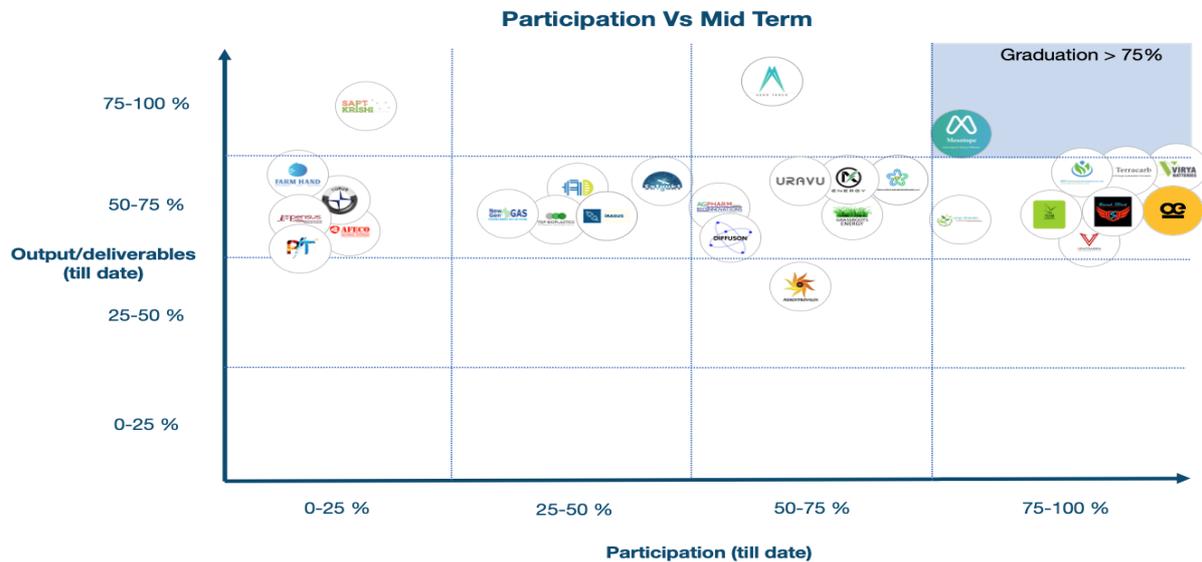


Figure 16: Participation of Startups Vs Performance in the Program

4.4.7 Mid Term Reviews for each Start-up

1. Aerostrovilos

- The company noted that there is a difference in efficiency of IC Engines and Gas Turbines.
- The company also denotes that the knowledge about the number of Gas Turbines running in India is very essential.
- The ARAI Certifications and Testing will be helpful for determining the maximum speed of the vehicle and the Torque.
- The company needs to check what kind of automotive grade material should be used to know about the Current Metallurgy v/s Passenger Vehicle Grade.
- According to Aerostrovillos, the exhaust temperature for ICE ranges around 300°C - 350°C and this range is required in 100 kg tanks.

2. Afeco Heating Systems

- The company should be able to compare and position themselves against other crucible manufacturers in the market. They should be able to easily communicate to the customers the benefits of using Afeco's product against what is available in the market and also clearly showcase the low

energy consumption of Afeco's crucible against others including lower metal loss while treating.

- Afeco needs to rework the presentation and make it easier for the audience to understand

3. Agpharm Bioinnovations

- The company needs support/ assistance to identify the certifications they require in order to start pilots with farmer producer organizations that they're targeting as a customer segment.
- Too much information in the slides, need to bring down the content to the extent just to get the audience interested.
- The company needs to put more thought into business models, go-to-market strategy and meaningful impact numbers.

4. Apropos Drive Technologies

- Need to communicate in a clear and easy way.
- Highlight ease of manufacturing perspective.
- Apropos needs to carry out a life cycle assessment of the product so that can position themselves against the other competitors in the market.

5. Aria Aerotech

- Company needs to show to customers whatever they spend turns into actual fuel savings in terms of payback periods, as well as potential financing options.
- The company needs to think of some business model innovations – branding or to reduce the price to the customer, or basically provide some financing options. The company needs to define the proposition for the mass market.
- Aria needs to have a detailed and tactical plan for different sizes of fleet owners. Also they need to map out which ideas are relevant for which segment.
- The company is exploring a variety of business models that can allow customers to adopt the solution ideally incurring a lower upfront cost.
- The company has been able to clearly measure the impact of its solution with pilot partners, going forward, the measurement of impact might have to be deemed as the solution is a fixture that does not have any ability to measure or capture impact data.

- The presentation was simple yet detailed with clear articulation of all the different aspects of the business; the business model validation is currently being explored.

6. Crop Domain

- The company needs to highlight the long term cost - benefit analysis for the farmer, shifting from chemical pesticides to the grub terminator.
- The company should also showcase the environmental impact in terms of soil quality, soil health, micro-flora, microbial diversity. Crop Domain has already undertaken the study to do so, but cannot come to an answer yet.

7. Diffusion Coatech

- The overall presentation is very technical. The company needs to clearly communicate out the bigger picture to the audience
- Diffusion needs to identify who are the customers that are ready to switch to the Diffusion's product. They also need to calculate and prepare a business case for the customer if he switches over to use diffusion's product
- Needs to work on Impact Numbers and customer engagement models.

8. FarmHand

- The Business model canvas has too much information and it needs to be more streamlined with specific points on how the company plans to scale
- The company needs to strategize

9. Grassroot Energy Technologies

- The company needs to put a holistic view of the impact of the individual Biogas Plant in one frame along with what the impact is when they scale up. Questions such as how many tons of municipal solid waste is required to generate how much kg of biogas and what's the replacement potential of fossil fuels. Again, the placement of inorganic fertilizers with organic fertilizer
- Unit economics of the Biogas plant needs to be highlighted in the presentation
- Grassroots also needs to answer the kind of unit of operations it needs to set up to raise the amount of financing.

10. Healventures Biosciences

- The presentation was simple and crisp, good slides
- Long term cost benefit analysis to the end consumer should be defined

- The company should showcase how the application of the product in the slides

11. Impensus Electronics

- The company has defined their customer and market segment but still their impact and value proposition to the farmers is not clear and needs to be worked upon. Questions such as how much extra income their offering will generate for a farmer and how their storage innovation would provide direct market access to the farmers need to be addressed.
- The company's presentation could be improved as to clearly communicate what their innovation and business model is.
- Needs to work on GHG impact numbers.

12. Irasus

- The current target customers of the company are battery OEMs but it looks like the company is not completely focused on one target customer segment yet and still validating the best go to market strategy
- The solution is well development from an engineering perspective, the company still needs to arrive at the solution and business model that will drive sustainable growth
- The company has made significant progress in defining the value proposition to customers to be able to define the value that they are creating a share of which they can charge the customers.
- The company is slightly early in the market for EVs but has a significant opportunity to grow with the sector.
- The presentation could be improved with a little less text and a lot more data from the field and illustrations of value creation to customers. The company also didn't stick to the timings of the pitch and were way above time.

13. IX Energy

- The problem statement faced by the fleet operators has been identified - it would be important to understand the various opportunities available to them to address the pain points they have
- The start-up has picked private fleet operators to be the initial target customer segment after exploring various options to enter the market.
- The solution takes into account the customer expectations and is designed to match the current business practices in the industry

- The company has a clear value proposition to bus fleet operators that matches the feedback to founders have gotten during the customer discovery process.
- The company can improve its analysis of impact potential to include a full lifecycle cost of their intervention for existing buses in operation
- The company is currently evaluating various business models to make the offering meaningful to bus operators including a pay as go system. The same needs to be validated by getting into contracts with a few early adopters.
- The founder and supporting team were able to communicate the approach the company is taking to the market well.

14. Mesotope

- The product activated carbon has not been widely used in the lead acid battery market in India even though research papers suggest a huge improve in life of the batteries
- Mesotope to continue completing third party validation of the technology to prove the effectiveness of using activated carbon for batteries. The product will cater to the entire battery market (proven existing and recyclable) if proven
- The company to refine their Impact slide further

15. NewGen GAS

- Can share information about cost per unit for switching to NewGen's System.
- It'll be good to share some key points from the prototyping and piloting stage while presenting.

16. Offgrid Energy Labs

- Stick to the timings of the pitch
- The company to focus on key aspects of the technology and how it fits into the overall battery market
- For the FLCTD Innovation Challenge, Off-grid to focus on comparative studies of different battery technologies to create a strong positioning for them.

17. Prayogik Technologies

- Need to get the certification sorted

- Getting the product certified will require time and might need iterations which will consume a considerable chunk of available funds. Need to manage the operations, expenses and funds accordingly.
- Keep the momentum and keep the team motivated.

18. Pelican Thermogenics

- Pelican Thermogenics need to work on multiple used cases for the product. The company also should prioritize the target segment based on value proposition. For example: Seasonal High Value Fruit Dehydration (Processing). They also need to relook into the Problem Statement and begin with the pain points - highlighting the loss of income due to wastage & uncertainty of the system. The company can also look at the agro-processing market and know the importance of seasonal high fruits/herbs & spices and sea food industries.
- Customer Segments and Needs: To know about the customer segments and understand their needs, the company has to know about the Spice/Herbs/Fish or agriculture processing units. Whether it is tailored to food processing and if there are any financing options available for the customers?
- For the GHG Emissions calculations, the company has to mention the cumulative numbers and re-check on them.

19. REVY Environmental Solutions

- Revy needs to have a breakdown of the Value Proposition no.'s and Review Impact No's
- The company also needs to explain a bit on the Bacterial Culture and its effectiveness.

20. Sand Bird Research and Development

- Sandbird needs to focus on its core competency in terms of partnering with other companies and making profit.
- The company also needs to define what it is trying to build in terms of its capabilities so that there can be product partnerships that the company may be able to make profits for agriculture, robotics, animal husbandry, poultry farms etc.
- The company is trying to focus on circumventing the normal distribution channels and going straight to the rental agencies which is essentially a layer between the manufacturers and the end consumers.

21. Saptkrishi Scientific

- The working of the technology needs to be incorporated into the deck
- Saptkrishi should focus on 1 state/ market, collect more data to define the business model and build capacity to mitigate operational risk before going pan India
- Re-check impact calculations with mentors

22. Satyukt Analytics Pvt. Ltd

- Value proposition for the end customer needs to be made stronger in the slides as well as the company website
- Re-check impact calculations with mentors and re-visit the SDGs included in the slides

23. Terracarb

- Terracarb to demonstrate the usability of graphene at the application level i.e. how the product is working
- The value proposition of the product in context of their competitors to be clearly reflected in the pitch
- Quantify the environmental impact for manufacturing of graphene in comparison to mining it.

24. TGP Bioplastics

- The customer persona to be a reflection of the customer of the first customer segment the company is going to be focusing on.
- TGP to work out the price point of the product to the customer as they are close to commercialising the technology. The company should be able to talk about in percentage terms how much their polymer is cheaper in comparison to the biodegradable plastics that are available in the market.
- GHG Impact of the company to be rechecked

25. Torus Robotics

- The company has explained their price point and the supply chain, where further review is needed.
- The Performance v/s loading graph, the Power Density Graph has also been explained along with examples. They have also explained about the life and efficiency of a pump (e.g. ☐ maximum 3 minutes duty cycle) along with the applications of the motors in the Hydraulic Pumps.
- According to the company, the information should be divided into 2 slides so that the value addition can be clear for the fleet and customer segment.

They have mentioned the applications i.e. low speed two-wheelers and consumer electronics.

- The commercial aspects of the value problem are not made clear and also the impact needs to be reviewed.

26. Uravu Labs

- The company has proposed a systematic mapping with the industries in which the temperature ranges from 5°C to 50°C for 250 LPD waste water. However, the temperature of the waste should be around 70°C to 90°C and the minimum size required to deploy at the industry is around 1000 LPD.
- The company has adopted an absorption based thermal technology, which uses desiccants and low-grade heat for generating 100% renewable water.
- About 6-8 months data will be needed to understand the waste water quality and also for the reliability of the system.
- The company should stay focussed on the Indian Market and should rightly provide renewable water to both industries as well as water applications.
- The company should try to meet with the World Health Organization (WHO) drinking water quality standards and to know about the pure distilled water (for industries – TDS Value etc); the mineral cartridge details are required.

27. Ventragen Technologies

- The company has explained about the validation of unit economics needs and it should be reviewed again.
- Both the cumulative and non-cumulative GHG Emission calculations should be reviewed.
- The market potential with respect to customer persona (SAM/TAM and Initial target Market) needs to be revisited and re-iterated along with the addition of a few competition slides.
- The Star Labelling should be checked with BEE and the Post Pilots including their case studies should be sent to BEE.
- The Output performance and Techno commercial Value proposition with respect to Capital investment needs to be tested and analysed post pilot (Dual Harnesser).

28. Virya batteries

- Company to study failures of the product to have a better understanding of the performance of the product
- It is extremely critical for the company to conduct third party validation of the product which will help to boost confidence in the technology.

- Virya to also focus on highlighting the energy savings of the battery due to an efficient technology
- The company put some thought and highlight why they are targeting the 2-wheeler and 3-wheeler market versus any other market today.
- During the pitch, focus should be to not to be repetitive and not put too much information in a particular slide with text
- Competition analysis and target price should be highlighted in the presentation as well since that everybody will be asking. It would be good to start off the presentation and talk about the price point that Virya is targeting and also mention the long-term goals. Also mention milestones and achievements, contract manufacturing at what price, full scale manufacturing price slabs. Scale and the current price the company is at.

4.5 DEMO Day

The DEMO Day was the final phase of the FLCTD Accelerator Program, where the startups from the Program got to pitch in front of investors and build their networks for fundraising.

Due to the unfortunate global pandemic of COVID-19, we had to postpone an in-person close of program (Demo-day) and had planned to bring the start-ups from the first accelerator program together with the start-ups from the second acceleration program in a final demo day for the year in December 2020 subject to safety for travel and allowance for large gatherings.

As it wasn't still safe for large gatherings to take place, the DEMO Day (closing of the program) was organised for the start-ups of Cohort-I and Cohort-II. A two-day Semi-Finale was organised where 35 start-ups from the two cohorts pitched to 20 investors and industry experts. 8 top finalists were selected from the semi finale and these finalists got to present to global investors, BEE and UNIDO Officials.

4.5.1 Design of the DEMO Day

The DEMO Day was a three-days long event with 2 - days Semi Finale and the Grand Finale where the 3 winners of the FLCTD Low Carbon Technology Accelerator were announced.

35 cleantech startups from Cohort-I and Cohort-II participated in the program and got the opportunity to pitch to an esteemed investor panel. A total of 4 mock pitching sessions for all the startups was organized by Sangam team in order to ensure that the learnings and deliverables of the startups are met and to prepare the startups for the DEMO Day pitching sessions. The mentors and Sangam team gave a lot of constructive feedback to the start-ups for their improvement and way forward. All the mentors worked with each of the startups to close their deliverables so that each of the start-ups have the basic knowledge and understanding of putting together a business plan and their pitch deck.

The FLCTD Program cohort start-ups were divided into 7 sectors namely-

- Energy Storage
- Mobility
- Food & Agriculture
- Industrial Low Carbon Technologies
- Pumps & Motors
- Resource Efficiency
- Space Conditioning

A total of 4 Sessions held were hosted on the Semi Finals of Demo Day. Session 1 and Session 2 were held on Semi Finale Day 1 and Session 3 and 4 were scheduled for Day 2. The sectors Energy Storage and Mobility were under Session 1, Food & Agriculture sector was under Session 2. For Day 2 of Semi Finale, the Industrial Low Carbon Technologies sector was under Session 1 and the remaining sectors- Pumps & Motors, Resource Efficiency and Space Conditioning were under Session 2. Out of the 35 cleantech and agritech start-ups, 8 finalists were selected by the Jury Panel for the Grand Finale of DEMO Day event.

4.5.2 Semi Finale Day 1

The Semi Finale Day 1 of FLCTD Low Carbon Technology Accelerator was held on 18th of January 2021 from 10:00 AM to 5:00 PM IST. The program started with a warm Welcome Address by Sreyashee Das, Sangam, followed by Opening Remarks from Mr. Sandeep Tandon, the National Project Manager of FLCTD project. Sreyashee Das from Sangam introduced the Jury Panel for the 1st Session- Krishna Navalpakkam from Schneider Ventures, Jayant Prasad from cKers Finance, Vishnu Rajeev from Micelio, Smita Rakesh from Social Alpha, Visalaxmi Ray from Ankur Capital and Kiran Ananth from CII.

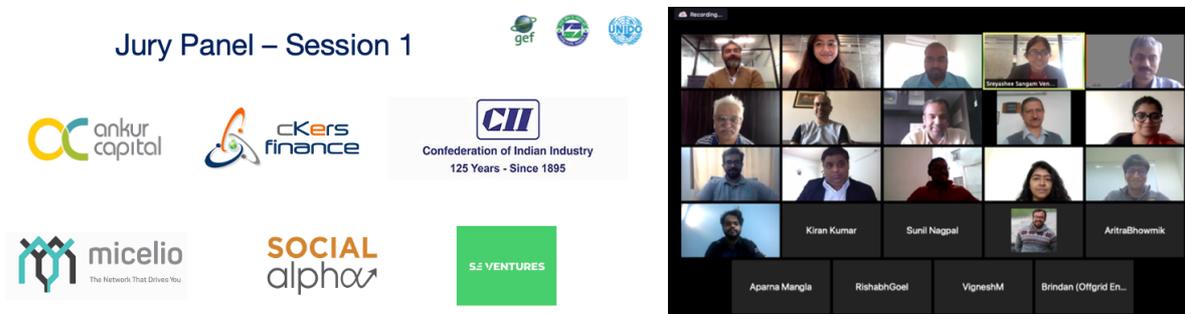


Figure 17: Semi-finale Day 1 Session 1

For Session 1 and 2, there were a total of 18 cleantech and agritech start-ups (9 start-ups for each session). All the start-ups were given 5 minutes time to pitch with a warning at 4 minutes. It was then followed by another 5 minutes of Questions & Answers(Q & A) from the Jury Members and the audience. A separate scoring sheet was provided to the Jury Members to score the start-ups based on their pitches and Q&A. A survey link was also provided in the chat box by the Sangam Team to the audience to give valuable feedback. After completion of all the start-up pitches and Q&A, a private discussion was held between the Jury Members and the Sangam Team for evaluation and selection of finalists on the basis of the scores provided to the start-ups.

Session 2 began after lunch break from 3:00 PM IST. Once again, the event started with a round of introductions of the Jury Members- Shiva Shanker from Ankur Capital, Subhadeep Sanyal from Omnivore, Starlene Sharma from Green Artha, Rachna Chandrashekhar from Upaya and Ankit Bhatnagar from Nab Ventures. All the agritech start-ups were again given 5 minutes time to pitch with a warning at 4 minutes. It was then followed by another 5 minutes of Q&A from the Jury members and the audience. The Jury Members scored the start-ups based on their pitches and Q&A, followed by a private discussion with the Sangam team for evaluation and selection of finalists. Finally, to conclude the event for day 1, a Vote of Thanks speech was delivered by Sreyashee Das from Sangam Ventures.



Figure 18: Semi-finale Day 1 Session 2

4.5.3 Semi Finale Day 2

The Semi Finale Day 2 of FLCTD Low Carbon Technology Accelerator was held on 19th of January 2021 from 10:00 AM to 5:00 PM IST. The event started with the Welcome Address by Sangam, followed by Opening Remarks from Sandeep Tandon, UNIDO. Sreyashee Das from Sangam introduced the Jury Panel for the Session 1 - Ganesh Kaveeshwar from Social Alpha, Aparna Mangla from Shell Foundation, Ashwin KP from Promethean Energy and Deepak Gupta from cKers Finance.

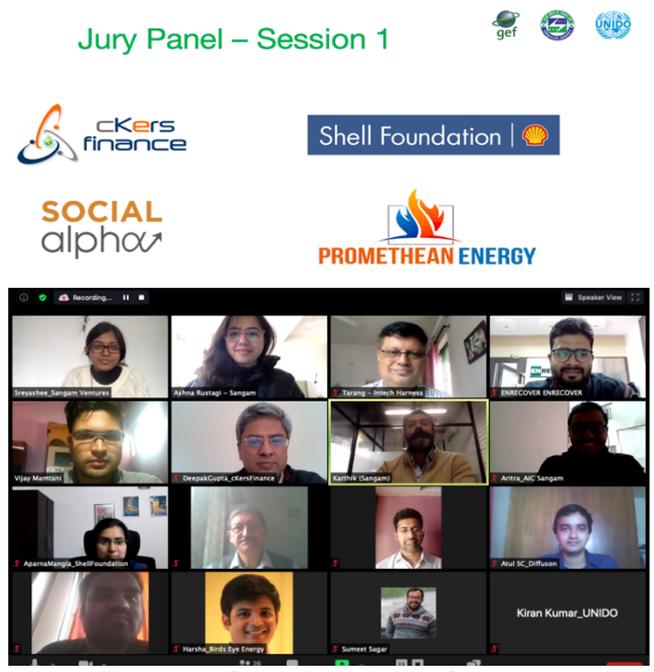


Figure 19: Semi-finale Day 2 Session 1

For Session 1 and 2 for Day 2, there were a total of 16 cleantech start-ups (7 start-ups for Session 1 and 9 for Session 2). The start-ups were given 5 minutes to pitch, with a warning at 4 minutes. It was then followed by another 5 minutes of Q&A from the Jury Members. A separate scoring sheet was provided to the Jury Members to score the start-ups based on their pitches and Q&A. A survey link was also provided in the Chat Box by Sangam Team to the audience to give valuable feedback.

After completion of all the start-up pitches and Q&A, a private discussion was held between the Jury Members and the Sangam Team for evaluation and selection of finalists on the basis of the scores provided to the start-ups.

Session 2 started post lunch break, at 3:00 PM IST, with a round of introductions of the Jury Members - Maya Chandrashekar from Green Artha, Gian C Modgil from ASHRAE, Simmi Sareen from Loans4me and Shankha Lahiri from Villgro. All the start-ups were again given 5 minutes time to pitch with a warning at 4 minutes. It was then followed by another 5 minutes of Q&A from the Jury members and the audience. The Jury Members scored the startups based on their pitches and Q&A, followed by a private discussion with the Sangam team for evaluation and selection of finalists. Day 2 of the Semi finale ended with a Vote of Thanks speech, delivered by Sreyashee Das from Sangam Ventures.



Figure 20: Semi-finale Day 2 Session 2

Basis the scores given by the Jury Members, the top 8 finalists were shortlisted and final scores of all the startups was presented to Sandeep Tandon from UNIDO. After approval of UNIDO on the final list of start-ups, the top 8 were announced to the public.

To prep the finalists for the Demo Day, a mock pitching session was organised for the top 8 finalists with the Sangam team. Inputs to the startups was given on the kind of questions that the startups might be expected to answer, presentation skills, time management and overall content.

The list of top 8 shortlisted startups are as following:

1. Agpharm Bioinnovations
2. Bird's Eye Technology
3. NewGen Gas
4. Offgrid Energy Labs
5. PELICAN Thermogenics
6. REVY Environmental Solutions
7. TGP Bioplastics
8. Torus Robotics



Figure 21: Top 8 Startups

4.5.4 Grand Finale - Demo Day

The Grand Finale Demo Day of FLCTD Low Carbon Technology Accelerator was held on 22nd of January 2021 from 3:00 PM to 6:00 PM IST. The top 8 Finalists for the Grand Finale DEMO Day were shortlisted out of 35 Start-ups from both Cohort-I and Cohort-II.

The event started with the Welcome Address by Sangam Ventures, followed by the Opening Remarks and an overview of the entire FLCTD program by Sanjaya Shrestha, Industrial Development Officer, UNIDO. Sreyashee Das from Sangam introduced the Grand Jury for Finale:

- Amit Antony Alex from Upaya Social Ventures
- Ananth Aravamudan from Villgro
- Jason Lusk from ADB Ventures,
- Sandro Stephen from Indian Angel Network
- Sanjoy Sanyal from Caspian (Didn't join due to personal emergency)



Figure 22: Grand Finale Jury

All the 8 finalists were given 5 minutes time to pitch with a warning at 4 minutes. It was then followed by 10 minutes of Q&A and feedback from the Jury Members.

The Jury Members scored the participants based on their pitches and Q&A on a separate scoring sheet provided via a Google Spreadsheet. After completion of all the finalists' pitches, a parallel discussion session was held with the Grand Finale Jury Members in the breakout room for short listing and finalizing the winners. Karthik Chandrasekar, CEO, from Sangam Ventures gave an overview of the Accelerator Program and thanked all the Program Partners for their support. Ashok Kumar, Deputy Director General, Bureau of Energy Efficiency explained the role of Bureau of Energy Efficiency (BEE) in supporting clean-tech start-up Ecosystem. The closing remarks for the Accelerator was given by Dr Rene Van Berkel, Regional Representative, UNIDO. Finally, the winners were announced by Sandeep Tandon, UNIDO India.

To conclude the Grand Finale event, a Vote of Thanks speech was delivered by Karthik Chandrasekar, CEO, Sangam Ventures, thanking all the Program partners- NITI Aayog, Atal Innovation Mission (AIM), UNIDO, Bureau of Energy Efficiency (BEE) and Global Environment Facility (GEF), Ecosystem Partners- Start-up India, Agni and Invest India and Acceleration Partner- Sangam Ventures for making the DEMO Day event a grand success.

Post the pitching session, a parallel private session was organised with the investors to choose the Top 3 finalists. The session was attended by all four Jury Members and Aritra Bhowmick and Sreyashee Das from the Sangam Team. The jury debated amongst themselves to select the top 3 finalists based on both scores and their assessment of the company on hearing the pitch and their prior experiences of knowing the startup.

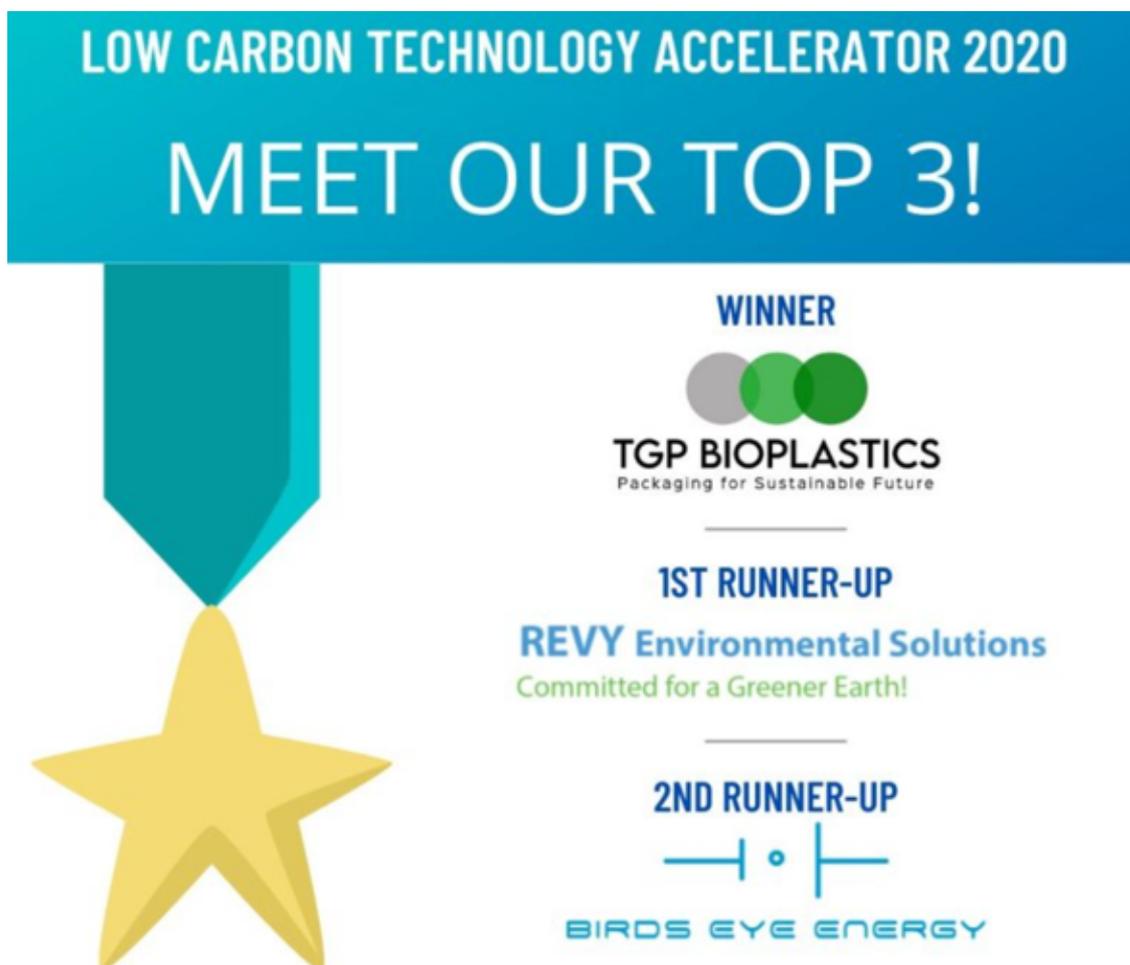


Figure 23: Top 3 startups of the Low Carbon Technology Accelerator

4.5.5 Investor Connects with Startups

Basis the scoring sheets provided to the jury panel of investors on all 3 days of the DEMO event and the feedback survey circulated to the audience of the DEMO day sessions, the Sangam team is connecting investors to startups they expressed an interest in. In total, there have been 62 connection requests.

4.6 Scoring Criteria for Mid Term and Demo Day

In order to evaluate start-ups during the Mid Term Review, the following scoring instructions were shared to ensure uniformity. Scoring criteria was in line with the curriculum covered before the Mid Term. Learnings from the assignments ensured that start-ups worked out each aspect of the Start-up Evolution journey. Sangam Team compiled the scores and engaged with mentors to improve the lowly scored aspects of a start-up.

Scoring Instructions			
Scores	1-4	4-7	7-10
Positioning Statement	Not very clear	Message is clear, but can be articulated better	Clear Messaging, very well articulated
Problem Statement	Hasn't identified the problem	Still working to understand the customer painpoint	Problem Statement truly addresses the customer's painpoint
Target Customer	Lack of Focus	Narrowed to top 3	Single Customer/Market Focus
Solution	Unclear innovation or impact potential	Technical clarity but commercial value unclear	Disruptive Innovation with an ability to scale
Value Proposition	Unclear about Value proposition	Value proposition can be strengthened	Clear Value proposition
Impact	Unclear Environmental & Social Impact	Environmental Impact can be improved	Clear Environmental Impact
Business Model	Unclear about Cost & Revenue Drivers	Business Model needs more thought	Business Model validated with clarity in VP, cost & revenue drivers
Market Potential	Unclear about the Market Potential	Needs to refine to create a better understanding of the market	Very clear on market potential
Overall Presentation	Needs more work	Can be improved further	Good presentation
Communication	Needs more practice	Confident, needs to work more on the pitch	Excellent Communication

Figure 24: Mid-term scoring criteria

Scoring criteria for Demo day was kept simpler than the Mid Term Review and focused on the bigger picture. Keeping investors point of view in light, a concise scoring pattern was used to evaluate the start-ups. Scores provided by Jury Members were compiled to shortlist top 8 participants.

Scoring Instructions			
Scores	1-4	4-7	7-10
Positioning/ Target Customer Segment	Not very clear	Message is clear, but can be articulated better	Clear Messaging, very well articulated
Problem Statement	Hasn't identified the problem	Still working to understand the customer painpoint	Problem Statement truly addresses the customer's painpoint
Value Proposition	Unclear about Value proposition	Value proposition can be strengthened	Clear Value proposition
Potential for Scale	Unclear about Cost & Revenue Drivers	Refinement of Business Model needed to understand scalability with respect to future projections	Well structured Business model aligned with cost, revenue drivers & future projections
Potential for Impact at scale	Unclear Environmental & Social Impact	Environmental and Social Impact needs clarity	Clear Environmental and Social Impact
Preparation / Presentation	Needs a lot of work with presentation & time	Needs refinement	Good overall presentation

Figure 25: DEMO Day scoring criteria

4.7 Mentor Mentee Interaction

During the acceleration program, a very crucial role was played by the FLCTD Program Mentors. Mentor Mentee Interaction sessions were scheduled once in every two weeks where external and internal mentors answered start-ups' queries related to assignments and discussed their progress over the period. Mentors guided start-ups on various aspects ranging from industrial connects to staff management within the start-up. It was a great opportunity for start-ups to gain from mentors' experience in the industry.

Based on the mentor's experience of interacting with the start-ups, individual feedback is given below.

Mentor	Feedback	Mentor	Feedback
Rajarshi Sen	I prefer hands on application of the concepts & proving with Beta testing before going all out for expansion and marketing.	Amit Antony Alex	Been quite straight forward from Sangam's side. I missed out on one call due to work emergency so I need to do a better job engaging with the entrepreneur.
Starlene Sharma	Minimal response from mentee despite repeated follow-ups. I have since asked if they needed help, requested that they schedule a time to meet before the review and sent articles about the farm bill with questions and comments on the impact this could have on their business.	Manoj Kumar Bada Ghar Wala	Complete discussed activities and comeback with any questions they may have
FeliVisco	Sharing the calendar of the program right at the beginning would be useful	Paras Arora	Getting a more informal catchup early on. Initially the start ups were not sure what to expect from Mentor Mentee relationship

Dr TejChingtham	The improvements area could be better tracked on a more automated platform where the startups could update at leisure and yet ensure the completion of task at hand. Currently it requires a lot of manual handling of task and assignments to be evaluated	Sidharth Choudhary	Institution of a scorecard/ review template which can be used to track start-up progress/issues over time. Will help make the mentor engagement as structured as the mentee engagement.
Shiva Shanker	It's probably an action item I can take which is copy the Sangam team on the follow-ups from our call for the founder to ensure that becomes a focus.	HK Borah	One startup per mentor is doing more justice to the startup.
Maya Chandrasekaran	A little more clarity on who else is working with the start-ups, for example and their areas of focus so that we don't either replicate efforts or provide fully contradictory inputs	Anuradha Bhavnani	focus on consumer and market insights
Shankha Lahiri	Better to focus on business output, it's get difficult to review their weekly assignments	ABHINAV RAMARIA	Weekly/fortnightly call from any of organising team would help. Basecamp seems too mechanical.
Krishna Navalpakkam	Nothing to complain. Base camp is a good platform.	Ganesh Kaveeshwar	Like the last cohort - can we plan a few interactive sessions with the start-ups along with the current meetings?
Ashwin KP	Video tour of their facility/workshop/work	Manisha Mishra	Pre-fix meets

5 What has been covered in the Program?

The FLCTD Cohort II Acceleration Program was hosted in the end of August 2020, where various webinars, training sessions were held online due to the COVID-19 crisis. The curriculum covered in the Accelerator can be majorly divided into 4 parts namely:

- Who are the Customers and why will they buy your product?
- Why would people buy your product?
- How will you make money?
- Where is the money?

As a part of the Program, webinars with mentioned below topics have been covered followed by an assignment session for the startups:

- Customer Discovery and Development
- Market Research
- Lab to Launch
- Product Market Fit
- Impact Assessment
- Entrepreneur Selling
- Financial Modelling
- Fundraising Pitch

The start-ups should be able to understand their customers, their target market, financials and should be ready with fundraising pitch.

In the first half of the Accelerator, the focus was to understand who the customers are and why will they buy the product. The second part of the program post the mid-term was focused on developing their financial models and to find the investors who will be invest in the startup.

The details of the topics covered as part of the curriculum are given in the next page:

Startup Evolution Journey

Who will buy your product?



CUSTOMER DISCOVERY & CUSTOMER DEVELOPMENT

Bringing the lean start-up thought process to understand and validate the product with actual customers and refining the product specifications based on their needs. The first step in this process is customer discovery – identifying a target customer segment that will benefit the most from the start-up's offering – this will become the beachhead market for the start-up.



MARKET RESEARCH

How to estimate the market size using top down and bottom up methodologies? How does secondary market research play a role in understanding the market? How can current non consumers could be potential consumers and the product associated thereof.



LAB TO LAUNCH

How to create products/services in markets with high uncertainty and competition using Design Thinking? Why, when and how to apply lean product development for continuous iterations in the product life cycle for impactful innovation?

Why would people buy?



PRODUCT/ MARKET FIT

What is Product/ Market Fit? What is Minimum Viable Repeatability in business? What is the Value Proposition to the customer and what is the unit economics for the start-up



ENTREPRENEURIAL SELLING

What are the elements of entrepreneurial sales? What are the key drivers to drive sales? How to create sales strategies and execution plans for early adopters using the SPANCOP model?

IMPACT MEASUREMENT



What is your baseline? How do you calculate your avoided Carbon emission by use of your technology? How does your technology contribute to the larger climate goals of reducing GHG emission? What is the Impact Framework

How will you make money?

MANAGING FOR GROWTH



What is Minimum Viable Traction (MVT), why it is important and how to achieve it? How to manage the cash flows and finances for growth of the organization?

SCALING YOUR STARTUP



How do you grow? What role do people, processes and systems play? What kinds of KPIs help to increase working efficiency and thereby improve customer satisfaction

IP LICENSING & COMPLIANCE



What are different legal, and compliance needs to be managed? How to secure an IP for a product?

Where is the money?

PITCH DECK & INVESTOR NETWORKING



How to deliver an impactful pitch to a potential investor? What are the key elements of a good pitch deck?

6 Mentor Engagement in the Program

6.1 Mentor Feedback Event

In the current scenario where an Off-site Mid-Term Event was not possible to organise, a feedback session was organised on 3rd November to interact with the mentors. This gave a chance for the UNIDO and Sangam team to understand how their interactions have been with the companies and overall, their assessment of the program.

The session started with a presentation by Sreyashee from Sangam on overall design of the program in terms of the start-up and mentor's recruitment. Most of the time of the session was spent on feedback from the mentors on the start-ups and the program.

6.1.1 Individual Start-up Feedback

The Individual Start-up feedback can be summarised as follows

A. Technology

- Technology companies focus on “Juggad” for building prototypes which might not be the best solution
- Product Development timelines for the product is quite high

B. Business

- Customer Discovery – In the 2nd half of the program, the main focus will be to systematically complete the customer discovery process, analyse the market dynamics, competition and also get to 1 customer, 1 product and 1 market and finally get to product market fit if possible.
- Strengthen Business Acumen - As the strategy team of the FLCTD Acceleration Program, the main focus would be to guide the start-ups to take their product to the right customer. The passion within the entrepreneurs is inward which needs to be translated into approaching the product for the market
- Strength of the Team: The mentors also in general analysed if the start-up founding team is equipped enough to take the product from where it is to the next level? Which means they are equipped as a management team themselves as co-founders to actually take this product beyond just doing small prototypes to commercial level. Is the company actively consumer insights?
- Companies need to focus on consumer insights and identify the customers. Figure out unit economics of the product. They should also

be able to position themselves against the competition in the market. This will help to lead to the road of commercialization in the future.

C. Recommendation

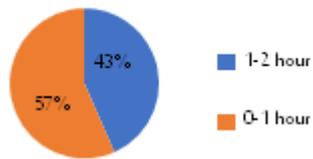
- Since the program timelines are limited, the focus should be to evaluate a business model, or to evaluate a product development roadmap, and be able to look for help to optimize or bring most of these down to the most meaningful. Also building list of priorities for the companies depending on their requirements will be helpful
- The FLCTD Acceleration program structure is providing a great opportunity to early stage start-ups. The start-up activities should not be made domain specific. Instead, the program is providing general tools and playbooks and is very relevant in the Indian ecosystem where this kind of a program is missing.

D. Some of the Individual Start-up Feedbacks by the Mentors are as follows:

 <p>Rajesh Vasudevan</p> <p>TGP needs to create a good understanding of both Indian and International customers and engagement strategy. The company needs to focus on building the supply chain and the business model to prove scalability of the model</p> <p>TGP Bioplastics</p>	 <p>Krishna Navalpakkam</p> <p>The product is looking for an answer. As Irasus is not able to find enough critical mass of adoption in the earlier stages, they are trying to reposition themselves into a services franchise which is a death nail for product startup thought process in our ecosystem</p> <p>Irasus</p>
 <p>Dr Tej S Chingtham</p> <p>The team is very strong in terms of technology development. However, the product has been over engineered with too much of AI, ML, Blockchain etc. The company has built a solution and are now trying to find the problem.</p> <p>Satykut Analytics</p>	 <p>Krishna Navalpakkam</p> <p>Off-grid is a deep tech start-up. They need to identify their business model. New business model innovation cannot be ignored. Also push faster adoption instead of licensing</p> <p>Off-Grid Energy</p>
 <p>Anuradha Bhavnani</p> <p>The company has a great technology which is functional at lab scale level. Are the entrepreneurs equipped to take the product to the next level? There is also a need to pick up consumer insights from the market to design the product according to the customer needs.</p> <p>Agpharm</p>	
 <p>Manoj Badagharwala</p> <p>Lack of understanding of design and product development and trying “Jugaad” processes is delaying the product development for the company to develop the product. 3+ years for product development is very high customers. They need a lot of support to identify their customers if they are targeting both India and abroad. They need to identify how to work with multiple clients in both India and abroad. From an investment point of view, they primarily need to answer the two questions – who are the customers and how do you get there. So, in a pitch to an investor, it has to be clear how this would scale and what the economics will be there at scale.</p> <p>SandBird</p>	

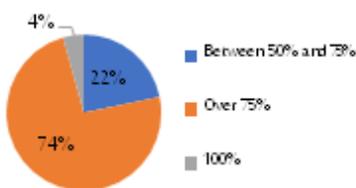
6.2 Overall Mentor Engagement in the Program

The mentors played a very definitive role in providing the right guidance to the start-ups and helping us to shape the program and making it a successful one. The data below gives an overall idea of the engagement of the mentors in the program.



The mentors were able to dedicate maximum 2 hours per week with each start-up.

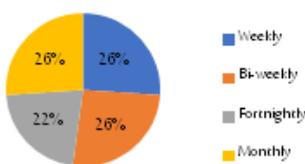
57% of the mentors spent 1-2 hour per with the start-ups while the rest spent around 1 hour with the start-ups



The mentors rated the curriculum based on what on what they felt could be value to the start-ups.

74% of the mentors rated the curriculum over 75% and 22% of the mentors rated it between 50-75%

4% of the mentors also rated it 100% relevant and useful for the early stage start-ups



26% mentors caught up with the start-up bi-weekly

26% mentors caught up with the start-up weekly

26% mentors caught up with the start-up fortnightly

22% mentors caught up with the start-up on a monthly basis

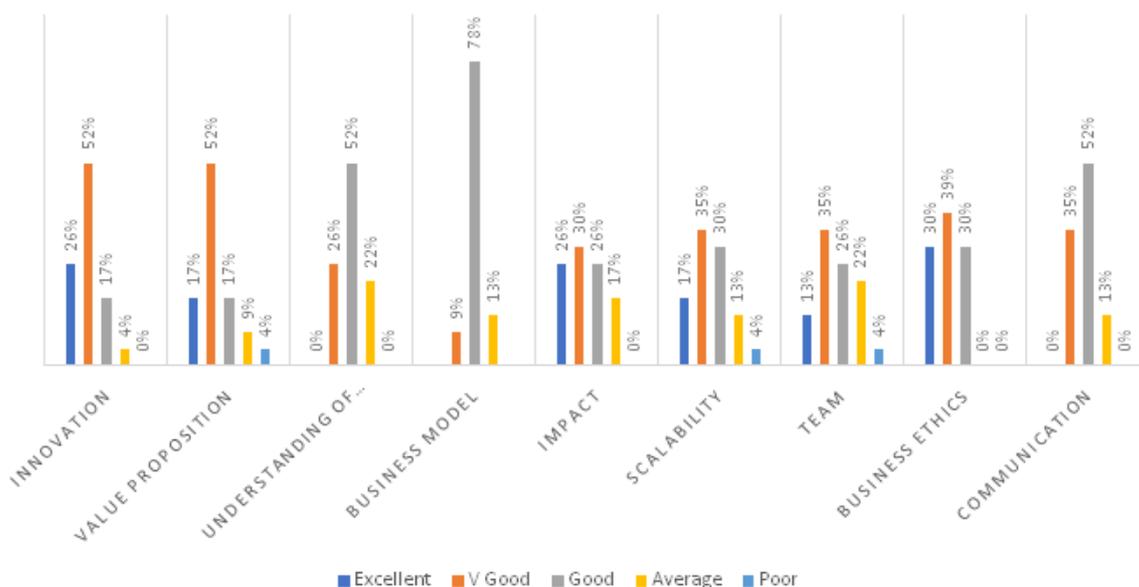


Figure 26: Individual Startup Analysis by Mentors

The graph above provides the feedback of the mentors based on their analysis of the individual start-ups that they mentored during the program. The graph gives an

overall idea of the dynamics of the cohort in terms of innovation, value proposition, customer understanding, business model, impact, scalability, team, business ethics and communication.

6.3 Mentor Honorarium

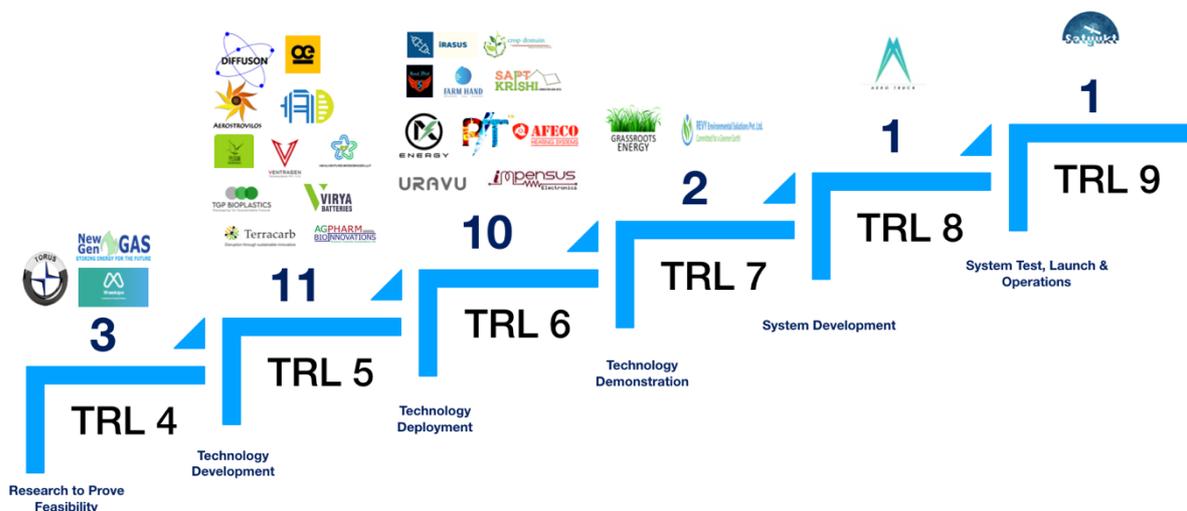
On basis of the level of engagement of the mentors in program, each mentor will be given an honorarium for supporting and engaging with start-ups during the tenure of the Acceleration Program.

Out of 34 mentors, 15 mentors accepted cash or gift vouchers as compensation from the program while rest refrained themselves from accepting the honorarium. The details of the mentor honorarium is given in Annexure 7

7 Annexure 1: Focus Areas and TRL Levels of Companies



The FLCTD program cohort start-ups can be divided on the basis of the TRL level in 6 groups. All the 24 early stage companies which are between TRL 3 -6 are trying to identify the customers or carry out technology demonstrations. The 4 companies between TRL levels 7-9 have already demonstrated their technology on the ground and are looking for ways for scaling up their business.



8 Annexure 2: Start-up Representation



Low Carbon Technology Accelerator 2020

Sector wise Cohort Startups

Facility for Low Carbon Technology Deployment **FLETD** Promoting Innovation and Deployment of Low Carbon Technologies

Ecosystem Partner **startupindia** **agnii**

Acceleration Partner **INVEST INDIA** **Sangam**



Low Carbon Technology Accelerator 2020

Cohorts from across India

Facility for Low Carbon Technology Deployment **FLETD** Promoting Innovation and Deployment of Low Carbon Technologies

Ecosystem Partner **startupindia** **agnii**

Acceleration Partner **INVEST INDIA** **Sangam**

9 Annexure 3: Mentor Representation

-  Ashwin KP, Founder Promethean Energy, Expert in Waste Heat Recovery Systems
-  Manoj Badagharwala, Mechanical Engineer is specialist in Product Development
-  Paras Arora, has experience in Robotics and Automation, IoT, manufacturing, lean principles etc
-  Dr Tej S Chingtham has 2 decades of experience in domains such as AI, Mobile and Autonomous Robots etc
-  Lt Col Monish Ahuja (Retd) , founder PRESPL a Biomass Company & Expert in the RE sector with focus on Biomass power plants
-  Rajarshi Sen, Energy Storage expert, currently working as a Technical Adviser at Customised Energy Solutions Pvt. Ltd
-  Adrian Leonardi is part of Infineon's Strategy and M&A team, his responsibility includes internal management consulting and external innovation engagement



**Low Carbon
Technology
Accelerator 2020**

7 Sector Experts

-  Amit Anthony Alex
India Country Director, UPAYA Social Ventures
-  Hemant K Borah
Head of Ecosystem Development
-  Anuradha Bhavnani
Independent Consultant, Ex Regional Director, Shell Foundation
-  Abhijit Chatterjee
Economist, UNDP consultant, IT power
-  Feli Visco,
Deputy Head of IT, Energy and Industry, Embassy of France
-  Padmaja Krishnan
Director on Board, Newgen Software Technologies
-  Abhinav Ramaria
Program Manager at Aspirelabs Accelerator
-  Kiran Ananth
Principal Counsellor CII
-  Adwitya Mal
CEO, EM3 Agriservices
-  Rajesh Sharma
Associate General Manager at Hero MotoCorp Ltd
-  Sidharth Choudhary
AVP –Technology Development Fund at Invest India
-  Aashish Dutt
Co- founder at SAAF Energy
-  Krishna Navalpakkam
Business Incubation Leader at Schneider Electric
-  Manisha Mishra
AVP – Strategic Initiatives, 1mg



**Low Carbon
Technology
Accelerator 2020**

**14 Business
Experts**

Padmaja Krishnan
Director on Board, Newgen Software Technologies

Anuradha Bhavnani
Independent Consultant, Ex Regional Director, Shell Foundation

Feli Visco,
Deputy Head of IT, Energy and Industry, Embassy of France, India

Starlene Sharma
Co-Founder, Green Arth

Chandana Sasidharan
Senior Research Associate, AEEE

Manisha Mishra
AVP – Strategic Initiatives(Health) at 1mg

Simmi Sareen
Founder and CEO at Loans4SME

Maya Chandrasekaran
Co-Founder, Green Arth



Low Carbon Technology Accelerator 2020

8 Women Mentors

Shiva Shanker, VP
Ankur Capital

Simmi Sareen
Founder and CEO at Loans4SME

Maya Chandrasekaran
Co-Founder, Green Arth

Ganesh Kaveshwar
Portfolio Manager, Social Alpha

Shankha Lahiri
Energy Practice, Villgro

Vasudevan Rajesh
Investment and Strategy at Micelio

Starlene Sharma
Co-Founder, Green Arth

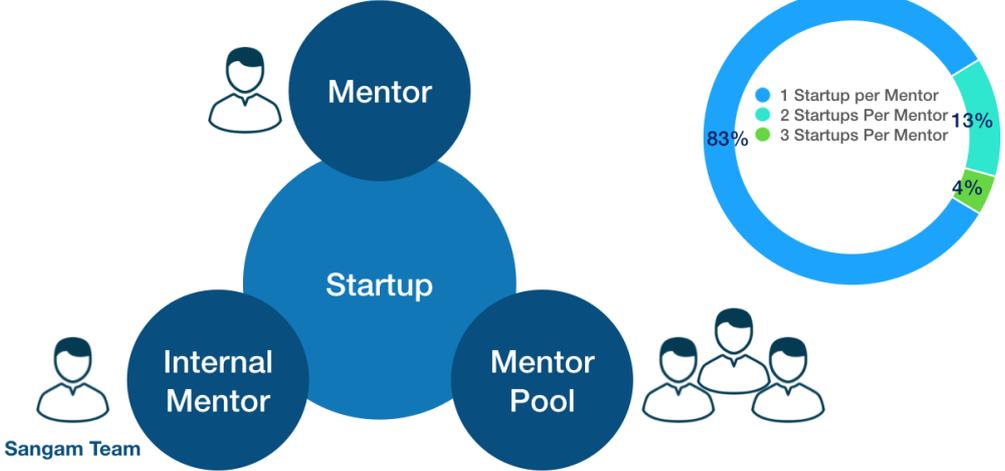
Sriram Sankaran
Angel Investor



Low Carbon Technology Accelerator 2020

Investor Network

Startup Mentor Relationship



10 Annexure 4: Cohort #2 Start-up Details

AI, ML & IoT



irasus Technologies

Irasmus' innovation is a data infrastructure for clean-tech equipment and modular analytical software offering built for acquiring and consuming electricity data to augment safety, reliability, durability and affordability of low-carbon technologies.

Founders: Aniruddh Ramesh and Arjun Sinha Roy

Website: www.irasus.com

Location: Gurgaon, Haryana

Contact Info: anirudh@irasus.com, +917737486223

Food & Agriculture



Crop Domain

Crop Domain's indigenous technology helps to reduce dependence on chemical fertilizer, irrigation requirements, and soil fertility. The cutting-edge root microbial technologies help to replace conventional practices and products and protect biodiversity.

Founder: Dr. Mahadeva Swamy HM

Website: cropdomain.com

Location: Bareilly, UP

Contact Info: hmswamy@cropdomain.com, 8618089890



Healventure Biosciences

Healventures is developing feed formulation for livestock birds, fish and animals, using insect protein. Insect protein (BSFL, Meal worm etc.) is a promising alternative to traditional protein source and helps to reduce feed costs and environmental pollution

Founders: Dr. Sumit Saxena and Dr. Megha Saxena

Website: www.healventures.co

Location: Gurgaon, Haryana



Contact info: healventurellp@gmail.com, 8851513115

Pelican Thermogenics

Pelican has developed a novel photo voltaic solar power - based energy efficient technology for dehydration of agricultural / marine/ food produce to generate value added products from Agri produce and biodegradable waste.

Founders: Dr. Priya Rao and Dr. CN Manoj

Website: www.pelicanthermogenics.com

Location: Cherthala, Kerala

Contact info: pelicanthermogenics@gmail.com, 9207120003



Sand Bird Research and Development

Sand Bird's innovative and smart electric tractor has the ability to reduce the operational cost of tractor by 10 times than that of a normal tractor

Founders: S Bala Surya and Ajith Kannan R

Website: sandbird.in

Location: Chennai, Tamil Nadu

Contact info: sandbird.rd@gmail.com, 7550126088



Farmhand

Farmhand delivers right volume irrigation at the right time and reveals unprecedented farm-level data to the agri-ecosystem using an IoT enabled hardware software system that controls irrigation precisely based on localized weather forecasting and crop data and uses in-situ data collection from the farmers app and satellite datasets to run farm forecasting models making the farm-data accessible for the agri ecosystem.

Founder: Abhimanyu Bhargava

Website: www.farm-hand.in

Location: Kulappalayam, Tamil Nadu

Contact info: abhimanyubhargava7@gmail.com, 9786268939



Agpharm

Agpharm's product is a novel sterile microbe-based formulation which expresses a synergistic mixture of volatile organic compounds (VOC's) which are quite similar to volatile essential oils and kill/ wipe off a spectrum of pathogenic and spoilage microbes (both bacteria and fungi).

Founder: Dr.Sanjai Saxena

Website: www.agpharmbioinnovations.com

Location: Patiala, Punjab

Contact info: sanjaisaxena@agpharmbioinnovations.com, 9888219815



SapTKrishi Scientific

Preservator/Sabjikothe is a wheel mountable storage for the transportation of fresh fruits and vegetables. It is a cost-effective, IOT Enabled, microclimate based, portable storage that extends the shelf-life and preserves the freshness of fruits and vegetables anywhere between 5 to 30 days.

Founder: Nikky Kumar Jha

Website: www.sapTKrishi.com

Location: Bhagalpur, Bihar

Contact info: sapTKrishi@gmail.com, 08826217394



Satyukt Analytics Private Limited

Satyukt has developed algorithms to combine multi-satellite data to improve the agro-hydrological parameters which can provide insights for farmers to make spontaneous/timely informed decisions.

Founder: Dr. Sat Kumar

Website: satyukt.com

Location: Bengaluru, Karnataka

Contact info: yukti@satyukt.com, 9828690238

Industrial Low Carbon Technologies



Grassroots Energy Technologies

Grassroots Energy has developed a modular, economical biogas enrichment and storage solution for Bio-CNG. The critical step in enrichment process is removal of CO₂.

Founder: Mateen Abdul

Website: www.grassrootsenergy.co

Location: Bengaluru, Karnataka

Contact info: mateen@grassrootsenergy.co



Ventragen Technologies

Pulsed power transmission is an enhanced version of mechanical power transmission designed to harness Gravitational energy during the power transmission process which helps to reduce the energy consumption of a system or machinery by up to 1.5 times than conventional continuous power transmission we are using today

Founder: Saurabh Chaudhari, Pankaj Attarde, Sanket Patil

Website: ventragen.com

Location: Airoli, Maharashtra

Contact info: pankaj.ashokaa@gmail.com, 9930298908



Torus Robotics

Torus Robotics has developed an innovative and indigenous motor technology designed with a highly compact design, to offer best in class performance at affordable pricing.

Founder: Vignesh M

Website: torusrobotics.com

Location: Chennai, Tamil Nadu

Contact info: taurus.defence@gmail.com, 9884667059



Aerostrovilos Energy

The micro gas tubes that we have developed with our patented Lean direct injection burner system are fuel flexible (can run on any liquid or gaseous fuel) and emits 10 times lower emission than any power generation that is currently available.

Founder: Rohit Grover

Website: www.aerostrovilos.com

Location: Chennai, Tamil Nadu

Contact info: pradeep@aerostrovilos.com, 9750959770



IX Energy

IX Energy has developed retrofits for existing buses and converts them into fuel-saving hybrid electric buses. Hybrid vehicles are those that run on both fuel and electricity.

Founder: Anshu Dewan

Website: www.ixenergy.in

Location: Noida, UP

Contact info: anshu@ixenergy.in, 9582811511



Prayogik Technologies

Prayogik has developed a thermoelectric module static generator which can be used as a highly reliable remote power supply unit working with natural gas or propane

Founder: Vijay Mamtani

Website: www.prayogik.in

Location: Bhopal, Madhya Pradesh

Contact info: vijay@prayogik.in , 7045573807



Afeco Heating Systems

AFECO offers tailor-made advanced Electrical and Gas fired heat processing technology required for FERROUS & NON FERROUS metal process industries applications like, Heat Treatment, Melting, Forging, Drying, Baking, etc.

Founder: Prakash Maladkar

Website: www.afecoheating.com

Location: Gokul Shirgaon, Kolhapur



NewGen Gas Pte. Ltd.

NewGen Gas has developed a process of storing natural gas in the form of gas hydrates which is also termed as solidified natural gas. SNG can be formed from the excess natural gas during low demand times and can be replenished as per supply demand.

Founder: Dr. Maninder Khurana

Website: www.newgengas.com/

Location: Singapore

Contact info: maninderkhurana@newgengas.com, 6583948175



Aproposdrive Technologies

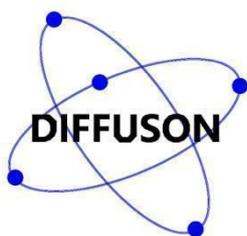
Aproposdrive has developed a SRM drive ceiling fan which saves 50% electricity while delivering a very high air flow rate.

Founder: Nimish Kothari

Website: <https://aproposdrive.com/>

Location: Pune

Contact info: nimish@aproposdrive.com , 7709216928



Diffuson Coatech

Diffuson Coatech provides high performance, wear resistant coatings with low friction coefficient for ferrous and few nonferrous alloys.

Founder: Atul SC

Website: NA

Location: Thiruvallur, Chennai, Tamil Nadu

Contact info: d.coatech@gmail.com , 07397296915

Resource Efficiency



TGP Bioplastics

TGP Bioplastics has developed and tested compostable plastic packaging for a growing market of 15% CAGR at a cheaper price with a unique and patented blend of starch.

Founder: Indrajeet Nikam

Website: www.tgpbio.com

Location: Sitara, Maharashtra

Contact info: icnikam@gmail.com, 09850522469



Aria Aerotech

AEROTRUCK® is a copyrighted and patent-pending aftermarket aero-kit for Indian trucks that can improve the fuel efficiency by 7-12%. Implementing AEROTRUCK® on 25% of Indian heavy-Duty trucks can save 1 Billion litres of diesel consumption annually.

Founder: Pradeep Pandurangi

Website: www.aerotruck.in

Location: Mumbai, Maharashtra

Contact info: pradeep@aerotruck.in, 8369313151



Uravu Labs

Uravu labs use low-grade heat (solar thermal, waste heat) and desiccant material to source ~100% renewable water from humidity in the air.

Founder: Swapnil Shrivastav

Website: www.uravulabs.com

Location: Bengaluru, Karnataka

Contact info: swapnil@uravulabs.com, 9995698162



REVY Environmental Solutions

Revy has developed an anaerobic granulated sludge of 1.5 -2.0mm size and more than 650 no.'s of various bacteria

Founder: Rajneesh Prasad

Website: www.revy.co.in

Location: Vadodara, Gujrat

Contact info: mail@revy.co.in, 8156009652

Storage Technologies



Virya Batteries

Virya has developed a process that allows for a novel low-cost synthesis process that is simple with few manufacturing steps while yielding nano – scale anode material with desired morphology for Li-ion cells.

Founder: Sunil Mehta

Website: www.viryabatteries.com

Location: Mumbai, Maharashtra

Contact info: sunil@viryabatteries.com, 9820048263

Off - Grid Energy Labs



Off Grid Energy labs has developed a novel Zinc-Gel® battery which delivers performance of lithium ion battery at 1/3rd the cost and is targeted at stationary energy storage market applications: telecom towers, renewable energy storage and power distribution companies for grid balancing purposes.

Founder: Tejas Kusrkar

Website: offgridenergylabs.com

Location: Kanpur Nagar, UP

Contact info: tsk@offgridenergylabs.com, 8004443974

Impensus Electronics



Impensus electronics has developed a product that helps in efficient storing of fruits and vegetables by increasing their shelf life and preserving the quality. It monitors and controls the metabolism of the produce to arrest the wastage and increase shelf life.

Founder: Dinesh Narayanan

Website: www.impensuselectronics.com

Location: Madurai, Tamil Nadu

Contact info: dinesh.n@impensuselectronics.com, 7208546859

Mesotope



Mesotope has developed a novel chemical process to produce up to 2x more efficient material for energy storage at a cheaper cost.

Founder: Akshay Jain

Website: mesotope.com

Location: Jaipur, Rajasthan

Contact info: akshay@mesotope.com, 9314682159



Terracarb

Terracarb has developed a patent-pending process for manufacturing graphene, which overcomes the conventional challenges related to chemical/physical modification, scalability, and sustainability.

Founder: Solomon Jones

Website: terracarb.com

Location: Coimbatore, Tamil Nadu

Contact info: solomon@terracarb.com, 7093905101

11 Annexure 5: Startup Pitches, Videos and Feedback Forms

- **Start-up Pitch & Videos**

The start-up pitches and the 1-min videos developed by the start-ups are available in the google drive link given below

Link: <https://rb.gy/981xdu>

- **Startup Feedback Form**

Link: <https://forms.gle/bjwuHTkjN9hCdqQY7>

- **Mentor Feedback Form**

Link: <https://forms.gle/DQb1jPg9wBHnee2R8>

12 Annexure 6: Cohort #2 Mentor Bios



Amit Anthony Alex: Amit leads the efforts in identifying, coaching and investing in early-stage companies across India. He continues to work on his passion by acting as a mentor to early stage social entrepreneurs who are trying to solve global development challenges through a market based approach. He holds a BE from R.V. College of Engineering in Mechanical Engineering and an MBA from Hult International Business School.

Organisation and Designation: India Country Director, UPAYA Social Ventures

Skillset: Business Strategy & Impact

Sector of work: Green Businesses

Linkedin: <https://www.linkedin.com/in/amitantonyalex/>



Anuradha Bhavnani: Anuradha has a wide range of experience with Start-ups, Social Enterprise and Sustainability. She is a Thought leader, Angel investor, Mentor, Board member and Advisor to many start-ups.

Organisation and Designation: Independent Consultant, Ex Regional Director, Shell Foundation

Skillset: Strategic Leadership, co-creating pioneers, stakeholder management, change management, creating inclusive business

Sector of work: Waste to value, Urbanisation, Sustainable cities and Agriculture

Linkedin: <https://www.linkedin.com/in/anuradha-bhavnani-a341608/>



Abhijit Chatterjee: Abhijit, an experienced Economist, has experience in energy access, climate change adaptation and mitigation, enterprise development, feasibility studies and business planning. Worked over 12 countries, he also has expertise in policy and institutional design, stakeholder engagement, training and capacity development.

Organisation and Designation: UNDP consultant, IT power

Skillset: Impact measurement

Sector of work : Energy, GHG Impact

Linkedin: <https://www.linkedin.com/in/abhijit-chatterjee-66883017/>



Ashwin KP: Ashwin is the founder of Promethean Energy Pvt. Ltd which manufactures unique waste heat recovery solutions for industrial and commercial applications. Prior to Promethean, he worked as a Senior Associate with the Boston Consulting Group. He holds an MBA from IIM Ahmedabad and a B. Tech degree from IIT Bombay.

Organisation and Designation: Director, Promethean Energy Pvt. Ltd

Skillset: Waste Heat Recovery Systems

Sector of work: Waste heat recovery solutions for industrial and commercial applications

Linkedin: <https://www.linkedin.com/in/ashwinkp/>



Chandana Sasidharan: Chandana, currently researching on vehicle to grid integration and smart charging, works around the Research area of Distributed Energy Resources, focusing on Electric Vehicles, Demand Response, Flexible loads, Energy Storage, Energy Efficiency and Renewable Energy.

Organisation and Designation: Senior Research Associate, Alliance for an Energy Efficient Economy, Technical Mentor

Skillset: EV - Electrical & Electronics

Sector of work: Electric Vehicles and Electric Vehicle Charging Infrastructure

Linkedin: <https://www.linkedin.com/in/chandana-sasidharan-782936136/>



Feli Visco: Feli has over 13 years' experience in development aid financed programs and government services; handling climate change, innovation and senior stakeholder engagement. Feli is well exposed to public policy and pre-emptive trends and impacts of policy change.

Organisation and Designation: Deputy Head of IT, Energy and Industry, Embassy of France, India

Skillset: Business Strategy

Sector of work: Energy and IT

Linkedin: <https://www.linkedin.com/in/felivisco/>



Ganesh Kaveeshwar: Ganesh holds a dual degree in B. Tech and M. Tech from IIT Madras. Currently he works with Social Alpha as a Portfolio Manager. Previously, he has worked with Shell and Factor[e] Ventures.

Organisation and Designation: Portfolio Manager, Social Alpha

Skillset: Product Development, Product market Fit Software proficiency - MATLAB, Solidworks

Sector of work: Energy Technologies

Linkedin: <https://www.linkedin.com/in/ganesh-kaveeshwar-9b311531/>



ShankhaLahiri: Shankha has varied experience in enabling entrepreneurship and in building and anchoring partnership across various sectors. He has worked extensively on supporting early-stage entrepreneurs, from building partnerships to generating pipeline, conducting due diligences, identifying gaps in the business model, developing business and financial model and identifying and connecting with downstream investors.

Organisation and Designation: Manager Energy Practice, Villgro

Skillset: Go To Market

Sector of work: Renewable Energy & Livelihood, working with social businesses

Linkedin: <https://www.linkedin.com/in/shankha-lahiri-56368220/>



Shiva Shanker: Shiva's role involves providing strategic support to start-ups in agri and energy space. He has over 8 years in early stage private market investing in India, Indonesia & Africa. Shiva has also worked as a strategy & finance consultant for social enterprises in the education and renewable energy sectors.

Organisation and Designation: Vice President, Ankur Capital

Skillset: Finance Modelling Inventory Management

Sector of work: Agri & Energy

Linkedin: <https://www.linkedin.com/in/shankershiva/>



Dr Tej S Chingtham: Prof (Dr) Tej Chingtham has more than 2 decades of experience in various domains such as Artificial Intelligence, Mobile and Autonomous Robots, Machine Learning and Human Computer Interaction. He has also served as Professor in Computer Science & Engineering at Sikkim Manipal University. He is an alumnus of Indian Institute of Technology Guwahati.

Organisation and Designation: CEO, AIC SMU Technology Business Incubation Foundation

Skillset: Computational Intelligence, Robotics

Sector of work: AI, ML, Deeptech, Robotics

Linkedin: <https://www.linkedin.com/in/tej-s-chingtham-4335b117/>



Manoj Badagharwala: Manoj is a mechanical Engineer who is a specialist in product development. He has 8 years of experience of working as product designer working with various big brands such as TATA Technologies, Infosys, and Caterpillar etc.

Organisation and Designation: Mentor, Atal Incubation Centre ALEAP WE HUB, Hyderabad

Skillset: Product Development

Sector of work: Product Development

Linkedin: <https://www.linkedin.com/in/manoj-kumar-bada-ghar-wala/>



Maya Chandrasekaran: Maya, an expert at scaling companies that change lives, is one of the founding members of Menterra Venture Advisors. Maya has been a mentor now with TechStars India and Village Capital for multiple cohorts, and works with a number of start-ups in an advisory capacity. She also co-founded and continues to actively run the 250+ member Women in investing network.

Organisation and Designation: Co-founder and Managing Partner at Green Arth

Skillset: Go to Market Strategy, Operations, Scaling of companies

Sector of work: Education & Livelihoods

Linkedin: <https://www.linkedin.com/in/maya-chandrasekaran-801949/>



Lt Col Monish Ahuja (Retd): Lt Col Monish Ahuja (Retd) is known in the Biomass fraternity as a dedicated and knowledgeable leader. He has been working in the RE sector since 7+ years with specific focus on Biomass power plants and Biomass supply chain management. In a short span, with the understanding of the Biomass IPPs and Biomass Supply Chain Management, he set up the first of its kind in India, biomass fuel aggregation and Supply Company called Punjab Renewable Energy Systems Pvt. Ltd. (PRESPL).

Organisation and Designation: Managing Director of Punjab Renewable Energy Systems Private Limited (PRESPL)

Skillset: Renewable Energy expert

Sector of work: Renewable Energy, Biomass Power and Biomass supply chain

Linkedin: <https://www.linkedin.com/in/monish-ahuja-75317423/>



Padmaja Krishnan: Padmaja has four decades of experience in the technology industry and has delivered business growth agenda and created Strategic Business Units for companies. She has managed multiple business portfolios for organisations like TCS, Dell Perot Systems, Genisys Group, Sopra- Steria, CSC

Organisation and Designation: Director on the Board of Newgen Software Technologies Limited

Skillset: Business Strategy & Impact

Sector of work: IoT, Deep Tech

Linkedin: <https://www.linkedin.com/in/pkrishnan2007/>



Hamanta K Borah: HK Borah builds ecosystem for multiple states through interventions made with academia, government and corporate sectors. He has worked across multiple industries and geographies across different parts of the value chain in various multinational organisations like HSBC Bank, Accenture Consulting etc. HK Borah is a certified Lean Six Sigma Master Black Belt from ISI Bangalore.

Organisation and Designation: Head of Ecosystem Development - IIM Calcutta Innovation Park

Skillset: Business Strategy & Impact

Sector of work: Operations & Quality Control

Linkedin: <https://www.linkedin.com/in/hkborah/>



Paras Arora: Paras has experience in Robotics and Automation, IoT, manufacturing, lean principles, Go to Market strategy and Product Market Fit, across private and public sector, B2C and B2B sectors in various companies and start-ups, like NTPC, Delhivery, Flipkart etc.

Organisation and Designation: Head of Strategy and Supply Chain at ZoomTail Technologies Pvt Ltd

Skillset: Go To Market strategy and Product Market Fit

Sector of work: IoT, Robotics and Automation

Linkedin: <https://www.linkedin.com/in/paras-arora-1ab77593/>



Vasudevan Rajesh: Vasudevan Rajesh is a part of Micelio, an EV start-up which is a part of the SD Shibulal Family Office Primarily working on the \$20 million VC fund concentrating on early-stage technology focused EV companies. He has evaluated over 200 companies in the EV space. He is mandated to grow the EV ecosystem by leveraging their high-tech lab helping start-ups accelerate product development.

Organisation and Designation: Investment and Strategy at Micelio

Skillset: Investments and Strategy

Sector of work: Electric Vehicles and Energy

Linkedin: <https://www.linkedin.com/in/vasudevan-rajesh-29712280/>



Aashish Dutt: Aashish has a keen focus on water, environment and waste-to-energy. Before SAAF Energy, Aashish was the investment manager at Social Alpha where he was working to identify and enable entrepreneurs and innovators to build sustainable, scalable and impactful clean tech enterprises.

Organisation and Designation: Co- founder at SAAF Energy

Skillset: Investments and portfolio

Sector of work : Waste to Energy

Linkedin: <https://www.linkedin.com/in/aashish-dutt-5aa3a9176/>



Manisha Mishra: Manisha handles Strategic Initiatives at 1mg and is a business leader. She handles direct Profit & Loss responsibilities and demonstrates a high level of business acumen to identify, incubate and scale up models and lines of businesses. Manisha is an ex-entrepreneur and is very effective at managing internal and external stakeholders. She has an eye for detail with extremely predictive skill set which has always helped her take preventive and agile actions.

Organisation and Designation: AVP – Strategic Initiatives (Health) at 1mg

Skillset: Go To Market strategy, Business Development and Customer Development

Sector of work: Marketing and Business development

Linkedin: <https://www.linkedin.com/in/manishamishra/>



Starlene Sharma: Starlene is an experienced investor and two time entrepreneur. She has scaled organisations with global reach. Starlene has been part of the founding leadership of two tech-for-development start-ups in India and scaled Orphans International/Better Future International to seven countries.

Organisation and Designation: Co-founder & Managing Partner of Green Arth

Skillset: Investments & Strategies

Sector of work: Green Businesses

Linkedin: <https://www.linkedin.com/in/starlenesharma/>



Sriram Sankaran: Sriram is an Owner of multiple Businesses including Real Estate and Logistics. He is an advisor, mentor, angel investor, focusing on social and impact investments in the sustainability sector.

Organisation and Designation: Chairman and Managing Director of Synchron Group

Skillset: Investments & Strategies

Sector of work: Sustainability

LinkedIn: <https://www.linkedin.com/in/sriram-sankaran-27056510/>



Rajarshi Sen: Rajarshi is an Energy Storage expert, currently working as a Technical Adviser at Customised Energy Solutions Pvt. Ltd. He has 24+ years of experience in working on the Energy Storage field. He is also the founder, director & CEO of Luminous Renewable Energy Solutions Pvt. Ltd.

Organisation and Designation: Technical Adviser at Customised Energy Solutions Pvt. Ltd, a USA Headquartered technology Company at Pune technical & training support for Energy Storage Systems, Solar & Wind Energy Micro Grids.

Skillset: Energy Storage Systems, Solar & Wind Energy Micro Grids

Sector of work: Energy Storage



Kiran Ananth: Kiran leads CII's engagements in Industrial & Building energy efficiency, renewable energy studies and climate change assessment. Kiran has also been involved in conceptualising, submission and execution of various energy efficiency and climate change related projects with several national and international agencies. He is also involved in CII's Green Entrepreneurship Council which runs a cohort to provide Business Acceleration support to clean-tech start-ups.

Organisation and Designation: Principal Counsellor at Confederation of Indian Industry

Skillset: Engagements in Industrial & Building energy efficiency, renewable energy and climate change assessment

Sector of work: Climate change and Energy efficiency projects

LinkedIn: <https://www.linkedin.com/in/kiranananth/>



Rajesh Sharma: Rajesh drives sustainable mobility strategies in a leading automobile company. He is a Certified Sustainability Assessor, certified energy auditor (BEE), GRI trained and Sustainability Scholar.

Organisation and Designation: Associate General Manager at Hero MotoCorp Ltd.

Skillset: Sustainability mobility, Electrical Vehicle Product and Ecosystem Development

Sector of work: Sustainability, Automotive, Electric Vehicles

LinkedIn: <https://www.linkedin.com/in/rajesh-sharma-0052681a/>



Simmi Sareen: Simmi Sareen is the founder of Loans4SME, a four year old venture that provides cashflow linked loans to high growth SMEs and to businesses working in climate change and sustainability. Before setting up Loans4SME, Simmi had a 20 year long career in credit and lending. During this time, she held leadership positions in banks, investment banks and venture debt funds. Simmi is a chartered accountant and holds an MSc in Leadership and Strategy from London Business School.

Organisation and Designation: Founder and CEO at Loans4SME

Skillset: Financial Management

Sector of work: Finance for high impact businesses and SMEs

Linkedin: <https://www.linkedin.com/in/simmi-sareen-a138a72/>



Sidharth Choudhary : Sidharth is the Assistant Vice President for the Technology Development Fund at Invest India. He leads Governance and Program-level Initiatives for AGNli, an innovation program of the Principal Scientific Adviser to the Government of India. Before joining Invest India, Sidharth worked as a researcher with Fraunhofer USA - Center for Sustainable Energy Systems CSE. Sidharth has a Masters in Energy Science, Technology and Policy from Carnegie Mellon University

Organisation and Designation : Assistant Vice President for the Technology Development Fund at Invest India

Skillset : Fund Management, Energy systems

Sector of work : Clean-tech, Energy Technologies

Linkedin : <https://www.linkedin.com/in/sidharthc/>



Adwitiya Mal: Adwitiya is the co-founder & CEO of EM3 AgriservicesPvt. Ltd. He holds a Bachelors's (with Honours) Degree in Economics from Delhi University and completed his MBA at the Simon School of Business, University of Rochester. He started his career as a front line sales manager with ICICI Prudential, a leading private insurance company in India. Following his MBA, he moved to Hong Kong where he was the Strategy Manager at AXA Insurance's Asia Headquarters and was responsible for developing corporate strategy for the group's 19 businesses across 10 countries in Asia. The desire to do something large and impactful in India brought Adwitiya back to co-found EM3 AgriServices.

Organisation and Designation: Co-Founder & CEO of EM3 AgriservicesPvt. Ltd

Skillset: Strategic Planning, Mergers and Acquisitions, Marketing and Distribution

Sector of work: Agritech

LinkedIn: <https://www.linkedin.com/in/adwitiya-mal-a7457b/>

13 Annexure 7: Mentor Honorarium

Sl. No.	Name of the Mentor	Cash/Gift Voucher	Honorarium Acceptance
1	Abhijit Chatterjee	30,000	Accepted
2	Abhinav Ramaria	10,000	Accepted
3	Ashok Toshniwal	20,000	Accepted
4	Feli Visco	20,000	Accepted
5	Hemanta Kumar Borah	20,000	Accepted
6	Kiran Ananth	20,000	Accepted
7	Madhusudhan Rao Rapole	20,000	Accepted
8	Mahesh Kanumary	20,000	Accepted
9	Manoj Kumar Bada Ghar Wala	30,000	Accepted
10	Maya Chandrasekharan	20,000	Accepted
11	Monish Ahuja	10,000	Accepted
12	Padmaja Krishnan	20,000	Accepted
13	Paras Arora	20,000	Accepted
14	Shankha Lahiri	20,000	Accepted
15	Simmi Sareen	20,000	Accepted
16	Aashish Dutt	10,000	Rejected
17	Adwitya Mal	10,000	Rejected
18	Amit Antony Alex	20,000	Rejected
19	Anuradha Bhavnani	10,000	Rejected
20	Ashwin KP	30,000	Rejected
21	Chandan Gadgil	20,000	Rejected
22	Dr. Tej S Chingtham	20,000	Rejected
23	Ganesh Kaveeshwar	30,000	Rejected
24	Krishna Navalpakkam	20,000	Rejected
25	Rajarshi Sen	30,000	Rejected
26	Rajesh Sharma	10,000	Rejected
27	Shiva Shanker	20,000	Rejected
28	Siddharth Choudhury	20,000	Rejected
29	Sriram Sankaran	20,000	Rejected
30	Starlene Sharma	20,000	Rejected
31	Adrian Leonardi	Institution Partner	
32	Chandana Sasidharan	Dropped off	
33	Dhruv Chandel	Institution Partner	
34	Manisha Mishra	Dropped off	