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Indian BioServices industry crosses Rs 32k Cr with growth of 10% in 2020-21



- *Jinu Jose, Vice President, Head - Sales and Clinical Operations, R&D Solutions, IQVIA India - 44*

“India will continue to leverage existing capabilities and lead in clinical trials for biosimilars and complex generics.”

Piramal Pharma Solutions retains No 1 position in Indian BioServices Industry Survey - 28

Pune-based Entrepreneurship Development Center (Venture Center) gains No 1 position in BioSpectrum BioIncubator Survey- 15



Equipping Deep Tech Innovators to Aim High

As the first cohort of the Atal Innovation Mission’s incubation and mentoring programme for deep technology startups draws to a close, it is time to take stock of the programme and what it has achieved in helping first-time founders, especially those who are working in laboratories, commercialise their research. Let’s examine, at length, how this first cohort will help prepare founders for the long journey in all aspects of running a business.

« N Ramakrishnan

The AIM-PRIME – Atal Innovation Mission-programme for Researchers in Innovation and Entrepreneurship – aims to promote science-based, deep technology ideas to go to market by providing founders, training and guidance on various aspects of starting and running an enterprise. The Pune-based Venture Center, a technology business incubator for science and technology startups, was selected to run the programme that was launched in June 2021.

Instilling business sense in scientists

“The AIM-PRIME experience was very good. I am a scientist and I only understand science. But there are a lot of other aspects as well, those things were very alien to me. I got introduced to them through AIM-PRIME. Not just introduced but also how to methodically tackle them, especially when it is about pitching to investors, business model and market size,” says **Sayantani Pramanik, Co-founder and Product and Technical Lead, Pragmatech Healthcare Solutions**, a company that is developing a product to help in easy screening and early detection of cervical cancer.



The programme, adds **Manjusha Shelke, Principal Scientist, CSIR-National Chemical Laboratory and Co-founder and Director, Rechargion Energy Pvt. Ltd.**, drastically changed her perspective, including to the research she was involved with.



“I was a hardcore researcher. I am now more towards how I can



make my research commercially viable or the process I am developing should have sustainability. Generally scientists don’t bother about these things,” she says. Manjusha started Rechargion with her physicist-husband Vilas Shelke, who quit his scientist’s job at Barkatullah University, Bhopal, to run the company as its chief executive officer.

Access to experts and network

According to Manjusha, thanks to the programme, they have access to experts in various fields. Besides, the one-on-one mentoring sessions and the network of connections that the programme has provided have been invaluable. Adds Vilas Shelke, India has been good at fundamental research and has made good progress in the last decade or so in applied science research. The missing link was in translating the research from the laboratory to the market, which the programme addresses.

Spread over nine months, the programme launched by the Government of India’s think-tank NITI Aayog, included classroom sessions, live projects where the participants work with an interdisciplinary team to bring an idea to market, one-on-one mentoring, deeptech startup playbook in which the participants get access to exclusive toolkits, curated video library and peer-to-peer learning. The Atal Innovation Mission, which is the Government of India’s flagship initiative to create and promote a culture of innovation and entrepreneurship across the country, tied up with the Bill and Melinda Gates Foundation for the programme. A unique feature

of the programme was that it specifically targeted scientists and innovators and helped them take their laboratory research or idea into the market.

Different set of challenges

The programme is significant because science-based deep tech startups face an entirely different set of challenges, particularly in how a product prototype is built, the product validated and taken to market, and the costs involved in all these steps. An even bigger challenge is that the funding ecosystem for deep tech startups in India is not as evolved as it is for other types of ventures.

According to **Dr V. Premnath, Director, Venture Center**, science-based deep tech startups face a very different set of challenges, especially in how products are validated, how value is credibly communicated to key opinion leaders, how the de-risking is staged over many steps, how the journey to market is financed and how relationships need to be forged with experienced corporates and industry leaders to hit the market. “These are the kind of challenges that AIM-PRIME prepares startups for.” For example, in the case of a bio-pharma drug, ventures will have to enter the market in partnership with larger players because of the costs involved. The startups will then benefit from the experience, networks and resources of the larger company. However, for the startup and its investors to succeed, the venture needs to ensure that it sets up win-win partnerships through well-designed agreements and ensures strong intellectual property protection. “AIM-PRIME focusses on preparing the cohort for such advance planning and strategising,” says Dr Premnath.



He points out that if the startup chooses to enter the market on its own, the founders need advice and support on setting up manufacturing operations, market research, pricing, market positioning, sales and distribution, all of which are part of the programme. AIM-PRIME includes specialist mentors with expertise in these domains as well.

Dr Satya Prakash Dash, Founding and former head of strategy, BIRAC, and Board Member, Venture Center,

and one of the mentors for AIM-PRIME, says most of the startups are at early stages or at validation stage of product development with a few that have had a brush with the market. He has been suggesting to the founders to think holistically about their business, including what it would take to



make the product world class. The product should be excellent and robust, and the founders should have a regulatory and standards roadmap early on. They should be in continuous dialogue with customers and early adopters, key opinion leaders with the feedback factored into product development. He has also told the founders that they should have strategies for fund raise, build an effective team, sense the market and the competition, and refine go-to-market strategies, including pricing. Innovation, according to him, is a constant sport for which the founders need to build genuine networking skills with stakeholders.

“The benefit of this programme is huge,” says

Saiprasad Sanjay Poyarekar, Founder and CEO, Pacify Medical Technologies Pvt. Ltd.

a venture that uses spray atomization technology to treat burn injuries, thus helping in quick recovery and also significantly reduce tissue and skin requirement. The programme has helped him explain the work he is doing in simple terms to an investor, that too in the limited time available.

“To convince someone in five minutes, it is difficult. It has to be to the point. That was the most difficult part for me. That has improved now; what points I should put in, what are the two-three things that I should include for someone to make a decision,” says Saiprasad, a mechanical engineering graduate with a Master’s in design. Pitching to investors for raising funds is similar to asking for





a salary when someone asks you what salary you expect, he points out. The money you ask of the investors should not be too high and at the same time should not be too low. That level of understanding was needed from the commercial side, which he has got now thanks to AIM-PRIME, he adds.

According to him, the most important benefit as far as he is concerned is the connections that the programme has provided. Mentors to this programme come with decades of professional experience and expertise. They bring an entirely different perspective to the problem statement and the solution and they open doors that did not exist earlier for the founders. Thanks to these connections, Saiprasad says he was able to talk to incubators in other State – facilities that he did not even know existed – and speed up the process of product development and validation.

Regulatory roadmap

According to Sayantani, who has a Master’s in Applied Genetics and is concluding her Ph.D in Biochemistry, AIM-PRIME gave her an insight on how to plan for various issues, including taking their product to the regulatory authorities for approval. The regulatory approval roadmap is unclear as there are no fixed timelines, but thanks to the programme they knew what to do and whom to follow up with. More than anything else, the programme taught her how to go about all aspects of running a venture methodically, including planning for revenue, business model, making a pitch to investors,

understanding the market size and looking out for fresh opportunities. Their optimistic estimate is that their product will hit the market later this year, but realistically they are looking at a launch by the middle of next year.

“It (the programme) was like a grooming session to look at the product from a business perspective. It is not enough if it is developed successfully, it has to reach the masses. Selling is extremely important, which most of the scientists do not know. The entire session was conducted in a flawless manner without any glitches,” adds Sayantani.

Anticipating challenges

The programme, adds **Ranjith Kumar Velusamy, Co-founder and CIO, Biodimension Technology Pvt. Ltd.**, helps founders and ventures anticipate the difficulties and challenges deep tech ventures may face in their journey, how to tackle them and why building a network is important. Learning from people who have experienced all these is great. The peer-to-peer learning is another unique feature of the programme, says Ranjith. Biodimension, co-founded by Ranjith and Manojkumar. S, is incubated at the Technology Business Incubator at Vellore Institute of Technology (VIT). Both Ranjith and Manojkumar are M.Tech in Biotechnology from VIT. Biodimension is working on developing artificial tissues as alternatives to animal tissues that are widely used in the cosmetics industry for product testing and in the pharmaceutical industry for drug research.

What more would he like AIM-PRIME to do? Ranjith says the programme is well-rounded and comprehensive and helps companies like theirs in regulatory aspects too, but he would like the programme to help them in connecting with global regulatory agencies too, as their product will tap the global market at a later date. Connection with overseas regulatory agencies will help companies like theirs in a big way, he adds.

Focus on business models

Dr Srivardhini Jha, Chairperson, Center for Entrepreneurship, Indian Institute of Management Bangalore, and one of the mentors to the programme,

says they have given the startups participating in the AIM-PRIME a fair bit of exposure to various aspects of business; she did a session for them on business models. As



far as business models are concerned, would she advise the founders to look at both the domestic and global markets simultaneously or crack one first and then explore the other? “It is never a good idea,” she says, “to look at multiple markets to start with, because there are so many specific requirements. The moment you go very broad, you get overwhelmed and the startup has limited resources. You are better off focusing on those lead customers, making sure that you are giving them what they really want and establishing the fit and then trying to go to other customers like that in the same market or other geographies.” These startups really don’t have the bandwidth to go global from the get-go. Sometimes, they may start global, meaning they may start by addressing an American market because the India market is not ready. That is fine. It is better, says Dr Srivardhini, to focus on a market first, solve for it and then explore other markets. It has to be the same approach for industry verticals too, she adds.

For instance, a deep tech company may have a product that finds application in, say, transportation and also in communication. A lot of AI/ML startups do data crunching and they can have interesting applications for multiple verticals or industries, but they cannot possibly start looking at all the verticals from the beginning. “They have to find that beachhead industry, the market where the pain is the greatest and start there,” says Dr Srivardhini.

Being ready

Dr Shailendra

Vyakarnam, Professor in Entrepreneurship, Cranfield University, who is also a mentor at AIM-PRIME, makes an interesting point when he talks about the readiness levels in the science and technology world.

While the ventures are at early stages of techno-commercial readiness, the more interesting aspect is the readiness levels of the founders to don the mantle of a CEO and their readiness to become managers, allocating resources for the growth of their companies.

“That is lagging behind the technology,” says Dr Vyakarnam. “Our obsession is, will the technology work, will the customers buy it, but not whether the individual will make the journey with it. That is still an issue and AIM-PRIME is addressing that through the mentorship programme, through peer-to-peer learning, people are becoming aware whether they should be doing it, how they should do it,” he adds.

Entrepreneurship is not for everybody, there is

no magic formula for success. For whatever reason, a founder may not be ready for the long journey. Readiness includes emotional and psychological readiness, intellectual readiness, what to do next, the founders will have to learn a whole new vocabulary. Issues like shareholder agreements, due diligence, valuations, product market fit, whole set of jargons thrown at them by the legal community, the investors, the marketing people, the bureaucracy and the founders will have to learn all these instantly.

Another important issue that the founders will have to learn is team building and how quickly they achieve this will determine the success of their venture. Dr Vyakarnam feels that founders should have an eye on the global market. “To act on it, they will need about two-three years, but as a mindset issue, when they are pitching for funding, trying to attract team members, their eyes should be on the global market,” he says. He would like the AIM-PRIME to continue for some more time. “It would be an absolute disaster if they end at this point, because it takes a long time to nurture success stories and for the investor community to believe in it.”

Preparing online resources

Dr Premnath says AIM-PRIME is planned to continue till the need exists. It is for this reason, he adds, that in the first cohort, Venture Center has tried to create online resources, including in the form of videos, a playbook and a digital library. There has also been a conscious effort to include other incubators in the cohort so that some of them can serve as trainers in the future.

According to him, AIM-PRIME brings a fresh perspective to training and mentoring deep tech startups. The programme has selectively picked hands-on methodologies and frameworks from the best innovation ecosystems of the world. It emphasises practical and usable insights that are contemporary. It does not take an academic approach, neither does it take a populist approach. It is scholarly and yet practitioner-led, points out Dr Premnath. “It is collaborative and brings in many different best practices rather than focusing on one methodology. That is what makes it unique.”

A key indicator, according to him, of short-term success for such programmes for early-stage startups is the ability of the startup to put together its business storyline, strengthen various elements of the story, tell the story well and raise innovation funding/investment. Just training is not adequate to achieve that. Considerable mentoring and hand-holding are needed. “I believe that AIM-PRIME has been able to do that,” concludes Dr Premnath. **BS**

