

Scent of a Startup

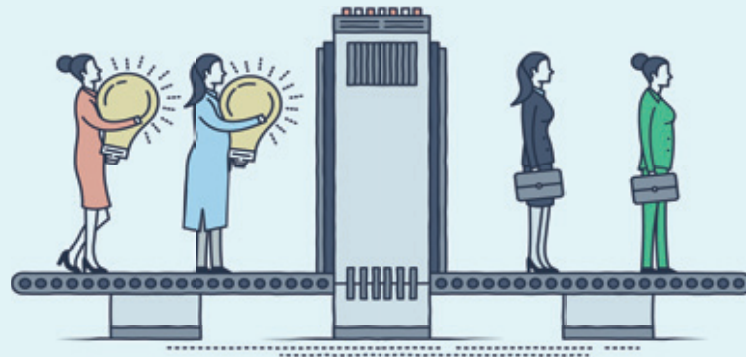
How IIT-Delhi is going about creating an ecosystem for women entrepreneurs

:: Vanita Srivastava

On a lazy Sunday morning, a bunch of around 45 women with different business ideas sit in a classroom in Indian Institute of Technology-Delhi, taking notes on how to transport their ideas into successful business ventures. A session on the legal aspects of doing business is followed by a presentation on 'Being an Entrepreneur', which fleshes out the risks and rewards of starting up.

The women are in the age group of 18 to 57. Some are complete strangers to the startup arena, others have been there, still doing that. While the trajectories of these women are different, they have a common goal – to master the vocabulary of entrepreneurship.

"IIT-Delhi is committed to creating an ecosystem for women entrepreneurs in the country. You empower one woman, you empower an entire generation. There are many studies to show that women-led enterprises are more



profitable. Our vision is to support these women entrepreneurs in every possible way... we wish to see more women founded enterprises and their increased contribution to India's GDP," IIT-Delhi director V Ramgopal Rao says. The spectrum of the businesses being mentored is broad – from organic farming, bee-hiving to tissue reproduction, online

marketing to baking. The participants are ranked on a scale of 1 to 10 based on their experience or the lack of it – 1 is for a woman who has an idea and little else, and 10 for a woman who has a venture that's up, running and scaled.

"We want to create a culture where women empower other women through cooperatives and self-help groups," says Aparna Saroagi, chairperson of the Women Entrepreneurship and Empowerment Foundation, IIT-Delhi's initiative to train and empower women startup artistes.

The three-month free of cost course has two components: a Startup programme launched on October 1 for 30 women entrepreneurs who wanted to convert their ideas into a business; and an Accelerate programme launched on October 16 for 15 women entrepreneurs running businesses with revenues between ₹25 lakh-3 crore. Here's a peek into some of the women-driven ideas:

Mentoring Mantras, IIT-D Style

A **three-month course** started in October for women with startup ideas and those already running startups

From thousands of applicants, **45 were chosen**

The **course is free of cost** and helps the women **build their business ideas, connect with customers, network and attract funding**

The women will stage a **roadshow at IIT-Delhi** in December to showcase their products

The **next batch will start from January 2017**

Queen Bee

A Femina Miss India finalist, Kanupriya Saigal did her BSc from St Stephen's and an MBA from the Indian Institute of Foreign Trade. After a stint with a news channel she joined a global agri company.

"Did you know it takes approximately a million bee hours to produce a pound of honey; and that bees tap into 2 million flowers and fly 55,000 miles for the same? Yet the bees are so efficient that if a single bee were to fly around the world, she would only consume one ounce of honey in the process," gushes Saigal.

In the course of her work at the agri multinational, Saigal worked with farmers and realised the need to boost their incomes by providing them alternate avenues of earning. Beekeeping, she reckons, is one such excellent source of income. "While doing a project on bees, I discovered that beekeeping is a goldmine which requires little investment of time and money. Unfortunately, activities around apiculture are unorganised. People are inadequately trained to harness high-value beehive products." Saigal adds that the number of people involved in beekeeping, too, is small. According to reports, there is a potential for 200 million bee colonies in India but we have just over 3 million. There is a global shortage of premium grade, accredited, fully traceable honey bee products at competitive market prices. "So I thought, why not create a startup that changes the status quo?"

Saigal, who says her startup is a socially sustainable one, is working on creating a cooperative of beekeepers. In the first phase, BeePositive++ will train existing bee keepers to harvest simpler products like honey and bees wax while simultaneously training more farmers in bee keeping. "In the second phase we will train them to extract more complex products like propolis, royal jelly and bee venom," says Saigal. "These products have a huge market in India and abroad and are used in various industries like the pharmaceutical and cosmetic industries."



"While doing a project on bees I discovered that **beekeeping is a goldmine which requires little investment of time and money**"

Kanupriya Saigal, 36
CEO, BeePositive++, which is focused on the bee keeping sector

Connecting the 3D Dots

After completing a Masters in biotechnology from Ulster University, UK, Swati Midha did a doctorate in tissue engineering and regenerative medicine from the same university. That perhaps set the stage for a her startup idea of 3D bioprinting, which is now in its final stage of conception, and which plans to cater to making biocompatible, patient and tissue-specific implants for clinical applications.

"This field has a high socio-economic impact and the number of clinical cases in India as a result of disease and trauma are increasing at a high rate. With this technology we can provide an effective alternative which the current strategies lack," explains Midha.

Midha points out that as biotechnology was her favourite subject since school days, pursuing research in the field of life and health science came naturally to her. "Since the past seven years, extensive research has been done by our lab members (at IIT-Delhi) to optimise various strategies for 3D printing and 3D bioprinting. While progressing on my research at IIT-Delhi under Dr Sourabh Ghosh, we realised the possibility of creating products that are an improvement

"With our technology, we can provide an effective alternative which the current strategies lack"

Swati Midha, 29
working on a startup idea of **3D bioprinting; in the final stage of conception**



over current available treatment strategies for tissue grafts. Such a product would have a direct impact on the society."

Midha says that in the last two decades, very few engineered grafts could reach human clinical trials. The major challenge is to replicate the complex 3D architecture and functional dynamics of living tissues. "After several years of lab research in 3D bioprinting technology, we proposed to formulate 3D bioprinted implants that will be patient-specific, site-specific and tissue specific."

These customised 3D printed constructs that assure longevity of implants and efficacy at affordable costs would have a robust market particularly in developing countries, reckons Midha. Her market includes a network of medical practitioners and establishments. "We have already initiated clinical trials with some hospitals and obtained promising results so far."

Midha explains that currently the startup is focused on maxillofacial implants for bone regeneration on the face, and will eventually explore other parts of the body. "As the adoption of the product improves, we will expand our reach to more hospitals."