Technology Business Incubators at IIT Madras and Corporate Social Responsibility

Indian Institute of Technology, Madras (**IITM**) is one of India's leading technological institutions, and is home to world-class undergraduate as well as graduate and doctoral programmes. IITM has been at the forefront of India's technology revolution and has over the years developed a strong and sustainable relationship with the industry and society at large. Reinforcing this interaction is also the fact that IITM is home to India's first university-driven **Research Park** (http://respark.iitm.ac.in), which currently houses R&D and innovation wings of corporate and public sector majors, engaged in collaborative research with IITM faculty, technology transfer and adding to career opportunities for IITM graduates. Over the years these efforts have also engendered an entrepreneurial culture, leading to several spinout companies, sector- and target-specific incubators and recently, curricular support at IITM.

I.   POWERING ENTREPRENEURSHIP

Start-up ventures increasingly emerge from cutting-edge innovations at premier academic institutions, and play an important role in the transfer of technology to the industry and society at large. In the globalized world today and with the rising importance of pioneering solutions addressing the needs of the society, the modern entrepreneurial cycle has crucial value. Start-up ventures can step in and fill the gap in the technology-transfer chain, in areas where conventional companies would be more cautious in view of novelty of field or risks involved on return of investment. Thus **start-ups today play a vital role, not only as drivers of innovative solutions to societal challenges, but also as job creators and economic stimulators.**

However, the entrepreneurial culture in India is still in its nascent stages, and young entrepreneurs face several challenges, including lack of structured access to resources and an ecosystem to sustain them through the high-risk initial stages. Since technology and knowledge based start-ups are ideally poised to emerge from universities, the role of academic incubators in providing a support system for the entrepreneurial culture to take root and flourish is now widely recognized.

> **IIT Madras,** with its resources such as its extensive social, academic and industrial network and the Research Park, is uniquely positioned to provide a boost to technology-based entrepreneurship. In order to attain organic growth and emerge effective in supporting the entrepreneurial ecosystem, IITM's incubators are in need of strong financial and other support. While support from Government in sustaining this process is crucial, the role of corporate sector cannot be overstated, and the Companies Act, 2013 provides an ideal route for the latter through the Corporate Social Responsibility (CSR) channel.

II.   FUNDS FOR TECHNOLOGY INCUBATORS IN ACADEMIC INSTITUTIONS GET CSR STATUS

Section 135 of the Companies Act, 2013 lists permitted CSR activities, and by a key recent amendemnt, 'contributions or funds provided to technology incubators located within academic institutions which are approved by the Central Government' qualify as a CSR expenditure. IIT Madras has established two incubators recognised by Ministry of Science and Technology, Govt. of India, which hence qualify to receive funds from Indian and foreign companies operating in India as part of fulfilling their CSR obligations under the Companies Act 2013.

A vibrant entrepreneurial ecosystem needs strong capital inflows to fuel startups to become enterprises. In collaboration with corporates, IITM incubators aim to promote Incubators as Entrepreneurial hubs with intimate private sector engagement. Funds will be utilized for seed and early stage investments in incubated companies and creation of facilities for rapid growth and sustenance of start-up ventures.

We invite the corporate sector to partner with us and contribute to IITM's start-up vision for the nation through CSR. IITM's impeccable record, growth and global position will provide your company with unmatched potential for your CSR activities, with assured impact, value and visibility.

IITM Research Park is a pioneering effort in India to catalyze collaborative research between industry and academia to enable technological innovation & nurture entrepreneurship
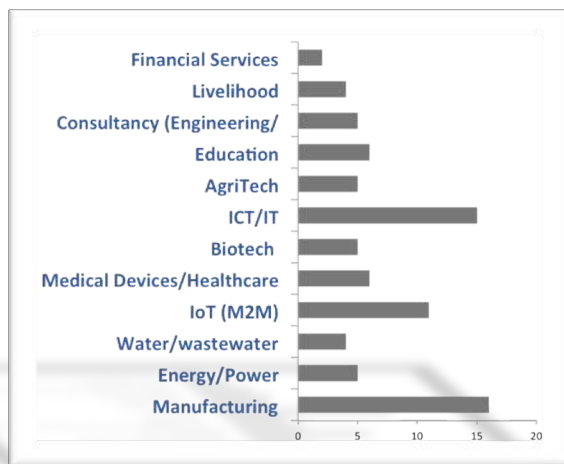- Tap into faculty expertise & student skills
- Presence of IITM Research Centres, Incubators and Startups make IITMRP an active eco-system

Total built up area of 1.2 million sq. ft.
- **Phase I** (0.4M sq ft): operational since Mar 2010. Currently fully occupied with **60+ companies** across domains.
- **Phase II** (*left image*), under construction: 0.8M sq ft built up area, with four blocks and a multi-level parking (0.26 M sq. ft)

III.   TECHNOLOGY BUSINESS INCUBATORS AT IIT MADRAS

Entrepreneurial ventures translating ideas from academic research to bring practical benefits to communities have been supported from an early phase of IITM's activities. The informal incubation atmosphere at different research groups at IITM has over the years evolved a number of dedicated bodies and societies for nurturing innovation and entrepreneurship. IITM now seeks to leverage these experiences and give entrepreneurship a wider push in order to address the needs of the society at large through institutionalized incubation support.

Incubatee companies across domains

IITM Incubation Cell and **IITM's Rural Technology and Business Incubator** are the two incubators at IITM, which have been recognised as Technology Business Incubators (TBI) by National Science and Technology Entrepreneurship Development Board (NSTEDB), Department of Science & Technology (DST), GoI. Both these incubators are located within the IITM Research Park, and actively collaborate on different levels.

Under the aegis of IITMIC and other incubators, **today IITM is fast becoming one of the most vibrant hubs for start-ups in the country.** 88 companies have already emerged from the wider IITM community. Several of them are pioneers in advanced and emerging areas such as IoT(M2M), energy/power, water, manufacturing, ICT, biomedical devices/healthcare, biotechnology, education; many have graduated with strong infusion of capital from interested majors.

Going forward, IITM envisages growing to a level at which at least 20 new companies are incubated every year, with 10% of them becoming 'blockbusters'. IP ownership and acquisition or creation of high technology will be harnessed to address key challenges facing the nation, including job creation, improving the quality of life and arriving on par with global standards.

IITM Incubation Cell (**IITM-IC**) is the nodal body overseeing all entrepreneurial activities arising out of IITM. IITM-IC nurtures technology and knowledge based ventures through their start-up phase by providing all support necessary to help entrepreneurs survive in the competitive market and reach a stage where they can scale-up their ventures. IITMIC is working to build and share resources including space and infrastructure, access to business support services, mentoring, networking, training programmes to enhance the skills of entrepreneurs and access to seed and early stage venture funds. Ultimately, IITMIC aims to create an ecosystem comprising resources, networks, competencies and expertise in key areas of technology, innovation, business, government and policy, to drive a generational entrepreneurial culture contributing positively to economic and societal welfare.

IITM-IC is registered as a not-for-profit **Section 8 Company** (erstwhile Section 25 company under the Companies Act, 1956), guided by a Board of Directors and steering committees consisting of IITM faculty, alumni, and industrialists.

IITMIC operates from IITMRP (Phase I), where about 35,000 sq. feet space is allocated for incubation.

An additional **100,000 sq. feet** is being allocated for incubation in **RP's Phase II** building, currently under construction.

Currently IITM-IC has a portfolio of **47 companies**. These ventures have been founded by faculty, staff, students, alumni of IITM and external members (R&D partners) across domains including **manufacturing, energy/power, water, healthcare, automobile, IoT** (machine to machine), **education, ICT/IT (SMAC)**.

IITM's Rural Technology and Business Incubator (**RTBI**) is a registered not-for-profit **Society** established in Oct 2006. Its mission is to design, pilot and incubate scalable ventures building solutions for rural/underserved societal segments, leveraging ICT. RTBI has been supported by DST, GoI and other organizations from inception till date. RTBI today stands proud and is growing with an admirable reputation for having and continuing to nurture entrepreneurs in different domains such as *education, healthcare, agriculture, energy, livelihood and financial inclusion* in India's rural areas. RTBI has incubated **41** companies, of which 10 companies have graduated and created net worth of over ₹50 crores.

RTBI has also pioneered social research through its exploratory initiatives. Being a recognized TBI, RTBI has well-established policy frameworks for managing several grants and schemes on behalf of the Government of India adhering to simple and transparent procedures.

Incubation Support available to start-ups @ IITM Incubators

Admission for potential incubatees begins with the submission of an electronic application to the incubator website. After initial screening by management, an Incubation Committee examines the proposal with attention to financial and technical due diligence. Selected incubatee companies are required to sign an agreement commencing formal incubation under the incubator.

> Upon admission incubatee companies may be offered shared office space and infrastructure at IITMRP on a case-by-case assessment basis. In addition, both the Incubators actively support all incubatees with a combination of inputs.

To ensure compliance incubators evaluate the performance of incubatee companies, who are required to report progress on a quarterly basis. Companies availing of funding support submit a utilization certificate duly certified by an auditor. Incubatees have to submit their annual reports within a stipulated period from their approval date, along with minutes of their Board Meetings and AGMs.

1 **BRANDING**	**2** **BUSINESS SUPPORT SERVICES**
"IIT Madras Incubated Companies" or "Company incubated by IITM"	• Accounting, tax, company secretary and legal • Intellectual Property (copyrights, trade marks, patent) filings

3   MENTORING

- Collaborate with IITM Entrepreneurship Forum (initiative by IITM alumni body) - *monthly meets* and *assigned mentors*
- Entrepreneur-in-Residence: interact one-on-one with accomplished entrepreneurs, industrialists

4   SEED FUNDING

➢ **IITM Startup Fund:** a **corpus fund** set up by IITMIC for receiving contributions from **industry and alumni charitable donations**, which can be disbursed to eligible startups in the IITM ecosystem as seed investment. A Fund Advisory Body will oversee the structure and governance of the Fund. An Investment Committee will assess incubatee proposals and approve fund allocations.

➢ **Government seed support:** Ministry of Micro, Small and Medium Enterprises (**MSME**) grant | Technology Development Board (TDB) seed fund | NSTEDB Seed Support scheme | TIDE scheme, Dept. of Information Technology

5   NETWORKING

- Our **88 ventures** engage actively with each other to leverage collective knowledge and networks
- Networking and events such as monthly entrepreneur meetings
- Introduction to Angel investors/Venture capitalists / and other financial institutions
- Meetings with visitors of IITM (such as alumni, VCs, industry professionals)
- Permission to use laboratories, workshop facilities and equipment at IITM
- Facilitating hiring of student interns from IITM
- Entrepreneurship week (Eweek) at IITM – an annual event held on campus
- Key Ecosystem partners: Keiretsu Forum (Chennai Chapter), TiE Chennai, Ultimate Startup, Amazon Web Services

APPENDIX: SELECT COMPANIES INCUBATED @ IITM

(Portfolio of 88 companies: www.incubation.iitm.ac.in/portfolio/all-startups)

ATHER ENERGY
www.atherenergy.com

Designing intuitive and **smart electric scooters** for the Indian market with improved ride quality & battery performance for the Indian market: built own chassis, suspensions, swappable lithium ion battery packs (patent filed), battery management systems and body works

AIRWOOD AEROSTRUCTURES
http://airwood.in

Indigenously manufacture **unmanned aerial vehicles** (**UAVs**). Produce high performance designs and services solutions in **Agriculture** and aerial imaging applications.

DESICREW SOLUTIONS
www.desicrew.in

DesiCrew is a new generation service provider **leveraging the power of rural Indian workforce** to deliver a wide host of **BPO services** to corporate India. Started in 2007, DesiCrew currently is over 500-people strong with 65% of the staff being women.

UNIPHORE SOFTWARE SYSTEMS
www.uniphore.com

Uniphore builds **mobility solutions** using two primary technologies: **multilingual speech recognition** and **voice biometrics**. Uniphore's technology interprets and responds to the particular characteristics of 14 Indian languages and over 1000 dialects. Currently has 80 employees serving customers across industries (4M+ end users). Offices in India, Philippines and UAE.

New product - 'auMina', Integrated Speech mining & analytics solutions for next gen Call Centers

SKILLVERI TRAINING SOLUTIONS
www.skillveri.com

Manufactures **welding simulating tool** for training purposes to address skill gap in automobile sector, ship building, construction, vocational training institutes and engineering colleges.

CYGNI ENERGY
http://cygni.com

Solar-DC Power Solutions through development of three technologies: GOA (green offices & apartments), OGH (off grid homes) and Uninterrupted DC (**UDC**) meter. *Domain: Renewables, Energy Efficient Equipments, Solar-DC, Low Voltage DC*

STELLAPPS TECHNOLOGIES   www.stellapps.com

Stellapps in India's **first dairy technology solutions** company, building **automation tools integrated with cloud, mobility and data analytics** for dairy farms, cooperatives and private dairies. As an end to end solution initiative Stellapps provides dairy farm optimization and monitoring services with special focus on small and medium herd size farm.

INNONANO RESEARCH

Nanomaterial based water purification technology, which has been widely deployed in India. Over 150 small-scale community purifiers were installed last year in the **arsenic-affected** rural areas of the country, serving over 100,000 people. By the end of next year this is expected to serve six lakh people.

LEMA LABS TECHNOLOGIES   www.lemalabs.com

Provides **Robotics education** to local colleges. Has developed specialized Robotics kits ('Kaizen Robotics') to enable learning: basic modules in Robotics and Advanced modules in computer vision, control systems, machine learning, industrial automation & cloud deployment

HYPERVERGE INC   http://hyperverge.co

Spinout from computer vision group (CFI). HyperVerge team are creating powerful solutions in the intersection **of Computer Vision, Machine Learning, Cloud and Data**

EDSIX BRAINLAB   www.skillangels.com

Conceptualized with the vision of improving cognitive performance for students and adults through next generation brain enhancement programs. Develops **Brain-Skill & Educational Games**.

GREENVIRONMENT INNOVATION AND MARKETING INDIA

www.greenvironmentindia.com

An environmental engineering company focused towards providing innovative & cost effective technologies for **water, wastewater and solid waste management** solutions based on sustainability principles.

SWAYAMBHU BIOLOGICS

www.biologics.in

Swayambhu's primary focus is on converting Agro Process Industrial Wastes generated by Agro Industries (sugar, distillery, paper, fruit processing, dairy) into usable, enriched biomanure for organic farming. Awarded the Best Social Enterprise by Sankalp Forum for 2014 under Agri, Food and Livelihood and Sankalp-Artha Grand Jury Award across all Sectors.

New product: press mud composting in 14 days using accelerated biological intervention technology (ARBIT)

GYAN DATA

www.gyandata.com

Company delivers **data modelling and process control solutions** to industries. *Present focus:* Data modelling, Surge analysis, Water Distribution Systems, Process monitoring and control, Fault diagnosis, Decision support systems and other Software applications.

DHVANI RESEARCH & DEVELOPMENT SOLUTIONS

http://dhvani-research.com

The company provides a concept to field experience to customers through innovation in technologies related to **non-destructive testing**, manufacturing diagnostics, materials characterization, structural health monitoring, simulation and visualization tools, and training

PHASORZ TECHNOLOGIES

http://www.docsapp.in

DocsApp: A **mobile app for patients to seek online consultation from doctor**s through chat & phone. Simply connect to a specialist through the app and get health queries answered. Creating an ecosystem for patients to seamlessly access healthcare services

GUVI

www.guvi.in

Peer to peer network for providing **technical training in vernacular languages**

PI BEAM LABS

www.pibeamlabs.com

Designing **solar power-assisted rickshaws** - a convertible three-wheeled hybrid vehicle with three drive modes: pedal, electric and solar, to be used in rural India.

UNILUMEN PHOTONICS

http://unilumen.in

The company specializes in **fibre laser technology** solutions for industries such as **material marking and cutting, and bio-engineering**. Product portfolio includes pulsed and continuous wave fibre lasers, and laser drivers.

VDIME INNOVATIVE WORKS

http://1000lookz.com

1000Lookz is a virtual makeover technology application based on **facial image recognition technology**. The application allows customers to try on cosmetic items like eye shadow, foundation, lipstick, nail polish etc. on their own photograph. The virtual hair studio- MIDAS helps hair stylists show various hair styles and colors to customers on their own photo. "Top 10 product companies in Nasscom Emerge 50 for 2014"

CONCRETE QUALITY CONCEPTS

www.cqcndt.com

On-site non-destructive testing of concrete condition, repair and rehabilitation methodologies and consultancy.

NADHI INFORMATION TECHNOLOGIES

www.nadhi.in

Nadhi is an **enterprise software and solutions** company developing analytics and decision support solutions for **construction supply chains**.

RELAGENT TECHNOLOGIES

http://relagent.com

Semantic Text Mining Engine for Biomedical Research – enabling discovery of connections between objects spanning multiple journal articles, clinical records involving natural language and unstructured text with graph search to connect drugs to genes to diseases, and genotypes to phenotypes.

GEOTAGG TECHNOLOGIES

www.geotagg.in

A comprehensive Public Transport Information System: tracking, predicting, routing and scheduling of vehicles for passengers and transport agencies. **Raft - a mobile app that provides users transit information (real-time), schedules of buses, local trains, metro rails**

MICROSPIN MACHINE WORKS

http://microspin.co.in

Microspinning machines for inclusive textile development. Company has successfully introduced the technology in rural pockets and helped small-time cotton farmers and artisans participate more meaningfully in textile production.

MERKEL HAPTIC SYSTEMS

http://merkelhaptics.com

First haptics company in India exclusively for touch related technologies, pioneer in providing 3D **touch technology** solutions in India and abroad, combining academic and industrial experience. Developing Mannequin based training simulators for doctors

Contact Us

Dr Tamaswati Ghosh

CEO

IITM INCUBATION CELL
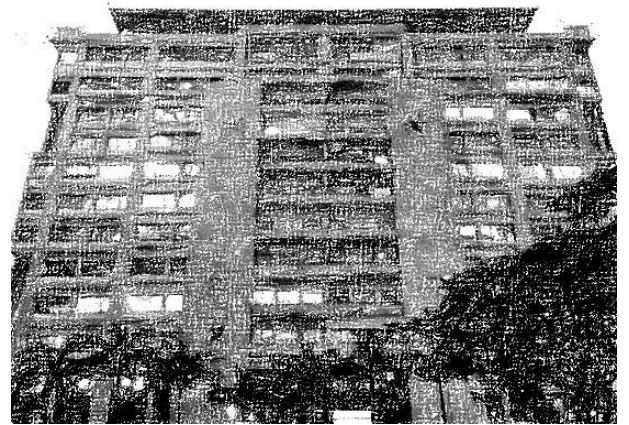
03 A2, Third Floor, IIT Madras Research Park

Kanagam Road, Taramani,

Chennai – 600113, Tamil Nadu, India

Tel: 91 (0) 44 6646 9869

Email: tamaswati@incubation.iitm.ac.in; office@incubation.iitm.ac.in

Web: www.incubation.iitm.ac.in

Ms. Suma Prashant

Director

IITM'S RURAL TECHNOLOGY AND BUSINESS INCUBATOR

First Floor, IIT Madras Research Park

Kanagam Road, Taramani

Chennai – 600113, Tamil Nadu, India

Tel: 91 (0) 44 6646 9872

Email: suma@rtbi.in; info@rtbi.in

Web: www.rtbi.in