

# Technology Business Incubator (TBI) Program in IIT Delhi

## Concept Notes on the Proposed Technology Business Incubation Unit (TBIU) at IIT Delhi - (As revised after the 1st Meeting of the TBIU Board on 12.10.99)

### Background

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As a part of the ICICI/World Bank Funded Technology Institution Programme (TIP) being implemented in IIT Delhi, there is a commitment on the part of the Institute to organise a Technology Business Incubation Unit (TBIU) in the Institute Campus near its departments, centres, laboratories and workshop. The objective of the TBIU is primarily to promote partnership with new technology entrepreneurs and start-up companies. As part of the TBIU scheme, limited modular space will be provided to new entrepreneurs or technology based organisations for a limited period of time for setting up an office or a workstation or a prototyping laboratory within the Campus, with a view to

- i. promoting interactions with, and technology/expertise resourcing from, the members of academic staff and research scholars of the Departments and Centres of the Institute, and
- ii. incubating novel technology and business ideas into viable commercial products or services.

The modular spaces will be basically developed with appropriate infrastructure like electricity and power lines, telephone and networking arrangements, but without any other furniture as such and will be made available to carefully screened entrepreneur partners at concessional charges. Interior furnishing (including air-conditioning or false ceiling) will be done by the TBIU Partners themselves as per their requirements. The activities permitted in the TBIU will include product development, product innovation, software testing, simulation, prototyping, pilot experimentation, training and similar other technology related work.

The concept of having an incubation centre attached to a technological university/institute, though fairly novel in India, is quite a well known and successful one in the industrially advanced countries. In preparing this proposal for IIT Delhi, we had the benefit of documented information from such organisations in USA, eg the Austin Technology Incubator of the University of Texas, Austin · one of the largest incubator organisations in USA, and in the UK, eg in the Universities of Durham (Mountjoy Research Centre), Manchester (Campus Ventures Ltd), Salford (Technology House) and UMIST (UMIST Venture Ltd).

In all these incubator organisations the emphasis is on assisting new start-up entrepreneurs, particularly `spin-outs` from the universities, who want to develop a new technological idea of a product or a service or a concept into a marketable commodity. Eventually the technology firm matures to a point from where it can graduate to a viable enterprise, and moves from the Incubator to make way for some other new entrepreneur.

All such Incubators in UK or USA also provide workspace for established organisations who are keen to work in an innovative networking environment in close proximity with university departments and centres.

These Incubator Organisations are all managed in an autonomous mode, independently from the University, either as a Company or a Foundation. The Organisation, normally established by the University itself, does more than manage the building. It provides a range of services to its clients, aimed at allowing the client companies to concentrate upon core activities and business. For start-up enterprises, a variety of assistance packages are made available to promote the development needs of specialized technical help, the on-campus resources of the university as well as those from other sources harnessed by the Organisation. Finance is normally the first impediment faced by the entrepreneur. The Incubator Organisations normally have close links with venture capitalists and other mission conscious financial institutions, and help the entrepreneurs in this respect, if necessary.

An Incubator Organisation is, however different from Science and Technology Parks, in that it encourages its

clients to traverse the development path from almost the concept stage itself, and no regular or routine manufacturing or commercial supply activities take place in the Incubation premises. The emphasis is on R&D and technology consultations with the resident faculty experts of the parent university or institution. In fact, the normal practice in the successful incubators in USA and UK has been for the entrepreneur to shift first to a Science Park location after a few years of stay at the Incubator.

In the context of the globalisation of economic environment and liberalised market forces in this country, technology business incubation appears to be a very relevant concept, especially to encourage, nurture and support technologists and scientists with initiative and potential to turn their innovative research ideas into sound commercial ventures. In IIT Delhi, we propose to give this concept a modest trial, for which approximately 4000 sq. ft area has been identified for development into a TBIU. Incidentally, the Austin Technology Incubator at the University of Texas in Austin, USA, also started with a 4000 sq. ft area in 1990, and today in 1998 it has a 60,000 sq. ft. (approx.) area building complex, a turnover of more than \$100 million in sales revenue with nearly 25 resident companies and around 30 graduate (start-up) companies in operation. In the following few pages, the proposed TBIU at IIT Delhi has been elaborated.

## **The Location**

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Two separate locations have been identified in the Institute for developing into a Technology Business Incubation Unit.

1. Location A: The 4th floor of the newly constructed Synergy Building, having a total floor area of around 1500 sq.ft. (under the Solar Roof)
2. Location B: Approximately 2500 sq. ft. area on the 3rd floor of the extended Block-I building (under construction) adjacent to the Biochemical Engineering and Biotechnology Department.
3. Location C: The erstwhile carpentry of the IDDC workshop, near the Canteen Building. The area available in this location is around 1250 sq.ft.
4. The Location A (i.e. the Synergy Bldg. 4th Floor) will have a number of advantages, which are already available or in the process of implementation. There is a well organised cafeteria, with good catering service, operational in the 1st floor of the Building. The 2nd and 3rd floor spaces are occupied by two high-tech Companies (M/s NIIT and M/s eCapital Solutions India Ltd) for R&D operations; all the floors, from 2nd to 4th, are to be serviced by an automatic lift; adequate car parking facilities have been established.
5. Location B will have the advantage of being contiguous with the main academic area of the Institute, though there would be direct entry access from outside. It will also have the benefit of being adjacent to the IBM Research Centre
6. The Location C, proposed at the IDDC workshop, will be utilised by clients who would need to set up facilities that can be described as heavy equipment and to have interactions with workshop and allied labs in the institute. It may be divided into two or three modules. Access to this area would, however, have to be planned and designed separately, from across the existing Industrial Design Workshop at the far end of the IDDC. Development of this location is proposed to be taken up after one or two clients are identified and their preferences are taken note of.
7. It is also envisaged that some substantial floor area will be made available for TBIU in the proposed TIFAC-IITD Building (of 50000 sq ft) expected to be ready by the year 2002 AD in the north side of the Institute Campus.

## **Membership of TBIU**

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### **{A} Eligibility**

TBIU residency applications will be considered in following order of priorities:

- i. An incubator nursery programme · initiated by one or more members of academic staff, students or alumni of one of the IITs or other premier technological institutes, supported by the Institute, FITT or some other technology promoting body like Technology Development Board, TIFAC, DST, DSIR, TIFR, ICICI (government or non-governmental), with a view to trying out a novel technological idea or scaling up a laboratory proven concept.
- ii. Technology based start-up companies.
- iii. Technology/R&D unit office of a small or medium size enterprise, industry association/an R&D company who desires to have a technology interface with IIT Delhi.

### **{B} Admission Criteria**

Amongst eligible applicants following criteria will be observed for shortlisting:

- i. An incubator nursery programme · initiated by one or more members of academic staff, students or alumni of one of the IITs or other premier technological institutes, supported by the Institute, FITT or some other technology promoting body like Technology Development Board, TIFAC, DST, DSIR, TIFR, ICICI (government or non-governmental), with a view to trying out a novel technological idea or scaling up a laboratory proven concept.
- ii. Homology between the services/expertise/facilities available at the Institute and technical facilities/assistance required by the applicant.
- iii. Technology based product or services : The product or services should be based on new technologies or technologically innovative concepts and should seek to develop a proprietary position.
- iv. Entrepreneurial capability : The entrepreneur should have adequate technical education or business experience to exploit the technology.
- v. Commercial viability and growth potential.
- vi. Written Business Plan : The prospective TBIU member has to prepare and submit a written business plan at the time of admission. The plan should indicate key focus, market analysis, customers, costs, pricing and cash flow forecasts.
- vii. R&D intensity : The key focus during the incubation will be on the R&D intensity and therefore an applicant should clearly indicate in advance the areas of technology to be addressed and the departments/centres/faculties/laboratories and facilities of IITD to collaborate with on a regular basis during TBIU residency.
- viii. Capability to network with other TBIU members, with the industry and with contacts of Institute/FITT.

Preference will be given to applicants who have previous records of interaction with IITD or some other premium academic institutions or to develop a technology transferred from IITD and also have plans for long term collaboration with the faculty/departments/centres of IIT Delhi. Ideas generated by students, faculty members and alumni of the Institute will be given top priority.

### **{C} Terms of Residency**

- i. Residency period will be normally for two years, extendable by another year in special cases, depending on progress of incubation. Under no circumstance, however, the total period of residency will exceed five years.
- ii. Each applicant approved for membership by the TBIU Board, will have to execute a Licence Agreement for space utilisation with the Institute and a tripartite MOU on synergistic collaboration with the Institute and FITT, the latter providing the platform for interaction.
- iii. Each successful applicant, admitted as a resident member of the TBIU, will have to pay to the Institute a charge of utilization of space, at a rate concessional to the prevailing market rent realisable (which at present is Rs. 80/- per sq.ft. per month). While priority (ii) and (iii) members will be given upto 50% concession, the nursery incubator members can be given more, with a stipulation that the additional concession in space utilization charges be treated as equity share by the Institute at the time of registration by the nursery member as a Company.

- iv. All members approved for TBIU residency will be required to give an undertaking to offer 5% of equity share to the Institute with the option of market liquidation of such equity at an appropriate time in future.
- v. Under no circumstances, routine sales/marketing operation will be permitted from the TBIU.
- vi. **The TBIU address in the IIT Delhi Campus can not be used as the address of the Registered Office of the Resident Company.**

### **{D} Exit Policy**

Notwithstanding any issues pending between the member and the Institute/ FITT at the time of completion of the agreed tenure of incubation period, the TBIU member shall unconditionally agree to compulsorily vacate the office space for the next TBIU applicant (in the waiting to move in). The synergy MOU will also contain a provision to monitor the progress of TBIU residency to ensure that significant collaboration/association with the Institute through the faculty and/or research laboratories/facilities are manifested in the technology incubation of the admitted member. In case such monitoring reveals that the TBIU resident member resorted to operations in contravention with the submitted Business/Work Plan or fails to collaborate with the Institute or resorted to routine sales/marketing operations, the TBIU member will undertake to vacate the office on a written notice by the Institute to this effect.

### **Administration and Management**

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It is proposed that the Foundation for Innovation and Technology Transfer (FITT), the industry interface organisation of IIT Delhi, be given the responsibility for overall administration of the TBIU and management of its common facilities. While the capital cost of the civil construction for the TBIU floor (in fact the whole new canteen building) has been borne by IIT Delhi, the costs of other renovation work, if any, and common facilities may be borne by FITT, whose charter permits such expenditure from its funds, provided it is meant towards meeting the main objective of the Foundation, i.e. enhancing interaction with industry. FITT will also facilitate marketing of TBIU among potential clients (i.e. IITD faculty and scholars, entrepreneurs and high tech industries abroad and in India etc.), and disseminate information to industry associations, government departments and sister organizations, FIs and Venture Capital Companies etc.

### **TBIU Board**

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An Institute level Empowered Committee on TBIU (to be known as TBIU Board), has been constituted for the management of TBIU. The TBIU Board would be responsible for, among other things,

- i. Finalization of the Membership criteria and terms and conditions (including space utilization fees)
- ii. Screening of applications from prospective clients and final selection.
- iii. Periodic monitoring of progress of Members and review of their performance, especially relating to technical collaboration with IIT Delhi faculty/Depts.
- iv. All matters relating to interaction between the TBIU members and IIT system, including those concerning sharing of resources etc.
- v. In short, the TBIU Board will be managing the interface of TBIU, whereas FITT will play the role of administrator. The Board will have full authority over all matters pertaining to TBIU, including that of revoking the membership of a Resident Company if it fails to fulfil the laid down criteria of eligibility or deviates significantly from its original plans and commitments.

### **Technology Incubation Nursery Fund**

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The TBIU Board will consider giving membership of TBIU to budding entrepreneurs from among the academic members of the staff, students and alumni of the Institute, who have promising technological ideas and provide partial financial support through a Fund to be created separately in FITT. The Fund (called the Technology Incubation Nursery Fund) will be utilised to nurture the entrepreneurs by providing assistance at the initial stages in the form of fellowships, research assistanceship etc, for a period of 6

months to a year.

FITT Project Promotional Fund (FPPF) created out of the 30% retention money from the Scientific & Technical Fees payable to faculty experts in industrial consultancies may be utilized initially for this purpose prior to the separate Technology Incubation Nursery Fund to be created for the purpose. Contribution to this fund can also be made from ILF or IRD. FITT will prepare a good write-up and approach industry associations, financial institutions, Department of Sc. & Tech., Technology Development Board and big industry houses to contribute to this fund. Entrepreneurs amongst the IITD Alumni Association may also be approached for funding.

### **Concluding Remarks**

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The TBIU represents a proactive approach towards a strategic partnership among the Entrepreneur (the potential business/industry leader of the future), the Institute (the technological resource in its 13 departments and 10 centres) and the External World (the government, the FIs, VCCs and industry at large). It will be a place that an entrepreneur can utilize at low overhead expenses with promises of high quality professional assistance and advice near at hand.

The established incubators abroad are invariably supported by Government and local industry organizations, in terms of both financial and physical resources. Strong relationships exist with VCCs. The proposed TBIU is being set up almost entirely at the initiative of IIT Delhi. It is expected that participation of other stakeholders will be forthcoming sooner than later, and it would be possible to extend more liberal support to the prospective entrepreneurs.