

267/AIH/2020
07/10/2020

Hon'ble Vice Chancellor

HBTU, Kanpur

This has reference to the 3rd Council Meeting of Atal Incubation Hub held on 15th September 2020, wherein it was decided that the draft of Startup & Innovation Policy prepared at University level be circulated among the members of the council, specially members from MSME & SIDBI for their suggestions/advice if any.

The draft was sent by mail to all the members of the council including the members from MSME & SIDBI on 18th September 2020 with a request to provide suggestions/modifications in the policy if any. There being no any response, a humble request reminder was sent on 25th September 2020. Further telephonic requests were also made to Director MSME and Prof. R.P.Singh to expedite the matter. Except one response from Prof. B.V. Phani, IIT Kanpur, no other response was received. Prof. B.V. Phani mentioned "I am fine with the same, you may kindly proceed accordingly".

We are attaching all the said correspondences along with draft of **Startup & Innovation Policy** for your kind perusal please. May like to approve the draft.

Approved

ef

07 OCT 2020

कुलपति
हरकोर्ट बटलर प्राविधिक विश्वविद्यालय
कानपुर-2


07/10/2020

Dr. Narendra Kohli

Dean, Incubation Hub

Prof. Narendra Kohli
Dean, Incubation Hub
H.B.T.U., Kanpur-208002 (U.P.)

SCIENCE TECHNOLOGY AND INNOVATION POLICY

HARCOURT BUTLER TECHNICAL UNIVERSITY, KANPUR

1. Strategies and Governance

- a. Entrepreneurship promotion and development being one of the major dimension of the expansion strategy. To facilitate development of an entrepreneurial ecosystem in the organization, specific objectives and associated performance indicators have been defined for assessment.
- b. Implementation of entrepreneurial vision at the institute should be achieved through mission statements rather than stringent control system. The entrepreneurial agenda should be the responsibility of a senior person at the level of PVC/ Dean/ equivalent position to bring in required commitment and must be well understood by the higher authorities.
 - i. Minimum 1% fund of the total annual budget of the institution can be allocated for funding and supporting innovation and start-ups related activities through creation of separate 'Innovation fund'.
 - ii. The funds should also be raised from diverse sources to reduce dependency on the public funding. Bringing in external funding through government (state and central) such as UPCST,DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Start-up India, Invest India, MeitY, MSDE, MSME, etc. and non-government sources should be encouraged.
 - iii. To support technology incubators, the University may approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.
 - iv. University may also raise funding through sponsorships, projects and donations. University should actively engage Alumni network for promoting Innovation & Entrepreneurship (I&E).
- c. For expediting the decision making, hierarchical barriers should be minimized and individual autonomy and ownership of initiatives should be promoted.
- d. Importance of innovation and entrepreneurial agenda should be known across the University and should be promoted and highlighted at University programs such as conferences, convocations, workshops, etc.



P.K. Kamari
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02



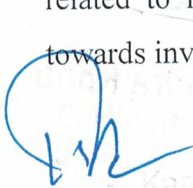
Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P.


- e. Student and faculty start-up Policy and action plan should have well-defined short-term and long-term goals.
- f. University will develop and implement Innovations & Entrepreneurial strategy and policy for the entire University order to integrate the entrepreneurial activities across various centres, departments, faculties, within the University, thus breaking the silos.
- g. Product to market strategy for start-ups should be developed by the University on case to case basis.
- h. Development of entrepreneurship culture will not be limited within the boundaries of the University.
 - i. HEIs should be the driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). This shall include giving opportunity for regional start-ups, provision to extend facilities for outsiders and active involvement of the University in defining strategic direction for local development.
 - ii. Strategic International Partnerships can be developed using bilateral and multilateral channels with international innovation clusters and other relevant organizations. Moreover, international exchange programs, internships, engaging the international faculties in teaching and research would be promoted.

2. Start-ups Enabling University Infrastructure

Creation of pre-incubation and incubation facilities for nurturing innovations and start-ups in HEIs & institutions should be undertaken. Incubation and Innovation may be organically interlinked.

- a. The facilities would be created within University for supporting pre-incubation (e.g. IICs as per the guidelines by MHRD's Innovation Cell, EDC, IEDC, New-Gen IEDC, Innovation Cell, Start-up Cell, Student Clubs, etc.) and Incubation/ acceleration by mobilizing resources from internal and external sources.
- b. This Pre-Incubation/Incubation facility would be accessible 24x7 to students, staff and faculty of all disciplines and departments across the University.
- c. 'Incubation cum Technology Commercialization Unit' (ITCU) would be a separate entity registered under Section-8 of Company Act 2013 or 'Society' registered under Society Registration Act with independent governance structure. This will allow more freedom to Incubators in decision making with less administrative hassles for executing the programs related to innovation, IPR and Start-up's. Moreover, they will have better accountability towards investors supporting the incubation facility.




 Prof. Narendra Kohli
 Dean Incubation Hub

3. Nurturing Innovations and Start ups

Processes Mechanisms for easy creation and nurturing of Start ups/enterprises by students (UG, PG, Ph.D.), staff (including temporary or project staff), faculty, alumni and potential start up applicants even from outside the University's, would be developed.

a. University will ensure to achieve following:

i. Incubation support: Offer access to pre-incubation & Incubation facility to start ups by students, staff and faculty for mutually acceptable time-frame.

In case required Incubation facility are not available in University infrastructure it may reach out to nearest incubation facilities in other HEIs in order to facilitate access to their students, staff and faculty.

ii. University will allow licensing of IPR from University to start up: Ideally students and faculty members intending to initiate a start up based on the technology developed or co-developed by them or the technology owned by the University, would allow to take a license on the said technology on easy term, either in terms of equity in the venture and/ or license fees and/ or royalty to obviate the early stage financial burden.

iii. University will allow setting up a start up (including social start ups) and working part-time for the start ups while studying / working: University may allow their students / staff to work on their innovative projects and setting up start ups (including Social Start ups) or work as intern / part-time in start ups while studying / working. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models. The H. B. Technical University may need to develop clear guidelines to formalize this mechanism. Student inventors may also be allowed to opt for start up in place of their mini project/ major project, seminars, summer trainings. The area in which student wants to initiate a start up may be interdisciplinary or multidisciplinary. However, the student must describe how they will separate and clearly distinguish their ongoing research activities as a student from the work being conducted at the start up.

b. Students who are under incubation, but are pursuing some entrepreneurial ventures while studying, can be allowed to use their address in the University to register their company with due permission from the University.

c. Students entrepreneurs would be allowed to sit for the examination, even if their attendance is less than the minimum permissible percentage, with due permission from the University.

Prof. P. K. Kamani
Dean of Planning & Resource Generation
H.B.T.U., Kanpur-02

Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P


- (4)
- d. The University will allow their students to take a semester/year break (or even more depending upon the decision of review committee constituted by the University) to work on their start-ups and re-join academics to complete the course. Student entrepreneurs may earn academic credits for their efforts while creating an enterprise. University would set up a review committee for review of start up by students, and based on the progress made, it may consider giving appropriate credits for academics.
 - e. The University would explore provision of accommodation to the entrepreneurs within the campus for some period of time.
 - f. Allow faculty and staff to take off for a semester / year (or even more depending upon the decision of review committee constituted by the University) as sabbatical/ unpaid leave/ casual leave/ earned leave for working on start-ups and come back. University would consider allowing use of its resource to faculty/students/staff wishing to establish start up as a fulltime effort. The seniority and other academic benefits during such period may be preserved for such staff or faculty.
 - g. University will facilitate the start-up activities/ technology development by allowing students/ faculty/ staff to use University infrastructure and facilities, as per the choice of the potential entrepreneur in the following manners:
 - i. Short-term/ six-month/ one-year part-time entrepreneurship training.
 - ii. Mentorship support on regular basis.
 - iii. Facilitation in a variety of areas including technology development, ideation, creativity, design thinking, fund raising, financial management, cash-flow management, new venture planning, business development, product development, social entrepreneurship, product costing, marketing, brand-development, human resource management as well as law and regulations impacting a business.
 - iv. University may also link the start-up's to other seed-fund providers/ angel funds/ venture funds or itself may set up seed-fund once the incubation activities mature.
 - h. In return of the services and facilities, University may take 2% to 9.5% equity/ stake in the start-up/ company, based on brand used, faculty contribution, support provided and use of University's IPR (a limit of 9.5% is suggested so that University has no legal liability arising out of start-up. The University would normally take much lower equity share, unless its full-time faculty/ staff have substantial shares). Other factors for consideration would be space, infrastructure, mentorship support, seed funds, support for accounts, legal, patents etc.


Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02


Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P

- For staff and faculty, University can take no-more than 20% of shares that staff / faculty takes while drawing full salary from the University; however, this share will be within the 9.5% cap of company shares, listed above.
 - No restriction on shares that faculty / staff can take, as long as they do not spend more than 20% of office time on the start-up in advisory or consultative role and do not compromise with their existing academic and administrative work / duties. In case the faculty/ staff holds the executive or managerial position for more than three months in a start-up, then they will go on sabbatical/ leave without pay/ earned leave.
 - In case of compulsory equity model, Start-up may be given a cooling period of 3 months to use incubation services on rental basis to take a final decision based on satisfaction of services offered by the University/incubator. In that case, during the cooling period, University cannot force start-up to issue equity on the first day of granting incubation support.
- i. The University would also provide services based on mixture of equity, fee-based and/ or zero payment model. So, a start-up may choose to avail only the support, not seed funding, by the University on rental basis.
 - j. University could extend this start-up facility to alumni of the University as well as outsiders.
 - k. Participation in start-up related activities needs to be considered as a legitimate activity of faculty in addition to teaching, R&D projects, industrial consultancy and management duties and must be considered while evaluating the annual performance of the faculty. Every faculty may be encouraged to mentor at least one start-up.
 - l. Product development and commercialization as well as participating and nurturing of start-up's would now be added to a bucket of faculty-duties and each faculty would choose a mix and match of these activities (in addition to minimum required teaching and guidance) and then respective faculty are evaluated accordingly for their performance and promotion.
 - m. University's may also update/change/revise performance evaluation policies for faculty and staff as stated above time to time.
 - n. University would ensure that at no stage any liability accrue to it because of any activity of any start-up.
 - o. If a student/ faculty start-up policy is pre-existing in the University, then the University may consider modifying their policy in spirit of these guidelines.

4. Product Ownership Rights for Technologies Developed at University


Prof. P. K. Kamani
 Dean of Planning & Resource Generation
 H.B.T.U., Kanpur-208002


Prof. Narendra Kohli
 Dean Incubation Hub,
 H.B.T.U., Kanpur-208002 (P.P)

6

- a. When University facilities / funds are used substantially or when IPR is developed as a part of curriculum/ academic activity, IPR is to be jointly owned by inventors and the University.
 - i. Inventors and University can together license the product / IPR to any commercial organisation, with inventors having the primary say. License fees could be either / or a mix of
 1. Upfront fees or one-time technology transfer fees
 2. Royalty as a percentage of sale-price
 3. Shares in the company licensing the product
 - ii. If one or more of the inventors wish to incubate a company and license the product to this company, the royalties would not be more than 4% of sale price, preferably 1 to 2%, unless it is pure software product. If it is shares in the company, shares will again be 1% to 4%. For a pure software product licensing, there may be a revenue sharing to be mutually decided between the University and the incubated company.
- b. On the other hand, if product/ IPR is developed by innovators not using any University facilities, outside office hours (for staff and faculty) or not as a part of curriculum by student, then product/ IPR will be entirely owned by inventors in proportion to the contributions made by them. In this case, inventors can decide to license the technology to third parties or use the technology the way they deem fit.
- c. If there is a dispute in ownership, a minimum five membered committee consisting of two faculty members (having developed sufficient IPR and translated to commercialisation), two of the University's alumni/ industry experts (having experience in technology commercialisation) and one legal advisor with experience in IPR, will examine the issue after meeting the inventors and help them settle this, hopefully to everybody's satisfaction. University can use alumni/ faculty of other University's as members, if they cannot find sufficiently experienced alumni / faculty of their own.
- d. University IPR cell or incubation centre will only be a coordinator and facilitator for providing services to faculty, staff and students. They will have no say on how the invention is carried out, how it is patented or how it is to be licensed. If University is to pay for patent filing, they can have a committee which can examine whether the IPR is worth patenting. The committee would consist of faculty who have experience and excelled in technology

Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02


Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P

translation. If inventors are using their own funds or non- University funds, then they alone would have a say in patenting.

- e. All University's decision-making body with respect to incubation / IPR / technology-licensing will consist of faculty and experts who have excelled in technology translation. Other faculty in the department / University will have no say, including heads of department, heads of University's, deans or registrars.
- f. Interdisciplinary research and publication on start-up and entrepreneurship would be promoted by the University's.

5. Organizational Capacity, Human Resources and Incentives

- a. University would recruit staffs that have a strong innovation and entrepreneurial/ industrial experience good behaviour and attitude. This will help in fostering the I&E culture.
 - i. Some of the relevant faculty members with prior exposure and interest would be deputed for training to promote I&E.
 - ii. To achieve better engagement of staff in entrepreneurial activities, University policy on career development of staff would be developed with constant up skilling.
- b. Faculty and departments of the University have to work in coherence and cross-departmental linkages would be strengthened through shared faculty, cross-faculty teaching and research in order to gain maximum utilization of internal resources and knowledge.
- c. Periodically some external subject matter experts such as guest lecturers or alumni can be engaged for strategic advice and bringing in skills which are not available internally.
- d. Faculty and staff would be encouraged to do courses on innovation, entrepreneurship management and venture development.
- e. In order to attract and retain right people, University would develop academic and non-academic incentives and reward mechanisms for all staff and stakeholders that actively contribute and support entrepreneurship agenda and activities.
 - i. The reward system for the staff may include sabbaticals, office and lab space for entrepreneurial activities, reduced teaching loads, awards, trainings, etc.
 - ii. The recognition of the stakeholders may include offering use of facilities and services, strategy for shared risk, as guest teachers, fellowships, associate ships, etc.
 - iii. A performance matrix would be developed and used for evaluation of annual performance.


 Prof. K. Kamani
 Dean of Planning & Resource Generation
 H.B.T.U. Kanpur-02



 Prof. Narendre Kohli
 Dean Incubation Hub
 H.B.T.U. Kanpur-208002

8

6. Creating Innovation Pipeline and Pathways for Entrepreneurs at University/Institute Level

- a. To ensure exposure of maximum students to innovation and pre incubation activities at their early stage and to support the pathway from ideation to innovation to market, mechanisms would be devised at University level.
 - i. Spreading awareness among students, faculty and staff about the value of entrepreneurship and its role in career development or employability would be a part of the University entrepreneurial agenda.
 - ii. Students/ staff would be taught that innovation (technology, process or business innovation) is a mechanism to solve the problems of the society and consumers. Entrepreneurs would innovate with focus on the market niche.
 - iii. Students would be encouraged to develop entrepreneurial mind set through experiential learning by exposing them to training in cognitive skills (e.g. design thinking, critical thinking, etc.), by inviting first generation local entrepreneurs or experts to address young minds. Initiatives like idea and innovation competitions, hackathons, workshops, boot camps, seminars, conferences, exhibitions, mentoring by academic and industry personnel, throwing real life challenges, awards and recognition would be routinely organized.
 - iv. To prepare the students for creating the start up through the education, integration of education activities with enterprise-related activities would be done.
- b. The University would link their start-ups and companies with wider entrepreneurial ecosystem and by providing support to students who show potential, in pre-start-up phase. Connecting student entrepreneurs with real life entrepreneurs will help the students in understanding real challenges which may be faced by them while going through the innovation funnel and will increase the probability of success.
- c. The University would establish University's/Institutions Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell and allocate appropriate budget for its activities. IICs would guide University's in conducting various activities related to innovation, start-up and entrepreneurship development. Collective and concentrated efforts would be undertaken to identify, scout, acknowledge, support and reward proven student ideas and innovations and to further facilitate their entrepreneurial journey.



Prof. P.K. Kamari
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02



Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P

- d. For strengthening the innovation funnel of the University, access to financing must be opened for the potential entrepreneurs.
 - i. Networking events must be organized to create a platform for the budding entrepreneurs to meet investors and pitch their ideas.
 - ii. Provide business incubation facilities: premises at subsidised cost. Laboratories, research facilities, IT services, training, mentoring, etc. would be accessible to the new start-ups.
 - iii. A culture needs to be promoted to understand that money is not FREE and is risk capital. The entrepreneur must utilize these funds and return. While funding is taking risk on the entrepreneur, it is an obligation of the entrepreneur to make every effort possible to prove that the funding agency did right in funding him/ her.
- e. University/Institute must develop a ready reckoner of Innovation Tool Kit, which would be kept on the homepage on University's website to answer the doubts and queries of the innovators and enlisting the facilities available at the University.

7. Norms for Faculty Start-up's

- a. For better coordination of the entrepreneurial activities, norms for faculty to do start-up's would be created by the University's. Only those technologies would be taken for faculty start-up's which originate from within the same University.
 - i. Role of faculty may vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the start-up.
 - ii. University/Institute would work on developing a policy on 'conflict of interests' to ensure that the regular duties of the faculty don't suffer owing to his/her involvement in the start-up activities.
 - iii. Faculty start-up may consist of faculty members alone or with students or with faculty of other University/Institute or with alumni or with other entrepreneurs.
- b. In case the faculty/ staff hold the executive or managerial position for more than three months in a start-up, they will go on sabbatical/ leave without pay/ utilize existing leave.
- c. Faculty must clearly separate and distinguish on-going research at the University from the work conducted at the start-up/ company.

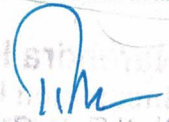

Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02

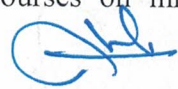

Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P.

- d. In case of selection of a faculty start up by an outside national or international accelerator, a maximum leave (as sabbatical/ existing leave/ unpaid leave/ casual leave/ earned leave) of one semester/ year (or even more depending upon the decision of review committee constituted by the University) may be permitted to the faculty.
- e. Faculty must not accept gifts from the start-up.
- f. Faculty must not involve research staff or other staff of University/Institute in activities at the start-up and vice-versa.
- g. Human subject related research in start-up would get clearance from ethics committee of the University/Institution.

8. Pedagogy and Learning Interventions for Entrepreneurship Development

- a. Diversified approach would be adopted to produce desirable learning outcomes, which would include cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery.
 - i. Student clubs/ bodies/ departments may be created for organizing competitions, boot camps, workshops, awards, etc. These bodies would be involved in University strategy planning to ensure enhancement of the student’s thinking and responding ability.
 - ii. University’s would start annual ‘INNOVATION & ENTREPRENEURSHIP AWARD’ to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the University.
 - iii. For creating awareness among the students, the teaching methods would include case studies on business failure and real-life experience reports by start-ups.
 - iv. Tolerating and encouraging failures: Our systems are not designed for tolerating and encouraging failure. Failures need to be elaborately discussed and debated to imbibe that failure is a part of life, thus helping in reducing the social stigma associated with it. Very importantly, this would be a part of University’s philosophy and culture.
 - v. Innovation champions would be nominated from within the students/ faculty/ staff for each department/ stream of study.
- b. Entrepreneurship education would be imparted to students at curricular/ co-curricular/ extracurricular level through elective/ short term or long-term courses on innovation,


 Prof. P.K. Kamani
 Dean of Planning & Resource Generation
 H.B.T.U. Kanpur-02


 Prof. Narendra Kohli
 Dean Incubation Hub.
 H.B.T.U., Kanpur-208002 U.P

entrepreneurship and venture development. Validated learning outcomes would be made available to the students.

- i. Integration of expertise of the external stakeholders would be done in the entrepreneurship education to evolve a culture of collaboration and engagement with external environment.
 - ii. In the beginning of every academic session, University would conduct an induction program about the importance of I&E so that freshly inducted students are made aware about the entrepreneurial agenda of the University and available support systems. Curriculum for the entrepreneurship education would be continuously updated based on entrepreneurship research outcomes. This would also include case studies on failures.
 - iii. Industry linkages would be leveraged for conducting research and survey on trends in technology, research, innovation, and market intelligence.
 - iv. Sensitization of students would be done for their understanding on expected learning outcomes.
 - v. Student innovators, start-ups, experts maybe engaged in the dialogue process while developing the strategy so that it becomes need based.
 - vi. Customized teaching and training materials would be developed for start-ups.
 - vii. It may be noted that not everyone can become an entrepreneur. The entrepreneur is a leader, who would convert an innovation successfully into a product, others may join the leader and work for the start-up. It is important to understand that entrepreneurship is about risk taking. One may carefully evaluate whether a student is capable and willing to take risk.
- c. Pedagogical changes need to be done to ensure that maximum number of student projects and innovations are based around real life challenges. Learning interventions developed by the University's for inculcating entrepreneurial culture would be constantly reviewed and updated.

9. Collaboration, Co-creation, Business Relationships and Knowledge Exchange

- a. Stakeholder engagement would be given prime importance in the entrepreneurial agenda of the University. Universitys would find potential partners, resource organizations, micro,

[Signature]
 Prof. R. K. Kamani
 Dean of Planning & Resource Generation
 H.B.T.U., Kanpur-02

[Signature]
 Prof. Narendra Kohli
 Dean Incubation Hub.
 H.B.T.U., Kanpur-208002 U.P

12

small and medium-sized enterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship and co-design the programs.

- i. To encourage co-creation, bi-directional flow/ exchange of knowledge and people would be ensured between Universities such as incubators, science parks, etc.
 - ii. University would organize networking events for better engagement of collaborators and would open up the opportunities for staff, faculty and students to allow constant flow of ideas and knowledge through meetings, workshops, space for collaboration, lectures, etc.
 - iii. Mechanism would be developed by the University to capitalize on the knowledge gained through these collaborations.
 - iv. Care may be taken to ensure that events DON'T BECOME an end goal. First focus of the incubator would be to create successful ventures.
- b. The University would develop policy and guidelines for forming and managing the relationships with external stakeholders including private industries
- c. Knowledge exchange through collaboration and partnership would be made a part of University policy and University's may provide support mechanisms and guidance for creating, managing and coordinating these relationships.
- i. Through formal and informal mechanisms such as internships, teaching and research exchange programmes, clubs, social gatherings, etc., faculty, staff and students of the Universities would be given the opportunities to connect with their external environment.
 - ii. Connect of the University with the external environment may be leveraged in form of absorbing information and experience from the external ecosystem into the University's environment.
 - iii. Single Point of Contact (SPOC) mechanism would be created in the University for the students, faculty, collaborators, partners and other stakeholders to ensure access to information.
 - iv. Mechanisms would be devised by the Universities to ensure maximum exploitation of entrepreneurial opportunities with industrial and commercial collaborators.


v. Knowledge management would be done by the University through development of innovation knowledge platform using inhouse Information & Communication Technology (ICT) capabilities.


10. Entrepreneurial Impact Assessment

- a. Impact assessment of University's entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education would be performed regularly using well defined evaluation parameters.
 - i. Monitoring and evaluation of knowledge exchange initiatives, engagement of all departments and faculty in the entrepreneurial teaching and learning would be assessed.
 - ii. Number of start ups created, support system provided at the University level and satisfaction of participants, new business relationships created by the Universitys would be recorded and used for impact assessment.
 - iii. Impact would also be measured for the support system provided by the University to the student entrepreneurs, faculty and staff for pre-incubation, incubation, IPR protection, industry linkages, exposure to entrepreneurial ecosystem, etc.
- b. Formulation of strategy and impact assessment would go hand in hand. The information on impact of the activities would be actively used while developing and reviewing the entrepreneurial strategy.
- c. Impact assessment for measuring the success would be in terms of sustainable social, financial and technological impact in the market. For innovations at pre-commercial stage, development of sustainable enterprise model is critical. COMMERCIAL success is the ONLY measure in long run.

Way Forward

Uniform and successful implementation of the 'National Innovation and Start-up Policy 2019' for students and faculty of all the HEIs across the nation is the main objective. In order to achieve this, full-fledged support of education Universitys will be important. The roadmap suggested through this document is 'broad guidelines' and if required, these Universitys may develop their own comprehensive guidelines and policy on innovation and start-ups with greater details. The


 Prof. P.K. Kamani
 H.B.T.U., Kanpur-208002 U.P.


 Prof. Narendra Kohli
 Dean Incubation Hub.
 H.B.T.U., Kanpur-208002 U.P.

Universities are expected to make use of already available infrastructure as much as possible to achieve the implementation of suggestive measures.

Glossary

Accelerators Start-up Accelerators design programs in batches and transform promising business ideas into reality under the guidance of mentors and several other available resources.

Angel Fund An angel investor is a wealthy individual who invests his or her personal capital and shares experiences, contacts, and mentors (as possible and required by the start-up in exchange for equity in that start-up). Angels are usually accredited investors. Since their funds are involved, they are equally desirous in making the start-up successful.

Cash flow management Cash flow management is the process of tracking how much money is coming into and going out of your business.

Co-Creation Co-creation is the act of creating together. When applied in business, it can be used as is an economic strategy to develop new business models, products and services with customers, clients, trading partner or other parts of the same enterprise or venture.

Compulsory Equity An equity share, commonly referred to as ordinary share also, represents the form of fractional or part ownership in which a shareholder, as a fractional owner, undertakes the maximum entrepreneurial risk associated with a business venture. The holders of such shares are members of the company and have voting rights.

Corporate Social Responsibility Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable – to itself, its stakeholders, and the public.

Cross-disciplinary Cross-disciplinary practices refer to teaching, learning, and scholarship activities that cut across disciplinary boundaries.

Entrepreneurial culture A culture/ society that enhance the exhibition of the attributes, values, beliefs and behaviours that are related to entrepreneurs.

Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02

Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P

'start up related concepts and contents' to introduce a positive influence on the thought processes of students. Courses like 'business idea generation' and 'soft skills for start-ups' would demand experiential learning rather than traditional class room lecturing. Business cases and teaching cases will be used to discuss practical business situations that can help students to arrive at a decision while facing business dilemma(s). Field based interactions with prospective customers; support University's will also form a part of the pedagogy which will orient the students as they acquire field knowledge.

Pre-incubation

It typically represents the process which works with entrepreneurs who are in the very early stages of setting up their company. Usually, entrepreneurs come into such programs with just an idea of early prototype of their product or service. Such companies can graduate into full-fledged incubation programs.

Prototype

A prototype is an early sample, model, or release of a product built to test a concept or process.

Science parks

A science park, also known as a research park, technology park or innovation centre, is a purpose-built cluster of office spaces, labs, workrooms and meeting areas designed to support research and development in science and technology.

Seed fund

Seed fund is a form of securities offering in which an investor invests capital in a start-up company in exchange for an equity stake in the company.

Special Purpose created

Special purpose vehicle, also called a special purpose entity, is a subsidiary Vehicle by a parent company to isolate financial risk. Its legal status as a separate company makes its obligations secure even if the parent company goes bankrupt.

Start-up

An entity that develops a business model based on either product innovation or service innovation and makes it scalable, replicable and self-reliant and as defined in Gazette Notification No. G.S.R. 127(E) dated February 19, 2019.

Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U, Kanpur-02

Prof. Narendra Kohli
Incubation Hub.
H.B.T.U., Kanpur-208002 U.P.

16

- Entrepreneurial Individuals** An Individual who has an entrepreneurial mindset and wants to make his/her idea successful.
- Entrepreneurship education** Entrepreneurship education seeks to provide students with the knowledge, skills and motivation to encourage entrepreneurial success in a variety of settings
- Experiential learning** Experiential learning is the process of learning through experience, and is more specifically defined as learning through reflection on doing.
- Financial management** Financial Management is the application of general principles of management to the financial possessions of an enterprise.
- Hackathon** A Hackathon is a design sprint-like event in which computer programmers and others involved in software development, including graphic designers, interface designers, project managers, and others, often including domain experts, collaborate intensively on software projects.
- Host University** Host University's refer to well-known technology, management and R&D University's working for developing start-ups and contributing towards developing a favourable entrepreneurial ecosystem.
- Incubation** Incubation is a unique and highly flexible combination of business development processes, infrastructure and people, designed to nurture and grow new and small businesses by supporting them through the early stages of development.
- Intellectual Property Licensing** A licensing is a partnership between an intellectual property rights owner Rights and another who is authorized to use such rights (licensee) in exchange for an agreed payment (fee or royalty). (Licensor) Rights Licensing
- Knowledge Exchange** Knowledge exchange is a process which brings together academic staff, users of research and wider groups and communities to exchange ideas, evidence and expertise.
- Pedagogy and experiential** It refers to specific methods and teaching practices (as an academic subject or theoretical concept) which would be applied for students working on start-ups. The experiential learning method will be used for teaching

Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U., Kanpur-02

Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P



Technology Business Incubator Technology Business incubator (TBI) is an entity, which helps technology-based Incubator start-up businesses with all the necessary resources/support that the start-up needs to evolve and grow into a mature business.

Technology Commercialization Technology commercialization is the process of transitioning technologies from the research lab to the marketplace.

Technology licensing Agreement whereby an owner of a technological intellectual property (the licensor) allows another party (the licensee) to use, modify, and/or resell that property in exchange for compensation.

Technology management Technology management is the integrated planning, design, optimization, operation and control of technological products, processes and services.

Venture Capital It is the most well-known form of start-up funding. Venture Capitalists (VCs) typically reserve additional capital for follow-up investment rounds. Another huge value that VCs provide is access to their networks for employees or clients for products or services of the start-up.

Bibliography

- Guideline for Implementation of SSIP for Universitys/Colleges; Student Start-up and Innovation Policy (SSIP) 2017, Directorate of Technical Education, Government of Gujarat, October 2017
- Guideline for Developing Student Innovation & Start-up Ecosystem in University/Engineering Campuses, TEQIP-III, Ministry of Human Resource Development
- A Guiding Framework for Entrepreneurial Universities, OECD, European Commission, 18th December, 2012
- For Faculty: Best Practices for Start-ups, Stanford University, <https://otl.stanford.edu/industry/stanfordstart-ups/faculty-best-practices-start-ups>, visited on 5th September, 2019 • Faculty Entrepreneurship Policy, DA-IICT, 30th September, 2015

P. K. Karmali
Dean of Planning & Resource Generation
H.B.T.U., Kanpur-02

Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P.

19

- For Students: Best Practices for Start-ups, Stanford University,
<https://otl.stanford.edu/industry/stanfordstart-ups/students-best-practices-start-ups>,
visited on 5th September, 2019
- Start-up Policy AICTE- 2016, All India Council of Technical Education, November
2016
- Student Start-up Policy 2015, Kerala Technological University, Kerala



Prof. P.K. Kamani
Dean of Planning & Resource Generation
H.B.T.U. Kanpur-02



Prof. Narendra Kohli
Dean Incubation Hub.
H.B.T.U., Kanpur-208002 U.P.