

PSG College of Arts & Science

Innovation and Start-up & Entrepreneurship Policy



Since 1947



PSG College of Arts & Science

Autonomous & Affiliated to Bharathiar University
Accredited with 'A⁺⁺' Grade Level by NAAC (4th Cycle)

College with Potential for Excellence
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An ISO 9001:2015 Certified Institution

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PREAMBLE

All India Council of Technical Education (AICTE) released a Startup Policy document, as a guideline to address the directives of inculcation of innovation and entrepreneurial culture in higher education institutions (HEIs).

NISP Co-ordinator was nominated and a committee was constituted in PSGCAS to formulate detailed guidelines for various aspects related to innovation, Startup and entrepreneurship management. This committee deliberated on various facets for nurturing the innovation and Startup culture in the campus, viz., Innovation Promotion strategies, Start-Up mentorship, Pre-incubation and Incubation support systems, Intellectual Property ownership, revenue sharing mechanisms, norms for technology transfer and commercialization, equity sharing, etc. The Innovation and Startup Policy for students and faculty members of PSGCAS was formulated with this preamble.

VISION

Create High quality technical human resource capable of doing cutting edge research and innovation and deep-tech entrepreneurship. Provide students, Alumni and aspirants from the society participate in innovation and entrepreneurship (I&E) related activities, thus encouraging students and faculty to consider startups and entrepreneurship as a career option.

MISSION

To identify student and faculty innovators, promote and mentor them to develop sustainable product / process development. To cultivate innovation mindset & build ecosystem at the campus to harness the entrepreneurial potential.

To impart a supportive and vibrant environment to stimulate the innovation attitude of the student entrepreneurs, startups / SMEs and enable them to design technology based products and services leading to job creation for strengthening the regional and national economy.

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PSGCAS has a legacy in building Entrepreneurship and has been a notable change maker for creating Entrepreneurs in the locale. The institute has initiated establishment of third vertical of innovation and entrepreneurship along with the traditional verticals of placements and higher studies through Centre for Innovation Incubation & Entrepreneurship. A separate Innovation Start-Up and Entrepreneurship policy (ISE Policy) has been framed with guidelines from NISP. This initiative has created a pathway towards development of culture among students and faculties to adopt entrepreneurship as one of the carrier options. Following steps have been taken to implement ISE policy.

1. Strategies and Governance

1.1 A dedicated Innovation and Entrepreneurship Council (PSGCAS IIC and EDC) with defined specific objectives and associated performance indicators for assessment, has been established to facilitate development of an Innovation & entrepreneurial ecosystem in the organization.

1.2 Minimum 1% fund of the total annual budget of the institution is being allocated for funding and supporting innovation and startups related activities through creation of separate 'Innovation fund'. However, revenue earning activities will be encouraged through PSGCAS BIC to minimize the burden on the Institution in due course.

1.3 Faculty and Students will be Encouraged for raising funds from diverse sources to reduce dependency on the public funding. Bringing in external funding through government (state and central) such as DST, DBT, MHRD, AICTE, TDB, TIFAC, DSIR, CSIR, BIRAC, NSTEDB, NRDC, Startup India, Invest India, MeitY, MSDE, MSME, startup in TN as well as non-government sources CSR grants from PSU and industries will also be encouraged.

1.4 To support innovation and entrepreneurship promoting activities, it will be highly encouraged and appreciated to approach private and corporate sectors to generate funds, under Corporate Social Responsibility (CSR) as per Section 135 of the Company Act 2013.

1.5 Fund raising through sponsorships and donations engaging alumni network for promoting Innovation & Entrepreneurship (I&E) shall be encouraged.

1.6 Entrepreneurship Development Cell (EDC) under CII&E will organize institutional programs such as bootcamps, conferences, training programmes, workshops etc. to spread the awareness regarding importance of innovation and entrepreneurial agenda across the institute.

1.7 Product to market strategy for startups which is a part of ISE policy document will be finalized on micro level on case to case basis.

1.8 Efforts will be encouraged to make PSGCAS as a driving force in developing entrepreneurship culture in its vicinity (regional, social and community level). These efforts include giving opportunity for regional startups, provision to extend facilities for outsiders and active involvement of PSGCAS in defining strategic direction for local development.

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1.9 Development of strategic international partnerships using bilateral and multilateral channels with international innovation clusters and other relevant organizations will be encouraged and participation in international events shall be encouraged.

1.10 PSGCAS has initiated the setup of student owned E-Cell to propagate and involve student community to take enterprising activities Viz. awareness, Innovation prizes, Hackathon etc. The CII&E through IIC and EDC will mediate the following steps to promote Innovation and Entrepreneurship Promotion in the campus.

- a. A student/group of students has to find out a problem statement. Problem statement should be realistic one and it should be associated directly with societal issue. The problem statement must be adhered to any of the area given in annexure 1.
- b. Student has to find out a potential solution that can solve the predefined problem. The solution should be an innovative solution. The idea or innovative process is to be uploaded through website: www.psgcas.ac.in. The ideas must be in TRL 1 to TRL 4 level. (Refer annexure 2).
- c. By default these ideas will be considered to be taken part in National Innovation Repository (NIR) of MHRD Innovation Cell, GOI.
- d. Each group will be assigned to a faculty member for mentorship. Each group has to prepare a prototype or design under the mentorship of the faculty. The prototype must adhere to minimum TRL 5 (Refer annexure 2). Institution will provide all the lab facility to the groups for preparing prototype through the Pre-Incubation centres.
- e. The prototype will be evaluated by experts and basing on potency, market value etc. Will be decided whether it is eligible for a startup or not.
- f. Once the idea/prototype is eligible for startup as decided by experts, this should be registered as a student startup under a form of business entity like Partnership Firm, LLP, Private Limited Company and One Person Company. Start-ups should be able to provide a copy of the registration certificate/letter to his/ her academic institution.
- g. In next step, the student startup should be admitted to PSGCAS Business Incubation Centre for incubating the startup.
- h. PSGCAS BIC will mentor the startup to let it be the successful startup in market.
- i. Faculty members may directly go for registration of their idea/prototype at the website and follow steps e-h.

2. Enabling Infrastructure

Institute has already developed institutional infrastructure to enable startups in the past decades and progressed in this direction from establishment of ED Cell to its promotion into PSGCAS BIC. This startup enabling infrastructure and its success is acknowledged by various ministries and bodies of Government of India and state government i.e. by approving their flagship program i.e. Entrepreneurship Training Schemes by NSTEDB, DST. As a part of developed infrastructure, a dedicated building with 12000 sq. ft. of operational area consisting of well-equipped cubicles for startup working, Idea lab, fab lab / makers space with all the facilities of prototyping, mentoring for IPR, marketing, business plan development, product development etc. is available at the Centre for Innovation Incubation & Entrepreneurship.

2.1 Thus creation of pre-incubation and incubation facilities for nurturing innovations and startups in PSGCAS has already taken place and ISE policy document reflects the roadmap of INNOVATION to ENTREPRISES to FINANCIAL SUCCESS.

2.2 The list of all the pre-incubation units in the campus i.e. hobby clubs, students' clubs working on various technologies, E-cell, advanced labs and design centers, Innopreneur's Club has been disseminated. A functional IIC is managing all the activities regarding innovation, entrepreneurship and startup related activities within the institute in creating mindset among the students and faculty members.

2.3 PSGCAS Business Incubation Centre has all the incubation related facilities. Entrepreneurship Development Cell, a part of CII&E is responsible for structured and unstructured support to the students and faculty through the Makers lab at Innovation center with all the facilities available for conversion of idea into prototype.⁴

2.4 Centre for Innovation Incubation & Entrepreneurship through IIC and EDC is executing and administrating the programs related to innovation, IPR and Startups. The details of the programs like Entrepreneurship Development Programs (EDP), Faculty Development Program (FDP), Woman's Entrepreneurship Development Program (WEDP), Technology Entrepreneurship Development Program (TEDP), Entrepreneurship Awareness Camp (EAC) etc. are given in the annexure 3.

2.5 A separate policy document has been created to offer mentoring and other relevant services through Pre-incubation/Incubation units for nominal charges or zero payment basis. The modalities regarding Equity Sharing in Startups supported through these units will depend upon the nature of services offered by these units and are elaborately explained in the document. Seed support fund to start up for ready to market product or service or soft loan with collateral for specific period will be made through PSGCAS BIC.

3. Nurturing Innovations and Startups

PSGCAS Innovation and startup scheme establish processes and mechanisms for easy creation and nurturing of Startups/enterprises by students (UG, PG, Ph.D.), staff (including temporary or project staff), faculty, alumni and potential start up aspirants from outside the institution.

The Scheme would nurture Innovation and Start-Ups through

Incubation support:

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

Will allow licensing of IPR from institute 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 institute, should be allowed 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.

Will allow setting up a start up (including social start ups) and working part-time for the start ups while studying /working:

PSGCAS will allow it's students /staff to work on their innovative projects and setting up start ups (including Social Start ups) or work as intern / part-time in startups (incubated in any recognized HEIs/Incubators) while studying / working. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models.

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. The salient features of incubation process is given in the following.

- a. 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 would be allowed to use their address in the institute to register their company with due permission from the institution.
- 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 institute. (Only for carrying out Innovation and Start-Up promotion activities)

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- d. PSGCAS will allow their students to take a semester/year break (or even more depending upon the decision of review committee constituted by the institute) 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. Institute 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. PSGCAS will allow setting up a startup (including social startups) and working part-time for the startups while studying / working: students / staff shall be allowed to work on their innovative projects and setting up startups (including Social Startups) or work as intern/part-time in startups (incubated in any recognized HEIs/Incubators) while studying / working.
- f. Student Entrepreneurs may earn credits for working on innovative prototypes/Business Models. Student inventors may also be allowed to opt for startup in place of their mini project/ major project, seminars, summer trainings. The area in which student wants to initiate a startup may be interdisciplinary or multi-disciplinary. 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 startup.
- g. Faculty and staffs are allowed to take off for a semester / year (or even more depending upon the decision of review committee constituted by the institute) as unpaid leave/ casual leave/ earned leave for working on startups and come back. PSGCAS allows the 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.
- h. PSGCAS will provide a part-time/full time Short Term Course / PGDM (Innovation, entrepreneurship and venture development) program where one can get degree while incubating and nurturing a startup company. AICTE has already issued guidelines for a similar program.
- i. Institute will facilitate the startup activities/ technology development by allowing students/ faculty/staff to use institute infrastructure and facilities, as per the choice of the potential entrepreneur in the following manners:
- j. Short-term/ six-month/ one-year part-time entrepreneurship training.
- k. Mentorship support on regular basis.
- l. 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.
- m. Institute may also link the startups to other seed-fund providers/ angel funds/ venture

funds or itself may set up seed-fund once the incubation activities mature.

- n. In return of the services and facilities, institute may take 2% to 9.5% equity/ stake in the startup/company, based on brand used, faculty contribution, support provided and use of institute's IPR (a limit of 9.5% is suggested so that institute has no legal liability arising out of startup. The institute should normally take much lower equity share, unless its full-time faculty/ staff have substantial shares). Other factors for consideration should be space, infrastructure, mentorship support, seed funds, support for accounts, legal, patents etc. For staff and faculty, institute can take no-more than 20% of shares that staff / faculty takes while drawing full salary from the institution; however, this share will be within the 9.5% cap of company shares, listed above.
- o. No restriction on shares that faculty / staff can take, as long as they do not spend more than 20% of office time on the startup 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 startup, then they will go on sabbatical/ leave without pay/ earned leave.
- p. In case of compulsory equity model, Startup 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 institute/incubator. In that case, during the cooling period, institute cannot force startup to issue equity on the first day of granting incubation support.
- q. The institute would also provide services based on mixture of equity, fee-based and/ or zero payment model. So, a startup may choose to avail only the support, not seed funding, by the institute on rental basis.
- r. Institute would extend this startup facility to alumni of the institute as well as outsiders.
- s. Participation in entrepreneurship 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 startup.
- t. Product development and commercialization as well as participating and nurturing of startups 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.
- u. Institutions might also need to update/change/revise performance evaluation policies for faculty and staff as stated above.
- v. Institute would ensure that at no stage any liability accrue to it because of any activity of any startup.

3.1 Pre incubation facility

It is very important to primarily identify which ideas can successfully go through the incubation process. This phase of pre-incubation can prepare student entrepreneurs for the incubation phase by providing them prerequisite skills and knowledge that will help them validate and assess their ideas as well as define their business models in detail. In the pre-incubation planning phase, the following activities are to be performed:

- a. **Identification of problems:** Students will visit various sectors like villages, hospitals, urban areas etc. and will visualize practical problems that are associated with those sectors. Various other field visits may occur for identification of real life problems.
- b. **Idea generation:** Depending upon the problems students have to come out with a potential solution for a specific problem. That idea should be novel, innovative and can be able to solve a real life problem effectively.
- c. **Collection of Ideas:** Students have to submit the ideas in proper format to the authority in online mode. The ideas may be considered to take part in Smart India Hackathon, other Hackathons, NIR and National Innovation Contests conducted by MoE.
- d. **Screening of Ideas:** Selected applicant will be invited to give presentation to evaluation committee based on their potency of idea they will be shortlisted.
- e. **Supporting, mentoring and strengthening of ideas:** The shortlisted ideas will go through series of workshops, webinars, lecture series etc. In order to improve their ideas to solve problems and know various aspects of startups. Each idea may be under mentorship of a mentor from PSG Institutions / Industry. Under his/her provision ideas may go to incubation stage.
- f. **Business plan preparation:** Workshop will be conducted on 'business plan development' for awareness of students by inviting renowned expert from industry or academia. Selected ideas are required to present their business plan with market analysis.
- g. **Prototype development:** Finally students have to prepare a prototype for their ideas. The prototype may be prepared under direct supervision of mentor assigned.
- h. **Basic Idea Testing:** Student idea needs to be tested before applying for incubation. Academic Institutions must ensure pre-incubation qualification of a student's business idea.
- i. **Promoters Details:** Relevant details of promoters are required to be validated before allowing start-ups to enter the incubation process.
- j. **Registration of Start-up:** The Student Start-up needs to be registered under a form of business entity like Partnership Firm, LLP, Private Limited Company and One

Person Company. Start-ups should be able to provide a copy of the registration certificate/letter to his/ her academic institution.

- k. **Admission to Incubator/ Co-working Space:** Admission into a start-up incubation/co-working space programme of any TBI (approved by GoI) is permissible.

This facility shall be offered to students who are currently enrolled in any degree program at PSGCAS. This is a support system to help students 'test' their ideas. They shall be offered

- ✓ Seed loan on availability
- ✓ The Institute shall offer seed-loan on generous terms to promote start-ups Space in the incubation centre
- ✓ Use of Laboratory and Equipment
- ✓ Deferment of dues: In case the student is offered a pre-incubation and they are using facilities or availing seed loan, then they shall be permitted to defer such dues of the institute or incubation centre, based on a declaration to repay at a later stage.

3.2 Incubation facility

After the process of pre-incubation, students have to be admitted in PSGCAS BIC for availing incubation facility. Mentorship to incubatees to convert the innovative ideas to successful startups are done at Pre-incubation and incubation stage.

3.3 Infrastructure and service provided to incubatees

3.3.1 Infrastructural service

Upon admission to PSGCAS BIC, the following infrastructural facilities will be offered to the incubatee companies on an individual basis, apart from a set of shared/ common infrastructure mentioned hereinafter:

3.3.1.1 Office space: Company specific

3.3.1.2 Internet connection

3.3.1.3 Common Lab services (Upon payment Basis as applied to Central Research Laboratory)

Besides, the incubatee companies will be facilitated to access the laboratories and other resources of PSGCAS BIC for their product development and will be connected to our network for business development. Access to departmental resources is possible with permission of the concerned department to avoid conflict with departmental activities and objectives through the PSGCAS BIC.

Further usage of such resources shall be on commercial basis and in conformity with the policies of Institution for consultancy/sponsored projects prevailing from time to time. The consideration payable to the Institution for usage of departmental resources will

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generally be in the form of cash (payable by cheque or demand draft). Augmentation of resources in the department on account of such usage shall be the properties of the concerned department.

Irrespective of requirements of departmental facilities for usage, all incubatee companies will primarily locate PSGCAS BIC shared incubation facility. Apart from company specific infrastructure as stated above, the incubation centre will provide certain facilities be shared by all incubatee companies which would include:

- 3.3.1.3.1 Teleconferencing facilities
- 3.3.1.3.2 Meeting/Conference room with projection equipment
- 3.3.1.3.3 Pantry facilities of Institution can be availed
- 3.3.1.3.4 Common secretarial pool/staff (depending on availability of such staff)

Apart from physical infrastructure as stated above, Incubatees will be provided with certain other supports and services as:

- a. Pool of mentors, experts in technology, legal, financial and related matters, with or without consideration,
- b. Organising events to help companies in networking and showcasing their technologies
- c. Meetings with visitors of PSGCAS BIC and CII&E (such as successful entrepreneurs, VCs, industry professionals). Incubatee companies can avail of the above support and services. In addition, PSGCAS BIC will also build up information and knowledge pool to be useful generically for start-up companies. PSGCAS BIC will coordinate with its allied partners and training providers to train the start-up companies.
 - ✓ Training in business management: structured short courses
 - ✓ Training in business communication: written as well as verbal
 - ✓ Accounting tools/ software
 - ✓ Common secretarial pool/staff
 - ✓ Experiences of successful companies – a knowledge/ information site would be created where management concepts, intellectual property evaluations, deal making, negotiations, networking, VC funding, company registrations etc. are provided
 - ✓ Networking events/ showcases
 - ✓ Tie-ups with chartered accountants and other professional organizations as required

3.3.2 *Mentoring and advisory services*

Strategic Checkups: The PSGCAS BIC Head will meet with company CEOs at least once per month for strategy reviews and discussion of operational issues.

- 3.3.2.1 Each incoming company is offered a "Mentor." This is a person with extensive

business experience or specific industry insight who will advise the company on a limited basis regarding matters of particular importance to the company.

3.3.2.2 A faculty advisor is also associated with the incubatee as a mentor on technology issues.

3.3.2.3 Specialized mentors will also be available to the companies to assist with particular strategic areas or to provide project-oriented consultation.

3.3.2.4 All companies would be provided access to consulting by professionals.

3.3.3 Market research and counselling

Consulting and market research services to incubates are also mediated and facilitated on request. Services may include:

3.3.3.1 Market research and opportunity identification

3.3.3.2 Valuation of Businesses

3.3.3.3 Competitor Research

3.3.3.4 Market analysis and sizing

3.3.3.5 Customer Search

3.3.3.6 Electronic Research

3.3.3.7 Marketing plan formulation

3.3.3.8 Consulting on strategies at various stages: Launch, Growth and Harvest of businesses.

Any specialized consultancy work for a specific company has to be paid for by the incubatee directly. However, PSGCAS BIC may provide certain services to all incubatees, which it may choose to bear the complete cost. However, it would be sole prerogative of PSGCAS BIC to choose who would pay for these specialized services.

The admission to PSGCAS Innovation and startup scheme can be in any one of the following categories:

CATEGORY I:

Open to Faculty, Staff and Students of PSGCAS. Aspirants must have an idea and they will undergo pre- incubation stage. It is expected that the innovator would like to commercialize the technology and would graduate to Category II within 1 year from beginning the pre- incubation.

Eligibility - Faculty, academic staff and students of PSGCAS having the intent of trying out a novel technological idea for up-gradation to a commercial proposition, scaling up a laboratory proven concept, and setting up a technology business enterprise qualify for a pre- incubation project.

CATEGORY II:

Technology based Start-up Company promoted by a first generation entrepreneur desirous of R&D partnership with the institute or a company, with the objective of commercializing a novel technological idea, scaling up a laboratory proven concept and setting up a technology business enterprise.

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Eligibility - PSGCAS BIC Innovation and startup scheme would admit technology based companies in any discipline. Acceptable business would involve innovative, technology-based product, idea or service.

- ✓ It is open to the faculty, staff, researchers, alumni and students of PSGCAS having S & T background.
- ✓ PSGCAS Innovation and startup policy would also welcome outside promoters.
- ✓ Majority of Founders/ core team should be Indian citizens.
- ✓ A company has to be registered with RoC (Registrar of Companies) to be incubated in PSGCAS BIC (except Category I). A company not registered with RoC (Proprietorship or Partnership) would have to do so within 6 months of admission to PSGCAS BIC or before the disbursal of seed fund, whichever is earlier. A company can exist as a private limited company, proprietorship or partnership before it is admitted.

Admission Procedure

Anyone wants to avail PSGCAS innovation and startup scheme must register through website www.psgcas.ac.in. After registering Category I has to give details of their ideas and category II has to put all the details about ideas, registration certificates etc. In the website itself. The confirmation of admission will be notified to the applicant.

4. IPR evaluation

A separate IPR policy is in place for addressing the guidelines and issues regarding Product Ownership Rights for Technologies Developed at Institute. Students who are developing and demonstrating proof of concepts of their ideas in minor and major project exhibitions, inter-institute competitions, hackathons etc. are facilitated in Technology Business Incubator -Fab lab and Innovation Center to convert their PoCs into MVPs. **Any IPR related activity will be dealt as per IPR policy of PSG Institutions.** The policy and the procedures for the Intellectual Property filing, evaluation of Intellectual Property, ownership, royalty sharing and is applicable to all the full and part time employees full-as well as students are drafted in the policy. The document provides some salient features of IPR policy and may be used as guidelines for IPR evaluation.

4.1 Evaluation of IP

Evaluation of Intellectual Property will be done by the IPSC (Intellectual Property sub Committee). IPSC will assist various departments/schools of the Institution in all matters relating to intellectual property. Among other responsibilities, the IPSC will help various departments to secure protection for intellectual property where appropriate and will review infringements, maintain central databases and files of patent applications, issued patents, trademarks and copyrights, licenses and agreements, coordinate with various departments in negotiating and preparing license and other agreements and review and

approve as to form all agreements relating to intellectual property.

IPsC shall be a standing committee with a tenure of five years. The Principal shall be the Chairman of this committee. Three member shall be nominated by the Principal from members of the faculty in order to provide broad technical expertise across various disciplines. Head of Research Advisory Committee will also be a member of this committee. The committee will invite subject experts as and when required. Evaluation of IP means

- ✓ Determining the ownership of IP and who made the intellectual contribution.
- ✓ Determining whether an IP is innovative and qualifies the eligibility so given under respective statute in India or foreign countries.
- ✓ Determining whether the IP has a reasonable chance for commercialization.

4.2 Royalty Income Sharing

For transfer/ licensing of/ permission to use IP owned by PSGCAS / PSGCAS BIC in favour of the incubatee companies, the costs of securing the property, licensing, including the costs to operate and support a technology transfer office and IPsC, and the costs of obtaining a patent or other protection for the property on behalf of the University shall first be recaptured from any royalties or other license payments received by PSG Institutions and the remainder of such income (including, but not limited to, license fees, prepaid royalties, minimum royalties, milestone payments and sublicense payments) shall be divided as per institutions rule.

Cumulative Net Income	Inventor	Department of the inventor	PSG College of Arts & Science
Rs. 1 to Rs. 1,00,000	60%	20%	20%
Rs. 1,00,001 to Rs. 5,00,000	60%	20%	20%
Above Rs. 5,00,000	50%	20%	30%

4.3 Product Ownership Rights for Technologies Developed at Institute

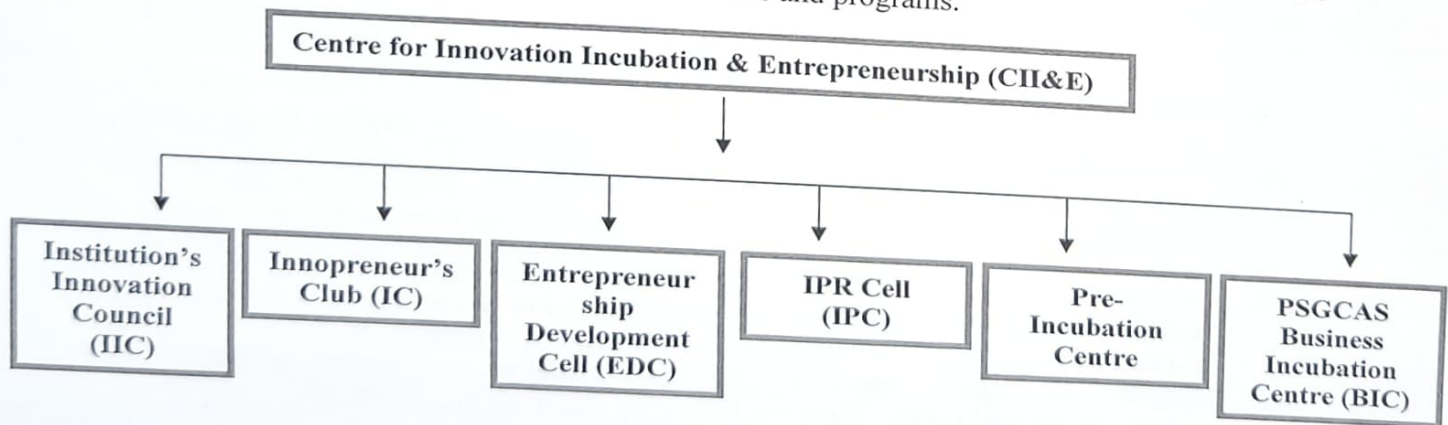
- a. When institute facilities / funds are used substantially or when IPR is developed as a part of curriculum/ academic activity, IPR is to be jointly owned by inventors and the institute.
- b. On the other hand, if product/ IPR is developed by innovators not using any institute facilities, outside 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 member committee consisting of

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- two faculty members (having developed sufficient IPR and translated to commercialization), two of the institute's alumni/ industry experts (having experience in technology commercialization) and one legal adviser with experience in IPR, will examine the issue after meeting the inventors and help them settle this, hopefully to everybody's satisfaction. Institute can use alumni/ faculty of other institutes as members, if they cannot find sufficiently experienced alumni / faculty of their own.
- d. Institute IPR cell or incubation center 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 institute is to pay for patent filing, they can have a committee which can examine whether the IPR is worth patenting. The committee should consist of faculty who have experience and excelled in technology translation. If inventors are using their own funds or non institute funds, then they alone should have a say in patenting.
 - e. Institute'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 / institute will have no say, including heads of department, heads of institutes, deans or registrars.
 - f. Interdisciplinary research and publication on startup and entrepreneurship would be promoted by the institution.

5. Organization capacity, HR & Incentives

Organizational Structure for Centre for Innovation, Incubation & Entrepreneurship is as shown in figure below. ISE policy document is available regarding implementation of all Innovation and Entrepreneurship related activities and programs.



- a. PSGCAS BIC would recruit staff who have a strong innovation and entrepreneurial/ industrial experience, behaviour and attitude. This will help in fostering the I&E culture.

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- ✓ Some of the relevant faculty members with prior exposure and interest would be deputed for training to promote I&E.
 - ✓ To achieve better engagement of staff in entrepreneurial activities, institutional policy on career development of staff would be developed with constant upskilling.
- b. Faculty and departments of the PSGCAS have to work in coherence and cross-departmental linkages should 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 will be engaged for strategic advice and bringing in skills which are not available internally.
- d. Faculty and staff are to be encouraged to do courses on innovation, entrepreneurship management and venture development. In order to attract and retain right people, institute would develop academic and non-academic incentives and reward mechanisms for all staff and stakeholders that actively contribute and support entrepreneurship agenda and activities.
- ✓ The reward system for the staff may include sabbaticals, office and lab space for entrepreneurial activities, reduced teaching loads, awards, trainings, etc.
 - ✓ The recognition of the stakeholders may include offering use of facilities and services, strategy for shared risk, as guest teachers, fellowships, associate ships, etc.
 - ✓ A performance matrix would be developed and used for evaluation of annual performance.

6. Creating innovation pipeline & pathways

- 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 has been devised at PSGCAS BIC.
- ✓ 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 institutional entrepreneurial agenda.
 - ✓ 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 should innovate with focus on the market niche.
 - ✓ Students would be encouraged to develop entrepreneurial mindset 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,

PSGCAS Innovation & Startup

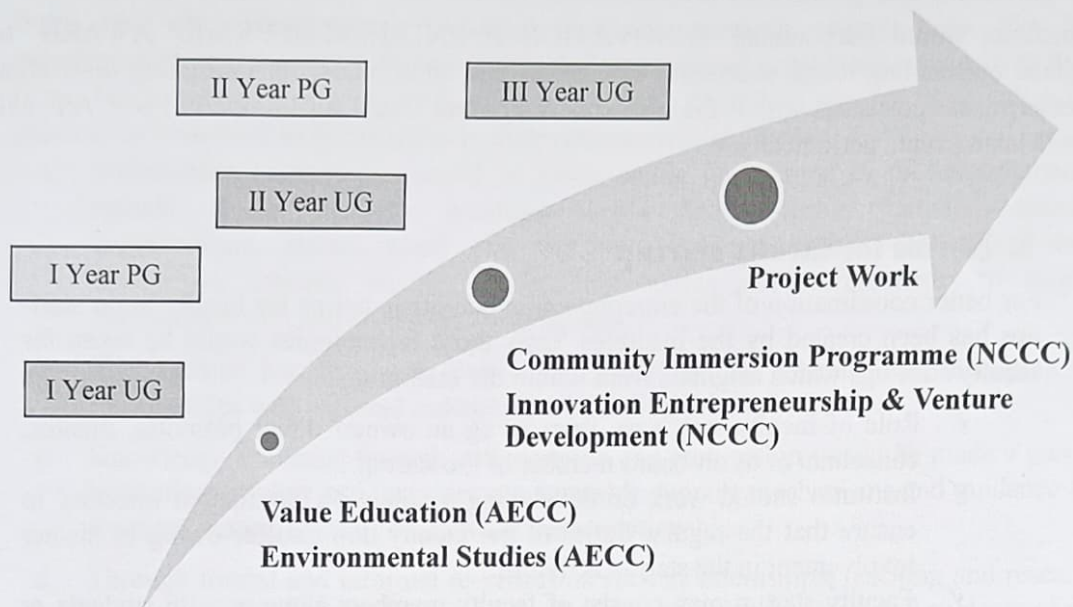
conferences, exhibitions, mentoring by academic and industry personnel, throwing real life challenges, awards and recognition should be routinely organized.

- ✓ To prepare the students for creating the start up through the education, integration of education activities with enterprise-related activities would be done.
- b. PSGCAS BIC would link its start ups and companies with wider entrepreneurial ecosystem and by providing support to students who show potential, in pre-startup 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. PSGCAS has established Institution's Innovation Councils (IICs) as per the guidelines of MHRD's Innovation Cell and allocated appropriate budget for its activities. PSGCAS IIC and Entrepreneurship Development Cell (EDC) would guide institution in conducting various activities related to innovation, startup 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 and building ecosystem for Innovation and Entrepreneurship.
- d. For strengthening the innovation funnel of the institute, access to financing must be opened for the potential entrepreneurs.
 - ✓ Networking events must be organized to create a platform for the budding entrepreneurs to meet investors and pitch their ideas.
 - ✓ Provide business incubation facilities: premises at subsidised cost. Laboratories, research facilities, IT services, training, mentoring, etc. should be accessible to the new start-ups.
 - ✓ 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. PSGCAS BIC will develop Innovation Tool Kit and systematic processes, which will be kept on institute's website to answer the doubts and queries of the innovators and enlisting the facilities available at the institute.

7. Pedagogy and Learning Interventions for Entrepreneurship Development

PSGCAS has initiated a Capstone program with diversified approach in teaching and learning pedagogy including cross disciplinary learning using mentors, labs, case studies, games, etc. in place of traditional lecture-based delivery through Ability Enhancement Courses (AECC), and

Non CGPA Credit Courses (NCCC). Experts from industry, mentors from different areas of business and enterprise will be the part of resource person team of this program. This program has adopted blended learning mode of pedagogy which consists of project and problem-based learning, online learning with MOOC platform. The learning journey of aspirant innovator & entrepreneur is shown in figure below.



The learning journey of aspirant entrepreneur through curriculum focus on Innovation and Entrepreneurship

7.1 A dedicated innovation center at CII&E is responsible to co-ordinate all student clubs to promote Innovation, whereas individual departments are responsible for running technical clubs, project workshops/labs.

7.2 Entrepreneurship Development Cell is responsible for organizing competitions, bootcamps, workshops, awards, etc. A separate E-cell run and administered by students is totally involved in strategic planning and implementation of these activities.

7.3 As a part of awareness program about entrepreneurial ecosystem present in the institute, introductory sessions will be organized for the students of all the programs during Student Induction Programme.

7.4 A dedicated Industry Institute Interaction Cell with well drafted policy will be made responsible for conducting research and survey on trends in technology, research, innovation, and market intelligence. Industrial consultancy, industrial visits and student internship related activities which will be coordinated by this cell.

7.5 To promote student ideas, projects and innovations based around real life challenges, bootcamps, visits to rural and underprivileged areas in nearby region and hackathons will be organized by IIC on regular basis. These activities and other IIC calendar activities will be displayed in the institute's activity calendar.

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7.6 I&E Faculty members and Student Innovation champions have been nominated from within the students/ faculty for each department.

7.7 Institute would start annual 'INNOVATION & ENTREPRENEURSHIP AWARD' to recognize outstanding ideas, successful enterprises and contributors for promoting innovation and enterprises ecosystem within the institute. The event 'Sandhai – Made in PSGCAS' will earmark such events periodically.

8. Norms for faculty startup

- a. For better coordination of the entrepreneurial activities, norms for faculty to do start-ups has been created by the institutes. Only those technologies would be taken for faculty start-ups which originate from within the Institution.
 - ✓ Role of faculty may vary from being an owner/ direct promoter, mentor, consultant or as on-board member of the startup.
 - ✓ Institutes should 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 startup activities.
 - ✓ Faculty startup may consist of faculty members alone or with students or with faculty of other institutes or with alumni or with other entrepreneurs.
- b. In case the faculty/ staff holds 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 institute from the work conducted at the startup/ company.
- 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 institute) may be permitted to the faculty.
- e. Faculty must not accept gifts from the startup.
- f. Faculty must not involve research staff or other staff of institute in activities at the startup and vice-versa.
- g. Human subject related research in startup should get clearance from ethics committee of the institution.

9. Collaboration, Co-creation, Business relation

For all the activities relevant to the innovation & entrepreneurial agenda of the institute, participation and collaboration of industry partners, institutes of national importance, international institutions, social enterprises, schools, alumni, professional bodies and entrepreneurs will be encouraged.

Coordinator of CII&E and Coordinators of other forums under CII&E team will be Single
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Point of Contact (SPOC) in the institute for the students, faculty, collaborators, partners and other stakeholders.

Institute has collaborations with associations of industries CII, CODISSIA, FICCI Flo, NEN, Yi, etc., with various government departments and ministries like DST, MeitY, Start-Up tamil Nadu through EDII-TN, Govt of TN etc, infrastructure, networking and mentoring support from other PSG institutions, Technical institutes, research organizations like SITRA, entrepreneurship promoting institutes EDII, and international organizations like INNOPICs, IP firms, NAN and network of angel funding and venture capitalists etc. All these collaborations prove to be beneficial to the students in their entrepreneurial journey.

- a. Stakeholder engagement would be given prime importance in the entrepreneurial agenda of the institute. Institutes would find potential partners, resource organizations, micro, small and medium sized enterprises (MSMEs), social enterprises, schools, alumni, professional bodies and entrepreneurs to support entrepreneurship and co-design the programs.
- b. The institute has developed 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 institutional policy and institutes must provide support mechanisms and guidance for creating, managing and coordinating these relationships.
- d. Through formal and informal mechanisms such as internships, teaching and research exchange programmes, clubs, social gatherings, etc., faculty, staff and students of the institutes would be given the opportunities to connect with their external environment.

10. Periodic Assessment

Impact assessment of entrepreneurial initiatives such as pre-incubation, incubation, entrepreneurship education would be performed regularly using well defined evaluation parameters such as

- a. Monitoring and evaluation of knowledge exchange initiatives, engagement of all departments and faculty in the entrepreneurial teaching and learning would be assessed.
- b. Number of startups created, support system provided at the institutional level and satisfaction of participants, new business relationships created by the institutes would be recorded and used for impact assessment.
- c. Impact would also be measured for the support system provided by the institute to the student entrepreneurs, faculty and staff for pre-incubation, incubation, IPR protection, industry linkages, exposure to entrepreneurial ecosystem, etc.
- d. 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.

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- e. Impact assessment for measuring the success would be in terms of sustainable social, financial and technological impact in the market.

11. Innovations & Entrepreneurial Impact Assessment

The various parameters to be considered for Entrepreneurial Impact Assessment are;

- a. Satisfaction of the participants in certification program, workshops and training programs
- b. Participation in awareness programs
- c. Utilization of pre-incubation facilities by students
- d. Number of curriculum projects addressing real life problems
- e. Participation in various idea, PoC, Prototype, b-plan competitions and hackathons
- f. Participation in pitching for fund raising and grants/support from government and non-government agencies
- g. Contribution in industrial projects and consultancy projects
- h. Idea to PoC projects
- i. PoC to Prototype/MVP projects
- j. Product development and its launching in the market
- k. Fund raising
- l. Startup registrations and company incorporation
- m. Annual Turn over
- n. IPR application filing, grant and commercialization

The CII&E and PSGCAS ISP will be responsible for assigning appropriate weightages to the above parameters depending on the maturity of the process. A separate document regarding this will be made available by IIC and reviewed annually.

Conflict of Interest

The inventor(s) are required to disclose any conflict of interest or potential conflict of interest. If the inventor(s) and/or their immediate family have a stake in a licensee or potential licensee company then they are required to disclose the stake they and/or their immediate family have in the company. Under these circumstances, it must be ensured by the inventor(s) that their entrepreneurial activities do not have an adverse impact on inventor(s) teaching, research and any other institutional responsibilities.

12. Agreements

The following agreements are required to be signed by the companies to the extent applicable:

a. Incubation Agreement:

Between PSGCAS BIC and incubatee company for admission of the company in the Incubation Centre.

b. Non-Disclosure agreement (NDA):

Between PSGCAS BIC and incubatee company/Client for availing R&D services at PSGCAS on a case to case basis.

c. Equity agreement:

Between PSGCAS BIC, and incubatee company and its Promoters for PSGCAS BIC's equity holding in the incubatee company.

d. Transfer of technology Agreement/ Technology License Agreement:

Between PSGCAS BIC and incubatee company/licensee for transfer of technology from PSG Institutions in the favour of Licensee.

e. Loan Agreement:

Between PSGCAS BIC and incubatee company on sanction of the seed loan to the incubatee company in PSGCAS.

f. Usage of Lab:

Between PSGCAS Departmental lab and an incubatee company for usage of departmental resources of PSGCAS by the incubatee company as per the prevailing policy of the Institution.

13. Disclaimer

The incubatee company will understand and acknowledge that PSGCAS BIC intends to provide supports and services to the Company in good faith to pursue its objective to promote entrepreneurship by converting innovative technologies developed in the Institute to commercialization by incubating and supporting new enterprises. It is understood that by agreeing to provide various supports and services, the Institution does not undertake responsibility for:

- ✓ Ensuring the success of an incubatee company, its products/ process/ services or marketability.
- ✓ Ensuring quality of support and services provided by PSGCAS to the complete satisfaction of the incubatee companies or their promoters/ founders.
- ✓ Ensuring quality of services of the consultants engaged by the incubatee companies through PSGCAS or its network. Incubatee companies will have to apply their judgements before getting in to a relationship with them.
- ✓ The incubatee companies agree that PSGCAS or their employees shall not be held liable for any reason on account of the above.

14. Others:

- a. PSGCAS BIC does not guarantee success and/or feasibility of the technology transferred from the Institute. PSGCAS or any person representing them shall not be liable for any acts or omissions of the incubated company.

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- b. The above policy is subject to periodical review and amendment at any time.
- c. Any/all disputed between the parties shall be referred for arbitration to the Principal, PSGCAS or person so nominated by him/her, whose decision will be final and binding upon the parties. The place of arbitration shall be Coimbatore.

Annexure 1

IIC Institutes should scout student innovation on the following themes as per the guidelines from MHRD:

1. Healthcare & Biomedical devices.
2. Agriculture & Rural Development.
3. Smart Vehicles/ Electric vehicle/ Electric vehicle motor and battery technology.
4. Food Processing.
5. Robotics and Drones.
6. Waste management.
7. Clean & Potable water.
8. Renewable and affordable Energy.
9. IoT based technologies (e.g. Security & Surveillance systems etc.)
10. ICT, cyber-physical systems, Blockchain, Cognitive computing, Cloud computing, AI & ML.

Thrust Areas of the Institution for Research and Innovation

Thrust Area	Sub Thrust Areas	Fundamental – Advanced and Applied Areas of Research
Sustainable wellness	1. Integrated approach to wellness	<ul style="list-style-type: none"> ▪ Regenerative health (Functional foods and Nutraceuticals) ▪ Tools for Identification, Assessment, Intervention strategies and Impact (medicine, public health, and psychology) ▪ Contextual Influence of Trans-disciplinary collaboration towards wellness (Technology, socio-cultural and environmental, Intrapersonal, Interpersonal, Political)
	2. Green Planet Conservation	<ul style="list-style-type: none"> ▪ Natural product based materials / Biomaterials / Green Chemical Synthesis and its impact (Therapeutic, Agriculture, Environmental, Food and Analytical -Applications) ▪ Impact of Climate change (Produce, Life Style, Economics and Wellness) ▪ Environmental Conservation Activities (Biodiversity Studies, Bioremediation) ▪ Green Business Practices (Ethics, Social relevance, Lean Business Models)
	3. Data centre for Sustainable Wellness	<ul style="list-style-type: none"> ▪ ▪
Sustainable Business	1. Sustainable Livelihood	<ul style="list-style-type: none"> ▪ Use of Natural Resources (Renewable and Non-renewable) ▪ Facilitating Start-ups and Enterprises ▪ Performing Arts (Music, Dance, Visual Arts, Drama, Folklore, Writing, Communication, Translation)
	2. Self-Reliant Entrepreneurship	<ul style="list-style-type: none"> ▪ New Product Development (Food, Agricultural, Environmental, Textiles, Herbal Drugs, Software, Electronics) ▪ Resource Mobilization and Marketing Management (Materials, Human Resources, Social-Organizational) ▪ Scientific Validation and Economic Viability of Various Systems of Medicine ▪ Innovation and Commercialization ▪ Competency (Usage of Technology, Entrepreneurial Mindset)
	3. Data Centre for Entrepreneurship	<ul style="list-style-type: none"> ▪
Sustainable Technologies	1. Automation and Human Interface	<ul style="list-style-type: none"> ▪ Technologies for developing sustainable products and processes ▪ Assistive Technologies (Health and Wellness, Communication and Media, IT, Environmental, Agriculture, Sensors and IoT) ▪ Extended and Augmented Reality (Health and Wellness, Communication and Media, IT, Environmental, Agriculture) ▪ Business Intelligence and Decision Support Systems (Analytical Tools, Data Management)
	2. Data Use and Management	<ul style="list-style-type: none"> ▪ Communication for Industry 5.0 ▪ Technology for Data use and Management (Business Analytics, Big

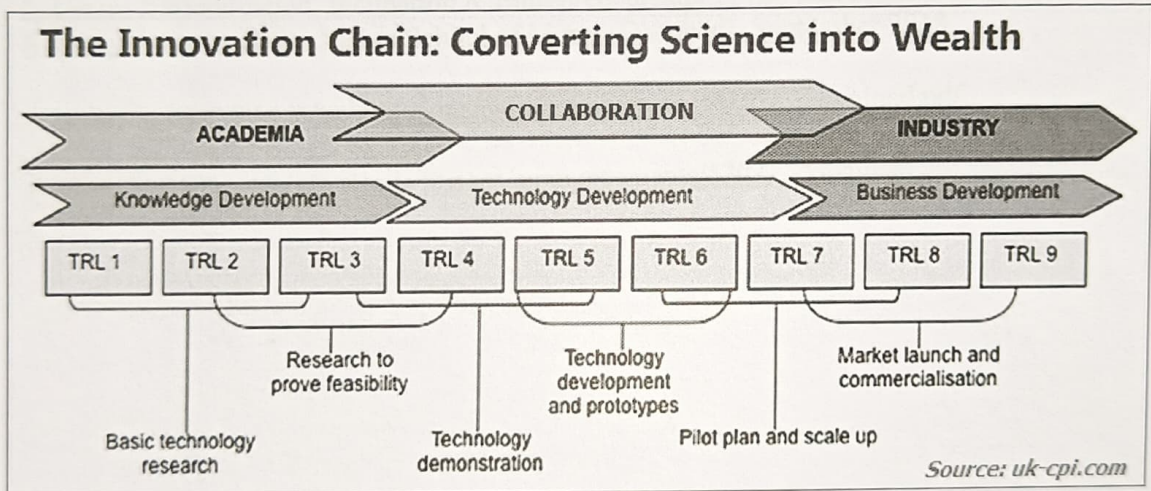
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		<p>Data Analysis, Bioinformatics)</p> <ul style="list-style-type: none"> ▪ Statistical Modelling (Clinical Data, Ecological, Business Information)
	3. Data Centre for Developed Technologies	<ul style="list-style-type: none"> ▪ ▪ ▪
Indian Knowledge systems	1. Study and the scientific translation of Indian mythology and literature towards peaceful living and sustainable business	<ul style="list-style-type: none"> ▪ Exploration of Indigenous Knowledge (Therapeutics, Business, Computing, Literature, Mythology, Value systems) ▪ Digital archives of ancient text and languages ▪ Development of Methodologies for Application of IKS (Agriculture, Food, Environment, Medicine, Societal Function. Ecological, Financial) ▪ Functional Applications of Indigenous Knowledge (Folkloristics, Education, Governance, Disaster, Business Management Principles) ▪ Ethnocentric studies (Culture, Management, Trade and Commerce, Medicine, Environment)
	2. Application of numeracy in Indigenous systems	<ul style="list-style-type: none"> ▪ Simulation and Mathematical Modelling (Business, Health care, Gaming, Climate) ▪ Astrophysics (Medicine, Industry, Defense, Environmental Monitoring) ▪ Empirical studies on Quantitative Models (Science and Management)
	3. Data Centre for Indian Knowledge Systems	<ul style="list-style-type: none"> ▪

Annexure 2

Technology Readiness Levels (TRLs)

- TRL 0 : Idea. Unproven concept, no testing has been performed.
- TRL 1 : Basic research. Principles postulated observed but no experimental proof available.
- TRL 2 : Technology formulation. Concept and application have been formulated.
- TRL 3 : Applied research. First laboratory tests completed; proof of concept.
- TRL 4 : Small scale prototype built in a laboratory environment ("ugly" prototype).
- TRL 5 : Large scale prototype tested in intended environment.
- TRL 6 : Prototype system tested in intended environment close to expected performance.
- TRL 7 : Demonstration system operating in operational environment at pre-commercial scale.
- TRL 8 : First of a kind commercial system. Manufacturing issues solved.
- TRL 9 : Full commercial application, technology available for consumers.



Annexure 3

Programmes Conducted through forums of Centre for Innovation Incubation & Entrepreneurship

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Annexure 3

Programmes Conducted through forums of Centre for Innovation Incubation & Entrepreneurship

REFERENCES

1. National INNOVATION and STARTUP Policy 2019 for Students and Faculty MHRD, GOI www.mhrd.gov.in / www.mic.gov.in
2. Tamil Nadu Startup and Innovation Policy – 20183, Entrepreneurship Development and Innovation Institute, Chennai, www.editn.in
3. Centre for Innovation, Incubation & Entrepreneurship, Policy and Framework, Indian Institute of Technology, Indian School of Mines (Dhanbad), September 2018.
4. https://api.mic.gov.in/uploads/images/announcements/90769_download.pdf
5. https://api.mic.gov.in/uploads/images/announcements/57022_download.pdf

Contact us

Students those have any innovative idea and want to establish a successful startup are advised to contact the following faculty of their branch. The nominated I&E faculty members of each department will help them to show direction to avail pre-incubation and incubation facility. Faculty members and Students can directly approach CII&E for any support services.

This Policy is prepared by CII&E Committee

B. S. G. V.

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