



Design Research and Innovation by Harvesting Science and Technology for Industries

<https://www.drishti.cmti.res.in>

Drishti portal provides open and collaborative framework to problem solvers and problem owners for developing sustainable manufacturing technologies and innovative products/systems in a collaborative manner.

Stakeholders and Roles

- Problem Solvers: Students, Faculties, Research Scientists, Individual Innovator, Technocrats, Academic and Research Institutes, CPSE/ABs
- Problem Owners: Industries, Govt. Agencies/Ministries, CPSE/ABs
- Experts/Evaluators/Mentors: Individuals, Scientists, Faculty
- Moderators: CMTI team
- Technology and Market Enablers: Consultants, IPR Specialists
- Technology Analysts: Expert committee, Govt. agencies



Objectives

This technology platform aims at:

- Providing opportunities for the young engineers to learn actively by involving in finding innovative solutions
- Collaborative and cooperative platform to find multidisciplinary teams for finding innovative solutions to problems of Industries
- Consolidation of expertise available in Academia-R&D-Industry for solving manufacturing production challenges
- Consolidation of technology/knowledge gap in manufacturing sector for facilitating feasible global interfacing
- Consolidation of ideas of think tanks (experts) for the technology/product being originated in India
- Establishing technology monograms to support investment in Indian R&D and Industrial business
- Pooling and sharing of engineering resources towards common cause of technology development in India

Platform Design: Functional Features of Web- based Open Innovation Platforms

While each Technology Platforms design varies and built with customized features as found suitable for the selected areas of operation the host institute the following are the essential features incorporated in DRISHTI.

- Registration: User registration enables innovator, problem owner, evaluator and moderator roles
- Challenge hosting: Abstract-Engineering definition-Novelty assessment – redefinition – hosting
- Innovator's proposals: Concept proposals-evaluation- acceptance /rejection
- Networking & Teams: Team formation (innovator-mentor-facilitator)- Contract agreements

- Innovation Process: Periodic review – redefinition – solution – evaluation-implementation-payments
- Solution implementation and Assessment: Implementation of solution (PoC/ final solution)-assessment
- Knowledge Gap Analytics: Feedbacks – AI based Analytics (gaps in tech./skill/innovation process)
- Knowledge House: Consolidation of ideas from think tanks for long term futuristic projects
- E-learning / Virtual Classrooms: Case studies – Success stories – experienced learning Tools/Concepts

Envisaged Outcomes

- Earn while learning: Prize money to support cost of developing individual's innovation
- Business Opportunity: Collaborate and co-create with potential customers with opportunities to commercialize and access to go-to market channels
- Mentorship and community support: Support and guidance from domain experts and technology and marketing enablers
- Innovation process and support: Tap the dedicated support from engineering resources, experts from leading CPSE, R&D Laboratories and Academic Institutions. This includes mentorship, design thinking, innovation expertise and use of facilities.

Schemes / Programs Proposed to attract above Stakeholders

- Scheme – 1: Open call for Industrial challenges: Facilitating MSMEs and Industrial clusters in finding innovative solutions without investment on Capital and Specialized HR. Industries could use this platform to reach wider network of engineering resources (HR and R&D Facilities) – Proposed 4 calls per year.
- Scheme – 2: Design Innovation Clinic for Students: It is proposed to host design innovation clinics to promote students innovation. Students come with an idea can convert into concept model in 2 days (30hrs).
 - 2(A) Awards and Recognition: Best innovations will be recognized with certificates and cash prize
 - 2(B) Incubation: Potential innovations (5/6 in a year) will be incubated at CMTI (using ideation and makers lab. that we are creating under this project) to convert into POC prototypes
 - 2(C) Promoting entrepreneurship: Interested Innovators shall be mentored to develop engineered product and technology. In this period student on graduation will be mentored with paid internship of Rs. 15000/- pm for one year. It is required to commercialize the product /technology developed using the platform resources. ToT without premium but higher percentage royalty
- Scheme – 3: Handholding of Technology Licensee: Any individual who acquired the technology from CMTI or any other Indian R&D institutes will be mentored till they commercialize. Mentorship, Cost and value engineering, business consultancy, workspace for 1/2 years, access to research facilities on discounted rates shall be provided.
- Scheme – 4: Hosting of Award winning innovations for translational research: Award winning innovations under various schemes viz. Gandhian Award for Research Scholars, Student Project Assistance from MSME min. under design clinic scheme, Women Scientists Scheme of DST etc. will be hosted at CMTI under the mentorship by experts of the platform

- Scheme – 5: Hosting of Grand Challenges: Govt. schemes for technology development shall be hosted under this platform to reach to larger group and also to promote multi-institutional consortia.
- Scheme – 6: Promoting Grass-root Innovators: Individual innovators will assisted in engineering design, POC (Using mentors and individual student innovators), facilitating IPRs protection, Networking with financial institutes/ Venture Capitalists
- Scheme – 7: Rolling call for Industrial challenges: MSMEs, LSEs could look into obtaining solutions which require outsourced R&D activities aligning to their portfolio. Such challenges could be hosted as a challenge on the Drishti website anytime and proposals could be floated indicating the methodology to solve the challenge. This ensures quick, efficient and optimized delivery of solutions to such industries.

