PROPOSALS

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Academic Session: 2026–27

Contents

Proposal 1

Establishment of the Central Innovation Lab and Structured Funding Ecosystem

Area	Objectives
Initiative 1	Administrative structure and affiliation under Dean R&D with centralized leadership and group-level faculty governance.
Initiative 2	Faculty-led funding mechanism through SRIC, bridging institutional research grants with student-led execution.
Initiative 3	Centralized shared technical infrastructure consolidating fabrication, compute, electronics, and collaboration resources.
Initiative 4	Technical Oversight Council for coordination, accountability, and sustained engagement with the R&D administration.

1.1 Objective

The purpose of this proposal is to create a unified and institute-recognized innovation framework through the establishment of a Central Innovation Lab under the Dean of Research and Development. This body will serve as the institutional platform for integrating student technical groups, faculty-led research channels, structured funding support, and shared advanced infrastructure. Additionally, the facility will play a crucial role in enabling the smooth conduct of large-scale technical events such as Inter-IIT Tech Meet, by providing centralized access to resources and infrastructure, thereby ensuring efficient and high-quality execution.

- **Student Research Groups:** Technical societies and independent student-led teams currently operating in Institute.
- **Faculty-Led SRIC Funding:** Sponsored Research and Industrial Consultancy grants managed by faculty, now formally channelled to support student-led work.
- **PG/RS Expertise:** Post-Graduate students and Research Scholars integrated into student teams.

- **Shared Technical Infrastructure:** A centralized, open-access lab facility consolidating high-capability hardware and compute resources currently scattered across campus.

The goal is to institutionalize this framework so that student-led innovation at IIT Kharagpur is no longer dependent on ad-hoc sponsorships and fragmented resources, but is instead backed by a permanent, faculty-governed, R&D-integrated pipeline.

1.2 Overview and Current Scenario

IIT Kharagpur has a strong culture of student-led innovation, with many technical societies and independent groups contributing significantly to the institute's technical environment. However, despite the strength of individual efforts, the overall ecosystem remains structurally fragmented.

1.2.1 Fragmented Innovation Ecosystem

Student innovation activities currently function through multiple separate groups, each operating with its own limited processes, resources, and support structures. While many of these groups perform exceptionally well, the absence of a unified institutional framework leads to inefficiencies, duplication of effort, and limited coordination across the broader innovation landscape.

1.2.2 Weak Integration Across Student and Research Communities

There is a visible disconnect between undergraduate technical groups, postgraduate and research scholar communities, and faculty-led research initiatives. As a result, different segments of the institute's technical talent often work in parallel rather than in collaboration. This prevents student groups from fully benefiting from advanced research expertise, and it limits the scope for deeper academic and technical continuity in projects.

1.2.3 Funding Instability for Student Technical Work

Many student groups continue to rely heavily on uncertain year-to-year sponsorships or fragmented financial support. This creates instability in planning, execution, and long-term project development. In contrast, faculty members often manage larger institutional or sponsored research grants, but there is currently no structured mechanism to connect these funding streams with student technical initiatives in a systematic way.

1.2.4 Scattered and Underutilized Technical Infrastructure

Advanced equipment and infrastructure relevant to prototyping, fabrication, and computation exist across different parts of the institute, but access is often limited, decentralized, or inconsistent. This creates a situation where resources may be duplicated in some places while remaining inaccessible to many capable student innovators elsewhere. The lack of a shared system reduces efficiency and slows down technical progress.

1.2.5 Need for an Institutional Deep-Tech Framework

As IIT Kharagpur moves toward stronger deep-tech, research, and innovation goals under broader institutional ambitions, there is a need to transition from a collection of isolated student efforts to a more formalized and scalable innovation ecosystem. Such a framework must combine student initiative with faculty guidance, structured funding, and common infrastructure support.

1.3 Proposed Framework: The Central Innovation Lab

The Central Innovation Lab is proposed not merely as a physical space, but as a formal institutional administrative body governed by the R&D framework of the Institute. It operates under four interconnected pillars, each addressing a specific structural gap in the current ecosystem.

1.3.1 Administrative Structure and Affiliation under Dean R&D

The Central Innovation Lab will operate as a formalized entity under the direct purview of the Dean R&D, with the Gymkhana (TSG) serving as the student coordination interface.

1.3.1.0 Central Leadership

The Lab will be governed by a leadership team appointed by the Institute:

1.3.1.0 Affiliation Process

Any student research group, technical society, or independent student-led body wishing to operate within this ecosystem must apply for official affiliation. The process is designed to be inclusive but structured:

- **Application:** The group submits an affiliation request detailing its technical focus, team composition, and project roadmap.

Role	Responsibility
Central Professor-in-Charge (PIC)	Primary academic and administrative head of the Lab; reports directly to the Dean R&D and oversees the entire ecosystem.
Co-PICs (2)	Support the Central PIC in day-to-day governance, coordination with affiliated groups, and liaison with SRIC administration.

- **Routing:** The request is routed through the Central Lab PIC for technical assessment.
- **Approval:** Formal approval is granted by the Dean R&D, conferring institutional recognition and access to the Lab's funding and infrastructure ecosystem.

1.3.1.1 Group-Level Faculty Governance

Once affiliated, every individual student group or society must have a dedicated Faculty PIC (or multiple Faculty PICs). These faculty members serve as the direct academic and administrative mentors for that specific group. This is the critical link that connects student teams to the broader SRIC funding pipeline.

1.3.2 Faculty-Led Funding Mechanism through SRIC

This is the most transformative element of the proposal. Currently, student groups chase external sponsorships independently while faculty members manage large SRIC-funded research grants. This structure formally bridges that gap.

1.3.2.1 How the Funding Flow Works

- **Faculty PICs Secure Funding:** Faculty PICs mapped to specific student groups leverage SRIC (under Dean R&D) to secure institutional or external corporate funding for their own research ideas. This is existing faculty behavior—the only change is that their affiliated student group is now a formal execution arm.
- **Project Module Allocation:** The Faculty PIC formally allocates specific modules of their funded projects to their respective affiliated student research groups. Students work on real, funded research problems rather than self-defined academic exercises.
- **PG/RS Integration:** Post-Graduate students and Research Scholars who are interested in these specific projects can work alongside the student research groups with the permission of the Faculty PIC.

1.3.3 Centralized Shared Technical Infrastructure

To physically support this newly formed R&D body, a unified technical infrastructure facility will be established. This facility consolidates high-capability hardware and software resources that are currently scattered across campus, duplicated across groups, and often inaccessible to independent innovators.

1.3.3.1 Facility Scope

Category	Resources
Heavy Fabrication	CNC machines, laser cutters, welding stations, lathe and milling equipment
Additive Manufacturing	Industrial-grade 3D printers (FDM, SLA, SLS) for rapid prototyping
Compute Infrastructure	High-performance GPU clusters for AI/ML training, simulation, and CAD/CAE workloads
Electronics Lab	PCB fabrication, soldering stations, oscilloscopes, signal generators, embedded systems workbenches
Collaboration Space	Workstations, project storage, meeting and presentation areas

1.3.3.2 Access Model

The facility will operate on an open-access model managed through a centralized digital portal:

- **Affiliated Groups:** Societies and teams with formal affiliation can book equipment based on project relevance and technical feasibility.
- **Independent Innovators:** Individual students with valid project proposals can request access, ensuring the facility is not limited to established groups.
- **Safety Protocol:** High-end machinery will be operated strictly under trained technical supervision. Mandatory safety certification will be required before access to hazardous equipment.

1.3.3.3 Procurement and Scalability

The Central Lab PIC will facilitate the procurement of new equipment dynamically through R&D and Institute funds, based on the evolving demands of affiliated student

groups. This replaces the current model where each group individually petitions for equipment budgets, often duplicating purchases made by other groups on the same campus.

1.3.4 Technical Oversight Council

To ensure smooth coordination between affiliated student groups, Faculty PICs, TSG, and the R&D administration, a dedicated Technical Oversight Council will be established.

1.3.4.1 Composition

Member	Role
Central Lab PICs	Chair the council, provide institutional and administrative direction
Affiliated Group Representatives	One representative per affiliated research group or society
Student Leadership (VP, GSecs)	Represent TSG interests and coordinate student-facing logistics
Faculty Advisors	Provide domain expertise and ensure alignment with SRIC project goals

1.3.4.2 Responsibilities

- Monitor facility usage and ensure equitable access across affiliated groups.
- Track project milestones and ensure deliverables align with SRIC-funded timelines.
- Audit funding inflows and expenditures for transparency and compliance.
- Facilitate collaboration between UG and PG/RS members across project teams.
- Drive outreach to corporate partners and the Office of Alumni Affairs for sustained endowment funding.

1.3.4.3 Review Cadence

The council will hold regular reviews directly with the Dean R&D to assess technical performance, ensure SRIC compliance, identify infrastructure gaps, and plan procurement cycles. This creates a direct accountability loop between student output and institutional R&D priorities.

1.4 Expected Impact

1.4.1 Financial Sustainability

- Replaces the unstable, year-to-year corporate sponsorship model with structured, SRIC-backed institutional funding.
- Eliminates redundant equipment purchases across groups through centralized procurement.
- Opens a sustained funding pipeline through alumni endowments and corporate R&D partnerships managed at the institutional level.

1.4.2 Elevating Student Output

- Student projects shift from self-defined academic exercises to modules of real, funded research problems.
- Direct faculty mentorship raises the quality bar and connects student work to publishable, deployable outcomes.
- The institutional R&D standing makes student output legible to industry, graduate programs, and funding agencies.

1.4.3 Infrastructure Efficiency

- Consolidates scattered, duplicated equipment into a single, professionally managed facility.
- Democratizes access so that independent innovators and smaller groups are not shut out.
- Scales dynamically through centralized procurement aligned with actual demand.

1.5 Ground Work

To validate the need for a centralized innovation framework and ensure its practical applicability, we engaged with multiple student leaders and stakeholders across active technical societies at IIT Kharagpur. Their inputs highlight existing inefficiencies and directly inform the design of the proposed Central Innovation Lab.

- Following detailed discussions with the Associate Dean of Research and Development and the Associate Dean of Strategy and Analytics, a clear consensus emerged

on the need to establish a formal Central Innovation Lab under the purview of the Dean (R&D) to systematically institutionalize student-led innovations. Drawing inspiration from the Centre for Innovation (CFI) at IIT Madras, this initiative envisions a top-down administrative framework that formally recognizes and consolidates currently fragmented student societies into a unified, R&D-aligned ecosystem, thereby effectively bridging the gap between student-driven initiatives and faculty-led research efforts.

- Krushnashish Pradhan, representative of Aerial Robotics Kharagpur (ARK), emphasized the operational challenges arising from ad-hoc and fragmented resource allocation across student societies. He highlighted the absence of a centralized facility for shared infrastructure, which leads to redundant equipment procurement and dependency on inconsistent external sponsorships. His insights reinforce the need for a unified ecosystem that enables efficient resource pooling and structured funding mechanisms.

- Madhav Agarwal, Utkarsh Mishra, and Pratyush Chatterjee, Executive Heads of Kharagpur Data Analytics Group (KDAG), identified critical gaps in access to high-performance computational infrastructure required for AI/ML workloads. They also stressed the lack of sustained faculty mentorship in student-led projects. Their feedback supports the proposal's inclusion of centralized GPU clusters and the formal appointment of Faculty PICs to guide, mentor, and systematically assign research-oriented work.

- Sanjit Madisetti from ProDex and Mr.Aditya Gupta from the Kharagpur Robosoccer Students' Group emphasized the importance of involving domain experts, particularly postgraduate students and research scholars actively engaged in advanced technical and research work. Their participation can significantly enhance the technical depth of projects, ensure continuity across batches, and foster a stronger research-oriented environment within student initiatives.

- Building on these inputs, the proposed framework enables structured collaboration between undergraduate students, postgraduate students, and research scholars within organized student research groups. This integrated approach facilitates knowledge transfer, enhances project quality, and gradually transitions the ecosystem from fragmented, event-driven efforts to sustained, research-focused development, ultimately leading to stronger contributions in terms of high-quality research outputs and publications.

Proposal 2

Comprehensive Revamp of Career Development Mechanisms: Departmental T&P Cells, Custom ATS-Driven Shortlisting, and Modular CV Generation

Area	Objectives
Initiative 1	Departmental Training and Placement Cells: formalized department-backed outreach for core and research-oriented opportunities, feeding into the CDC pipeline.
Initiative 2	Custom ATS-Based Shortlisting: a weighted, multi-dimensional applicant tracking system replacing rigid CGPA-only filtering.
Initiative 3	Modular CV Generation: a verified profile bank enabling dynamic, role-specific CV assembly from independently verified entries.

2.1 Objective

The objective of this proposal is to strengthen and modernize the placement and internship ecosystem at IIT Kharagpur through three major interconnected reforms:

- **Departmental Training and Placement Cells:** Establishment of formalized Departmental Training and Placement (T&P) Cells to improve outreach for core and research-oriented opportunities, thus driving targeted outreach.
- **Custom ATS-Based Shortlisting:** Introduction of a custom ATS-based holistic shortlisting system to move beyond narrow CGPA-based filtering by replacing rigid CGPA-only filtering with a holistic, weighted Applicant Tracking System that evaluates candidates across multiple dimensions.

- **Modular CV Generation:** Implementation of a modular, point-level verified CV generation system to allow students to present their profiles in a more relevant, flexible, and role-specific manner. Serving as a transition from a static, three-CV model to a dynamic profile system that lets students tailor applications per role.

Together, these reforms aim to create a recruitment framework that is more inclusive, skill-driven, transparent, and aligned with current industry hiring practices, while preserving the central coordination and institutional credibility of the Career Development Centre (CDC).

2.2 Overview of Current Scenario

2.2.1 Central Role of the Career Development Centre

The Career Development Centre (CDC) currently serves as the primary body responsible for managing placements and internships at IIT Kharagpur. It has played an important role in handling large-scale recruitment efficiently, particularly for software, analytics, consulting, and other broad-based employment sectors. Its centralized structure has been effective in coordinating high-volume processes and maintaining institutional consistency.

2.2.2 Limited Depth in Core and Domain-Specific Outreach

Despite the strengths of the existing system, certain structural limitations have become increasingly visible as student aspirations diversify and the recruitment landscape continues to evolve. One of the key challenges is that core engineering, domain-specific, and niche research opportunities often do not receive sufficiently focused outreach.

Such opportunities usually require a deeper level of departmental involvement, including subject-specific understanding, faculty connections, alumni engagement, and targeted communication with specialized organizations. A fully centralized structure, while efficient in scale, may not always be able to provide this level of discipline-specific outreach across all departments with equal depth.

2.2.3 Overdependence on CGPA-Based Shortlisting

Another major concern is the continued reliance on CGPA as the dominant shortlisting criterion. In many cases, recruiters impose strict academic cutoffs not necessarily because they believe grades alone define merit, but because they lack an efficient and structured way to assess candidates more holistically.

As a result, students with strong practical experience, relevant internships, research publications, technical proficiency, leadership roles, and other meaningful achievements are often filtered out at a very early stage. This creates a mismatch between how students are evaluated and the full range of qualities that many roles actually require.

2.2.4 Limitations of the Current Static CV Model

In addition to shortlisting concerns, the present CV verification system also limits how effectively students can present their profiles. The restriction of only three pre-verified static CVs does not adequately support the diversity of opportunities for which students apply.

A student may need to emphasize different aspects of their profile depending on whether they are applying for a software role, a consulting position, a core engineering internship, or a research opportunity. The current model does not provide enough flexibility for such targeted representation, which can lead to suboptimal applications and weaker alignment between student profiles and role requirements.

2.2.5 Need for a More Modern and Responsive System

To ensure that IIT Kharagpur remains aligned with modern, merit-driven recruitment practices, there is a clear need to move toward a system that is more specialized, technology-enabled, and responsive to student needs. The placement and internship ecosystem should not only manage recruitment efficiently, but also support fairer evaluation, stronger domain-specific outreach, and more flexible profile representation.

2.3 Proposals

2.3.1 Establishment of Formalized Departmental Training & Placement (T&P) Cells

To boost core placements, research internships, and discipline-specific opportunities, we recommend the formal establishment of Departmental Training and Placement Cells across all departments, schools, and centers.

The purpose of these cells is not to replace the CDC, but to complement it by enabling department-backed outreach in areas where subject-specific understanding and networks are especially important. Departments often possess valuable connections through faculty collaborations, alumni in industry and academia, and an understanding of the specific aspirations of their students. Formalizing this into an institutional mechanism can significantly improve targeted outreach.

2.3.1.1 A. Structure and Composition of the Departmental T&P Cell

Every department, school, and center will mandate the creation of a unified T&P Cell. The composition will be:

This composition ensures that the cell is academically guided, institutionally accountable, and representative of all student groups.

Role	Details
Professor-in-Charge (PIC)	Chairperson of the Departmental T&P Cell
Additional Faculty (1–2)	Based on department size; provides advisory and network support
UG Departmental Representative	Represents undergraduate cohort interests and outreach
PG Departmental Representative	Represents postgraduate cohort interests and outreach
Research Scholar Representative	Represents doctoral and research scholar cohort
Nominated Students (2)	Selected across UG, PG, and RS cohorts based on proactive engagement

2.3.1.2 Operational Workflow

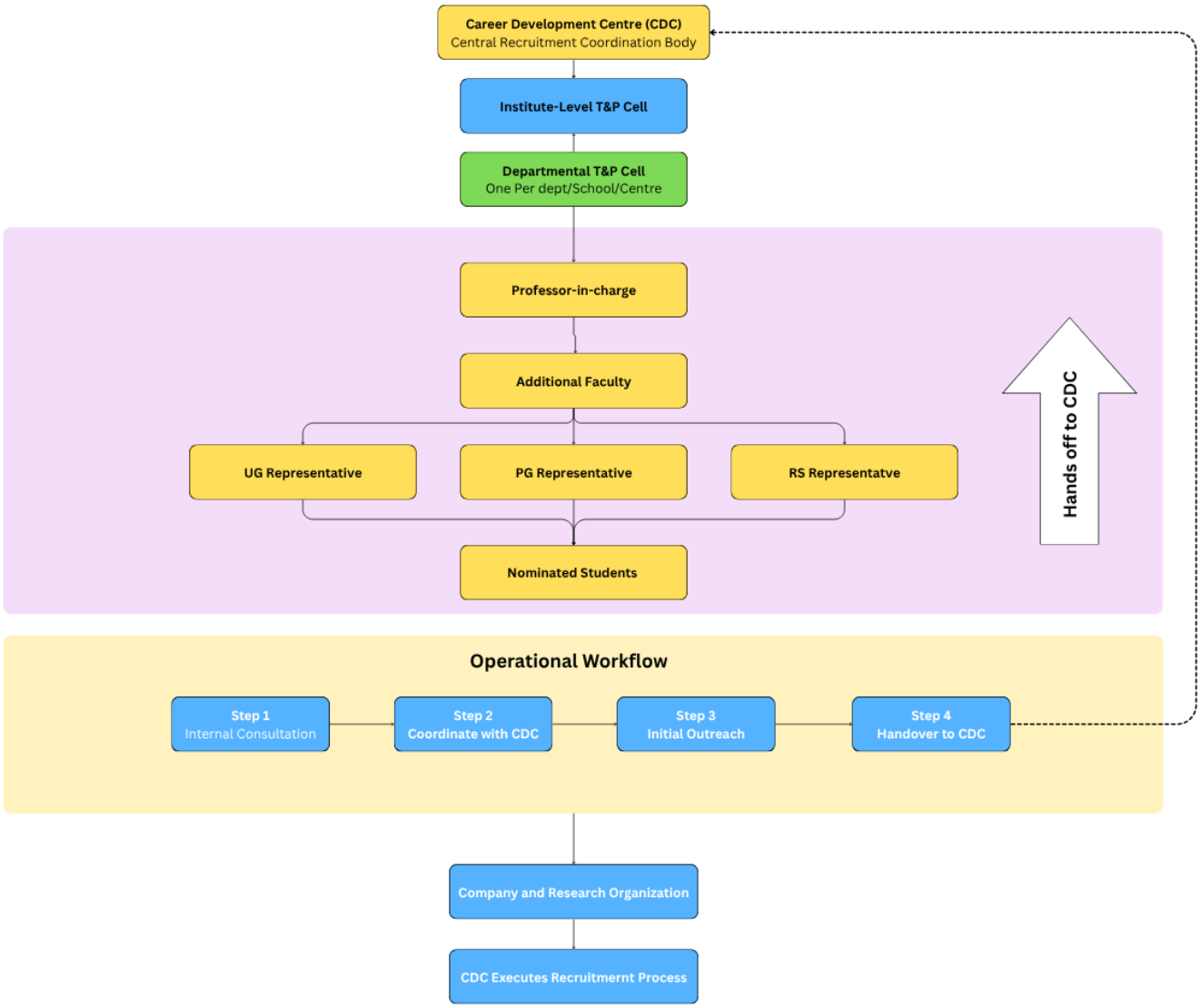
The Departmental T&P Cell will function as the first layer of department-specific placement support. It will operate through a clearly defined four-stage pipeline that feeds directly into the existing CDC infrastructure:

- **Internal Consultation:** The cell will conduct surveys, consultations, and discussions within the department to understand the career preferences of students. Based on this, it will prepare a focused list of relevant companies, research organizations, labs, PSUs, or sector-specific employers.

- **Coordination with CDC:** Before any outreach is undertaken, the prospective company list will be shared with the CDC to ensure that there is no overlap with existing outreach efforts, no duplication of communication, and no conflict with institutional corporate relations already being maintained centrally.

- **Initial Outreach:** Once cleared, the departmental cell will initiate first-level communication with the identified companies or organizations. This may involve reaching out to HR teams, technical managers, research leads, alumni, or faculty contacts, with the goal of exploring possible internship or placement engagement.

- **Maturation and Handover to CDC:** When a company expresses interest in participating in the recruitment process, the departmental cell will formally route the opportunity back to the CDC. The CDC will then take over all official execution-related processes, including JNF/INF handling, ERP integration, pre-placement talks, tests, interviews, scheduling, and final institutional coordination.



2.3.1.3 Institute-Level T&P Coordination Committee

To ensure smooth coordination across departments and maintain alignment with institutional placement policy, an Institute-Level T&P Coordination Committee should be established. Its composition will be as follows:

- **Chairperson:** One Vice-Chairperson of the CDC, either from the existing structure or specifically designated for departmental T&P coordination.(If required, the Chairperson of CDC can also chair this committee)
- **Convenor:** Vice President of Technology Students' Gymkhana.
- **Members:** All Departmental PICs for Training and Placement.

This body will act as the bridge between departmental efforts and CDC operations, ensuring consistency, transparency, and efficient communication across the system. The committee should meet thrice annually:

- At the start of the academic year.
- Once before the commencement of Phase 1 of the career development center hiring process.
- Once after the completion of Phase 1, but before the commencement of Phase 2. This meeting should be specifically scheduled to plan for Phase 2 and discuss learnings from Phase 1.

2.3.2 Transition to a Custom ATS-Based Holistic Shortlisting System

The second major reform proposed is the introduction of a custom Applicant Tracking System (ATS) specifically designed around the student profile format and recruitment structure of IIT Kharagpur. This reform addresses the most consequential bottleneck in the current system: shortlisting.

2.3.2.1 Rationale

At present, many recruiters rely on CGPA-based shortlisting because it is simple, familiar, and easy to apply at scale. However, this also means that several dimensions of a student's profile are not given sufficient weight during the shortlisting stage.

A student's merit cannot be captured solely through academic scores. Practical experience, technical skills, research exposure, positions of responsibility, competitions, project work, entrepreneurship, and internships often say as much about a candidate's potential as grades do. A better system should enable recruiters to evaluate profiles using a combination of factors rather than a single rigid metric.

2.3.2.2 Proposed Model

The custom ATS will parse student profiles in a structured format and allow companies to shortlist candidates using weighted parameters based on the nature of the role.

Each company assigns its own weights to these parameters. A consulting firm might weight PORs and communication heavily similarly an alternative company might prioritize relevant coursework and research. The system generates a composite score for each applicant, producing a ranked shortlist that reflects the company's actual hiring priorities.

Parameter	Description
CGPA / Academics	Cumulative GPA, relevant coursework grades
Research Output	Published papers, conference presentations, ongoing research projects
Past Internships	Prior industry experience, research internships, duration and impact
Positions of Responsibility	Student body roles, club leadership, event management, mentoring
Technical Skills	Programming languages, tools, certifications, domain-specific competencies
Competitions & Awards	Hackathons, olympiads, inter-IIT achievements, national/international awards
Projects	Academic and personal projects demonstrating applied skills

2.3.2.3 Implementation Strategy

- **Development and Pilot Phase:** An in-house ATS tailored to IIT Kharagpur's resume and data structure will be developed and introduced as a pilot with a selected group of recruiters who are open to more holistic shortlisting practices.
- **Feedback and Validation:** Feedback will be collected from both students and recruiters during the pilot phase. The aim will be to evaluate whether the system improves shortlisting quality, recruiter satisfaction, and fairness of candidate evaluation.
- **Technical Integration and Scaling:** Once validated, the ATS can be maintained with the support of the Institute ERP team and integrated into the broader recruitment platform for larger-scale use.
- **Corporate Advocacy:** This model can also be actively promoted to recruiters by existing student representatives and placement stakeholders. With supporting campus data, the Institute can demonstrate that holistic shortlisting leads to better candidate-role matching than relying solely on grade-based cutoffs.

This reform will position IIT Kharagpur as an institution that values not only academic excellence, but also practical capability, initiative, and depth of experience.

2.3.3 Transition to a Modular, Point-Level CV Verification and Dynamic Generation System

The third proposed reform addresses the limitations of the current three-static-CV model by shifting to a modular, point-level verification and dynamic CV generation framework.

2.3.3.1 Problem with the Current Model

At present, students are limited to a small number of pre-verified CVs. While this ensures administrative control and credibility, it also creates rigidity. Different employers look for different things, and students often need to emphasize different aspects of their profile depending on the role. A static CV structure does not adequately support this need.

As a result, students may either be forced to use a less relevant CV for a role or omit certain strengths that could have improved their chances.

2.3.3.2 Proposed System: Verified Profile Bank

Under the new model, each student maintains a Centralized Verified Profile Bank. Individual entries across all sections (internships, projects, competitions, positions of responsibility, skills, and awards) are independently verified and stored as discrete, reusable units.

2.3.3.3 How It Works

- **One-Time Verification:** Each entry (e.g., a specific internship, a research project, an award) is verified once by the CDC. Once approved, the content is locked and cannot be modified without re-verification.
- **Dynamic Assembly:** At the time of applying to a specific company, students can select relevant entries from their verified pool and assemble a role-specific CV. A student applying to a core manufacturing role and a data science role can present genuinely different profiles, each composed entirely of verified content.
- **Guardrails and Uniformity:** Predefined constraints ensure fairness: section-wise entry limits, standardized templates, and mandatory sections prevent gaming while preserving flexibility.

2.3.3.4 Administrative Benefits

- Eliminates redundant verification of the same entries across multiple CVs.
- Reduces administrative overhead for the CDC while maintaining the same rigor of verification.

- Scales naturally as the student body grows, since each entry is verified once regardless of how many CVs it appears in.

2.4 Expected Impact

2.4.1 Departmental T&P Cells

- Directly increase the volume and quality of core engineering and research roles through targeted, department-backed outreach.
- Leverage existing faculty and alumni networks that are currently untapped for placement purposes.
- Feed seamlessly into the CDC pipeline without fragmenting the recruitment process.

2.4.2 Custom ATS System

- Democratize shortlisting by enabling multidimensional evaluation of candidates.
- Ensure that students who have invested in research, leadership, and hands-on projects are no longer penalized by rigid academic cutoffs.
- Give companies a better tool for identifying candidates who actually match their hiring criteria.

2.4.3 Modular CV System

- Enable students to present role-specific profiles composed entirely of verified content.
- Improve the quality and relevance of applications, leading to better shortlist outcomes.
- Reduce administrative burden on the CDC through one-time, entry-level verification.

2.5 Ground Work

To assess the effectiveness of the current placement ecosystem and identify areas for improvement, we engaged with key student representatives and stakeholders associated with the Career Development Centre (CDC) at IIT Kharagpur. Their inputs highlight structural inefficiencies and inform the need for a more decentralized, flexible, and role-aligned placement framework.

- Mr. Shreyash Naikare, Student Placement Coordinator at the Career Development Centre, IIT Kharagpur, and a postgraduate student at the Centre for Ocean, River, Atmosphere and Land Sciences, emphasized the need to decentralize and empower Training and Placement Cells at the department, school, and center levels. He highlighted that such a structure would enable better alignment with domain-specific opportunities and significantly improve the number of core job offers.

- A Former Vice-Chair of the Career Development Centre highlighted the operational burden on Student Placement Coordinators, noting that they are often overextended and face challenges in bringing in high-quality core domain opportunities. He emphasized the importance of empowering more students at the departmental level to take on placement-related responsibilities, thereby improving outreach and effectiveness.

- The Former Vice-Chair also pointed out limitations in the current shortlisting process, particularly the heavy reliance on CGPA-based filtering. He suggested transitioning toward a more holistic, ATS-style evaluation system that considers project experience, skills, and role alignment. He further noted that he has worked on similar approaches in collaboration with research scholars and undergraduate students engaged in thesis projects.

- It was also observed that the current CV submission system lacks flexibility. At IIT Kharagpur, CVs are locked prior to the start of the recruitment process, limiting students' ability to tailor their applications for specific roles. In contrast, institutions such as IIT Dhanbad allow students to modify their CVs before applying to individual companies. This limitation often results in misalignment between submitted CVs and job requirements, reducing the effectiveness of applications.

Proposal 3

Enhancing Student Governance, Infrastructure, and Extracurricular Engagement

Area	Objectives
Initiative 1	Two dedicated student-led committees to continuously monitor and improve campus eateries, infrastructure, lighting, and campus transport.
Initiative 2	LEAP @ KGP: semester-long instructor-led courses in arts, tech, fitness, and soft skills. Official Gymkhana adoption of the Research Scholars' Premier League (RSPL).

3.1 Objective

The objective of this proposal is to strengthen student governance through a more decentralized and responsive framework that can address day-to-day campus infrastructure and amenity concerns in a sustained manner. At the same time, the proposal seeks to broaden the role of the Technology Students' Gymkhana so that it serves not only certain domain-related interests, but also the wider extracurricular, creative, technical, and recreational needs of the student community, including Research Scholars.

The larger aim is to create a campus environment in which student welfare, common amenities, and non-academic engagement are supported through structured committees, better feedback mechanisms, and a more inclusive Gymkhana ecosystem.

3.2 Overview of Current Scenario

The student community at IIT Kharagpur faces a wide range of everyday concerns that extend beyond academics and formal institutional processes. These include issues related to campus eateries, common amenities, lighting, accessibility of shared spaces, and the availability of structured extracurricular opportunities. While many such matters affect a large number of students, they often lack dedicated mechanisms for continuous monitoring and timely follow-up.

3.2.1 Limited Continuous Oversight of Student Amenities

Several student-facing issues, such as hygiene in food outlets, fair pricing, quality of common infrastructure, and the upkeep of shared facilities, require regular assessment rather than occasional intervention. In the absence of dedicated bodies focused on these concerns, many problems continue for long periods without structured feedback collection or sustained follow-up.

3.2.2 Infrastructural Gaps in Shared Campus Spaces

Common student spaces and campus utility areas often suffer from gaps in maintenance, accessibility, or planning. Poor lighting in frequently used gathering spaces and pathways, inconsistent upkeep of basic amenities, and the absence of reliable last-mile mobility options reduce convenience, safety, and the overall quality of campus life.

3.2.3 Narrow Scope of Open Gymkhana Participation

At present, the Technology Students' Gymkhana offers open participation in a structured way mainly through sports. While this model is supported by Physical Training Instructors and an established framework, students seeking guided engagement in areas such as music, fine arts, communication, wellness, or technical skills do not have an equally accessible and centralized institutional platform within the Gymkhana structure.

3.2.4 Limited Integration of Research Scholars

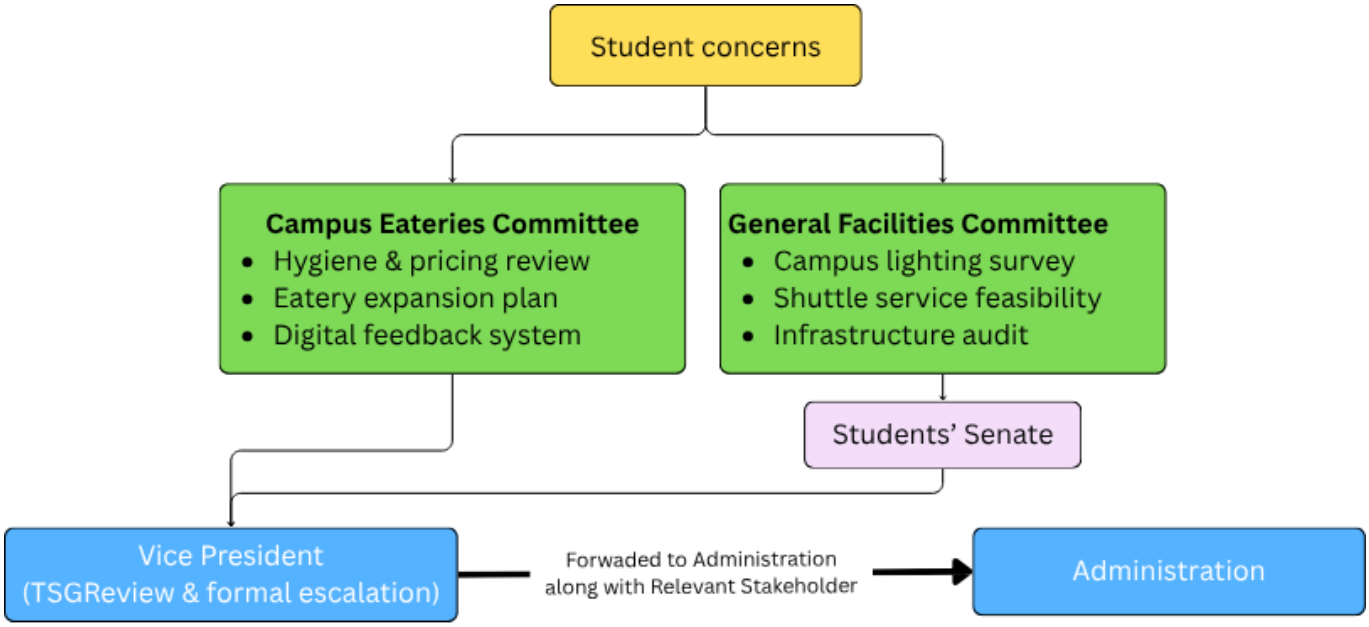
Research Scholars often remain relatively disconnected from the larger extracurricular ecosystem because of demanding schedules and the lack of structured avenues that specifically accommodate their needs. Although there are some independent initiatives, they do not receive the same level of institutional support and integration within the broader Gymkhana framework.

3.2.5 Need for a More Inclusive and Responsive Student Support Model

There is a clear need to strengthen student governance by introducing focused committees for infrastructure and amenities, while also expanding the mandate of the Gymkhana to cover a wider range of non-sporting interests. Such a model would improve student welfare, make campus life more inclusive, and ensure that extracurricular development is not limited to only one category of activity.

3.3 Proposal 1: Enhancing Student Governance and Infrastructure Upgradation

Dedicated student-led committees for continuous monitoring and actionable improvement. This sub-proposal introduces two dedicated student-led committees, each focused on a specific domain of campus life. By decentralising these responsibilities, we ensure focused monitoring, structured feedback collection, and a clear administrative pipeline that moves student concerns from the ground level to the administration efficiently and consistently.



3.3.1 Campus Eateries Committee

A dedicated committee should be formed to regularly review the condition and functioning of food outlets across campus. Its focus will be on hygiene standards, food quality, affordability, accessibility, and overall student satisfaction.

The committee will gather student feedback, engage with vendors when recurring issues arise, and prepare structured recommendations for corrective action or improvement. It will also help identify whether the current number and distribution of eateries are sufficient for student needs.

3.3.1.1 Expansion and Accessibility of Food Options

The committee will gather student opinion on whether additional food outlets are required and assess possible campus locations where new eateries could be introduced. Based on feasibility and demand, recommendations will be compiled and forwarded through the Vice President for consideration by the administration.

3.3.1.2 Monitoring, Pricing, and Accountability

The committee will conduct periodic review of hygiene conditions and pricing practices at existing eateries. Repeated issues related to overpricing, poor food standards, or non-compliance with expected norms will be formally documented and escalated for administrative action through the appropriate channel.

3.3.1.3 Student Feedback Integration

A structured digital feedback mechanism will be introduced, allowing the student body to report concerns or suggestions in real time. The committee will aggregate and analyse this data on a monthly basis to prioritise interventions.

3.3.2 General Student Facilities Committee

A second committee should be created to focus on shared infrastructure and everyday student amenities. This body will track the condition and accessibility of facilities such as washrooms, water points, seating spaces, reading areas, internet-related amenities, and other common-use infrastructure that affects student life on a daily basis.

The committee will identify gaps, prioritize recurring concerns, and prepare actionable proposals aimed at improving both convenience and the usability of student spaces across campus.

3.3.2.1 Campus Lighting Initiative

The committee will undertake a comprehensive, campus-wide lighting survey to systematically identify all areas, pathways, and social spaces that currently lack adequate illumination. This includes academic zones, residential connectors, and high-footfall recreational areas such as Adda, the TSG premises, Lakeside, and campus gardens. Based on survey findings, the committee will develop a prioritised, phased lighting plan, identifying areas requiring immediate intervention versus those suitable for medium-term upgradation. The plan will be submitted to the Vice President for review and onward referral to the estate maintenance and administration departments. Improved lighting in social spaces will directly enhance student safety, enable broader use of open spaces after dark, and foster a more inclusive environment for informal interaction across the student community.

3.3.2.2 Campus Shuttle Service

The committee will assess the feasibility of introducing a structured, campus-wide shuttle service to address the longstanding mobility problem faced by students. Currently, students relying on Ola or Rapido face surge pricing, frequent refusal at metered fares, and irregular availability, especially during peak hours and late nights. The existing

institute bus network, while valuable, operates on fixed and infrequent schedules that leave large gaps in daily connectivity.

The proposed shuttle service would operate on fixed, transparent, and affordable rates, accessible to all students regardless of financial background. It would run continuously within a defined time window, with a predictable frequency between trips, offering reliable point-to-point coverage across major campus nodes. The committee will map optimal routes, estimate operational costs, evaluate potential service models (institute-run vs. vendor-partnered), and prepare a detailed feasibility report with recommendations on pricing, route design, and operational timelines, to be submitted to the Vice President for engagement with the administration and relevant transport vendors.

3.3.3 Implementation Strategy: Proposal 1

- **Committee Formation:** Each committee will be composed of motivated, engaged students drawn from diverse halls and academic programmes, ensuring that feedback and decisions reflect the full cross-section of campus demographics. Clear roles and responsibilities will be defined at the outset.

- **Surveys, Audits & Digital Feedback:** Structured digital feedback portals will be launched for eatery assessments. Monthly physical audits will be conducted for lighting, water points, washrooms, and other shared infrastructure. Transport-related surveys will be conducted to establish baseline data on student mobility needs.

- **Recommendation & Approval Workflow:** Based on the findings from surveys and audits, the committee will formally document its recommendations. These proposals will then be presented and discussed in the Student Senate. Once supported by the Student Senate, the committee, along with the Vice President, will forward the proposals and take them forward for formal discussions with the concerned Dean or Director.

- **Administrative Liaison & Execution:** The Vice President will serve as the formal bridge between student committees and the campus administration, estate maintenance department, and external vendors, ensuring that the approved proposals are formally actioned within defined timelines.

3.4 Proposal 2: Expanding Gymkhana's Scope to Cater to Broader Student Needs

LEAP @ KGP programme and official adoption of the Research Scholars' Premier League. This sub-proposal aims to transform the Technology Students' Gymkhana from a predominantly sports-centric institution into a comprehensive activity and development centre for all students. It does so through two distinct but complementary initiatives: a structured, instructor-led enrichment programme for undergraduates and postgraduates, and the formal institutional adoption of an existing Research Scholar initiative that currently operates without Gymkhana support.

3.4.1 Introduction of LEAP @ KGP (Leisure Enrichment and Activity Program)

A major gap in the current Gymkhana model is that students who want guided participation in non-sporting activities do not have an equivalent institutional framework. LEAP @ KGP is proposed as a structured initiative that introduces semester-based learning and engagement opportunities in creative, practical, wellness, and communication-oriented areas.

The idea is to create an ecosystem similar in spirit to sports training support, but designed for a much wider range of student interests.

3.4.1.1 Programme Domains & Courses

- **Arts & Culture:** Fine arts (single-shade painting, sketching, clay modelling); Music (Guitar, Flute, Violin, Carnatic and Classical vocals, Mridangam); Dance (classical forms including Bharatanatyam and Kathak, alongside contemporary styles). These courses will provide guided creative expression to students who may otherwise have no formal access to instruction post-schooling.

- **Technical & Practical Skills:** Web and mobile application development, introductory coding, and UI/UX design. These courses allow students to build applied, market-relevant tech capabilities alongside—and independent of—their core academic curriculum, particularly valuable for students from non-CS disciplines.

- **Fitness & Wellness:** Martial arts (Hapkido, Taekwondo) for self-discipline and self-defence. These courses complement the existing sports infrastructure and extend structured fitness engagement to students who may not participate in competitive sports.

- **Communication & Soft Skills:** Effective English communication, public speaking, language courses, and personality development. These courses address a frequently cited gap in student preparedness for placements, higher studies, and professional environments—building confidence and articulation through structured, instructor-led practice.

3.4.1.2 Key Features

- **Professional Instruction:** Mirroring the sports model, LEAP @ KGP will hire qualified, part-time professional instructors for each discipline, ensuring that students receive structured, high-quality guidance rather than peer-led informal sessions.
- **Semester-Long Structure:** Courses will be structured across a full semester with defined learning outcomes, regular sessions, and a clear progression, ensuring depth of engagement rather than one-off workshops.
- **Operational Management:** The functioning and execution of these courses will be handled by the Rector Nominees of the Social and Cultural Committee and the Technology Committee, along with the General Secretaries of their respective committees. Responsibilities will be distributed based on the specific genre of the activity being conducted.

3.4.2 Gymkhana Support for the Research Scholars' Premier League (RSPL)

3.4.2.1 Context & Rationale

Research Scholars at IIT Kharagpur navigate one of the most demanding academic environments on campus. Their schedules, shaped by research deadlines, lab commitments, and publication pressures, leave little structured space for recreation or community engagement. The Research Scholars' Council already organises the Research Scholars' Premier League annually—a multi-sport tournament designed to provide scholars with a meaningful outlet for physical activity and community building. However, this initiative currently runs without official Gymkhana recognition, funding, or infrastructure support, limiting its scale and sustainability.

Formalising TSG's adoption of the RSPL sends a clear institutional signal: that Research Scholars are a valued part of the Gymkhana ecosystem.

3.4.2.2 Institutional Support and Funding

The Gymkhana should provide formal backing, budgetary support, and execution assistance for the RSPL so that it can be conducted at a larger and more organized

scale.

3.4.2.3 Access to Infrastructure

Research Scholars participating in the RSPL should be given access to relevant sporting facilities, grounds, and equipment required for the event. This would help integrate them more meaningfully into the broader Gymkhana system rather than leaving their activities isolated from mainstream student recreation.

3.4.2.4 Broader Significance

Supporting RSPL in this way would not merely fund a tournament; it would represent an effort to include Research Scholars more fully in campus life and recognize their need for structured recreation alongside academic and research responsibilities.

3.4.3 Implementation Strategy: Proposal 2

- **Instructor Recruitment:** Open applications will be issued for qualified, part-time professional instructors across all LEAP @ KGP domains: music, dance, martial arts, technical development, and communication skills. A standard selection process will include portfolio review and a short demonstration session.

- **LEAP Registration Portal:** A dedicated, centralised portal will be launched at the start of each semester for course registration, domain selection, and fee payment. The portal will also surface course schedules, instructor profiles, and session venues.

- **RSPL Formalisation and Budgetary Integration:** The formalisation of the Research Scholars' Premier League (RSPL) will be structured as a proposal presented to the Executive Council and supported by student representatives. The arrangements for the upcoming year—including ground reservations, equipment sharing, and timelines—will be structurally secured by officially including the RSPL component into the year-long annual budget. This inclusion will take place concurrently while the overall annual budget is being deliberated and finalized at the Technology Students' Gymkhana (TSG).

- **Feedback & Iteration:** End-of-semester feedback will be collected from LEAP @ KGP participants to continuously improve course quality, instructor effectiveness, and programme relevance. RSPL participation data will be tracked to measure scholar engagement over time.

3.4.4 Annual Budgetary Framework for PG and RS Initiatives

To ensure sustained inclusion and financial backing, a formal structural mechanism will be established for research scholars and postgraduate students.

At the end of the Spring Semester (the close of the academic year), Research Scholar Representatives and the Research Scholar Coordinator, alongside Postgraduate Representatives and the Postgraduate Coordinators of the Technology Students' Gymkhana (TSG), will be empowered to formally submit proposals for the upcoming year's events and initiatives.

These proposals will be reviewed during the Executive Council meeting. Once approved, their associated budgetary requirements will be systematically integrated into the TSG's annual budget allocation process. This guarantees that PG and RS activities are formally recognized and proactively funded when the new budget is being decided, establishing a sustainable ecosystem for their extracurricular engagement.

3.5 Expected Impact

Outcome Area	Expected Impact
Enhanced Campus Life	Dedicated eatery oversight will raise hygiene standards and pricing fairness. The lighting initiative will extend safe and usable outdoor spaces well into the evening. A structured shuttle service will provide students with reliable, affordable campus mobility—reducing dependence on exploitative private services and an under-resourced bus network.
Administrative Efficiency	A clear, tiered governance channel—from student committees to the VP, and onwards to the administration—will systematically reduce the time taken to identify, escalate, and resolve campus infrastructure issues. Proposals will arrive at the administration level pre-vetted, prioritised, and evidence-backed.

Outcome Area	Expected Impact
Holistic Student Development	LEAP @ KGP will democratise access to structured, instructor-led development in arts, technology, fitness, and communication—ensuring that students who are not athletically inclined have an equally robust platform for personal growth, stress relief, and skill building.
Research Scholar Integration	Official Gymkhana adoption of the RSPL will formally integrate Research Scholars into the Gymkhana ecosystem. They will gain access to funding, infrastructure, and institutional visibility—bridging the recreational and community gap between UG and PG/RS demographics.
Inclusive Campus Identity	Collectively, these proposals signal a shift in how student governance and student development are understood at IIT KGP—moving towards a model that is proactive, inclusive, and responsive to the full diversity of student needs rather than reacting to complaints in isolation.

3.6 Ground Work

- Tanush B Agarwal and Dnyaneshwari Ghare, current General Secretaries (Students' Welfare) and active members of key institutional bodies such as the Crisis Management Team and Task Force for Hygiene & Food Monitoring, emphasized the need to empower a larger base of students to take up structured responsibilities in improving campus facilities and infrastructure. They highlighted that expanding student involvement would significantly enhance the effectiveness of student representation in addressing the diverse and large-scale needs of the student community.

- Mr. Akshay Singhal, Research Scholar Coordinator, Technology Students' Gymkhana, highlighted the lack of institutional funding support for research scholar-led initiatives such as the Research Scholar Premier League, which is currently sustained through participant registration fees. He also pointed out that research scholars often have limited access to, and engagement with, facilities and societies funded through the Gymkhana budget. His inputs indicate the need for a more inclusive framework that ensures equitable access to resources and formal support for research scholar-driven activities.

- Drawing insights from structured student development initiatives such as the Leisure Time Activity Program (L-TAP) at IIT Madras, there is a clear opportunity to institutionalize skill-based and interest-driven activities within the campus ecosystem. L-TAP provides a structured platform for students to explore diverse skills—ranging from technical domains to creative and personal development areas—under guided supervision, thereby enhancing confidence, independence, and overall personality development. This highlights the importance of creating similarly organized and accessible platforms that go beyond conventional academic and extracurricular structures to support holistic student growth.

Proposal 4

Academic Empowerment Initiatives

Area	Objectives
Initiative 1	Self-Study & NPTEL/SWAYAM Waiver Policy: a flexible credit-recovery mechanism to eliminate graduation bottlenecks, timetable clashes, and ease the burden on semester-away students.
Initiative 2	Young Researcher Fellowship (YRF): a fully funded, credit-integrated, industry-partnered undergraduate research programme to institutionalise early-stage R&D at IIT KGP.
Initiative 3	Professional Ethics and Social Responsibility Elective: a credit-bearing course designed to formally recognize student responsibilities while cultivating ethical leadership, accountability, and social responsibility across campus.

4.1 Objective

The objective of the Academic Empowerment Initiatives is to make the undergraduate academic framework at IIT Kharagpur more flexible, student-responsive, and innovation-oriented by addressing long-standing structural rigidities in degree progression, research participation, and institutional responsibility.

This proposal seeks to achieve four broad goals.

4.1.1 Ensuring Smoother Degree Progression

The first goal is to reduce avoidable delays in graduation by creating more flexible pathways for students facing minor credit deficits due to timetable constraints, course unavailability, or semester-away requirements. Students should not lose an entire semester or year because of rigid administrative constraints when the actual academic shortfall is small and recoverable.

4.1.2 Reducing Academic Stress and Structural Overload

The second goal is to ease academic pressure on students dealing with timetable clashes or semester-away credit displacement. The academic system should provide reasonable

recovery mechanisms rather than compounding student stress through overloads and credit rigidity.

4.1.3 Creating a Structured Research Pathway

The third goal is to institutionalize early-stage undergraduate research as a formal academic track. Research should not remain an informal extracurricular pursuit pursued at personal cost and academic burnout. Instead, it should be integrated into the academic system through credits, funding, mentorship, and clearly defined outcomes.

4.1.4 Building Ethical, Responsible, and Institution-Oriented Students

The fourth goal is to strengthen the culture of ethical responsibility, leadership accountability, and social awareness among students. IIT Kharagpur should not only strive for academic and technical eminence, but also actively inculcate professional ethics and social responsibility within its student community. Institutional excellence must extend beyond technical competence to include integrity, responsibility, and community-oriented leadership.

4.2 Current Scenario and Academic Pain Points

While the present academic framework ensures structure and rigor, it also creates several recurring bottlenecks that make degree progression unnecessarily difficult for many students, limit the institute's ability to support early undergraduate research in a systematic manner, and fail to formally recognize meaningful student responsibilities as structured learning.

4.2.1 Inflexibility in Offering Small-Cohort Courses

At present, course offerings remain dependent on a minimum number of enrolled students. This creates a major problem when only a very small number of students need to complete an important course. In such cases, the course may not be offered at all, even though the consequences for those students are severe. A minor academic deficit therefore turns into a long delay in graduation simply because the system is not flexible enough to accommodate small cohorts.

4.2.2 Delayed Graduation Due to Limited Credit-Recovery Options

Final-year students who miss the opportunity to complete a course on time often have no practical way to recover the deficit within the same academic cycle. As a result, even a small shortfall may lead to forced extension of the degree timeline. This affects not only academic progression but also job offers, higher education admissions, and the student's broader career trajectory.

4.2.3 Timetable Clashes and Scheduling Rigidity

Students attempting to complete courses from different years or semesters frequently encounter direct clashes with their ongoing semester courses. This means that even when a student is willing to recover academically, the timetable itself becomes an obstacle. Instead of enabling recovery, the system often forces students to postpone required courses further, prolonging the deficit.

4.2.4 Excessive Academic Burden on Semester-Away Students

Students who go for internship or academic-semester-away programs often face the burden of compensating for missed credits by overloading their remaining semesters. This leads to intensified academic pressure, frequent timetable conflicts, and reduced flexibility at precisely the time when students are also trying to make meaningful professional or research use of off-campus opportunities.

4.2.5 Research Treated as an Extra Burden Instead of Academic Work

Students who engage in serious research during their undergraduate years often do so without academic credit recognition. As a result, research becomes an additional burden layered on top of regular coursework rather than a formally recognized substitute for part of it. This discourages deep engagement and often leads to burnout among students who are otherwise capable of making strong research contributions.

4.2.6 Fragmented Support for Undergraduate Research and Industry Collaboration

Support for early undergraduate research is currently scattered and inconsistent. Funding is often limited, project participation depends heavily on informal access, and there is no centralized institute-level mechanism that systematically connects student research with

sustained mentorship, academic credit, and real industry or R&D problem statements. This limits both scale and impact.

4.2.7 Lack of Academic Recognition for Meaningful Student Responsibilities

A significant number of students take up demanding responsibilities across halls, societies, Gymkhana bodies, CDC teams, placement processes, preparatory programmes, and other institutional structures. These roles require decision-making, accountability, coordination, and consistent effort over long periods. However, despite their institutional value and developmental depth, there is currently no formal academic mechanism that recognizes these responsibilities as structured learning experiences.

4.2.8 Limited Formal Training in Ethics, Accountability, and Social Responsibility

While students often learn leadership and responsibility informally through experience, there is no dedicated academic space where they can reflect on ethical decision-making, professional conduct, or community-oriented leadership. As a result, important dimensions of student development remain under-supported, even though they are central to producing responsible professionals and institution-minded graduates.

4.3 Proposal 1: Implementation of Self-Study and SWAYAM (NPTEL) Courses

The first reform proposed under Academic Empowerment is the introduction of a more flexible mechanism through which eligible students can complete specific academic requirements outside the rigid constraints of the standard timetable. This will take the form of a structured Self-Study and SWAYAM/NPTEL waiver policy.

The purpose of this proposal is not to dilute academic standards, but to create an academically sound recovery pathway for students whose graduation or academic stability is being hindered by systemic rigidity rather than lack of effort.

4.3.1 Rationale for the Reform

The present system is not well-suited to cases where only a few students need to complete a course, where regular course scheduling creates unavoidable clashes, or where asynchronous learning could solve the problem without disrupting the larger academic framework. A self-study and approved online-course mechanism would offer flexibility

without weakening academic accountability.

This reform is particularly relevant for final-semester students with minor credit deficits, students under credit constraints due to semester-away programs, and students facing timetable clashes that prevent them from completing required courses on schedule.

4.3.2 Proposed Rules & Regulatory Framework

4.3.2.1 Self-Study Provisions

- **Final Semester Credit Deficit:** A student may be granted a self-study course (maximum 5 credits) in their final semester if they are short by a maximum of five earned credits required for graduation, provided the course is not running as a regular offering in that semester. Dual-Degree students may avail of this in their final semester, restricted to UG courses. This provision may be used only once during the programme.

- **Timetable Clash Resolution:** A student may request a self-study course (maximum 5 credits), at most once during the programme, when the required course is not being offered as a regular section in that semester or creates an unavoidable timetable clash with a current-semester course. This provision directly addresses scheduling rigidity by eliminating the dependency on slot availability.

- **Approval Hierarchy:** All self-study applications require a recommendation from the Course Coordinator and the Head of Department (HoD), with final sanction from the Dean of Undergraduate Studies. This ensures academic oversight is maintained while removing the bottleneck of central timetabling.

- **Course Conduct:** Formal lectures are not mandated for self-study courses. However, any integral laboratory, design, or computation component must be completed under the supervision of the Course Coordinator.

4.3.2.2 NPTEL / SWAYAM Waiver Provisions

- **Eligibility & Scope:** UG students may complete up to two equivalent courses via SWAYAM (NPTEL) during their programme. Upon successful certification, the corresponding KGP credits will be waived. This provides a safe, asynchronous mechanism for credit completion that does not conflict with current semester ERP limits.

- **Pre-Approval of Equivalency:** The Departmental UG Committee (DUGC) will maintain and publish a pre-approved equivalency map of SWAYAM/NPTEL

courses to KGP core and elective subjects before every semester registration cycle, eliminating ad-hoc approval delays.

- **Attached Lab Components:** Where a KGP course has an associated laboratory component, the lab must be completed separately on campus under faculty supervision, even when the theory component is fulfilled via NPTEL.

4.3.3 Implementation Strategy

A successful implementation of this reform requires both administrative modernization and clearly defined academic procedures.

- **ERP Integration and Clash Bypass Mechanism:** The ERP should be updated to recognize self-study and approved equivalent-course registration as a distinct academic category. This would allow such registrations to bypass ordinary timetable clash logic where appropriate, since these courses are not intended to follow the same slot-based delivery structure as regular classroom offerings.

- **Pre-Approved Equivalency Mapping:** Departments should publish a structured list of approved SWAYAM/NPTEL equivalents before each semester. This will avoid uncertainty, reduce ad hoc approvals, and create predictability for students planning credit completion or replacement.

- **Flexible Decentralized Assessment:** Since these cases will generally involve very small numbers of students, evaluation can be handled directly by the course instructor or department rather than relying entirely on the central exam structure. This creates a practical solution to scheduling and logistics while preserving faculty-led quality control.

- **Alternative but Rigorous Evaluation Formats:** Assessment may include viva-based evaluation, open-book or design-oriented assignments, computational submissions, or project-based review depending on the nature of the course. For approved NPTEL routes, the external proctored exam can serve as the standardized assessment component.

4.3.4 Expected Impact: Self-Study and NPTEL Reform

Impact Area	Description
On-Time Graduation	Eliminates arbitrary 6–12 month degree extensions for students facing minor credit deficits (1–5 credits). Final-year students will no longer lose pre-placement job offers or graduate school admissions due to administratively delayed degree awarding.
System De-congestion	Shifts small-cohort course scenarios to self-study and NPTEL pathways, drastically reducing the administrative load on the Central Timetable Committee and the Examination Section, while ending the scheduling deadlock caused by the "minimum-5-students" rule.
SAIP/SAPP Frictionlessness	Students on semester-away internships will no longer face punishing credit overloads in their remaining semesters. Replacement credits can be earned remotely via SWAYAM, actively encouraging higher participation in global R&D and corporate internship programmes.
Academic Flexibility	Students facing timetable clashes between required courses across different years or semesters will have an alternative pathway to complete their requirements without being forced into semester extensions or schedule compromises.

4.4 Proposal 2: Institutionalizing the Young Researcher Fellowship (YRF)

The second major reform under Academic Empowerment is the creation of the Kharagpur Young Researcher Fellowship (YRF) as a formal, credit-bearing, funded undergraduate research track.

The idea is to convert serious undergraduate research from an informal and often exhausting side pursuit into a structured academic pathway supported by faculty mentorship, institutional recognition, and external engagement.

4.4.1 Rationale for the Fellowship

At present, undergraduate students who want to pursue meaningful research often have to do so without formal academic space being created for it. This forces them to balance research work alongside full semester course loads, which frequently leads to burnout or discontinuity. At the same time, the institute loses the opportunity to channel talented students into a sustained research pipeline early in their academic journey.

The YRF is meant to address this by treating research as legitimate academic work rather than an extracurricular addition.

4.4.2 Core Fellowship Model

The fellowship would operate as a selective academic track for students with demonstrated research potential and academic consistency.

- **Credit-Integrated Research Track:** Selected students would be allowed to undertake a research project in place of a defined portion of standard coursework over two semesters. This creates a formal academic swap in which research time is institutionally recognized and protected, rather than being informally squeezed into an already overloaded semester.
- **Funded Research Participation:** Projects would be backed through institutional funding, corporate partnerships, alumni support, or research grants, allowing fellows to receive structured financial support. This is important both for research continuity and for signaling that undergraduate research is being treated seriously.
- **Dual Mentorship Structure:** Each fellow would work under a faculty mentor for academic and technical supervision, while also benefiting from an external or industry-linked mentor wherever the project involves practical or real-world problem framing. This creates a bridge between academic research depth and applied relevance.
- **Outcome-Oriented Research Deliverables:** The fellowship would be built around serious deliverables rather than symbolic participation. Students would be expected to progress through literature review, project scoping, periodic review, and a final research output of publishable or protectable quality.

4.4.3 Eligibility and Academic Safeguards

The YRF should remain a rigorous and merit-based program, open only to students who demonstrate both academic preparedness and seriousness of intent.

- **Eligibility Conditions:** Students entering the fellowship should satisfy minimum academic performance requirements, have no unresolved academic liabilities, and maintain a clean disciplinary record. This ensures that the fellowship is reserved for students who are capable of handling a structured research track responsibly.

- **Selection Process:** Selection should move beyond pure CGPA-based filtering and instead include a combination of academic readiness, motivation, project alignment, and technical interview performance. A process involving an SoP, project scope evaluation, and interaction with mentors would help identify genuinely suitable candidates.

- **Academic Contingency and Exit Framework:** A clear fallback mechanism should be built in so that if a student withdraws or is unable to perform adequately, they can return to the standard curriculum without long-term academic disruption. This is important to preserve flexibility and protect students from the risks of overcommitment.

4.4.4 Implementation Plan

For the fellowship to succeed, it must be established as an institutional academic program rather than as a loosely organized student initiative.

- **Creation of a Dedicated YRF Secretariat:** A formal administrative unit should be established under the joint oversight of the relevant academic and R&D authorities. This unit would be responsible for program design, application management, funding coordination, milestone tracking, and academic record integration.

- **Funding Architecture:** The fellowship should be supported through a pooled model drawing from CSR channels, alumni contributions, institute R&D support, and external research partners. This would ensure that the program is financially sustainable and not dependent on one-time arrangements.

- **Industry and Research Project Curation:** Relevant problem statements and project opportunities should be curated in advance through coordination with faculty and external partners. This will ensure that fellowship projects maintain both academic seriousness and practical relevance.

- **ERP Integration of the Credit Swap:** The academic ERP should be updated to recognize the research project as a credit-bearing substitute for the designated coursework components. This is essential to ensure that students in the fellowship do not face technical problems in academic registration or degree auditing.

- **Milestone-Based Execution and Final Evaluation:** The fellowship should operate through periodic reviews, structured mentor engagement, and a final academic evaluation process. This will ensure accountability and maintain the prestige and seriousness of the track.

4.4.5 Expected Impact: Young Researcher Fellowship

Impact Area	Description
Global Rankings	By mandating publications and patents as final deliverables, an annual cohort of 30–40 YRF Fellows will directly strengthen the Institute's research output and citation visibility, creating a sustained positive effect on key national and global academic reputation metrics.
Reduction in Research Burnout	The formal credit swap replaces part of a standard coursework load with protected research time. Students are no longer expected to sustain intensive lab work in parallel with a full academic load, significantly reducing avoidable burnout.
Deep-Tech Entrepreneurship Pipeline	The YRF bridges the gap between laboratory research and commercial viability. Industry-vetted, funded projects are structurally better positioned to evolve into startups, innovation cells, or longer-term R&D collaborations.
Higher Education and R&D Placements	Structured, funded, and mentored undergraduate research becomes a strong differentiator for admissions to global research programmes and premium R&D roles. Students gain both depth and legitimacy in their research profiles.
Cultural Paradigm Shift	The YRF gradually reorients campus culture away from an exclusive focus on placement outcomes alone toward a broader ethos of deep-tech innovation, inquiry, and scientific excellence.

4.5 Proposal 3: Introduction of an Elective Course on Professional Ethics and Social Responsibility

The third reform under Academic Empowerment is the introduction of a credit-bearing elective course on Professional Ethics and Social Responsibility. This course is intended to formally recognize meaningful student responsibilities within IIT Kharagpur while simultaneously building a stronger culture of ethical leadership, accountability, service, and social responsibility across campus.

4.5.1 Core Idea

This elective is designed to formally recognize and academically support students who take up meaningful responsibilities within IIT Kharagpur, including roles in societies, halls, Gymkhana, CDC, placement teams, preparatory programmes, and other student-led institutional bodies.

The course is built on the idea that student leadership and responsibility should not be treated merely as administrative or extracurricular commitments, but as structured learning experiences that contribute to professional development, ethical maturity, and institutional growth.

At the same time, the course aims to build a stronger culture of ethical leadership, accountability, service, and social responsibility across campus.

4.5.2 Rationale and Need for the Course

The introduction of this course addresses two critical institutional needs.

First, a significant number of students at IIT Kharagpur take on high-responsibility roles that require decision-making, coordination, conflict resolution, and long-term commitment. These roles often demand time, effort, and accountability comparable to academic work. However, despite their depth and impact, such contributions are not formally recognized within the academic structure. This creates a disconnect between institutional contribution and academic reward.

Second, student participation and seriousness toward such responsibilities can be significantly enhanced when professional commitments are aligned with academic incentives. When responsibilities are supported through academic credit, students are more likely to approach them with consistency, ownership, and long-term commitment, leading to higher quality outcomes across institutional bodies.

Third, IIT Kharagpur, as a leading academic institution, must go beyond technical training and actively inculcate professional ethics and social responsibility within its students. The institute should aim to produce graduates who are not only academically competent but also capable of ethical decision-making, responsible leadership, and meaningful societal contribution.

Currently, there is no formal academic mechanism that connects student responsibilities with structured learning, ethical reflection, and institutional accountability. This course bridges that gap by integrating real-world responsibility with guided academic evaluation.

4.5.3 Course Structure: 12-Week Module Plan

Module	Content
Module 1	Introduction to professional ethics, campus responsibility, institutional roles, and the purpose of the course. Students verify and justify their positions.
Module 2	Leadership, duty, and social responsibility: understanding leadership as responsibility, service, and accountability rather than authority.
Module 3	Role Presentation I: students present their current roles, expected outcomes, and intended contributions.
Module 4	Ethics in decision-making and team management, including fairness, transparency, and practical ethical dilemmas.
Module 5	Social responsibility in the IIT context: understanding community impact, campus culture, and peer responsibility.
Module 6	Mid-tenure review presentation with structured feedback from faculty.
Module 7	Communication, coordination, and conflict resolution in institutional and team settings.
Module 8	Workshop on event planning and institutional execution, including delegation, planning, and risk management.

Module	Content
Module 9	Ethics in institutional representation: professional conduct while representing IIT Kharagpur in official capacities.
Module 10	Role Presentation II: students present updated progress, learning, and measurable outcomes.
Module 11	Reflective leadership and personal growth through self-evaluation of leadership style, ethical decisions, and development.
Module 12	Final presentation and submission of a comprehensive tenure report forming the basis of final evaluation.

4.5.4 Academic Design and Evaluation Philosophy

The course will follow a practice-integrated evaluation model in which academic credit is awarded on the basis of structured institutional contribution and guided reflection.

- **Verification of Role and Responsibilities:** Each student's position and scope of responsibility must be formally verified before enrollment.
- **Periodic Presentations and Reviews:** Students will undergo scheduled review presentations to demonstrate continuity, seriousness, and accountability.
- **Demonstrated Impact and Outcomes:** Evaluation will consider measurable outcomes, deliverables, and institutional contribution achieved during the tenure.
- **Ethical Reflection and Learning:** Students will be assessed not only on execution, but also on how they reflect on dilemmas, decision-making, responsibility, and service.
- **Final Comprehensive Tenure Report:** A final written report and presentation will synthesize the student's role, outcomes, leadership growth, and ethical learning.

This ensures that the course maintains academic rigor while recognizing real institutional contributions.

4.5.5 Expected Impact: Professional Ethics and Social Responsibility Elective

Impact Area	Description
Increased Student Participation	More students will actively take up institutional responsibilities when these are aligned with academic benefits and formal recognition.
Improved Quality of Student Governance	Structured evaluation, reflection, and accountability will improve the functioning of societies, halls, Gymkhana bodies, placement teams, and other institutional student structures.
Ethical and Responsible Leadership	Students will develop stronger foundations in ethics, accountability, decision-making, and professional conduct.
Institutional Culture Strengthening	The course will encourage a culture of service, responsibility, and contribution across campus by recognizing meaningful work that supports the institute's larger functioning.
Holistic Student Development	The initiative moves beyond purely technical education toward leadership, civic awareness, social responsibility, and mature professional development.

4.6 Collective Impact Summary

What all three proposals together deliver for IIT Kharagpur: the three proposals are structurally complementary. Proposal 1 removes the floor-level barriers that prevent students from graduating on time or managing their academic load. Proposal 2 builds the ceiling by creating a world-class, institutionally backed research track for the most ambitious students. Proposal 3 strengthens the ethical and institutional spine of student life by formally recognizing responsibility, accountability, and service as part of structured academic development. Together, they ensure that no student is held back by administrative inflexibility, that serious researchers receive institutional support, and that responsible leadership is cultivated as a core part of the IIT Kharagpur experience.

Dimension	Current State	After Implementation
Credit Recovery	Students wait up to 12 months for a single course due to scheduling constraints; the "minimum 5 students" rule traps individuals.	Self-study and NPTEL pathways provide immediate, asynchronous resolution; ERP changes eliminate the cohort-size dependency.
SAIP/SAPP Burden	Semester-away students overload remaining semesters by up to 6 credits, causing clashes and stress.	NPTEL credits earned remotely seamlessly replace absent semester credits; no overloading is required.
Research Recognition	Research is an uncredited extracurricular activity layered on top of a full academic load.	YRF grants formal academic recognition to research by allowing structured credit integration, protecting student well-being and legitimizing research as serious academic work.
Industry R&D Engagement	Limited to standard semester-end internships with no long-term structured problem-solving.	YRF provides a year-long, co-funded, jointly mentored research track with strong deliverables and deeper institutional-industry collaboration.
Institutional Rankings	Research output from undergraduates is informal and weakly captured in institutional reputation metrics.	Structured research outputs from YRF fellows strengthen the institute's long-term academic visibility, innovation output, and research culture.

Dimension	Current State	After Implementation
Ethical Leadership & Responsibility	Student responsibilities remain largely extracurricular and uncredited; ethical reflection and accountability are informal and inconsistent.	A credit-bearing elective formally recognizes institutional responsibilities, introduces guided reflection and evaluation, and strengthens service-oriented, ethical campus leadership.

4.7 Ground Work

- The Associate Dean, Faculty of Engineering and Architecture, emphasized the need to create placement-oriented and internship-driven opportunities that also enhance undergraduate research involvement. He noted that aligning academic structures with industry exposure can encourage students to engage in research while improving career outcomes.

- Mr. Akash Manna, Undergraduate Representative to the Institute Senate, and Mr. Mehul Jain, Former Undergraduate Representative to the Institute Senate, highlighted the need for structured self-study course options to address academic rigidity. They pointed out that timetable clashes often hinder course completion, while mechanisms such as SAIP and SAPP tend to increase academic load in later semesters. Self-study options can enable flexibility and better workload distribution.

- Drawing inspiration from initiatives like the Young Research Fellowship (YRF) program at IIT Madras, there is a strong case for similar mechanisms to promote early research engagement. The YRF model enables undergraduates to work with faculty on guided research projects with academic credit and mentorship, demonstrating how flexible, credit-linked research can be integrated into the academic framework.

- Prof. Bharath Haridas Aithal, Professor-in-Charge of the Life Skills course, confirmed that the proposed elective is feasible and aligned with existing academic objectives. He noted that the modular and flexible framework of the Life Skills course can be adapted for this elective, enabling smooth implementation while reinforcing experiential learning within the institute's structure.

Proposal 5

Comprehensive Enhancement of the SETU Application as a Unified Campus Services Platform

Area	Objectives
Initiative 1	SETU Discovery Hub: a unified platform for academic research discovery, career preparation resources, and centralized campus communications and event governance.
Initiative 2	Comprehensive Complaints and Grievance Redressal Portal: a SPOC-driven digital ticketing system with structured SOPs, real-time routing, and a student-faculty monitoring committee.
Initiative 3	Online Healthcare and Wellbeing Appointment Module: native integration with iMediX for BCRTH hospital bookings and a dedicated SETU Counselling Centre appointment workflow.

5.1 Objective

The objective of this proposal is to transform the existing SETU application into a comprehensive, centralized campus services platform that consolidates research discovery, career preparation, grievance redressal, and healthcare access into a single, institutionally governed digital ecosystem.

The SETU application currently serves as a foundational digital tool for student wellbeing and campus support at IIT Kharagpur. However, it does not yet fulfill its potential as the primary interface through which students interact with the full range of campus services. Critical functions such as discovering research opportunities, lodging and tracking infrastructure complaints, and booking healthcare appointments remain scattered across disconnected platforms, informal communication channels, and manual processes.
This proposal seeks to expand SETU across three integrated pillars:

- **SETU Discovery:** A structured hub for academic research opportunities, career and internship preparation resources, and a centralized campus engagement feed that

replaces fragmented information channels.

- **Grievance Redressal Portal:** A robust, transparent digital ticketing system that routes student complaints directly to designated Single Points of Contact (SPOCs), with real-time tracking, structured resolution workflows, and oversight by a formally constituted student-faculty monitoring committee.
- **Healthcare and Wellbeing Module:** A native appointment booking interface within SETU that integrates with the existing iMediX backend for Dr. B. C. Roy Technology Hospital (BCRTH) services, and provides a dedicated confidential booking workflow for the SETU Counselling Centre.

The overarching goal is to eliminate administrative friction, replace informal and unaccountable processes with digitally governed workflows, and create a single point of access for the services that most directly affect student life on a daily basis.

5.2 Overview of Current Scenario

Despite the existence of the SETU application as a digital platform, several critical areas of student life continue to operate through fragmented, manual, or poorly coordinated systems. This creates inefficiency, reduces accountability, and leaves students without reliable mechanisms for accessing information, resolving grievances, or managing essential services.

5.2.1 Fragmented Information Discovery

Research opportunities, internship resources, career preparation materials, and campus event information are currently distributed across a patchwork of departmental emails, WhatsApp groups, social media pages, and disconnected institutional websites. There is no single, authoritative platform where students can discover faculty-led research projects, access curated placement preparation resources, or view a consolidated calendar of campus events. This fragmentation disproportionately affects students who are less well-connected or who enter the institute without pre-existing peer networks.

5.2.2 Absence of a Structured Digital Grievance System

The current grievance and complaint mechanism, particularly for hostel and campus infrastructure issues, relies heavily on manual processes. Students typically lodge complaints by verbally informing hall General Secretaries (Maintenance) or by writing in physical complaint registries maintained at hall offices. The Hall Officer must then manually compile and forward these requests to the relevant execution sections such as the Civil Construction and Maintenance (CCM) department, Electrical Works, or the

Computer Informatics Centre (CIC). Only after this manual handoff is completed do the execution sections become aware of the issue and begin acting upon it.

This sequential, paper-based workflow creates significant administrative bottlenecks. Students have no way to track the status of their complaints, there is no institutional record of resolution timelines, and recurring infrastructure problems often go undocumented because the feedback loop is entirely informal. The absence of a digital trail also makes it difficult for wardens, assistant wardens, and institutional administrators to identify systemic patterns or hold execution sections accountable for delayed responses.

5.2.3 Disconnected Healthcare Access

IIT Kharagpur currently utilizes the iMediX web portal for BCRTH appointment bookings and telemedicine services. However, the student-facing interface of iMediX suffers from accessibility challenges, a poor mobile user experience, and operational issues such as lack of real-time slot visibility, slot-hoarding by automated scripts, and double-booking errors. As a result, students frequently encounter difficulties in booking appointments with General Physicians and visiting Specialists, leading to frustration and underutilization of available healthcare services.

Similarly, access to counselling services lacks a seamless digital booking pathway. Students seeking mental health support must navigate separate channels to schedule appointments, which creates unnecessary friction and may discourage timely help-seeking behaviour.

5.2.4 Need for a Unified Digital Campus Services Platform

The common thread across all these gaps is the absence of a single, well-governed digital platform that brings together information access, service delivery, and accountability. The SETU application is uniquely positioned to serve this role, given its existing institutional backing, its established user base among the student community, and the trust it carries as an official campus tool. What is needed is a structured expansion of SETU's capabilities to address these specific service gaps.

5.3 Proposal 1: SETU Discovery — The Research, Career, and Engagement Hub

The first pillar of this enhancement transforms SETU into the primary discovery interface for academic research, career resources, and campus communications. This module is

designed to replace the current reliance on scattered, informal information channels with a structured, searchable, and institutionally maintained platform.

5.3.1 Academic Research Hub

A dedicated module within SETU will make research opportunities across all departments significantly more accessible and transparent, bridging the information gap between faculty seeking research collaborators and students seeking meaningful project engagement.

5.3.1.1 Faculty Project Management

The Research Hub will allow faculty members to upload and manage research project listings directly on the platform throughout the academic year. Professors will be able to define project scope, specify prerequisite skills or coursework, set application windows, review student applications, and manage the full lifecycle of a project from recruitment through evaluation. This replaces the current ad-hoc process of departmental circulars and informal word-of-mouth recruitment.

5.3.1.2 Dynamic Student Profiles

To support effective matching between faculty projects and student capabilities, SETU will enable students to build comprehensive academic and professional profiles natively within the application. These profiles will include past project experience, publications, patents, work experience, technical skills, and specific research interests. When a student applies for a research project, the faculty member will receive the student's verified profile alongside the application, enabling more informed and efficient shortlisting.

5.3.1.3 Year-Round Discovery and Filtering

Students will be able to search and filter research opportunities by domain, department, prerequisite requirements, and project duration without waiting for formal departmental announcements. This creates a continuous, open marketplace for research engagement that operates independently of semester timelines and administrative circulars.

5.3.2 Career and Opportunity Hub

The second component centralizes all resources related to internships, placements, and higher education preparation into a single, well-organized module within SETU.

5.3.2.1 Live Opportunities and Competitions

The hub will provide real-time, category-filtered updates on active internship openings, hackathons, coding competitions, and industry contests. Information will be structured and searchable rather than buried in email threads or social media posts, ensuring that students can discover relevant opportunities without depending on informal networks.

5.3.2.2 Curated Preparation Resources

A dedicated preparation bank will offer access to curated content including company-specific interview insights, previous year questions, placement preparation guides, and higher education application resources. This consolidates materials that currently exist in fragmented form across personal drives, WhatsApp groups, and unofficial repositories into an institutionally maintained, quality-controlled resource library.

5.3.2.3 Personalized Resource Organization

Students will be able to highlight, bookmark, and organize resources within their personal SETU workspace. This allows each student to maintain a tailored preparation bank aligned with their specific career interests and application timelines, rather than losing track of useful materials across multiple disconnected platforms.

5.3.3 Campus Engagement and Governance Feed

The third component addresses the severe information clutter caused by fragmented communication channels for campus events and institutional updates.

5.3.3.1 Gymkhana and Society Updates

A dedicated, decentralized feed will be established for General Championship events, technical, sports, and socio-cultural society updates, workshops, and other Gymkhana-managed activities. Content management will be distributed to authorized Society Governors and Gymkhana office bearers through a secure posting interface, ensuring that information is timely, accurate, and institutionally governed.

5.3.3.2 Centralized Campus Calendar

A unified calendar will consolidate key academic dates, competition deadlines, event schedules, and registration windows across all campus bodies. This will help students plan their commitments more effectively and reduce scheduling conflicts that arise from the absence of a single authoritative calendar.

5.4 Proposal 2: Comprehensive Complaints and Grievance Redressal Portal

The second pillar introduces a robust, transparent, and accountable digital ticketing system within SETU that fundamentally transforms how student grievances—particularly those related to hostel maintenance and campus infrastructure—are lodged, routed, tracked, and resolved.

5.4.1 Transforming the Grievance Workflow

The core innovation of this module is the shift from a slow, sequential, manually forwarded complaint process to a system of real-time direct routing with parallel oversight. Under the digitized SETU portal, when a student raises a ticket, it is instantaneously routed to the dashboard of the relevant execution section. These sections can view and act upon complaints immediately without waiting for manual forwarding through hall administrative staff.

Simultaneously, the Hall Officer, General Secretary (Maintenance), Assistant Warden, and Warden are automatically kept informed via a unified monitoring dashboard. They function as an oversight body that can track whether the relevant execution section is resolving issues within stipulated timeframes, rather than serving as a bottleneck in the complaint pipeline itself.

5.4.2 Hostel Facilities: Categorization and Routing

Hostel-related complaints will be organized into clearly defined categories, each mapped to its designated execution section for immediate routing.

5.4.3 Standard Operating Procedure for Resolution

To ensure consistency and accountability across all complaint categories, a standardized resolution workflow will govern every ticket raised through the portal.

- **Mandatory Data Capture:** Every ticket will automatically capture the student's contact number and room number at the time of submission, ensuring that maintenance staff have the information needed to locate and resolve the issue without additional coordination.
- **Service Visit Protocol:** If maintenance staff visit a room to resolve a ticket and the student is not present, a standardized physical note must be left on the door

Category	Routing Destination
Electrical Issues	Fan, tube light, switchboard malfunctions routed to the Hall Electrical Works Section. Emergency electrical fault landline numbers displayed alongside the ticket.
LAN / Network Issues	Connectivity and network faults routed to the Computer Informatics Centre (CIC).
Civil & Repair Works	Peeling paint, dampness, broken windows, and structural issues routed to the Civil Construction and Maintenance (CCM) department.
Carpentry & Furniture	Repair or replacement requests for cots, tables, and chairs routed to the Hall Carpentry Section.
Water & Plumbing	Washroom leaks, broken taps, and flush malfunctions routed to Hall Maintenance or CCM.
Cleaning & Sanitation	Unclean corridors, washrooms, and pest issues routed to the Hall Sweeping and Sanitation SPOC.
Mess Food & Hygiene	Food quality, hygiene concerns, and utensil shortages routed to the Hall Mess Committee and Wardens.
Appliances	Malfunctioning water coolers, geysers, and washing machines routed to the relevant Hall Maintenance SPOC.

indicating the time of the visit. The staff will simultaneously update the ticket status on the SETU Admin Panel to "Attempted — Student Unavailable."

- **Student-Verified Closure:** A ticket can only be permanently marked as "Closed" once the student verifies the resolution through the application. This prevents premature closure of unresolved complaints and ensures that the resolution record accurately reflects the ground reality.

5.4.4 Formation of the Hostel Maintenance and Grievance Monitoring Committee

To ensure that the digital complaints system translates into physical accountability, a dedicated monitoring body will be constituted with joint student-faculty representation.

Member	Role
Vice President, TSG	Chairs the committee and ensures administrative escalation of systemic issues
Coordinating Warden (Maintenance)	Provides institutional oversight and authority for escalation
General Secretaries (Students' Welfare), TSG	Coordinate with General Secretaries (Maintenance), Halls of Residence for complaint tracking across halls
All Presidents, Second Senate Members, and General Secretaries (Maintenance), Halls of Residence	Provide hall-level operational input and monitor local resolution rates

5.4.4.1 Composition

5.4.4.2 Responsibilities

- **Data-Driven Monitoring:** The committee will meet monthly to review the SETU portal's dashboard analytics, including average resolution time per hall, category-wise complaint volumes, and recurring infrastructural bottlenecks.
- **Stakeholder Coordination:** The committee will act as a bridge between the student body and execution sections such as CCM, CIC, and sanitation contractors, ensuring that systemic issues receive coordinated attention rather than being addressed in isolation.
- **Escalation of Overdue Complaints:** Complaints that exceed the stipulated resolution timeline will be escalated by the committee directly to the relevant Assistant Wardens (Maintenance) and Wardens, using the data logged in SETU as the basis for intervention.

5.4.5 Other Complaint Categories

Beyond hostel facilities, the grievance portal will also support structured complaint routing for broader campus concerns.

- **Academic Affairs:** Issues in academic administrative matters will be routed to the appropriate academic office with proper tracking. In specific cases requiring escalation, matters will be discreetly flagged to the Faculty Advisor, Head of the Department, and Academic Deans to ensure timely and effective resolution.

- **Campus Facilities:** General campus infrastructure complaints, including street lighting, academic building maintenance, and common area upkeep, will be routed to the relevant estate maintenance sections.

- **Discrimination and Harassment:** A highly secure, encrypted complaint channel will be provided for cases involving discrimination, harassment, or ragging. These complaints will be routed directly to the relevant Deans, Associate Deans, the Internal Complaints Committee (ICC), or the Anti-Ragging Committee, with absolute privacy protections and no visibility to intermediate administrative layers.

5.5 Proposal 3: Online Healthcare and Wellbeing Appointment Module

The third pillar introduces a native appointment booking module within SETU that unifies access to the institute's healthcare and counselling services. This module addresses the accessibility and usability gaps in the current system by providing a modern, mobile-native interface that integrates seamlessly with existing hospital backend infrastructure.

5.5.1 BCRTH and iMediX Integration

The Dr. B. C. Roy Technology Hospital (BCRTH) currently uses the iMediX web portal for appointment bookings and telemedicine services. While the administrative backend of iMediX functions adequately for hospital staff and doctors, the student-facing interface suffers from poor mobile responsiveness, inconsistent real-time slot visibility, and operational issues including slot-hoarding and double-booking errors.

5.5.1.1 Proposed Integration Architecture

The proposed solution creates a separate, mobile-native appointment workflow within the SETU application that connects to the existing iMediX backend via APIs. This approach preserves the administrative systems that hospital staff are already familiar with while providing students with a significantly improved booking experience.

- **Student Frontend (SETU App):** Students will use the SETU interface to view schedules of General Physicians and visiting Specialists, check real-time slot availability, and book appointments. The interface will be optimized for mobile use and designed to provide clear, immediate feedback on slot status.

- **Admin Backend (iMediX):** On the administrative side, hospital staff and doctors will continue to use their existing iMediX interface without disruption. The SETU

application will function as a modernized student-facing frontend, pushing booking data directly into the iMediX database through API integration.

- **System-Level Improvements:** By bringing the student-facing booking functionality into the SETU application, frontend logic improvements can be implemented to prevent slot-hoarding through rate-limiting and session validation, resolve double-booking errors through real-time slot locking, and deliver push notifications for appointment reminders and schedule changes.

5.5.2 SETU Counselling Centre

Access to mental health and counselling services will be integrated into the same appointment module, providing a confidential and frictionless booking pathway.

- **Confidential Appointment Booking:** Students will be able to book private sessions with institute counselors directly through the SETU application. The booking interface will be designed with privacy as a first-order concern, ensuring that appointment details are visible only to the student and the assigned counselor.
- **Slot Selection and Availability:** Students will be able to view available dates and times for specific counselors and select slots that align with their schedules, removing the friction of manual appointment coordination.
- **Automated Reminders:** Push notifications will be sent to remind students of upcoming appointments, reducing no-show rates and ensuring that students receive the support they have sought in a timely manner.

5.6 Implementation Strategy

The implementation of this comprehensive SETU enhancement will follow a phased approach designed to ensure technical stability, administrative readiness, and smooth campus-wide adoption.

- **Phase 1 — Backend Architecture and Integration:** Development of the SETU Discovery Hub, including research project lifecycle schemas, student profile databases, and the campus engagement feed infrastructure. Mapping of all SPOC databases and routing logic for the Complaints Portal. Establishment of API bridges between the SETU application and the iMediX BCRTH database. This phase focuses on building the technical foundation without disrupting existing services.
- **Phase 2 — Administrative Training and Committee Constitution:** Formal constitution of the Hostel Maintenance and Grievance Monitoring Committee.

Training of faculty members on research project upload workflows, hall supervisors and maintenance execution staff (CCM, Electrical, CIC) on the SETU Admin Panel, and hospital administrators and counselors on the appointment module interface. This phase ensures that every stakeholder who will interact with the system is prepared before student-facing deployment.

- **Phase 3 — Beta Testing and Campus Rollout:** A closed beta test will be conducted with Gymkhana office bearers, select faculty members, and a representative student group across multiple halls. Feedback from the beta phase will be used to refine workflows, resolve technical issues, and calibrate routing logic. Full-scale campus rollout will follow through official Institute circulars, hall-level orientation sessions, and coordinated communication campaigns.

5.7 Expected Impact

Outcome Area	Expected Impact
Research Accessibility	Faculty research projects will become discoverable year-round through a searchable, filterable platform. Students from all departments will have equal access to interdisciplinary opportunities, replacing the current reliance on informal networks and ad-hoc departmental circulars.
Career Preparedness	Centralized, curated placement and internship resources will ensure that every student has access to the same quality of preparation material, reducing the information asymmetry that currently disadvantages less-connected students.
Information Governance	A unified campus calendar and structured engagement feed will eliminate the clutter of fragmented WhatsApp groups, unofficial social media pages, and physical notice boards, creating a single authoritative channel for campus communications.

Outcome Area	Expected Impact
Grievance Accountability	Real-time ticket routing and student-verified closure will create a transparent, data-backed record of complaint resolution. The monitoring committee will use this data to hold execution sections accountable and identify systemic infrastructure gaps across halls.
Administrative Efficiency	The shift from sequential manual forwarding to direct digital routing will drastically reduce the time between complaint lodging and execution-section awareness. Hall Officers and Wardens will transition from bottleneck roles to oversight roles, focusing their attention on systemic issues rather than individual complaint forwarding.
Healthcare Access	A mobile-native, real-time booking interface for BCRTH will resolve the slot-hoarding, double-booking, and poor-UI issues that currently discourage students from using the hospital's appointment system. Push notification reminders will reduce missed appointments and improve healthcare utilization.
Mental Health Support	A dedicated, confidential counselling appointment pathway within SETU will reduce the friction associated with seeking mental health support, encouraging timely help-seeking behaviour and improving counselor utilization rates.

5.8 Ground Work

- The technical feasibility of the proposed digital interventions was validated through discussions with the Product Owner of the SETU application, who is currently working closely with the Director. He confirmed that several of the proposed features align with the existing development roadmap of the platform. Additionally, he highlighted that incorporating structured feedback and participation from student representatives could significantly enhance the effectiveness of the application, ensuring better usability, faster iteration, and more context-aware implementation of features. The SETU platform itself is designed as an integrated campus solution for academics, communication, and well-being, demonstrating the feasibility of such digital systems at scale.

- To better understand the current on-ground challenges and gaps in existing systems, discussions were held with the Assistant Warden (Maintenance) and the General Secretary (Maintenance) of Pandit Madan Mohan Malaviya Hall of Residence. They emphasized the pressing need for greater digitalization in maintenance and grievance-handling processes. They highlighted that current workflows are often manual, fragmented, and time-consuming, leading to delays in issue resolution and lack of accountability. They further noted that implementing structured digital systems could significantly improve transparency, tracking, and overall efficiency in addressing student concerns.

- In addition, interactions with a Senior Executive Engineer from the Civil Construction and Maintenance section, along with representatives from the Electrical Works division, provided insights into the internal functioning of infrastructure management on campus. They explained the existing processes for issue reporting, allocation, and resolution, which currently rely heavily on hierarchical communication and manual coordination. They indicated that enabling direct reporting of issues by students through a centralized digital platform could streamline workflows, reduce response time, and improve prioritization of critical maintenance tasks, while also ensuring better coordination between different operational units.