



Indian Institute of
Technology Madras



STRATEGIC PLAN 2021-2027



MESSAGE FROM THE CHAIRMAN, BOARD OF GOVERNORS

IT Madras has been developing and following Strategic Plans (strategic plans) for more than two decades. The strategic plan 2014-2020 has enabled IITM to consistently top the NIRF (National Institutional Ranking Framework) rankings and emerge as the best overall engineering institute in the country.

The new strategic plan 2021-2027 (SP 2027) will usher in the next phase of IITM's quest towards global excellence. The vision for IITM laid out in SP 2027 is a reiteration of the 2014-2020 plan: to be among the top 50 institutes globally in at least five disciplines.

The key pillars that will help IITM achieve this vision and meet its national and institutional aspirations are: courses delivered through hybrid pedagogy; increasing multidisciplinary undergraduate pivot options; growing an innovation and entrepreneurial culture; greater focus on faculty development and engagement; increasing internationalization; and focus on campus environment and living. Expanding outreach through online degree programmes will have a greater thrust in the current plan as will the engagement with industry/corporates for skilling, R&D partnership, as well as for recruitment. Each of the above priority areas is linked to measurable milestones. The Board of Governors will continuously monitor these milestones and guide the Institute in any course correction required.

Through this strategic plan, IITM aims to continually strive towards research excellence, which rests on three pillars: the quality of students, of faculty, and of the research infrastructure. SP 2027 incorporates measures to strengthen each of these pillars. To support cutting-edge research, the Institute aims to build a research endowment corpus of about ₹1,000 crores. The Institute has strong links with the industry, and a highly successful incubation ecosystem in the form of the IITM Research Park, with large groups working on transformational technologies to address societal challenges. SP 2027 will leverage the 10x initiative of the IITM research park to create more start-ups, new technologies, and grow capacity in design and innovation with an aim to positively impact people's lives.

The SP 2027 completely adheres to the legacy and commitments of IITM, is aligned with the larger vision of the country and aims to contribute to the National Education Policy in a significant way. Achieving these ambitious goals will require collaboration and earnest participation of all the stakeholders – namely, the students, faculty, staff and alumni. Hence, I urge all the stakeholders to come together and play their important parts in the realization and delivery of SP 2027.

Personally, it has been a delightful experience to work with the Director, the Deans and other faculty members as they shaped the strategic plan. Many have contributed to this plan, and I thank every one of them. I especially want to thank the past director Prof. Bhaskar Ramamurthi for the vision, effort and co-creation of this plan. I also want to thank the present director Prof. V Kamakoti for giving the plan its final shape and taking on the responsibility for achieving its objectives.

Wishing IITM all the very best to achieve this ambitious six-year plan and reach the next level of excellence.

Dr. Pawan K. Goenka
Chairman, Board of Governors



MESSAGE FROM THE OUTGOING DIRECTOR

After successful implementation of the strategic plan for the period 2014-20, the Institute has now developed the plan for the next seven years. Having a well-developed plan and monitoring its implementation periodically to make course corrections, even while retaining the ability to react quickly to new opportunities, is the key to continued and rapid progress.

For developing the Strategic Plan 2021-27, the Institute went through an elaborate bottom-up approach. Ten committees were set up, each to address a different vertical. The members of these committees were mid-career faculty members, many of whom had experience in various advisory roles in administration or had been recognized for their research and teaching. All committees had at least one woman member and where appropriate, student members as well. Some committees that would benefit from detailed knowledge of processes being followed had a senior mentor faculty as well.

The committees began their work with a coaching session conducted by Prof. Rishi Krishnan and R. Srinivasan of IIM Bangalore on strategy in the context of an academic institution. We benefited greatly from the thoughts they left in our minds about how we might go about the tasks. The Institute is grateful to these expert colleagues from a sister institution for their valuable inputs.

Our Chairman, Board of Governors, Dr. Pawan Goenka was fully hands-on and conducted several meetings with the committees – reviewing their work and making suggestions. He brought to bear his rich experience in corporate strategy-making as well as in shepherding an academic institute during the past seven years, and contributed immensely to the planning exercise.

The committees held extensive meetings with and sought inputs from multiple stakeholders – Board of Governors, Deans, Institute Professors, Chair Professors, faculty members, student executive, alumni, industry partners – so as to make the planning process as diverse and inclusive as possible.

This plan is therefore the distilled vision of all those vested in the Institute who care deeply about its growth and well-being. I congratulate and thank the members of the committees (listed below) for their painstaking effort to hear and absorb all the voices and identify key ideas therefrom. I also thank all those who have contributed to it in some fashion or the other with their ideas and queries.

I personally enjoyed mentoring the entire process of searching for new ideas and fleshing them out, resulting in a plan that now appears as if it has always existed, only to be articulated and given shape. I therefore express my personal gratitude to the committees and all those who contributed to the effort.

If our past experience is anything to go by, this Strategic Plan 2021-27 will, like its predecessor, stand us in very good stead and propel us to great heights and new benchmarks. I wish the new Director all the very best in this exciting journey and look forward eagerly to seeing our Institute outdo itself year after year. The objectives laid out in the plan are ambitious but achievable, and are aligned with the path the nation is expected to take in the coming decade. We will do ourselves and the nation proud if we excel and exceed these objectives on all fronts.

Prof. Bhaskar Ramamurthi



MESSAGE FROM THE DIRECTOR

As we are getting ready to face a post-pandemic world, with the new normal, new expectations and new challenges, this strategic plan is undoubtedly the guiding spirit for our Institute. This plan is arrived at through a bottom-up exercise involving students, staff and faculty of our Institute, fine-tuned based on multiple rounds of feedback from well-wishers and other stakeholders. Thus, this plan is developed and owned by our IITM community at large, rather than a top-down administration-driven one. The plan touches every aspect/activity of IITM: research; course programmes; placement and internships; innovation and entrepreneurships; infrastructure; alumni and corporate relations; internationalization; finance; human resources; and student life. As the plan was evolved during the pandemic-struck days, careful thought has gone into building necessary frameworks that will help our Institute address the new challenges of the post-pandemic world.

The priorities of IIT Madras may be broadly classified into the following six areas – internationalization, local relevance, transparent and effective governance, translational research, interdisciplinary research and development; and, online education. Based on the goals set by the preceding two strategic plans, a number of foundational activities in these priority directions have been carried out in the past. The same needs to be leveraged to quickly reach the desired goals.

In the next five years, we would like to realize an IIT Madras with a diversified group of faculty, students and staff actively pursuing nationally relevant and internationally-recognised fundamental and translational research. As part of this vision, we would like to have students from all parts of India, especially rural India to be associated with IIT Madras. We would like to see a recognizable difference in the presence of international students and faculty on campus. Finally, we believe that translational research, which has been one of IIT Madras' forte, should become internationally visible through impactful patents and start-ups originating from the Institute. This strategic plan clearly defines the road-map to convert this vision into reality. These goals are also in alignment with the recommendations of the National Education Policy 2020. In addition, I am of the strong belief that the Institute of Eminence recognition will aid in plan implementation.

I place on record my sincere thanks to Dr. Pawan Goenka and Prof. Bhaskar Ramamurthi for guiding the process right from the beginning. I also thank all the committee members involved for the meticulous job they carried out. As mentioned by Prof. Ramamurthi, we will make ourselves and the nation proud if we excel and exceed the objectives set by this plan on all fronts.

V. Kamakoti

Strategic Planning Committees

RESEARCH

(Academic/Sponsored/Industrial)

Chairperson

SHANTHI PAVAN Y

Mentor

SUNDARARAJAN T

Members

SUJITH RI

PREETI AGHALAYAM

SUBRAMANYA SARMA V

SUNDARGOPAL GHOSH

KRISHNA SIVALINGAM

MANU SANTHANAM

MICHAEL GROMIHA

BALAJI C

KALPANA MAHALINGAM

Research Affairs Secretary,
Student Member

VIJAY MUDGAL

PLACEMENT & INTERNSHIP

Chairperson

MANU SANTHANAM

Members

RAVI KUMAR NV

SHANKAR RAM CS

USHA MOHAN

Student General Secretary,
Student Member

UNMAN UDAY NIBANDHE

INFRASTRUCTURE

Chairperson

LIGY PHILIP

Members

MURALI K

ROBINSON RG

SANNASIRAJ SA

ALUMNI & CORPORATE RELATIONS

Chairperson

ASHWIN MAHALINGAM

Mentor

NAGARAJAN R

Members

SATHYAN SUBBIAH

RAJAGOPLAN SRINIVASAN

RICHA AGARWAL

SATYANARAYANAN SESHADRI

COURSE PROGRAMS

(Online/Hybrid/Outreach)

Co-Chairpersons

ANDREW THANGARAJ

PRATHAP HARIDOSS

Mentor

RAMAMURTHY K

Members

EDAMANA PRASAD

ARUN MENON

VIGNESH MUTHUVIJAYAN

ARUN THITTAI

MURTHY HSN

MANU JAISWAL

JAYALAL SARMA

SWARNALATHA R

SRIRAM V

Academic Affairs Secretary,
Student Member

S. SIDHARTHA NARAYAN

INNOVATION & ENTREPRENEURSHIP

Chairperson

RAVINDRAN B

Members

BOBY GEORGE

THILLAI RAJAN

PRABHU RAJAGOPAL

SUJATHA SRINIVASAN

Co-curricular Affairs Secretary,
Student Member

NITISH GUPTA

HUMAN RESOURCES

(Faculty)

Chairperson

MURALI K

Mentor

SRIRAM P

Members

ASHISH KUMAR SEN

SHWETA AGARWAL

MOHANASANKAR S

ANBARASAN P

VINU R

ATHI NARAYANAN N

TIJU THOMAS

HUMAN RESOURCES

(Staff & Processes)

Chairperson

KOSHY VARGHESE

Mentor

SRIRAM P

Members

RAMAMURTHY K

RUPASHREE BARAL

JANE PRASAD

FINANCE

Chairperson

BHASKAR RAMAMURTHI

Members

MAHESH PANCHAGNULA

LIGY PHILIP

ARUN KUMAR G

JANE PRASAD

INTERNATIONALISATION

Chairperson

SRIKANTH VEDANTAM

Mentor

NAGARAJAN R

Members

SHANTI BHATTACHARYA

SACHIN S GUNTHER

RAJNISH KUMAR

I&A Relations Secretary,
Student Member

SAARTHAK SANDIP MARATHE

STUDENT LIFE

Chairperson

BENNY RAPHAEL

Members

AROCKIARAJAN A

SANTHOSH PN

SHAIKH FARUQUE ALI

ARSHINDER KAUR

VIJAYALAKSHMI V

Student Member

AJMAL HUSSAIN

Cultural Secretary (Literary)

SAI PRAKASH VELAGALA

Cultural Secretary (Arts)

SHREENIWAS MAHESH

JAGDALE

Sports Secretary

GAJULA CHINMAYI

Hostel Affairs Secretary

EXECUTIVE SUMMARY

IT Madras has been developing and following strategic plans periodically for more than two decades now. The planning exercise has been taken up about every seven years to reflect the changing objectives and capabilities of the Institute and the environment it operates in. The last plan to be so developed and implemented was for the period 2014-2020. That plan laid out the targets and objectives for several verticals such as academic programmes, research, industry engagement, entrepreneurship, alumni engagement and so on. The progress of the Institute in implementing the plan and meeting the targets were monitored regularly by the Board of Governors. This resulted in the Institute being ahead of the targets most of the time and on almost all axes. In turn, this led to the Institute maintaining its lead on most metrics in the National Institutional Ranking Framework year after year and retaining its #1 position throughout from inception of the rankings. It finally culminated in the Institute being declared as an Institution of Eminence.

The Institute is now publishing its strategic plan for the period 2021-27. Although the plan is being published in early 2022, implementation has commenced for many of the initiatives outlined in this plan in 2021 itself, and will set the tone for the oncoming decade. This is a very important decade for India, not only because we are celebrating 75 years of Independence in 2022, but because we are poised to achieve many important yardsticks of growth as an economy and as a major power. The Institute's strategic plan for this decade is aligned with the larger vision of the country and aims to contribute to the national effort in a significant way.

This plan has been evolved through a rigorous bottom-up exercise involving ten committees for various verticals with a total of more than sixty faculty members. These faculty members are in the middle of their careers and represent those who will play a key role in executing this plan. Widespread consultations were held with, and surveys conducted of, Institute and Chair Professors, students, alumni, industry leaders and other stake-holders, to obtain the widest possible inputs. The draft plan was finally reviewed by the Board of Governors before it was frozen.



PREAMBLE



IIT Madras has been guided by Strategic Plans developed at regular intervals for more than 25 years now. The last plan to be so developed and executed successfully was for the period 2014-20 (<https://www.iitm.ac.in/sites/default/files/Others/strategicplan2020.pdf>). These plans have enabled the Institute to set itself specific objectives and targets that are aligned with those of the government, designed carefully to fit the available human and financial resources, and yet challenge the faculty, students, and staff to scale new heights.

The targets for the plan period 2014-20 were broken down into yearly milestones, and the Board of Governors reviewed the performance of the Institute periodically. Corrective steps were taken, where needed, to address lacunae, and some targets were revised upwards to take advantage of unexpected supportive factors in the operating environment. This process enabled the Institute to maintain its leading position in the NIRF and ARIIA rankings, even though all top institutions were improving year after year. It finally culminated in the Institute being selected as an Institution of Eminence by the Government of India.

A brief summary follows of the objectives and targets of Strategic Plan 2014-20, along with the achievements of the Institute.

Key Objectives 2014-20

The Institute set itself some key objectives for the period 2014-20:

- To become a leading technological university with global recognition
- Become as renowned for post-graduate education as for its undergraduate education
- Establish a track record for creation of innovative technologies for industry, and transformational solutions for meeting national needs, particularly through the incubation of startups
- Become known as a dynamic, student-friendly and sustainable campus.



During the past seven years, the Institute has grown its research profile significantly and is now clearly perceived as a post-graduate and research-intensive university as a top undergraduate teaching institution. It is also widely acknowledged that IIT Madras is the institute of choice for industry for collaborative research and development. The startup ecosystem at the IIT Madras Research Park took off around 2015 and today boasts of companies making advanced technology products such as EVs, IoT-driven asset management, conversational AI engines, 3D-printed rocket engines, and the like. Although the student population has grown by around 25% in this period, the campus has maintained its unique natural beauty even as the infrastructure has been steadily augmented to global standards. The Institute has grown its international collaborations manifold in the past decade, and is now well-known among its peers as a leading research-driven technological university.

Key Targets 2014-20

The tables below summarize the key targets set out in the 2014-20 plan and the achievements. The accompanying graphs show the steady growth achieved towards key targets during the plan period.

PILLAR	MEASURE	TARGET 2020	2020 ACHIEVEMENT
Courses	No. of faculty	700	~650, incl. Emeritus, VF, PoP (Fig. 1)
	Flexibility	50% core and 50% elective	Implemented; 8 Upgrade paths to Dual Degree open for ALL branches also made available with more than 175 UG students availing
	Professor of Practice Positions	~25	22 (Fig. 2)
	Industry-Oriented Online Courses leading to M.Tech degrees	To make a beginning	4 Web-enabled M. Tech programmes started
Research	To be known as best educational research technological institute in India	First in India in major rankings	1st in NIRF, ARIIA since inception
	Centres of Excellence with national impact and research output having global visibility	2-3 to be established per year	14 such CoEs were established
	Increase Ph.D intake	0.8 per faculty member per year	Achieved; graduation rate increased at 13% per annum (Fig. 3)
	Publish papers in internationally recognized venues	Large fraction of papers in same venues as faculty in global top-50 universities	>85% of papers published in same journals as faculty in top-50 universities
	Significant contribution to technology needs of Nation		Many key technologies in water, construction, telecom, renewable energy, defence developed and transferred to industry/startups
Industry Engagement	Faculty members involved in sponsored research	75%	Achieved
	Faculty members involved in consultancy	60%	Achieved in engineering departments
	Value of total funded research	500 crs per year	Achieved in 2019; CAGR is 15% for Govt sponsored projects, 22% for industry projects (Figs. 4 and 5)
	Patent applications	140 annually	Achieved; good grant rate also since 2019 (Figs. 6 and 7)
Entrepreneurship	Number of startups incubated	>20 per year	Achieved 2017 onwards (Fig. 8)
Internationalization	Joint PhD programmes	20	18 active, with more than 50 JDP scholars (Fig. 9)
Faculty	5-step path for career advancement of faculty and rewards for high-achievers		Implemented; ~50 Chairs created, Early, Mid-career and Lifetime Achievement Awards, Annual Faculty Academic Profile, mentoring of young faculty initiated
Students	Each student to pursue one passion in addition to academics	Every UG student to be addressed	Partially achieved
Infrastructure	Accommodation capacity for students and faculty	Add more hostel rooms, apts	Faculty residence position comfortable, student hostel requirement still to be met as 25% increase due to higher intake consequent to EWS reservations starting 2019 (Fig. 7)
	Capacity of labs and classrooms	Complete at least addl 20K sqm beyond NAC I	New Academic Complex I, Chemistry II and Biosciences II completed; NAC II, EE and CSE Annexes under construction (Fig. 11)
Alumni Relations	Build corpus and endowment funds	₹500 cr (₹1000 cr upside)	Achieved ₹512 cr, apart from donor-funded projects
	Annual donations from Alumni/Foundations	₹100 cr per annum	Achieved (Fig. 10)



While the specific targets and the achievements thereof do give a fairly accurate picture of the growth of the Institute during the plan period, there have been several developments that have left a lasting impact on academics, technology development and campus life in general.

During this period, the Institute developed several technologies that were commercialized and have had significant social impact. A nanomaterials-based water treatment system for removing arsenic deployed in thousands of villages in the country, off-grid solar power systems deployed in far-flung villages where the grid does not reach, mobile cataract surgery vehicles that has enabled this important intervention to reach patients who are unable to travel to distant hospitals, affordable, sustainable and rapid gypsum-based house construction technology, motorized wheelchair that can double as a three-wheeler for commuting, systematic interventions that demonstrably reduce road accidents and resulting mortality, are some notable examples.

The Institute also leads the NPTEL national effort of IITs and IISc that provides online content and MOOCs to engineering and science students across the country. During this plan period, more than 300 courses have been offered to more than a million students each semester, of whom 20% or more have taken proctored exams and earned credits.

Taking advantage of the revised curriculum having more than 40% elective courses, students have been pivoting from the discipline they were admitted to and taking minors in the areas they have developed an interest in. About 20% of the UG students have also been upgrading to a Master's degree in interdisciplinary fields by spending an extra year and leveraging their elective courses in these disciplines.

The incubation activities of the Institute have shown spectacular growth, with more than 10% of the faculty members having founded companies. A healthy 33% of the founders are recent alumni or students, while an equal number from outside who seek our assistance. During this plan period, the Institute created the incubators, and policies and support systems for incubation, as well as several pre-incubation centres on campus in an all-out effort to remove all hurdles to budding entrepreneurship. These efforts have led to a distinct change in attitude towards innovation, entrepreneurship, and risk-taking among the students and faculty members.

The Institute has recognized and rewarded high-achieving faculty through awards and chair professorships. These faculty members stand out as role models and help raise the bar in our research and teaching activities.

During this plan period, the Institute has paid a lot of attention to the holistic development of students, apart from their academic pursuits. An environment to nudge the students to take part in at least one extra- or co-curricular activity of their choice during their leisure hours has been created. Most of these activities involve team effort. Whenever there is a desire to engage in some new hobby or activity, and there is a viable number of interested students, the Institute has found suitable resource persons to coach or hand-hold the students and provide the infrastructure support needed for the activity.



The flow of exchange students from countries in Europe and Asia to the Institute is now steady. Partnerships established with leading universities across the world and are being curated with care. Several have matured to joint-degree programmes. These efforts have set the stage for full-time international students to register in larger numbers in coming years. The rapid growth in our international engagements has encouraged us to create a new Deanship for Global Engagement.

The engagement of the Institute with alumni and corporates has grown manifold in this plan period. Driven by the newly-created Deanship for Alumni Affairs (which has now been repositioned to also serve Corporate Relations), alumni foundations have been set up in key geographies, and fund-raising is now handled by a professionally staffed and growing Office of Institutional Advancement. The Institute has substantially grown its engagement with alumni in a multitude of ways – as mentors to startups, as advisors to departments and industry partnerships, as visiting faculty, and as board members. Alumni have been very generous with their time, money and efforts. Their commitment to their alma mater is indeed deep and lifelong. With their goodwill and generosity, IIT Madras will scale new heights in the coming years.

Apart from the emphasis of adding new infrastructure to cater to the growing needs of the Institute, attention has been paid to improving the ambience, maintenance and quality of fitment to the existing infrastructure. As a result the Institute is now cleaner, better outfitted, and boasts of improved facilities. Sports facilities such as the stadium, swimming pool and courts have been improved significantly to cater to the increased population as well as interest.

Figure 1

TOTAL FACULTY

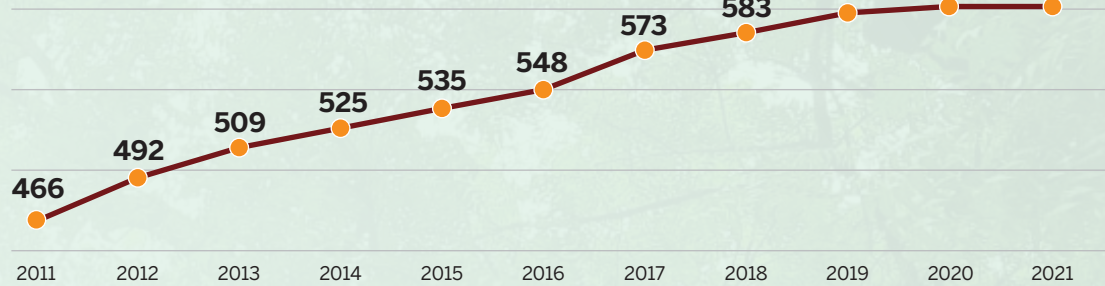


Figure 2

PROFESSOR-OF-PRACTICE

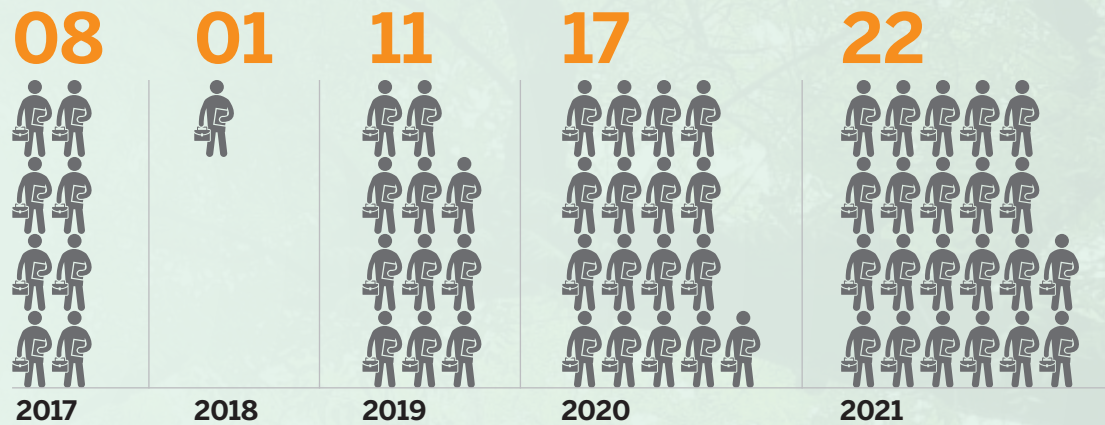


Figure 3

TOTAL PhDs

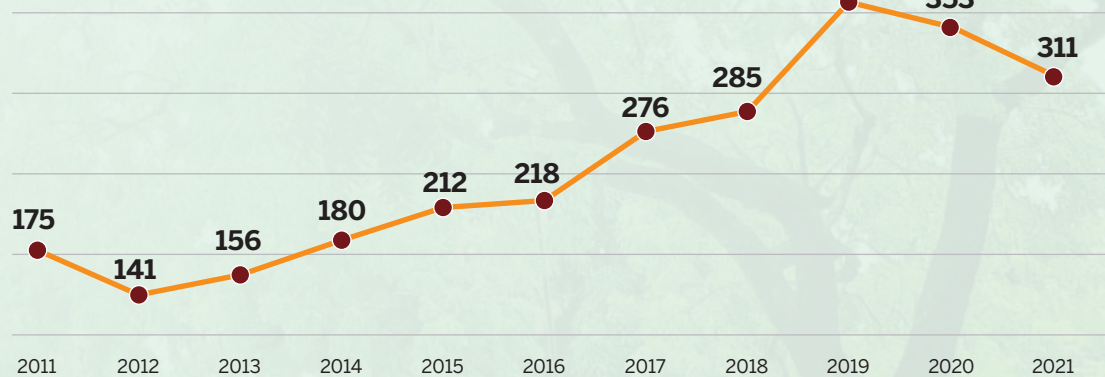


Figure 4

SPONSORED PROJECTS (Rs. in crores)

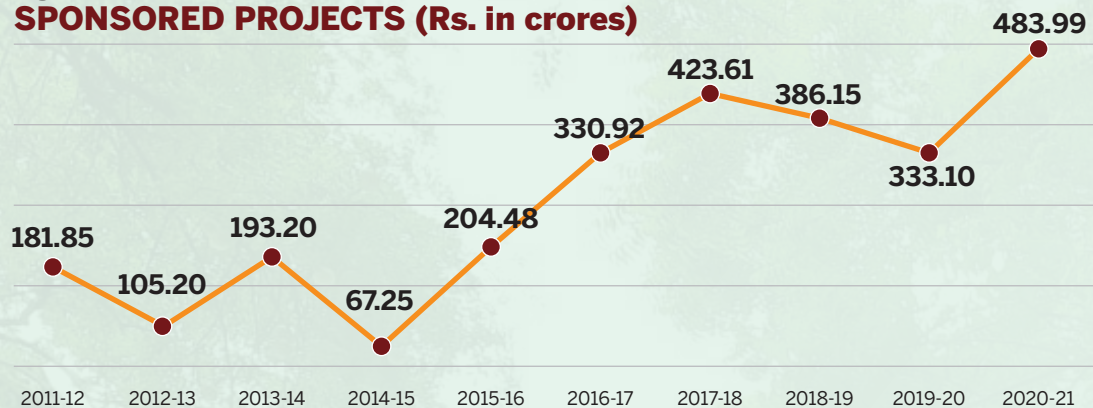


Figure 5

CONSULTANCY PROJECTS (Rs. in crores)

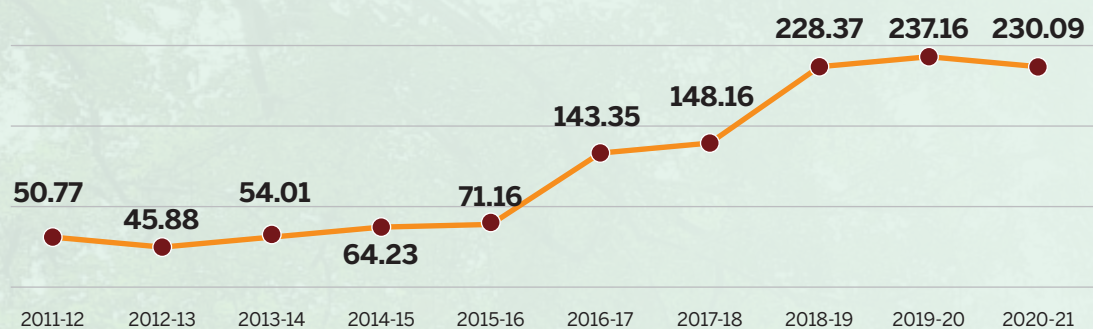


Figure 6

PATENTS FILED

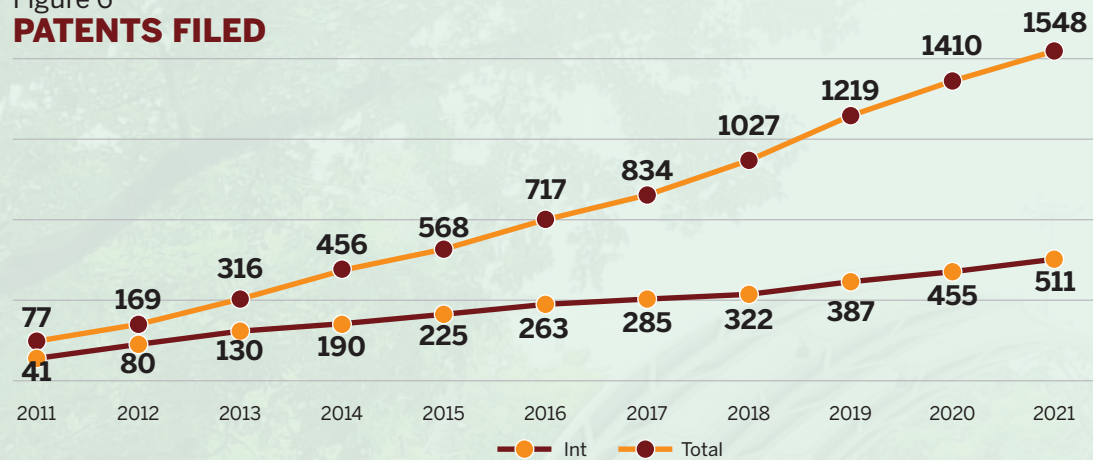


Figure 7

PATENTS GRANTED

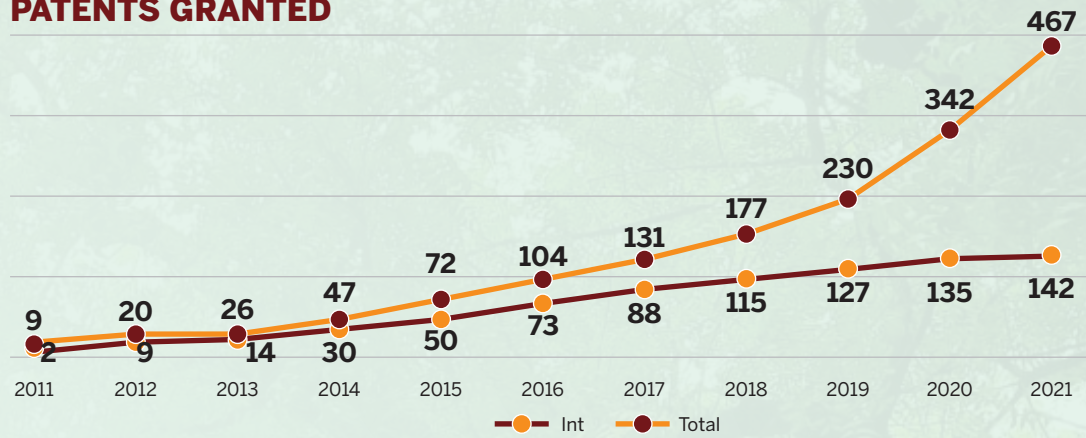


Figure 8

COMPANIES INCUBATED

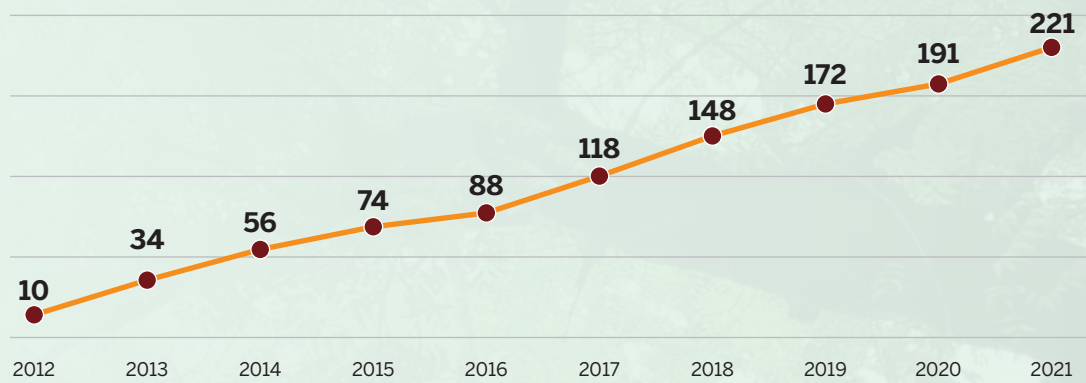


Figure 9

JDPs

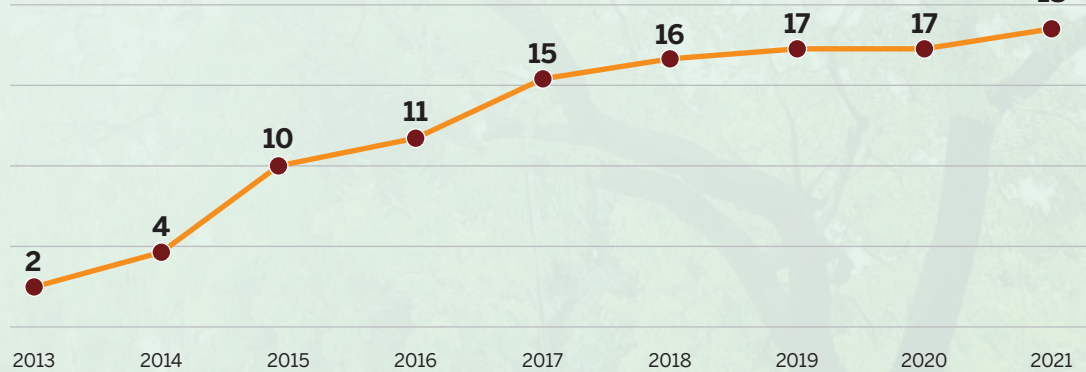


Figure 10

FUND RAISING (Rs. in lakhs)

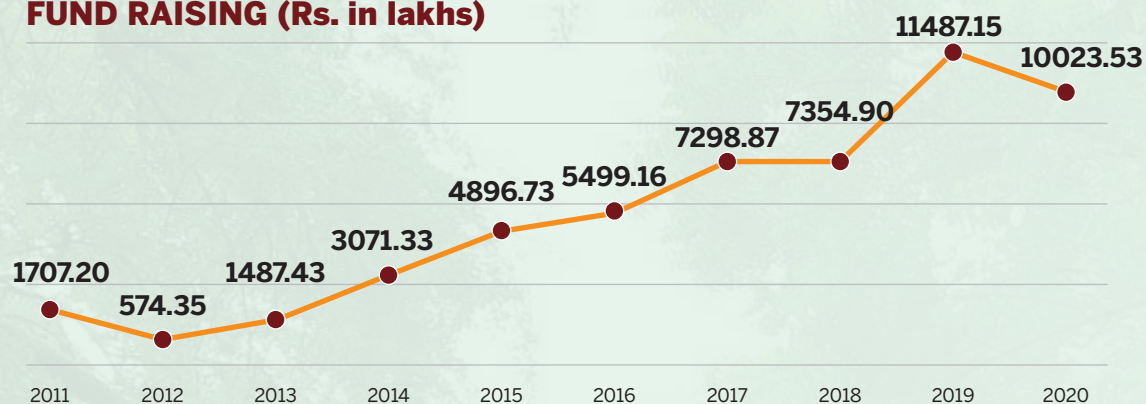
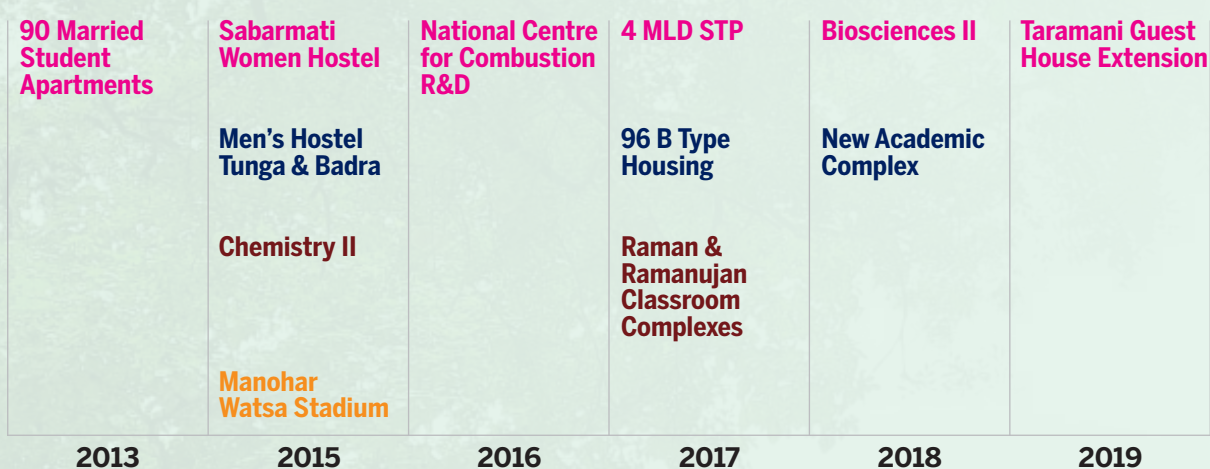


Figure 11

INFRASTRUCTURE DEVELOPMENT



VISION

The previous plan 2014-20 enunciated a vision for the Institute to be recognized as a global leader in research and education that attracts the brightest students from diverse backgrounds. It also sought to nurture research groups working on transformational technologies to address the societal challenges faced in India with regard to housing, energy, water, healthcare and the like. The newly-built Research Park was to be leveraged towards commercializing innovative ideas from the students and faculty by working closely with industry and startups. This vision has been realized, and even exceeded, for the most part, as is evident from the summary of achievements outlined in the Preamble.

The vision for the Institute during the period 2021-27 seeks to build extensively on the foundations laid till date. It also seeks to align with the aspirations of the country as it celebrates 75 years of Independence. The New Education Policy is sweeping in its vision, with a bold target of achieving 50% GER in higher education. The call for Atmanirbhar Bharat also sets the tone for the rapid advancement of technological capabilities in the country. It is in this context that the Institute has set out a vision that seeks to nurture a community of students, faculty, staff and alumni striving towards academic excellence and technological advancement of the nation.

The Institute proposes to move significantly to a hybrid pedagogy, retaining the best of intense class-room learning while leveraging technology platforms to the maximum extent. It also seeks to nonlinearly expand its outreach using online platforms and establish a paradigm for high-quality online education at scale. The focus of curricular and extracurricular activities on campus will be the all-round development of every student, from UG to PhD scholar, to enable the students to be at their creative best.

On the research front, the growing momentum that led to the recognition as an Institute of Eminence will be built on to establish global leadership in some areas. The strong industry engagement already in place will be sustained leading to the development of several high-impact technologies. The entrepreneurial energy unleashed in the last few years will be harnessed and grown to establish a healthy pipeline for successful startups as well as other high-risk, high-reward initiatives.

The Institute has chosen to place increased emphasis by creating a Dean (Global Engagement). After growing the number of exchange students and visiting faculty from abroad during the past decade, the Institute will firm up international presence on campus by increasing its full-time foreign student enrollment and regular international faculty on rolls.

The Institute seeks to fortify its already strong and diversified engagement with alumni and corporates along multiple dimensions ranging from technology development to fund-raising, from mentoring of students to entrepreneurial efforts, and making them partners in the Institute's progress.

By the end of this Plan period, the Institute will have significantly upgraded and augmented its infrastructure to support its ambitious programmes. The second Discovery Campus will be home to an increasing number of specialized world-class research facilities.

The net impact of all these efforts will be to propel the Institute to a pre-eminent position in India and enable it to be counted among the leading technical universities of the world.

The Targets 2021-27

The targets envisioned for 2021-26 have been captured in the figure below

WHAT

An IITM with a diversified group of faculty, students and staff pursuing nationally relevant and internationally recognised basic and translational research

WHY

TO MEET INSTITUTIONAL AND NATIONAL ASPIRATIONS

HOW

Moving to hybrid pedagogy	Nurturing deep-tech startups	Sustaining growth in industry engagement	Recruiting international students and faculty	Enabling faculty to build active international collaborations	Engaging alumni/corporate partners	Upgrading infrastructure to global standards
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ENABLERS

Motivated Faculty and Staff	Well-qualified Students at Admission	Commensurate infrastructure for living, learning and innovation
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CORE ACTIVITIES

Developing high-quality human resources to build the nation	Pursuing world-class research – blue-sky, translational and transformational	Providing thought leadership to society and governments
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WE WILL

- **Make IITM the institute of choice for students with most flexible engineering UG programmes and best online degree programmes**
 - ▶ Move to hybrid pedagogy – combining face-to-face and online tools
 - ▶ Increase multi-disciplinary UG pivot options
 - ▶ Non-linearly expand online degree programmes
 - ▶ Be among top-2 research destinations for PhD scholars in engineering
 - ▶ Be among top-2 destinations in India for employers
 - ▶ Focus on career planning and preparation for all students
 - ▶ Improve ease of student living & learning, and foster culture of excellence and positive reinforcement
- **Rank among top-50 in at least 5 disciplines**
 - ▶ At least 5 COEs to be among top-3 in the world in their fields
- **Be among top-2 destinations in India for new faculty in > 75% of departments**
- **Grow the international faculty and student strength on campus steadily commensurate with the available resources**
- **Maintain growth rate of extramural R&D funding and commercialize at least 5 technologies with national impact**
- **Build a ₹1,000 cr Research Endowment to sustain momentum**
- **Grow Alumni and corporate engagement at > 10% per annum**
- **Increase the fundraised from alumni and corporates to ₹250 cr per annum**
- **Leverage the 10x programme of IITM Research Park and incubate at least 5 'Blockbuster' companies/technologies that create high-value IPR**
- **Expand and upgrade campus infrastructure to global standards, and grow the second Discovery Campus to house large research centres**
- **Actively mentor and assist faculty and staff to grow in their careers, set goals for themselves and outperform them.**

RESEARCH

Excellence in research rests on three pillars: the quality of students, faculty and research infrastructure (or the “ease of doing research”). This strategic plan incorporates measures to strengthen each of these pillars. Some of these measures are already underway.

IIT Madras aims to become one among the top two destinations for students wanting to pursue engineering research within the country. This will be done on multiple fronts - not only will there be more proactive messaging and outreach, but also the admission processes and timelines will be streamlined. Measures will be taken to actively encourage more of our top students from the Masters’ programmes to upgrade to the PhD programme. This encouragement will be in the form of enhanced stipends, either through fellowships like the PMRF, or through top-ups from industrial and/or alumni funds. It is envisaged that about 25% of our PhD students will be supported by such enhanced fellowships by the end of the plan period.

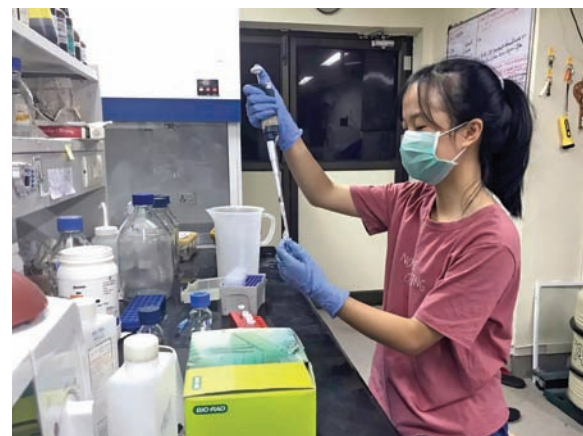
IIT Madras aims to steadily increase the number of students and faculty involved in joint-degree programmes and collaborations with leading research groups globally. Furthermore, the Institute will strive to provide every PhD student work experience in a research group abroad and/or exposure to R&D in industry, depending on their proclivity.

IIT Madras will proactively take steps for career guidance and placement of PhD students early on in the programme. Improvement in communication and writing skills will be given particular importance, in addition to exposing them to academic and industrial groups even during their PhD. In addition, every graduating PhD student will have taken a series of courses to equip them with the soft skills necessary to be successful in academia or industry. Steps will be taken to reduce the length of time that a PhD student spends in the program through better monitoring and feedback mechanisms, as well as a more time-efficient thesis evaluation process. The Institute will encourage and publicize the achievements of our PhD students, so that the programme becomes an aspirational one. Active tracking of the progress of our PhD graduates throughout their careers will be used as a measure of the success of our PhD programme.

The Post-doctoral fellow programme in the Institute will be overhauled, both process and quality wise, to make it competitive with respect to faculty positions in top Indian institutions.

The Institute is already in a pre-eminent position with respect to industrially-driven research. The aim going forward is to enhance IITM’s position in this regard, explore avenues for industrial partnerships in longer-horizon high-end research, and involve PhD students in solving these challenging and industrially-relevant problems.

- **TO REACH TOP-50 RANK IN AT LEAST THREE ENGINEERING DISCIPLINES**
- **TO CREATE AT LEAST 5 WORLD-CLASS COES TO BE RECOGNIZED GLOBALLY AS HIGH-IMPACT, PRE-EMINENT**
- **TO FACILITATE 50% OF FACULTY TO HAVE ACTIVE INTERNATIONAL COLLABORATIONS**
- **TO BE AMONG TOP TWO CHOICES FOR PHD STUDENTS IN INDIA FOR ENGINEERING**
- **TO RETAIN AND GROW THE PRE-EMINENT POSITION IN INDUSTRY-SPONSORED R&D BY 20% YOY**
- **TO ENSURE THAT 25% OF PHD STUDENTS SHALL BE RECEIVING ENHANCED STIPEND**



The Institute will maintain or exceed the current growth rate in extramural funding from government and industry for research and development. We will work towards the goal that at least five technologies originating from its laboratories will scale to a national level of commercialization by 2027, some of which also address national development imperatives.

An important initiative of the Institute going forward will be the mentoring of young faculty. This will address many aspects of a faculty's career, ranging from getting a research group going and attracting extramural funding, to initiating and benefiting from industrial and academic collaborations. To enhance the Institute's global footprint and reputation, IIT Madras will aim to steadily increase the number of international faculty on campus, including the presence of distinguished professors.



Recognizing faculty excellence in the form of more early- and mid-career awards is another priority of the Institute. Continuous benchmarking of faculty and research groups with respect to comparable groups inside and outside the country will be undertaken to identify strengths and gaps and set aspirational individual targets for each faculty member.

The Centres of Excellence, financed through the Govt. of India's Institute of Eminence (IoE) scheme, have given an impetus to research in the Institute by bringing faculty together and funding cutting-edge research. To continue this effort beyond the duration of the IOE scheme, the Institute aims to build a research endowment war chest of about ₹1,000 Crores over the next ten years. The aim, at the end of this strategic plan period, is for at least five CoEs to be recognized globally as high-impact and pre-eminent.

IIT Madras will strive to enhance the academic ambience and research infrastructure of the Institute. Efforts will be made to actively assist faculty with writing and vetting funding proposals. Centralized facilities, accessible to researchers 24/7, will be further strengthened to enhance the "ease-of-doing research" metric.

The Institute expects that the initiatives above will not only foster a culture of excellence, collaboration and positive reinforcement, but will also translate into improved international rankings. IIT Madras will strive to rank among the top-50 in at least five disciplines by the end of the plan period.



COURSE PROGRAMS

Course programs form a core activity impacting the academic experience of virtually every student at IIT Madras. It is, therefore, necessary for the course programs to stay current, be flexible to keep up with advancements in pedagogy and meet the aspirations of the student community. The New Education Policy (NEP 2020) encourages increasing the GER in Higher Education to 50% using innovative technology-driven pedagogy and training methods. The plans highlighted here represent a forward-thinking view on how the course programs should be positioned in IIT Madras going forward.

Hybrid Pedagogy on Campus

Students have increasing access to diverse opportunities that may not necessarily coincide with the academic calendar of IIT Madras. These include exchange programs, internship opportunities, and sports and cultural opportunities. These opportunities are only expected to grow in number and scope. In addition, IIT Madras envisions improving accessibility and inclusiveness in the education experience.

To enable such an inclusive academic experience, it is envisioned that the classroom infrastructure and teaching pedagogies at IITM will embrace hybrid learning environments. The classrooms, intended to be best-in-class, will be equipped with facilities such that faculty can easily offer their classes in hybrid mode. Students can connect to the classes live from anywhere, when necessary. The use of online interactive tools to emulate the in-person classroom experience will be encouraged.

Infrastructure is being put in place such that faculty, with minimal extra effort, can offer courses in a hybrid mode. This infrastructure will include audio and video devices as well as writing interfaces that will enable good quality visuals to be transmitted across the world while enabling students to interact and view classes at their pace. This will also greatly enhance industry upskilling initiatives aimed at working professionals who can take classes from their work spot. It is envisioned that offering every class online will greatly increase the presence of industry professionals in the classroom, which is greatly beneficial to both industry, society and of course, current students.

Multidisciplinary Pivot Options for UG Students

To fulfill an undergraduate student's evolving interests and passion, the IIT Madras curriculum offers flexibility through an increased number of electives and an opportunity to pursue interdisciplinary dual degree (IDDD) programs as envisioned in the NEP. Over the next six years, IIT Madras will add various multidisciplinary dual degree options to the existing eclectic mix of IDDD programs. These multidisciplinary programs will nurture innovation, creativity, higher-order thinking, and real-life problem-solving capabilities and integrate humanities, social sciences, and management into STEM education. Further, the IDDD programs can be expanded into joint international Master's programs with opportunities for a semester exchange.

- **TO MOVE TO HYBRID PEDAGOGY MODE FOR ALL COURSES**
- **TO PROVIDE AT LEAST 20 MULTI-DISCIPLINARY PIVOT OPTIONS FOR UG STUDENTS**
- **TO BE OFFERING AT LEAST THREE ONLINE DEGREE PROGRAMS WITH A TOTAL ENROLLMENT OF 50,000**



In addition to dual degree options, IIT Madras will expand and augment minors that allow students of one discipline to specialize in a specific domain of their interest from another discipline. Faculty will be encouraged to implement novel pedagogical approaches for promoting multidisciplinary learning and thinking.

Through such innovative multidisciplinary programs, IIT Madras will build a trained workforce that will enthusiastically attempt to solve the grand challenges in areas of global interest.

Reinforcing Course-based PG Programs

IIT Madras offers outstanding course-based PG programs such as MTech, MSc, and MBA. Concerted efforts will be made to strengthen and diversify intake in these programs. IIT Madras will explore the possibility for direct admission of well-qualified students from CFTIs to these Master's programs. IIT Madras will also aggressively pursue industry-supported Master's fellowships.

New Programs and Academic Outreach

- Introduce hybrid and online PG programs
- To start multidisciplinary PG programs in current areas such as health policy studies, computational linguistics, disability studies, environmental humanities, digital humanities and medical humanities.
- Build online UG programs and diplomas
- Establish international masters and dual degree programs
- Outreach to schools and colleges through exhibitions, summer fellowships, etc.

Flexible, well-rounded, inclusive programs

- Enable an internship year option for UG students
- Facilitate non-competitive and continuous evaluation to improve student life.
- Improve inclusivity through assistive technologies
- Establish finishing schools, writing centers, etc.
- Provide personalized career counselling
- Create a forum for reflection and student interaction

In addition to increasing the number of students admitted, these programs will also be designed to increase interaction with industries through internships, industry-defined projects, etc. This aims to align these Master's students towards joining core industries and contributing to their discipline. IIT Madras will collaborate with top international

universities to start joint course-based International Masters' programs. Through hybrid pedagogical approaches and opportunities for a semester exchange, these programs can admit students from different countries and create a global impact.

Outreach Through Online Degree Programs

IIT Madras has been a pioneer in online education both nationally and internationally. Over the past 7 years, IIT Madras has led the NPTEL online certification effort resulting in mainstreaming of Massive Open Online Courses (MOOCs) in the country through a countrywide local chapter colleges initiative and establishment of efficient credit transfer mechanisms for NPTEL MOOCs through the SWAYAM program. The NPTEL experience was a key enabler of IIT Madras' Online Diploma/BSc in Programming and Data Science, which was launched in Jan 2021, and today (Jan 2022) boasts of more than 12,500 enrolled students. NPTEL online certification and the online BSc are key innovations promising high-quality education on a large scale, which is and will continue to be a vital need of our young nation.

Looking ahead to the next six years, IIT Madras will lead innovations in the sector of online higher education, and meet and exceed national expectations outlined in the NEP by offering curated, employment-oriented, high-quality, Bachelors' and diploma programs in select disciplines. A special effort will be initiated to make IIT Madras online education programs accessible and inclusive. In addition to Bachelor's programs, online and web-enabled PG/Master's programs will be designed and offered primarily targeting industry professionals.



INNOVATION AND ENTREPRENEURSHIP



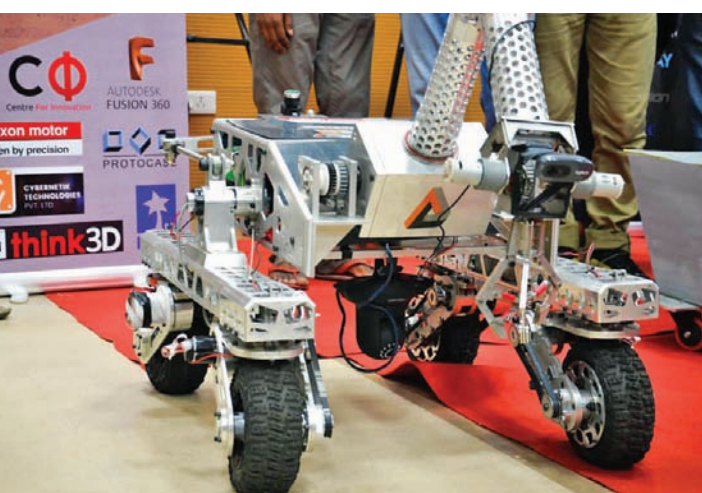
IIT Madras has the most successful innovation ecosystem in Indian academia. The reputation is built around the IITM Incubation Cell and the IITM Research Park: India's first university based research park that houses industries that have significant activities in R&D. IITMRP enables faculty members and student entrepreneurs to get critical industry inputs that are helpful in product conceptualization and market acceptance.

The IITM Incubation Cell provides a nurturing environment to nascent start-ups by providing support that helps them focus on working on their venture rather than get hassled by compliance and other requirements. The ecosystem nurtures interactions with like-minded people and more importantly supports risk taking. This has enabled us to exceed the previous planned target launching twenty companies in a year.

Pravartak, a recent addition to the innovation ecosystem, provides a holistic ecosystem for I&E in technology areas of national importance – comprising components for conducting translational research, product development, international collaboration, and then supporting entrepreneurship.

The Centre For Innovation (CFI), the pre-incubator NIRMAAN, the Entrepreneurship-Cell (E-Cell) and Gopalakrishnan-Deshpande Centre (GDC) form the backbone of

- TO DOUBLE INNOVATION AND ENTREPRENEURIAL ACTIVITIES TO RETAIN AND DRIVE INSTITUTE'S LEADERSHIP POSITION
- TO INJECT ENTREPRENEURIAL THINKING INTO ALL ACTIVITIES OF THE INSTITUTE
- TO FACILITATE 20% OF FACULTY AND 10% OF STUDENTS TO BE INVOLVED IN STARTUPS AND OTHER ENTREPRENEURIAL INITIATIVES
- TO LEVERAGE THE 10X INITIATIVE OF IITM RP TO CREATE 100 MORE STARTUPS, NEW TECHNOLOGIES, GROW HUMAN CAPACITY IN DESIGN AND INNOVATION
- TO CREATE AN I&E FUND OF ₹100 CR TO SUPPORT NEW INITIATIVES
- TO ENSURE THAT AT LEAST 5 TECHNOLOGIES ORIGINATING FROM IITM RESEARCH TO SCALE TO COMMERCIALIZATION



the innovation ecosystem of IIT Madras. CFI, India's largest student-run innovation lab, is the entry point to the ecosystem for students. At CFI, students generate interesting ideas, form teams, implement and test them. These are further nurtured, considering the technical and commercial aspects, at NIRMAAN before being supported and guided at E-Cell and GDC in their journey to become a product to the society. In the coming years, we will strengthen the ecosystem through better integration, further streamlining of activities, and engaging students at all levels of study; from BTech to PhD and post-doctoral researchers. We will leverage the 10x initiative of the IITMRP to create more start-ups, new technologies and grow human capacity in design and innovation.

As part of our vision, the Institute will push innovation and entrepreneurial initiatives to drive its leadership position and encourage development of new approaches to achieve quality, scale and objectives. We will encourage a broader view of innovation across the spectrum of activities carried out in the Institute. For instance, an online 3-year degree program is an impactful innovation in how education could be delivered. There will be greater focus on innovation and entrepreneurial activities that have greater social impact.

We will look to expand innovation activities on campus to interact with the larger ecosystem. Some of the facilities shall also be opened to attract external individuals who have a proven record of interest in innovation. Our students in the ecosystem shall be given opportunities and support to visit top innovation ecosystems in the world, to meet similar minds, and maintain ours as one of the best. To facilitate these activities, an innovation and entrepreneurship fund will be created with contributions from income generated from such activities as well as alumni support.

HUMAN RESOURCES

FACULTY

Faculty are the mainstay of an academic and research institution. The strategy on faculty as an important human resource is focussed on making IITM among the top-two destinations in the country for faculty applicants. Once good faculty are on the rolls, we will devise mechanisms to enable them to be maximally productive based on their preferences and passion for fundamental and translational research, innovation and entrepreneurship, student engagement, outreach and so on. The Institute will also work with the faculty to enrich their life during and after service.

In order to achieve the above outcomes, the following focus areas have been identified for action.

Strategies for Faculty Recruitment

To make faculty recruitment and onboarding more effective, the process will be honed by a human resources section. The HR section will cover the entire gamut of the recruitment process: right from the identifying to selecting the best candidates. The Institute will identify pathways for nurturing potential faculty material while implementing affirmative recruitment policies as per Government norms. We will strive to improve perception of IITM and focus on the priorities of faculty applicants to become a preferred destination for candidates. We shall identify emerging areas of research globally and recruit promising candidates who have specialised in such areas. We will also identify sources of likely foreign faculty, particularly at the entry level, at least for a fixed period of two to three years. This will develop the catchment for global recruitment of permanent faculty in the years to come.

On-boarding of New Faculty

The Institute will put in place better mentoring and hand-holding mechanisms for new faculty. These will include induction workshops and periodical HR training modules, as well as modules to enhance their pedagogical skills. Contemporarily essential facilities will be provided to new faculty at the time of joining even when there are infrastructural constraints. New faculty members desirous of industry collaboration or consultancy early upon joining will be facilitated to discover such opportunities, particularly at the IITM Research Park. The Institute will also arrange for professional and personal financial planning guidance for new faculty members. Faculty appraisals will be conducted on a periodic basis to provide early course correction and assistance as needed.

Faculty productivity metrics will be streamlined to define productivity of different types and levels, such as basic and additional. A comprehensive approach will be

- **TO ENSURE THAT IITM SHALL BE #1/#2 DESTINATIONS FOR TOP FACULTY CANDIDATES FROM INDIA AND ABROAD (90% ACCEPTANCE RATE OF OFFERS MADE).**
- **TO IMPROVE PERCEPTION OF IITM ON ACADEMIC AND RESEARCH CULTURE, INFRASTRUCTURE AND FACILITIES.**
- **TO PROVIDE APPROPRIATE MENTORSHIP TO ALL EARLY CAREER FACULTY.**
- **TO CREATE AN EFFECTIVE APPRAISAL OF PRODUCTIVITY OF ALL FACULTY AND STAFF WITH FEEDBACK PROVIDED.**
- **TO PROVIDE AT LEAST TWO RELEVANT TRAINING PROGRAMMES FOR EACH STAFF MEMBER PER YEAR TO IMPROVE PERFORMANCE AND PRODUCTIVITY.**
- **TO RECOGNIZE HIGH-PERFORMER STAFF MEMBERS APPROPRIATELY.**
- **TO SUPPORT PERSONAL WEALTH CREATION AND RETIREMENT PLANNING THROUGH INSTITUTIONAL MECHANISMS.**

developed to measure productivity, encompassing teaching, research, publications, projects, IP creation, innovation and entrepreneurship, outreach, and student engagement. Each faculty member will thus be encouraged to excel along the axes where their passion lies, even while they fulfil the basic expectations on the teaching and research fronts. We will strengthen and utilize the Faculty Academic Profile (FAP) for this purpose.

We will encourage and assist faculty to attract extramural funds for their research. In particular, we will focus on attracting industry support for research by PhD scholars. As a complementary strategy, the Institute will incentivize faculty productivity through attractive monetary and non-monetary awards/rewards. Existing mechanisms will be strengthened and reinforced as required. These will be expanded to reward non-teaching/research activities such as outreach and involvement in students' activities/service roles. Mentorship will be available for all early-career faculty to strengthen productivity and growth, and their engagement with industry and the IITM Research Park.



Personal Financial Planning by Faculty

Faculty members tend to neglect their personal financial and wealth planning, and attempt to set it right very late in their career, typically at the time of retirement. The Institute will provide assistance to faculty members early in their career towards residential property planning, and to address cashflow aspects post retirement. The Institute will enable the Alumni and Faculty associations to assist the faculty members in this regard.

STAFF & PROCESSES

Objective

To establish HR Policy and processes for staff to enable IITM to recruit the best technical and administrative staff members and enable them to reach their full professional and personal potential while contributing to the achievements of the Institute.

Guidelines

The plan has been formulated with strict adherence to GoI/DoPT/BoG norms. A core objective is the professional and personal development of staff through timely professional growth milestones. The Institute envisages a steady improvement in occupational health and safety through a continuous review process with the aim to achieve best-in-class working conditions for our faculty, staff and students. A variety of steps are

proposed to improve sensitivity to gender and diversity at the workplace. The interactions with staff and faculty will be based on utmost transparency within an ambience of trust and respect.

Enablers

The primary resource enablers proposed are a properly staffed human resources section, and an information-technology platform for human resource management processes. Adoption of relevant standards such as ISO30414 and implementation of best practices through services of consultants/organizations specialised in human resource management are expected to enable the HR section to realise these objectives.

Processes to be Addressed

As a part of the strategic plan, the following processes will be established/improved: definition of roles, responsibilities and competencies of various staff positions, structuring and standardisation of recruitment and promotion processes at all levels, improvement in communications between the administration/departments and faculty/staff members, and improvements in the annual performance evaluation and grievance-redressal processes. The Institute will establish relevant training programs for aptitude and attitude development, and initiate programs to advise on career planning, retirement and a holistic campus life. We will also assess opportunities to improve the current system for the recognition of excellence, and establish a scheme to enable early retirement of non-performers. The Institute will, as a policy, outsource jobs in which career growth within the Institute is limited.



INFRASTRUCTURE

Over the years, the size of the student body has been steadily growing. There was an increase from about 5,000 to 8,500 starting 2008 and then to 10,500 starting 2019. There is a proportionate increase in the number of faculty and non-teaching staff in the institute, extending into the next plan period. The Institute has made a successful transition from primarily being a teaching institute to an excellent teaching and research institute. This was possible due to a multi-fold increase in research activity in focussed areas and creation of many interdisciplinary research centres of excellence. Increasing student and faculty strength, research and developmental activities and population in the residential area have increased the need for more built space, fast connectivity and adaptation of new infrastructure technologies.

Although situated in a large metropolitan city, the IITM campus is blessed with a natural forest-type ecosystem. It is also home to some endangered species such as the black buck. The lush green environment provides a unique ambience which is conducive to learning and nurturing innovative ideas. Over the years, the ecosystem and biodiversity have been carefully protected. Increasing infrastructure development should not adversely impact the environment and IITM will continue to protect and conserve the rich biodiversity of the campus.

As with other parts of Chennai city, the IITM campus is also subjected to extreme weather conditions such as cyclones and droughts. The recent pandemic has also revealed the importance of robustness and resilience of the infrastructure for IITM to continue its activities in the face of adversities.

A comprehensive second master plan was prepared in 2011-12 to meet the increasing demands due to the increase in student

- TO ENSURE THAT 100% OF THE BUILDINGS IN THE ACADEMIC ZONE SHOULD HAVE BEEN UPGRADED TO GLOBAL STANDARDS OF FITMENT AND MAINTENANCE
- TO CREATE NEW INFRASTRUCTURE WITH AVERAGE OUTLAY OF ₹75 CR PER YEAR
- TO INCREASE INTERNAL REVENUE GENERATION BY ABOUT 10% YOY TO FUND THIS EXPANSION
- TO BRING TWO NEW RESEARCH CENTRES PER YEAR TO THE NEW DISCOVERY CAMPUS
- TO PROVIDE CAMPUS-WIDE HIGH SPEED DIGITAL CONNECTIVITY WITH 100% COVERAGE
- TO MAINTAIN A SUSTAINABLE CAMPUS WHICH CONSERVES RESOURCES AND PROTECTS, PRESERVES AND NURTURES THE BIODIVERSITY



strength to 8,500. The infrastructural requirements to sustain this increase were planned at that time and were executed by 2020. However, there has been a further increase in the total strength of the students in the Institute from 2019 onwards. The current student strength is around 10,500.

Many campus utilities, such as water supply, sewerage, solid-waste management and the internal transport system are more than fifty years old. They need upgradation and augmentation to make them fit for use and efficient.

The pandemic has brought to the fore the need and opportunities for innovative teaching and learning. Online and hybrid learning needs fast and robust internet connectivity. There is an urgent need to revamp classrooms from the conventional chalk-and-board type to hybrid rooms with facilities for recording, computing, transmission and networking.

IITM has been recognized as an Institute of Eminence by the Government of India. This calls for (i) development of world-class research laboratories to carry out state-of-the-art experimental work, (ii) increasing the accessibility of facilities to faculty and research scholars through the creation of more shared research facilities, and (iii) establishment of high-end computing and network systems which facilitate collaborative work with researchers in universities abroad.

As an institute aspiring to be world-class, IIT Madras has to live up to its responsibility to create a sustainable campus with responsible consumption of resources, implementation of recycling and reuse of crucial resources such as water, innovative energy conservation methods and increased use of renewable energy sources, all of which lead to minimal carbon and water footprint. It has a social responsibility to preserve its unique ecosystem and biodiversity.

Space utilization is almost reaching its limits in the present campus, given the constraints of minimizing environmental impact and maintaining ecological balance. The old horizontally-spread infrastructure in the present campus has been giving way to vertical



infrastructure in the academic, hostel and residential zones. However, there are limits to vertical growth. Furthermore, certain research facilities need substantial space at ground level. Therefore, the “Discovery Campus” is being established in Thaiyur to cater to the increased space requirement. Establishment of the Discovery campus is a great opportunity for infrastructure expansion, despite the geographic separation of about 30 km.

It is pertinent to note that the Government does not provide grants for creation of new infrastructural facilities in the Institute. The current policy of the Government is to allow the Institute to take loans for creating the infrastructure and then repay the principal using the internal revenues generated by the Institute.

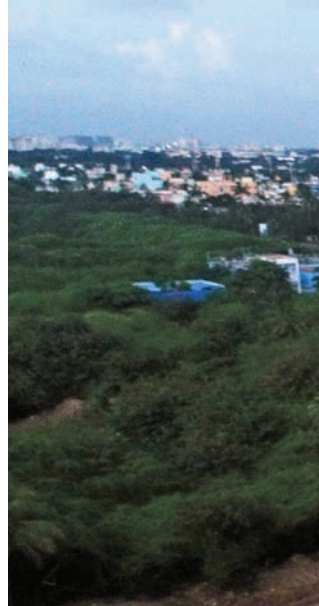
Infrastructure in the Academic Zone

To cater to a large body of students and make teaching more effective under new circumstances, the following facilities will be created:

- Smart classrooms with state-of-the-art facilities to facilitate hybrid online/offline teaching, and easy and effective interaction with students. Immovable and movable infrastructure will be standardized to achieve uniformity and reduce cost.
- Large, centrally-managed classrooms and lecture halls as common facilities for all the departments and they will be centrally managed.
- Small, department-managed classrooms with less than 50 seats will be created in all departments.
- International norms will be adopted to create world-class teaching and research laboratories.

As a top-ranking institute for research and technology development, the following laboratory, network facilities and ambience will be created:

- World-class, centralized common research facilities with state-of-the-art instrumentation, with equitable access to all students and faculty. Extramural and alumni funding will be used for this purpose. Unnecessary duplication of facilities will be avoided and the facilities efficiently utilized through proper time sharing. This is in line with the present policy of government funding for sponsored research projects.
- High-end computing facilities and a high-speed network, equivalent to those at top academic institutes in the world, will be established.
- To substantially increase research output and performance adequate office space with all essential facilities for research scholars.
- Appealing open spaces for student-student and student-faculty interactions, for an ambience that encourages creativity.
- A user-friendly and attractive library with adequate space for interactions, discussions,





leisurely thinking and social networking. Designated cycle and pedestrian lanes to create sustainable mobility. Parking spaces for two wheelers and four wheelers will be well organized, and motorized traffic from campus residents will be minimized.

Accommodation for Students/Faculty/Staff/Project Staff

Housing and hostel facilities need to be increased to accommodate new faculty and staff, and the increasing student population. Old buildings with large footprint areas are being demolished and high-rise buildings constructed in their place to meet future requirements. IITM will also attempt to identify builders to construct and maintain apartment blocks exclusively for IITM faculty/staff/contract employees in a PPP model. Transport facilities and all other amenities will be provided to encourage faculty and staff to move out of the campus to either owned or rented accommodation.

The following are the key strategies for increasing living facilities on the campus and also returning space to nature.

- Hostels will be planned for another 1,000+ seats over the next six years. A dynamic planning strategy will be adopted to cater to the increased needs. Hostels will be located as per the campus master plan.
- The number of apartments for married students will be increased.
- Based on requirement for faculty/staff accommodation, high-rise buildings will be constructed after demolishing old buildings as per the master plan.
- More natural space will be restored by demolishing flood-prone and dilapidated old quarters.

The mantra for all the future infrastructure development will be “sustainability and safety”. The resource consumption and impact to the environment will be reduced through recycling and reuse, employing energy-efficient systems and proper waste collection.



STUDENT LIFE

Holistic development of students with equal emphasis on academic, physical, mental, and cultural aspects will be an important goal of the Institute. Since quantitative targets for these are unlikely to be meaningful, yearly qualitative evaluation will be conducted to assess progress made on these fronts.

Physical well-being

Requirements for improving the physical well-being of the students will be brought out by careful evaluation of the facilities needed for sports, maximizing the utilization of current facilities, and review of the effectiveness of current programmes such as the NSO. Safety and security of students on campus will be assured using state-of-the-art technology and management practices.

Mental well-being

Existing schemes for the mental well-being of students will be strengthened further. The functioning of the wellness centre will be improved through involving professional management as well as creating a Wellness Center. Scientific methods will be applied for identifying the root causes for academic and non-academic stress in students. Where possible, adverse conditions that are detrimental to mental health will be eliminated. Students will also be equipped with stress management skills so that they are able to come out of difficult experiences stronger. Faculty will be trained to deal with students who are unable to manage stress. There will be more courses for holistic development both for faculty and students. Unless students, staff and faculty are able to maintain a healthy mind and body, other strategic goals of the Institute cannot be achieved. Hence



more faculty will be encouraged to participate in activities related to student welfare.

Culture

Activities that promote a culture of integrity and consideration to others will be planned. Existing mechanisms that facilitate teamwork among students, such as inter-hostel competitions, extra-curricular and co-curricular activities, and cultural events will be strengthened. The aim is to create a self-reinforcing ethos through encouragement of hard work, wholesome fun, and team activities. After graduation, we should have alumni that stand tall for each other, for the Institute, and for society, as a force for the good.

Sustainable Living

Students will be sensitized to adopt sustainable living methods. Strategies will be developed to discourage students from wasting resources such as electrical power, food, and time. Incentives and rewards will be used to promote sustainable living.

Ease of Living

Smart systems will be implemented to improve the ease of student living. Modern information technology and efficient management techniques will be leveraged to create a positive experience for students. A single-window system will be implemented for all matters concerning student life; all the systems will be tightly integrated for optimal performance. All information relevant to students, including rules, ordinances, and key contact details, will be accessible electronically and will be in a form that can be queried and retrieved easily. IT managers will be specially

- TO PROMOTE A CULTURE OF HOLISTIC DEVELOPMENT AND TEAM-WORK AMONG STUDENTS
- TO ENSURE THAT SPECIAL-NEEDS STUDENTS' REQUIREMENTS WILL BE IDENTIFIED AND WILL BE GIVEN ADEQUATE ATTENTION IN THE PLANNING OF FACILITIES
- TO PROVIDE LIVING SPACE TO EACH STUDENT IN THE HOSTELS THAT MEETS INTERNATIONAL NORMS
- TO PROVIDE STATE-OF-THE-ART SPORTS AND CULTURAL FACILITIES TO ALL STUDENTS
- TO CREATE NEW INTERACTION SPACES FOR STUDENTS AT MULTIPLE LOCATIONS
- TO CREATE A SELF-REINFORCING ETHOS THROUGH ENCOURAGEMENT OF HARD WORK, WHOLESOME FUN, AND TEAM ACTIVITIES
- TO FACILITATE A CULTURE OF STANDING TALL FOR EACH OTHER, FOR THE INSTITUTE, AND FOR SOCIETY, AS A FORCE FOR THE GOOD
- TO SUBSTANTIALLY IMPROVE EASE OF STUDENT LIVING THROUGH SMART SYSTEMS
- TO CREATE AN ATTRACTIVE, VIBRANT LIVING ENVIRONMENT FOR THE ACADEMIC, PHYSICAL, MENTAL AND CULTURAL DEVELOPMENT OF THE STUDENTS, FACULTY AND STAFF



entrusted with the task of ensuring that all the information is up-to-date and available digitally in a user-friendly form. Standard queries will be answered automatically through state-of-the-art machine learning techniques. All requests will be routed to appropriate sections and administrative units automatically. As much as possible, handling of requests will be automated, without excluding the possibility for manually acting upon special cases and situations by higher authorities.

IT infrastructure in the hostels, messes, and other places in the hostel sector will be enhanced. It should support online learning and interactions between students, wherever they are on campus.



Attractive Living Environment

Creative re-design of hostels and the environment will be undertaken with support from students and alumni. Professionalism in the management of hostels will be improved significantly. Requirements for facilities will be predicted well in advance and planned carefully. Rational allocation of resources for sports, arts and cultural activities will be carried out.

Stakeholder Engagement

New IT systems will be developed for active involvement of stakeholders in all the decisions. Students will be encouraged to discuss internal matters that concern them in a healthy and amicable environment. Constructive suggestions arising out of these discussions will be propagated to decision-making structures for consideration. Students will be informed about the results of their proposals and the rationale for the final decisions.

PLACEMENT



A primary attraction for any student to select a college/university of study is the career opportunities at the end of the study period. While entering an IIT does guarantee a suitable progression towards a good career, there are differences in the potential opportunities that a student can get at different IITs, because of a number of reasons, including the location, perception, history (of prior placements), among others.

To provide a level playing field, the All-IIT Placement Council has mandated a common start date for the placement process across all IITs, i.e. December 1 of each year. Highly sought-after recruiters are generally invited within the first three days – such recruiters often send multiple teams across different IITs. These are primarily consulting, finance/banking, and tech-driven companies.

In the past few years, several recruiters have looked towards providing internship opportunities to pre-final year students in an attempt to get to know them over a longer interaction period (can be anywhere between 6 and 10 weeks). At the end of the internship period, a number of companies make 'Pre-Placement' Offers (or PPOs) to the students, which is essentially a job offer. Students who accept such offers do not participate in the placement process. The number of PPOs has increased significantly, indicating the growing importance of internships.

At IIT Madras and at several other IITs, the placement processes for the students in management programs are handled separately. This is because there is considerable difference in the job profiles put forth for management and technical graduates.

Challenges and Opportunities

There are numerous challenges in ensuring the best placements for our students, including:

- Intense competition among IITs and the location of sought-after recruiters. Increase in the online mode of recruitment, brought on by the pandemic in the, offers a good opportunity to address the disadvantage due to recruiter location.
- Finding suitable opportunities for research scholars. Academic recruitment processes at top institutions are not conducted in a mass placement mode. Companies with R&D opportunities also typically do not participate in the placement process, as they are better filled through a locally-managed process. Additionally, the existing set up for career development is geared more towards helping course programme students, and does not specifically target research scholars.
- Employment in core engineering sectors. The pay packages in the core sector are often not competitive compared to consulting and other non-core sectors. This creates a greater demand among students for non-core opportunities, while reducing interest in core companies.

The online mode of interaction throws open new opportunities to level the playing field. Further, the visibility of the research scholars' work can also be increased by online outreach.

Key Strategies

Enhancement of internship opportunities is a primary goal going forward. This can be achieved through the following specific strategies:

- Tap into nation-wide internship platforms for more online internships. In the current mode, online internships will continue to thrive, but the process at IITM currently does not engage companies offering such internships. Thus, engaging with service providers would increase the range of opportunities.
- Promote 'semester-off' programs: Several companies, especially in the core engineering space, prefer to have students spend longer than the 2-month window that is available in the summer break. While taking off an entire semester was not possible in the past, the online mode of coursework has given an opportunity to explore this idea further. In the current set up, it may be possible for students to go for longer-term internships, and convert the same into PPOs.

Judging the kind of projects that IITM faculty take up in collaboration with the industry, there is good potential for enhancing the core opportunities to the students, especially in streams such as Aerospace, Mechanical, Civil, and Metallurgical Engineering. Some of the strategies that can be followed in this regard include:



- **TO FACILITATE AN ENVIRONMENT FOR MAXIMISING THE PLACEMENT INTERNSHIP OPPORTUNITIES FOR OUR STUDENTS IN THE BEST INDUSTRIAL AND ACADEMIC POSITIONS**
- **TO ENSURE THAT 90% OF THE TOP-50 TECH COMPANIES TO BECOME RECRUITERS**
- **TO ENABLE NEW EXTRA-CURRICULAR OPTIONS FOR STUDENTS TO AID PLACEMENT**



- Formation of department level core employment monitoring committees – these will help identify potential recruiters.
- Industrial advisory boards for each department – these will help to steer the curriculum and student development towards the current industry needs.
- Outreach by faculty to core industry – this is a practice already followed in Management Studies, and can help in showcasing the skills of our students to industry.
- Connect with alumni to establish links with companies in India and abroad to identify good opportunities for our students.
- During placements, give better slots to core companies – this is a strategy that has already been put into action in some ways, especially for Masters' students, and has yielded good dividends.
- Assign credits to Research Park companies for recruitment – this will bring in more Research Park companies to recruit from IITM. Greater IITM faculty engagement with Research Park companies will further enhance opportunities. An environment where IITM-partner and Research-Park companies preferentially recruit IITM students needs to be created. Constant outreach with such companies, accompanied by timely dissemination of IITM events and research will lead to such an environment.

IIT Madras has arguably among the best research environments in the country, and produces a large number of PhD graduates year on year. Not many of the PhD graduates from IITM have made it as faculty members to the top universities in India and abroad. Additionally, there are few PhD students that get picked up for key industry positions. Increasing research scholar placements is a top

- **TO ENSURE THAT 100% OF THE STUDENTS HAVE ACCESS TO COMMUNICATION AND SOFT SKILLS TRAINING**
- **TO CREATE SYSTEMS THAT ENSURE 5% OF STUDENTS WILL BECOME ENTREPRENEURS WITHIN THREE YEARS OF GRADUATION**
- **TO PROVIDE CONTINUOUS CAREER PLANNING AND DEVELOPMENT FOR ALL STUDENTS INCLUDING RESEARCH SCHOLARS**
- **TO ENSURE THAT >80% OF ALL STUDENTS WILL GET DESIRED JOBS THROUGH STRONG INTERNSHIP-DRIVEN OFFERS**
- **TO ENSURE THAT, FOR CORE ENGINEERING PLACEMENTS, IIT MADRAS PARTNER-COMPANIES AND RP COMPANIES TO BE FIRST PORTS OF CALL**
- **TO ENSURE 100% PLACEMENT FOR PHD STUDENTS WITHIN SIX MONTHS OF GRADUATION**
- **TO ENSURE THAT MORE THAN 50% OF PhD SCHOLARS WHO GOT ACADEMIC PLACEMENT WILL HAVE FOUND FACULTY POSITIONS AT TOP CFTIs AND/OR POSTDOC OR FACULTY POSITIONS AT GLOBAL UNIVERSITIES**

priority going ahead. Some of the key strategies for enhancing the uptake of the PhD candidates in top academic institutions include:

- Popularize research scholar seminars/PhD defense presentations across other IITs – With the online mode of seminars and colloquia, it is now possible to reach out to a much wider audience, which includes research groups at other IITs and even top international institutions. This could bring much greater visibility to the work of the PhD scholars, and provide an advantage for faculty/post doc positions.
- Promote visibility of high-performing PhD scholars (including those who get research awards) at other Institutes.
- Initiate processes to train PhD students who wish to pursue an academic career – this can be realized through the newly proposed 'Career Services Cell', which is explained in detail in the annexure.



The following specific strategies are suggested for enhancing industry opportunities for PhD graduates:

- Pan-IIT virtual job portals – Often, recruiters of PhD graduates do not find sufficient numbers of applicants for specific job profiles, due to the specialized nature of the PhD candidates. A common job portal across various IITs can bring together students with specific skill sets across all IITs, and enhance the opportunity over a range of companies.
- Open houses in the departments and networking sessions with industry to showcase research scholars' work – activities have to be organized year round, rather than focus all efforts during a one-week campaign.
- Encourage such scholars interested in an industrial R&D career to spend an extended period during their PhD research phase at the R&D division of a company. It may be possible to pursue research for the thesis that is also of interest to the company and even get financial support for such research.
- Connect with alumni – similar to the outreach required for increasing core placements, connecting with alumni would help research scholar placements in a big way.
- The placement process for the PhD graduates can be conducted in a year-round manner, delinking from the main placement process. This is because PhDs do not have a specific calendar for completion of the degree.

A major step towards implementing the above strategies would be to modernize the office and make it more professionally managed. In this regard, efforts will be made to bring in full-time staff with prior HR experience at major companies. The funding for the office modernization can be sought from the alumni.

INTERNATIONALISATION

An enhanced international presence will play a very important role in IIT Madras' brand as well as impact its research and academic environment. Towards this, promoting academic exchange of undergraduate and graduate students and faculty with top universities in both directions will be important. We aim to have about 5% of our students and faculty from other countries by 2027.

Towards this, we propose to raise the number of exchange undergraduate students visiting IIT Madras from universities abroad from the current average of 120 students per year to 250 per year. This would be done by focusing on under-represented countries and through innovative summer/winter schools at IITM as well as global industrial internship programs. Apart from this, establishing dual-degree programs targeting international students interested in obtaining a degree at IITM, could attract top undergraduate students to IITM.

Exchange visits by IITM students to top international universities is aimed at 300 international visits per year from the current 180 per year. This could be achieved by encouraging more participation in exchange programs at affiliated universities, formal research internships, summer/winter schools and other academic opportunities.

With the increased acceptability of virtual interactions, it is proposed to enhance the number of virtual multi-institute meets and conferences to foster cultural and academic exchange. Conducting virtual student competitions and establishing collaborative academic projects with affiliated institutions would help in creating an online innovation incubation community, promote an exchange of ideas and thus help in expanding the exposure for our undergraduate students.

A lively exchange of graduate students with international research teams will play an important role in enhancing the research environment. Specific steps towards this will involve improving the number and quality of conference visits by research scholars to disseminate their research output effectively. A new system of collaborative research visits for periods ranging from about



- **TO HOUSE 5% INTERNATIONAL FACULTY AT IITM**
- **TO HOUSE 10% GRADUATE STUDENTS OF INTERNATIONAL ORIGIN**
- **TO CREATE TWO OPERATING INTERNATIONAL SATELLITE CAMPUSES**

- **TO ENSURE THAT 50% OF GRADUATING PhD STUDENTS WOULD HAVE SPENT AT LEAST THREE MONTHS IN A FOREIGN UNIVERSITY/LAB**
- **TO ENSURE THAT 50% OF FACULTY WILL HAVE ACTIVE PUBLISHING COLLABORATION WITH AN INTERNATIONAL COLLABORATOR**
- **TO GROW TO 400 ACTIVE MoUs WITH INTERNATIONAL UNIVERSITY PARTNERS**
- **TO GROW TO 100 JOINT PhD DEGREES TO BE AWARDED BY 2027**



three months to a year for the research scholars will be established to give them access to a wider range of facilities and research environments. Enhancing the number and quality of joint degree programs will also provide an essential component in this. The exchange of ideas and scholars with international universities should be a two-way street. Enthusing a large number of research scholars from around the world to spend time at IITM will help enhance the vibrant research environment at IITM. Encouraging a series of diverse and high-quality conferences and workshops on IIT campus will provide a foothold for encouraging international visiting research scholars.

International presence of IITM faculty could be enhanced by easing the procedures for international visits and emphasizing the benefits of international interactions. It is proposed to support high-achieving individual faculty members on prestigious lecture tours to enhance the visibility of their research. Attracting top international faculty to IITM will begin with professionally run conferences. To help with this, the Office of GE is creating a professional conference secretariat. A comprehensive support system for high-achieving international postdoctoral candidates and Young International Faculty will help attract early career international faculty to IITM. It is proposed to establish Named/Corporate chairs for mid-career/senior international faculty as well as prestigious chairs for distinguished faculty to encourage a continuous engagement with IITM.

ALUMNI AND CORPORATE RELATIONS

The Goal

In 2027, the office of Alumni affairs and Corporate Relations (A&CR) aims to seamlessly connect all our alumni, and a majority of corporates in the Fortune India 500 list as well as other corporates, to the Institute. The alumni should derive high satisfaction from their engagement with IIT Madras, must be well aware of the activities that the Institute is undertaking and derive mutual benefit. Corporates should proactively seek IITM out to help them on projects due to IITM's reputation of producing the best outcomes. Our in-house capabilities shall enable us to develop high-quality proposals and informational material that will lead to iconic projects that IITM delivers on. Internally the A&CR office will work closely with faculty, students and various other offices on campus to help achieve IITM's objectives.

Vision

To facilitate high impact by effectively coordinating all of the Institute's relations with Alumni and Corporates

Strategy

To achieve this goal, we have identified three key thematic areas and a total of eight objectives within these areas. The three thematic areas are (1) Improving our networking with alumni and corporates, (2) Augmenting our fundraising efforts and (3) Reorganizing our internal functioning.

Improving Our Networking with Alumni and Corporates

We have identified three objectives. The first is to connect more effectively with a wider range of alumni, in particular with recently graduated alumni as well as with students who are about to graduate. The second is to establish relationships with corporates and alumni that are both long-term and recurrent. The third goal is to establish a strong network of alumni volunteers who can act as the bridge between the institute and alumni/corporates, all over the world.

Augmenting Our Fundraising Efforts

We have identified three objectives for this area: the first is to create bi-directional value where both the Institute as well as our alumni/corporate donors benefit from our collaborative efforts, thereby increasing our donor pool. The second is to increase the quantum of funds we raise annually. The third objective is to effectively use these funds for increased impact and to thereby encourage donors and corporates to provide additional funding to IITM.

- TO CURATE MULTI-DIMENSIONAL, LONG-TERM AND REPEAT CORPORATE RELATIONSHIPS INVOLVING R&D, INTERNSHIP/PLACEMENT, CONTINUING EDUCATION, CONSULTING, CSR, ALUMNI, DEPARTMENT ADVISORY AND INCUBATION
- TO PROVIDE A UNIFIED FACE FROM VARIOUS ARMS OF BOTH INSTITUTE AND COMPANY INVOLVED IN THESE DIVERSE ACTIVITIES IN ORDER TO REINFORCE MUTUAL BENEFIT
- TO SET UP SYSTEMS THAT CONNECT AT LEAST 50% OF ALUMNI TO THEIR ALMA MATER.
- TO CREATE AT LEAST 60 ENDOWED CHAIRS INSTITUTED BY 2027
- TO RAISE ₹125 CR* P.A OF CSR/CORPORATE GRANTS BY 2027
- TO GROW THE FUND-RAISING FROM ALUMNI TO ₹250 CRORES P.A. BY 2027
- TO EXPAND ALUMNI ENGAGEMENT (TIME AND EXPERTISE) WITH INSTITUTE AT 10% PER ANNUM
- TO BUILD A RESEARCH ENDOWMENT OF ₹1,000 CR TO HELP CREATION OF NEW COES.

Reorganization of Our Internal Functioning

We have identified two objectives here: the first is to improve our outreach and messaging to ensure that IITM's capabilities and the work done on campus are better understood by our alumni and corporates, while the second is to strengthen the A&CR organization in order to enable it to be more professional and corporate-like.

PLAN

Improving Networking

One of the main goals of improving networks is to connect with larger numbers of alumni. Since alumni connections typically happen several years after graduation from IITM, one goal of the current strategic plan is to establish these connections much earlier so that alumni can contribute to and benefit from the institute for a longer period of time. We aim to meaningfully engage with 50% of post-graduate alumni and 80% of undergraduate alumni within five years of their graduation. Meaningful engagement can take many forms – invitation to speak at campus, mentoring students, membership of committees and so on. Departments will be encouraged to connect with post-graduate alumni. Undergraduate students on the other hand often share higher levels of affinity with their hostels and therefore we will work through hostels to connect to larger numbers of undergraduate alumni. We expect 20% of our alumni to be engaged with IITM through their hostels.

Beyond improving our networks, we also aim to establish long-term relationships with both alumni and corporates such that their interaction with the Institute is not sporadic. Specifically we would like a large number of our alumni and corporates to engage with us on programs that last five years or longer, or on multiple projects over a similar time period. In order to do so, we realize the importance of clearly communicating both the progress and impact of our work to our stakeholders. We therefore plan to provide frequent and clear communications on the utilization of donated/sponsored funds to 100% of our alumni and corporate sponsors and donors. Further, we expect that by 2027, 30% of the alumni and corporates that we work with will be engaged with us on long-term endeavours spanning five years or longer.

Finally, we also realize that IIT Madras by itself cannot achieve our alumni and corporate relationship goals and in accordance with best international practices, a strong volunteer network is required. Several alumni do currently volunteer to help IITM through organizations such as IITMAA and IITM Foundation. In order to encourage more alumni to help evangelize the institute's activities, build our brand, connect with other alumni and corporate partners and so on, we aim to undertake the following activities. First, we plan to resurrect and popularize a 'Service to IITM' award that is awarded to alumni who have provided exceptional assistance to the institute. We also aim to identify specific volunteer opportunities and roles and communicate these to our alumni. These opportunities might be coordinated by various alumni chapters and organizations, or may be with the Institute directly. Through these means we plan to achieve a 10% increase in alumni volunteers year on year.

3 THEMES, 8 OBJECTIVES

IMPROVE NETWORKING

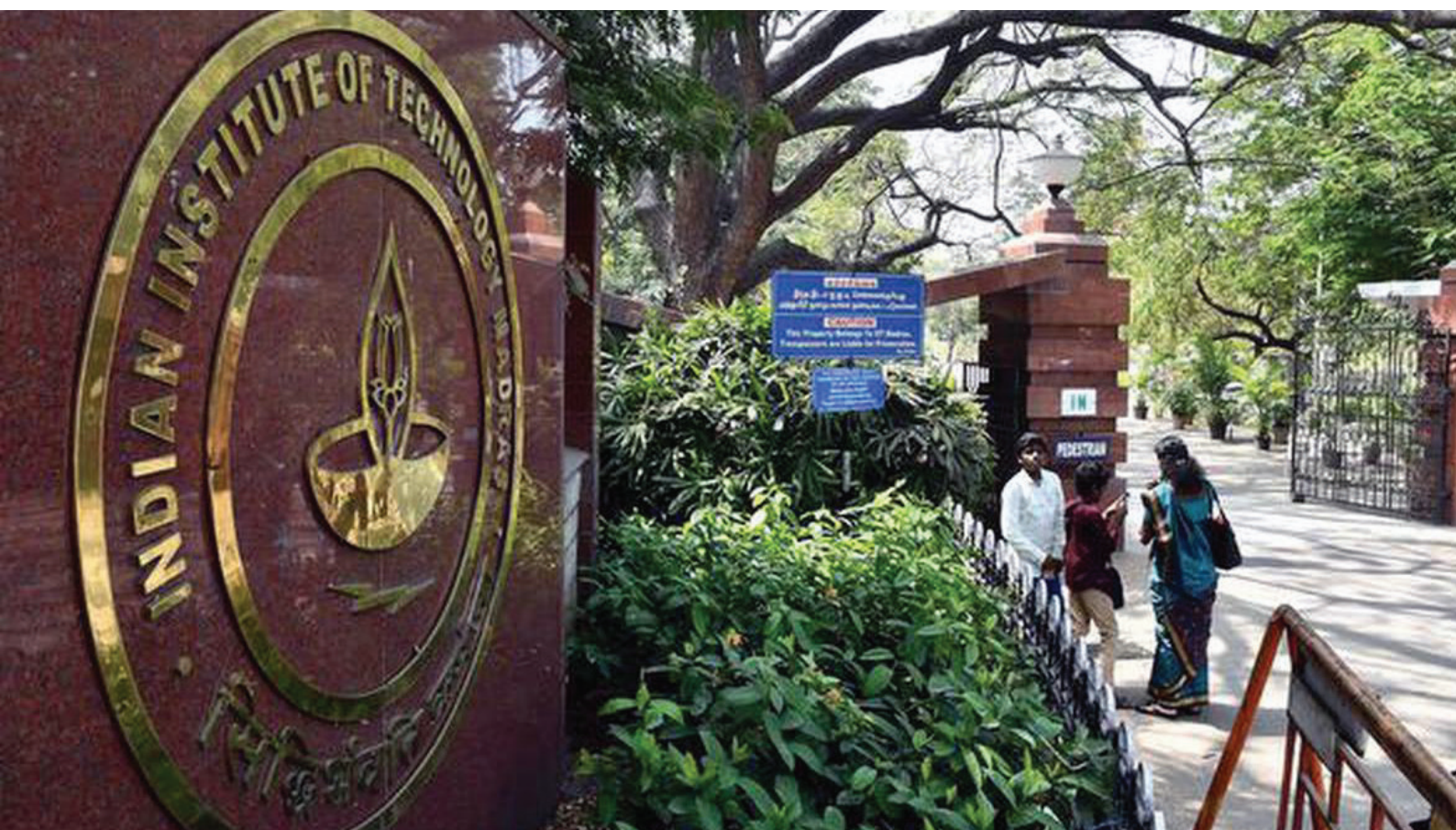
1. Connect effectively with students and new alumni
2. Establish Long Term Relationships with Stakeholders
3. Establish a strong volunteer network

AUGMENT FUNDRAISING

4. Create bi-directional value
5. Raise Funds
6. Effectively plan for fund utilization

REORGANIZE INTERNAL FUNCTIONING

7. Improve Outreach and Messaging
8. Organizational Strengthening



Augmenting Fundraising

In contrast to the earlier strategic plan that positioned fundraising as its preeminent goal, in this plan we view fundraising as a natural consequence of the activities we undertake to grow our networks, achieve impact through the projects we undertake, and communicate effectively with alumni and corporate partners. Specifically we see fundraising being positively impacted by the creation of bilateral value where alumni, corporates and society also benefit through the activities undertaken at IIT Madras. In order to do so, we (led by the IITM Alumni Association) will aim to create an equivalent of an 'IITM LinkedIn' system, either on the web or through an app, which allows alumni to connect seamlessly to one another and to the Institute, to pursue opportunities of mutual benefit. In addition, in order to make alumni and corporates more aware of the work that happens at IIT Madras so that they may be able to identify opportunities to collaborate, we plan to double the number of open-houses that IITM offers as well as the number of executive education programs on specialized topics. Through these mechanisms we hope to share cutting edge ideas with alumni and corporates and also provide a platform to build long-term relationships between these stakeholders and the various departments at IITM.

We hope to raise a cumulative annual amount of ₹500 Crore by 2027. Of this, ₹250 Crore will be raised from alumni towards our endowment, ₹150 Crore will be raised from corporates through Corporate Social Responsibility channels and a further ₹ 100 Crores will be raised from alumni and corporates via direct donations to the Institute. We expect a large quantum of alumni funds to come from repeat donors who are extremely satisfied with the impact of their earlier donations. Specifically we expect 80% of our donors at any given point of time to be repeat donors. In addition, we also realize the need to have more alumni contribute to the Institute and would like to see our first-time alumni donors

increase by 25% on an annual basis. From a corporate perspective, we aim to bring in at least five large, multi-year programmatic grants of \$1 Million or more (₹7.5 Crore), per year, as part of our fundraising target of ₹250 Crore from corporates.

In addition to raising funds, the utilization of these funds is very important, as is providing timely information to donors on the status of fund utilization. In order to facilitate these functions and to ensure that funds are spent in a systematic and impactful manner, we propose to implement an internal project management system on which 100% of projects funded by corporates and alumni will be monitored. This system will be used by the A&CR office in partnership with faculty utilizing the grant to ensure that project deliverables are met, thereby ensuring donor satisfaction.

Reorganizing Internal Functioning

A key area of improvement identified in the current strategic plan is with respect to the communication of our capabilities and achievements to the outside world. In the past, this has often been couched in highly technical terms, making it challenging for corporates in particular to understand if their requirements can be met by partnerships with IITM. As a result, we plan to set up an internal 'outreach office'. On the one hand, this office will create a set of 'products' (schemes/projects) that alumni can subscribe/donate to and will create material surrounding these initiatives that they will also market. On the other hand, this office will also create a series of 'corporate style' presentations of the work done at IITM that will allow companies to quickly assess how IITMs capabilities fit into their strategic thinking. Further, we plan to involve 30% of our faculty as 'Rainmakers' who can evangelize the institute's depth of activities to corporates and alumni. This will further increase our ability to reach out to alumni and corporate partners across the globe.

We also plan to reorganize the office of Alumni affairs and Corporate Relations. First, we aim to separate the alumni affairs and corporate relationship functions into two clear sub-organizations, both of which will report to the Dean A&CR. While there will be knowledge sharing between these organizations, their hierarchies and responsibilities will be separate. Second, both of these organizations and the A&CR office will be professionalized and function as a corporate organization would in terms of roles, structure and performance. By 2027, both of these organizations will be ISO 9000 compliant. Through these measures we plan to achieve our Vision 2027 set out in this strategic plan.

Key Metrics

- 50% of PG alumni and 80% of UG alumni who have graduated in the last 5 years to be engaged with the institute
- 30% of Alumni and Corporate interactions to be long term
- Raise ₹350Cr+ per year from CSR, alumni and corporate donations
- 2X increase in short courses and open houses for alumni and industry
- 100% of projects to be managed through an internal project management system and 100% visibility on fund use and project outcomes to donors
- Set up an outreach office to create corporate presentations and products that alumni can subscribe to.

FINANCE

There has been a sea change in the structuring of the grant-in-aid provided by the Ministry of Education to IIT Madras since 2014. The earlier Plan/Non-Plan structure has been shelved, and instead funds are provided under three heads related to the types of expenditure such as salaries, maintenance, scholarships, etc. Another important change is the Higher Education Financing Agency (HEFA) that has been set up as an NBFC to finance new infrastructure across all HEIs. This has enabled large infrastructure creation in parallel based on the financial capacity of the Institute. The principal amount of the 10-year term loan is to be paid by IITM from its Internal Revenue Generation (IRG) sources such as fees, rent, outreach programmes, consultancy earnings, donations, etc., while the interest is paid from the grant-in-aid. Thus, the maximum loans IITM can take at any given time is limited to ten times the IRG, assuming it can meet all its expenses without recourse to the IRG income.

At the onset of the ensuing Strategic Plan period 2021-27, IITM has already taken loans amounting to nearly ₹600 cr, in order to rapidly create infrastructure to accommodate the increased student intake arising out of the implementation of OBC and EWS reservations. Though the IRG is currently nearly ₹90 cr per annum, the Institute needs the remaining uncommitted IRG to meet expenses. It cannot take further loans towards additional infrastructure without increasing IRG, or obtaining a special infrastructure grant to meet the one-time infrastructure need arising from the EWS reservation implementation.

It is estimated that we will need to add infrastructure with an investment of around ₹75-100 cr per year over the next 6 years. This calls for a growth in IRG of ₹7.5-10 cr per year. This requirement can come down if the Ministry provides a one-time infrastructure grant for meeting the increased infrastructure needs due to introduction of EWS reservations from

- **TO ENABLE IRG OF ₹150 CR FOR INFRASTRUCTURE DEVELOPMENT (HEFA OR ANY OTHER SOURCE OF FUNDING)**
- **TO USE ICSR OVERHEAD RETURN AS WELL AS ALUMNI FUNDING FOR INITIATING STRATEGIC HEFA-FUNDED INFRASTRUCTURE PROJECTS**
- **MOE GRANT IS PROJECTED TO BE 750 CR**
- **TO ENSURE THAT IC&SR SPONSORED PROJECTS WILL REACH ₹800 CR AND CONSULTANCY AND CSR PROJECTS TO REACH ₹750 CR**
- **TO GROW FEES, RENT AND OTHER INCOME TO ₹100 CR**
- **TO ENSURE THAT IIT MADRAS SHALL BECOME A ₹3,000 CR ANNUAL CASH FLOW INSTITUTION BY 2027.**





2019 onwards. Such a grant was provided, for example, when OBC reservations were introduced. IRG can be increased by growing the outreach programmes of the Institute such as Web-enabled M. Tech for industry professionals, online degree programmes, and so on. Donations will also be sought from corporates (CSR), alumni and other foundations. Earnings of the Institute from consultancy and sponsored research can also be employed to fund such infrastructure development as needed.

In addition to new infrastructure, the Institute also needs to periodically upgrade teaching and research laboratories. While renewal of research equipment may get supported by various programmes of DST such as FIST, the labs also need support infrastructure to be renewed. Alumni and corporate donations will be sought for this purpose.

The huge impact of new Research Initiatives in emerging multi-disciplinary areas, kick-started in one go with an injection of substantial IoE funds within a competitive framework, is already evident. These funds will support the Initiatives for the next five years, and result in the formation of global-scale Centres of Excellence. The Institute needs to create a Research Endowment to continue such initiatives, and support existing and new CoEs beyond the oncoming Strategic Plan period. For this, it is proposed to raise an Endowment of ₹1,000 crores which can support new research, graduate scholarships, post-doctoral positions, international collaborations, etc. Much of the fund-raising activity over the next six years will be focussed on building this endowment.



