

Annexure – I

PROPOSED ACTION PLAN

(Please attach separate sheet, if required)

Name of HI/NewGen IEDC : Dr. C. Muthamizhchelvan

Name of the Chief Coordinator: Mr. Nikunj Panchal

Details of proposed Activities to be undertaken during the Year: 2020-21

[A] To inculcate the spirit of innovation and entrepreneurship amongst S&T students

Sr. No.	Activities	Duration	Period From April 2020 To March 2021
1.	Entrepreneurship Awareness Camp	Three Days (twice in year)	August December
2.	Entrepreneurs Talks Series (Triumph Talks)	One Day (Bi-Monthly)	July– April
3.	Student Run Courses on Entrepreneurship	Semester course (Half yearly)	July- May
4.	Project and Startup Expo	One Day (Half Yearly)	October -March
5.	Encouraging students to make final year project as product development	Yearly	November-March
6.	Workshops	One Day (Bi-Monthly)	August-March

[B] To identify, develop & commercialize students' innovative ideas

Sr. No.	Activities	Duration	Period From April 2020 To March 2021
1.	Idea Clinic	One Day (Bi-monthly)	July- March
2.	Hackathon	Three Days (Quarterly)	August, November, January, March
3.	Business plan competition	One Day (Half-yearly)	October & February
4.	Pitch fest	One Day (Yearly)	November
5.	Bootcamp	One Week (Half-Yearly)	August & January

[C] To enhance Industry-Academia interaction

Sr. No.	Activities	Duration	Period From April 2020To March 2021
1.	Industry Academia Meetup Forum	One Day (Yearly)	January
2.	Faculty Industry Immersion Program (FIIP)	One Month (Half-Yearly)	August
3.	Industry Mentors Mentee Meetup	One Day (Half-yearly)	February
4.	Industry Visit	One Day (Bi-Monthly)	August - March

[D] Student Projects:

- More emphasis may be given to projects aiming to solve the local problems of the Society/local Industry Challenges
- Projects having more potential to commercialize the product/process
- To select the right project, local bodies like; MCD/PWD/Hospitals/Local Industry Associations etc. should be contacted

Note: Following list of projects are not the final one. We are in process of finalizing the next batch, hopefully by July end we can have the final teams.

Sr. No.	Student Team/ Project Name & Description	Current Status	Aadhaar Number of Each Student	Interventions to be made for next stage/commercialization
1.	Thermal Management System for Li-ion battery pack at different climatic conditions (The Li-ion battery pack during charging and discharging dissipates heat which in-turn challenges battery life and efficiency. When the operating temperature increases, it is being sensed by the sensing element and sends the signal which triggers the inlet port to open. The inlet ports are placed in plurality, it opens at the location and the cooling module works along to deliver the heat transferring fluid. The particular location heat transfer increases the efficiency of the cell pack. The overall control of the module is achieved automatically. The embedment of the intelligent monitoring system which governs battery pack unit is used to monitor the data.)	Ideation	R. Senthil Kumar	Prototype Development
2.	Eamvey - Affordable Automation (The project is about using minimum and affordable hardware to make devices to meet automation requirements for home, offices and industries.)	Ideation	Poola Manoj Vamsee 745870610661	Prototype Development
3.	SMART PV WINDOWS SHADES (is the external blinds with photovoltaic panels that automatically track the sun and generate electricity from its energy while keeping the inside of your building cool)	Ideation	SARVESH SINGH 982758487291 SUPRATIK SENGUPTA 59140265 3080 RAHUL TANK 276116682034	Prototype Development
4.	Styloria - a tech based personalized fashion recommendation platform (I'm currently working on a tech-based Fashion Recommendation Platform. I strongly believe that the fashion market currently isn't personalized according to the customer's personality and there is no system to recommend clothes that truly are an extension of a person's personality. Moreover, there is a huge gap in the	Ideation	Abhishek Sudhan 844768618781 Abhinav Maharan 993753939146 Ayush Gupta 450759268161 Deepak K	Prototype Development

	integration of technology in improving clothes recommendations. We are working a virtual body measuring app using Machine learning (TensorFlow -posenet) and data analysis of the user preferences.)		894646085607 Divyansh Jain 251960275806 Hydervali Yalamkur 283354876877 Monish Rajupalepu 211179521391 Suravi Sen 390019045477	
5.	FlyLife (FlyLife is making VTOL drones with package delivery capabilities to expedite the logistics process for e-commerce websites through automation. Our idea has been funded by the Ford Motor Company Fund in the Covid-19 Challenge.)	Ideation	Manas Tuteja 208654423138 Rishik Jhunjunwala 581763889566 Sasaki Kamariya Sahil Sajid 700768182257 Divyang 714362510439 Pulla Kapil 545272176547 Hasan Mohammed 831448926028	Prototype Development
6.	Smart integrated farming technique using machine learning model (To help the farmers to monitor the helath of the plants which are mainly growing on the aquaponics or hydroponics culture)	Ideation	Dr.P.Malarvizhi 253626737389 K.Anish Gandhi 664476421570 D. SRIVATHSAN 860624613870 VUPPALA SHASHANK 274957051927 S.R. KEERTHI VARMAN 466634459200	Prototype Development
7.	Sa.fe (Accidents are a big problem especially in India and its increasing every year. In 2017, officially reported road accidents were 464,910, claiming 147,913 deaths and 470,975 injured persons, that is, 405 deaths and 1,290 injuries each day from 1,274 accidents. To put that in perspective every 4 minutes a person dies in a car accident, our take on this problem is Sa.fe With Sa.fe we want to create the smartest dashboard app on the planet. It's an app that tries to keep you safe on roads by: 1.Trying to keep you awake 2.Sending you alerts about accident prone	Ideation	Hariom 780565350096 Arijit 880353110143 Prateek 978278873990	Prototype Development

	<p>zone(s)</p> <p>3.But if still an accident happens?</p> <p>4.It will automatically alert the nearest emergency service with exact location.)</p>			
8.	<p>Blend (We interviewed many visually impaired people and found out that the only wish they have is to visually sense their surroundings. We are a team of innovative individuals who have found a novel solution to solve this problem. We are using image processing and Machine learning to identify the surroundings. We have created a standalone device which has all the capability of object recognition and live feedback. This device can fit in your pocket.)</p>	Ideation	<p>Anupam Tiwari 276638774258</p> <p>Anushka Purohit Sahil Mehta</p>	Prototype Development
9.	<p>Sanitation machine (this machine will be used to sanitize our classrooms, corridors, hostels, canteen etc....)</p>	Ideation	<p>BHAVYA GHORAWAT 522961559173</p>	Prototype Development
10.	<p>Retro Landing for Hybrid fueled Model Rocket (This a project initiated by a group of SRMIST students of various Departments. The goal of the project is to design and build a Hybrid fueled model rocket which has a capability for retro landing using an on-board camera and AI vision system. Using the application of reinforcement learning, the rocket model will be trained and tested for landing in a simulated environment and eventually be used in the real environment. This is the first-of-its-kind project in India with no other University/Organization in India working on it.)</p>	Ideation	<p>Amit Chowdhary</p>	Prototype Development
11.	<p>HIGH PAYLOAD CARRYING UAV (The need for improved aircraft performances with high payload carrying capacity has provided the motivation for considering different UAV design concepts in order to perform task like payload delivery, humanitarian aid & disaster relief, surveillance etc. In this project, we aim to design a model UAV which could be suitable replacement for current manned air operation. We plan to study and perform structural and aerodynamic analysis on different designs to figure out on how to carry different payloads and reach in areas less accessible by conventional aircraft. Its small- scale applications will be area mapping & aerial photography while its global applications will be military purpose and small equipment transportation.</p> <p>As evident from the name itself, this project is capable of carrying high payload 16kg to be approx. We have performed the proper literature survey-based mission requirement. Accordingly, we have devised a certain repetitive methodology to approach our project. The design, calculation & development of the RC aircraft can be broadly grouped into three domains namely aerodynamics, structures & flight systems. The systemic activity of each domain is briefly described in the flowchart. The aerodynamic calculations referred from Daniel P Raymer "Aircraft Design: A Conceptual approach", 5th edition. The aircraft is designed with unconventional Nose that reduces the drag. The main structural component of the UAV are light weight and higher strength materials like Birchply & Balsa which are not only cheap but also easily replaceable or repairable. It also consists of carbon fibre rods laterally and longitudinally to</p>	Ideation	<p>Karan Kumar Shaw 8823 32836780</p> <p>Shloka Ketan Hajare 563108739854</p> <p>Kanuparthy Sakya 400813984909</p> <p>Om Singhal 549188597739</p> <p>Garv Sehgal 697105856322</p> <p>Heena Sharma 743443037591</p> <p>Abhinav Vishwakarma 361257606622</p>	Prototype Development

	increase the structural rigidity. The electronic components were tested in the Jig before finalizing the components. The aircraft is capable of carrying both static and dynamic payloads. The initial prototype was made under 1.5 Lakhs. Under the current COVID'19 Pandemic situation, the government is looking for aerial options for delivery of goods and this project perfectly matches the requirement.)			
12.	Augmented Reality Solutions (AR based solutions for Education, Industrial Training, Retail solutions for Architecture etc.)	Ideation	Mohammed Jasim 384893576365 Sree Varshan 834988337132 Shamil Ayoob Khan 268586715800 Fahad Abdullahi- Passport: A10555910 Karthik Subramanian 962008515186 Meghana K 694764735282 Yagnesh Krishnan 789205949353 Debanjan Mandal 226299675367 Ardhra Sivasankaran 841397536325 Shivam Mukherjee 481843126891 Pragya Moondra 417169234693 Shreyasri Biswas 207920851248	Prototype Development
13.	Hydration level indicator combined with mobile app (It senses saliva while taking water it identifies how much hydration should take)	Ideation	Pramod 514006087352 Manikanta 263657974107	Prototype Development
14.	IVentors Initiatives (Most Trusted Student Community Globally providing complete students support.)	Ideation	Divyansh Dwivedi	Prototype Development
15.	Electricity Generation from Speed Breakers (The main aim of this project is to produce the electrical energy from speed breakers And the details of the project are attached at the last of this application.)	Ideation	S. Vinay Kumar Reddy	Prototype Development

16.	<p>Workify (thermal and pulse rate watch :- this would measure the temperature and pulse rate of the user and will send the details to the central data base in case of abnormality)</p> <p>social distancing pendant :- this will ensure 2 m distance between two people</p> <p>ultra violet torch :- this is a portable chargeable torch for ensuring sanitization of belongings and place)</p>	Ideation	<p>Antariksh Ray 872847431907</p> <p>Harshit Rathore 675614784976</p> <p>Reshesh Kumar Pathak 512082753680</p> <p>Prateek 536985281687 Akankshi Vaishya 707621304624 Pawan Wadhvani 482617314136</p>	Prototype Development
17.	LawyerU (Making app/website to provide lawyers near you. Giving/creating job opportunities for lawyers. Need funds for marketing of my idea.)	Ideation	Kunwar Priya raj Singh Yohenba	Prototype Development
18.	Ballin (Ball.in is an online platform to discover and book, connect and compete with people and build a community around them in real-time in the recreational activity space.)	Ideation	Darshan	Prototype Development
20	Digital Attendance and Access Control System (App based system to digitize attendance to reduce errors with continuous logging of student and staff activity for safety issues.)	Ideation	<p>Kussagra Pathak 60211045 9049</p> <p>Soumiya Chadha 868740481526</p> <p>Aryan Bhatnagar</p>	Prototype Development
21	Autonomous Ecological Survey Vehicle (An autonomous surface vehicle that surveys water bodies towards the aim of reversing water pollution and reintroducing lost flora and fauna. The vehicle when deployed will map the parameters such as temperature, acidity, biological content, salinity and overall water quality along the length of the testing area using GPS coordinates. After deployment a report will be prepared from gathered data outlining guidelines for the recovery of the lost ecosystem.)	Ideation	P L Joseph Raj 696227920890	Prototype Development
22	Design & Development of Low cost Enhanced Ultrasound Transducer for Medical applications (Ultrasound machine transmits (1 – 5 MHz) sound pulses in to the human body using a probe. An ultrasound transducer (probe) is a device that produces sound waves that bounce off the tissues and make echoes. The reflected waves (echoes) are picked up by the probe and released back to the machine. The machine calculates the distance between the probe and the tissue (or) organ, using the speed of sound in tissue and time taken for each echo's return. It displays the distances and intensities of the echoes on the screen forming an image called sonogram. The common parts of an ultrasound machine are transducer probe, CPU, transducer pulse controls, display, keyboard/cursor, disk storage device and printer. Transducer probe uses a principle called piezo electric effect. It plays the role of mouth and ears of the machine. It is available in many shapes and	Ideation	P L Joseph Raj 696227920890	Prototype Development

	size. Its shape determines the field of view and the frequency at which the sound waves are emitted determines how deep the sound waves penetrated which in turn determines the resolution of the image. Linear, Curvilinear and phased array are most common ultrasound probes. Depending upon the application, various transducers are used. Nano material (carbon) is coated over the foot print (contact area with the human body) to enhance the image quality and conduction. In order to improve the performance still more in terms of image quality and to reduce the cost of the device, carbon nano tube (CNT) can be coated. This can be done by either e beam evaporation or sputtering method. Over the nanomaterial, any of the polymer composites (PVA, PVC, PCL) can be coated as this is the region that gets in to direct contact with the patient. These polymers are bio degradable, bio compatible and non-toxic.)			
23	Automated Tool Management System (Idea is to make an autonomous tool managing system with the help of modern artificial intelligence. An object detection system will be made keeping fab lab in mind. Whenever a person issues a tool , using object detection it will be registered to the system and inventory will be updated. Main objective is to reduce human intervention and make whole system automated. Also we can make the system equipped with face recognition to register the person which issues the tool along with the tool. This will make whole tool issuing and managing system automated and also comes with modern norms of safe distancing and minimum contact. Whole system can be deployed anywhere in the same kind of environment and have great potential of being commercialized.)	Ideation	Salil Veer Saxena 4926 2703 3996 Manas Sharma 3141 2090 2416	Prototype Development
24	DESIGN AND DEVELOPMENT OF SMART WATER MANAGEMENT SYSTEM USING IOT (This prototype presents an IOT device which help to manage and plan the usage of water. This system can be easily installed in residential societies. Sensors placed in the tank which continuously informs the water level at the current time. This information will be updated on the cloud and using an android application, user can visualize the water level on a Smartphone anywhere that is connected to Internet. According to the level of water in the tank the motor functioning will be automatically controlled, at low level of water motor will automatically turn on and when tank is about to fill up it will cut off.)	Ideation	G.Sruthi J.Sowbarnika 407710640378 J.Hariharan	Prototype Development
25	I-Engravers (We're going to manufacture a PCB prototyping and manufacturing machine using which we would design and make PCBs faster and at costs lower than that of PCBs currently manufactured in Indian markets.)	Proof of Concept	Ritesh Roy 4809 7280 9371 Utkarsh Agnihotri 5258 1138 7235 Hari Prasad 6012 5626 4416	Prototype Development
26	Compressed air engine (our idea is to make a bike which uses compressed air as fuel and a regenerative compressor. so that it will be better than the e-bike which uses same amount of electricity to cover better distance or produce better power)	Proof of Concept	KAARTHI G 967084369332 ABHISHEK S 233653122950 CHITRARASAN K 684709159959 HRISHIKESH ANAND S	Prototype Development

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27	Swayam 89 (A break-through technology for self charging vehicles that charges the batteries when the vehicle is driven.)	Ideation	Shubhayan Saha 541198561547 Arya Sekhar Bandopadhyay 295023659270 Soumya Sinha 975753186078	Prototype Development
28	Life on Wheels (A solution, LOW- Life on wheels, where you can have an experience of being in a moving cottage with all the needed amenities , cooking equipment, live tracking with GPS and few basic sporting equipment. 1. Bedding for 6 Pax 2. Cooking equipment for. 3. Washroom facilities. 4. 2 Bicycles, uno cards, carroms and many more 5. Pet friendly 6. booking and tracking through mobile apps 7. Self driven/ driver provided on demand)	Ideation	Bobby Sri harsha Masetty 932101895097	Prototype Development
29	ADVANCED SELF SANITIZING RESPIRATOR (This project is about a medical provision that can be used to reduce the risk of transmission of communicable disease that mainly spread through air or droplets discharged from an infected person. This proposal mainly focuses on recent pandemic COVID-19 which is a highly communicable disease. This project aims to develop a respirator which includes a filtering and a sanitizing unit so that the contaminated air exhaled by the infected person cannot pass directly in the atmosphere, and so it will reduce the chance of spread of infection to its nearby environment. Apart from filtering and sanitizing the air this mechanism also makes the user feel comfortable during respiration by controlling the pressure inside the mask. The filtration is performed by the wet scrubbing method aiming to filter out small enough particles and the sanitizing part is done by exposure of ultraviolet-C radiation which is the most effective way to deal with viruses.)	Ideation	Prabhat Kumar 215676046028 Abhisekh Behera 526651036256 Rishabh Shukla 783033277763 Mrs. N. Deepa 734320915463 Dr. P.A. Sridhar 314564082275 Dr. K.A. Sunitha 390280919899	Prototype Development
30	Socially - A mental health supporting platform (Socially is an initiative by Dataly for patients suffering from mental health illness like phobias, sleep disorders, depression, anxiety. We are creating a platform to connect people to therapist and our chat bot. They will also have option for trial session with therapist and then can have access to personal therapy lessons. And best part all of it could be anonymous without disclosing the names.)	Ideation	Shubhayan Saha 541198561547 Arya Sekhar Bandopadhyay 295023659270 Soumya Sinha 975753186078	Prototype Development
31	ESS for on and off grid applications with demand prediction based switching (Developing a decentralised battery storage system for home and industrial use application to be connected with the grid to flatten the duck curve of power generation and consumption caused by variable renewable energy production systems. The system will provide power to homes at a cheaper cost and flatten the duck curve on a very individual and specific purpose. System can be implemented in both CAPEX and	Ideation	K Swaroop Kumar 928961338383 Ayush Sagar 442930541788 Saksham Bhadani 297519381730	Prototype Development

	RESCO models.)			
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☐ Above details need to be provided for all the students projects

[E] Details/information you think appropriate, if any