Goa State Innovation Council

2019-20

ANNUAL REPORT

SHRI JOSE MANUEL NORONHA
Chairman

MESSAGE FROM CHAIRMAN

The Goa State Innovation Council was reconstituted on 18th October 2016 with a mandate to map opportunities for Innovation in the State as well as to create an innovative ecosystem besides meeting other objectives. In order to achieve these, a large number of activities namely Faculty Development Programs (FDP), Women Centric workshops (WCW), STEM Education Programs and Intellectual Property Rights (IPR) training programs have been organized so that the youth in general and innovators in particular are exposed to the various facets presently available in the field of Innovation.

The Council has also launched a Virtual Innovation Register (VIR) where young and aspiring innovators can register an idea and pursue it through filing a patent application and later for commercialization of the product/process or for Transfer of Technology through an appropriate agency. The Council has also actively pursued the Goa's Young Innovators Award where young students are encouraged to innovate and produce prototypes of their ideas so that they have scope for patenting and commercialization at a later stage.

The Council presently has established its Secretariat at the Don Bosco College of Engineering, Fatorda and we encourage all youth to visit the Secretariat and see firsthand the activities being carried out there. We will be glad to be of service to you through our Office and do feel free to contact us at your convenience.

SHRI JOSE MANUEL NORONHA

Index

List of Tables

List of Photographs

List of Annexures

01
About GSInC

01.01
General Introduction

About Goa State Innovation Council

The Goa State Innovation Council was established by the Directorate of Science and Technology, Government of Goa, under the aegis of National Innovation Council.

The Government of India's vision to make India self-reliant, and emerge as one of the strongest economies in the world, with a focus on inclusive, sustainable development for all is the genesis of National Innovation Council that seeks to foster the spirit of innovation and entrepreneurship among all classes, groups and communities in India.

Goa State Innovation Council is responsible for carrying out the National Innovation Council's mandate of inclusive growth and sustainable development in the State of Goa. To achieve this, Goa State Innovation Council engages in organizing various programs and events to spread the awareness about innovation and entrepreneurship among the people of Goa, handhold budding start-ups and innovators in scaling their business ideas and identifying potential ideas and innovations through competitions.

The Council is now actively involved in creating an eco-system on Innovation in the State and has launched its website at the hands of the Hon'ble (former) Chief Minister of Goa on 05.07.2018.

Objectives of Goa State Innovation Council:

- Drive the innovation agenda in the state and harness the core competencies, local talent, resources and capabilities to create new opportunities
- Support the State Government to promote innovation in the State
- Encourage young talent in local universities, colleges, medium and small-scale industries (MSME) and R&D institutes
- Map opportunities for innovation in the State
- Identify and reward talent in innovation and disseminate success stories
- Organise seminars, lectures, workshops on innovation
- Create the state innovation portal to educate and drive awareness on innovation
- Provide input into the Innovation Roadmap 2017-2020 for the State

01.02
The Secretariat

Goa State Innovation Council Secretariat is established at Don Bosco College of Engineering, Fatorda. Presently, there are two staff employed in the Goa State Innovation Council.

Table: 1.1: Staff employed in the Goa State Innovation Council with Name and Designation

Sr. No.	Name of the Employee	Designation
01	Sudip Faldesai	Project Office
02	Valencia Fernandes	Secretarial Assistant

The Organisational Chat is attached in Annexture 1

02
Constitution of Council

02.01
Constitution of the Council

Chairman:

SHRI JOSE MANUEL NORONHA

Member:

DR. VIVEK KAMAT

Director, Directorate of Technical Education, Porvorim, Goa

Member:

DR. KRUPASHANKARA MS

Principal, Goa College of Engineering, Farmagudi

Member:

DR. NEENA PANANDIKAR

Principal, Don Bosco College of Engineering, Fatorda

Member:

DR. MRIDULA GOEL

Faculty, BITS Pilani K.K. Birla Goa Campus, Goa

Member:

SHRI KUNAL UPADHYAY

CEO, Centre for Innovation Incubation and Entrepreneurship, IIM-A

Member:

PROF. RAGHUVEER VERNEKAR

Nominee, Goa Chambers of Commerce and Industry, Panaji, Goa

Member:

DR. KAUSTUBH PRIOLKAR

Faculty, Goa University

Member:

SHRI D. S. PRASHANT

CEO, Forum for Innovation Incubation Research & Entrepreneurship, Fatorda, Goa

Member:

SHRI PRADEEP V. MORAJKAR

Member Secretary, Goa State Council for Science and Environment, Saligao, Goa

Member Secretary:

SHRI LEVINSON MARTINS

Director, Department of Science and Technology, Govt. of Goa

02.02
Constitution of Boards

No. 3-191/2011/STE-DIR/725
Office of the Director,
Department of Science & Technology,
Opp. Saligao Seminary,
Saligao, Bardez Goa – 403511.

Date: 18/10/2016

ORDER

1) Read Order dated 4th August, 2011 under No. 9 / 309 / 2011 / HE / SInC / 1673.
2) Read order no. 3-191/2011/STE-DIR/702 dated 12th September, 2013.

In supersession of the above referred order, Government is pleased to reconstitute the Goa State Innovation Council (GSInC), comprising of the following members:

1) Shri Jose Manuel Noronha
Chairman .... Chairman

2) Director,
Birla Institute of Technology & Science,
Zuarinagar, Sancoale or his nominee .... Member

3) Dr. Neena Panandikar
Principal,
Don Bosco College of Fatorda Goa .... Member

4) Shri Kunal Upadhay
CEO
Centre for Incubation Innovation & Entrepreneurship
Indian Institute of Management
Ahmedabad, Gujarat .... Member

5) Director,
Directorate of Technical Education
Government of Goa,
Porvorim Goa .... Member

6) Principal, Goa Engineering College
Farmagudi, Ponda Goa .... Member

s/c

8) GCCI Nominee .... Member

9) Shri D.S. Prashant,
General Manager,
Centre for Incubation & Business Accerlation
Verna – Goa. .... Member

10) Member Secretary,
Goa State Council for Science & Technology
Department of Science & Technology,
Government of Goa,
Saligao, Bardez-Goa. .... Member

11) Director,
Department of Science & Technology,
Government of Goa,
Saligao, Bardez-Goa. .... Member Secretary

Following shall be terms of reference for the council:-

1.0. Support the Government to promote innovation in the State
2.0. Encourage young talent in Goa University, Colleges, Higher Education Institution (HEI's), Medium and Small scale Industries (MSME) and R & D Industries etc.
3.0. Map opportunities for innovation in the State
4.0. Identify and reward talent in innovation and disseminate success stories.
5.0. Organize seminars, workshops, lectures on innovation and create Stat3e Innovation Portal to educate the stake holders.
6.0. Help create innovation eco system
7.0. Organize risk capital
8.0. Prepare an Innovation Road Map for the State of Goa for the period 2016-2020.

The Non Official members of the Council shall be paid TA/DA as per the Rules for attending the meeting of the Council.

(Levinson J. Martins)
Director / Ex-officio, Jt. Secretary(S&T)

Copy to:-

1) P.S. to Secretary for Hon'ble Chief Minister, Government of Goa, Secretariat, Porvorim Goa.
2) P.A. to Hon'ble Minister for Science & Technology, Secretariat, Porvorim Goa.
3) P.S. to Chief Secretary, Government of Goa, Secretariat, Porvorim Goa.
4) P.S. to Secretary, Government of Goa, Secretariat, Porvorim Goa.
5) The Director, (Directorate of Higher Education), Porvorim Goa... for kind information.
6) The Director of Accounts, Panaji Goa.

03
Minutes of Meetings

03.01
Meeting of the Council

During the year under the report, the Goa State Innovation Council held three Council Meetings under the reconstituted Council. The details of the meeting held during the year are presented in the table below:

Table: 3.1: Minutes of meeting

Sr. No.	Sr. No. of the Meeting	Date of the Meeting	Venue
01	12th	04/06/2019	Don Bosco College of Engineering, Fatorda
02	13th	23/08/2019	Don Bosco College of Engineering, Fatorda
03	14th	11/11/2019	Don Bosco College of Engineering, Fatorda
04	15th	11/02/2020	Don Bosco College of Engineering, Fatorda

03.02
Extracts of Minutes of Meeting of Council Held During the Year Under Report

12th MoM

Minutes of the meeting of Goa State Innovation Council held at Don Bosco College of Engineering conference hall on 4th of June, 2019 at 10.00 A. M.

Table: 3.2: GSInC Members present for 12th Meeting

01	SHRI. JOSE MANUEL NORONHA Chairman, Goa Public Service Commission, Panaji, Goa	Chairman
02	DR. KRUPASHANKARA MS Principal, Goa College of Engineering, Farmagudi, Goa	Member
03	DR. NEENA PANANDIKAR Principal, Don Bosco College of Engineering, Fatorda	Member
04	PROF. RAGHUVEER VERNEKAR Nominee, Goa Chambers of Commerce and Industry, Panaji, Goa	Member
05	SHRI. D. S. PRASHANT CEO, Forum for Innovation, Incubation, Research and Entrepreneurship, Fatorda	Member
06	DR. MRIDULA GOEL Associate Professor, Department of Economics, BITS Pilani – Goa Campus	Member
07	SHRI. LEVINSON MARTINS Director, Department of Science and Technology, Govt. of Goa, Porvorim, Goa	Member

Dr. Vivek Kamat, Dr. Mridula Goel, Shri Kunal Upadhyay & Dr. Kaustubh Priolkar could not attend the meeting and were granted leave of absence. Thereafter, the Chairman welcomed the members of the Goa State Innovation Council for the meeting.

1. At the outset, the minutes of the meeting held on 28th February 2019 were read and confirmed after which the agenda of the meeting was discussed.

2. Project Officer reported the action taken from the previous meeting. Action report on prototyping lab at Don Bosco College of Engineering was presented and the Council decided to invite Hon'ble Chief Minister of Goa, Dr. Promod Sawant and Mr. Vijay Sardessai for the Inauguration. The Council Members also decided to give the awards for the winners of Goa Young Innovator Award on the same day. The winners of Goa's Young Innovator Award is as follows:

Table: 3.3: The winners of Goa Young Innovator Award

First Rs. 20,000	GYIA/Cat 1/08	Development of oil absorbing biofilters for efficient removal of oil spill Ms. Tanishka G. Shet Raikar The New Educational Institute, Curchorem
Second Rs. 10,000	GYIA/Cat 1/15	IV Therapy Mr. Sanad Balegiri and Mr. Shreyan Burye Dr. K. B. Hedgewar High School, Bambolim
Third Rs. 5,000	GYIA/Cat 1/14	A Fish Feeder Robot for Aquaculture Ms. Shravani Marathe Dr. K. B. Hedgewar High School, Bambolim
First Rs 20,000	GYIA/Cat 2/08	A digital microscope and a laser microscope Ms. Keira Fernandes Manovikas English Medium School
Second Rs 10,000	GYIA/Cat 2/15	Energy generation using vehicle passing over the speed breakers Mr. Ruben Hugo Pinheiro Manovikas English Medium School
Second Rs 10,000	GYIA/Cat 2/14	Ultrasonic sensor blind guide Mr. Suhit Rajaram Mahambery Vidya Vikas Academy

The Council decided to award two second prizes in the Category 2 as two projects have an equal score from the evaluation of the judges.

3. It was further informed that the quotes for Website maintenance of Goa State Innovation Council for the duration of 3 years were opened and the following quotes were obtained:

Table: 3.4: Quotes for Website maintenance

01	Codewell Computers	64,800/-
02	Owlways Creative	45,000/-
03	Vitrues	54,000/-

After discussion, it was decided to place an order with M/s Owlways Creative, them being the lowest bidder.

4. The Chairman advised to email the MoU to be signed between Goa State Innovation Council and Patent Information Centre, Karnataka State Council for Science & Technology with the Council members. The MoU aims to drive the mission of encouraging innovation in the state of Goa & Karnataka. It works on creating new opportunities for young innovative startups and provide facilities for protection of innovation through Intellectual property rights.

5. During the meeting, it was decided to constitute a Technical Advisory Committee in order to develop uniformity in approach and to ensure timely shortlisting of Ideas registered under VIR for Provisional Patent Scheme of the council. The committee comprises of the following members:
   I. Mr. B S Revankar: Ex-Director NITK – STEP Surathkal, B Tech from IIT, Madras, Dharwad, Karnataka - Chairman
   II. Prof Sunil Bhand: Dean, Sponsored Research & Consulting, Professor of Chemistry BITS, Pilani -K.K. Birla, Goa - Member
   III. Mr Deepak Pathania: Industrial Design, NID Ahmedabad, Goa - Member
   IV. Mr Sudip Faldesai: Project Officer, Goa State Innovation Council, Government of Goa - Member Secretary

The action plan for the year 2019-20 initiative for Goa State Innovation Council was presented by the Project Officer.

Table: 3.5: The action plan for the year 2019-20

June 2019 July 2019 August 2019	Bootcamp - 10 IPR Session - 1 Sensitisation Workshops - 18 Women Centric Workshops - 1 Rural Camps - 8 Faculty Development Program (3 days)
September 2019 October 2019 November 2019 The action plan was discussed in detailed and approved.	Bootcamp - 8 Women Centric Workshops - 2 Sensitisation Workshops - 12 Rural Camps - 14 Orientation for School Teachers Launch – Goa's Young Innovators Award Launch – Student Project Competition - BE & ASC
December 2019 January 2019 February 2019	Bootcamp - 2 Rural Camps - 8 Sensitisation Workshops – 6 Faculty Development Program (3 days) Launch – Goa's Young Innovators Award Launch – Student Project Competition - BE & ASC

6. The members of the council decided to organise a meeting with the principals of engineering colleges in Goa to organise “Hackathon” to identify Innovative Solutions to various challenges faced in Solid Waste Management and disposal in Goa. It was also decided to send a letter to Solid Waste Management with regards to organising the “Hackathon”.

7. The meeting ended with the vote of thanks.

13th MoM

Minutes of The Meeting of Goa State Innovation Council Held at Don Bosco College of Engineering Conference Hall On 23.08.2019 At 10.00 am. The following members were present at the meeting:

Table: 3.6: GSInC Members present for 13th meeting

01	SHRI. JOSE MANUEL NORONHA Chairman, Goa Public Service Commission, Panaji, Goa	Chairman
02	DR. KRUPASHANKARA MS Principal, Goa College of Engineering, Farmagudi, Goa	Member
03	DR. NEENA PANANDIKAR Principal, Don Bosco College of Engineering, Fatorda	Member
04	PROF. RAGHUVEER VERNEKAR Nominee, Goa Chambers of Commerce and Industry, Panaji, Goa	Member
05	SHRI. D. S. PRASHANT CEO, Forum for Innovation, Incubation, Research and Entrepreneurship, Fatorda	Member
06	DR. MRIDULA GOEL Associate Professor, Department of Economics, BITS Pilani – Goa Campus	Member
07	SHRI. LEVINSON MARTINS Director, Department of Science and Technology, Govt. of Goa, Porvorim, Goa	Member

Shri Vivek Kamat, Shri Kunal Upadhyay & Dr. Kaustubh Priolkar could not attend the meeting and were granted leave of absence. Thereafter, the Chairman welcomed the members of the Goa State Innovation Council for the meeting.

1. At the outset, the minutes of the meeting held on 4th June 2019 were read and confirmed after which the agenda of the meeting was discussed.

2. Project Officer reported the action taken on the discussion of the previous meeting. It was further decided to invite the Hon'ble Minister for Science & Technology and MLA from Fatorda Constituency to present the awards to the winners of Goa's Young Innovators Award and to launch the Prototyping Lab. The Action taken on the MoU with PIC - Karnataka State Council for Science and Technology was discussed and Member Secretary suggested to forward the MoU proposal to the Department of Science and Technology, Government of Goa for approval. It was decided to organise meeting with the principals of engineering and science colleges of Goa to organise "Hackathon" to identify Innovative Solutions to the challenges faced in Solid Waste Management and disposal in Goa at Solid Waste Management office in Saligao on 29th August 2019 from 10:00 am to 12:00 pm. The status of Technical Advisory Committee (TAC) was presented and it was informed that two meetings of TAC were held and the Ideas registered under VIR were categorized into three Categories of A with 34 Ideas, B with 11 Ideas & C with 57 Ideas to be invited for an orientation program. During the second meeting, 18 Ideas were presented and evaluated out of which 1 Idea was approved, 8 Ideas were directed to follow-up and 9 Ideas were directed to commercialise their Ideas by the TAC.

3. The status of the Initiatives of the council activities were presented. Sensitisation workshops on innovation were held in the following 13 schools. A total of 1374 students participated in the same.

Table: 3.7: List of Sensitisation workshops on innovation in Schools

01.	Dr K B Hedgewar High School, Cujira	24.7.19
02.	Manovikas High School, Margao	25.7.19
03.	St Michael's High School	8.8.19
04.	Government High School, Sattari	9.8.19
05.	Jesus and Mary, Carambaulim	10.8.19
06.	Government High School, Shristhal	13.8.19
07.	Sacred Heart School, Parra	14.8.19
08.	St Anthony High School, Margao	16.8.19
09.	Our Lady of Grace High School, Bichiolim	17.8.19
10.	Government High School, Chimbel	19.8.19
11.	Government High School, Rivona	20.8.19
12.	St. Mary Of The Angels Convent High School, Chinchinim	21.8.19
13.	Fr. Agnel Multipurpose High School, Verna	22.8.19

Table: 3.8: List of Bootcamps on innovation in Colleges

Bootcamps on Innovations were conducted at 7 colleges. A total of 712 students participated in the bootcamp.

01.	Dr K B Hedgewar High School, Cujira	24.7.19
02.	Manovikas High School, Margao	25.7.19
03.	St Michael's High School	8.8.19
04.	Government High School, Sattari	9.8.19
05.	Jesus and Mary, Carambaulim	10.8.19
06.	Government High School, Shristhal	13.8.19
07.	Sacred Heart School, Parra	14.8.19
08.	St Anthony High School, Margao	16.8.19
09.	Our Lady of Grace High School, Bichiolim	17.8.19
10.	Government High School, Chimbel	19.8.19
11.	Government High School, Rivona	20.8.19
12.	St. Mary Of The Angels Convent High School, Chinchinim	21.8.19
13.	Fr. Agnel Multipurpose High School, Verna	22.8.19

Shri Vivek Kamat, Shri Kunal Upadhyay & Dr. Kaustubh Priolkar could not attend the meeting and were granted leave of absence. Thereafter, the Chairman welcomed the members of the Goa State Innovation Council for the meeting.

1. At the outset, the minutes of the meeting held on 4th June 2019 were read and confirmed after which the agenda of the meeting was discussed.

2. Project Officer reported the action taken on the discussion of the previous meeting. It was further

   decided to invite the Hon'ble Minister for Science & Technology and MLA from Fatorda Constituency to present the awards to the winners of Goa's Young Innovators Award and to launch the Prototyping Lab. The Action taken on the MoU with PIC - Karnataka State Council for Science and Technology was discussed and Member Secretary suggested to forward the MoU proposal to the Department of Science and Technology, Government of Goa for approval. It was decided to organise meeting with the principals of engineering and science colleges of Goa to organise "Hackathon" to identify Innovative Solutions to the challenges faced in Solid Waste Management and disposal in Goa at Solid Waste Management office in Saligao on 29th August 2019 from 10:00 am to 12:00 pm. The status of Technical Advisory Committee (TAC) was presented and it was informed that two meetings of TAC were held and the Ideas registered under VIR were categorized into three Categories of A with 34 Ideas, B with 11 Ideas & C with 57 Ideas to be invited for an orientation program. During the second meeting, 18 Ideas were presented and evaluated out of which 1 Idea was approved, 8 Ideas were directed to follow-up and 9 Ideas were directed to commercialise their Ideas by the TAC.

3. The status of the Initiatives of the council activities were presented. Sensitisation workshops on innovation were held in the following 13 schools. A total of 1374 students participated in the same.

The status of the Panel Discussion on Industry Institute Interaction conducted at Don Bosco College of Engineering, Fatorda on 27th July 2019 was presented. The panel members were:

- Dr. Mridula Goel, Associate Professor, Department of Economics, BITS Pilani, K.K. Birla Goa
- Dr. Chiraj Modi, Assistant Professor, Department of Computer Science and Engineering, NIT Goa
- Mr. Mangirish Salelkar, CEO & CoFounder - Umang Software Technologies
- Dr. Pradeep Salgaonkar, Director at SALDOTS Academy - Researchers, Corporate Trainers and Facilitators
- Mr. Ramchandra Salgaonkar, Founder, Amaze Warriors (Moderator)

The Council members suggested to invite the local MLA for the programs of the Goa State Innovation Council and provide wide publicity for the initiatives of the Council.

4. The members of the council approved the Kids Finance and Entrepreneurship Initiative proposal and decided to conduct programs at North Goa and South Goa inviting 40 students for each program. It was also decided to invite the Parents of the students for the inaugural session.

5. The Orientation Programme for Schools teachers & Headmasters was discussed and it was decided to organise a training program on “Innovation” for Headmasters/ Headmistresses and another program for “Non-Science teachers” as part of the initiatives of the council.

6. The members of the council approved the IPR, Patent Search Awareness Session and it was decided to conduct the session at Goa College of Engineering, Farmagudi on 27th September 2019.

7. The meeting ended with the vote of thanks.

14th MoM

Minutes of The Meeting of Goa State Innovation Council Held at Don Bosco College of Engineering Conference Hall On 11.11.2019 At 9.30 am. The following members were present at the meeting:

Table: 3.9: GSInC Members present for 14th Meeting

01	SHRI. JOSE MANUEL NORONHA Chairman, Goa Public Service Commission, Panaji, Goa	Chairman
02	DR. VIVEK KAMAT Director, Directorate of Technical Education, Goa	Member
03	DR. KRUPASHANKARA MS Principal, Goa College of Engineering, Farmagudi, Goa	Member
04	DR. NEENA PANANDIKAR Principal, Don Bosco College of Engineering, Fatorda	Member
05	PROF. RAGHUVEER VERNEKAR Nominee, Goa Chambers of Commerce and Industry, Panaji, Goa	Member
06	SHRI. D. S. PRASHANT CEO, Forum for Innovation, Incubation, Research and Entrepreneurship, Fatorda	Member
07	DR. MRIDULA GOEL Associate Professor, Department of Economics, BITS Pilani – Goa Campus	Member
08	DR. KAUSTUBH PRIOLKAR	Member
09	SHRI. LEVINSON MARTINS Director, Department of Science and Technology, Govt. of Goa, Porvorim, Goa	Member

Shri Kunal Upadhyay could not attend the meeting and were granted leave of absence. Thereafter, the Chairman welcomed the members of the Goa State Innovation Council for the meeting.

1. At the outset, the minutes of the meeting held on 11th Nov 2019 were read and confirmed after which the agenda of the meeting was discussed.

2. Project Officer reported the action taken on the discussion of the previous meeting. Entrepreneurship and Financial Literacy Workshop was conducted for students from schools of North Goa at Sanskruti Bhavan, Directorate of Art & Culture for students on 4th & 5th Feb 2020 and for students from schools of South Goa at Don Bosco College of Engineering, Fatorda for students on 6th & 7th Feb 2020. The total number of students and schools participated are:XXXXX Venture Capital Program was conducted on 18th Dec 2019 at Goa College of Engineering, Farmagudi. The total number of participants for the program were 30 Start-up founders from Goa.

3. Project Officer reported the list of events and initiatives conducted by Goa State Innovation Council for the year 2019-20.

Table: 3.10: List of events and initiatives conducted by Goa State Innovation Council for the year 2019-20

Sr. No.	Initiatives/Events	Sessions Conducted	Total Participants
01.	Sensitisation Workshops on Innovation at Schools	38	3957
02.	Bootcamps on Innovations & Startups at Colleges	16	1506
03.	Women Centric Workshops on Innovation & Startups	2	510
04.	Faculty Development Program	1	30
05.	Orientation Program for Schools on Innovation & Startups	2	350
06.	Industry Institute Interaction	1	200
07.	IPR Awareness Session – Patent Search	2	276
08.	STEM – Sessions at Prototyping Lab	8	228
09.	Risk Capital Session	1	31
10.	Design Innovation Session	1	53
11.	Entrepreneurship and Financial Literacy Workshop	2	75

It was also reported that 7216 participant attended from 74 events and initiatives of the Goa State Innovation Council. As a result of the events and initiatives the number of New Idea registration on Virtual Innovation Register were 152 New Ideas for the year 2019-20. The total number of New Ideas registered on Virtual Innovation Register are 273 Ideas.

4. During the discussion on Goa's Young Innovators Award 2019-20 it was decided to invite the Hon'ble Minister for Science & Technology to launch the competition.

5. During the discussion on organising Hackathon to identify Innovative solutions in Waste Management, the following challenges faced in Solid Waste Management Corporation were presented.

- Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse Derived Fuel)
- Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
- Disposal of tubelights, LED's and CFL bulbs in scientific manner.
- Disposal of Sanitary Pads and Diapers in scientific manner.
- It was suggested by the council members to conduct the Hackathon in first week of Feb 2020. It was further decided to invite the Hon'ble Chief Minister to meet the participants. Member Secretary suggested to fund the projects through the Goa Rajya Puraskar Scheme of Department of Science & Technology, Government of Goa

6. The Council decided to invite 2 schools from each talukas with a boy & a girl from each school to attend the workshop on Entrepreneurship and Financial Literacy.

7. The members of the council approved the Risk Capital Session of Venture Capital Funding and it was decided to conduct the session at Goa College of Engineering, Farmagudi on 18th Dec 2019.

8. The meeting ended with the vote of thanks.

15th MoM

Minutes of The Meeting of Goa State Innovation Council Held at Don Bosco College of Engineering Conference Hall On 11.02.2020 At 9.00 am. The following members were present at the meeting:

Table: 3.11: GSInC Members present for 15th Meeting

01	SHRI. JOSE MANUEL NORONHA Chairman, Goa Public Service Commission, Panaji, Goa	Chairman
02	DR. VIVEK KAMAT Director, Directorate of Technical Education, Goa	Member
03	DR. KRUPASHANKARA MS Principal, Goa College of Engineering, Farmagudi, Goa	Member
04	DR. NEENA PANANDIKAR Principal, Don Bosco College of Engineering, Fatorda	Member
05	PROF. RAGHUVEER VERNEKAR Nominee, Goa Chambers of Commerce and Industry, Panaji, Goa	Member
06	SHRI. D. S. PRASHANT CEO, Forum for Innovation, Incubation, Research and Entrepreneurship, Fatorda	Member
07	DR. MRIDULA GOEL Associate Professor, Department of Economics, BITS Pilani – Goa Campus	Member
08	DR. KAUSTUBH PRIOLKAR	Member
09	SHRI. LEVINSON MARTINS Director, Department of Science and Technology, Govt. of Goa, Porvorim, Goa	Member

Shri Kunal Upadhyay could not attend the meeting and were granted leave of absence. Thereafter, the Chairman welcomed the members of the Goa State Innovation Council for the meeting.

1. At the outset, the minutes of the meeting held on 11th Nov 2019 were read and confirmed after which the agenda of the meeting was discussed.

2. Project Officer reported the action taken on the discussion of the previous meeting. Entrepreneurship and Financial Literacy Workshop was conducted for students from schools of North Goa at Sanskruti Bhavan, Directorate Of Art & Culture for students on 4th & 5th Feb 2020 and for students from schools of South Goa at Don Bosco College of Engineering, Fatorda for students on 6th & 7th Feb 2020.

Table: 3.12: List of Schools from North Goa

Sr. No.	North Goa Schools
1	Government High School Agarwada, Pernem
2	Lokshikshan High School, Dhargal, Pernem
3	Ideal High School, Piligao, Bicholim
4	Shri Navdurga Edu. & Cult. So Anandibai Naik, Bicholim
5	St. Theresa High School, St Estevam
6	St. Joseph High School, Calangute
7	Assagao Union High School
8	Saraswat Vidhyalaya High School, Mapusa
9	St. Xavier High School, Moira
10	Government High School, Ambedem, Sattari
11	Government high School, Keri, Sattari
12	Our Lady of Lourdes High School, Valpoi
13	Government High School, Daushirem, Usgao, Ponda
14	Government High School, Sada, Ponda
15	Government High School, Ganjem– Usgao
16	Fr. Agnel High School, Pilar, Tiswadi
17	Immaculate Heart of Mary, Goa Velho
18	Chubby Cheeks High School, Porvorim
19	Azmane High School, Neura

Table: 3.13: List of Schools from South Goa

Sr. No.	South Goa Schools
1	Government High School, Xeldem, Quepem
2	Government High School, Maina, Quepem
3	Government High School, Morpilla, Quepem
4	Government High School, Gaval – Khol, Canacona
5	Our Lady of Snow's High School, Raia
6	Shri Nirankal Vidhyalaya, Mashem
7	Government High School, Mangor Hill
8	Murgaon High School, Sada
9	Government High School, Baina
10	Multipurpose High School, Borda
11	Government High School Vidhyanagar, Aquem
12	Government High School, Davorlim
13	Our Lady of Piety School, Dharbandora
14	Government High School, Valkini
15	Government High School, Curdi
16	Government High School, Kalay, Sanguem
17	Government High School, Colomb
18	Government High School, Zambaulim

3. Project Officer reported the list of events and initiatives conducted by Goa State Innovation Council for the year 2019-20.

Table: 3.14: List of events and initiatives conducted by Goa State Innovation Council for the year 2019-20

	Initiatives/Events	Sessions Conducted	Total Participants
01.	Sensitisation Workshops on Innovation at Schools	38	3957
02.	Bootcamps on Innovations & Startups at Colleges	16	1506
03.	Women Centric Workshops on Innovation & Startups	2	510
04.	Faculty Development Program	1	30
05.	Orientation Program for Schools on Innovation & Startups	2	350
06.	Industry Institute Interaction	1	200
07.	IPR Awareness Session – Patent Search	2	276
08.	STEM – Sessions at Prototyping Lab	8	228
09.	Risk Capital Session	1	31
10.	Design Innovation Session	1	53
11.	Entrepreneurship and Financial Literacy Workshop	2	75

It was also reported that 7216 participants attended from 74 events and initiatives of the Goa State Innovation Council. As a result of the events and initiatives the number of New Idea registration on Virtual Innovation Register were 152 New Ideas for the year 2019-20. The total number of New Ideas registered on Virtual Innovation Register are 273 Ideas. The Technical Advisory Committee evaluated 27 Ideas and 4 Ideas were granted with Rs 10,00/- under the Provisional Patent Scheme.

4. During the discussion on Goa's Young Innovators Award 2019-20, the council members decided to conduct the finals at Don Bosco College of Engineering, Fatorda on 20th March 2020. It was also reported that the Competition was launched by Hon'ble Minister for Science and Technology, Shri Michael Lobo in presence of Chairman and Member Secretary of Goa State Innovation Council on 28th Jan 2020 at the Secretariat Block, Goa Legislative Assembly.

5. During the discussion on organising Hackathon to identify Innovative solutions in Waste Management, the following applications received in each category were presented:

Table: 3.15: List of applications received in each category

01	Disposal of Sanitary Pads and Diapers in scientific manner.	2
02	Disposal of Tubelights, LED's and CFL bulbs in scientific manner.	3
03	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.	8
04	Segregation of Dry Waste & reduction/ elimination of moisture from RDF (Refuse Derived Fuel)	6

The list of following mentor names were presented for inviting as mentors for conducting the hackathon:

Table: 3.16: List of mentors for conducting the hackathon

01	Mr. Scott Knox, Founder, Sunlight LLP & Design Thinking Expert, Mumbai
02	Mr. Jabir Karat, Founder, Green Worms, Kerela
03	Mr. Akshay Gunteti, AccelerateSD Foundation, Hyderabad
04	Mr. Pradeep Sarmokadam, Member Secretary, Goa State Biodiversity Board, Goa
05	Mr. Kishore Shah, Director, IDEAZ UNLIMITED, Goa
06	Mr. K. Moorley Dharan, Strategic and Turn-Around Management Consultant, Goa
07	Mr. Anish Souza, Founder & CEO, SUN360, Goa

The member secretary suggested to invite Mr. Shrikant Mutunari, HoD, Biology Department as mentor for the Hackathon. Chairman directed the project officer to approach the Goa Waste Management Corporation for more details regarding the problem statement and to share a presentation template with the participants.

5. During the discussion on Final Year Innovative Student Competition, the council members decided to conduct the finals at Don Bosco College of Engineering, Fatorda on 14th March 2020. The council members were updated with the number of applications received for the competition:

Table: 3.17: List of of applications received for the competition

Colleges	Civil	Comp	ECE	ENE	ETC	IT	MECH	Total
AITD		6	6				5	17
DBCE	8	11			8		12	39
GEC		4		20	8	7	10	49
PCCE		12			14	7	3	36
SRIEIT		16			6	13		35
TOTAL								**176**

6. The budget was approved by the council members for Final Year Innovative Student Competition of
    i. Engineering College Students &
    ii. Art Science Commerce College Students

7. The council members decided to invite Mr. Pranay Gupta, CEO, 91 Springboard as council member.

8. The meeting ended with the vote of thanks.

04
Committees & Sub-committees

04.01
Technical Advisory Committee

Goa State Innovation Council constituted a committee in order to develop uniformity in approach and to ensure timely shortlisting of Ideas registered under VIR for Provisional Patent Scheme of the council. The Technical committee comprising technically qualified professionals vide order No. DBCE/Goa State Innovation Council/2019-20/11.

The committee comprises of the following members:

1. Mr. B S Revankar, Ex-Director NITK – STEP Surathkal, B Tech from IIT, Madras, Dharwad, Karnataka - Chairman
2. Prof. Sunil Bhand, Dean, Sponsored Research & Consulting, Professor of Chemistry BITS, Pilani -K.K. Birla, Goa - Member
3. Mr. Deepak Pathania, Industrial Design, NID Ahmedabad, Goa - Member
4. Mr. Sudip Faldesai, Project Officer, Goa State Innovation Council - Member Secretary

04.02
Minutes of the meeting

Minutes of Meetings

Minutes of The Meeting for The First Technical Advisory Committee (TAC) Of Goa State Innovation Council Held On 28th June 2019 At Don Bosco College of Engineering, Fatorda.

Table: 4.1: Technical Advisory Committee's Members present for 1st meeting

01	Mr. B S Revankar Ex-Director, NITK – STEP, Surathkal, Karnataka	Chairman
02	Prof Sunil Bhand Dean, Sponsored Research & Consulting, Professor of Chemistry BITS, Pilani - K.K. Birla, Goa	Member
03	Mr. Deepak Pathania Industrial Design, NID Ahmedabad, Goa	Member
04	Mr. Sudip Faldesai Project Officer, Goa State Innovation Council	Member Secretary

Proceedings:

1. At the outset, the Chairman welcomed the members to the Meeting.

2. The project officer presented with the objectives of the TAC to the members.

3. The project officer presented the committee with the present status of the Ideas and Startups registered under Virtual Innovation Register which were as a result of Bootcamps on Innovations in Colleges, Sensitisation Workshops in Schools, Competitions on Innovations for Schools, Colleges and Other orientation programs conducted by Goa State Innovation Council. A total of 36 startups and 102 ideas are registered since 7th July 2018.

4. In order to select the eligible Ideas for Provisional Patents, it was decided to Invite the registered Innovators for a presentation in four phases. The entire process will be completed before February 2020.

5. Innovation Register which were as a result of Bootcamps on Innovations in Colleges, Sensitisation Workshops in Schools, Competitions on Innovations for Schools, Colleges and Other orientation programs conducted by Goa State Innovation Council. A total of 36 startups and 102 ideas are registered since 7th July 2018.

6. In order to select the eligible Ideas for Provisional Patents, it was decided to Invite the registered Innovators for a presentation in four phases. The entire process will be completed before February 2020.

7. The brief and abstract details about the registered Ideas from the Virtual Innovation Register were discussed and decided to shortlist them into three categories:

8. Category A : Total of 34 Ideas to be Invited first;
   Category B : Total of 11 Ideas to be invited after Category A;
   Category C : Total of 57 Ideas to be invited for an orientation program to discuss on the eligibility criteria and also in some cases where they have selected the option of patenting their Ideas as No, to understand the reason and as it was felt that some of them may have answered without understanding the option. The committee also decided to include the newly registered Ideas for Selection during the next meeting after the presentation by the invited Innovators.

9. The shortlisted categories were identified and the committee decided to invite the first 25 out of 34 from category A on 10th July 2019 and the presentations will be done and details not to be sent in written with the committee members.

10. It was decided to brief the innovators to limit their presentation to 5 minutes and the parameters for presentation mainly are: Novelty, Innovative Approach, Usefulness, and Cost-Benefit.

11. It was also decided to sign the Non-Disclosure Agreement with the Innovators and the committee before the presentations and the same will be informed to the Innovators.

12. The meeting ended with the Vote of Thanks by the Chairman.

Minutes of The Meeting for The Second Technical Advisory Committee (TAC) Of Goa State Innovation Council Held On 10th July 2019 At Don Bosco College of Engineering, Fatorda.

Table: 4.2: Technical Advisory Committee's Members present for 2nd meeting

01	Mr. B S Revankar Ex-Director, NITK – STEP, Surathkal, Karnataka	Chairman
02	Prof Sunil Bhand Dean, Sponsored Research & Consulting, Professor of Chemistry BITS, Pilani - K.K. Birla, Goa	Member
03	Mr. Deepak Pathania Industrial Design, NID Ahmedabad, Goa	Member
04	Mr. Sudip Faldesai Project Officer, Goa State Innovation Council	Member Secretary

Proceedings:

1. At the outset, the Chairman welcomed the members to the Meeting.

2. The Minutes of the previous meeting were read and confirmed by the members.

3. During the presentations it was observed that a total of 19 Ideas were present for the evaluation by the Technical Advisory Committee out of 25 invitees. Idea with the Unique Registration Number 161 was approved and selected for the Provisional Patent Scheme. A total of 8 ideas with Unique Registration Numbers 135, 193, 173, 142, 139, 244, 191 and 101 were directed to revert with proof of concepts and other supporting documents. They were advised for the importance of Inventiveness among all the Ideas for Patent Search. Out of the remaining, 10 ideas, some of the Ideas were asked to commercialise their ideas into Startups.

4. It was decided by the committee to orient the Innovators with the aspects and importance of Patent search and IPR.

5. It was decided by the committee to schedule the next meeting in the third/fourth week of August 2019.

6. The meeting ended with the Vote of Thanks by the Chairman.

Minutes of The Meeting for The Third Technical Advisory Committee (Tac) Of Goa State Innovation Council Held On 13th Nov 2019 At Don Bosco College of Engineering, Fatorda.

Table: 4.3: Technical Advisory Committee's Members present for 3rd meeting

01	Mr. B S Revankar Ex-Director, NITK – STEP, Surathkal, Karnataka	Chairman
02	Prof Sunil Bhand Dean, Sponsored Research & Consulting, Professor of Chemistry BITS, Pilani - K.K. Birla, Goa	Member
03	Mr. Sudip Faldesai Project Officer, Goa State Innovation Council	Member

Proceedings:

1. At the outset, the Chairman welcomed the members to the Meeting.

2. The Minutes of previous meeting were read and confirmed by the members.

3. Action taken on proceedings of second meeting were presented and discussed.

4. During the interaction with empanelled Patent Agents/Attorneys, they were asked to present about their Domain expertise, IDF, Cost involved and timeline including Patent Search, Provisional Patent Filing, Examination, Complete Specification, etc. They were also advised to send the details to Goa State Innovation Council Secretariat.

5. During the presentations it was observed that a total of 8 Ideas were present for the evaluation by the Technical Advisory Committee out of 12 invitees. Idea with the Unique Registration Number 255-A, 255-D were approved and selected for Provisional Patent Scheme. The other Ideas were directed to revert with Novelty Claims, proof of concepts and other supporting documents. They were advised for the importance of Inventiveness among all the Ideas for Patent Search. Idea with the Unique Registration Number 146, 262 were advised to go for copyright.

6. It was decided by the committee to schedule the next meeting in the third/fourth week of January 2020.

7. The meeting ended with Vote of Thanks by the Chairman.

Status Report:

Total Ideas invited for interview: 37

Provisional Patent Granted: 4

Provisional Patent Rejected: 11

Suggested Changes: 22

Four Ideas were shortlisted by the Technical Advisory Committee:

1. A DEVICE FOR A BLIND PERSON TO DETECT OBSTACLES
2. SYSTEM FOR IV DRIPS
3. ELECTRICAL ALL-TERRAIN VEHICLE
4. MANUFACTURING OF BRICKS

05
VIR (Virtual Innovation Register)

05.01
Introduction

The Virtual Innovation Register (VIR) is a unique initiative by Goa State Innovation Council to harvest potential ideas and innovation without any hassle or fuss. In step with the ethos of Digital India, the VIR is an online platform where innovators and entrepreneurs can register their ideas virtually and source the required support to achieve the expected results. VIR will also function as an innovation souk where young innovators will display prototypes and directly talk to prospective buyers.

Ideas are the genesis of start-ups. Having said that, ideas turn into the intellectual property only when they are implemented. Often, people get a brainwave, and an idea germinates – only to wither and die in the absence of a proper platform to test its potential. VIR is that platform where anyone can bounce their start-up ideas and get validation from experienced mentors who have significant industry experience and access to sophisticated tools to evaluate the commercial viability of ideas.

Why is VIR Good for Innovators & Businesses?

- Safeguarding unique innovations and ideas
- Validation of idea and support from experts
- Hassle-free digital registration from the comfort of home or office

Innovations and ideas can be registered under VIR in two categories; New Ideas and Startups. While the former allows individuals to submit their innovation and ideas, the latter allows already functioning start-ups to register with VIR and enjoy a host of benefits.

Benefits of Registering New Ideas Under VIR:

- Intellectual Property Rights support
- Support for commercialisation
- Pitching to prospective buyers

Benefits of Registering Your Start-up Under VIR:

- Collaboration with mentors and experts
- Support for raising Funds
- Access to resources (Incubation, Co-Founders, etc.)

The adequate promotion and spreading the awareness about the VIR bore fruits. The VIR saw registrations from 33 start-ups, as well as, submission of 96 new ideas by individuals across all ages and walks of life. Identified as one of the most significant tools to rope in game-changing entrepreneurial ideas from about anyone in the state, VIR is integrating technology and an iron-will to nurture a strong start-up ecosystem in Goa.

05.02
Status Report

The Virtual Innovation Register has successfully registered several path-breaking start-up ideas. Out of the total 363 ideas registered on VIR, 43 were from established start-ups and 320 were new ideas. The latter figure, which is significantly higher than the last year's figure of 179, suggests the potential of entrepreneurship in Goa, and is also a reflection of VIR's success in reaching out to people and tapping ideas.

STARTUP	NEW IDEA
43	320

05.03
Scheme of Provisional Patent Filing

Scheme for Provisional Patent Filling under Intellectual Property Rights is an initiative that would boost the Goan start-up ecosystem tremendously. The scheme for Provisional Patent Filling under Intellectual Property Rights is envisaged to facilitate protection of Provisional Patents of innovative and ideas. Taking its IPR training and support initiatives a notch higher, Goa State Innovation Council would soon be adding capabilities to provide dedicated support in provisional patents filings to innovators from Goa. The new IPR handholding initiative would help various innovators and VIR registrants in better organising and submitting all IPR-related documents with accuracy.

The process of filing for a patent is not only time consuming and complex, it is also expensive. For many new entrepreneurs and innovators, paying the patent fee is a challenge. The provisional patent filing scheme solves this problem while ensuring that the innovator's invention or idea is well protected. The scheme also aims to promote awareness and adoption of Intellectual Property Rights amongst the students and innovator.

Who Can Apply?

Any innovator or student with an innovative and creative technology-based based Idea can apply.

Empanelment of patent agents/ firms for filing patents under VIR:

The Committee duly appointed by the office bearers of the Goa State Innovation Council for Selection of Patent Agents/ Firms scheduled the interviews on 11th Jan 2019 and the committee finalised the following Individuals/ Firm based on the needs of the Goa State Innovation Council:

1. Mrs. Shalini Menezes, order no DBCE/Goa State Innovation Council/2018-19/56
2. Adastra IP Pvt Ltd, represented by Mr Sandeep Agarwal, order no DBCE/Goa State Innovation Council/2018-19/55
3. Lawmate.in represented by Ms. Gautami Raiker, order no DBCE/Goa State Innovation Council/2018-19/54
4. Jackfruit Software and Systems Pvt Ltd represented by Mrs. Supriya Ravindra, order no DBCE/Goa State Innovation Council/2018-19/53

An applicant under this Scheme shall be eligible for a support of upto Rs. 10,000 for filing provisional patent application through the aforesaid patent agents/ firms. The said fee will be paid directly to the appointed firm for filing the application.

Procedure for applying under the scheme:

Below mentioned is the procedure for applying under the Virtual Innovation Register (VIR):

An individual or a registered entity (Partnership/ Limited Liability Partnership/ Private Limited Company) shall submit an application through the portal:
http://goastateinnovationcouncil.com/virtual-innovation-register

An Innovative shall be from the following sectors which are not absolute but include:

1. Agri-tech
2. Digital media
3. Health care tech
4. Manufacturing
5. ITES

It is mandatory for the applicant to apply under the aforesaid mentioned portal to claim benefits under the Virtual Innovation Register.

Selection committee for sanctioning projects under VIR for provisional patent filing:

The Goa State Innovation Council shall hold meetings for once in three months basis to approve projects for filing provisional patent application.

Following is the committee for sanctioning the proposals:

1. Mr. B S Revankar, Ex-Director, NITK – STEP, Surathkal, Karnataka : Chairman
2. Prof Sunil Bhand, Dean, Sponsored Research & Consulting, Professor, BITS, Pilani, Goa : Member
3. Mr. Deepak Pathania, Industrial Design, NID Ahmedabad, Goa : Member
4. Mr. Sudip Faldesai, Project Officer, Goa State Innovation Council : Member Secretary

The intimation of decision shall be made to the applicants through email within 30 number of days from the date of meeting.

All decisions regarding selection shall be final and binding.

Tenure of the Scheme:

The scheme shall be valid for a period of 3 years w.e.f. 1st April 2019.

05.04
Provisional Patent Granted

Total applications: 320

Total interviews: 37

Granted: 4

Rejected: 11

Modifications/Queries: 22

06
IPR (Intellectual Property Rights Training)

06.01
IPR Training session on Patent Search for New Ideas registered on VIR

It is imperative to safeguard your innovation against threat. Intellectual Property Rights or IPR helps innovators to appropriate their innovations to their name to prevent any theft of their ideas in the future. Unfortunately, many innovators are not aware of IPR and how to search for patents.

On 24th September 2019, Goa State Innovation Council organised an informative IPR training session on Patent Search for New Ideas registered on VIT. The participants, 101 in number, were educated on concepts like copyright, plagiarism, fair use, exception, etc. They were also educated on the procedure of filing patents and other important topics that would help them in protecting their innovations in times to come.

Date: 24th September 2019 at Venue: Goa Engineering College, Farmagudi, Goa

Table: 6.1: Schedule for IPR Training session on Patent Search

Schedule

Time	Session
9.30 AM - 10.00 AM	Registration
10.00 AM - 10.30 AM	Inaugural Session Keynote Address by Chief Guest Shri Jose Manuel Noronha, Chairman, Goa State Innovation Counc
10.30 AM - 10.45 AM	Tea
10.45 AM - 11.45 AM	Technical Session I A holistic view of Intellectual Property Rights – Copyright , Plagiarism, fair use, Exception, Copyleft, Trademark- Geographical Indication. Speaker: B Vivek Anand Sagar, IP Attorney and Consultan
11.45 AM – 1.00 PM	Session II Patentability Subject Matter, What is patentable? What is not patentable? Speakers: Dr. Suhas Kulkarni, Deputy Controller of Patent and Design, Office of Controller of Patent, Trademark and Design, IP Office
1.00 PM – 2.00 PM	Lunch
2.00 PM – 3.30 PM	Technical Session III Patent filing mechanisms and procedures. Procedure of filing of patent – Provisional and complete specification, Examination, pre- grant opposition and Post grant Opposition- Fee structure Speaker: B Vivek Anand Sagar, IP Attorney and Consultan
3.30 PM – 4.30 PM	Session IV Copyright – Plagiarism – Rights Exception for Education purpose – ownership and Transfer and TRADEMARK- Design and Geographical Indication Speaker: B Vivek Anand Sagar, IP Attorney and Consultant Vote of Thanks

Photograph: 6.1: Participants for IPR Training session on Patent Search

Photograph: 6.2: Participants for IPR Training session on Patent Search

Photograph: 6.3: Participants for IPR Training session on Patent Search

Photograph: 6.4: Speaker - Dr. Suhas Kulkarni, Deputy Controller of Patent and Design, Office of Controller of Patent, Trademark and Design, IP Office

Photograph: 6.5: Participants for IPR Training session on Patent Search

Photograph: 6.6: Speaker - B Vivek Anand Sagar, IP Attorney and Consultant

Photograph: 6.7: Participants for IPR Training session on Patent Search

06.02
IPR awareness session for School Student

With an aim of promoting innovation in Goa, the Goa State Innovation Council not only trains the youth in harnessing their creativity and innovative spirit but also educates them on other related aspects like patents and copyright. In line with this objective, the Council held two informative sessions on IPR in Goa. The second session, held on 25th September 2019 at The New Education Institute School, Curchorem, focussed on the basics of Intellectual Property Rights and the process of IPR in India.

The event saw a massive turnout of 175 participants who certainly enjoyed the engaging lecture interspersed with relevant, real-life examples that added to the learning outcomes.

Topics	: Understanding of IPR in India and Process of IPR.
Speaker	: B Vivek Anand Sagar, IP Attorney and Consultant
Date	: 25th September 2019
Venue	: The New Education Institute school, Curchorem
Total Participants	: 175

Photograph: 6.8: Participants for IPR awareness session for School Student

Photograph: 6.9: Participants for IPR awareness session for School Student

07
GOA WASTE MANAGEMENT HACKATHON 2019-20

07.01
Introduction

With the view to finding deployable solutions to counter the burgeoning issue of garbage and waste management in the state, Goa State Innovation Council organized the Goa Waste Management Hackathon 2019-20. The hackathon encouraged people from different age-groups, and from diverse walks of lives pitch pathbreaking ideas in waste management that are not only economical but also easy to adopt and scale.

07.02
Brainstorming Session at Goa Waste Management Corporation

The Goa State Innovation Council is determined to solve the solid waste management problem in Goa. To aid its efforts, the council invited representatives from various colleges for a brainstorming session to help solve the problem. The main agenda of the session was to identify the challenges that may be presented to teams in the form of a Hackathon to find innovative solutions to community problems.

Some of the identified challenges include pressing concerns like segregation of dry waste, removal of solid waste from water bodies, and the disposal of sanitary pads and diapers in a scientific and environment-friendly manner.

Schedule:
29th August 2019
Goa Waste Management Corporation, Saligao
Objective: Discussion on organising Hackathon to identify Innovative solutions in Waste Management

Table: 7.1: Schedule for Goa Waste Management Hackathon 2019-20

Time	Session
10:00 am to 10:15 am	Opening Address on the meeting agenda
10:15 am to 10:45 am	Challenges faced by Goa Waste Management Corporation
10:45 am to 11:45 am	Open Discussion
11:45 am onwards	Visit to Waste management plant at Saligao

Letter to colleges for Brain Storming Session

Goa State Innovation Council

GOA STATE INNOVATION COUNCIL
Department of Science & Technology, Government of Goa
Secretariat
Don Bosco College of Engineering, Fatorda,
Margao, Goa - 403602 | (O) 0832 274 3944 | (E) admin@gsic.in
www.goastateinnovationcouncil.com

No. DBCE/GSInC/2019-20/23 23/08/2019

To
The Principal

Sub: Brainstorming on organising Hackathon to identify Innovative Solutions in Waste Management.

Dear Sir/Ma'am,

As you are aware, Goa State Innovation Council is mandated with the task of promoting innovation in Goa. During the 12th meeting held on June 4, 2019, it was decided to organise a meeting with the principals of engineering and science colleges in Goa to organise "Hackathon" to identify Innovative solutions to the challenges faced in Solid Waste Management and disposal in Goa.

We request you to attend the meeting at Goa Waste Management Corporation, Saligao on 29th August 2019, to identify various challenges to be taken up for the Hackathon to be organised by the Goa State Innovation Council in association with Goa Waste Management Corporation.

Kindly find enclosed the agenda of the meeting.

Thanking you.

GOA STATE INNOVATION COUNCIL FATORDA MARGAO GOA

Yours Sincerely,

Shri Sudip Faldesai
Project Officer

GOA STATE INNOVATION COUNCIL
Department of Science & Technology, Government of Goa
Secretariat
Don Bosco College of Engineering, Fatorda,
Margao, Goa - 403602 | (O) 0832 274 3944 | (E) admin@gsic.in
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Agenda

Goa State Innovation Council

29th August 2019

Goa Waste Management Corporation, Saligao

Objective: Discussion on organising Hackathon to identify Innovative solutions in Waste Management

Sr No.	Schedule	Time
1	Opening Address on the meeting agenda	10:00 am to 10:15 am
2	Challenges faced by Goa Waste Management Corporation	10:15 am to 10:45 am
3	Open Discussion	10:45 am to 11:45 am
4	Visit to Waste mangement plant at Saligao	11:45 am onwards

GOA STATE INNOVATION COUNCIL FATORDA MARGAO GOA

Photograph: 7.1: Launch of Goa Waste Management Hackathon 2019-20

Photograph: 7.2: Launch of Goa Waste Management Hackathon 2019-20

Invitation to colleges

Goa State Innovation Council

GOA STATE INNOVATION COUNCIL
Department of Science & Technology, Government of Goa
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Margao, Goa - 403602 | (O) 0832 274 3944 | (E) admin@gsic.in
www.goastateinnovationcouncil.com

No. DBCE/GSInC/2019-20/35 23/01/2020

To,
The Principal

Sub: Goa Waste Management Hackathon

Goa State Innovation Council is pleased to announce the Goa Waste Management Hackathon to Identify Innovative Solutions to the challenges faced in Solid Waste Management and disposal in Goa.

Goa Waste Management Hackathon 2020 is an initiative of Government of Goa to provide students a platform to solve challenges faced in Solid Waste management and disposal in Goa and thus incubate the culture of product/process innovation with problem solving mindset.

Challenges faced in Solid Waste Management and disposal are:

1. Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse Derived Fuel)
2. Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
3. Disposal of tubelights, LED's and CFL bulbs in scientific manner.
4. Disposal of Sanitary Pads and Diapers in scientific manner.

The submitted projects will be evaluated on the basis of

a. Problem identification and ideation
b. Innovation & Design
c. Sustainability

The Students are encouraged to submit their project through online application by 4th Feb 2020. The hackathon finals will be held on 18th & 19th of Feb 2020 at Don Bosco College of Engineering, Fatorda.

Apply at ***www.goastateinnovationcouncil.com/goa-waste-management-hackathon***

The hackathon is open for students from colleges affiliated with Goa University which includes students from Engineering, Arts, Science, Commerce, Polytechnic, ITI & Home Science colleges.

The selected projects will get an opportunity to implement their projects with the support of Goa Waste Management Corporation.

Activities at Hackathon

1. **Waste Management Workshop**: A workshop on Solid Waste Management and disposal, Waste cause Pollution, Plastic Life Cycle & it's Impact on the Environment.
2. **Design Thinking Workshop:** The Workshop will nurture a creative approach by engaging in dynamic discussion, relevant reading and team exercises in a systematic, human-centred approach to solve complex problems.
3. **Developing Ideas:** The Participants will brainstorm and come up with solutions
4. **Mentorship Session:** Mentors will assist the participants in developing their Ideas.

Goa State Innovation Council

GOA STATE INNOVATION COUNCIL
Department of Science & Technology, Government of Goa
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5. **Business Development Workshop:** Once the participants are very clear about their Ideas, during the Day 2 participants will attend a Business Development workshop to explore commercialization of their Solutions .
6. **Pitch Session:** The Participants will be given an opportunity to pitch their Solutions.

Schedule:

Day 1 18th Feb 2020	Registration	09:00 am - 10:00 am
	Inauguration Ceremony	10:00 am - 10:30 am
	Introduction to Mentors	10:30 am - 12:00 pm
	Design Thinking Workshop	12:00 pm - 01:00 pm
	Lunch	01:00 pm - 02:00 pm
	Idea Generation	02:00 pm - 03:00 pm
	Activity – Think, Design & Prototype	03:00 pm - 07:00 pm
Day 2 19th Feb 2020	Activity – Think, Design & Prototype	09:00 am - 11:30 am
	Business Plan Development Workshop	11:30 am - 01:00 pm
	Lunch	01:00 pm - 02:00 pm
	Pitching & Pitch Deck Training & Preparation	02:00 pm - 03:00 pm
	Pitch Session & Closing Ceremony	03:00 pm - 06:30 pm

Yours Sincerely,

Sudip Faldesai,
Project Officer

07.03
Goa Waste Management Corporation - Challenge

1. Segregation of Dry Waste & reduction/elimination of moisture from RDF (Refuse Derived Fuel).
2. Removal of Solid Waste from Surface water bodies for e.g., Rivers, Lakes, Ponds.
3. Disposal of tube lights, LEDs and CFL bulbs in a scientific manner.
4. Disposal of Sanitary Pads and Diapers in a scientific manner.

07.04
Launch of competition for Goa Waste Management Hackathon

Goa Waste Management Hackathon was held in February 2020, as an initiative of the state government, to encourage students in being a part of the larger change that needs to be brought about to overcome the issues related to waste management.

Four major issues were identified and the students were asked to apply online with their ideas. It was announced that all the teams would be mentored by experts and 8 teams will get to present their idea on the final day. The winning team would receive funding to bring their idea to life and help in solving the waste management problems of Goa.

Photograph: 7.3: Launch of Goa Waste Management Hackathon 2019-20

View on page

Govt organises hackathon on trash for youth

TIMES NEWS NETWORK

Panaji

: Budding innovators from educational institutions in the state will vie for a chance to help Goa Waste Management Corporation tackle the state's burgeoning trash. Goa State Innovation Council is organising a two-day hackathon from February 18 where teams from different colleges will ideate and offer solutions for four problems — segregation of waste, removal of trash from water bodies, disposal of LEDs and bulbs, and disposal of sanitary pads and diapers.

According to the department of science and technology, 19 teams from technical as well as non-technical institutes have signed up to take a shot at hacking away at Goa's waste.

"We will see the ideas. If two ideas are similar, we will combine them to form one group. On the second day, eight teams will be selected to give a presentation about their innovation," said an official with the council.

Goa Waste Management Hackathon 2020 is an initiative of the state government to provide students a platform to solve challenges faced in solid waste management and disposal in Goa and thus incubate the culture of innovation with problem solving mindset among students.

Students will have access to nine mentors who will assist the teams in fine-tuning their projects.

"The winner of the hackathon will get access to funding and government support to implement their projects on the ground and scale up. As a start, the most innovative project will work with Goa Waste Management Corporation," the official said.

Goa Waste Management Corporation has identified four major challenges that urban and local bodies face while collecting and processing solid waste in the state — segregation of dry waste and elimination of moisture from domestic and commercial waste along with disposal of lighting equipment, sanitary pads and diapers.

Interestingly, most of the teams have shown interest in the fourth category, which deals with removal of waste from water bodies.

The state innovation council has partnered with AccelerateSD Foundation, Hyderabad to guide the students and even after the hackathon, the winner of the contest will get the opportunity to continue with the accelerator.

WASTE MINDED

More from Times City

Disqualification plea: Ex-Cong MLAs get 4 weeks to file reply

Tiger from Goa caught on camera in Karnataka forest

Juvenile detained in Porvorim case

nCoV: 45 persons isolated till date, 35 under watch

Youth held for outraging modesty

TIMES CITY

THE TIMES OF INDIA, PANAJI - GOA FRIDAY, FEBRUARY 14, 2020

METRO DIGEST

Cashew zones' auction begins, up to 40% will see no takers

'Using Section 144 to handle terror threat mischievous'

CINEMA OF THE WEEK

Govt organises hackathon on trash for youth

To avoid CAA protests, CCP to 'screen' floats ahead of Panaji parade

MARK YOUR CALENDAR

Photograph: 7.4: Launch of Goa Waste Management Hackathon 2019-20

Govt organises hackathon on trash for youth

TIMES NEWS NETWORK

Panaji: Budding innovators from educational institutions in the state will vie for a chance to help Goa Waste Management Corporation tackle the state's burgeoning trash. Goa State Innovation Council is organising a two-day hackathon from February 18 where teams from different colleges will ideate and offer solutions for four problems — segregation of waste, removal of trash from water bodies, disposal of LEDs and bulbs, and disposal of sanitary pads and diapers.

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WASTE MINDED

Activities at Hackathon

- **Waste Management** Workshop
- **Design Thinking** Workshop
- **Developing Ideas**
- **Mentorship** Session
- **Pitch Session**
- **Business Development** Workshop

Goa Waste Management Corporation has identified four major challenges that urban and local bodies face while collecting and processing solid waste in the state — segregation of dry waste and elimination of moisture from domestic and commercial waste along with disposal of lighting equipment, sanitary pads and diapers.

Interestingly, most of the teams have shown interest in the fourth category, which deals with removal of waste from water bodies.

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07.05
Status Report

Goa Waste Management Hackathon 2020 is an initiative of the Government of Goa to provide students a platform to solve challenges faced in Solid Waste management and disposal in Goa and thus incubate the culture of product/process innovation with a problem-solving mindset. Goa State Innovation Council conducted the Hackathon on 18th & 19th Feb 2020 at Don Bosco College of Engineering, Fatorda.

Challenges faced in Solid Waste Management and disposal were:

1. Segregation of Dry Waste & reduction/ elimination of moisture from RDF (Refuse Derived Fuel)
2. Removal of Solid Waste from Surface water bodies for e.g. Rivers, Lakes, Ponds.
3. Disposal of tube lights, LEDs and CFL bulbs in scientific manner.
4. Disposal of Sanitary Pads and Diapers in scientific manner.

A total of 19 student projects were applied and attended the finals the submitted projects were evaluate on the basis of:

1. Problem identification and ideation
2. Innovation & Design
3. Sustainability

Mentors:

1. Mr. Scott Knox, Founder, Sunlight LLP & Design Thinking Expert, Mumbai
2. Mr. Jabir Karat, Founder, Green Worms, Kerala
3. Mr. Akshay Gunteti, AccelerateSD Foundation, Hyderabad
4. Mr. Kishore Shah, Director, IDEAZ UNLIMITED, Goa
5. Mr. K. Moorley Dharan, Strategic and Turn-Around Management Consultant, Goa
6. Mr. Baylon Gomes, MD, Bavish, Goa

Judges:

1. Dr Vittal Tilve, PhD Astronomy, School of Earth & Space Exploration, USA
2. Mr. Lalit Saraswat, Chairman, Confederation of Indian Industry (CII), Goa
3. Mr. Atul Naik, CEO, Creative Engineers Group of Industries

07.06
Goa Waste Management Hackathon - Winners

1st Award

Title : MINI SOLID WASTE SEGREGATOR

Students : Rajay Naik, Sanath Bharne

Faculty : Prof. Swapnil Ramani, Prof. Ajit Salunke

College : Don Bosco College of Engineering

Dept : Mechanical

Abstract :

The size of the segregation machine is reduced while also making the process completely automated with programmable artificial intelligence. This is done so that civic bodies(municipalities, panchayats) can use it to segregate their own waste, eventually reducing the load on major dump sites.

The product and process is much more cheaper and compact as compared to the current waste segregation system Since the project is automated it can segregate more solid waste in less time and is able to segregate waste much efficiently under the guidance of the operator. Solid waste segregation in present day has become a big problem and with the recent fires taking place as dump yards in Goa we thought of coming up with an efficient way to solve this issue also, this project will allow civic bodies to not only segregate their own waste but earn revenue out of it .

2nd Award:

Title : DESIGN AND FABRICATION OF GLASS POWDERING AND GRADING MACHINE FOR VARIOUS INDUSTRIAL APPLICATION

Students : Tejas pandit, Rohit Prabhu

Faculty : Prof. Suraj Marathe

College : Don Bosco College of Engineering

Dept : Mechanical

Abstract :

Glass is made from a mixture of sand lime and soda. When these ingredients are heated together they form a liquid glass. And. When waste glass is milled down to micro size particles it is expected to undergo pozlanic reaction with cement hydrate forming secondary calcium silicate hydrate.

3rd Award:

Title : DETECTION AND REMOVAL OF FLOATING WASTE ON WATER BODIES

Students : Sainil Priolkar, Saiesh Karwarkar, Deeptesh Morajkar, Aafrin Khan, Akshata Fatartekar

Faculty : Prof. Satyesh Kakodkar, Prof. Gaurish Samant

College : Don Bosco College of Engineering

Dept : Civil

Abstract :

Removal of Solid Waste from Surface water bodies for e.g. Rivers, Lakes and Ponds.

Photograph: 7.5: Winners of Goa Waste Management Hackathon 2019-20

Photograph: 7.6: Winners of Goa Waste Management Hackathon 2019-20

Photograph: 7.7: Winners of Goa Waste Management Hackathon 2019-20

Photograph: 7.8: Winners of Goa Waste Management Hackathon 2019-20

08
GOA'S YOUNG INNOVATORS AWARD

08.01
Introduction

A bright initiative of the Goa State Innovation Council, Goa's Young Innovators Award is geared at promoting innovation and entrepreneurship among the students of Goa. The much appreciated and visibly successful initiative has encouraged several students across the state to present their ideas on a common platform – giving every student an equal opportunity to share their ideas and also play a part in curating a better future by harnessing their creative side.
Students aged between 10 and 15 years can participate in the competition under two categories – standard VIII – X and standard V – VII.

The winners of Goa's Young Innovators Award not only receive recognition but also cash prizes in addition to mentorship and infrastructural support to turn their ideas into reality.

1. What is role of Goa State Innovation Council in promoting Innovation

Innovation can be described as a new idea, device, or method which is useful and scalable to appropriate levels. However, to be innovative, the idea should have certain distinctiveness over similar products/devices/methods that are in existence. It should also solve a problem or improve output or efficiency, enable multi-functionality, reduce drudgery, etc. Overall, the idea should be such that it offers measurable results and improvement over the methods already in use.

At Goa State Innovation Council, we are focussing on creating an innovation movement that involves individuals of all age groups to solve the various problems faced by the Indian community and create a trajectory of inclusive growth and sustainable development for India.

2. Why is Goa State Innovation Council promoting Innovation in Children?

Children are the future of the world and it is pertinent to promote and fuel their natural creativity to harness their original ideas into viable solutions for resolving various issues. By fostering creativity in children, Goa State Innovation Council is nurturing the future leaders of the country and the world with intuitive problem-solving skills cantered on innovation.

Creativity, impatience, and imagination - these three traits are the foundations of creative success and must be promoted in children for inclusive growth and development.

3. The process of project submission

1. Ideas should be submitted from the school in prescribed format.
2. Project Type: Product/Process
3. Description of the project with the technology used
4. Student and school contact details
5. Share photos, videos, sketches of the project, if available
6. Submit the proposal online to goastateinnovationcouncil.com/goas-young-innovator-award

08.02
Launch of competition for Goa's Young Innovator Award

Photograph: 8.1: Launch of Goa's Young Innovator Award 2019-20

Goa State Innovation Council

GOA STATE INNOVATION COUNCIL
Department of Science & Technology, Government of Goa
Secretariat
Don Bosco College of Engineering, Fatorda,
Margao, Goa - 403602 | (O) 0832 274 3944 | (E) admin@gsic.in
www.goastateinnovationcouncil.com

No. DBCE/GSInC/Admn/2019-20/37 28/01/2020

To,
The Headmaster/ Headmistress

Goa State Innovation Council is pleased to announce the competition for Goa's Young Innovator Award 2019-20 to encourage Innovative talent amongst young minds studying in the schools in Goa. Students are encouraged to come up with original and creative ideas. Teachers of the school can help the students by proposing problems to the students which need solutions and provide assistance in converting the idea into a prototype or model.

The projects will be judged on the originality and usability of the innovation. The competition will be held in the following categories:

Category 1 – Students from class 8th to 10th
Category 2 – Students from class 5th to 7th

Goa's Young Innovator Award will emphasize on Innovation with weightage for Idea, Innovation & Creativity, and Feasibility in terms of technology, Prototype, Scalability & Sustainability.

The Finale will be restricted to 20 projects for each category and will be held in the month of March 2020

We request you to encourage the participation of the students from your school. The last date to submit the online application is 22nd Feb 2020

Kindly submit the applications at www.goastateinnovationcouncil.com/goas-young-innovator-award

For any queries contact Secretariat, Goa State Innovation Council at 0832-2744000 / +91 98221 64489

Thanking you,

Yours Sincerely,

Sudip Faldesai
Project Officer

08.03
Status Report

The unfortunate outbreak of the coronavirus has brought a lot of activities to halt, including Goa's Young Innovators Award that couldn't be materialized this year due to the nationwide lockdown. However, we urge young children and parents to continue revelling in the spirit of innovation and building on their ideas because there would be nothing more important than innovation in bringing the world back to its feet in the post-COVID era.

Photograph: 8.2: Goa's Young Innovator Award 2019-20

Photograph: 8.3: Goa's Young Innovator Award 2019-20

08.04
Winners of Goa's Young Innovators Award 2018-19

Goa's Young Innovator Award is an initiative of the Goa State Innovation Council to promote innovation and entrepreneurship among the students of Goa. Goa's Young Innovators Award helps encourage students across schools and education boards to present their ideas on a common platform, giving each student an equal opportunity to demonstrate their innovation. Goa's young Innovator Award is competition organised by Goa State Innovation Council for the School students in the State of Goa.

The Competition was held in two categories:
Category 1 : For students from Standard 8th to 10th
Category 2 : For students from standard 5th to 7th.

Over 200 students from various schools across North Goa & South Goa submitted their ideas in the form of proposal by 18th Feb 2019. The prize awards in each of two categories are:
First prize of Rs20,000/-
Second prize of Rs10,000/-
Third prize of Rs5,000/-.

The students came up with creative & innovative ideas to use technology in solving societal problems and addressing grave issues in the areas of sustainable energy, environmental conservations, road safety, health & many more.

The finals were held on 13th Mar 2019, where top 20 projects from each of Category 1 & 2were represented by the students. Prize Distribution was conducted on 01-10-2019 at Don Bosco College of Engineering, Fatorda.

Table: 8.1: Winners of Goa's Young Innovator Award 2019-20

Winners	
First Rs. 20,000	Development of oil absorbing biofilters for efficient removal of oil spill Ms. Tanishka G. Shet Raikar The New Educational Institute, Curchorem
Second Rs. 10,000	IV Therapy Mr. Sanad Balegiri and Mr. Shreyan Burye Dr. K. B. Hedgewar High School, Bambolim
Third Rs. 5,000	A Fish Feeder Robot for Aquaculture Ms. Shravani Marathe Dr. K. B. Hedgewar High School, Bambolim
First Rs 20,000	A digital microscope and a laser microscope Ms. Keira Fernandes Manovikas English Medium School
Second Rs 10,000	Energy generation using vehicle passing over the speed breakers Mr. Ruben Hugo Pinheiro Manovikas English Medium School
Second Rs 10,000	Ultrasonic sensor blind guide Mr. Suhit Rajaram Mahambery Vidya Vikas Academy

Shri Jose Manuel Noronha was the Chief Guest for the program and he encourage the students to be innovative and creative. Other guest on the dais were Fr. Paul D'Souza, Rector – Don Bosco College of Engineering, Fr. Kinley Dcruz - Don Bosco College of Engineering, Dr Neena Panandikar, Principal - Don Bosco College of Engineering and Mr D S Prashant, CEO – FiiRE.

Vote of thank was presented by Mr Sudip Faldesai, Project Officer, GSInC

Photograph: 8.3: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.4: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.5: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.6: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.7: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.8: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.9: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.10: Prize distribution of Goa's Young Innovator Award 2019-20

Photograph: 8.11: Winners of Goa's Young Innovator Award 2019-20

Photograph: 8.12: Winners of Goa's Young Innovator Award 2019-20

Photograph: 8.13: Participants of Goa's Young Innovator Award 2019-20

Photograph: 8.14: Winners of Goa's Young Innovator Award 2019-20

Photograph: 8.15: Winners of Goa's Young Innovator Award 2019-20

Photograph: 8.16: Winners of Goa's Young Innovator Award 2019-20

Photograph: 8.17: Winners of Goa's Young Innovator Award 2019-20

09
FINAL YEAR ENGINEERING PROJECT COMPETITION

09.01
Introduction

Engineering undergraduates in Goa can win cash rewards and significant recognition with a unique opportunity to showcase their final year projects to the world through the Student Project Competition. The objective of this initiative is to encourage final year engineering students to use their imagination and find innovative solutions to social/environmental problems. For fostering innovation, the Student Project Competition is designed in a flexible way to catalyse a range of different project types, scales of operation and stages of development.

The Student Project Competition is built on the model of:

- Supporting innovative and solution-oriented thinking
- Strengthening the capacity of coalitions, networks, and partnerships; and supporting the implementation of innovative projects (ideas into action)
- Competition is open for students of colleges based in Goa

Most Innovative Student Project Competition for Arts, Science & Commerce

Goa State Innovation Council is committed to creating a culture of innovation and entrepreneurship in Goa. To promote this, the council actively scouts promising youth in the state through student project competitions across disciplines. Undergraduate students from Arts, Science and Commerce streams can participate in their respective category to present disruptive ideas that can change the world as we see it.

Besides the recognition, students win cash prizes and get the opportunity to connect with thought-leaders and also benefit from their mentorship to develop their ideas further and make them market-ready.

09.02
The Launch of competition for Innovative Student Project Awards

Goa State Innovation Council invites colleges the Innovative Student Project Award for the students from engineering colleges in Goa:

Table: 9.1: List of engineering colleges in Goa

Sr. No.	Name of the Institution
1	Agnel Institute of Technology and Design, Assagao
2	Don Bosco College of Engineering, Fatorda
3	Goa Engineering College, Farmagudi
4	Padre Conceicao College of Engineering, Verna
5	Shree Rayeshwar Institute of Engineering & Information Technology, Shiroda

Student Project Competition will encourage exploration of innovative projects as part of the curriculum by the students of engineering colleges. This could be the stepping stone to explore the innovative and creative potential resulting in innovative products and services thus contributing towards Innovation and building a startup ecosystem in Goa.

Students are encouraged to come up with original and creative ideas. The projects will be judged on the originality and usability of the innovation. The Student Projects must be part of Final Year Project of undergraduate students.

One innovative project will be selected for the finals from amongst each department of every engineering college. An overall winner and runner-up will the awarded. Besides, five innovative projects will be awarded encouragement prize.

03. Student Project Competition Categories

Table: 9.2: Student Project Competition Categories

Sr. No.	Discipline	Streams
01.	Bachelor of Engineering (B.E.)	1. B.E. Civil 2. B.E. Mechanical 3. B.E. Electrical & Electronics 4. B.E. Electronics & Telecommunication 5. B.E. Electronics & Communication 6. B.E. Computer 7. B.E. Information Technology

04. Cash Prize for Top Three Students Project

Table: 9.3: Cash Prize for Top Three Students Project

Categories	Prize
Winner	INR 20,000
Runner-Up	INR 10,000
Encouragement Prize 5 in Nos.	INR 5,000 each

05. Budget Estimate

Table: 9.4: Budget estimate

Sr. No.	Timeline	Details
01	Organisation of The Event	0.10
02	Mementoes to Jury/Judge	0.05
03	Refreshments – Tea & Biscuits	0.10
04	Prize Awards	0.55
	TOTAL	**0.80**

EduCom RV- 1423.190214 February 14, 2019

Principals : Arts, Science & Commerce Colleges from Goa

Respected Principals.

FINAL YEAR INNOVATIVE PROJECT WORK COMPETITION 18-19

We are pleased to announce the above titled competition for respective colleges. We expect the students to send in the entries by February 25. (Entries vide Google Doc link below)

Colleges shall hold the internal competition by 28th February and inform us (deputydirector@goachamber.org; & projectofficer@gsic.in) of The Most Innovative Project in each segment in their college by 3rd March 2019.

Please note that competition at college level is a must for students to get scope to present and articulate their idea to larger audience – as preparation for Final Presentation.

Segment/ Categories are:
Most Innovative Project in Arts subjects including humanities

1. -do-Life Sciences
2. -do- Physical Sciences
3. -do-Commerce Subjects
4. -do- In their respective streams viz Architechture/ Agriculturee/ Teacher Training/ Law etc

In mid-March 2019, we shall hold final competition amongst all colleges in different segments or combined as may be necessary. The Prizes and Certificates will be given on the final day competition itself.

Winners of competition will get awards and Certificates. We shall also endeavor to ensure mentoring and scaling of the shortlisted projects through benefactors.

The competition with the emphasis on INNOVATION is being organized under the aegis of Goa State Innovation Council, and close cooperation with Directorate of Higher Education.
The projects will be assessed on the basis of

a. Idea Generation – Quality & Clarity
b. Innovative Approach
c. Feasibility in terms of Technology to support the Idea
d. Prototype (to be accounted more during Final Competition)
d. Scalability & Sustainability

We request you to announce the same to the students immediately and send us the entries vide Google Doc link below by February 25, 2019. Please note that late entries will not be possible in view of limited time at your and our disposal.

Looking forward to your positive response and cooperation,

Truly,

Raghuveer Vernekar
Chair : Education Committee : GCCI

cc: GSIC, DHE

Please acknowledge the receipt this letter with a copy to:
Deputy Director GCCI deputydirector@goachamber.org; & Sudip Faldesai projectofficer@gsic.in

09.04
Status Report

Opening a whole new vista for the college students to showcase their talent and innovation through their final year projects, Goa State Innovation Council, in collaboration with Goa Chamber of Commerce & Industry (Education Committee), conducted seven competitions in the state, witnessing participation from more than 900 Engineering students and a total of 167 innovative projects with the promise of solving complex world problems. The 'Most Innovative Student Project Competition' for final year Engineering students is a vital move towards encouraging young minds to apply their technical education in creating workable models and prototypes that have the potential to solve a bigger problem, in terms of restoring nature, enhancing individual safety, inventive farming solutions, sustainable solutions among others.

The project submissions were evaluated on factors such as idea generation – quality & clarity, innovative approach, feasibility in terms of technology to support the idea, prototype, scalability and sustainability. Civil Engineering students from Don Bosco College of Engineering took home the first prize of Rs 25,000 for their project, 'Manufacturing of Bricks Using Laterite Soil.' The second prize of Rs 10,000 was awarded to the Computer Science students of Agnel Institute of Technology and Design for their project, 'Smart Walking Stick for the Visibly Impaired.' The third prize of Rs 5,000 each was awarded to E&E department students of the Goa Engineering College for their project, 'Power Generation Using Biogas.'

Conducted by Goa State Innovation Council and Goa Chamber of Commerce & Industry – Education Committee.

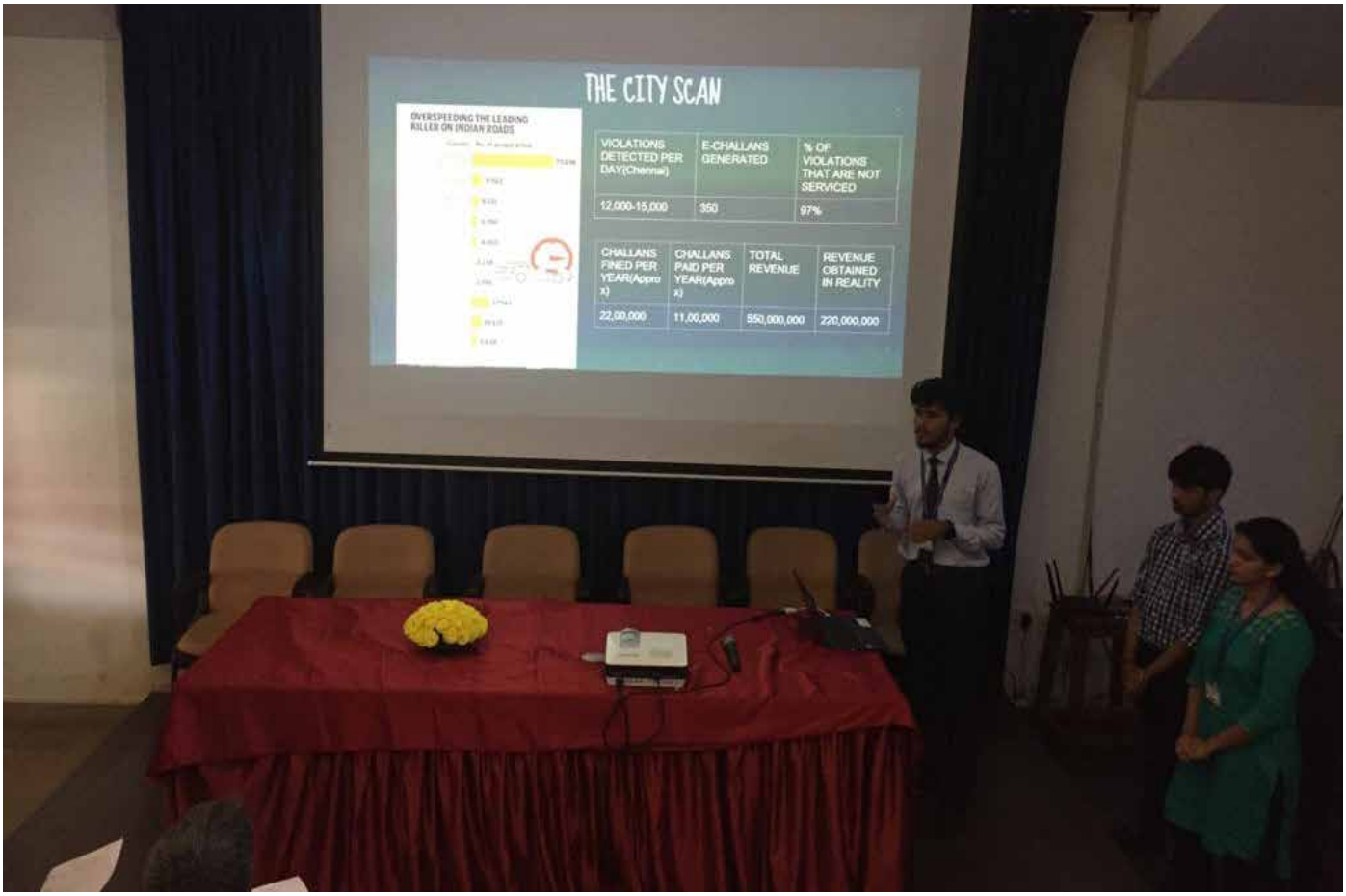
The competition had the emphasis on INNOVATION and the projects were assessed on the basis of:

a. Idea Generation – Quality & Clarity
b. Innovative Approach
c. Feasibility in terms of Technology to support the Idea
d. Prototype
d. Scalability & Sustainability

09.05
Winners of for Innovative Student Project

The winners for the Innovative Student Projects Awards could not be announced this year due to the ongoing coronavirus pandemic and the nationwide lockdown. Nonetheless, we were overjoyed at the response to the competition and hope to organize the event in the near future to felicitate the innovative minds of Goa once this pandemic is over.

Photograph: 9.1: Student presentations




Emotions


GOA COLLEGE OF ENGINEERING
CONGRATULATIONS
WELCOME TO GEC

10 BOOTCAMPS

10.01
Introduction

Bootcamps on innovation focus on three key aspects - technology, innovation and entrepreneurship. Specifically designed for the college students in Goa, these bootcamps encourage the participants to tap into their creativity and use it to devise scalable business ideas that innovatively bridge various gaps in the market or solve community issues.

Mentored by lecturers and industry leaders, these students learn the ropes to becoming tech-entrepreneurs by being exposed to the rigours of successfully launching and scaling up a start-up. Besides focusing on innovation and entrepreneurship, the bootcamps also educate the students about the role played by GSInC in promoting the start-up culture in Goa. One can also learn about the various state government-based schemes available to budding entrepreneurs in Goa.

Schedule:

Table: 10.1: Schedule of Bootcamps on Innovations in Colleges

Sr. No.	Topic	Duration
1	Introduction of Goa State Innovation Council & Bootcamp	30 MINS
2	How to be a Tech Startup Entrepreneur?	45 MINS
3	Break (Tea and Snacks)	15 MINS
4	Process of setting up an Enterprise, Ideation, Planning, execution, etc.	45 MINS
5	Various Government Funds and Schemes assistance for starting up	45 MINS
6	Q & A	15 MINS

10.02
Status Report

New updated Data:

Total Sessions: 17

Total students: 1561

Students interested in startup: 840

Bootcamps on Innovation in Institutes

Spearheading innovation and entrepreneurship, the Goa State Innovation Council team has done a splendid job in organising bootcamps on innovation across educational institutes in Goa. In total, 17 boot camps were organised across 20 institutes, including IIT Goa, Goa College of Engineering, Agnel Institute of Technology and Design, St. Xavier's College, Don Bosco College of Engineering among others in a span of one year.

Through these bootcamps, over 1,561 students were taught to harness innovation to shape their ideas into successful start-ups. The 2-to-3-hour long boot camps were designed to encourage maximum student participation and involved various activities for maximum engagement.

Recognising the rapid advancements in technology, the bootcamps focussed on grooming youngsters with the necessary skills to realise their entrepreneurial dreams effectively. Students were also given information on protecting their innovations through patenting, copyrighting or by simply registering them with the Goa State Innovation Council's Virtual Innovation Register (VIR). Post-program feedback revealed that as many as 840 students who attended the bootcamps are interested in launching startups.

Through the massive reach-out program to engage students from various colleges in Goa, the Goa State Innovation Council team has contributed significantly to spreading the awareness about transforming technology-led innovations into tomorrow's successful business enterprises.

01)

27.06.2019

Government Polytechnic Curchorem

Speakers: 1. Mr B S Revankar, 2. Mr Tushar Sawant, 3. Mr Rajesh Gaonka

Total Participants: 57

02)

05.07.2019 & 06.07.2019

PES College, Ponda

Speakers: 1. Ms Farheen Sayed, 2. Mr Tushar Sawant, 3. Mr Ramchandra Salgaonka

Total Participants: 131

03)

11.07.2019

S. S. Dempo College of Commerce & Economics, Bambolim

Speakers: 1. Mr B S Revankar, 2. Mr K D Bhatt

Total Participants: 75

04)

22.07.2019

Shree Rayeshwar Institute Of Engineering And Information Technology

Speakers: 1. Mrs. Suwarna Surlekar, 2. Mr Ramchandra Salgaonkar, 3. Mr Tushar Sawant

Total Participants: 159

05)

01.08.2019

Agnel Institute of Technology and Design

Speakers: 1. Mrs. Suwarna Surlekar, 2. Prof KD Bhatt, 3. Mr Tushar Sawant

Total Participants: 135

06)

09.08.2019

Goa Engineering College

Speakers: 1. Mrs. Farheen Sayed, 2. Mr Avin Naik, 3. Mr Ramchandra Salgaonka

Total Participants: 91

07)

14.08.2019

PCCE

Speakers: 1. Mrs. Farheen Sayed, 2. Mr Sushant Surleka

Total Participants: 64

08)

26.08.2019

DBCE

Speakers: 1. Mrs. Farheen Sayed, 2. Mr Sushant Surlekar, 3. Mr Tushar Sawant

Total Participants: 73

09)

08.11.2019

Sridora Caculo College of Commerce & Management Studies

Speakers: 1. Mrs. Poonam Shirsat, 2. Mr Saidutt Kamat, 3. Mr Ramchandra Salgaonkar

Total Participants: 41

10)

08.11.2019

PES College, Ponda

Speakers: 1. Mrs. Suwarna Surlekar, 2. Mr Saidutt Kamat, 3. Mr Ramchandra

Total Participants: 40

11)

14.11.2019

DBCE

Speakers: 1. Mrs. Farheen Sayed, 2. Mr BS Revankar, 3. Mr Tushar Sawant

Total Participants: 60

12)

9.12.2019

Government College Borda

Speakers: 1. Mrs. Farheen Sayed, 2. Mr Saidutt Kamat, 3. Ms Suwarna SUrlaka

Total Participants: 60

13)
10.01.2020
Goa University
Speakers: 1. Mrs. Farheen Sayed, 2. Mr BS Revankar, 3. Mr DS Prashant
Total Participants: 250

14)
24.01.2020
Rosary College of Commerce & Arts
Speakers: 1. Mrs. Farheen Sayed, 2. Mr Abhay Bhamaikar, 3. Ms Suwarna Surlakar
Total Participants: 120

15)
28.01.2020
Malikarjun College of Arts & Commerce
Speakers: 1. Mrs. Farheen Sayed, 2. Mr Abhay Bhamaikar, 3. Mr Krishna Shett
Total Participants: 75

16)
31.01.2020
St Xavier's College. Mapusa
Speakers: 1. Mrs. Farheen Sayed, 2. Mr Abhay Bhamaikar, 3. Mr Krishna Shetty
Total Participants: 75

17)
9.3.2020
Institute Of Shipbuilding Technology, Sada
Speakers: 1. Mrs. Farheen Sayed, 2. Mr Abhay Bhamaikar, 2. Mr Saidutt Kamat
Total Participants: 55

Photograph: 10.1: Bootcamps on Innovation in Colleges


EFY

11 SENSITISATION WORKSHOP

11.01
Introduction

Goa State Innovation Council initiates promotion of STEM (Science, Technology, Engineering and Mathematics) education in primary and secondary schools.

The core idea is to strengthen the provision of quality learning experiences to students through support to schools on whole-school curriculum planning and collaboration with relevant organizations like Incubators and Tinkering labs. To achieve this, Goa State Innovation Council takes the initiative of approaching big and small, government-run and private schools across Goa to help school authorities envision and embrace a technology-driven future. In addition, the Goa State Innovation Council organises multiple workshops on STEM education in Goa that has resulted in the tremendous success of this initiative.

11.02
Status Report

Workshops Conducted: 40

Total participants: 4112

The Goa State Innovation Council team has achieved remarkable success in conducting sensitisation workshops on STEM (Science, Technology, Engineering & Mathematics) by reaching out to more than 1000 students through successful workshops across 14 schools spread across various parts of the Goa.

For uniformity and increased reach, Goa State Innovation Council, like the previous year, identified schools in the vicinity of large cities such as Ponda, Margao, Mapusa, Panjim, as well as, far-flung villages including Valpoi, Cujira, Guirim, Aquem, Sirigao among others. The aim behind such an exercise is to ensure equal opportunities and inclusive development across the state.

The initiative to popularise STEM education is driven by the growth in emerging technologies across the world and the need to familiarise students with technology at an early age so they can take advantage of these developments in the future. Goa State Innovation Council finds it necessary that school students must be introduced to a modern way of teaching, with enough exposure to scientific learning and acquaintance with technology. The workshops achieve this aim by helping schools adopt the STEM education program and take necessary steps towards creating the required infrastructure to support STEM education.

1)
Date: 24.07.19
School: Dr K B Hedgewar High School, Cujira
Total Participants: 90
Speakers: 1. Ms Marilyn Pinto | 2. Ms Poonam Shirsat

2)
Date: 25.07.19
School: Manovikas High School, Margao
Total Participants: 75
Speakers: 1. Ms Marilyn Pinto | 2. Ms Poonam Shirsat

3)
Date: 08.08.19
School: St Michael's High School
Total Participants: 96
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

4)
Date: 09.08.19
School: GHS Sattari
Total Participants: 70
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

5)
Date: 10.08.19
School: Jesus and Mary, Carambaulim
Total Participants: 100
Speaker: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

6)
Date: 13.08.19
School: GHS Shristhal
Total Participants: 34
Speaker: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

7)
Date: 14.08.19
School: Sacred Heart School, Parra
Total Participants: 100
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

8)
Date: 16.08.19
School: St Anthony High School, Margao
Total Participants: 50
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

9)
Date: 17.08.19
School: Our Lady of Grace High School, Bichiolim
Total Participants: 300
Spreakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

10)
Date: 19.08.19
School: Government High School, Kirlawado, Chimbel
Total Participants: 60
Spreakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

11)
Date: 20.08.19
School: Government High School, Zambaulim, Rivona
Total Participants: 44
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

12)
Date: 21.08.19
School: St. Mary Of The Angels Convent High School, Chinchinim
Total Participants: 155
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

13)
Date: 22.08.19
School: Fr. Agnel Multipurpose High School, Verna
Total Participants: 200
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

14)
Date: 24.08.19
School: St Joseph Vaz High School, Sancoale
Total Participants: 190
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

15)
Date: 26.08.19
School: Popular English High School, Goa Velha
Total Participants: 70
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

16)
Date: 27.08.19
School: Regina Martyrum High School, Assolna
Total Participants: 120
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

17)
Date: 28.08.19
School: Government High School, Paddi
Total Participants: 35
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

18)
Date: 30.08.19
School: Ideal High School, Bicholim
Total Participants: 60
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

19)
Date: 09.09.19
School: Government High School, Khol
Total Participants: 80
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

20)
Date: 12.09.19
School: St Joseph Vaz High School, Sancoale
Total Participants: 175
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

21)
Date: 16.09.19
School: St Anne High School, Agonda
Total Participants: 140
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

22)
Date: 17.09.19
School: Government High School, Curdi
Total Participants: 60
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

23)
Date: 19.09.19
School: Government High School, Ponda
Total Participants: 75
Speakers: 1. Mrs Suwarna Surlekar | 2. Ms Poonam Shirsat

24)
Date: 20.09.19
School: St Andrew High School
Total Participants: 75
Speakers: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

25)
Date: 23.09.19
School: Bandodkar High School
Total Participants: 50
Participants: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

26)
Date: 25.09.19
School: New Educational Institute, Kakoda
Total Participants: 175
Participants: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

27)
Date: 30.09.19
School: Fatima Convent
Total Participants: 155
Participants: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

28)
Date: 26.10.19
School: Government High School, Maina
Total Participants: 75
Participants: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

29)
Date: 19.11.19
School: St Anthony High School, Majorda
Total Participants: 200
Participants: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

30)
Date: 21.11.19
School: GHS, Aquem
Total Participants: 60
Participants: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

31)
Date: 22.11.19
School: Surashree Kesarbai Kerkar High School, Keri
Total Participants: 190
Speakers: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

32)
Date: 25.11.19
School: Vidhya Vihar High School, Thana
Total Participants: 98
Speakers: 1. Mrs Suwarna Surlekar | 2. Mr Abhay Bhamaikar

33)
Date: 8.1.20
School: St Alyoisius High School, Benaulim
Total Participants: 35
Speakers: 1. Mrs Suwarna Surlekar | 2. Mr Krishna Shetty

34)
Date: 27.1.20
School: Damodar English High School, Paroda
Total Participants: 80
Speakers: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

35)
Date: 28.1.20
School: Chandranath Education Societys High School
Total Participants: 50
Speakers: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

36)
Date: 29.1.20
School: Government High School, Xeldem
Total Participants: 100
Participants: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

37)

Date: 30.1.20

School: Holy Cross Institute, Quepem

Total Participants: 95

Speakers: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

38)

Date: 31.1.20

School: Dr. K.B. Hedgewar High School, Podocem

Total Participants: 120

Speakers: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

39)

Date: 10.2.20

School: GHS Porvorim

Total Participants: 85

Speakers: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

40)

Date: 25.2.20

School: Lourdes H School

Total Participants: 90

Speakers: 1. Mrs Suwarna Surlekar | 2. Mrs Mahalaxmi Bhobe

Photograph: 11.1: Sensitization Workshop

12 FDP (FACULTY DEVELOPMENT PROGRAM)

12.01
Introduction

The Faculty Development Programme (FDP) is aimed at training faculties in entrepreneurship development to turn them into resource persons for guiding and mentoring young science and technology students on the path of innovation. These sessions are conducted at various Science and Engineering colleges, Polytechnics, Industrial Training Centres, etc., to train the faculty members and equip them with the necessary skills to propel Goan youth on the path to entrepreneurship.

The topics covered include entrepreneurship development, communication and interpersonal skills, creativity, problem-solving, motivation training, inputs on available resources and supporting industries, etc. The training methodology comprises engaging sessions full of hands-on workshops, case studies, team exercises and interactions with eminent personalities, entrepreneurs and industry personnel.

Creating jobs via innovation is the need of the hour today. Through this initiative, Goa State Innovation Council is equipping teachers with the skills and knowledge required to foster entrepreneurship at a young age in their students - leading to the vision of a self-reliant India.

Schedule:

Table: 12.1: Schedule of Faculty Development Programme (FDP)

Date	Start Time	End Time	Topics	Speaker
	9:30 AM	10:00 AM	Registration	
	10:00 AM	10:30 AM	Key Note Address	Prof. Raghurama G. Director BITS Pilani, K.K. Birla Goa
	10:30 AM	1:00 PM	How to convert an Idea into an Enterprise?	Shri Anish Dsouza Founder - Sun360
13th Sept	1:00 PM	2:00 PM	Lunch break	
	2:00 PM	3:00 PM	Opportunity recognition in S & T student projects	Smt Suvarna Sulekar Director, Codewell Computers
	3:00 PM	3:15 PM	Tea Break	
	3:15 PM	5:00 PM	Developing Business Model for Techno-startups	Smt Mridula Goel Faculty, BITS Pilani K.K. Birla Goa Campus

Date	Start Time	End Time	Topics	Speaker
14th Sept	10:00 AM	1:00 PM	Establishing Entrepreneurship Cell at Institutes Curriculum Development for EAC Development of Calendar of Events for Entrepreneurship Cell	Mr Amit Singh, Regional Manager, Central India,National Entrepreneurship Network (NEN)
	1:00 PM	2:00 PM	Lunch Break	
	2:00 PM	5:00 PM	Creativity and Problem Solving + Activity Based Session	Mr KD Bhatt, Faculty, Goa Institute of Management
20th Sept	10:00 AM	1:00 PM	Role of EDII, How to Identify, Select & Support Potential Student Entrepreneurs?	Dr. Satya Ranjan Acharya, Entrepreneurship Development Institute of India (EDII)
	1:00 PM	2:00 PM	Lunch Break	
	2:00 PM	5:00 PM	Idea to Prototype - 3D Printing Workshop	Mr Ryan Vaz Founder - 3DInfinyt Technology
21st Sept	10:00 AM	11:15 AM	Role of Support agencies in promoting Startups–Banks, DIC, etc	Mr Tushar Sawant Manager - FiiRE
	11:15 AM	11:30 AM	Tea Break	
	11:30 AM	1:00 PM	Do we need an IP for our Ideas? Patenting & IPO	Smt Shalini Menezes Founder - Sim Sim Legal Consultations
	1:00 PM	2:00 PM	Lunch Break	
	2:00 PM	3:45 PM	Networking & Certificate Distribution	

12.02
Status Report

Program Conducted: 1

Total participants: 28

A Faculty Development Program was conducted by the Goa State Innovation Council at BITS Pilani, K. K. Birla Goa for the faculty of various colleges in the State of Goa in September 2019. The event saw a good turnout with 30 teachers from different institutes attending the hands-on session.

The event was also attended by various eminent personalities. The Key Note Address was delivered by Prof. Raghurama G. Director BITS Pilani, K.K. Birla Goa. Other luminaries spoke on topics like turning an idea into an enterprise and opportunity recognition in S & T students. There was also an interesting workshop on developing business models for tech startups. The list of speakers at the event included Shri Anish Dsouza, Smt. Suvarna Sulekar, Smt. Mridula Goel, Mr Amit Singh, Mr KD Bhatt, Dr. Satya Ranjan Acharya, Mr Ryan Vaz, Mr Tushar Sawant and Smt. Shalini Menezes.

The four-day workshop also touched upon issues like opening entrepreneurship cells in the state and the role of various support agencies like banks in establishing a successful startup. The last day also included a session on intellectual property rights followed by a vote of thanks by Shri Sudip Faldesai, Project Officer, Goa State Innovation Council.

Dates:

13th September 2019

14th September 2019

20th September 2019

21st September 2019

The list of speakers included Shri Anish Dsouza, Smt Suvarna Sulekar, Smt Mridula Goel, Mr Amit Singh, Mr KD Bhatt, Dr. Satya Ranjan Acharya, Mr Ryan Vaz, Mr Tushar Sawant and Smt Shalini Menezes.

The objective of the program was as follows:

- Training the teachers to be well equipped with skills to develop innovative and creative thinking approach among students.
- Provide an exposure to the current scenario of innovation in the state, so that they act as resource persons in guiding and motivating young Science & Technology persons to consider Startup ecosystem as a career possibility.
- Provide details on the policies present and activities taken up by the Government of Goa in promoting innovation and creativity.

Day 1 - 13th September 2019

The Key Note Address was delivered by Prof. Raghurama G. Director BITS Pilani, K.K. Birla Goa. Shri Anish Dsouza Founder - Sun360, spoke on How to convert an Idea into an Enterprise. Smt. Suvarna Sulekar, Codewell Computers spoke on various Opportunity recognition in S & T student projects. Smt. Mridula Goel Faculty, BITS Pilani K.K. Birla Goa conducted workshop on Developing Business Model for Techno-startups.

Day 2 – 14th September 2019

Mr Amit Singh, Regional Manager, Central India, National Entrepreneurship Network (NEN) spoke on Establishing Entrepreneurship Cell at Institutes Curriculum Development for EAC Development of Calendar of Events for Entrepreneurship Cell. Mr KD Bhatt conducted the workshop on Creativity and Problem Solving + Activity Based Session.

Day 3 – 15th September 2019

Dr. Satya Ranjan Acharya, Entrepreneurship Development Institute of India (EDII)

Explained the Role of EDII, How to Identify, Select & Support Potential Student Entrepreneurs?

An Idea to Prototype - 3D Printing Workshop was conducted by Mr Ryan Vaz, 3DInfinyt Technology.

Day 4 – 16th September 2019

Mr Tushar Sawant explained the Role of Support agencies in promoting Startups–Banks, DIC. Smt Shalini Menezes spoke on Intellectual Property Rights and Do we need an IP for our Ideas? Patenting & Indian Patent Office

Vote of thanks was given by Shri Sudip Faldesai, Project Officer, GSInC.

12.03
List Of Participants

Faculty Development Program (FDP)

Goa State Innovation Council | LC 101

13th, 14th, 20th & 21st September 2019

Table: 12.2: List of participants

Sr. No.	Name	College
1	Mathilda Colaco	Don Bosco College of Engineering
2	Anisha Cotta	Don Bosco College of Engineering
3	Satyesh Kakodkar	Don Bosco College of Engineering
4	Manjunath Narwate	Don Bosco College of Engineering
5	Vivek Jog	Don Bosco College of Engineering
6	Dr.(Smt.)Shaila R.Ghanti	Chowgule College
7	Shri D, Prabakaran	Chowgule College
8	Mr Pratik Sawadekar	Padre Conceicao College of Engineering
9	Dr. Niyan Marchon	Padre Conceicao College of Engineering
10	Ms Sulana Rebello	Padre Conceicao College of Engineering
11	Ms Sonia Fernandes	Padre Conceicao College of Engineering
12	Mr. Enrich Braz	Padre Conceicao College of Engineering
13	Mr Luis Fernandes	Government Polytechnic Panaji
14	Mr Austin Rodrigues	Government Polytechnic Panaji
15	Mr Sunil Shetye	Government Polytechnic Panaji
16	Mr R L Chari	Government Polytechnic Panaji
17	Ms Harsha Farrari	Government Polytechnic Panaji
18	Ms Rahila Khan	Government Polytechnic Panaji
19	Mr Viraj Mahatme	MES College
20	Mr Jeffery Vegas	Carmel College
21	Ms Sneha Naik	Carmel College
22	Mr Ramkrishna Reddy	Rosary College
23	Leonard Joanes	Rosary College
24	Dr. Venugopal Reddy	NIT Goa
25	Dr. Lalat Indu Giri	NIT Goa
26	Mr Devanand Dessai	Government Polytechnic Curchorem
27	Mrs Prajakta Rajesh Tanksali	Shree Rayeshwar Institute Of Engineering & IT
28	Chilton Fernandes	Shree Rayeshwar Institute Of Engineering & IT

Photograph: 12.1: Banner of Faculty Development Programme

Photograph: 12.2: Participants of Faculty Development Programme

Photograph: 12.3: Participants of Faculty Development Programme

Photograph: 12.4: Mr Amit Singh, Regional Manager, Central India, National Entrepreneurship Network (NEN)

Photograph: 12.5: Participants of Faculty Development Programme

Photograph: 12.6: Dr. Satya Ranjan Acharya, Entrepreneurship Development Institute of India (EDII)

13
WOMEN CENTRIC WORKSHOP

13.01
Introduction

In addition to focussing on developing a spirit of innovation in students, Goa State Innovation Council also fosters entrepreneurship amongst women in Goa by organising regular workshops and seminars on the topic, especially for women, across the state. The aim of this initiative is to harness the creativity and ideation power of women and bring them into the mainstream through the power of innovation.

Mentorship support, hands-on workshops, informative seminars, etc., form a part of these workshops that teach women to scale their ideas into independent enterprises and grow them successfully and independently. The participants are also made aware of various government schemes and funding opportunities to help them in their endeavours further.

Schedule:

Table: 13.1: Schedule of Women Centric Workshop

Sr. No.	Topic	Duration
01	Inaugural Session Key Note Address by Chief Guest	
02	Introduction of Goa State Innovation Council & VIR	15 mins
03	Ideation with a focus on Problem-solving, Creativity, Innovation Speaker: Jyothi Karandikar, Stademy	30 mins
04	Tea Break	15 mins
05	Ideation with a focus on Problem-solving, Creativity, Innovation Speaker: Jyothi Karandikar, Stademy	30 mins
06	How to convert an Idea into an Enterprise? Speaker: Suwarna Surlekar, Director, Codewell Computers	45 mins
07	Various Government Funds and Schemes assistance for starting up. Speaker: Tushar Sawant	30 mins

13.02
Status Report

Workshop conducted : 02

Total participants : 510

Focussed on increasing the participation of women in driving innovation and entrepreneurship, Goa State Innovation Council conducted two women-centric workshops in Goa with a participation of over 500 women. The event was attended by about 150 women in the previous year and recorded a three-time increase in participation for the 2019-20 session. Like the previous workshops, this year also the seminars and activities focussed on problem-solving, innovation and developing ideas into scalable businesses using the available support and infrastructure in the state. The interactive workshops also spoke about the existing government schemes for women to help them get the funding and clearances they need to build their ventures.

Women Centric Workshop at Carmel College, Nuvem

Date: 26th September 2019

Speakers

- Mrs Jyothi Karandikar
- Mrs Suvarna Surlakar
- Mr Tushar Sawant

Total Participants: 450

Women Centric Workshop at Govt College of Home Science, Miramar

Date : 17th December 2019

Speakers

- Smt Farheen Sayed
- Smt Suvarna Sulakar
- Dr. Jennifer Kamat

Total Participants: 60

Photograph: 13.1: Women Centric Workshop at Carmel College, Nuvem

Photograph: 13.2: Women Centric Workshop at Carmel College, Nuvem

Photograph: 13.3: Women Centric Workshop at Carmel College, Nuvem

Photograph: 13.4: Women Centric Workshop at Carmel College, Nuvem

Photograph: 13.5: Women Centric Workshop at Carmel College, Nuvem

Photograph: 13.6: Women Centric Workshop at Carmel College, Nuvem

Photograph: 13.7: Women Centric Workshop at Govt College of Home Science, Miramar

Photograph: 13.8: Women Centric Workshop at Govt College of Home Science, Miramar

Photograph: 13.9: Women Centric Workshop at Govt College of Home Science, Miramar

Photograph: 13.10: Women Centric Workshop at Govt College of Home Science, Miramar

14 ORIENTATION PROGRAM

14.01
Introduction

Children are the future of the country, which also means that teachers are the architects of the future. With a firm belief in the role of teachers in developing their students' interests and faculties, Goa State Innovation Council conducts periodic orientation programs for teachers to acquaint them with the latest developments in the world of start-ups and technology.

The logic behind these sessions is simple. Teachers, when updated, pass on the right information to their students while also helping them in developing their creative faculties. The orientation programs also cover any recent schemes or opportunities for students in the innovation and start-up space – so that the information can be disseminated to young entrepreneurs at the right time.

In 2019, Goa State Innovation Council conducted two sets of successful orientation programs for school teachers. The first set of sessions was conducted on 3rd and 5th October 2019 at Sanskruti Bhavan, Patto, Panjim. The second set was held on 10th and 11th October 2019 at Ravindra Bhavan, Margao.

The two orientation programs saw a participation of 350 teachers from various schools across Goa. During the orientation programs, teachers were informed about the role that Goa State Innovation Council plays in promoting a culture of innovation at various levels. In addition, they were informed of student ideas from across the state, sensitised about intellectual property rights and acquainted with new and existing government funding schemes for students.

14.02
Schedule

Agenda

Orientation Programme on Innovation for Headmasters and School Teachers

North Goa: Sanskruti Bhavan, Patto, Panaji on 3rd & 5th October, 2019

South Goa: Ravindra Bhavan, Margao on 10th & 11th October 201

Table: 14.1: Schedule of Orientation Programme on Innovation

Sr. No.	Topic	Time
01	Inauguration of the Orientation Programm	10:00 am – 10:15 am
02	Key Note Address - What is Innovation? Speaker: Shri Jose Manuel Noronha	10:15 am – 10:30 am
	Tea break	10:30 am – 10:45 am
03	How I set up my innovative company	10:45 am – 11:15 am
04	Student Ideas	11:15 am – 11:45 am
05	Do we need an IP for our Idea	11:45 am – 12:15 pm
07	Action Plan – The way forward	12:15 pm – 12:45 pm
08	Vote of Thanks	12:45 pm – 1:00 pm

List of Speakers

North Goa

Table: 14.2: Schedule of Orientation Programme on Innovation – North Goa

Sr. No.	Topic	Time
01	Inauguration of the Orientation Programm	10:00 am – 10:15 am
02	Key Note Address - What is Innovation? Speaker: Shri Jose Manuel Noronha	10:15 am – 10:30 am
	Tea break	10:30 am – 10:45 am
03	How I set up my innovative company? Speaker: Shri Gajanan Nagarshek	10:45 am – 11:15 am
04	Student Ideas Speaker: Smt Suwarna Sulaka	11:15 am – 11:45 am
05	Do we need an IP for our Idea Speaker: Smt Shalini Meneze	11:45 am – 12:15 pm
07	Action Plan – The way forward Speaker: Shri Ramchandra Salgaonkar	12:15 pm – 12:45 pm
08	Vote of Thanks Shri DS Prashant	12:45 pm – 1:00 pm

List of Speakers

South Goa

Table: 14.3: Schedule of Orientation Programme on Innovation – South Goa

Sr. No.	Topic	Time
01	Inauguration of the Orientation Programm	10:00 am – 10:15 am
02	Key Note Address - What is Innovation? Speaker: Shri Jose Manuel Noronha	10:15 am – 10:30 am
	Tea break	10:30 am – 10:45 am
03	How I set up my innovative company? Speaker: Shri Rohin Parker	10:45 am – 11:15 am
04	Student Ideas Speaker: Smt Suwarna Sulakar	11:15 am – 11:45 am
05	Do we need an IP for our Idea Speaker: Smt Gautami Raiker	11:45 am – 12:15 pm
07	Action Plan – The way forward Speaker: Shri DS Prashant	12:15 pm – 12:45 pm
08	Vote of Thanks Shri DS Prashant	12:45 pm – 1:00 pm

14.03
Status Report

1. **Program conducted: 2**
2. **Total participants: 350**

Photograph: 14.1: Orientation Programme on Innovation – North Goa

Photograph: 14.2: | Photograph: 14.3:

Photograph: 14.4:

Photograph: 14.5:

Photograph: 14.6:

Photograph: 14.7:

Photograph: 14.8:

Photograph: 14.9: Orientation Programme on Innovation – South Goa

Photograph: 14.8:

Photograph: 14.8:

Photograph: 14.9:

Photograph: 14.10:

Photograph: 14.11:

Photograph: 14.12:


Goa State
Innovation
Council
ORIENTATION PROGRAMME ON
INNOVATION & STARTUPS


ORIENTATION PROGRAMME ON
INNOVATION & STARTUPS


ORIENTATION PROGRAMME ON
INNOVATION & STARTUPS

15
STEM – THINK DESIGN PROTOTYPING WORKSHOPS

15.01
Introduction

The Prototyping Lab was established at Don Bosco College of Engineering, Fatorda, by Goa State Innovation Council, Government of Goa, to provide innovators from all walks of life with the necessary infrastructure to transform their ideas into tangible models or prototypes.

Equipped with the latest technology and tools, like an advanced 3D Printer and a powerful Laser Cutting Machine, the lab allows innovators to freely tinker around with ideas until they can refine them to the point of idealisation. To develop the spirit of innovation further, Goa State Innovation Council organised prototyping workshops across schools and colleges in Goa to help students innovate, conceptualise and scientifically shape their ideas.

The Objective of the workshop is to develop and materialize ideas that are formed in creative minds. We provide access to various prototyping equipment from the Prototyping Lab to individuals with a purpose to convert the Ideas into designs, and their designs into products.

The benefits Prototyping Lab are:

1. Building the Product/Design Proofs
2. Saving Cost and Time
3. Customizing
4. Reducing Design Flaws

Venue: 2nd Floor, Prototyping Lab, Don Bosco College of Engineering, Fatord

15.02
List Of Equipments

Table: 15.1: Table: 14.3: Schedule of Orientation Programme on Innovation – South Goa

Sr. No.	List of Equipments	Description	Make / Brand
		POWER TOOLS	
01	Professional Angle Grinder	Bosch GWS 600 Professional Angle Grinder Disc Diameter 100 mm Grinding Spindle Thread M 10 No Load Speed (rpm) 12000 rpm Rated power input 660 W Width (millimetre) 263 mm Height (millimetre) 95 mm Weight (kilograms) 77 mm Weight 1.5 kg	BOSCH
02	Circular Saw	Bosch GKS 7000 Circular Saw Rated Power Input 1,100 W No-Load Speed 5.200 rpm Weight 3.6 kg Saw Blade Bore Diameter 20 mm Saw Blade Diameter 184 mm Cutting Depth (90°) 65 mm Cutting Depth (45°) 47 mm	BOSCH
03	Smart Drill Kit	Bosch Impact Drill 1G GSB 13 RE Kit, 600 W, Voltage: 230v Impact Drill GSB 13 RE Kit Voltage 230v No Load Speed 0 - 2800 rpm Item Weight 1.6 kgs Power Consumption 600 W Minimum Order Quantity 1 Piece	BOSCH
		ESSENTIALS	
04	Junior Hacksaw	Size: 6 inch	STANLEY
05	Screw Driver Set	4pc Screw Driver set: PH1x450, PH2x450mm, 5x450mm, 6x450mm, chrome vanadium steel shaft, chrome plated Ergonomically designed ABS plastic grip handle	STANLEY
06	Micro Chisel Set	Set of 12 Tools for Wood-Carving. Quantity: 12 Tools; Size: 13.5 x 1 cm each (approx.); Material: Steel Blades with Wooden Handles	STANLEY
07	Plier Set	PLIER SET - Combination Plier, Needle Nose Plier and Lockin Plier	STANLEY
08	Hammer Set	1 Mallet Hammer, 1 Claw Hammer and 1 Ball peen Hammer	STANLEY
09	C Clamp	Material: Steel Colour: Red and Silver Dimensions : 4” Package Content: 3 C or G Clamp	STANLEY

Sr. No.	List of Equipments	Description	Make / Brand
10	C Clamp	Material: Steel Colour: Red and Silver Dimensions: 8” Package Content: 3 C or G Clamp	STANLEY
11	Hardened Metric Allen Key Set	Hardness: 52 to 56 HRC(Scientifically hardened) The Allen Keys are Precision Drawn for perfect matching of Allen keys with the screw head Black Allen Keys are specially coated and oiled for rust prevention TAPARIA Allen Keys generally Conform to I.S. 3082 2008 Set Size: Set of 9	STANLEY
12	Combination Spanner	12 Pcs Combination Spanner Set 6-22mm. Chrome Vanadium Steel Combination Spanner Set 6-22 Mm Consist Of 12 Pcs 6-7-8-9-10-11-12-13-14-17-19-22	STANLEY
13	30 Pc Racheting Screwdriver set	Package Contains: 30 Pcs, ratcheting screw driver se	STANLEY
14	Baby Vice Clamp	Size (L x B x H): 15.2 cm x 6 cm x 15 cm, Jaw width 60 mm, Jaw opening 70 mm Portable- Can be taken along and used anywhere Net Weight 1.2 KG. Type 60 Mm	STANLEY
15	Swastik Stainless Steel Adjustable Spanner Wrench (8 Inches)	Material: Stainless Steel, Colour: Black Item Dimension: 21 cm x 11 cm x 9 cm Precision marked scale indicate correct jaw opening Heat treated adjustable chrome finish spanner Package Contents: 1 Piece Adjustable Spanne	STANLEY
16	Hot Melt Glue Gun	power input - 220-240V AC, 50H	STANLEY
17	Measuring Tape 5meters	Material: Plastic and Aluminium Colour: Grey and Blue Size (L x B x H): Tape: 9 cm x 3 cm x 7 cm; Level: 3 cm x 3 cm x 5 cm Included Components: 1 Spirit Level & 1 Measuring Tape	STANLEY
18	Digital Tester	Direct Detection: 12V - 220V AC/DC live objects through LCD display. Jaw Size: 50mm or 2.0 inch	STANLEY
19	Digital multimete	Tests AC or DC voltage, AC current and resistance Diode check and continuity test ,Data hold Fuse and Diode Protection and Voltage Measurement Includes carry case and 9v battery Multimeter Ammeter tester	STANLEY

Sr. No.	List of Equipments	Description	Make / Brand
20	46 In 1 Pcs Tool Kit & Screwdriver and Socket Set	1/4 Inch Socket Combination 46Pcs Set Diy Repair Tool Kit Model:2462 is suitable for professionals, technicians . The multi function drilling machine can be used to make holes on walls, concrete, metal, wood and plastic. Fix your picture frames, paintings, hangers, lightings etc. without any hassles	STANLEY
		3D PRINTER SET	
21	Flashforge Adventurer 3 3D Printer	Print Technology Fused Filament Fabrication (FFF), Fused Deposition Modeling (FDM) File Format Supported STL Connectivity USB, Wifi, Ethernet Build Size (L*W*H Inches) 150L x 150W x 150H mm Condition New Weight (Kg) 9kg Filament Diameter 1.75mm Resolution 0.1mm-0.3mm (Adjustable) Automatic Grade/Machine Type Automatic Colour White Extruder Quantity 1 Layer Thickness 0.1mm-0.3mm (Adjustable) Nozzle Temperature 245 degree celcius Operating System Windows 7/10/Mac OS X,Linux Printing Technology Fused Deposition Modelling Technology Fused Deposition Modelling Color White Brand Flashforge Warranty 1 Year Material Polyamide (PLA), Nylon, ABS, Polypropylene (PP) Print Accuracy 0.1mm-0.3mm (Adjustable) Software Supporting FlashPrint Product Dimension 388 x 380 x 405mm Heated Bed Temperature Upto 100 degree celcius	Flashforge
22	9060-80W Laser Cutting /Engraving Machine	Laser Type: Hermetic and Detached Co2 Laser Tube Laser Power: 80W Voltage: AC 220V 50Hz Moving System 5 Inch Offline Display, Offline Stepping Motor System Cutting Area: 900 mm X 600 mm Cutting Table: Honeycomb and Aluminous Strip Panel Double Face Working Table Engraving Speed: 50000 mm/min. Repeating: Location Less than 0.05 mm	H-SPACE MACHINERY CO.

15.03
List Of Workshops

Goa State Innovation Council is committed to developing and fostering the spirit of innovation in the youth of Goa. The Prototyping lab is one of the first of its kind in the state that allows students to think freely and experiment to refine their ideas. In line with its objectives, Goa State Innovation Council organised several prototyping workshops across the state in 2019-20 to acquaint students with the facilities available in the lab.

The informative and hands-on sessions were held for schools in both the larger and quaint parts of Goa on Robot Building, Laser Engraving, 3D-Printing, etc.

The students thoroughly enjoyed the sessions and learned how to use the equipment in the lab on their own to bridge the gap between ideation and implementation.

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1) Finalist of Goa's Young Innovator's Award 2018-19 – 1st October 2019
   Topic: Robot Building
   Speakers: Ms Sunaya Shirodkar
   Total participants: 45

2) Govt High School, Morpirla – 23rd October 2019
   Topic: Robot Building
   Speakers: Ms Sunaya Shirodkar
   Total participants: 4

3) Dr. K B Hedgewar School, Cujira - 30th October 2019
   Topic: Visit by students and teachers from ATL
   Speakers: Mr Gaurish Samant
   Total participants: 7

4) Vidya Vihar High School, Cortalim - 7th January 2020
   Topic: Robot Building and Laser Cutting & Engraving Machine workshop
   Speakers: Ms Sunaya Shirodkar & Mr Gaurish Samant & Mr Shantanu Dessai
   Total participants: 40

5) Manovikas English Medium School, Margao – 21st January 2020
   Topic: Laser Cutting & Engraving Machine workshop
   Speakers: Mr Gaurish Samant & Mr Shantanu Dessai
   Total participants: 40

6) Make in Goa – Students Robot Competition – 22nd Jan 2020

Topic: Mentoring Session

Speakers: Mr Deepak Patania

Total participants: 21

7) Government High School, Morpirla – 7th February 2020

Topic: Drone Building Workshop

Speakers: Mr Tarun Krishnakumar

Total participants: 57

8) Rosary High School, Navelim and Vidya Vikas Academy, Margao – 8th February 2020

Topic: Laser Cutting & Engraving Machine workshop

Speakers: Mr Gaurish Samant & Mr Shantanu Dessai

Total participants: 18

9) Manovikas English Medium School, Margao – 13th February 2020

Topic: Robot Building Workshop

Speakers: Ms Sunaya Shirodkar

Total participants: 35

10 Damodar High School, Margao – 15th February 2020

Topic: 3D Printing Workshop

Speakers: Mr Akhilesh Bhise

Total participants: 40

11) Dr KB Hedgewar High School – 24th February 2020

Topic: Laser Cutting & Engraving Machine workshop

Speakers: Ms Sandra D'Costa

Total participants: 20

15.04
Status Report

Total participants: 323

Total Sessions: 11

Eleven Think Design Prototyping Workshops were held between October 2019 and February 2020 with a participation of 300 students from schools across Goa, including Govt High School, Morpirla, Dr. K B Hedgewar School, Cujira, Vidya Vihar High School, Cortalim and Manovikas English Medium School, Margao. The topics included Robot Building, Laser Cutting, Engraving, Drone Building, 3D printing, etc.

The aim of these sessions was to apprise the students of the latest technologies and facilities available for them to prototype their ideas. By learning how to use these tools, the students can work freely in the Prototyping lab to give shape to their ideas and gradually refine them into market-ready models.

Photograph: 15.1: Prototyping session for schools

Photograph: 15.2: Prototyping session for schools

Photograph: 15.3: Prototyping session for schools

Photograph: 15.4: Prototyping session for schools

16
INDUSTRY INSTITUTE INTERACTION

16.01
Introduction

Table: 16.1: Panel Discussion - Industry Institute Interaction - Demystifying The Impact Of Digitization On Industry

Topic	Panel Discussion - Industry Institute Internaction - Demystifying The Impact Of Digitization On Industry
Date	Saturday, 27th July 2019, 10:00 am - 01:00 pm
Audience	Final Year Engineering Students
Paricipants	85 students
Panelists	Dr. Mridula Goel, Associate Professor, Department of Economics, BITS Pilani, K.K. Birla Goa Dr. Chirag Modi, Assistant Professor, Department of Comuter Science & Engineering, NIT Goa Mr. Mangirish Salelkar, CEO & Co-founder - Umang Software Technologies Dr. Pradeep Salgaonkar, Director at SALDOTS Academy - Researchers, Corporate Trainers and Fanilitators Mr. Ramchangra Salgaonkar, Founder, Amaze Warriors (Moderator)

16.02
List of speakers

PROF. DR. MRIDULA GOEL

Education

- B.A. (Hons.) in Economics, Miranda House, Delhi University, 1980 (62%, First Position)
- M.A. in Economics, Delhi School of Economics, 1982 (65%, merit position)
- UGC-NET qualified, 1995
- PhD - Economics,2006 from Giri Institute of Development Studies,an ICSSR institute affiliated to Kanpur University, . Topic: Gender Bias & Economic Development in Uttar Pradesh: with reference to Female Education. (Supervisor: Dr.G.P. Mishra.)

Professional Experience:

- Faculty in Charge, BITS BIRAC BioNEST, 2017 - Present
- Faculty in Charge, CIIE, BITS Pilani K.K. Birla Goa Campus, 2014 to 2018
- Head of Department of Economics, BITS, Pilani KK Birla Goa Campus 2009-2013
- Associate Professor , BITS Pilani K.K. Birla Goa Campus, 2008 - Present
- Associate Professor, Jaipuria Institute of Management, Lucknow, 2003-2008
- Assistant Professor, Jaipuria Institute of Management, Lucknow, 1997-2003
- Head Of Department- Economics, Miranda House 1992-1994
- Sr. Lecturer Miranda House, Delhi University, 1992-1997
- Lecturer, Economics, Miranda House, Delhi University, 1982- 1992

DR. MODI CHIRAG NAVINCHANDRA

Dr. Modi Chirag Navinchandra obtained his Ph.D. (2010–2014) and M.Tech (2008–2010) in Computer Engineering from National Institute of Technology Surat (NIT Surat), India and did his B.E, in Computer Engineering from BVM Engg College, Sardar Patel University, India. He is currently working as an assistant professor in the department of computer science and engineering at National Institute of Technology Goa, India. In addition, he is the chairman of Training and Placement Cell of NIT Goa. His research interest includes Information Security and Privacy, Cryptography, Cloud Security, Network Security, Intrusion Detection and prevention and Blockchain and DLT. He has published more than 40 papers in reputed journals and international conference proceedings, with good number of citations. He has received the Young scientist award in specialization of Cloud Computing (2015) from VIFRA, Chennai, India. He holds Best Review Paper Award (2015), from Journal of Network and Computer Applications (JNCA), Elsevier, San Diego, USA. He is a active member in many of the journal editorial board and review committees. He holds research funded projects under ECR call, SERB/DST, GOI and IMPRINT-IIc call, SERB/DST + MHRD, GOI. He is a member of Board of Study at different institutions. He has research collaboration with various industries and universities in India as well as abroad. He always looks for new technologies, exploring them and transfering knowledge to the students to make them fit for ever growing era of technological innovations in society.

MANGIRISH SALELKAR

- CEO & CoFounder UMANG SOFTWARE TECHNOLOGIES
- Goa Technology Association - Founder and Current - President
- British Business Group - Goa - Member of Managing Commitee
- Goa Chamber of Commerce & Industry - IT, ITES & Telecom Committee: Member
- World Trade Centre - Goa - Associate Member
- NASSCOM - Associate Member

Honors and Awards:

- Young Manager of the Year 2018 by Goa Management Association
- 'Yuva De Goa' Young Achiever Award
- Yuva De Goa - August 2016
- Indian Leadership Award for Industrial Development
- All India Achievers Foundation- New Delhi - July 2013
- Mangirish Salelkar on behalf of UMANG SOFTWARE TECHNOLOGIES received an award at National Seminar for the Outstanding Achievements and National Development. The Award is given by All India Achievers Foundation in association with India Economic Development & Research Association.
- Top 5 Startup Entrepreneur - Business Goa - September 2014 : Goa's Only Business Magazine 'Business Goa' highlighted as top 5 Startup Entrepreneur in their 2014 Anniversary Edition.

DR. PRADEEP B. SALGAONKAR, (PHD)

B.Pharm., MMS, PhD, Corporate Trainer & Facilitator, Founder of SALDOTS Academy Past Chairman, Goa Management Association

Dr. Salgaonkar, born on 25th November, 1967 is a Pharmacy Graduate from Goa College of Pharmacy. He later completed Masters in Management Studies (MMS) from Faculty of Management Studies, Goa University in the year 1992 and subsequently completed Ph.D. in Management in 2005 also from Goa University, Faculty of Management Studies. He has attended a FDP at IIMA.

Dr. Salgaonkar is having wide industry and academic experience of over 24 years. He worked with prestigious organizations like m/s CIPLA ltd., Goa Housing Corp., Saraswat College BBA department, MBA program of Faculty of Management Studies Goa University, ICFAI Business School and as Director at SSIMS Goa, before taking onto full time corporate training and facilitation.

He has undertaken training and facilitation assignments in organizations such as BOSCH, MAGSONS, Goa Bagayatdar, SMRC, GMC, Sangath, GIPARD, GKB Vision, GKB Ophthalmic, Unichem Labs, Berger Becker ltd. etc. He has also conducted facilitation workshops for Professors & students at various colleges in Goa such as Goa College of Pharmacy, SVSC's Saraswat College of Commerce & Management, Govt. College Khandola, DMC College Assagoa, ISBT etc.

He has keen interest for research in Service and Retail industry and has authored many cases, and presented several research papers in international and national seminars and conferences. He has authored a book "Marketing of Healthcare Services" and published many articles in renowned research journals. He is a regular contributor to 'Business Goa' – Goa's only Business Magazine, vide column titled "Beyond Classroom".

He teaches Management courses for last several years at various management institutes. He has also been a visiting faculty to various institutes such as ICAI, NICMAR, GIM, Goa University, Manipal University etc.

Dr. Salgaonkar is presently full time corporate trainer and facilitator and is the Founder of SALDOTS Academy, Corporate Trainers and Facilitators. He is Adjunct Visiting Faculty to Department of Commerce & Management, Manipal University. He is the recipient of prestigious D. D. Kossambe post-doctoral research fellowship. He is the past Chairman of Goa Management Association (GMA)

RAMCHANDRA SALGAONKAR

Founder, Amaze Warriors

He is a graduate in Mechanical Engineering from Goa University and Post graduation from Goa Institute of Management . has a 15 yrs of Work experience in corporate and worked with market leaders like TATA Motors , Maruti Suzuki , IFB etc.Currently a founder of start up " Amaze Warriors" - Which is into Strategic and Marketing consultancy. He is also a visiting / Guest faculty at several colleges in India namely IIT , BITS Pilani - Goa Campus, several college's under Goa University , Manipal University and Sanjay Godawat University .

He has host and lead a delegation of business owners to Busan , South Korea . He also a lead for Govt of Goa at the Defence Expo 2016. He has interacted on various platforms , he was the only Goan speaker at the recently concluded Unplugged by TedX Gateway.

Photograph: 16.1: Panel Discussion - Industry Institute Interaction - Demystifying The Impact Of Digitization On Industry

Photograph: 16.2:

Photograph: 16.3:

Photograph: 16.4:

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Photograph: 16.14:

17
RISK CAPITAL

17.01
Introduction

The objective of the 1 Day session is to upskill the Startups and Innovators with the skills and knowledge about startup fundraising and Venture Capital.

Venture Capital Program for Startups & Innovators

10:00 am to 5:00 pm

18th December 2019

Venue: Seminar Hall, First Floor, ETC Dept, Goa College of Engineering, Farmagudi

Table: 17.1: Schedule of Venture Capital Program for Startups & Innovators

Time	Agenda
9:30 am - 10:00 am	Registration
10:00 am - 11:30 am	**Introduction** • What Attracts Venture Capital? • Current Investment Trends • Options for Capital Raising for early stage businesses – Angel, VC, Venture Debt, Crowd Funding, ICO etc. • Process of Capital Raising • How big is the opportunity? • Market Size and Addressable Mark
11:30 am - 11:45 am	Tea Break
11:45 am - 1:00 pm	**Understanding Valuation** • Deal Structuring
1:00 pm - 2:00 pm	Lunch Break
2:00 pm - 3:30 pm	**Understanding Termsheet** • What is a Termsheet • Various clauses of Termsheet • (Shareholding, Preemption rights, Anti-dilution right, exit clause, liquidation clause, ROFR/ ROFO, Co-sale and Tag Along Right, Reserved Matters, Founders Lock-In, CPs, Exclusivity etc.)
3:30 pm - 3:45 pm	Tea Break
3:45 pm - 5:00 pm	**Preparing for Due-Diligence Process** • Shareholders Agreement • Exit and Case Studies on Exit

17.02
Speaker

Vikrant Potnis

Vikrant, having worked with organisations such as Springboard Ventures, JP Morgan and Mumbai Angels, has expertise in Venture Capital and Investment Banking. He has worked on transactions upwards of INR 200 Crores. He has closely worked in equity fund raising execution across sectors such as consumer, pharma, technology and healthcare. Currently heads SP-TBI, a DST funded incubator and is a visiting faculty of Entrepreneurship and Venture Capital in leading Indian B-Schools and Startup Accelerators.

17.03
Status report

1 Day Venture Capital Program conducted by Goa State Innovation Council for the Startups in the State of Goa

Goa State Innovation Council conducted a 1 Day Venture Capital Program on 18th Dec 2019. The objective of the 1 Day session is to upskill the Startups and Innovators with the skills and knowledge about start-up fundraising and Venture Capital.

Shri Jose Manuel
was the Chief Guest for the program and he encourage the participants to be innovative and creative. Shri Vikrant Potnis was the trainer for the session and he introduced the various aspects of VC Funding, Understanding Termsheet, Understanding Valuation and concepts of Preparing for Due-Diligence Process, Shareholders Agreement Exit and Case Studies on Exit.

Photograph: 17.1: Venture Capital Program for Startups & Innovators

Photograph: 17.2:

Photograph: 17.3:

Photograph: 17.4:

Photograph: 17.5:

Photograph: 17.6:

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Photograph: 17.8:

18 ENTREPRENEURSHIP & FINANCIAL LITERACY

18.01
Introduction

Goa State Innovation Council

GOA STATE INNOVATION COUNCIL
Department of Science & Technology, Government of Goa
Secretariat
Don Bosco College of Engineering, Fatorda,
Margao, Goa - 403602 | (O) 0832 274 3944 | (E) admin@gsic.in
www.goastateinnovationcouncil.com

No. DBCE/GSInC/Grant/2019-20/34 27/11/2019

To,
The Headmaster/Headmistress

Sub: Workshop on Entrepreneurship and Financial Literacy for Two Days

Sir/Madam

Goa State Innovation Council is organising a Workshop on Entrepreneurship and Financial Literacy for two days to equip the students with critical life skills of money management and to build an entrepreneurial mind set.

Date : 6th and 7th February, 2020
Venue : To be announced
Time : 10:00am to 5:00pm

We request you to nominate two students (one boy & one girl) from 8th class for the workshop.

Kindly submit the attached registration form at admin@gsic.in. For any immediate query contact **Secretariat, Goa State Innovation Council** at **"0832-2744000 / +91 98221 64489"**

Please find the enclosed brochure.

Certificate will be provided.

GOA STATE INNOVATION COUNCIL FATORDA MARGAO GOA

Yours Sincerely,

Sudip Faldesai,
Project Officer

Encl: As above

About Kids Finance Initiative:

Kids Finance Initiative is a Dubai based organization founded by Marilyn L. Pinto that has brought number of innovative and ground-breaking programs to the UAE and beyond.

We equip kids with critical life skills that aren't taught in school.

By conducting in-depth programs and not just workshops, we built a deeper understanding of the various topics we teach. By engaging with parents, we ensured that the kids' cycle of learning is deeper. By building relationships with the kids, we instill in them a curiosity for learning that will outlast our interaction with them.

We believe that kids are capable of learning, understanding, and doing so much more than we give them credit for.

Our two flagship programs are 'Money Management for Kids & Teens' & "Entrepreneurship with A Twist'.

Money Management for Kids & Teens: Our kids are going to make financial decisions throughout their lives, and as parents, it's up to us to ensure that they're prepared to face them intelligently. This program gives them just that—the understanding and the confidence to make conscious money decisions. This skill isn't just something nice to have; it is a social imperative.

Entrepreneurship with A Twist: Teaching entrepreneurship to kids is fantastic and but we need to do it right and not gloss over the hard bits. We need to show them how to develop an entrepreneurial mindset – to problem solve, to make mistakes, to be curious, to be fearless, to want to give back and be part of something bigger. Only then can they grasp its true meaning.

At KFI, we are passionate about helping kids realize their potential, igniting their curiosity, and stretching the horizons of their minds. We help them overcome their limiting beliefs and encourage them to achieve more than they think they are capable of.

That's what we mean by #EducationReimagined.

The concepts and ideas aren't ours, we've borrowed them from Robert Kiyosaki, Tony Robbins, Beth Kobliner, Daniel Goleman, Dr Carol Dweck, William Deresiewicz, Dan Ariely, T Harv Eker, Angela Duckworth, and other prominent authors and scientists.

What is ours is the premise that we can teach this to kids in a way that they can understand and use it. Our programs are fun, full of profound knowledge, and packed with skills they need for a future built on their own terms.

Kids Finance Initiative not only has skin in the game, but also, more importantly, we have our heart there too.

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18.02
About Kids Finance Initiative

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What is ours is the premise that we can teach this to kids in a way that they can understand and use it. Our programs are fun, full of profound knowledge, and packed with skills they need for a future built on their own terms. Kids Finance Initiative not only has skin in the game, but also, more importantly, we have our heart there too.

18.03
Status Report

Table: 18.1: Entrepreneurship & Financial Literacy – South Goa

Sr. No.	Name of the School	Name of the Students
01	Government High School, Xeldem, Quepem	1. Miss Nikita Gholap 2. Miss Renuka Naranyan Sawant
02	Government High School, Maina, Quepem	1. Mast. Gaonkar Sudeen Sudhakar 2. Miss Phaldessai Rakshita Rajender
03	Government High School, Morpilla, Quepem	1. Mast. Sapnesh Santosh Gaonkar 2. Mast. Rahul Sandeep Gaonkar 3. Mast. Pranay Purso Velip 4. Mast. Prajot Prakash Gaonkar
04	Government High School, Gaval – Khol, Canacona	1. Miss. Purva Pagi 2. Mast. Nachiket Salelkar
05	Our Lady of Snow's High School, Raia	1. Mast. Troy Cardoso 2. Miss Iona Fernandes
06	Shri Nirankal Vidhyalaya, Mashem	1. Miss Poorva Pramod Naik 2. Mast. Atharv Subhash Prabhudesai
07	Government High School, Mangor Hill	1. Miss Mehrun Nesha Shah 2. Mast. Bikram Ram Prasad Giri
08	Murgaon High School, Sada	1. Mast Prathamesh Junjawadkar 2. Miss Urvi Goltekar
09	Government High School, Baina	1. Miss Varsha A. Chalwadi 2. Mast. Sabappa Madar
10	Multipurpose High School, Borda	1. Miss. Sunita S. Bagi 2. Mast. Rohit Wadigar
11	Government High School Vidhyanagar, Aquem	1. Ms. Maya Umesh Lamani 2. Mast. Shanmit N. Mouraya
12	Government High School, Davorlim	1. Mast. Abhishek Gupta 2. Miss Afreen Khan
13	Our Lady of Piety School, Dharbandora	1. Miss Vaibhavi Adarkar 2. Mast. Saneth Waingankar
14	Government High School, Valkini	1. Mast. Manikant Kolekar 2. Miss Samiksha Pandarmise
15	Government High School, Curdi	1. Miss Manasi Kurdikar 2. Mast. Tanesh Naik
16	Government High School, Kalay, Sanguem	1. Mast. Pranav Prabhakar Ghadi 2. Miss Prasiddi Prakash Gaonkar
17	Government High School, Colomb	1. Miss Maya R. Gaonkar 2. Mast. Harsh S. Kakodkar 3. Mast. Jeevan P. Sorije
18	Government High School, Zambaulim	1. Miss Divya Ramesh Shetkar 2. Mast. Nikhil Deshbhandari

Table: 18.2: Entrepreneurship & Financial Literacy – North Goa

Sr. No.	Name of the School	Name of the Students	School Contant No.
01	Government High School Agarwada, Pernem	1. Miss Ruchi Prashant Bagli 2. Mast. Rahul Rajesh Agarwadeka	2246020
02	Lokshikshan High School, Dhargal, Pernem	1. Mast. Govindraj Prakash Tulaskar 2. Miss Sanjana Bablo Varak	7757088884/ 9158314279
03	Ideal High School, Piligao, Bicholim	1. Mast. Gaurang Parag Khanolkar 2. Mast. Medhaj Harmalkar	2363224
04	Shri Navdurga Edu. & Cult. So Anandibai Naik, Bicholim	1. Miss Shubra Manoj Sawant 2. Mast. Rudra Umesh Phadte	2392008
05	St. Theresa High School, St Estevam	1. Mast. Yash Ramdas Naik 2. Miss Nikita Bablu Singh	9823091202/ 2287006
06	St. Joseph High School, Calangute	1. Mast. Joseph Samad 2. Mast Kayden Pereira	2276477
07	Assagao Union High School	1. Miss Samrita Naik 2. Mast. Aman Naik	2268963/ 7972525364
08	Saraswat Vidhyalaya High School, Mapusa	1. Ms. Manshri M. Shetye 2. Mast. Kshitij S. Dalvi	2262850
09	St. Xavier High School, Moira	1. Mast. Jeet Roy 2. Miss Samidha J. Raul	2470179
10	Government High School, Ambedem, Sattari	1. Mast. Nikhil Govind Chari 2. Mast. Vishnu Santosh Yetrekar	2374030
11	Government high School, Keri, Sattari	1. Miss Vaishnavi Sudhakar Gaonkar 2. Mast. Vaibhav V. Mainkar	9326131609
12	Our Lady of Lourdes High School, Valpoi	1. Mast. Rugved Teli 2. Miss Sanika Gawas	9422675907
13	Government High School, Daushirem, Usgao, Ponda	1. Mast. Ganesh 2. Mast. Shail Nivruti Merva	9423060571
14	Government High School, Sada, Ponda	1. Mast. Akash Sengar 2. Miss Pallavi Betgikar	2311503
15	Government High School, Ganjem– Usgao	1. Miss Vaishnavi Gaonkar 2. Mast. Aryan Gaonkar	9673586027
16	Fr. Agnel High School, Pilar, Tiswadi	1. Mast. Hansel D'Silva 2. Mast. Melcom Barbosa	9146659204
17	Immaculate Heart of Mary, Goa Velho	1. Miss Fiana Cael Gonsalves 2. Miss Mehek Ansari	2219806/ 7875234486
18	Chubby Cheeks High School, Porvorim	1. Miss Sushal Kudnekar 2. Mast. Jay Kumar Rathor	7507312336 8830244912
19	Azmane High School, Neura	1. Mast. Vicky D'costa 2. Miss Vedika Shirodkar	8208989155

Photograph: 18.1: Entrepreneurship & Financial Literacy

Photograph: 18.2:

Photograph: 18.3:

Photograph: 18.4:

Photograph: 18.5:

Photograph: 18.6:

19
FINANCE AND ACCOUNTS

Grants & Funds

Table: 19.1: Funds received from the Government

Sr. No.	Date	Amount	Order No.
01	31/07/2019	5,00,000.00	3-191-2011/14-15/STE-DIR/GSInC/Part/911
02	17/01/2020	5,00,000.00	3-191-2011/14-15/STE-DIR/GSInC/Part/418
03	29/08/2019	20,00,000.00	3-191-2011/14-15/STE-DIR/GSInC/Part/338

Table: 19.2: Utilisation Certificates

Sr. No.	Amount	Order No.	Receipt No.
01	5,00,000.00	3-191-2011/14-15/STE-DIR/GSInC/Part/911	9324
02	5,00,000.00	3-191-2011/14-15/STE-DIR/GSInC/Part/418	9532
03	20,00,000.00	3-191-2011/14-15/STE-DIR/GSInC/Part/338	9209

20
OTHER ACTIVITIES

20.01
Prototyping Lab established at Don Bosco College of Engineering, Fatorda

A Prototyping Lab is established at Don Bosco College of Engineering, Fatorda by Goa State Innovation Council, Government of Goa. The Lab will support innovators from all walks of life to transform their ideas into tangible models or prototypes.

The Prototyping lab will be mainly powered by an advanced and powerful Laser Cutting machine and 3 D Printer capable of printing the most complex of designs with perfect precision.

The Prototyping Lab was inaugurated by Shri Jose Manuel Noronha, Chairman - Goa Public Service Commision and Goa State Innovation Council in presence of Fr. Paul Dsouza, Rector, Don Bosco College of Engineering, Fr. Kinley D'Cruz, Director, Don Bosco College of Engineering, Dr. Neena Panandikar, Principal, Don Bosco College of Engineering and Shri D S Prashant, Member, Goa State Innovation Council on 01.10.2019 at Don Bosco College of Engineering, Fatorda.

The benefits Prototyping Lab are:

1. Building the Product/Design Proofs
2. Saving Cost and Time
3. Customizing
4. Reducing Design Flaws

Photograph: 20.1: Prototyping Lab established at Don Bosco College of Engineering, Fatorda

Photograph: 20.2:

Photograph: 20.3:

Photograph: 20.4

Photograph: 20.5

Photograph: 20.6

Photograph: 20.7

Photograph: 20.8

20.02
Design Innovation Session

Don Bosco College of Engineering, Fatorda

Date: 07.02.2020

The objective of the session was to provide an introduction to the design thinking process by design professionals. The session will help to develop innovative solutions for complex challenges of product development.

Key takeaways:

1. Overview of the Design Thinking Innovation process.
2. Understanding Design Thinking Innovation in action.
3. Understanding the value of empathizing, prototyping and testing.
4. The ability to look at Design Thinking as an Innovation discipline as well as a creative and multidisciplinary endeavour.

Agenda

Table: 20.1: Agenda of Design Innovation Session

01	Registration	9:30 am – 10:00 am
02	Inauguration of the Workshop	10:00 am – 10:15 am
03	Key Note Address - What is Innovation? Chief Guest: Shri Jose Manuel Noronha	10:15 am – 10:30 am
	Tea Break	10:30 am – 10:45 am
04	Introduction to Design thinking, Innovation and Innovators Mindset	
05	Introduction to a Design thinking tool – Journey Map	
06	Case Study : A Design thinking	10:45 am – 1:30 pm
07	Discussion & Interaction Session	

Photograph: 20.9: Design Innovation Session

Photograph: 20.10: Design Innovation Session

Photograph: 20.11: Design Innovation Session

21
THE WAY FORWARD

21.01
Introduction

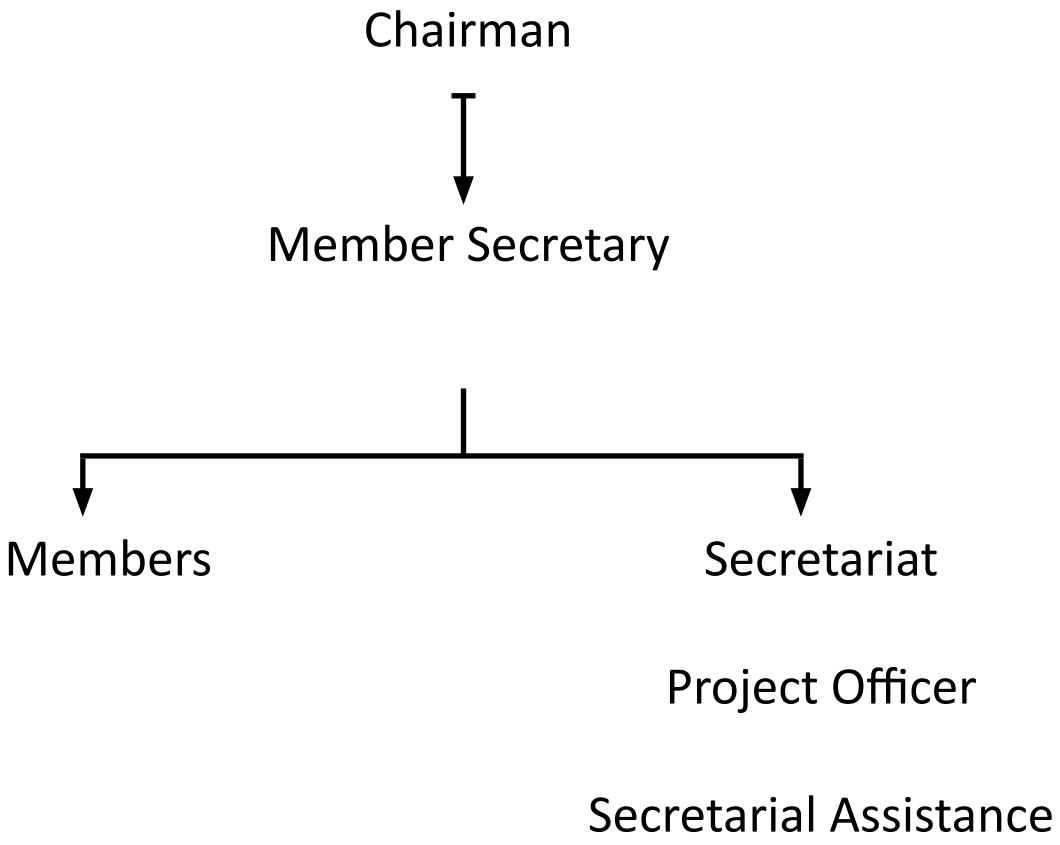
To help innovators from all walks of life transform their ideas into tangible models or prototypes, Goa State Innovation Council will soon be launching its state-of-the-art Prototyping Lab at its premises, Goa State Innovation Council Secretariat, Don Bosco College of Engineering, Fatorda. The prototyping lab will be mainly powered by an advanced and powerful 3 D Printer capable of printing the most complex of designs with perfect precision.

21.02
Intellectual Property Rights Support

Taking its IPR training and support initiatives a notch higher, Goa State Innovation Council would soon be adding capabilities to provide dedicated support in provisional patents filings to innovators from Goa. The new IPR handholding initiative would help various innovators and VIR registrants in better organising and submitting all IPR-related documents with accuracy.

22
ANNEXTURES

Annexure 01
Organizational Chart



Annexure 02
List of Applicationfor Goa Waste Management Hackathon 2019-2020

Sr. No.	Title of the Project	College	Department/ Graduation/ Post Graduation	Select the project criteria from the following challenges faced in Solid Waste Management and disposal are:
1	Design and Fabrication of Solar Powered Floating Waste Removal System for Fresh Water Bodies.	Don Bosco College of Engineering	B.E. Mechanical Engineering	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
2	Mini Solid Waste Segregator	Don Bosco College of Engineering	Mechanical/ Graduation	Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse DerivedFuel)
3	Aquatic waste Collecting system	Don Bosco College of Engineering	Electronics and Telecommunication Engineering	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds
4	Autonomous Garbage Collection and Segregation Robot	Goa College of Engineering	Electronics and Telecommunication	Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse DerivedFuel)
5	Integrated Waste Management System	Don Bosco College of Engineering	Electronics and Telecommunication	Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse DerivedFuel)
6	DETECTION AND REMOVAL OF FLOATING WASTE ON WATER BODIES	Don Bosco College of Engineering	CIVIL	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
7	sustainable waste management for today	Parvatibai Chowgule College of Arts and Science	Zoology	Disposal of Tubelights, LED's and CFL bulbs in scientific manner.

Sr. No.	Title of the Project	College	Department/ Graduation/ Post Graduation	Select the project criteria from the following challenges faced in Solid Waste Management and disposal are:
8	Segregation of Dry Waste Using AI	Goa University	M.Sc. ELECTRONICS	Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse DerivedFuel)
9	Design and fabrication of glass powdering and grading machine for various industrial application	Don Bosco College of Engineering	Mechanical	Disposal of Tubelights, LED's and CFL bulbs in scientific manner.
10	Water Surface Waste Eating Drone	Government Polytechnic Curchorem	Diploma in Computer Engineering	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
11	Smart E-waste bin	Goa University	Post Graduation (Electronic Department)	Disposal of Tubelights, LED's and CFL bulbs in scientific manner.
12	Solid waste removal from water surface by remote control vehicle.	Goa University	Post Graduation (Electronics Department)	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
13	Removal of solid waste from surface water bodies	Government Polytechnic Curchorem	Electrical and Electronics Engineering	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
14	Solid Waste Removal System from Perennial River Bodies	Don Bosco College of Engineering	Bachelor of Civil Engineering	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.

Sr. No.	Title of the Project	College	Department/ Graduation/ Post Graduation	Select the project criteria from the following challenges faced in Solid Waste Management and disposal are:
15	Upcycling of Scrap Aluminium	Goa University	Post Graduation - School Of chemical Sciences,	Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse DerivedFuel)
16	Smart Device for the removal of Solid Waste from Surface water bodies	Don Bosco College of Engineering	Computer Engineering	Removal of Solid Waste from Surface water bodies for eg. Rivers, Lakes, Ponds.
17	Citerminator	Government College of Arts, Science and Commerce, Khandola	Geography	Disposal of Sanitary Pads and Diapers in scientific manner.
18	Portable Wet and dry waste segregator	Angel Institute of technology and design	Computer	Segregation of Dry Waste & reduction/ elimination of moisture from RDF(Refuse DerivedFuel)
19	InciClean	Goa College of Engineering	Computer Engineering	Disposal of Sanitary Pads and Diapers in scientific manner.

Annexure 03
List Of Applications for Goa's Young Innovators Award 2019 - 2020

Category 1

Sr No	Write in brief about your project.	School Name
1	My project is a pair of shoes that produce energy by the footsteps of a person. This energy produced is used to charge a small battery embedded in the shoes. Each shoe has a powerful light embedded in it which provides a wide field view of light of upto 270 degrees of vision. This enables the user to see what is in front of him/her and also what lies at the side. These lights are useful for use in the night time when there isn't any sufficient source of lighting. Another feature of there shoes is that they can also charge a mobile phone. Each shoe has a USB port on it. So with this, we can charge our mobile phones and other devices when we need to. The shoes that I've designed work on a scientific principle that makes it a renewable, non exhaustible source of energy. There isn't any external source of power required. The shoes themselves produce the energy and consume it. This creates a continuous change with no other power/energy source getting consumed/wasted.	The Rosary High School
2	1# eco recycling atm My idea is to build a vending machine which instead of selling you some thing gives money for the recyclable waste you put in n .doing this will decrease the amount of plastic in our sourronding . The working principle is based on eco ATMs located near wall marts in USA which give you money for trading in your broken phone which they recycle properly.e waste like this is very difficult to recycle and some times impossible. It is said that it is better to make plastic then to recycle it because if it is not recycled properly it is 3 times dangerous than polluting plastics. Working principle The machine will have a tiny computer which will have WiFi and e sim technology built in . When aperson puts his recyclable waste in the bin camera located on top senses this waste.it uses AI and open cv (computer vision) to identy the material and accept or regect it and based on the weight of it the person is rewarded with shopping discounts by that brand of product or the food chain whoose cups or plastic utencils you are desposing. companies and food chains (MacDonald s,subway)or shopping brands like forever 21 which have plastic packaging which is made up a lot of plastic will have to pay the company for advertising and providing discount coupons to people who dispose their packaging.(companies like this are given a fine if their packaging use a lot of plastic especially food chains as lot of people go there and take their food "to go"(take away) and just dump packages on the street so to remedy this they have to use paper utencils like paper straws which are very bad in quality they get crumbled and rupture as the drink in which it will be liquid .so to avoid consumer complaints and bad brand reputation they will go for this). The divice will always will be connected to it's server which does all computing through the internet using an e sim so even if any one tries to hack the device to get access to it's server to get valuable data (coupons) can't as the sim will be reconfigured each day electronically. The person has to have a account to use the machine. If we reward people like this they will get encouraged to dispose plastic properly. i believe this technology will bring a change in our society and community.	A.j.De Almeida high school

3	We know that in present days consumer culture utilisation of plastic articles is increasing at rapid rate. This further results in plastic pollution caused due to uncontrolled use and disposal of plastic in the environment. This project is designed to reutilise the waste plastic to some extent. Here is the innovative way of recycling plastic waste in the form of plastic Bricks which can be utilised for different purposes. The waste plastic is melted in a vessel and then the sand is mixed thoroughly with it. This mixture is then poured in a mould which is in the form of bricks. The mould is allowed to cool and then the Plastic Brick is separated from the mould. The plastic Brick thus formed can be utilised for different purposes like underwater construction, swimming pool etc.	Sharada English High School, Marcela
4	The name of my project is Weight Sensing School Bag. The project is specifically made for school students. The load cell (a sensor) fit in the bag will help us to measure the weight of books in a bag and display the weight accordingly, on the LCD Screen. Therefore, we can come to know whether the bag is too heavy for the student. The entire project is based on Arduino.	Holy Family High School
5	Title : Future Agriculture Agriculture must be introduced to technology , Autonomous tractor ie driver less tractor to be used for ploughing. seeding machine to be used for seeding. Robot with digital auto rotation removes which can be used for cutting and separating the unwanted plants the crop mostly sugarcane must be transported by trains .The farmer can control the machines with one laptop .This will make the life of our village farmers easy.	Government High School Morpirla
6	Agricultural Practices The soil should be well prepared for aeration .Irrigation facilities should be available . a weeding machine to be used provision should be made for harvesting using latest technology, storage facilities free from pesticides should be made available best variety of seeds to be used and organic fertilisers to be used.	Government High School Morpirla
7	Satellite Communication If a ground station wants to upload a file, or download a file, the ground station must first register with the satellite by sending a short message using UDP or satellite specific protocol. If this request is received, the satellite acknowledges and assigns the ground station to a queue where it awaits its turn to either downlink or uplink. The satellite then works its way through the queues one station at a time, allocating each station a small time slice to accomplish the task. If a station doesn't complete its task in the assigned time, the request goes to the bottom of the queue to wait its next turn, during which it can attempt to complete the task. This process continues until either a timeout or the completion of data transfer. The messages are broken down into small packets, the packets then get assigned identification tags. If the satellite or ground station misses part of a message, a fill can be requested. Note that the ground station operator never directly activates the transmitter. Directions are given to the computer, which can request that a specific file be downloaded. From this point on the ground station is under the control of ground station software that is responding to on site conditions and satellite software. The ground station software decides when to transmit the request to enter the downlink queue, to avoid colliding with other requests. The ground station software recognizes if the initial request is unsuccessful, it then decides when to try again. The ground station software captures the packets containing the message.	Government High School Morpirla
8	Number Plate Recognition system An automatic and robust vehicle license plate recognition system has to be developed. The proposed method uses scan line evaluation and averaging method to localize the number plate followed by a border removal mechanism combined with character mending and approximation of character height to extract the number plate characters. Plate localization is done to remove the unwanted background details, and thereby focusing on to the essential details in the image. To detect the car plate, a method by applying a top-hat filter to the whole image followed by a multiscale region search has been described. Another approach has been proposed to detect the vertical edges, to extract the license plate using sobel operators.	Government High School Morpirla

9	Characterization and Utilization of Agroforestry Residues as Energy Source Part of this plantation output is destined for the pulp and industry:In this study three biomasses abundant in the Goa are studied: i.e. Eucalyptus, Garapeira/Peroba (wood dust) and Sewage Sludge. The wood samples (Eucalyptus) have higher heating value than the sewage sludge because the wood samples have higher amounts of carbon and hydrogen than the sewage sludge. The sewage sludge has higher ash content and lower amount of volatiles and fixed carbon than the wood samples resulting in a lower heating value. The pyrolysis of eucalyptus, garapeira/peroba and sewage sludge has been studied in a thermobalance over a wide range of degradation temperatures. the thermal decomposition of the biomass leads to significant weight loss. The behaviour of the sewage sludge to the increase of temperature from 25°C to 700 °C in an inert atmosphere do not show such different zones as the behaviour of the woody biomass. The proximate analysis shows differences between the woody biomass and the sewage sludge. The sewage sludge has higher ash content and lower fixed carbon and volatiles.	government High School Morpirla
10	Our medicine helps to cure anemia. Anemia is caused due to lack of red blood cells which can lead to death in the form of hart attacks Hemoglobin is made up of four protein molecules (globulin chains) that are connected together. The normal adult hemoglobin (abbreviated Hgb or Hb) molecule contains two alpha-globulin chains and two beta-globulin chains. In fetuses and infants, beta chains are not common and the hemoglobin molecule is made up of two alpha chains and two gamma chains. As the infant grows, the gamma chains are gradually replaced by beta chains, forming the adult hemoglobin structure. · Each globulin chain contains an important iron-containing porphyrin compound termed heme. Embedded within the heme compound is an iron atom that is vital in transporting oxygen and carbon dioxide in our blood. The iron contained in hemoglobin is also responsible for the red color of blood. · Hemoglobin also plays an important role in maintaining the shape of the red blood cells. In their natural shape, red blood cells are round with narrow centers resembling a don't without a hole in the middle. Abnormal hemoglobin structure can, therefore, disrupt the shape of red blood cells and impede their function and flow through blood vessels.	MANOVIKAS ENGLISH MEDIUM SCHOOL
11	The project is designed to use technology to detect and immobilize the vehicle violating parking laws automatically. The location and violation will be reported to the police control cell. On payment of the required fine in the police control cell by the violator, the personnel sitting in the control room will release the immobilized vehicle which will help bring complete discipline since prosecution continues round the clock.	Mushtifund High School
12	The project is entitled Smart Home which is time saving and has energy conserving technology.The main goal of this project is to design a home automation system with the help of Android application that can be controlled remotely. This proposed system uses an Android OS based smart phone or tablet, to control various electronic devices.	St.Michael's convent High School, Vagator-Anjuna
13	Self healing tissue In brief the cells in your mouth heal faster than any other cell in your body so since the DNA in your cells are the same it can give support to damaged cells in your body like cuts and wounds. All you need to do is to extract your cells and preserve it in alcohol. All you need to do is to take a tissue and dip it into your cell extract and place it on your wound and in a matter of minutes it will close up and heal within an hour.	MANOVIKAS ENGLISH MEDIUM SCHOOL

14	Cycle operated Shredder Shread your weight, waist and waste. . . . . . Organic waste, or green waste, is organic material such as food, garden, agriculture and lawn clippings. It can also include animal and plant based material and degradable carbon such as paper, cardboard and timber. Burying organic waste in landfill is a big problem. Hence first we have to know the necessity/reasons for solid waste management. Food waste is the organic material having the high calorific and nutritive values to microbes, that's why efficiency of methane production can be increased. In all the cities and places, organic waste is dumped or disposed in landfill or discarded, which causes the public health hazards and diseases like malaria, cholera, typhoid. Inadequate management of wastes like uncontrolled dumping bears several adverse consequences. It is not only polluting ground water and surface through leach ate but also promotes the breeding of flies, mosquitoes, rats and other disease bearing vectors. Also, it produces unpleasant odor and methane which is a major greenhouse gas contributing to global warming. Agriculture is the major occupation in many parts of the world and producing a range of waste waters requiring a variety of treatment technologies and management practices. The basic occupation of 70% of the population in India is majorly dependent on Agriculture. A variety of crops are cultivated in India. But after harvesting them the crops wastage are either burnt out or thrown as waste without taking into consideration of their nutritive value. With the increase in the population our aim is not only to stabilize agriculture production but also to increase it further in sustainable manner. Excessive use of agro-chemicals like pesticides and fertilizers over years may affect the soil health and lead to declining of crop fields and quality of the products. Hence, a natural balance needs to be maintained at all costs for existence of life and property. The obvious choice would be judicious use of agro-chemicals and more use of naturally occurring materials in farming systems. Hence the shredder machine is used for shredding i.e. converting of macro agriculture waste and food waste into small easily decompose form, which can used as organic manure. The small size waste will decompose faster than the large or macro size waste. This decomposed waste can be used for the crops and this leads to improving in the growth and quality of the crops and also improving the soil chemical properties such as supply and retention of soil nutrients, and promotes chemical reactions.	MANOVIKAS ENGLISH MEDIUM SCHOOL
15	Zero One Time Use Plastic from SuperMarket	Keerti Vidyalaya

16	Title: Smart Rain Water Management Technologies This project will help us to solve the issue of shortage of usable water in our village. water is one of the natural resources and come as a free gift.humans cannot survive without water as it is a basic need , water is necessary on a daily basis lifestyle like drinking, bathing, washing, planting etc. rain water harvesting : in simple meaning collection and efficient storage of rain water from different basement areas like rooftops of residential buildings, ground surfaces, rock catchment etc.if the water is collected from a dirty surface, then the collected water can be made utilization by using a proper filtration system. Objectives of rain water harvesting i) Increase volume of water bodies. ii) Lesson flood and soil erosion. iii) Prevent overuse of underground water. iv) save money Methods Of Rain Water Harvesting i) Domestic Rainwater harvesting ii) Rock and other surface catchment system. iii)subsurface dam and other dam iv) earth dam like ponds and pans. v) Recharge structures vi) Conservation tillage vii) planting pits viii) Katumani pits. ix) Semicircular bunds. x) Negarim micro catchments. xi) Stone buds xii) Ridges xiii) Terraces xiv)Chini xv) Bunds with external catchment.	Government High School Morpirla
17	Title : Bamboo is the best solution for contenting the global warming Bamboo from a 'poor man's timber' to green gold. bamboo is fast emerging as the super material of the 21st century. it is one of the fastest growing and highest yielding renewable natural resource making it a good substitute to wood in mitigation pressure on natural forest reduction. Bamboo is the best solution for contenting global warming in many following ways: i) Bamboo absorbs carbon dioxide of over 450 kg per plant and releases up-to 320 kg of oxygen per plant in a year. ii) Bamboo is a carbon sink. bamboo has 50% carbon in all its parts. iii)Bamboo as a air purifier and capable of reducing the urban pollution such as SO2, CO, CO2. iv) Bamboo for sewage water clearance. v)Bamboo for land restoration vi) Retains the rain water. Application Of Bamboo Plantation i) Renewable energy(bio coal, bio ethanol, bio CNG, electricity generation, bio oil) ii) Activated Charcoal. iii) Furniture, structure and art work. iv) Bamboo plywood. For better cultivation we have to do : i)Soil testing, analysis, ii) optimal soil conditions. iii) Bamboo for land restoration. iv) Retain rain water	Government High School Morpirla
18	This is model to show alternate sources of energy. In this model transformation of any data, or songs, news from the mobile is to convert into light. this light is then made to fall on a solar panel which is then converted into sound energy. this model saves us from the harmful radiation given by blue tooth and wifi connections .	St. Xavier's Institute

19	This is a model of a mobile hospital. it is used to save the lives of people who meet with accidents on the road. this mobile hospital is like a minor version of a hospital . It contains an OPD, surgery ward, rooms, elevator, washroom etc. It is used incase there is an accidents and an ambulance cannot reach in time because of a traffic jam.	St. Xavier's Institute
20	This machine makes use of the transmission of rotational mechanical energy by a belt. When it is moved, the rotation of the wheels is transmitted to the grooved disc in the chamber. The grooves pick up the seeds (The size of the grooves can be adjusted according to the size and shape of the seeds), and drop them into a pipe with a metal extension at the end to make the furrow for the seeds, dropped at regular intervals due to equal spacing of the grooves on the disc.	MANOVIKAS ENGLISH MEDIUM SCHOOL
21	Waste to Fuel : Straw which is a waste product can be a revolution to human kind as you know fossil fuels are depleting everyday. To renew them it takes millions of years production rate and the consumption rate are not proportional. Our project helps to renew fossil fuels by using an alternative to them. This fuel is made from an everyday waste product straw. Firstly we will have two hyper wash the straw to remove bacteria after that you need to add a emalserfyer that will break down the cellulose if the straw and by adding yeast to convert the cellulose into alcohol which is not consumable and can be used for burning purposes and the by product of the straw can be used as organic waste.	MANOVIKAS ENGLISH MEDIUM SCHOOL
22	Hydro water plant: IF THIS PROJECT IS MADE IN REALITY IN INDIA ,THEN THIS WILL BE A TURNING POINT BECAUSE THE MAIN POINT WATER CRISIS WILL BE NOT IN EXISTENCE , RIVERS IN INDIA WILL BECOME CLEAN ,PLASTIC IN INDIA WILL REDUCE WHICH WILL BE A BIG HELP TO WILDLIFE ,ELECTRICITY WILL BE PRODUCED AT A LOW COST AND CAN BE SUPPLIED TO VILLAGES WHICH DON'T REVISE ELECTRICITY.	MANOVIKAS ENGLISH MEDIUM SCHOOL
23	Railway Track Crack detection and monitoring system: In the past decade, India has faced over 230 rail accidents mainly due to derailment of the train from the rails which is caused by cracks on them. Our project detects cracks on the rails and alerts the closest station and the bogey driver before the train arrives to that point.The Indian Railways has one of the largest railway networks in the world, cris- crossing over 1, 15,000 km in distance, all over India. However, with regard to reliability and passenger safety Indian Railways is not up to global standards. A recent study revealed that over 25% of the track length is in need of replacement due to the development of cracks on it. HOW DOES IT WORK? This micro controller controls the circuit function. Various components are Interfaced with this micro controller to perform desired operation of the system. The hardware components used in this system requires regulated power supply for the operation. This power is provided by the rechargeable battery connected in the system. The battery will be charged through solar power with the help of solar panel connected. The hardware components used in this system requires regulated power supply for the operation. This power is provided by the rechargeable battery connected in the system. The battery will be charged through solar power with the help of solar panel connected. In this system we have interfaced two TSOP IR sensors with the micro controller for the distance and detection of the crack present in the track of the railway line. To communicate the received information, we make use of a GSM modem. The GSM module is being used to send the current latitude and longitude data to the relevant authority as an SMS. This GSM module is interfaced with the micro controller through a matching circuit MAX232. A GPS receiver is also interfaced with the micro controller to determine the exact location of the crack on the railway track. This GPS receiver will provide the longitude and latitude parameter values to the controller. Two DC motors are used to move the robot in forward direction. These motors are interfaced and controlled through the micro controller. To operate these motors through a micro controller a driver circuit is required for interfacing between micro controller and motors. A wireless camera is also used in this system. This camera is interfaced in the system for live streaming of the status of the railway track. This camera provides the live video to the device in which the application of that camera is installed. The architecture of the proposed system also consists of a 16x2 LCD display, interfaced with the micro controller for the display purpose. This LCD display will display the longitude and latitude values of the crack detected by the system.	MANOVIKAS ENGLISH MEDIUM SCHOOL

24	"Electric Pole Safety in Rainy Seasons and Save Animals as well as Human's Life through This IDEA"	Vidya Vikas Academy, Madgaon GOA
25	Risk Husk Bricks: India is currently a developing economy whose dependence is moving from agricultural to the industrial sector. However even with this statement we cannot change the fact of how agriculture provides basic necessities of food for not just our country but all nations around the world hence agriculture is indispensable no matter what we do. Besides providing us food agriculture also helps the industrial sector with the basic raw materials needed for production and playing as an open market for the industrial sector to sell goods such as fertilizers. Even though agriculture is so helpful to the nation it does provide us with one problem waste. and our nation India generates about 35 thousand crores kg of waste every year. This waste can go through processes like recycling or composting in order to make benefits out of them however there is one such waste that can scientifically and economically contribute to construction industry and agricultural sector respectively. This waste is nothing but rice husk which are the outer coverings obtained by the production of rice. Agriculture may be something that only is preferable to an undeveloped country but the fact is that agriculture is the back bone of any economy, whether it is undeveloped, developing or developed they will always require the agricultural sector to provide them with food and an open market for industries. In India agriculture has also become a source for labor supply for industries as during a certain period some farmers cannot produce certain type of crop which is actually their only source of income and so they are left jobless hence they migrate to industries in search of labor jobs so they can earn some wage. It is an unfortunate fact that farmers in India cannot fulfill their minimum calorie intake and expenditure and are living in poverty stricken condition. Ever since green revolution was introduced in India during the 1960s, farmers began to use new technological methods such as HYV(high yielding variety) seeds, pesticides, artificial fertilizers and tractors, which have improved the agricultural production but unfortunately there are some farmers who are illiterate or are not able to afford new technology for farming so they fail to produce a huge amount of agricultural products in less time and great quality. Even though green revolution has played a great role in agriculture, we still cannot forget the fact that these are chemicals which are harmful so these pesticides and artificial fertilizer's use must be kept at a certain limit so it does not affect the agricultural production in negative ways. Due to not being able to live a condition away from poverty farmers commit terrifying act of suicide. This is a major concern for our nation so the government has taken many actions against this by establishing schemes and services to support farmers so that they can live a happy life and eradicate poverty. Schemes such as providing loans and teaching new technological farming methods so that farmers can apply new farming methods like using irrigational facilities, tractors, pesticides and artificial fertilizers. Since independence and even before independence agriculture's role to our country's economy was essential as it was not the only sector that had highest production rate compared to the industrial and tertiary sector but also it provided a huge amount of employment to the people. The waste produced was organic hence it could also be used for composting which would make the soil fertile, rich with nutrients and suitable for growing crops and plants. Waste is defined as anything that is of no use to us and is disposed off. But this definition has blinded us of how waste is of great importance to us and can be used as resource to benefit our environment and economy. Of course not all waste is helpful, we do have hazardous waste which must be dealt with as soon as possible. An example of such waste can be plastic that can ruin our environment and if it is mixed with other types of waste than this mixed waste may release a high amount of toxic gas and intoxicate our environment through soil, air and water. In order to keep our environment safe we must follow the waste management system which contains the	MANOVIKAS ENGLISH MEDIUM SCHOOL
26	Automatic Water Irrigation system An automatic water irrigation system refers to the operation of the system with no or just minimum of manual intervention besides the surveillance. This automated system can help reduce manual labour used for normal irrigation, and is also more efficient. However, it is cost-friendly, and is a very basic system. It can be implemented by anyone who has basic knowledge to use a Arduino.	Manovikas English Medium School

27	Title : Sustainable Agricultural Practices Sustainable agriculture practices seeks to sustain farmers, resources and communities by promoting farming practices and methods that are profitable, environmentally sound and good for communities. Sustainable agriculture fits into and complements modern agriculture. In sustainable agricultural practices we have to practice intercropping, mixed cropping. use of solar panels, solar facing. to avoid wastage of water use moisture detector, practice of aquaponics where waste of fishes can be used as organic fertilizers to crops. rearing of cows, cox etc from their waste we can prepare vermicompost , biogasfor cooking. we have toi harvest rain water and use it for irrigation purposes. Methods of sustainable Agriculture i) Crop Rotation ii) Natural pest predator iii) Soil enrichment iv) crop cover v) bio intensive integrated pest management.	Government High School Morpirla
28	Blowbrella A very innovative idea to have control on the rain water flow . Sometimes our agriculture face hardships as it rains at wrong time so we can use blowers to divert the direction of rain water .we need motors and blowers so that the crop will have an umbrella of wind and harvesting time the damage will be less.	Government High School Morpirla
29	Bioplastic It takes 1000 years or more to break down plastics when we throw it away. what if we could make new plastic that can break down easily based on vegetables.we need vineygar , starch glycerine ,mix starch and water and vinegyar , glycerine and heat with stirring .	Government High School Morpirla
30	Innovative hearing aid device is device using a DC motor, an amplifier and a microphone. The microphone is connected to a laptop which in turn is connected to the amplifier and a DC motor. An ice-cream stick is connected to the DC motor. When we speak on the microphone, the laptop sends the audio-signal to the amplifier and the DC motor. The motor starts vibrating and the vibrations reach the inner ear.	Adarsh V.V. High School, Margao - Goa
31	TILE: “DEVELOPMENT OF FILTERS TO CONTROL CARBONMONOXIDE AND SMOKE EMISSIONS” An electronic circuit is made to detect carbon monoxide and smoke emitted from vehicle exhaust. The filters are designed by using the materials like cowdung, cocopit, charcoal etc.The vehicle exhaust is passed through these filters and the resultant emissions are checked by MQ2 sensors. These filters are found to efficiently absorb carbonmonoxide and smoke released from vehicle exhaust. thus reducing air pollution to a great extent.	THE NEW EDUCATIONAL INSTITUTE- CURCHOREM
32	Chalk powder absorbing Duster Materials required: wooden box, 2 DC Motors, 2 fans, battery, net and canvas material Working: It works on the principle of vaccum cleaner. As you wipe the board, chalk powder will be absorbed by the duster.	Government High School Shirgao
33	Title : Generating electricity from CO2 due to factories, vehicles etc CO2 increased in the environment and it results global warming. so this CO2 we will use to generate electricity.this technology is known as geothermal technologies. So to generate electricity we will collect CO2 from factories from specially by using heat exchanger. Then that CO2 we have to convert it into liquid by using high pressure pump. Then that liquid is stored by using injection well under the ground 3km deep. At 3km inside the earth’s crust the temperature is 125 c Under such high temperature it will get high pressure, then this CO2 is passed to production well. this high pressure of CO2 is used to move the turbine and to generate electricity.	Government High School Morpirla
34	It is a device that minimizes the consumption of electricity. This device is provided by the Electricity Department along with the energy meter which will be connected to our homes. It is going to minimize the consumption of electricity by changing the mind-set of the user. Making them more aware about their consumption of electricity.	The Rosary High School, Deendayal Integrated School Complex ,Cujira-Bambolim, Goa-403202
35	My project the Eco- friendly green city is a miniature concept of a unique and only city in the world in which, air pollution is controlled with the help of engineering and biological science.	Peoples High School

36	This project is a solution to plastic. Usage of single plastic is a sin committed by most of the people in this world. And the punishment for this sin is more single use plastic. So here is a substitute to plastic. Bioplastic. The bioplastic I intend on making is made through three techniques. The first one is by using banana peels.Banana peels have a lot of starch. The process is basically dipping the peels in sodium metabisulphite solution. Then boiling them and purifying them.The same process can also be performed with potato peels. And the third method is using corn starch.Corn starch is first mixed with vinegar and then heated.These can be substituted for single use plastics. This will also help the shopkeepers in Goa progress for our state has a single use plastic ban and is an inch away from defeating it !!	Mount litera zee school
37	Clean water is necessitity and a must. However many places in world do not have access to clean water. My project puts forward a clean water kit. This kit is based on the idea of reverse osmosis. A membrane will be enclosed list or a pouch which will have concentrated electrolyte solution outside and will purify the water through reverse osmosis. The second part of the project is an activated carbon water filter. The water filter is unique as reverse osmosis is usually considered impossible to replicate without an filter and electricity. This technique is used in our RO water system.	Mount litera zee school
38	Waste to energy project.	AL Madina high school
39	To generate electricity from traffic and to reduce overcrowding of parking space.	Our Lady of Carmel High School, Curtorim
40	Burglar's Alarm- When you open the door it triggers an alarm.	Our Lady of Carmel High School, Curtorim
41	Burglar's Alarm- When you open the door it triggers an alarm.	Our Lady of Carmel High School, Curtorim
42	Title: Automatic Gateway System It is a automatic gateway used in offices,school, houses.It has two motors connected on both side of the gateway and switches of the motor are in front side and one at the back side of the gateway. if the car comes from the front side the switch will sense the car and motor will activate and gate will open and after the car moves the gate will automatically close down. Same procedure will follow if the car comes from inside.	Government High School Morpirla
43	My idea was to create a torch that solely runs on the heat of the human hand. I used thermoelectric cooler module and the temperature between the palm of the hand and ambient air.	Vivekanand dnyan mandir high school keri sattari goa
44	Rain Water Harvesting- Filtration-Reuse	Government High School Mangor -Hill Vasco
45	We have strived to make an easy accessable low cost consumer friendly product. We have made a compact version of a cycle power charger in such a way that you can charge your phone while cycling as well	St Thomas Boys' High School
46	It is to clean the waste from water bodies and land.	MOUNT MARY'S HIGH SCHOOL CHINCHINIM
47	Motor Bike made up of Cycle	St. Aloysius High School
48	Every year 80,00,000 metric tones of waste flowers are dumped into rivers.toxic arsenic, lead and cadmium from the harmful farm - runoff, pesticides and insecticides used to grow flowers mixes with river water making it highly poisonous. To deal with this problem I have come up with the idea to prevent flower pollution. The idea is to collect floral waste from temples and mosque and convert it into incense sticks and soap trough a small process . This is the best idea to convert waste into wealth.By this idea many unemployed people can do business by making this innovative products from waste.	Vivekananda dnyan mandir high school, Keri, sattari -Gao
49	Waste paper mulching unit is the one which work on fountain produce with electrical energy. In a fountain turbines rotates and help mulching of waste paper with a mixture.	GHS Zambualim
50	this project uses security and alarm systems making use of laser light, mirrors and light sensors which senses intrusion and an unauthorised access. Any irregular activity produces a sound by the laser security system. Here a trip wire like security system is made which triggers an alarm when laser is interrupted. LDR (Light dependent resistor) acts like a light sensor. If the laser light is blocked by an intruder from falling on the LDR, even for a small duration, this activates the alarm.	Keshav Smruti High School

51	Floor Dry Cleaner and Wet Cleaner	GOVERNMENT HIGH SCHOOL KERI SATTARI GOA
52	Our envisioned product will detect the portholes present on the roads. Our project includes a Raspberry Pi with GPS capabilities and a camera and all this will be placed on a Quad-copter (Drone). The drone is capable to autonomously maneuver along a defined flight path using its on-board GPS. The drone when in-flight, will detect potholes using a custom trained Deep Neural Network and inform the concerned authority by sending its picture and GPS coordinates.	Dr. K.B. Hedgewar High School, Cujira, Panaji
53	My project is all about making the U - Turns on road safe specially when the view of further road is not at all clear or when the driver does not have any idea about what comes next. so sudden shocking situations can be avoided and so the fatal accidents	Dr K B Hedgewar Vidyalay Ponda Goa
54	Speed or the flow of water is much faster than the other electric pumps.	NEW ERA HIGH SCHOOL, MARGAO
55	Pendulum to create design pattern	NEW ERA HIGH SCHOOL, MARGAO - GOA.
56	It contains all gadgets working automatically. it takes care of every possible small or big task that otherwise needs to be looked after manually and so reduces the time & labor	Dr K B Hedgewar Vidyalay , Ponda , Goa
57	Our project is a Cognitive system for Clean and Healthy Toilets in Educational Institutions, focused more on Schools. Our Concept of the Innovation is to make a band, that will be attached to the flushing knobs and washbasin/ Toilet/Urinal taps. This band will be equipped with a UV Lamp and Capacitive Sensors/Contacts. Thus the band will DISINFECT the Knobs/Taps using UV Rays as well as notify with a BEEP, if the user DOESN'T FLUSH the Urinal/Toilet or DOES NOT TURN OFF the Tap. This is detected by the ON-BOARD CAPACITIVE CONTACTS.	Dr. K.B. Hedgewar High School, Cujira, Panaji
58	With the Enhanced Global awareness of the Alarmingly Fast Developing Water Scarcity, people are Resorting to various Ways and Means to Save, Conserve, Store and Recycle water, including major focus on Rain Water Harvesting. However, I observed that one Humongous source of Rain Water Harvesting has gone Totally & Absolutely UNTAPPED; rather UNNOTICED! This source is the Rain Water that runs Down the Roads and Streets. This Water just goes down the Drain Unused. My Innovative Concept to tap this Huge Source of Rain water for harvesting is very simple. The EXISTING as well as the to be CONSTRUCTED NEW roads should have a Slight slope in such a way that all the water flows into a Double Compartmented Darin. The Outer And The Inner Compartment. An Embedded Mesh Structure with Pebbles and Sand and Charcoal or Activated carbon would be the Divider between the Outer and Inner Compartments. Moreover, the Inner compartment would be closed from the Top too. The Rain water from the Outer Section would enter the Inner section through the Filtering Medium and the Purified water would flow into Reservoirs made for this purpose. This water could then be further Processed and supplied to the cities, towns for regular Consumption.	Dr K. B. Hedgewar High School, Cujira, Panaji
59	We face water scarcity problem and every year it becomes more intense. Goa is not an exception. The main cause of this is 100% dependency on treated water (by PWD) for drinking purpose, though there are many other sources of fresh water like open wells, ponds, natural springs, and many more. However, people avoid this water as it contains lot of dissolved minerals that makes it hard water. This project intends to change Hard Water to Soft Water and Purify it certain extend. With this the Well water would be made usable and Potable, thereby contributing in reducing Water Scarcity. We contemplate to achieve this by using Reacting of Sodium ions with Calcium and Magnesium, which is present in Hard Water. This will convert it to Soft Water, Later this water is made to pass through carbon filters. The carbon filters will be chosen according to the quantity of water required/ consumed per day. Carbon filter removes chorine, sediments, volatile organic compounds, taste, and odour from the water	Dr. K.B. Hedgewar High School, Cujira, Goa

60	In today's world shortage of parking space, high parking tariffs and traffic congestion due to visitors in search for a parking place are only a example of everyday parking problem. To deal with this idea, I have come up with an idea to stop everyday parking problem. My idea is to make a available parking spot detector. In which green and red lights over every parking spot indicate if the parking spot is free or occupied.	Vivekanand dnyan mandir high school keri sattari goa
61	Preparing fuel from plastics	St Joseph's Educational Institute, Chandor
62	As we can see, in today's world the pollution level is increasing too fast. One of the reasons for this is automobile pollution. To deal with this problem, I have come up with an idea to make a mini adjustable silencer which can be fitted to a car, bike, bus, truck silencers. To make this i have used a cylindrical tube in which one carbonator, exhaust fan and a box which collect carbon particles. This product is cheap to buy. So that any one can afford it. It will reduce the carbon from automobile smoke.	Vivekanand dnyan mandir high school keri sattari goa
63	Smartphone has been a very good tool and hence it is now owned by everyone. The bad side of it is that people get addicted to it and this is a very common case in children. Excessive use of smartphones can disturb sleep due to the emission of blue light, it can also damage eyesight and reduces physical activities. All this is very bad for kids, thus disturbing their growth, physical and mental health intensively. We have come up with an idea that restricts/prevents the use of a smartphone among children. This is done by preventing unlocking of the smartphone when its front camera detects a child by analyzing the size of the pupil of the respected user. All this can be deployed as an inbuilt app which is works on the smartphone's lock screen.	Dr. K.B.Hedgewar High School, Cujira, Panaji
64	Rotating Solar Panel. Energy demands in the recent years have been recorded to be growing at an exponential rate by the commercial and as well as domestic markets. While the non-renewable resources are rapidly getting depleted, it leaves no other option but to use renewable resources to produce usable energy. One of these resources, the Solar energy is the most abundant and easy to harness resource through Solar panels. This project makes this process of harnessing solar energy more efficient. The Rotating Solar Panel Using Arduino project aims at charging a 12VDC Battery with the help of a Solar Panel mounted on platform which can rotate with the help of a motor. This motor is getting controlled by Atmega328 microcontroller mounted on an Arduino Uno Board which is in turn mounted on the PCB. The Rotating Solar Panel system scans from one horizon to other to know the current position of sun and hence the position from which the greater solar energy can be harnessed.	Vidya Vikas Academy
65	Mini biogas plant	GHS KERI
66	Thermocol dissolved in petroleum and formed glue.	GHS KERI
67	Free energy well	GHS Keri
68	This project is making a unique design of a helmet. The helmet is designed to have a bluetooth conncetivity and pairing with another bluetooth module preinstalled in the bike. The main purpose of this project is to ensure that the rider is wearing a helmet while riding the bike.Only once the helmet is worn by the rider then the bike key can turn for ignition, else the bike key wont turn. This will be done by using arduino microcontroller, a bike key module, bluetooth module and sensors.	Vidya Vikas Academy
69	we have made a more compact version of a cycle to electricity conversion unit.which is way more compact and way more cheaper	St. Thomas Boys' High School
70	solar powered weather station cum charger	Dr. Keshav Baliram Hedgewar High School
71	Watering the plant becomes very tedious when you have a large garden area. So to overcome this problem a watering bird can be developed which can be operated with a remote control. The person has to fill water in the bird and control the bird from one place.	Saviour of the World High School

Category 2

Sr. No.	Write in brief about your project.	School Name
1	The name of my project is BLINKO. This project can be used for drowsy driver detection and other eye blink related detections. My project can be mainly used to stay awake while doing a certain job. If any driver, while driving feels sleepy and tends to shut his eyes for more than 4 (or number of coded) seconds the buzzer will automatically buzz. The loud and disturbing sound will wake him/her up. This device can also help students to stay awake while studying. Many times students, due to their incomplete coverage of sleep tend to sleep while studying. If the student closes his/her eyes for 4 or more seconds the buzzer will buzz and the student will wake up.	The Rosary High School, Cujira - Bambolim, Goa
2	Industrial processes produce an unhealthy atmosphere which has been the reason of 13.5 lakh deaths during the year 2018. Air Pollution through furnaces emit smoke which contains particulate matter PM 10 and PM 2.5 ,one in eight deaths in India in the year 2018 was attributable to air pollution, which contributes to more disease burden than tobacco use, a study said the highest exposure to ultra-fine particulate matter, PM 2.5, was in Delhi followed by Uttar Pradesh and Haryana. Around 1.3 million deaths in India in 2018 is attributable to air pollution, it said and termed air pollution a leading risk factor for deaths in the country where the average life expectancy. In this project we are trapping particulate matter so we can save many lives.	MANOVIKAS ENGLISH MEDIUM SCHOOL
3	Goal: The goal of the project is to make patients independent and ease the burden of hospital staff by automating time consuming tasks which are done manually by hospital staff or patient relatives. Features: The voice controlled smart patient bed responds to voice commands and has following features that can be controlled by voice: ● Move the bed backrest up and down ● Open & close food tray ● Integrated Nurse call system The above features make it ideal to be used in old age homes, government & private hospitals where there is staff shortage. How does it work? Following diagram depicts how the bed works: The patient speaks into the echo device, the spoken command is sent to the cloud where it is processed into a directive. This directive is then sent back to the echo device, which then forwards it to the gadget over Bluetooth.	MANOVIKAS ENGLISH MEDIUM SCHOOL
4	Project is about making In -house cart to bring the things required by aged or sick person to their room. It is remote controlled with Camera fitted to it along with a chip.It is connected to the phone so that image captured by camera is visible on phone	St. Michael's Convent high school

5	Drumstick leaves which commonly known as Moringa Olivera leaves have been researched recently for any medical purposes. They are very small leaves in green color which have many nutrients contents, as follow: Calcium - 435mg Phosphorus - 70mg Iron - 7mg Water content - 76% Protein - 6.7% Fat -1.6% Minerals - 2.2% Vitamin C - 220mg Vitamin B Complex Fiber - 1% Besides those nutrients above, drumstick leaves have still other 80 nutrients and 46 antioxidants, such as vitamin A, potassium, essential amino acids, etc. All of these nutrients bring the health benefit of drumstick leaves as follow: Protect the eyes. Drumstick leaves are rich in vitamin A. It's 4 times richer than carrot content. This great source of vitamin A will protect your eyes to stay healthy, keep them from any eyes diseases like cataracts or decrease in visual acuity. Keep the bones healthy. Drumstick leaves are also rich in calcium minerals. This mineral is absolutely needed to keep the healthy bone. It helps in bone formation and strengthens the bones. Stimulate the nervous systems. Vitamin B complexes which are contained in drumstick leaves play the role in stimulating the nervous system. They help to improve the nervous system function and keep you from the nervous system disorder symptom like tingling or numbness of your limbs. Help to prevent heart disease. The health benefits of drumstick leaf to prevent the heart disease come in several mechanisms. First, drumstick leaves contain potassium which can control the heart muscle contraction and make the heart can pump the blood smoothly. If this mineral is in enough amounts, the heart can work effectively and stay away from the heart disease. The second way, drumstick leaves act as the antioxidant which can prevent the	MANOVIKAS ENGLISH MEDIUM SCHOOL

6	Goal: The goal of our project is to save the lives of premature babies ,specially in rural hospitals who can not afford to keep an incubator or a proper health check. This results in death of the premature babies which is a big set back for the families as well as the undeveloped societies. 3 infants die every 2 minutes in India is reported by the UNICEF India. “The efforts for improving institutional delivery, along with countrywide scale up of special newborn care units and strengthening of routine immunization, have been instrumental towards this” Features: We can change the temperature of the suit according to the babies health. The baby can be kept warm all the time and this is basically done just using water.The project can be controlled by an app which will constantly monitor the following permanents like ECG, Heart Rate, SpO2, Temperature & Respiration comfortably using sensors. How does it work It consists of fabric that safely provide the required warmth to the neonate. Similarly, pulse oximetry is achieved using MAX 30100 device integrated to the baby’s hoodie and measure the blood oxygen saturation from the earlobe.	MANOVIAKS ENGLISH MEDIUM SCHOOL
7	Ambient Air Monitoring Device: The ambient air monitoring device displays parameters to monitor the quality of air. It can be used anywhere but especially in factories, industries and office spaces. It has been designed to be portable so that you can see and record the values of humidity, CO2, temperature and UV intensity. Other ways can be used to reduce UV intensity, such as automated blinds.	MANOVIKAS ENGLISH MEDIUM SCHOOL

8	The Green Agro Solutions - Multi purpose water compressor With a population of 1.27 billion India is the world's second most populous country. It is the seventh largest country in the world with an area of 3.288 million sq kms. It has a long coastline of over 7,500 kms. Agriculture, with its allied sectors, is the largest source of livelihoods in India. 70 percent of its rural households still depend primarily on agriculture for their livelihood, with 82 percent of farmers being small and marginal. The agricultural and allied sectors in India have grown at an annual growth rate of nearly 2.9 per cent from 2014-15 to 2018-19. India the largest producer of milk, jute and pulses, and with world's first-largest cattle population 305 million in 2018. For maintaining the farms a huge amount of cost is involved when it comes to putting in systems for various tasks like spraying fertilizers, using sprinklers and drip irrigation, there is a huge amount of water wasted for other activities on the farm. These activities use a huge amount of power due to which we are wasting a lots of energy sources. Energy saved is energy earned. Looking at the scenario of the existing resources, today there is a big need to save resources. The buffalo on the farm work hardly for a maximum period of 3 months in a year, they rest of the time they lie ideal doing nothing. So these buffaloes can help operate this mechanism just for few hours a day. This few hours a day can save a thousand of rupees which will be saved as there will be a lot of non-renewable energy saved. Wild monkeys can cause problems when they enter residential areas looking for food. It's important to understand the precautions you can take to discourage monkeys from coming into your neighborhood or even your house. If monkeys frequently enter residential areas, there are some things you can do to make it harder for them. Always start by ensuring there is no easy access to food which will attract monkeys and talk to all your neighbors about their responsibilities. OPERATIONAL DEFINITION A number of buffalo move an axel in a circular motion, this axel is connected to a piston pump; piston pump is a type of positive displacement pump where the high-pressure seal reciprocates with the piston. Piston pumps can be used to move liquids or compress gases. They can operate over a wide range of pressures. High pressure operation can be achieved without a strong effect on flow rate. When you pedal the bicycle in the piston pump the air gets compressed. It pumps the water with the help of a piston pump into closer chamber. When the air that is compressed has a huge amount of potential energy. Depending on the potential energy the piston pump can reach water to any height. HOW DOES IT WORK? When the buffaloes on the farm move around an axel this creates a rotational energy. This rotational energy moves a piston into a linear motion creating a pressure which helps in pumping water to a particular height. Then this water pumped at a particular height can be put to use for various activities. Multiple activities planned with the same simple pump.	MANOVIKAS ENGLISH MEDIUM SCHOOL
9	Helping Hand For Old Age Group People	Keerti Vidyalaya
10	Voice Controlled Broomba- Garbage clearing bot Goal: The goal of the project is clear the garbage resulting in huge landfill with a voice controlled device. . Features: The voice controlled Broomba clearing bot responds to voice commands and has following features that can be controlled by voice: ● Clear the garbage ● Break. – to stop moving forward How does it work The worker speaks into the echo device, the spoken command is sent to the cloud where it is processed into a directive. This directive is then sent back to the echo device, which then forwards it to the gadget over Bluetooth.	MANOVIKAS ENGLISH MEDIUM SCHOOL

11	ORK- Drone in Race to Deliver First Aid and emergency medical assistance to Patients In developing countries, lack of access to roads is critical for medical supplies like vaccines, drugs and emergency first aid supply. Air transport like a helicopter is expensive and not affordable method for using. The success of drones in the fields of ecology and environment makes us believe that they can also be used in the field of Public Health as medical couriers. The important strength of using drones is its potential to decrease the travel time for diagnosis and treatment. They are a cost-effective alternative to road transport in difficult terrains. Drones can be used in the transport of blood from the blood bank to the place of surgery and that of specimens from hard-to-reach areas to the labs in nearby towns. They can deliver essential medicines like anti-venom for snake bite, dog bite and prevent deaths. They can also help in first aid in necessary medical emergencies. Drones can be employed in disaster relief operations for rescuing victims and in the delivery of food, water, and medicines. Organs can be transported in a short time bypassing the busy traffic. However, operating drones require trained staff and the lack of infrastructure like runway is a potential problem. Drones cannot carry heavier payloads or deliver goods long distances. The key take aways on our drone: 1. Emergency medicines like anti-venom for snake bite, dog bite and prevent deaths 2. first aid kits in case of medical emergencies and major accidents 3. BP, heart rate monitoring, ECG on site. Here's how it works: Using standard GPS protocols, an operator flies the drone to the location of the emergency call. Once on the scene, a "remote" paramedic can provide instructions to whoever is on the ground, with the help of the drone's cameras and two-way speakers.	MANOVIKAS ENGLISH MEDIUM SCHOOL
12	Bio Green alternative to fossil fuels: Transport sector is one of the major contributors to greenhouse gases on the planet. Nations have been focusing on utilizing renewable energy sources as alternative fuel sources to reduce the environmental impact. Agricultural residues, food waste, organic waste, bio waste from industries are most common sources of biomass. Raw bio gas consisting of methane, carbon-dioxide and impurities such as hydrogen sulphide and water vapor is produced from biomass in the absence of oxygen and can be converted into different automobile fuels like Bio Compressed Natural Gas(BIO CNG) or Compressed Biogas (CBG), gasoline, syn gas and liquefied bio gas. Among all of these BIO CNG offers numerous advantages as a renewable vehicle fuel, such as high calorific value and cost savings over conventional fuels.It is similar to natural gas in terms of composition and properties. Biogas, when purified to get bio methane by absorbing or scrubbing contaminants and pressurized for storage in high-pressure cylinders, gets upgraded to BIO CNG. Without proper purification, using bio gas can lead to erosion of metal parts in vehicles.Purity of BIO CNG reserves in automobiles can be tracked using software and data analysis tools.	MANOVIKAS ENGLISH MEDIUM SCHOOL
13	Real - world movable bridges sometimes use hydraulic power to assist the lifting mechanism. This project mimics that engineering technique using a simple hydraulic system made from plastic syringes and tubing. This project consists of four syrings. Two syrings are attached to the two slits of the bridge that is made to open and close the bridge.	A. J. de ALMEIDA HIGH SCHOOL

14	HEALTHY HEALTH CHECK BAND In today's scenario, health care problems are increasing at a very high pace like coronary heart diseases, obesity, lung failures causing death rate of 7.2 million people per year hence it is the need of the hour to overcome from all such problems. Our health care providers have developed an intelligent and low cost health monitoring system to provide more comfortable life for people suffering from such chronic diseases using advanced technologies like wireless communications, embedded computations, wearable and portable remote health monitoring system. As a result need for repetitive doctor visits are decreased as the information reaches from everywhere. Implementation of wireless communication technologies in monitoring systems is now easier because of its patient friendly manner. Wireless technology is ruling worldwide and has invaded the medical area with wide range of scope and capabilities. To monitor continuous Medicare conditions of patient using existing wireless technologies were quite convoluted. To overcome this, we are proposing a change in wireless sensor technology by designing a biomedical monitoring device comprised of different sensors to acquire the information regarding human body temperature, heart rate, blood pressure, lung capacity which is sent to a personal vitality measurement system and further transmit this information on an IOT server which is user accessible over the internet. Various Biomedical sensors have been used as AD8232 ECG sensor is used for remote ECG monitoring by connecting ECG electrodes to the recording unit with cables. Blood pressure sensor (4811) is used to measure systolic and diastolic pressure and pulse rate for few seconds. LM35 temperature sensor is used to measure skin surface temperature as it is more accurate than a thermistor and lung capacity is measured using an arrangement of fan with motor like spirometry	MANOVIKAS ENGLISH MEDIUM SCHOOL
15	Harvest in Space: Aboard the international space station, astronauts don't have much room for growing food. This hydroponic garden is designed to operate efficiently using the minimum amount of space to harvest 30 plants on a rotating schedule in a zero-gravity environment.	MANOVIKAS ENGLISH MEDIUM SCHOOL
16	Wood- shape me up Wood carver is a machine tool that rotates a work piece about an axis of rotation to perform various operations such as cutting, sanding, knurling, drilling, deformation, facing, and turning, with tools that are applied to the work piece to create an object with symmetry about that axis.This wood carver machine can work on beads by high efficiency to make surface smooth.	MANOVIKAS ENGLISH MEDIUM SCHOOL
17	Cook with Sun: is a device which uses the energy of direct sunlight to heat, cook or pasteurize drink and other food materials. Solar Oven made mostly of recycled material. It is gimbled so cooking pot stays level while oven rotates. This is a small solar oven made of recycled materials	MANOVIKAS ENGLISH MEDIUM SCHOOL
18	This project <DJSEBN-1>is basically frictionless transport. In this project we use 2 to 4 magnets, one magnet as the track and one magnet at the middle of the train. As we all know the same sides of a magnet rebel, eg north pole and north pole of a magnet when come in contact together they move away from each other>so when the magnetic track''s north pole comes in contact with the trains magnet's north pole it rebels.	MANOVIKAS ENGLISH MEDIUM SCHOOL
19	Orchards are mainly destroyed by the invasion of animals, mostly monkeys. But monkeys are also an essential part of our ecosystem so we cannot harm them to protect our orchards. In order to tackle the increasing menace of monkeys in orchards without harming them a circuit is designed which emits sound of such a frequency which is otherwise harmless to the organism but irritates them thus driving them away from the orchards.The hearing range is 125 Hz-36,000 Hz for monkeys compared to 20 Hz-20,000 Hz for humans.	MANOVIKAS ENGLISH MEDIUM SCHOOL
20	ECO-FRIENDLY LABOR REDUCTION FARM ROBOT The robot is designed to replace human and animal labour. It has multiple features such as de-weeding, sloughing, manuring and collecting dry leaves.This in turn reduces the cost of buying the various required machinery that makes carrying out agricultural practices affordable for poor farmers which will in turn promote agriculture.	MANOVIKAS ENGLISH MEDIUM SCHOOL
21	SHOES FOR BLIND PEOPLE This pair of shoes for the blind people will help them to be cautious while walking in a crowded area.	THE NEW EDUCATIONAL INSTITUTE CURCHOREM

22	Title: Electricity From Bio gas My project is based on waste management where we will use 3R's concept that are reduce, recycle and reuse. We can make bio gas from garden waste, kitchen waste,animal waste. A bio gas plant is the name often given to an anaerobic digester that treats all this wastes. It can be produced using anaerobic digesters (air-tight tanks with different configurations). During the process, the micro-organisms transform biomass waste into biogas (mainly methane and carbon dioxide) and digestate. Then it is stored in a storage tank. and then that bio gas is used to generate electricity. bio gas can be converted directly into electricity by using a fuel cell. However, this process requires very clean gas and expensive fuel cells. The conversion of bio gas to electric power by a generator set is much more practical. In contrast to natural gas, bio gas is characterized by a high knock resistance and hence can be used in combustion motors with high compression rates. For use in gas or diesel engines, the gas must fulfil certain requirements : The methane content should be as high as possible as this is the main combustible part of the gas; The water vapour and CO2 content should be as low as possible, mainly because they lead to a low calorific value of the gas; The sulphur content in particular, mainly in form of H2S, must be low, as it is converted to corrosion-causing acids by condensation and combustion. The water vapour content can be reduced by condensation in the gas storage or on the way to the engine. The reduction of the hydrogen sulphide (H2S) content in the biogas can be addressed via a range of technical methods. These can be classified as chemical, biological, or physical and divided into internal and external methods.	Government High School Morpirla
23	Laptop Stand Materials: PVC pipes, elbows, Laptop frame, Rexine Working: This stand is specially useful for people with back problem. They can sleep while working and use the laptop. Stand can also be adjusted if the person wants to sit and work.	Government High School Shirgao
24	Automatic Signal Alert for preventing accident with speed breaker electricity generator. This system uses sensor for narrow roads to detect vehicles coming from opposite direction and produces siren and red light alert for vehicle drivers.If the road is clear it produces green light signal .This system will prevent hill side road accidents.It also has speed breaker electricity generator.	The New Educational Institute Curchorem
25	Title : To Generate Electricity From Salt Water World population is increasing day by day ultimately the demands on electricity increases. the resources of coal, oil, gas are limited and also they produce global warming. Hydroelectricity is capital intensive and nuclear energy is expensive and hazardous. so we have to take measures to reduce energy crises. here is my project to produce electricity from sea water. So to produce electricity from salt water we require salt water, copper sheet, aluminium can where rubber bands are attached to it so that opposite polarities does not come in contact with it. when two electrodes are deep in salt water, water dissociates in Na + and Cl- and water dissociates into H+ and OH - at the electrodes there is dissociation where emf is generated is upto 2.5 volt.	Government High School Morpirla
26	The project is a working model of an artificial satellite.It displays the earth rotating on its own axis and an artificial satellite revolving around the earth. The project makes use of two motors one used to rotate the earth, and another slower one to move the artificial satellite around the earth in a circular manner.	St. Michael's Convent High School, Anjuna-Vagtor
27	1. Vaccum Cleaner using Plastic Bottle. 2. Mouse Trap. 3. Garden Water Sprinkler.	HOLY CROSS INSTITUTE
28	Our project is basically about a car that does not meet with accidents. On the front and back we put ultrasonic sensors. And when it is going in front it won't dash other cars and same thing at the behind.	MANOVIKAS ENGLISH MEDIUM SCHOOL

29	UREA SPREADER FOR SMALL SCALE FARMERS Basically our project is about a urea spreader for small scale farmers with reduced cost and better result. Urea spreader is to be made as an extension of a bicycle, which can be attached to it and used for spreading urea. This will reduce time and human efforts.	MANOVIKAS ENGLISH MEDIUM SCHOOL
30	A water dispenser is a device that dispenses water. It is widely used to provide easy access to drinking water. It is widely used at homes, schools, offices and public places. It is an environmentally friendly option as personal bottled leaves a lot of plastic waste	St. Michael's Convent High School, Anjuna-Vagatir
31	A water dispenser is a device that dispenses water. It is widely used to provide easy access to drinking water. It is widely used at homes, schools, offices and public places. It is an environmentally friendly option as personal bottled leaves a lot of plastic waste	St. Michael's Convent High School, Anjuna-Vagatir
32	Hazardous chemical escape to the environment by the number of natural activity and may causes adverse effects on the human health and the environment. Air pollutants like carbon monoxide, Nitrogen oxides are emitted in the air Electric air purifiers are very expensive and hence difficult to be installed. Considering this major concern a bio filter using algae is developed. The bio (algae air) filter purifier pumps in mixture of gases from the air. As the air passes through the algae, it consumes the carbon dioxde and carbon monoxide in the air and allows the oxygen to pass through the outlet. This will reduce 93.7% of carbon dioxide and carbon monoxide from the surrounding. Algae releases more oxygen while consuming carbon dioxide more than a sampling. This project is the future towards a 0% pollution world. The main component of this project is algae which is easily available and low maintenance. Bio (algae) curtains can be placed draped over buildings; the living walls scrub carbon dioxide from the air while pumping out oxygen.	Vidya Vikas Academy
33	Home made magic plastic bottle water fountain.	AL MADINA HIGH SCHOOL
34	Title: Automatic Railway Crossing we are seeing now a day too many railway accidents are happening.we have used here a circuit system which is easily affordable.here we taken two soldering wires that do not touch each other. We have use buzzers, motor, and barriers are connected in the form of circuits. we have use silver foil below the train. if one train passes on the tract it will create barrier and does not allow the other thing to come on track.	Government High School Morpirla
35	Metal Expansion: Normally atoms in the matter are in constant vibration. Heat is a form of energy. So when the matter is heated, the atoms get energy and start vibrating more. This causes an increase in the size of the matter. This is called expansion. Metals expand very slightly, so it cannot be seen with the naked eye. This proposal deals with a design for a device that detects metal expansion. In the proposed design of the device, the specimen metal will be mounted on a support and a heat source will be placed under a free part of the metal. Upon heating, the metal expands. The expanding metal will hit a pointer placed nearby and deflect it. The deflection of the pointer will be shown on a dial. Therefore we will be able to see metal expanding.	MANOVIKAS ENGLISH MEDIUM SCHOOL
36	PM Free India. One in eight deaths in India is attributed to air pollution, which contributes to more disease burden than tobacco use.Industrial furnaces emit smoke which contains particulate matter (PM) PM 10 and PM 2.5. This produces an unhealthy atmosphere, which has been the reason for 13.5 lakh deaths during the year 2018 in India alone.A study said that the highest exposure to ultra-fine particulate matter, PM 2.5 was in Delhi followed by Uttar Pradesh and Haryana. So, air pollution is termed as a leading risk factor for deaths in our country. This project deals with trapping the hazardous particulate matter produced from factories to provide a healthy atmosphere for our people.	MANOVIKAS ENGLISH MEDIUM SCHOOL
37	SAVING ELECTRICITY THROUGH ELECTROLYSIS Generally, a good source of electricity is solar energy. But in the night time when there is very little or no light, solar cells are just useless. In this project,I propose to store solar energy by converting it as chemical energy for the later use, when there is no sunlight.	MANOVIKAS ENGLISH MEDIUM SCHOOL

38	Title : Smart Dustbin I have made Smart Dustbin using Arduino, where the lid of the dustbin will automatically open when you approach with trash. The other important components used to make this Smart Dustbin are an HC-04 Ultrasonic Sensor and an SG90 TowerPro Servo Motor. he main concept behind the Smart Dustbin using Arduino project is Object Detection. I have already used Ultrasonic Sensor in Object Avoiding Robot, where upon detecting an object, the Robot will change its course of direction. A similar methodology is implemented here, where the Ultrasonic Sensor is placed on top of the dustbin's lid and when the sensor detects any object like a human hand, it will trigger Arduino to open the lid.	Government High School Morpirla
39	Space Based solar Power: If successfully, space based solar system can be sustainable ad inexhaustible long term solutions for meeting power requirement for the entire world. Solar energy is a reliable source of energy and In this project we will get sunlight to such places so they can get solar energy.	MANOVIKAS ENGLISH MEDIUM SCHOOL
40	Bio Medical Waste Vaporizer My project is about bio medical waste vaporizer which turns the bio medical waste (sanitary napkins disposal) and disposes it off in a proper way.It will minimize health issues. It will avoid transmission of communicable diseases.	MANOVIKAS ENGLISH MEDIUM SCHOOL
41	Soil & Water Sensors Soil and water sensors is a really helpful project for farmers. Farmers don't have to keep checking the moisture of the soil. When the moisture of the soil is less,then the sensor turns on a red light and makes a beeping sound. Once the farmer hears the beeping sound he can water the plants. This will give an alarm to the farmer so the plants don't die.	MANOVIKAS ENGLISH MEDIUM SCHOOL
42	Electricity Generating Tiles Nowadays Due to population rise, demand for electricity has increased. This system of tiles would be proposed to be in metropolitan cities with high levels of population to generate electricity using tiles. It would Generate off grid electricity by just walking around with your footsteps.	MANOVIKAS ENGLISH MEDIUM SCHOOL
43	Title : Motor Boat Using dc motor An electric motor is a machine which converts electrical energy into mechanical energy. Principle: It is based on the principle that when a current-carrying conductor is placed in a magnetic field, it experiences a mechanical force whose direction is given by Fleming's Left-hand rule and whose magnitude is given by. A motorboat, speedboat, or powerboat is a boat that is powered by an engine. Some motorboats are fitted with inboard engines, others have an outboard motor installed on the rear, containing the internal combustion engine, the gearbox and the propeller in one portable unit. An inboard-outboard contains a hybrid of an inboard and an outboard, where the internal combustion engine is installed inside the boat, and the gearbox and propeller are outside.	Government High School Morpirla
44	Biogas- Anaerobic Digestion This project is special Dead animal like - Dog, Cow , Cat, Chicken waste etc. mostly this animal are die due to road accident and mostly found around roadside. By using this animal we can make Special Bio-Gas Plant and we can keep our environment Clean and safe. Goa of Govt. Should keep special van to collect dead animal by using special telephonic number may be keep like ambulance(108)	Mata Secondary School No.1
45	1)to water the surrounding area. 2)to generate electricity	MOUNT MARY'S HIGH SCHOOL CHINCHINIM
46	Aquarium cleaner is an electrical device which cleans aquarium with a brush. Dirty is pumped from one fish tank to another where it is filtered and pumped back into the first one.	G.H.S.Zambualim
47	India water crisis is often attributed to lack of government planning increase corporate privatization industrial and human waste and government curption. In addition water scarcity in India is expected to worsen as the overall population is expected to increase to 1.6billion by Year 2050. The total volume of water on earth is estimated 1.386 billion km cube with 97.5% being salt water and 2.5 being fresh Water. Of the fresh water only 0.3% is in the liquid form. To deal with this problem a idea is to make a solar distillation machine.	Vivekanand Dnyan Mandir High School

48	My project is about Home Security System with reference to the door lock of the house using IRIS detection as against Face Recognition, Voice Recognition or Finger Print Bio-metrics. With a false-positive rate of just 1 in 1.5 million, the accuracy of an IRIS SCAN is far superior and almost fool proof by comparison of FINGERPRINTS, which is a meager 1 in 10,000, VOICE & FACE identification a paltry 1 in 500. This is the reason that IRIS Scanning is the way to go!! There will be a IRIS scanner fitted on the door next to the Peep Hole. A small metal plate controlled by a Micro-controller code would be covering the key-hole. IRIS images of all members authorized to open the premises would be stored in the memory of the scanner. When the person wants to open the door, he/she has to face the scanner. The metal sheet blocking the key hole will unlock only on the Recognition Of The Iris of the Key Holder.	Dr K B Hedgewar High School, Cujira. Panaji
49	The exhibit is a static model of a future smart city, which shows a developed city having a solar energy trapping unit which traps the solar energy and converts it into electrical energy which is used for the charging of batteries in the vehicles.	Keshav Smruti High School
50	Grey water is the wastewater usually generated from the kitchen sink, shower, laundry or washing machine, AC outlet, etc., which is sent through as a waste. This can be reused subsequently by a simple and cost-effective treatment technique. Kuwait is one among the top countries generating grey water followed by Uganda and Oman, but the utilization of treated grey water is not so effective. To meet the future challenges of water scarcity, an attempt has been made in this project to utilize treated grey water obtained by gravity-governed filtration technique and disinfection for domestic usage. This project aims at recharging the ground water with the treated grey water. The method focuses on a gravity-governed flow through a column containing activated carbon, sand and gravel. The grey water used for the treatment contains a mixture of water collected from three different sources such as kitchen sink, shower and washing machine. The quality of the treated grey water was assessed to check the usability for domestic purposes. This project gives a new look toward the large-scale benefit, i.e., the rate of water scarcity could be reduced, and sustains the water for future generations. The treatment unit is user-friendly and can be installed in every house, and the treated grey water is suitable for car washing, irrigation, watering lawns, and, recharge of aquifers.	Vidya Vikas Academy
51	Gutter cleaner : A model of a machine with motors , big enough to fit in a gutter , having a shovel to clean out the mud and dirt and lift to throw onto the outer edge of the gutter. Cqan be made in two sizes to fit a standard gutter and a kuchha one.	SAVIOUR OF THE WORLD HIGH SCHOOL
52	Bio gas plant	St. Mary’s Convent High School Mapusa
53	Emergency ambulance on road Vegetable cutter Remote control dustbin	Govt high school keri sattari goa

54	Our envisioned project is to reduce the Heat emitted from the outdoor unit of an Air-conditioner. The basic principle of an A/c cooling is that to pump hot air from the room to the outside. A/c does not bring cold air into the room, but pumps the heat out. Some estimates claim that the Heat pumped out from an A/c can raise outside temperatures by 2 degrees over a few hours of working. With the number of A/cs increasing at a break neck pace, very substantially contributes to Global Warming. Our project aims at reducing the temp of the air thrown out from the A/c. To achieve this we have conceptualized an idea, wherein, we use the Concept of Evaporation Process which is that the surface area cools over which evaporation has taken place. We would be placing water absorbent sheet like Sponge on top of the outdoor Unit of the A/c. A tank with a holding capacity of about 7 litres of water would be suspended from the Brackets of the Outdoor Unit. The Water released from the a/c due to condensation would be collected in this tank. A small submersible pump would pump the water on to the sponge. As the water from this Sponge evaporates, it would cool the surface of the a/c unit, whereby the air passing from below also will cool down. This would reduce the Heat Emissions in the atmosphere.	Dr. K.B. Hedgewar High School, Cujira, Panaji
55	Hygienic disposal of Bio-degradable Household waste The projects aims at disposing the bio-degradable waste from the household such as kitchen waste like vegetable scrapings, garden trimmings etc. This includes big plastic tub in which at the bottom layer there will be black stones and other layers with waste. This method will also provide proper ventilation so as to avoid any foul smell in the surroundings. The method will also ensure that the temperature is maintained in the tub for quicker decomposition. The manure can be used later for various purposes.	Vidya Vikas Academy
56	Simple Air Cleaner My project is regarding the air purifier using an exhaust fan and a paper which is applied with petroleum jelly.	Vidya Vikas Academy
57	Concrete 3D printer My project is a 3D printer which can print houses and other structural elements.	Vidya Vikas Academy
58	Flourishing fields with tech. My project uses technology and equipments to develop for the betterment of farmers. The mechanism behind this project is that it will first 1) senses the soil. If the soil is dried up. It will on the pump automatically 2)And when it senses that the soil has enough water it will stop the pump. 3) And send a notification to the owner or the farmer that the pump is 'NO' and when the pump is 'OFF'. And then it will execute the processor to give the final results of farms	Vidya Vikas Academy
59	A robotic dustbin,which pick waste n loads it in the self attached vessel	St.andrews institute vasco
60	Robotic Arm to transfer things from one place to another	GHS KERI
61	Floor Cleaning Brush	GHS KERI
62	Air Cleaner	GHS KERI
63	Rice grinder	GHS KERI
64	Water filter	GHS KERI
65	Floor Cleaning machine	GHS KERI
66	Floor Cleaning machine	GHS KERI
67	Electromagnetic cleaning drone	GHS Keri
68	Floor cleaning machine	GHS Keri
69	Grass cutter car	GHS Keri
70	Generate electricity	GHS Keri
71	Desalination of Saline water	Vidya Vikas Academy

Annexure 04
List of Participants from 1 Day Venture Capital Program conducted by Goa State Innovation Council for the Startups in the State of Goa

Sr No	Participant Name	What are you doing presently?
1	susana gago garcia	Startup
2	Sumeer Kumar	Startup
3	Girish satardekar	Entrepreneur
4	Greg Acuna	Startup
5	Nikita Narvekar	Entrepreneur
6	Devraj Gaude	Job
7	Sanjay Dabir	Entrepreneur
8	Ravindra Manerkar	Incubator representative
9	Sudhir Acharya	Startup
10	Sharwani walke	Student
11	Fred Noronha	Startup
12	Divyansu Pal	Startup
13	ANTONIO FURTADO	Entrepreneur
14	MANJUNATH M NARWATE	Job
15	Brian Farias	Entrepreneur
16	Shonal Fernandes	Student
17	A M J Ramaraju	Startup
18	vassant salgaonkar	Startup
19	Ryan Vaz	Entrepreneur
20	Venugopal TR	Incubator representative
21	Priyanka De Souza	Job
22	Ritika Arora	Entrepreneur
23	Sudhir Acharya	Startup
24	Mukul Samant	Startup
25	Tushar Sakordekar	Startup
26	Rohit Talekar	Entrepreneur
27	Vibhav Kharangate	Startup
28	Remmie Azavedo	Startup
29	Chetan Desai	Entrepreneur
30	Yashodan Heblekar	Entrepreneur
31	Milind Prabhu	Entrepreneur
32	Anant Verenkar	Startup
33	Eric Cordeiro	Job
34	Gourish bhat	Entrepreneur
35	Aaron Menezes	Startup
36	Caleb Fernandez	Startup
37	Rajesh Marathe	Startup
38	Sunaya Shirodkar	Startup
39	Jacinto G Dourado	Entrepreneur
40	Inseyah Ali	Incubator representative

41	Shravan Hegde	Entrepreneur
42	zurial gonsalves	Startup
43	Puja jhoti	Student
44	Vishwesh Bhat	Startup
45	JERRY MATHEW	Entrepreneur
46	Inacio Fernandes	Startup
47	Narayan Vengurlekar	Job
48	Deborah Furtado	Student
49	Yatish Nagvenker	Intern
50	Prof. Viren Pereira	Assistant Professor
51	Dr. Safira Da Costa	Assistant Professor
52	Vencilla Dcunha	Intern
53	Frederico Furtado	Job
54	Gautami Raiker	Startup
55	Osbert DCunha	Startup
56	Merwyn Monteiro	Startup
57	Ranjita Pai	Entrepreneur
58	Rajat Kishore	Startup
59	Rohini Gonsalves	Startup