

VENUES

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&

Tepp

Technopreneur Promotion
Programme

Presents

Navonmesh: The Entrepreneurial Convention



B-Plan Challenge

Navonmesh – A Brief Introduction

Navonmesh, the entrepreneurial convention at Avenues 2011, aims to breathe in a new life to the spirit of innovation in the country. The biggest problem faced by the innovators in our country is the lack of proper business advice. A plan woven around their innovations would enable them to take it further. This event is the **flagship event at Avenues 2011**, the annual business festival of IIT Bombay.

At Navonmesh, our objective is to offer a helping hand to those innovators and sensitise the modern business school fraternity about the potential and power of such innovations.

Event Structure

Through the B-Plan challenge event business plans are invited for innovations which are in their nascent stage of development. Five innovations are selected from Tepp. Participants will be provided an opportunity to choose innovations and they have to craft b-plans to commercialize these innovations. The details of innovations will be released by 20th September.

Please read the general rules and timelines for further details.

Prizes

- 1st prize worth Rs. 50,000
- 2nd Prize worth Rs. 20,000

Event Timelines

B-Plan Challenge

Registration commences	15 th September, 2011
Deadline to choose Start-up	22 nd September, 2011
Allotment of Start-ups	23 rd September, 2011
Submission of Executive Summary	30 th September, 2011
Release of 1st Shortlist	1 st October, 2011
Final B-plan Submission	7 th October , 2011
Final Results	5th October 2011
Navonmesh Final Event	15th October 2011

Startups:

1. India Specific Sugarcane harvester

Innovator: Mr. Prabhu Shankar, IAC Agro inputs

Overview:

It is compact version of combined sugarcane harvester designed to suit Indian conditions of small farm holdings, of contract farming system, and of more lead time in shifting between farm to farm.

Features:

- The maximum power requirement is not more than 75 Hp and harvesting capacity is in the range of 5 to 10 tons per hour.
- Trash removal, top shoot separation are carried out inside the harvester.
- Contains a small loading dock to hold upto 1.5 tons before delivering on to a waiting truck on every fourth or fifth turn of the harvester operating inside the field.

Price:

The product may approximately cost upto Rs, 50.00 lakhs.

Current Status:

3D modelling and development of engineering drawing is half way through. Six more months required to complete the drawings and one more year thereafter for assembling the prototype.

2. A novel internal combustion engine with magnetic flywheel

Innovator: Dr. G N Prasanna, IIT Bangalore

Overview:

We use magnets in a variety of shapes and sizes to customize the behaviour of various kinds of mechanisms. The magnets help minimize effects of singularities in the mechanism, and improve dynamics. Where the mechanism slows, magnets are placed to help it forward, and where it races, other magnets slow it down. The innovator has developed a magnetic flywheel using this principle which can be used in an internal combustion engine.



Low Speed Flywheel Mounted on Test Jig.



IC Engine

Application in an IC engine:

Conventional flywheels are heavy and do not work well at low speeds. By contrast, a magnetic flywheel, based on energy storage in a magnetic field works in a speed independent fashion. Ideally speaking, the M-flywheel works equally well at all speeds, and can reduce torque ripple in a speed independent fashion. The above innovation is a magnetic flywheel attached to a 2-stroke IC engine.

Features:

- The magnetic flywheel reduces the torque ripple at all speeds.
- Hence a "single pulse" engine can be conceived of, where you get a single cycle of relatively constant torque from the IC engine.
- This results in a vibration free stable torque 2 stroke engine.

Cost

Cost of the magnetic flywheel is Rs. 1000 per Horsepower produced.

Current Status

The innovator holds US Patents 7,348,754 and 7,733,050 on "Motion Control Using Electromagnetic Forces", with further applications pending in US, EPO and India.

3. Anti vibration mechanism for front loaded washing machine

Innovator

Mr. Nitin Mulchandani

Overview

The regular front loading washing machines carry a concrete block of approximate 30 kg for an 80 kg machine weight to stabilize the machine. This results in an unnecessary dead weight, higher powered motor requirement and power loss in vibration. The innovator has developed an anti-vibration mechanism for front load washing machines which eliminates this concrete block and compensates for the vibration.

Features

- The energy rating of a 700W front load machine can be brought down to 350 W because of reduction in losses due to vibration
- The elimination of the weight itself results in 5-6% reduction in the price of the washing machine and also benefits by reduction in transportation costs, damaged goods etc.
- A lower capacity motor drive can be used due to the reduced power requirement.
- This mechanism can be integrated with the washing machine only during machine manufacturing

Current Status

- Innovator has already developed a 5-kg load carrying machine with this mechanism
- The innovator also holds the patent for the same

Specific business challenges to be addressed

- The innovator wants to license this mechanism to a multinational vendor for international markets. Keep this point in mind while designing the business plan.

4. Multimodal interaction systems for urban children for playing computer games

Innovator: Mr. Sumiran Pandya, NID Ahmedabad

Overview

With the advent of Television and computer Games, children living in modern urban cities are not getting engaged in physical exercises. The innovator has developed multimodal interactive systems for children for playing computer games. This involves a physical world interface through which children interact and with the help of sensors inputs are taken into a hardware which is plugged into a PC. The various products developed by the innovator in this system are:

- A jute rug as a running and jumping platform: It has been used for action games for taking user inputs through his jumps and walking pattern
- A horse riding toy with different masques which can be detected by the game for different characters and the characters in the game move according to the children's motion of the toy.

Benefits

- Physical exercise for children even while they are indoors.
- Can be integrated with physical environment instead of any specific hardware. i.e. games can be played by taking human interaction with day to day objects as inputs to the system instead of specific hardware.

Current status

- Innovator has developed the prototypes but not patented the innovation. Pricing information is not available currently. We will try to get that as soon as possible.

Specific business challenges to be addressed

- Specific strategies on how to compete with the established multinational players already in the market

5. PRINCE: Ready to install biogas plant

Innovator: Prof. Ajay Chandak

Overview

Biogas is generated by anaerobic digestion of organic matter. Primary combustible component of biogas is methane.

Why biogas?

- Need for alternatives to fossil fuels.
- Energy security of villages.
- Biogas can be generated from cowdung, food and kitchen waste and other organic waste. Old concept of biogas means “Gobargas” is no more valid. Alternate fuels can be available.
- Methane has very high global warming potential of 21. Primary content of biogas is methane. Hence arresting methane and burning is good for environment.
- For above reason, one can get good carbon credits.

Features and benefits of PRINCE ready to install Biogas plant

- All conventional design of biogas plants need construction. This requires highly skilled masons as the construction and fabrication has to be gas tight. Construction time is in weeks. Now a days there is huge shortage of such skilled masons and also the time factor does not suit many.
- PRINCE ready to install biogas plants: These are factory produced, consistent quality. Manufactured in plastic and hence light weight and cheap. Do not degrade for years. There are innovative features like provision of addition of concrete weight. Inlet and

outlet pipes can be factory fitted. COMPLETE INSTALLATION IS POSSIBLE IN 2 HOURS.

- Skilled person are not required. Even 2 semiskilled people can finish job in two hours.

Cost

Cost of the plant in bulk will be around Rs. 20000 for 3 CUM per day size. At present subsidy from Govt. of India can be Rs. 8000 per plant and similar revenues are possible from carbon trading by way of CDM.

Status of Innovation:

One design of biogas plant is commercialized and there are few successful installations in use. Manufacturing of this new design is in progress, the moulds are being manufactured. There are three different Patents pending for the proposed innovation.

Guidelines for choosing the innovations and executive summary

- Please choose your innovations through http://bit.ly/choice_of_innovations by 22nd September EOD.
- The executive summary should be submitted to Navonmesh@simsom.in on or before 30th September, with the subject Teamname_Bplan_Exec_summary.
- The executive summary should be a 10 page document along with the appendices.
- Use Calibri font 12 size with 1.5 line spacing
- Mention team name and email id on the front page of the document
- The executive summary should contain atleast
 - The competitive scenario for the innovation
 - Market potential for the product
 - Corporate Strategy to be followed
 - Marketing and distribution strategy
 - Financial projections and capital requirement.
 - Consider the specific business challenges to be addressed questions(if any) in your executive summary

TePP – Event Sponsor Navonmesh

Technopreneur Promotion Programme (TePP) is India's largest network program supporting Independent Innovators. The network with its 30 outreach centres spread across the country provides grants, technical guidance and mentoring support to independent innovators. The purpose of this support is to enable innovators emerge as entrepreneurs by incubating their ideas and enterprise. Since the time of its inception, 250 innovations have been supported under TePP. It is positioned as a pre-seed fund for start-ups.

TePP has developed a unique framework in a network mode and contribution by various players as illustrated by deal flow. Cumulatively, TePP accessed around 7500 ideas, evaluated 1650 proposals and supported 240 innovations. TePP pioneered network movement to make the support accessible for all eligible innovators and to add value in screening and monitoring.

Modern communication tools are used to get all the stakeholders involved, chief among them are 'TePP blog' and the LinkedIn Group, 'Friends of Indian Innovators'.

We are proud to have TePP as a partner for Navonmesh.

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