









# Award Winners of 7th India Innovation Initiative 2015



National Fair of 7th India Innovation Initiative (i3) 2015

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Mr. Venkatesh Valluri, Founder and Chairman of Valluri Technology Accelerators; Mr. Vijay Thadani, Chairman of CII National Committee on Higher Education & Vice Chairman & Managing Director -NIIT Limited; Dr. Mamta Bhatia, Advisor and Consultant, Campus of Open Learning; Secretary, Department of Science and Technology Prof Ashutosh Sharma and Dr. B P Singh, Head – NCSTC, Department of Science and Technology at the inaugural ceremony of 7th India Innovation Initiative 2015 national fair.



Union Minister of State for Science & Technology, Dr. Harsh Vardhan inaugurating the national fair of 7<sup>th</sup> India Innovation Initiative 2015 which was held under the aegis of India International Science Festival at Indian Institute of Technology, New Delhi, on 4 December 2015.

Others in the photo from left are: Mr. Venkatesh Valluri, Founder & Chairman of Valluri Technology Accelerators; Mr. Vijay Thadani, Chairman of CII National Committee on Higher Education & Vice Chairman & Managing Director - NIIT Limited; Dr. B P Singh, Head – NCSTC, Department of Science and Technology and Dr. Anil D Sahasrabudhe, Chairman, All India Council for Technical Education.





Mr. Vijay Thadani, Chairman of CII National Committee on Higher Education & Vice Chairman & Managing Director - NIIT Limited with Union Minister of State for Science and Technology, Dr. Harsh Vardhan at the national fair of 7th India Innovation Initiative 2015 which was held under the aegis of India International Science Festival at Indian Institute of Technology, New Delhi on 4 December 2015.





Jury members evaluating the projects during the national fair of 7th India Innovation Initiative 2015



# Winners of 7th India Innovation Initiative (i3) 2015

"We should not judge people by their peak of excellence; but by the distance they have traveled from the point where they started." - Henry Ward Beecher



A total of 76 projects were shortlisted for the national fair out of which 42 came for the fair. Several exhibitors could not make it to the fair because of floods in Chennai and subsequent breakdown of services. The jury recommended 9 out of 42 projects for awards. Among the award winning projects, there were 2 each from healthcare and products & services. Among the sectors which contributed 1 award each were bio-technology, textiles, food processing, agriculture and electronics. Maximum award winners were from the state of Tamil Nadu (3) while there from 2 each from Andhra Pradesh and Karnataka. Maharashtra and Assam had 1 winner each.

1 <sup>st</sup> Prize I3 Platinum Award for Best Innovator	Cash Award of Rs 50,000, Trophy and Certificate
2 <sup>ne</sup> Prize I3 Gold Award for Best Innovator	Cash Award of Rs 30,000, Trophy and Certificate
3 <sup>r∎</sup> Prize I3 Silver Award for Best Innovator	Cash Award of Rs 20,000, Trophy and Certificate
VTA Award for Most Promising Innovator	Cash Award of Rs 10,000, incubation and mentoring support from Valluri Technology Accelerators (VTA) and Certificate
IVCA Award for Top Innovator	Cash Award of Rs 5,000 each, mentoring and funding connect from IVCA and Certificate (No of Awards 3)
Young Indians Awards for Best Young Innovators	Cash Award of Rs 7,000 each and Certificate (No of Awards 3)

### Award Categories





Dr. Y S Rajan, Senior Distinguished Professor, Indian Space Research Organisation (ISRO) and Head of the Jury Panel for i3 National Fair, addressing the finalists before the announcement of results at the lecture hall of IIT Delhi in New Delhi on 4 December 2015. The finalists participated in the national fair of 7th India Innovation Initiative 2015 which was held under the aegis of India International Science Festival on the same day.



All the participants and jury members of i3 2015



# Award-Winning Projects

1 <sup>st</sup> Prize	Cash Award of Rs 50,000, Trophy and Certificate		
I3 Platinum Award for Best Innovator	<u>WINNING PROJECT</u> (AndBio Shi2610) <b>Rightbiotic -</b> <b>Fastest Antibiotic Finder</b>		
2 <sup>nd</sup> Prize	Cash Award of Rs 30,000, Trophy and Certificate		
I3 Gold Award for Best Innovator	WINNING PROJECT (TamTextP. 3659) Power Loom Warping Machine		
3 <sup>re</sup> Prize	Cash Award of Rs 20,000, Trophy and Certificate		
I3 Silver Award for Best Innovator	WINNING PROJECT (AssProdAru1783)		
	Injection Mouldable Polymeric Composite Based Passive Polycentric Knee Joint		
VTA Award for Most Promising Innovator	Cash Award of Rs 10,000, incubation and mentoring support from Valluri Technology Accelerators (VTA) and Certificate		
	WINNING PROJECT (AndProdSan2072)		
	Motorcycle Seat to Avoid Back Pain, Spinal Injury and Fatigue		
IVCA Award for Top Innovator	Cash Award of Rs 5,000 each, mentoring and funding connect from IVCA and Certificate (No of Awards 3)		
	1. <u>WINNING PROJECT</u> (TamHealS. 2551)		
	Low Cost Medical Sterilization Using Atmospheric Pressure Plasma		
	2. <u>WINNING PROJECT</u> (TamAgriDha1558)		
	Automated Rubber Tapping Machine		
	3. <u>WINNING PROJECT</u> (MahFoodVED3060)		
	Lemon Juice Making Machine		
	Lenion Suice Making Machine		
Young Indians Awards for Best	Cash Award of Rs 7,000 each and Certificate (No of Awards 3)		
-	Cash Award of Rs 7,000 each and Certificate (No of		
Awards for Best	Cash Award of Rs 7,000 each and Certificate (No of Awards 3)		
Awards for Best	Cash Award of Rs 7,000 each and Certificate (No of Awards 3) Only 2 awards were given in this category		
Awards for Best	Cash Award of Rs 7,000 each and Certificate (No of Awards 3) Only 2 awards were given in this category 1. <u>WINNING PROJECT</u> (KarElecNav3646)		



# Case Studies of Award Winning Projects



### i3 Platinum Award for Best Innovator Rightbiotic - Fastest Antibiotic Finder



Team Members: Shivani Gupta (29) & Anuradha Pal (32) Project ID: AndBio Shi2610 Sector: Bio-technology Profession: Research Scholars Institute: Birla Institute of Technology and Science, Hyderabad State: Andhra Pradesh

#### About the project

This team of two from Hyderabad has made Rightbiotic which is an ultra-rapid test for determining antibiotic sensitivity of bacterial pathogens found in human urine in case of Urinary Tract Infection (UTI). This innovative technology enables faster and better treatment of UTI by reducing the testing time of urine culture from 72 hours to 3 hours, thereby ensuring right antibiotic administration from the very start of the treatment. Availability of this rapid point of care (POC) is expected to obliterate the need for empirical treatment in case of infectious diseases and lead to specific, early and most appropriate treatment at the earliest ensuring "affordable and effective health care for all"

Overall aim is to make available this test for UTI in each and every ANC, Primary healthcare centers (PHCs) and practicing doctors clinic to promote evidence based prescription of antibiotics and minimize irrational / empirical use of antibiotics thus inhibiting the rate at which bacteria are becoming resistant to antimicrobials.

The technology used in this project replicates the basic tenets of clinical microbiology, namely 1) Growth of bacteria in a specialized medium and 2) Measuring the inhibition of growth of bacteria in the presence of an antibiotic. Detection is based on chromogenic endpoints which are measured using a set of optical sensors. The output is analyzed using lab-developed algorithm based software which reports the sensitivity of the pathogen to the panel of antibiotics tested. The display on the screen shows the results in terms of sensitivity, moderate sensitivity or resistance to any given antibiotic. Sensitivity and specificity of the new test for measuring antibiotic susceptibility was found to be 0.94 and 0.97, respectively. The components of the technology include:

In-house developed medium (BITGEN) for rapid growth of uropathogens.

A specially fabricated readout device, which gives an alphanumeric display on a LCD screen.

Pre-functionalized panel in strip format allowing screening for multiple antibiotics.

The prototype developed at BITS was used to test urine samples received by the clinical microbiology department for culture and sensitivity test. Received samples were first used for streaking for isolation of pathogens present. Then the remaining urine samples were processed for rapid test for antibiotic sensitivity with Rightbiotic. A total of 136 samples were tested as a prospective cohort over a period of three months.

Jury's View on the Project: The jury selected this project for the platinum award as it deploys technology which can be used for multiple diagnostic devices. It has the potential to change the way prescriptions are written for antibiotics and virtually takes the pathological laboratory to one's home. It promises to have large societal impact and shows exemplary advancement in the area of diagnostics.

# i3 Gold Award for Best Innovator Power Loom Warping Machine



Team Members: P A Sekar (51) Project ID: TamTextP. 3659 Sector: Textile Profession: Entrepreneur State: Tamil Nadu

#### About the project

This class VII pass person from Vellore district of Tamil Nadu has made an automatic loom warping machine which has reduced the time taken in producing warp from yarn. In the old process the entire family of the weaver, including children, had to work for 12 hours to wind 12 km lease warp (30 units). Because of this invention a person can make 100 units lease warp in 12 hours without much difficulty. This has not only led to increase in productivity but also increased the wages of families from Rs 300 per day to Rs 1,000 now. The automatic warp machine has also enabled children of such families to move away from manual labour and focus on their education.

The machine has been evaluated and studied by technical team from Indian Institute of Handloom Technology, Ministry of Textile.

Jury's View on the Project: This machine is already in the stage of commercialization. It is being sold at Rs 40,000 and the inventor has a patent for it in his name. He is manufacturing it himself and marketing it in Tamil Nadu. As many as 1,200 machines have already been sold. With a little support from right people, he can scale it to all-India level. This invention, coming from a person who does not have any high educational credentials to boast of, shows that it is not essential to have a degree to be able to make an impact on society.



i3 Silver Award for Best Innovator Injection Mouldable Polymeric Composite Based Passive Polycentric Knee Joint



Team Members: Srinivasan Arun (26) & S. Kanagaraj (40) Project ID: AssProdAru1783 Sector: Product & services Profession: Research scholar & academician Institute: Indian Institute of Technology, Guwahati State: Assam

#### About the project

An injection mouldable polymeric composite based passive polycentric knee joint was designed with required considerations such as extension bias, conversion of multi axes to single axis and provision for assembling with existing socket adapter. The designed knee joint consists of a top part, bottom part, small link and large link pivoted as a multi body system to achieve the flexion-extension of the knee joint. The knee joint is provided with an adapter coupled firmly to transfer the load from the stump of an amputee via socket. A compression spring along with a cylindrical rod is positioned in the interior of the bottom part, which provides the engaging and disengaging of the top and bottom part corresponding to the switch over between polycentric joint and single axis knee joint or vice versa. The extension bias is made using two parallel extension springs in a symmetric manner using a simply supported beam in top and bottom part of the knee joint, where the stability of the knee joint during the flexion-extension motion, swing phase and stance phase is maintained. Because of the inherent self-lubricating characteristics

of the polymer, wear occurring between the top and bottom part of the knee joint is taken care of in order to avoid buckling.

This knee joint is light weight, inexpensive and has high stability.

Jury's view on the project: The jury liked this project as it addresses the problem of a very specific group which is neglected so far and promises to have good societal impact. This artificial limb has reduced the price of such a prosthetic from Rs 40,000 to Rs 8,500. The weight of the leg has been brought down from 8 kg (weight of the prosthetic leg available in market at present) to 450 gm. It connects the prosthetic to the limb through a non-invasive method. It is ready for commercialization. The team members have already tied up with makers of Jaipur foot and are ready for the next stage of 3-D printing. VTA Award for Most Promising Innovator Motorcycle Seat to Avoid Back Pain, Spinal Injury and Fatigue



Team Members: Santosh Kumar Samala (29) & Viswanadh Malladi (27) Project ID: AndProdSan2072 Sector: Product & services Profession: Entrepreneurs State: Andhra Pradesh

#### About the project

With increasing urbanization in India, motorcycle usage is increasing rapidly. However, road conditions continue to be poor resulting in hazardous riding experience for bikers. This problem has not yet attracted the focus of industry. But consumers are increasingly demanding more and more focus on safety and comfort. Seating system in motorcycles has an important role to play in this. There are more than 160 million two wheelers on Indian roads.

Many city dwellers, especially those who work in IT and BPO companies, ride long distances sometimes 60 -100 km every day. They often suffer from back pain due to this. People who travel more than 45 minutes per day are also likely to experience back pain. This pain is due to vibrations & jerks and uneven distribution of pressure.

Vibration energy waves transfer into the body of the rider through body tissues causing various effects on the structure within the body before dampening and dissipating it. The human body can tolerate certain levels of vibration energy but starts to deteriorate over long-term due to incessant pressure and strong vibrations.

The solution that this team from Hyderabad came up with is a motorcycle seat which comes below a price point of a good helmet and provides comfortable riding experience through better pressure distribution (>50% efficient than existing foam seats), reduces jerks (by >50% from existing system), isolates vibrations (by > 50% from existing seat system) and provides a better posture for the rider. The seat is also durable, secure, easy to use and easy to install. Patent has already been applied for this product.

Jury's view on the project: The product is innovative and is already selling on Amazon. The team has order in place for 1,000 seats already. It is well designed and is likely to have a huge impact.



# IVCA Award for Top Innovator Low-Cost Medical Sterilization Using Atmospheric Pressure Plasma



Team Members: S. Krupakar Murali (40) Project ID: TamHealS. 2551 Sector: Healthcare Profession: Entrepreneur State: Tamil Nadu

#### About the project

Healthcare-acquired infection (HCAI) are a growing problem in both the developed and developing world. These infections are caused by a wide variety of common and unusual bacteria, fungi, and viruses during the course of receiving medical or surgical care. In the United States, the Center for Disease Control and Prevention (CDC) estimates that roughly 10 per cent of all hospital patients contract 1.7 million hospitalassociated infections, causing or contributing to as many as 99,000 deaths of these patients each year. Extrapolating from these gures, tens of millions suffer from HCAI in the developing world each year. Data remains scarce for most developing countries.

The non-availability of equipment, high operational costs and incompatibility to the contours of the surgical equipment further complicate the problem.

This innovator has created two devices for this purpose.

First the plasma tube sterilizer helps sterilize the inside surfaces of tubes used in laproscopic procedures. The second device helps self sterilize a surface. Therefore it is now possible to simply switch to this device and automatically sterilize an entire operation theater without having to use harmful chemicals.

Plasma is the fourth state of matter where the gas exists in the ionized state. Plasma responds to the applied electric and magnetic fields. The transient species generated within plasma is very reactive and can instantaneously kill germs. The second device employs plasma to kill bacteria, viruses and other microbes. Preliminary testing at the department of microbiology at PSG College of Technology, Peelamedu, Coimbatore has shown promising results.



### IVCA Award for Top Innovator Automated Rubber Tapping Machine



Team Members: M. Saravana Mohanv (41) Project ID:TamAgriDha1558 Sector: Agriculture Profession: Academician Institute: Velammal College of Engineering and Technology, Madurai State: Tamil Nadu

#### About the project

Production of rubber is increasing every year. India stands at 4th position in rubber production whereas Thailand stands at number 1. Rubber productivity in Thailand is 13.25 times greater than that in India. This is because almost all the tapping machines are semiautomatic which even though they make the tapping process easy, do not solve the problem of high labour requirement. Semi-automatic tapping knives are available in the international market but their cost is very high. So estate owners don't prefer semi-automatic machines.

This innovation deals with fabrication of an automatic device for rubber tapping. It can be fixed on the tree every day. The cut takes place automatically and latex is collected in the collector. The cost of this device is low and it increases the production of latex every year without any problem of labour requirement.

The machine uses an externally toothed spur gear. In this guide way the block with the tool attachment moves on the teeth of the external spur gear while the cut is made in the rubber tree and when the terminals of the D.C. battery are reverse the block with the tool returns to the initial position. The links of the automatic machine are made up of steel. The tool used in the machine is adjustable whereas the machine is fixed on the tree with the help of clamps and rubber bushes. Rubber bushes are used so that there is no damage to the tree by the machine fixture.

When the D.C. motor actuates, the gear stars to move in the rail while the tool is placed slightly below the previous surface of the primary cut so that the cut is proper. The tool has a curved edge at the end. And due to this the bark which is tapped out moves through the curve in the tool and thereby it falls on the ground without falling on the previously removed surface of the bark. The battery that powers the machine is 12V and 7A. The motor employed in this model is designed with a worm gear arrangement so that the torque produced is very high.

The tool is machined on both the sides so that while the front portion of the tool wears out the rear portion of the tool can be used. The cost of the tool is a low Rs. 8,225 but it can be brought down to Rs. 5,500 if produced on a mass scale.



### IVCA Award for Top Innovator Lemon Juice Making Machine



Team Members: Vednath Pundlik Kalbande (30) Project ID: MahFoodVED3060 Sector: Food technology Profession: Academician Institute: G. H. Raisoni College of Engineering State: Maharashtra

#### About the project

Lime juice making machine is a unique concept in itself. The mechanism is the first innovation in the machine. It first lets the lemon get added through the hopper in the machine. Then the lemon is cut automatically by the cutter inside the machine after settling in the grooves. After getting cut, it gets automatically squashed because of the rollers below and it also separates the seeds and lemon covers efficiently. Complete juice is extracted by the machine in an effective manner.

The juice is stored in an 18 litre tank and water inlet is given to the machine. A separate compartment is given to the machine for addition of soda, sugar syrup, salt and chat masala according to the requirement of consumer. Everything is mixed properly because of the submersible pump present in the tank. This is the other innovative part of the machine as it consumes less energy.

Next is the refrigeration part of the machine because of which it gets chilled and completely hygienic lemon juice pours from the tap. This machine reduces human effort completely and gives a pure and refreshing lemon juice. The machine gives 18 litres of lemon juice in just 10 minutes and can serve lemon juice at Rs. 5 including everything.



### Young Indians Award for Best Young Innovators Smart Electronic Helmet for Motorcycle



Team Members: Navajith Padmanabha Karkera (20) & Jagath H B (21) Project ID: KarElecNav3646 Sector: Electronics and PCB Profession: Students Institute: Sahyadri College of Engineering and Management State: Karnataka

#### About the project

This smart electronic helmet, made by a young duo from Naguri district of Karnataka, has been designed and developed with the aim of revolutionizing the use of helmets. Its aim is to improve and provide state-of-the-art safety to motorcyclists in an effective way and enhance their riding experience. This helmet provides futuristic edge to motorcycle helmet. It makes the helmet smart, technologically advanced and user friendly.

The helmet has been designed and developed particularly for Indian market in term of the usage condition, requirements, safety and also the cost.

Features available in the smart helmet are:

- The motorcycle won't start and cease to function without wearing the helmet properly and securing the strap.
- The motorcycle won't start and cease to function if the rider is drunk above the threshold level as set by the Indian Motor Vehicle Act.
- In case of an accident the location of the accident will be sent to relatives and health response unit.
- Provides Voice navigation to the rider to navigate unknown terrain as per request.

- Safety EL light to improve safety of the rider during night time.
- Hands free communication and wireless music playback through vibration transducer.
- Custom smartphone application to synchronize the helmet and the phone.
- Voice command for improved user experience.
- Announcing the mood of the rider to the surrounding traffic by means of discrete laser.
- Power generation in the helmet by means of electric wind turbine.
- Internet of things to synchronize with other devices and gadgets of the user.
- NFC for easy pairing of the helmet and phone.

Jury's view on the project: The jury liked the innovativeness of this product and felt that it would increase safety on roads. Young Indians Award for Best Young Innovators Indrabhuja: Low-cost Myoelectric Prosthetic Hand



Team Members: Koushik B (21) & Biswajit Roy (21) Project ID: KarHealKou3442 Sector: Healthcare Profession: Student Institute: R.V. College of Engineering State: Karnataka

#### About the project

Rehabilitation of handicapped is a big social issue across the world. There have been many studies about assistive devices for the handicapped. Especially, the prosthetic legs and hands were representative assistive devices for the amputees. The prosthetic hands for the upper limb amputee are either the hook or hand-shaped which are actuated by either body or external power.

Body-powered prosthetic limbs are controlled by cables connected elsewhere on the body. Externally powered prosthetic limbs are powered with motors and can be controlled by the patient in several ways. The switch control method allows a patient to move his or her prosthetic device by toggling switches or buttons.

A more advanced way to control a prosthetic limb is by listening to muscles remaining in the residual limb that the patient can still contract. Because muscles generate small electrical signals when they contract, electrodes placed on the surface of the skin can measure muscle movements. Although no buttons are physically pressed by the muscles in this case, their contractions are detected by the electrodes and then used to control the prosthetic limb – in a way similar to the switch control method that was just described. Prosthetic limbs that function in this way are called myoelectric. The current report is on real-time myoelectric control of a multifingered hand prosthetic.

# **Close Competitors**

There were some projects which lost by a small margin. They were discussed and evaluated animatedly by jury members but ultimately had to give way to those which were a shade better than them. Among the close competitors were:-

**1. Portable Food Kiosk** (Project ID: GujMobiPri2630; by Abhishek Premprakash Jain and Pritesh Ashok Kumar Bhatia) can keep food hot or cold and helps in hygienic transportation and disbursement of food through hawkers and street-side vendors. The jury was impressed by the modern design of this product but did not find it novel enough to deserve an award.

**2. Green Manufacturing of Pharmaceutical Drugs Using Smart Enzyme Libraries** (Project ID: TamBio Dr.3336; by R. Rajkumar) enables production of certain types of medicines at room temperature and does away with the requirement of reducing temperature to extremely low levels. The jury liked the concept but was not convinced that this technique would work when it came to mass production.

**3. Hybrid Air Cooling System** (Project ID: MadRefrPra2209; Pranav Mokshmar and Priyanka Mokshmar), is an air cooler without a compressor but with a refrigerant. It makes use of ice to blast cold air. The jury was not convinced about the energy efficiency of this device.

**4. Home-based Speech Therapy Product** (Project ID: DelProdPra3310; Prashant Goyal and Soniya Gupta)



# Jury Members



The national jury of 7th India Innovation Initiative comprised members from both industry and academia. The jury was anchored by Dr Y S Rajan who has been part of this initiative since its inception. He has helped shape and nurture the initiative to its present form.

The jury members were divided into five groups based on their core competence. The first group was on agriculture, food, chemical, textiles, water, education and social science. The second group was on bio-pharma, bio-technology, healthcare and herbal products. Third group's focus areas were bio-informatics, communications, digital signal processing, mobile VAS, mobility and web. Fourth group was on electronics, refrigeration and nanotechnology. The fifth group was on energy, micro-engineering, products and services and materials.

S. No	Name of Jury	Designation	Organisation
1	Dr. Y.S Rajan	Dr Vikram Sarabhai Distinguished Professor	Indian Space Research Organisation (ISRO)
2	Mr. Venkatesh Valluri	Founder & Chairman	Valluri Technology Accelerators & Valluri Change Foundation
3	Ms. Ntasha Berry	Head – Innovation Initiative	Indian Private Equity and Venture Capital Association (IVCA)
4	Mr. Abhinav Banthia	Chair	Young Indians (Yi), Jaipur
5	Prof. S K Kak	Former Vice- Chancellor	Mahamaya Technical University & Jaypee University of Information Technology
6	Dr. Anil Wali	Managing Director	Foundation for Innovation and Technology Transfer, IIT, Delhi
7	Dr. Mamta Bhatia	Professor	Campus of Open Learning, Delhi University
8	Mr. Pulok Ranjan Basak	Head	TIFAC-SIDBI Technology Innovation Programme (Srijan)
9	Dr. T. Chandrasekhar	Scientist-E	Technology Refinement and Marketing Programme (TREMAP) of Technology Information, Forecasting and Assessment Council (TIFAC <b>)</b>
10	Mr. Aditya B.	Representative	Forum for Industry Interaction (FII) Indian Institute of Management, Ahmedabad
11	Prof. Arun Goyal	Professor	Indian Institute of Technology, Guwahati

Following 20 jury members participated in the valuation of projects.



S. No	Name of Jury	Designation	Organisation
12	Prof. Rakhi Chaturvedi	Professor	Indian Institute of Technology, Guwahati
13	Prof. M.S. Sutaone	Professor	College of Engineering, Pune
14	Prof. V. S. Raja	Professor	Indian Institute of Technology, Bombay
15	Dr Niranjan D. Khambete	Professor	Dinanath Mangeshkar Hospital & Research
16	Prof. Ashitava Ghosal	Professor	Indian Institute of Science, Bangalore
17	Prof. Narender Singh Rathore	Deputy Director General (Engg)	Indian Council for Agricultural Research, New Delhi
18	Mr. Jonathan Mazumdar	Portfolio Manager & Entrepreneur in Residence	Sangam Ventures
19	Dr. Amita Dev	Principal	Bhai Parmanand Institute of Business Studies, Dept. of Training and Technical Education, Delhi
20	Prof. D K Banwet	Professor	Indian Institute of Technology, Delhi

# Evaluation Process



The jury followed a systematic and planned method of evaluation. All the jury members first evaluated the projects in their own groups and ranked them as 1,2,3. Then all top rankers of all five groups were taken up for discussion among all members. One member from each group was asked to explain and defend their recommendation for the top project. Members from other groups were asked to comment or question that recommendation. Consensus on best projects among the five led to the selection of top three winners. In subsequent rounds the number 2 and number 3 recommendations were examined and evaluated for the next seven awards. Though there was a provision to give 10 awards, the jury recommended only 9 projects under various categories.





Jury meeting in progress









The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has around 8000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 200,000 enterprises from around 240 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

In its 120th year of service to the nation, the CII theme of Build India - Invest in Development: A Shared Responsibility, reiterates Industry's role and responsibility as a partner in national development. The focus is on four key enablers: Facilitating Growth and Competitiveness, Promoting Infrastructure Investments, Developing Human Capital, and Encouraging Social Development.

With 66 offices, including 9 Centres of Excellence, in India, and 8 overseas offices in Australia, Bahrain, China, Egypt, France, Singapore, UK, and USA, as well as institutional partnerships with 312 counterpart organizations in 106 countries, CII serves as a reference point for Indian industry and the international business community.

# Contact:

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