V-TechSEED Projects on Waste Management

Project No.	1
Company type	Industry Personnel
Organization	VMware Software India Pvt
Problem statement title	Smart eco-friendly garbage management
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complex
Description	Trash management is a one of the hard problems. The existing model is very ineffective due to its poor placement, collection scheduling, dump yard allocation and management, ever increasing transport cost and resulting health issues. The solution shall present a solar powered smart garbage bin (like an Edge in IoT) which houses necessary biotech based mini/macro waste decomposer and necessary mechanical and electronics to manage, monitor and secure the Smart bins & detect usage violation etc
You tube Link	

Project No.	2
Company type	Industry Personnel
Organization	VMware Software India Pvt
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Technology Bucket	Waste Management
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You tube Link	

Project No.	3
Company type	Industry Personnel
Organization	Cognizant
Problem statement title	Solid Waste/ Waste management cost
Category	Software
Technology Bucket	Waste Management
Complexity	Simple
Description	Prevention is better than cure.” Hence reducing waste is the best approach of waste management. Build a digital platform to aggregate secondary resources (used clothes, e-wastes, remaining food etc.) at house-hold level and to facilitate distribution to needy

	(slum people, beggars etc.) and specific industry. Apart from letting people to keep environment clean, this can be used to educate people about better waste management ; by providing information and insights on waste management
You tube Link	

Project No.	4
Company type	Industry Personnel
Organization	Cognizant
Problem statement title	Ocean Cleaning
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	Ocean is an integral part of us. How can we keep our beaches and ocean clean? How can we effectively handle the waste management at large scale, especially at the ocean level - which is harming aquatic animals. Ask is a hardware solution that would help in pick up the collected waste transport back to the land for recycling and responsible processing. Also the machine should be equipped with reflector to make them show up on radar, thus mitigate the possibility of collision.
You tube Link	

Project No.	5
Company type	Industry Personnel
Organization	Cognizant
Problem statement title	Waste Management
Category	Software
Technology Bucket	Waste Management
Complexity	Simple
Description	Households generate degradable (food) and non-degradable (plastics, glass etc.) at a massive scale on a daily basis. Degradable waste can be readily made into compost with simple tools while non-degradable waste could be collected and deposited at the regional centers who recycle the material. An on-demand service would be helpful for the public to manage their plastic waste conveniently. This reduces landfills to major extent.
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Project No.	6
Company type	Industry Personnel
Organization	Cyient
Problem statement title	Household waste Incinerator
Category	Hardware
Technology Bucket	Waste Management

Complexity	Complex
Description	Incinerator is a device that burns the waste without the use of oxygen and without giving out fumes. The proposal is to make a small house hold waste incinirator that can run on a smallest possible solar panels.
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Project No.	7
Company type	Industry Personnel
Organization	Hindustan Unilever Ltd
Problem statement title	Digital Reverse Logistics for Damaged Goods
Category	Software
Technology Bucket	Waste Management
Complexity	Complex
Description	Reverse Logistics is the process of moving goods from their point of consumption or sales for recycling, disposal or reuse. We take back damaged/expired products from about 1.5 million retailers across India. The current process is slow and manual. It takes about 8-12 weeks to process the payment for returned goods. The manual entry makes it difficult to track, audit and analyze the inefficiencies. The Challenge is to design complete digital reverse supply chain for damaged/expired products.
You tube Link	https://www.youtube.com/watch?v=F_sQ67NPKM0

Project No.	8
Company type	Industry Personnel
Organization	Thermax
Problem statement title	Develop Innovative methods for treating Sewage
Category	Hardware
Technology Bucket	Waste Management
Complexity	Simple
Description	The sewage water from large cities and towns comes in huge volumes, contains unacceptable level of CoD/BoD and hence needs an extensive treatment systems. Currently it is being treated mainly through biological aerobic treatment route which consumes energy and occupies considerable space. The anaerobic treatment which usually results in energy generation in terms of bio-gas is not suitable very low CoD/BoD. These plants also face problem of creating local pollution.Hence current sewage treatment methods for municipal sewage require breakthrough change in designing. Hence the challenge is to develop new way of treating the sewage at municipal level or at co operative society level where the treatment process happens as the sewage flows in the U/ G pipe lines carrying the sewage to the common facility thereby making such a facility redundant or generates energy in a cost effective

	manner. The depiction should be based on scientific calculations for the processes involved in each of the proposed case
You tube Link	https://www.youtube.com/watch?v=qQ9p-R7MLt0

Project No.	9
Company type	Industry Personnel
Organization	KPIT
Problem statement title	Use of plastic to construct roads
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complex
Description	Plastic waste is one of the top most menace the world is facing today. Blanket ban on use of plastic too is quite difficult to implement considering the current life style of mankind. One of the novel ways of disposing plastic waste could be to use it constructively for other tasks and one of the novel use of plastic waste could be to use it to construct good quality roads. Demonstrate a technology, process for using plastic waste effectively to build roads.
You tube Link	

Project No.	10
Company type	Industry Personnel
Organization	Shree Cement Ltd
Problem statement title	Method of separating waste from limestone
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	The limestone deposit is semi metamorphosed which has undergone 4 fold deformation. Pegmatic and amphibolic intrusions of irregular trend are mixed in such a manner that the segregation is very difficult. If we are able to find a proper sorting/ separation method, it will help in mineral conservation
You tube Link	

Project No.	11
Company type	Central Ministry
Organization	Sadanand umberwadekar
Problem statement title	Cost Effective Fume and Dust Cleansing System
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	Methods should be developed so that the fumes released from chimneys get diluted before release in open air, making it less

	harmful and having a lower environmental impact. In addition, viable technology be developed to extract the carbon from fumes which could be used up in alternative ways. Also, the dust pollution caused during the manufacturing process needs to be tackled using novel ideas and technological innovation.
You tube Link	

Project No.	12
Company type	Industry Personnel
Organization	Shree Cement Ltd
Problem statement title	Use of limestone waste to achieve ZERO waste minin
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	Alternate use of mines waste should be explored to achieve the goal of ZERO waste mining and its legal constraints must also be judiciously removed. The Samples can be procured from Shree Cement Limited, Bangur City, RAS (Dist Pali). The waste is low quality of Limestone mixed with Sand / mud. This is extracted between the layers of Limestones during mining.
You tube Link	

Project No.	13
Company type	Industry Personnel
Organization	Goonj
Problem statement title	Assess impact on environment, of the material re-used by Goonj, had it gone into dump/landfill.
Category	Software
Technology Bucket	Waste Management
Complexity	Complicated
Description	BRIEF on GOONJ:- its a 19+ years old non-profit organization working on utilizing discarded urban material as a tool for development. We are a force of 900 people with work spread across 23 states in India. Goonj has won many National and International awards including the Ramon Magsaysay award 2015 to our founder Anshu Gupta. The work has touched upon some difficult rural development issues like water, sanitation, infrastructure, agriculture, migration apart from sustained work in disaster-hit communities. Goonj receives tonnes of material annually from urban population. This material goes through storing, sorting and processing. Sorted material is converted into kits of reusable material. Goonj engages with local communities in far flung areas in rural India to get development work done in their community using their own local resources and manpower. Material packed in kits is used as a parallel currency and is given out as a reward for their efforts. Do visit our website www.goonj.org to know more. PROBLEM STATEMENT - IMPACT ASSESSMENT ON ENVIRONMENT :--. Goonj deals

	with 3000+ tones (and increasing) of material (trash) annually. Material constitutes of apparel, cloth, kitchen utensils & appliances, electronic items, toys, stationery, books, footwear, furniture and many other household items. Goonj up-cycles the material and uses as parallel currency to get development work done in rural India. Up-cycling and extending the life of any material saves it from being dumped into landfill. PROVIDE A SOLUTION to measure quantifiable environmental impact, of various types of material, if it had reached garbage/landfill. Use standard global environmental parameters for different types of material to derive at an impact.
You tube Link	

Project No.	14
Company type	Central Ministry
Organization	Ministry of Textiles
Problem statement title	SANITATION
Category	Hardware
Technology Bucket	Waste Management
Complexity	Simple
Description	Lack of sanitation is a major problem in developing countries like India. Much deliberation has given way to the fact that the private sector is needed to tackle sanitation service problems. It is imperative to invest in solutions by offering different sanitation products and services at appropriate prices. An increased focus on sanitation and hygiene is something that can be a motivating idea for startups. Sulabh is a glaring example of a startup that began work in this area.
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Project No.	15
Company type	Central Ministry
Organization	Himalyan Chamber of Commerce
Problem statement title	Low cost smart dust bins for Office
Category	Hardware
Technology Bucket	Waste Management
Complexity	Simple
Description	Under the Swatch Bharath mission we should have all the government offices fitted with these low cost (less than Rs 2000) smart bins which should have anti-theft mechanism and should inform the labour with SMS when the bin is full.
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Project No.	16
Company type	Central Ministry

Organization	President Laghu Udyog Bharati, Pindwada (Sirohi)
Problem statement title	Design of tools and exhaust system to assist workers in stone industries
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	During cutting and carving of marble/articles in stone industries dust pollution is very high. We wish to develop special tooling's, exhaust systems etc so that the level of the dust in the working area may be reduced and health issues of the workers are addressed to
You tube Link	

Project No.	17
Company type	Central Ministry
Organization	Nagar Nigam Jaipur, Govt. of Rajasthan
Problem statement title	Development of Website/APP for collection, transporation,disposal and segregation of waste products
Category	Software
Technology Bucket	Waste Management
Complexity	Complicated
Description	There is no organized and scientifically planned process for collection, transportation, disposal and segregation of Industrial waste. Disposal and segregation takes places under very unsafe and hazardous condition. Industrial waste is usually directly disposed on low lying area in routine way violating the practices of sanitary land filling. Unscientific dumping and disposal is prone to contamination of ground water and surface water, greenhouse gases, air pollution due to bad odour of the waste and health related problems. To overcome these problems, we wish to find out suitable technologies/mechanism and IT based monitoring for systematic and fool proof industrial waste disposal system.
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Project No.	18
Company type	Central Ministry
Organization	Chaittanya Enterprise
Problem statement title	Automatic machine for making cloth bags
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	Cloths bags Making Automatic machine. Cloth bags have become a popular alternative to plastic and paper shopping bags, because cloth bags do not cause the environmental harm of plastic bags. However, cloth bags are not only, for the environmentally-conscious consumer. Unlike the free bagging alternatives, cloth bags usually.

	come with a nominal price tag, but the advantages of reusing cloth bags outweigh this small cost
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Project No.	19
Company type	Central Ministry
Organization	M/s Laxmi Business Cement Co. (P) Ltd, P.O. & Village- Morangi, Distt.- Hazaribagh(Jharkhand)-825301
Problem statement title	Solution to improve Dust Catching System in Mini Cement Plant / Raw material grinding facilities
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complicated
Description	Solution may be provided for Improved Technological system for Dust Catching in Mini Cement Plant / Raw material grinding facilities
You tube Link	

Project No.	20
Company type	Central Ministry
Organization	MSME DEVELOPMENT INSTITUTE DELHI
Problem statement title	Cost effective waste water treatment for micro & small units
Category	Hardware
Technology Bucket	Waste Management
Complexity	Simple
Description	A cost effective single unit Effluent Treatment Plant for MSMEs may be developed for waste water treatment to purify industrial waste water for its reuse and to release safe water to environment from the harmful effects caused by the effluent
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Project No.	21
Company type	Central Ministry
Organization	MSME DEVELOPMENT INSTITUTE DELHI
Problem statement title	Recovery of metals from Industrial waste
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complex
Description	Environmental pollution by heavy metals has been accelerated by the discharge of heavy metals to the environment by several industries such as mining, electroplating, metallurgical, electronics. These heavy metals may be recovered from the industrial waste
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Project No.	22
Company type	Central Ministry
Organization	DI PATNA
Problem statement title	Development of Website/APP to assist farmers regarding transportation of fruits and vegetable
Category	Hardware
Technology Bucket	Waste Management
Complexity	Complex
Description	The self-life of fruits and vegetable are very short. Due to lack of sufficient infrastructure for preservation and value addition of farm products, a large share of those products gets wasted during transportation and due to non-availability of transportation facility in villages. Focus towards value addition and preservation of farm products will also help in providing appropriate price to farmers. Technological intervention is needed for availability of every corner of the country for curbing wastage of food products. This may solve the starvation problem to great extent.
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