Smart City Living Labs

Innovation Registry

Name of the Startup	Sector	Name of the Founder(poc)	What is the specific problem that you are solving	Short description of the product	List the use Cases in Smart cities
6E Resources	Water Management and Water Supply/Distribution, Sewage Treatment and Recycling	Rudri Pandya	Atleast 40% of Indian population will have no access to drinking water by the year 2030. There have been more than 2 lakh deaths due to clean water shortage. 38 Billion Liters of Sewage Water is wasted daily due to sky-high Manufacturing & Maintenance cost of Sewage Treatment Plants. According to CPCB reports “Currently installed STPs are irregularly operational, responsibility of their operational & maintenance is in hands of non skilled persons due to which conditions of plant are very poor.”	6E uses IoT to make water smartly come back to our houses! We have developed a solution not only to detect the leakages in pipelines, but also to remotely monitor & optimize the sewage treatment, so you can decrease 95% of your water waste and reuse it. It is saving someone’s life with your money so we want to make it lighter on your pocket. We present the concept of “STP on lease”. We will install an STP for your building and will charge less than 7 paisa per liter!	Recycling water will reduce stress on fresh water resources & make it last 5X longer than current rate of extinction. In case of water scarcity, if water inlet of a society is limited, counteraction by society would be to stop water consumption in gardening. With our STP, water will be available for gardening until there is water usage in society. This will bolster environment friendly neighborhood. Our STP, by optimizing power requirements through machine learning, will reduce carbon footprint.
Aerobiosys Innovations Private Limited	Health	Rajesh Thangavel Yadav	Unaffordable and inaccessibility of life saving medical device facilities in urban areas.	Jeevan Lite is an IoT-based ventilation system with remote monitoring of patients. Each breath parameter of the patient will be recorded by the ventilator and transferred via Bluetooth to our android application. This data will be stored in our cloud facility for clinicians to analyze the patient's progress. The JVSync is an AI algorithm used in our system, to automate the ventilation based on patients' lung parameters, it works on a feedback loop. Subscription model reduces the price by 80%.	Smart cities are flooded with patients, it becomes difficult to control the increase in number of patients with minimum staff, hence we are providing an efficient option to use our IoT enabled device control and patient monitoring feature, which will help in enhancing the quality of care provided by the hospital.
Agua Wireless Systems Pvt Ltd	Water Management and Water Supply/Distribution	Kanish Aggarwal	The aging water infrastructure across Indian cities leads to multiple problems across the distribution network – • 35-50% Non-Revenue Water losses across Indian cities - Water lost due to underground leakages/theft • Outdated technology – Manual meters have inefficient data collection mechanisms which lowers overall visibility in payment collection systems. AMR meters have no real-time data collection which prevents features like real-time leakage detection and demand-based water supply	Agua develops IoT solutions enabling Water Savings and removing inefficiencies in the process of water management. The core hardware range includes 1) Ultrasonic tank level sensors 2) Motor controllers 3) Wireless Flow rate measurement sensors 4) Automated Valves + Flow Sensors. These sensors wirelessly interface with our cloud architecture to provide real time data about the availability, volume and quality of water. The user monitors and controls the devices through a mobile app/web dashboard	Our IoT solutions enable automated water distribution, fair-usage based billing, and leakage detection in underground pipelines and tanks. Some use cases include – • End-to-end automation of the water distribution infra, including tank and flow monitoring, motor automation and valve control • Real-time Leakage detection in underground pipelines and tanks • Flow regulation to ensure 55 LPCD of water supplied to each household • Sewer line Monitoring system to detect potential flood hazards
Ai Aerial Dynamics Pvt Ltd	Safety and Security, UAV, Drone, Disaster management, Agriculture	Vishnu V Nath	The crop yield of agriculturally rich land are below the average yield of many countries that implemented site specific crop management Unavailability of digitized agricultural field data Uniform proportion of nutrient spraying without considering plant health	Our UAV (Drone) based system can scan agriculture field to monitor plant heath and spray nutrients according to the plant health, aid to take counter measure to improve the yield.	By implementing this, the yield per unit area in smaller agriculture land located in cities can be improved to 30-40%, and will reduce the wastage of nutrients and fertilizers sprayed thus result in reducing the cost for the same by 15-20%
Air Buddi	Health	Saket Agrawal	With the rise in pollution level the risk of diseases have also been increased. Not only outdoor but indoor air quality has also gotten worse. In fact it is leading to several health issues like asthma, depression, lung cancer etc. Moreover breathing in poor air quality shortens one's lifespan too. Most premature deaths are just the result of poor indoor air quality as we spend 90% of our life indoors. In an article WHO quoted that "Indoor air quality is 5x times polluted than outdoor air".	Our product is an air purifier which not only performs filter purification but also focuses on natural purification. It covers the whole spectrum of air be it be particle filtration or gaseous filtration. A NASA study reveals that using these plants in indoor offices reduces eye irritation by 52% , headaches by 24% , lung impairment by 12%, asthma by 9%, and also increases human productivity by 20%., Presence of plants improves your mood and also helps you sleep better.	Air Buddi is an IoT-enabled smart air purifier use cases span multiple areas: from contributing to a healthier environment and improving air quality to enhancing decor of your place. We have installed an IoT system which helps you to control and monitor the air quality of your place at your fingertips. We are trying to provide air purifier to our customers needs according to their space and air quality.

AmplEarth Packaging & Systems Pvt Ltd	Waste Management	Ms. Arpita Kalanuria	We are a company focused on Waste Mitigation in the FMCG Packaging sector. We are building a Circular Economy based ecosystem for reusable metal based packaging for large scale consumer products. Packaging waste is a double pronged issue, where Brands don't have truly sustainable options available, and consumer don't have a choice to of better options.	We design, customise, manufacture, and provide 360 degree solutions to our clients, by providing a seamless sustainable packaging service , at low costs. We are built for scale, and we offer quality metal packaging for FMCG products, all our containers have complete traceability & traceability. Our AI & IOT based software complements the packaging, We improve packaging lifecycle, and also mitigate waste.	We can help in creating large impact on waste mitigation by reducing community packaging waste . We are ready for large scale implementation of Smart Containers that can be scanned by the users mobile phone, and enable Deposit Return Systems for Returnable Packaging in over 100+ products in the FMCG space. We provide end to end packaging, rinsing & sterilising as well as Return & reuse tech systems to large Consumer facing brands
ANTAR IoT Private Limited	Waste Management, Energy, Energy Monitoring and Management	Rajaneesh Vasanta	Energy conservation is pivotal for ensuring impact on the natural resources. using a combination of products we enable energy saving through - Edge intelligence that controls appliances automatically, Improve transparency through real time visibility of the appliance status and enhance the appliance life and utility consumption by moving from preventive to just in time maintenance . This greatly aids in cutting down on the carbon footprint	Desk Sensor - Accurately detects the Human presence in a predefined location and is more reliable than the existing PIR and Microwave based sensors.This Can also be used as a people counter X-Sense Can control IR based appliances and can enable the custom workflows based on a predefined event Smart Modules comes as a retrofit or replacement and can control loads up to 3600 Watt	1. Smart Data Center - Understand the load on servers/Heat produced vs automated cooling there by enabling the HVAC systems to respond to varied temperature conditions. 2. Rest rooms - Huge amounts are spent on utilities by cleaning the rest rooms periodically in public spaces and offices. Rather using our solution you can create dynamic cleaning schedules based on the usage 3. Office Spaces - Turn on lighting and regulate AC only when the space is occupied
ARCROBOTICS LLP	Water Management and Water Supply/Distribution, Waste Management, Health, Energy	Rahul Vishvakerma , Deependra Dubey , Sandeep Malaiya , Shubham Vishvakerma	PROBLEM 1 Every year, near about 1 million lives affected by water crises. By the year 2030 40 % of India's population will have no access to drinking water and thus, we are required to come up with a sustainable solution to curb the issue of water scarcity. PROBLEM 2 India generates over 150,000 tones of municipal solid waste (MSW). Inappropriate technology for waste management has shown serious issue like - Higher cost, Lack of awareness among the citizens.	PRODUCT 1 It is fully automatic and total touch less hand wash unit. It can conserve 70% of water. It is only device of India which has fulfillment of both hygiene and water conservation. It runs on smart AI technology and IoT based system. PRODUCT 2 ARCROBOTICS has developed fully automatic AI enhanced smart bin. It can communicate with people and greet them. Smart bin itself provides awareness in any regional language, which also reduces the cost for awareness programs.	Lucknow Smart City Indore Smart City
Aumsat Technologies LLP	Water Management and Water Supply/Distribution, Energy	Riddhish Soni	Energy monitoring is an essential public service. Public safety, food supply, energy production, environment & health all have high inter-dependency on the energy analytics within a power grid. Policies, planning, adaptive management, and engineering decisions need reliable information about the variability of energy quantity over time and in space. Given the high cost of energy ignorance, a sustainable supply of relevant, reliable, and trustworthy source of energy intelligence is necessary.	Aumsat provides AI enabled Satellite Based precision driven solar analytics for setting up solar pumps in cities. Unlike conventional costly and time consuming methods like Total Station, Theodolite and dumpy level surveys used in solar site suitability, we provide energy intelligence without physically being present on the field.	For our international projects, we have worked for World Bank Project in collaboration with NASA in Pir Nakhcir, Balkh Province Afghanistan. Our additional projects have been to work with Water utilities of Uzbekistan, and Sugarcane Companies of Mauritius. In India we have worked with Central Government Agencies in Dehradun, New Delhi and Jharia.
AUTOVOLTZ	Safety and Security, Fire Safety and Disaster Management	Yash Deshmukh	- Present detection and sprinkler systems are available everywhere, still unable to suppress fire instantly as both work separately and not interconnected - Sprinkler systems are slow acting due to heat dependency and its delayed activation leads to slower response rate than rate of rise of fire - There exists no platform that integrates surveillance, safety and controlling abilities of fire protection equipment in a single dashboard globally and carries automatic site evacuation during fire	- World's first technology that interconnects Fire Detection and Suppression systems. - During fire, AI/ML based detection and manual sprinkler activation results in saving huge infrastructure losses from fire. - AVR-1 system that provides customers with annual safety audits and documents for fire insurance claims. - Provide global controlling abilities of fire sprinkler systems on the basis of Emergency Alerting System with evacuation capabilities based on dynamic decision making algorithms.	- Currently the product is in development stage and Product launch is yet to scheduled on 25th September 2021. - We have successfully tested our product and completed all the quality checks & operational procedure checks at Gujarat Vidhan Sabha which is expected to be one of our initial customer sites as per initial interaction with their senior fire department authorities. - Product Demonstration Video link at Gujarat Vidhansabha is as below : https://youtu.be/qQsxfq_wRQo
Awiros (Awidit Systems Pvt. Ltd.)	other	Vikram Gupta	Building a Computer Vision platform to ease the development, training and deployment of Video AI Apps for smart cities and large camera networks.	Advances in deep learning and its applications in Computer Vision (CV) are accelerating at a high-pace. However, there is a wide gap in demand and supply as the market is served by small point-solutions. Awiros is the most comprehensive computer vision platform ever-built to ease the development, deployment and discovery of new apps. Awiros is bridging the market gap through its AppStack, a marketplace of computer vision apps acting as seamless offering over a consistent software infrastructure.	Use cases related to Municipal, Citizen Safety, Covid Compliance, Traffic Management, Facial Recognition, Dense Crowd Management, Facial Recognition System , Personal Protective Equipment Detection, Social Distancing Detection , Face Mask Detection, Temperature monitoring, Facial Recognition System, Camera Health Monitoring, Person Search, Vehicle Count and Classification, Automation Number Plate Recognition, FRAM, Water Logging, Fire and Smoke Detection, Parking Management etc.

AYUSHMAN BHAVA	Safety and Security, MOBILITY	Varun Chintha	Delay in emergency care vehicle transit is big issue in all major cities in India. There is heavy uncertainty associated with the emergency vehicle transit. Timely arrival of emergency care vehicles can greatly help to reduce the fatality rates in India. The primary reasons are emergency vehicles not being prioritized during travel and a general lack of awareness among motorists and the public about the seriousness of emergency vehicles movement, which indirectly causes heavy traffic blockades.	Our solution is a combination of unique Hardware + customized Software. We developed a portable device NEOEM which consists dual sensors. Where the video feed from outside view sensor is screened initially for number plates using ANPR technology, whereas the video feed from inside view sensor is screened on driver alertness. The device is integrated with multiple AI & ML based computer vision algorithms which can screen and record all potential violations in real time with time stamp details.	Our mission mainly focuses on 4 elements of transformation. 1] Public Health 2] Mobility 3] Safety & Security 4] Intelligent Govt. Services
Bariflo Labs Private Limited	Water Management and Water Supply/Distribution, Waste Management	Mrutyunjaya Sahu	The grand problem we are trying to solve is the stress in ground water because of pumping of groundwater for agriculture, industrial and domestic purposes. This issue can be solved by re-establishing the dependency on the surface water reserve. Due to broken links of dependency on surface water bodies, the stress on ground water is accumulating. In most of tier I- tier II cities the stress is alarming and the only hope is to be dependent on surface water reserves.	We have developed an intelligent floating agriculture cum waterbody management system. The idea is to grow vegetables, flowers, on the surface of water and harvest fish on the water body. In tier I- tier II cities the device will help maintain the health of the water body by reducing siltation due to anaerobic conditions and increase ground water table reducing the temperature by 5 degrees and reduce the breed of mosquitos and insects in housing society ponds.	1. Agriculture, 2. Beautification, 3. reduction of mosquitoes and insects breed in ponds, 3. Municipalities
Clenv Pvt Ltd	Health	Faisal Nayaab	The idea is to improve the natural environment by absorbing Suspended Particulate Matter and Carbon dioxide from the atmosphere, in order to improve public health using sustainable technology.	The proposed solution captures global green house gas, namely Carbon Dioxide and thus reduces current global warming and ocean acidification issues faced globally. This solution will also capture major pollutant in the form of Particulate Matter (PM) with particle size starting from 2.5 micron.	betterment of health and wellness of city residents due to reduced Carbon Dioxide and dangerous pollution and air contaminants.
Crooze App (by Cycling cities)	New Mobility (Active/Smart Commute)	Nikita Lalwani	Cycling is a simple solution to world's 3 most complex problems- environmental, congestion & health issues. In India, 50% of commute trips are < 5kms and doable by cycle. But people not motivated enough to cycle. 1. Cycling is not respected or rewarded but looked down upon. 2. Unorganized stakeholders in cycling ecosystem 3. Need of Holistic approach to boost Cycling culture in the cities 4. No platform to show cycling growth & numbers in India to fuel infrastructure planning and building	Mobile App to get more people to walk & cycle more by rewarding them, community engagement, nurturing an ecosystem for fit & livable cities in India	This platform has holistic approach to cycling growth in cities to make them more livable, healthier, happier & traffic as well as pollution free by : - Promoting cycle for fitness & smart commuting in the city - Incentivizing cycling to make more people cycle more - Build & nurture cycling ecosystem in the city - Activation & citizen engagement to build cycling culture - Gives data to analyze & make right decisions to build safe cycling infrastructure
E Waste Social	Waste Management	Iram Maimuna	We are looking to organise this 95 percent unorganised market and trying to achieve a sustainable solution for e waste management . Our user are businesses and corporates which use electronic and need an easy way to dispose it . eWaste includes any equipment which has an electronic component . With our 3 step auction platform we ensure ease of transaction and sustainable solution for e waste management	A B2B technology platform connecting corporates waste to registered recycler ensuring value out of waste .We envision a scenario where no waste goes into the landfill , thereby ensuring resource optimisation and urban mining from every electronic . Our platform would make it easy for corporates and businesses to dispose of their waste online as easy it is to buy electronics online .	We ensure that no waste goes into the landfill or into the hands of underage children . We also list out various uses of e waste , in one such case we build a 10 ft by 10 ft mural which is put out in Bangalore International Airport . In another pilot we connected with 100 non informal sector and incentivise them to use our platform for auctioning waste so that we are able to recycle appropriately
ECODEW PURE WATER SOLUTIONS PVT LTD	Water Management and Water Supply/Distribution, Waste Management	MUHAMMED NUJOOM A A	WASTE WATER TREATMENT SYSTEMS FOR INDUSTRIES AND APARTMENTS ARE RELATIVELY COSTLY AND REQUIRE A LARGE AREA. THE CONVENTIONAL TECHNOLOGIES IN THE MARKET ARE AT LEAST A 100 YEARS OLD AND FAIL TO OBTAIN THE STRIGNET ENVIRONMENTAL NORMS OF THE GOVERNMENT	OUR WASTE WATER RECYCLING SYSTEMS (BRANDED AS CRXFLOW) ARE IOT CONNECTED, EASY TO OPERATE AND REQUIRE VERY LESS FOOTPRINT AREA WHILE PROVIDING SUPERIOR WATER QUALITY COMPARED TO CONVENTIONAL SYSTEMS	ALL SMART CITIES WILL HAVE RESIDENTIAL AND COMMERCIAL COMPLEXES SHOULD BE DEALING WITH WATER UTILITIES. OUR SYSTEMS HELPS TO MEASURE, MONITOR AND TREAT FRESH WATER AND ALSO TREAT WASTE WATER AND USE IT FOR USES LIKE LANDSCAPING AND DISTRICT COOLING

ECOPROSUS INDIA PRIVATE LIMITED	Safety and Security, Energy, Environment	Mayank Kela	Urban spaces are dealing with the crisis of overpopulation, causing a dearth of resources. Social and economic imbalance among citizens creates problems in a community. Also, today urban spaces are cluttered with isolated, independent, depleted, and analog devices Since none of the devices talk to each other it leads to a huge social, economic and environmental impact. We can only be able to plan the cities of the future once we understand the problems in the current urbanscape and mitigate them	Our ergonomically designed, intelligent pole can integrate multiple sensors/devices to give one integrated and intelligent feed to a command center/data center/personal computer. It runs on our indigenously developed RUBIX IOT platform, whcih can be used to integrate multiple (existing) devices and give user an integrated dashboard which can be used to monitor and analyse the social, economic and environmental impact in an urban space.	One product, many use cases 1.Drive safety through AI-led surveillance, number plate recognition, face recognition 2.Raise alarm through the Panic button, have a 2-way communication 3.Address the entire urban space to raise any alarm during any urgency 4.WIFI to citizens 5.Smart LEDs which automatically turn on/off saving ~50% energy. 6.Charge EVs through EV charger at the pole 7.Push AV messages on the display For all the above, get single integrated control running on Rubix Platform
Ecowrap	Waste Management	Angraj Swami	Waste management is one area where smart city projects are facing challenges. Due to the lack of waste segregation at the source, there is no financially viable and technically feasible process can exist in this sector. Basically, it is not the problem of availability of treatment process but it is due to unfavourable behaviour of waste generator.	Ecowrap is a one-stop solution for waste segregation, collection, tracking, recycling and up-cycling. To promote waste segregation at the source we provide all required infrastructure (smart dustbins, tech intervention, training, doorstep pickup) to the waste generator. To increase the participation of waste generators in segregation we incentivise the segregation process. To increase the financial viability of this model we added an extra buffer of up-cycled products in our revenue stream.	Dumping Free City (Zero Waste City) Reverse Supply chain
ELVICTO TECHNOLOGIES P LTD	SMART PARKING UISNG IOT	Ajaya Celine	There are about thousands of passenger vehicles being deployed into the Indian roads every day. The vehicle population increases the unnecessary traffic, accidents and fuel loss in upcoming smart cities. There is a huge need and demand to optimize the traffic congestions in the cities. Even though there are many traditional parking vendors operating in this field for closed parking like malls, city centers, they don't have a stable and convenient solution for open sky/on road parking.	ELPARK is the innovative precision parking sensor and solution for smart parking management with a wireless long-range, low-power geomagnetic surface mounting sensor-based parking system for Smart Cities, Urban areas and public or private parking spaces. The product roadmap envisages implementation of Parking bays with friction less parking by adopting automatic reservation and parking, cashless payment options, real time dashboards to know the availability of parking facilities across locations	ELPARK addresses the needs of law enforcement and government agencies for monitoring and formulation of parking policies. The product is highly scalable and designed with Global perspective and versatile to tap local opportunity in India to leverage the emerging smart city opportunity for digitization of parking operations in traditional sectors like railways.
EnviroTech	Waste Management	Parth Dave	India lacks a proper infrastructure for collection and segregation of recyclable waste at source. And waste management in itself is a recurring cost that is incurred by any organization. Furthermore, unskilled workers involved in the chain have to work in unhygienic conditions to separate the waste and collect recyclables, which adversely affects their health. There is an urgent need to develop a system that puts all the industries at an advantage.	We develop Recycling Kiosks that automate the process of waste collection and segregation right at the source. This eliminates the recurring cost incurred by businesses to manage their waste. It also solves the problems of collection and segregation for recycling industries. Also, the Recycling Kiosks are assisted with a unique reward ecosystem that encourages people to dispose their waste.	Effective Waste Management Infrastructure ensuring source segregation and easier monitoring and management
EXOZEN SMART SOCIETY SOLUTIONS	Water Management and Water Supply/Distribution, Waste Management, Health, Energy	GIRISH B THIMMAIAH	O&M issues, Efficiency and Productivity, Issues related to asset Maintenance, Revenue leakages due to improper reporting, Deviation in SLA's, Identification of issues before the catastrophic failure and Accountability of all stake holders during implementation & during O&M related to process and assets involved in utility management (water and Energy) and waste management using advanced RF technologies by remote monitoring and controlling	In a remote tribal village successfully Implemented completely off grid solar based IOT solution using Lora technology (private network) as part of the green initiative to reduce the carbon foot print.Which involved water balancing, pressure balancing, pump automation, water quality monitoring, predictive maintenance of the assets, source sustainability monitoring and street light automation using RF technology under ISM free band.	We have still not won smart city project but we have been participating in the bidding process by associating with RPG-KEC, BEL and Allied Digital
EyeROV (IROV Technologies PVT LTD)	Water Management and Water Supply/Distribution, Safety and Security, Energy	Johns T Mathai	Our Lakes, Rivers, Ponds are polluted by Industrial Residues. Unless these water bodies are timely monitored it can cause severe environment damage. As water is one of the scarce resource in a city it needs to be conserved. Also the Lakes need to be monitored for its various parameters like Dissolved Oxygen, PH etc.. as it is a main source of drinking and other domestic and Industrial Use. The current monitoring methods are stationary and are positioned at specific locations.	We are proposing a Surface (Water) Drone/Unmanned Surface Vehicle which can autonomously navigate around the lake periodically & collect various critical parameters of water. The data will be transmitted live over 4G/5G network to cloud & will be stored & processed. We also provide an intelligent cloud platform were all the data from the surface drone/USV will be processed and can be visualized. This platform will be able to predict possible water condition deterioration well in advance.	The current monitoring of rivers and lakes are stationary/static. Only water parameters at specific points can be taken. For a larger lake or water body the water quality parameters needs to be monitored for the entire area over a periodic interval. This procedure cannot be manual as it may lead to several errors and it is resource intensive. Also the lake/river bed profile (bathymetry) can be also conducted.

ForHer Safety	Safety and Security	Osaid Sharif	Sexual Assault	Guardian, Our Flagship product, is an electroJacket with taser like capabilities along with instant message and live GPS tracking specially designed with keeping the safety of women in focus.	1.Instant location SOS alert can be sent to the nearest Police Authority 2. Safe public travel (Disables an attacker temporary for a safe escape for the victim) 3. Protects victim at the critical moment and ultimately boosts safety and reduces crimes in the society. 4. Women can travel alone without the fear of not getting help if needed on time
Fuselage Innovations Private Limited	Agriculture - Precision farming	Devan Chandrasekharan	Problems we addressing with the agriculture sector, that is crop damage, post-natural calamities issues, and plant treatment method. For managing a small area of crop damage farmers usually provide foliar applications to the entire crop acreage. Thus the over or unscientific usage of pesticides results in pesticide deposition and thereby fertility issues, ecosystem damage, and ultimately affecting the yield adversely. Natural calamities affecting soil characteristics lead to loss of yield.	Identifying the pest, nutrient deficiency from spectral UAV, and the predictive analysis has taken, based on data the prescriptions doing through aerial spraying UAV. Spectral UAV Integrated with red, red edge, NIR, IR, RGB sensors aligned for agriculture missions, soil monitoring, and vegetation management. Plant protection UAV crafted for support higher payload, optimizes the cost-effectiveness of crop ultra-low volume spraying deliver accurately and safely.	Agriculture 4.0 it should be necessary plant treatment based on leaf characteristic's,
Fuselage Innovations Private Limited		Devan Chandrasekharan	Problems we addressing with the agriculture sector, that is crop damage, post-natural calamities issues, and plant treatment method. For managing a small area of crop damage farmers usually provide foliar applications to the entire crop acreage. Thus the over or unscientific usage of pesticides results in pesticide deposition and thereby fertility issues, ecosystem damage, and ultimately affecting the yield adversely. Natural calamities affecting soil characteristics lead to loss of yield.	Spectral UAV- spectral UAV integrated with red, red edge, NIR, IR, RGB sensors aligned for agriculture missions, soil monitoring, and vegetation management. Process of the act on data-collecting the data from fields and the predictive and prescription update with farm management software. Plant protection UAV -UAV crafted for the optimum smart agriculture solution to support higher payload, optimizes the cost-effectiveness of crop ultra-low volume spraying deliver accurately and safely.	Smart cities farming can meet the increasing food demands, UAVs can find their applications in smart farming in the greenhouse and open field farming. Our UAV precision farming solution has also proven useful in gaining an extensive overview of plant emergence and population, as more accurate data can help with replanting decisions, as well as thinning and pruning activity and the improvement of crop models.
GetMo	Safety and Security, Energy, Mobility	Sachin Naik	Over the last 4 decades, cities have been growing & filling up with vehicles, people & things. The next 20 years will be crazier. Growing human activity & new developments in mobility will create increasing vehicular demands on public spaces. Therefore, equitable right-of-way and appropriately priced access to the city's roads, curbs & parking space becomes an urgent, growing problem. Cities need to maintain existing infrastructure yet they also need new infrastructure for future mobility.	Our solution (GetMo) an infrastructure-as-a-service solution provided to cities at zero upfront investment, automates the workflow & business processes for curb space management, street parking, traffic monitoring, traffic & parking enforcement. GetMo uses mmwave radar & camera fusion; this helps overcome camera limitations such as poor lighting & weather conditions, occlusions etc. GetMo won the first prize in the urban transport category at NASSCOM's national mobility competition.	1. Curb space management 2. On-street & off-street parking 3. Traffic monitoring 4. Traffic & parking enforcement
Hawaiadda Aerial Innovations Pvt. Ltd	Safety and Security, Periodic Checkups of Health of Environments (agriculture, Buildings, Bridges, Schools, etc.) and alerting the respected authority when found any issue.	Hitesh Sagar	Machine-Human Dependency, Manual, Error Prone, Fragility, Inhabitancy and Portability	Tawny is a revolutionary, innovative miniature electro-optical tactical loitering munition system designed for light maneuvering ground forces such as Infantry, Marines or Special Forces.	Rapid First AID delivery, Remote Law Enforcement, traffic monitoring, Search and Rescue operations and more...
Hindonics Technologies Private Limited	Safety and Security	Sumit Kumar Vaish	There are more than 15 million KIOSKs being operated across the globe. Most of them are touchscreen-based (Touchscreens do not work with gloves on hand) or mechanical pushbutton-based which requires close contact between human and machine. Currently being uses touchless solutions like Voice recognition, Smartphone-based solutions, Gesture sensors, Proximity sensors change the method of operation and make people device dependent.	A touchless interactive screen that can make a particular area in the mid-air responsive to the objects pointed towards it and locates the object's X and Y co-ordinate. This product is to convert the Human-Machine Interaction into touchless as the number of KIOSKs are increasing day by day and so is the Human-machine interaction. Integration with the holographic display will let the users experience the joy of virtual touch in mid-air.	Elevators, Ticket vending KIOSKs, Metro Stations, Railway Stations, Medical Instruments

Indibots	Energy	Suraj Partani	Uncleaned Solar Panels result in up to 35% loss of Efficiency. More than 95% of Solar Panels are cleaned Manually with Water hose and brush, this accounts for 54,00,000 L of Clean Drinking Water being used to clean a small 10 MW plant annually. Solar farms spend more than ₹2,00,000 for cleaning solar panels per Megawatt annually in India. The current method of cleaning is very labor intensive and inefficient resulting in loss of revenue.	Indibots has developed Indibots R12. An advanced Robotic solar Panel cleaning Machine. The Robot is plug and play and does not require any kind of pre-installation. the Robot is able to clean solar panels with 99% efficiency without using any water. The Robot moves upon the panels while cleaning them. Indibots systems are highly reliable and are proven in the market. https://www.youtube.com/watch?v=NcpgwHzcLYs&feature=youtu.be	Automation, Clean Energy
Indivisible Solutions Private Limited	Energy, Outdoor Automation	Rohit Mohata	At night time whereas the street lights are used to brighten up the road. But as these streetlights are continuously 'ON' for whole night. It constantly consumed electricity whether we need light or not. It is wastage of electricity & real time fault can be detected.	We proposed a IOT based Street Light System. Each unit in our system equipped with Sunlight Sensor, Fault detection, IoT controller, and the power consumption monitoring. Our module will sense the sunlight and changes brightness accordingly, fault detection will detect the fault and immediately send a massage to concerned utility. So that corrective action will be taken.	IOT Technology Enabled Real Time Data Analysis Human Presence Detection Connected Devices Digital Data Analysis Digital Cities Innovative Concept Control From Anywhere Immediate fault Detection Time Saving Model Efficient and automatic notification system.
iSenses	Water Management and Water Supply/Distribution, Health	Mr. Karan Behar	1. Global potable water loss due to pipeline leaks being estimated as 346 million m3 / day (126 billion m3/yr) in May 2019. 2. Conservatively valued at $0.31 / m3, the cost of loss amounts to ≈ $39 billion / yr. 3. The global Non Revenue Water (NRW) data as System Input Volume (SIV) water varies from 20 % to 40 %, with an average of 32 %. 4. The business potential for pipeline leak detection industry estimated to grow to $ 2.358 billion by 2027 with a CAGR of 6.8 %.	We employ active- passive multi-sensor, multi- dimensional platforms and multi- faceted techniques for pipeline leakage detection, prediction, estimation and forecast. For detection of pipeline leaks we use space-borne, airborne, ground and "in situ" active- passive sensors such as microwave RADAR, LiDAR, GPR, magnetometer, multi -spectral camera. For prediction, estimation and forecast we employ artificial neural network (ANN) for spatio- temporal leak prediction, estimation and forecast.	Digitization of waterworks assets, processes and services, pipeline large distributions, transmission lines, reducing non revenue water (NRW), increasing margins, service and efficiency.
Jivoule Biofuels Pvt Ltd	Waste Management, Health, Energy	Nandigama Chandrasekhar	Most Indian cities produce waste like Used Cooking Oil, Wet waste,Food waste, Biomass waste, Agri Waste, Garden waste etc. but currently most of the waste ends up in Landfill causing Carbon emissions, pollution, health and hygiene issues to public and to the cities as a whole. So, our startup solution to make Indian cities as smart cities is to deploy Tech enabled App to collect , aggregate and transport waste to processing plant to convert waste into energy like Biodiesel and Compressed Biogas.	The Tech enabled solution is an App with Blockchain based database and Digital Data Analytics features. The App will be marketed to Hotels, Restaurents, Caterers , Food processing business, Households, Gated Communities, Malls, Bulk organic waste generators directly so that they can install the app and use to alert our team for waste collection, route planning, route optimization, traceability, transparency and data analytics of waste generated in real time for actionable insights and solutions.	Used Cooking Oil generators like Hotels, Restaurents, Caterers, FBOs etc. Lot of food waste, Organic waste is produced by Households , Hotels, Restarurents, Caterers and FBOs. Biomass waste and agri waste is produced by Urban farmers , near by towns and villages from urban cities , Household, gated communities and Five stars Hotels garden biomass waste. These use cases in Smart cities convert waste into energy which is clean, green and renewable energy for circular smart cities economy
JSP Enviro	Water Management and Water Supply/Distribution, Health	Fidal Kumar	Life-saving institutions like Hospitals and Pharmaceuticals have the potential to create drug-resistant virulent pathogens. Reports have shown the presence of multiple microorganisms and recently covid-19 virus in the hospital discharge water. The present systems do not completely degrade the drugs present which poses a great threat of developing multi-drug resistant bacteria. With the current COVID pandemic, it is vital to prevent the spread through water and control further infection waves.	JSP Enviro has developed a novel photo-oxidizer that has the potential to completely degrade organic compounds and destroy the bacteria and viruses present in the water. It consists of a photo-oxide film which in the presence of UV light breaks down the antibiotics, drugs and kills the bacteria in the effluent. Since this photo-oxidizer is coated as a thin nano-transparent film, the cost is significantly low compared to commercial oxidizing agents such as chlorination, ozonation.	Although smart cities have well planned infrastructure, according to a report wastewater treatment is not a high priority. Smart cities such as Surat, Bangalore have adopted innovative engineering (drone-based, disinfection tunnels) but still relied on the conventional use of sodium hypochlorite (Bleach). Public Utilities Board (PUB) of Singapore has been a model internationally with state-of the art facility for water treatment, primarily done by chlorination and ozonation.
Karlot - Smart Water Solution	Water Management and Water Supply/Distribution, Energy	Suresh Jambunathan	Aim to convert water management into smart water system for every individual just like EB metering system. The solution works to monitor, maintain, operate, regulate ground water, sump water, grey/ black water and even water from tanker lorries / institutions.	Keeping sustainability at the core of everything we do. With the aid of Internet of Things (IoT) solution, our KarIoT solution converts any standardized water meter data to check the quantity and quality of water including checking for harmful arsenics and TDS. This data is then fed to a cloud solution which can be easily monitored and maintained using a desktop and mobile application.	Water wastage •With automated water level monitoring and control of the valve. •Tracking tanker lorry / metro water supplied to each property with remotely operated automated solution. •Demand based alerts to metro tankers / property users using level and aggregation

KleverMIND Mobility Solutions	Mobility Solutions	Sanghamitra Pattanayak	First Mile Last Mile Connectivity through technology.	KleverMIND® is a state-of-the-art AI based Transport Mobility solution provider where it can handle every aspect of the business in an optimized manner. Currently delivering Mobility-as-a-service at Scale.	Guwahati Smart Cities Project - This is a pilot project to make public transport smart with the help of technology. E-Bike Automation under Smart Cities Project - This is a pilot project to automate the running of e-bikes in a college campus through technology.
KNP Arises Green Energy Pvt Ltd	Waste Management, Energy	Sushil Vaishnav	As per the Indian Food Regulator, India discards 2200 Million litres of used oil every year. 60% of the oil goes into the food chain by reselling it to street food vendors. Repetitive use of this oil causes serious health diseases . Due to the Lack of Infrastructure this oil is thrown into the drain which creates water pollution in water bodies, single litre of oil can pollute 10,000 litres of water. This oil also causes sewage clogging and increases the load on water treatment plants.	We are building a marketplace powered by tech-enabled reverse logistics to dispose of food waste (used cooking oil) to make a healthier and clean society. We facilitate the conversion of used cooking oil into bio-diesel to promote a greener and pollution-free environment.	This is new in India and still huge gap in infrastructure for collection. Currently we are already working in 35 cities with this model.
LykWater	Water Management and Water Supply/Distribution	Srujan Joshi	Hygienic cleaning of Water tank	Once our product is installed in the tank it can convert any tank into a SMART WATER TANK which can 1) Clean water tank without any Human requirement 2) Maintain water level 3) Calculate water consumption 4) Check water quality	The water consumption data can be used to plan the future cities The water quality from the source and the water quality at the location can be compared
MACLEC	Energy	NARAYAN BHARDWAJ	Sustainable Hydro Power Generation at lowest cost, Civil Structure free hydro power generation Portable, replicable, relocatable hydrokinetic turbine to harness hydro power from any kind of running stream	SHK Turbine is next generation, robust, Plug and play type, military grade, completely customizable (500 Watts to 500 kW customizable modular capacity), scalable (few kW to several megawatts) Hydrokinetic Turbine Modules which is capable to get installed in any running stream with negligible structure required for just anchoring and mooring of the turbine.	Proposal Submitted to install Surface Hydrokinetic Turbine at downstream of Najafgarh Drain Delhi to generate Hydro Power from the discharge available in drain.
Marut Dronetech Pvt Ltd	Health	Prem Kumar Vislawath	Mosquitoes menace is year-round problem with huge implications on economy, society and human lives. Global warming is alleviating the problem further. But the solutions lagged decades behind. Absence of advancements in disease surveillance mechanisms, manual interventions, absence of intervention tracking not only are inefficient taking huge costs and time but also ineffective. Manual interventions further create a threat to worker's health.	MarutZAP is world's first real-time and data backed comprehensive mosquito eradication solution involving surveillance, alerting mechanisms, scheduling effective interventions and disease prediction. It assists authorities with a one stop solution to be effective, efficient with huge societal impact. Our disease prediction software further helps local authorities to predict potential outbreaks and take necessary precautions.	1.Comprehensive solution to deal with vector borne diseases involving sensing, monitoring and intervention planning 2. Effective budgetting for interventions 3. Tracking interventions to reduce leakages and improve effectiveness 4. Data based transparent mechanism to handle mosquito borne diseases.
MayaMD	Health	Dr Raju	Every day 16000 Indians dies because of lack of access to healthcare facilities which are preventable. This is a problem in almost every developing country. This is because patients do not take care of symptoms and this can lead to mortality later	AI based symptom analysis tool which can do virtual triage 1400 symptoms and 7000 clinical conditions.	Cities healthcare conscious and safe healthcare practices. Fast triage for emergency, Chronic disease monitoring, Preventing deaths
MinionLabs	Energy	Gokul Shrinivas	In order to save energy costs in any buildings/facilities, the facility maintenance should have each-and-every equipment level energy consumption data, then only the user can understand the problem and able to make necessary actions that lead to energy savings. At current scenario, to get equipment level energy consumption data, there is a need of dedicated sensors/meters required which requires high CAPEX & OPEX investment with longer/unclear ROI thus making it a loss.	Minion a hand sized energy auditing device with much easier installations has the ability to analyze this data for valuable actionable insights with non-intrusive energy management solution. Minion senses each and every appliances, devices and tools turning ON and OFF inside the building and gives you a comprehensive report on predictive analytics and maintenance without burning a hole in your pocket. Energy Savings Successful Case Studies - https://www.minionlabs.tech/energy-management	Use Cases: 1. Active Energy Efficiency 2. Affordable and reliable technology 3. Optimum energy utilization 4. Management of resources Minion Energy Management Solution targets building energy efficiency, Smart grid, Transport (EV Energy Management) and new energy services like peer to peer energy trading, solar self consumption, etc.

Moksh Garg		Moksh Garg	1. Unavailability of basic charging facilities at locations where vehicles are parked for 95% of the time 2. Expensive charger installations at residence complexes and workspaces 3. No transparency between charger host & users about energy consumption and billing	We are making a low-cost AC charging point for electric vehicles. The device is a standard 15A socket outlet with an IoT module used to relay data to a mobile application. The app is used to book slots, monitor charging status, and pay. The device can be hosted by anyone with a parking space and a standard electricity connection of 240V 15A, making installation very easy.	Our device can be hosted anywhere with a parking space and standard electricity connection of 240V, 15A. It is a plug and play solution and needs no infrastructural changes for installation. It is a very affordable and compact solution to enable EV charging at any parking lot or establishment.
Nawgati	Queue Management	Vaibhav Kaushik	Nawgati tackles the congestion and non-optimal resource utilization problem by a two-fold solution. On the consumer side, it routes users based on existing congestion patterns, fuel type and user preferences through its consumer-facing app. On the fuel providers' side, it supplies real-time congestion data and actionable insights through its business-facing arm, Aaveg. In addition, it attempts to streamline the fuelling experience at pumps in the best possible way.	Nawgati tackles the congestion and non-optimal resource utilization problem by a two-fold solution. On the consumer side, it routes users based on existing congestion patterns, fuel type and user preferences through its consumer-facing app. On the fuel providers' side, it supplies real-time congestion data and actionable insights through its business-facing arm, Aaveg. In addition, it attempts to streamline the fuelling experience at pumps in the best possible way.	We aim to launch our Queue Management solution for all the fuel stations in the cities. Nawgati's QMS is efficient, and rapidly scalable, allowing for mass deployment in the span of weeks. Once the Aaveg system has been deployed at major retail outlets, we will roll out our 360 degree fuelling app for the consumers of the region. The app would offer a one-stop fuelling solution for the end-user, everything from recommending stations to keeping track of transactions.
Neona Embedded labz Pvt Ltd	Water Management and Water Supply/Distribution, Energy	Anchunath R	1. Making all building smart and intelligent by Realtime monitoring and saving all resource like Water, Energy, Gas for Smart City 2. Providing automated and correct billing to Smart city customers 3. Finding leakage and theft of resource and with AI, we can find the root cause of the same.	* We make all Meter "Smart" at very low-cost Solution (Energy, Water & Gas) * We bring Latest Technology - IoT Solution for Smart Metering * Helping common People in proving accurate and correct Bill * Helping Utility to find Energy Resource leakages, Theft & find Power-Quality	1. "Smart Energy Saving and Monitoring System " To find the wastages, losses, theft, and other Energy qualities and find root cause of problem. 2. "Smart Water Meter- Save & Provide good quality drinking Water " - Real-time monitor water source (tank/pump) to destination (house & building) find leakage, theft, automated accurate billing and payment 3. Safe and Smart Gas monitoring system, to deliver the gas to reach building and houses enable a remote billing, detect gas leakages, wastage.
Newtons Apple Security Solutions	Safety and Security, Cyber Security	MANDAR M WAGHMARE	Negligence of home network security Network security is important for home networks as well as in the business world. Most homes with high-speed internet connections have one or more wireless routers, which could be exploited if not properly secured. A solid network security system helps reduce the risk of data loss, theft and sabotage. Hackers target naive people as they are easy to attack due to inadequate awareness.	NATASHA (Newtons Apple Threat Analyzer and Secure Home Assistant) is a state of the art AI-based Threat Intelligence system, which monitors the inbound and outbound internet traffic of your network and identifies the threats present in your network. This system is powerful enough to protect your network from the identified threats. It is designed to be a plug-and-play device, which means even a person from non-technical background can use it with ease.	We are moving towards an era of Smart Appliances and Smart Homes, where many of the appliances are connected to the home network. This enhanced connectivity is introducing new attack surfaces and therefore increasing the possibility of more cyber attacks. Also, unlike a company/business, no one has a household budget for cyber security to address these concerns.
Nimble Vision Pvt Ltd	Water Management and Water Supply/Distribution	Chinnayya Math	In the current scenario the manholes being monitored manually, which results in massive effort, cost and time consuming. This is not efficient approach and results in overflowing, damaging roads and traffic problems. The presence of harmful gases present inside the manholes results in human casualties. Currently it is impossible to know in advance any such gases. The pollutants present inside the sewage are not monitored in real time. Missing suggestions to improve the existing infrastructure.	Remote & real time manhole monitoring solution. Provides live status of the each manhole sewage water level, sewage water flow for entire day of each manhole with geo location. Provides advance warnings and triggers on the possible overflow. Integrates the rain water and sewage water flow. Smart suggestions based on the past history analysis about the improvements required on the infrastructure side. Brings the live sewage water quality details (COD, BOD, Ammonia) &harmful gases presence info	Smart Sewage infrastructure remote monitoring with integrated command center Sewage quality monitoring and compliance with pollution control board and NGIT

Oceo Water Private Limited	Water Management and Water Supply/Distribution	Vikram Gulecha	Monitoring of water quality is essential in order to characterize waters and identify changes or trends in water quality over time, or to be able to respond to emerging water quality problems, such as Identification of sediment plumes, harmful algae blooms and red tides. CHALLENGES -Unavailability of historical water quality baseline of an area -High cost of traditional monitoring approaches at uncertain safety levels	We provide satellite-based hydrological analysis for lake water quality monitoring Unlike conventional costly and time-consuming sample collection and IoT-based point measurement methods used in lake water quality analysis, our services can help detect lake biophysical parameters at a high rate of precision without physically being present on the field.	We have carried our projects with NGO's and Utilities in Gujarat, Tamil Nadu and Bangalore.
Order & Pickup: Home Delivery from Nearby Shops	Queue management and Home delivery	Akash Pratap Singh	Absence of one stop shop for buying daily need items online from shops in our locality. lack of online Home delivery services for daily need items especially in non-metro cities. Risky Unordered queues & waste of time when going to shops. Barrier of technical expertise to go online in local shopkeepers of Kirana/Medical stores & similar stores. Need of advertisement funds to setup online channels & reach customers. Lack of analytical skills to maximise sales from the limited available budget.	A Mobile App to buy online from nearby Kirana/Medical Stores & more, get fastest home deliveries. One can easily compare items on price, reviews, availability in your local stores & buy anything at the comfort of their homes. Our technology empowers local storeowners by providing them online presence with zero advertising costs & no technical expertise. They'll use our dedicated seller App to manage online orders, payments & AI/ML powered inventory management tools to boost sales on set budget.	All shops inside & nearby smart cities will be available online & people residing there will be able to check shops live open/close status, crowd levels, available items & buy daily use items at the comfort of their homes & avail home delivery in just few minutes. This will not only be a convenient way of shopping but it saves a lot precious time too. Hence It's a must have facility for all smart cities.
Orxagrid Solutions	Safety and Security, Energy	Yash Kulkarni	Utilities in the electricity sector are facing three major challenges at present: a) ageing grid having increasing maintenance costs, b) Distributed Energy Resource Integrations (solar, wind, batteries, electric vehicle charging stations) and c) high AT&C grid losses (theft alone is $90B globally). These aspects when taken together represent a major problem in achieveing the UN SDG Goal 7 of providing reliable affordable and sustainable electricity to all.	OrxaGrid's IOT sensors (SEED: smart feeder monitoring device and STEM: smart transformer monitoring device) and Grid Analytics Platform (GAP) system is an award-winning solution which supports the global drive towards a better energy future. GAP system monitors critical grid nodes for improvement of network efficiency. The system includes unique loss prediction machine learning algorithms that enable electricity utilities to make intelligent and informed optimization decisions.	The OrxaGrid GAP system has use cases in the following sectors: a) electricity utilities, b) energy efficiency solutions for industrial operations, c) asset health management solutions across industries and energy utilities and d) grid monitoring solutions for electricity grid operators.
PiStarTech Private Limited	Health	Anis Fatema, Deeksha Devendra	The physiotherapy equipment present in the market does not have a proper mathematical or statistical assessment of patient's health. The measurement of patient's progress in a session and over a duration of time is not done. Most physiotherapist cannot afford appropriate equipment because they have to be imported from abroad, and are very expensive of the order of lakhs of rupees. Our product is a solution to this problem by providing a low cost flexible pressure sensor mat.	Our product is a flexible low-cost pressure sensor mat. It allows the user to capture and record pressure conditions occurring in between the contacting surfaces in real time. It can be used in various applications that include but not limited to smart physiotherapy, smart mattresses (body pressure measurement) and smart chairs (for posture correction). We will be using Artificial Intelligence and machine learning for data analysis and error correction that will add an essence to our product.	Our product will mainly target the health care industry in cities. It will transform the hospitals in smart cities to smart hospitals, and chairs in offices to smart chairs. The sensor mat can also be used in wheelchairs in hospitals and for body pressure mapping in mattresses. The data from the sensor mat can be used to enhance the quality and interactivity of the system in which it is used.
Prescripto	Health	Harish Neotia	Real Time Patient Diagnnosis and Medical Assistance	Contactless IR Thermometer , IoT enabled connected through Cloud based Application for Remote monitoring and Connecting Doctors, Medical Stores, Testing Labs , Hospitals on single platform .	Remote Health Monitoring System. Virtual Medical Assistance
Quantanics Techserv Pvt Ltd.	Waste Management, Safety and Security, Energy, Internet of Things	Mr.T.Karthick	As residential electricity prices have increased and residential solar and electric vehicles become more popular, many consumers are considering adding a home energy monitoring system to their homes. These devices provide real-time visibility into energy usage, some provide more granular appliance level data and consumers can easily control the appliances from the predicted machine learning approach.	Power MonC, sits in your electrical breaker box and gives in-depth insight into your home's entire power usage. Power MonC works by electromagnetically listening to the power flowing along the 2 hot wires that run from your electric meter to your breakers. By measuring the current flow a million times each sec, Power MonC can observe changes in load with precise detail and, based on a machine-learning database.This means it can tell you exactly how much energy different appliances in your house.	Smart Lighting Daylight Harvesting Load Management Smart power - Smart meters facilitate real-time pricing, automated recording of the electricity consumption and a complete abolition of errors due to manual readings and reduce labour cost and enable instant fault detection. Ambiance and Utility Improvements.

Rakshak - Symbol of Safety	Safety and Security	1. Mayur Parmar, 2. Rinkal Kacha	As per current social life, people face so many problems i. e. kidnapping, Child trafficking, Citizen Safety, Panic situation, Medical Emergency, Accidents, Kids Protection, Aged People Safety, Harassment, Prevent Sexual Abuse, Rape, Murder, theft, molestation etc. I want & can protect people as much as possible with Rakshak App.	The Product Idea emerged from founders own bad experience. Safety concerns are not only for woman but for all mankind who are at risk. Many woman are not comfortable to work in some of the industry sector which hold their capabilities to grow and also hold growth of India as India need more and more woman to join hands with man in building nation, so we thought to give safety tool so they can achieve their goals without fear.	Safer environment can be created for all Citizens of India and asocial elements will also be under threat to get caught and crime rate will come down drastically. Rakshak App has come up with new innovative safety features. They provide an easy way to stay safe on the road and alert family, friends or police in distress situations.
RoadMetrics	Safety and Security, Road Mapping & Monitoring	Dipen Babariya	Road and street level data is an important asset for mapping providers, automotive companies & smart cities/townships. Vital information such a street level informatory signs, street assets and road surface information like potholes, cracks etc. cannot be accessed through aerial level satellite imagery data. At present, government bodies across India and other countries have no technology that can efficiently monitor its road infrastructure. Road assessments/mapping are done manually.	RoadMetrics is a deeptech mapping startup based in Bengaluru, that leverages AI to identify and classify road and street features such as potholes, speed breakers and street signage. RoadMetrics Enterprise dashboard helps visualise an entire road network with a brid's eye view and we use image data from a simple smartphone to identify over 10 types of road conditions and 65 types of street level classifications.	1) Road Surface Assessment & Monitoring 2) Road Asset Inventory Management 3) Prioritising Maintenance 4) Budget Allocation 5) Analytics Based Town Planning 6) Route Accessibility 7) Data Driven Road Maintenance Decision.
Silken Automation		Atul Dubey	The wastage of Electricity due to negligence of people is significant. By providing relevant triggers and adding smart automation, we can save upto 25% of overall household electricity consumption.	We are building a Smart Switching Solution to Save Electricity. The Switch will have the folllowing features: 1. Mobile App to remotely control the Appliances 2. Touch panel to ensure Shock Proof method to control devices in premise 3. Smart automation based on the sensors and Timers 4. Voice control with Google assistant, Alexa, and Home Kit integration	1. Smart offices - to ensure efficient use of electricty. 2. Smart Govt. College Campuses - Centralised control of devices in the whole campus. 3. Smart Public places - The Lights and Fans in the Bus stops, railway sations, hospitals, community halls etc. are smart enough to ensure they are OFF when no one is around. 4. Smart Govt. building - The accomodation of the Govt official should be smart so that appliances in the building are not wasting the precious electricity.
SiSoC Semiconductor Technologies Pvt Ltd	Water Management and Water Supply/Distribution, Energy, Smart Infra	Hari Babu	Presently utility companies (Water and Electricity) in India use Manual meters at consumers' premises for billing. Major drawbacks: 1) Too many lineman's required to read the meter of each consumer. 2) Chances of error prone due to manual intervention is more 3) Shortage of employees/restrictions. Govt push a lot for installing Smart Meters but, 1) Installation of Smart Meters will cost Billions of investment. 2) The disposal of currently existing millions of meters is another challenge.	Solution : Instead of procuring Smart Meters , Why don't we upgrade our existing meters and make it smart enough? Our product: Smart-Meter Wireless Adaptor - a pluggable module which when connected to the Existing meter turns it into Smart Meter. It acquires all readings from the meter and sends them to cloud wirelessly through LPWAN Technology. It accomplishes all the possible operations that a New Smart Meter can do with minimal investments and still keeping present system intact.	Smart Infra, Smart Utilities, Smart Industries. , IoT etc.
SmartTerra	Water Management and Water Supply/Distribution	Gokul Krishna G	Water utilities lose up to 40% of the water they produce due to leakages in pipe network or faulty water meters. This aggravates the water scarcity, even us more than 35% of urban households in India do not have access to piped water supply. The solutions available today to proactively reduce water loss are hardware focused, expensive, and unviable for a large number of towns/ cities. There is a need for data driven solutions for loss reduction that are affordable and easy to use.	Our products MeterCity and NetCity provide AI powered analytics to support utilities in reducing water loss. Our tools leverage data already available with utilities, unify them to address data-gaps, and deploy AI based algorithms to locate faulty customer meters or leaking pipes, thus enabling utilities to proactively maintain network assets and reduce losses. Our products are cloud hosted and easy to deploy/ scale. Their modular design enables them to be deployed at utilities of any size.	- deploy MeterCity to analyze consumption data and reduce water loss from faulty meters - deploy NetCity to analyze pipe condition and help locate leaks in the buried pipeline - develop dynamic water balance that helps track severity of water loss across network - identify consumers with high consumption for targeted water-use efficiency campaigns - quantify and track water loss indicators to help cities manage PPP contracts effectively

SunEmison Solar Energy Private Limited	Energy	Prahlad Thakur	Architectural building glass is expensive construction material thus making economically unviable and environment unfriendly by generates green houses gas emissions, since it is increases cost of electricity higher by 40% and reducing the cost of investment in return.	Artificial intelligence enabled architectural building glass embedded with photoactive (PV - PA) /synthetics technology, Glass aim to convert traditional building construction materials into energy generator optimizing different things at the same time, namely electricity production and intelligent behaviour analytics i.e. Anomalous behaviour detection, Behavioral biometrics and analytics for user authentication / fraud detection, Energy / building management system by UI/UX.	As an application of the PV technology, building integrated glass systems is feasible renewable power generation technology to help buildings partially meet their load to become self-energy sustained. In addition to building integrated photovoltaic/thermal systems provide a very good potential for integration into the building to supply both electrical and thermal loads. Glass Block application segments: - Single-ply membrane roofing - Facades - Architectural shading
Swaayatt Robots	Transportation | Autonomous Driving	Sanjeev Sharma	We are solving the problem of autonomous driving, to make it safer and cost effective.	We have been developing autonomous driving technology (software) that allows autonomous vehicles (AVs) to negotiate highly stochastic traffic-dynamics, such as in India. Furthermore, our perception technology enables AVs to perceiving environments as unstructured as in India. Overall, it makes the technology much more safer, compared to the competitive technologies developed by primary competitors (such as Waymo, NVidia, Aurora Tech, TuSimple, etc), when deployed in developed countries.	Autonomous Transportation; Safe Transportation
Technixia Automation Private Limited	Energy, Energy Management, Energy Automation using IoT/AI Technology	Suruchi Gagan	The problem that we are primarily solving 1. 30% - 50% of Energy Loss due to Inefficient Management of Appliances in Large Infrastructures 2. High Energy Resources Scarcity due to inefficient usage and Consumption 3. Unavailability of Autonomous Real Time Appliance Control in Building Management System leads to Overrun in Operational Cost. 4. Improper Water, Air and Waste Management System with interconnected real time simulation system.	Technixia is helping cities and townships create master technology strategy to blend IOT, AI and other digital solutions to improve city services and citizen experience. Technixia offers smart IoT powered solution for Energy, Air Quality, Water Quality and Waste Management and Health Monitoring for appliances along with autonomous controlling and data access for larger establishments in any Smart City.	Some of the use cases that we are catering to any Large Building and Infrastructures currently are:- 1. Environmental Health and Public Safety 2. Smart buildings Management Systems 3. Clean Energy and Smart Energy Management System 3. Smart Utilities (Air, Water and Waste Management System) 4. Smart Street Lights and Smart Parking System 6. Smart IT and Communications.
ThinkRaw India Pvt. Ltd.	Water Management and Water Supply/Distribution, Waste Management, Energy	Amrita Jagatdeo, Minushri Madhumita	We are trying to solve the following existing problems in fish and prawn farming. 1-High morbidity rate between spawn to fry stage 2-Low value of avg. fish/prawn production per acre per year - reduced revenue from fish/prawn farming 3-Uneven dissolved Oxygen level 4-Water pH level restrictions – 6.5 to 9. It is very necessary to maintain this for a good produce 5-Non-uniform distribution of Feed and inadequate feeding 6-Disconnected Key Processes	It is a solar power operated floating device that can move and cover the entire area of the water body with the help of a smart control sensor system (IoT). It would help in the uniform distribution of feed, help maintain uniformity of dissolved oxygen (DO) level in the water and maintain the pH level of the water within the specified range so that the per square meter yield can be increased and in turn the annual revenue for a farmer can improve.	Yes, one unit with STPI, Bhubaneshwar
Tranquility IoT & BIg Data Solutions	Health, Energy, IoT Backbone services (IoT Gateway for edge computing)	Shiju Sathyadevan	Backbone services for Smart Cities using smart edge computing gateways. Smart building, Smart street lights, Energy Management. Convert legacy systems into IoT enabled systems, Convert any off-the-shelf barebone sensors into fully IoT enabled device in relatively low timeframe using our reusable IoT hardware components called IoT enablers. This helps us to offer solutions in any domain quickly which is our core strength.	TIBS IoT Gateway for Edge Computing. Energy Management through Smart meter wireless adaptors (for converting existing legacy meters into smart meters) and wireless smart meters of various amperages. Smart buildings through Wireless Smart lighting, Floor level energy management, CO, CO2, Smoke sensors, All-in-one Ambient Light/Temperature/humidity Sensors, Duct humidity and temperature sensors, Differential pressure sensors for Duct air flow optimization, Automated overhead water tank management	Smart Buildings, Weather stations, Air Quality Monitoring, Smart street lights, Energy monitoring and Management, Preventive Maintenance of Critical infrastructures, Heterogeneous protocol supported gateways to collect data from sensors from different vendors, .

Traxion Analytics LLP	Water Management and Water Supply/Distribution, Safety and Security, Construction	Sailaja Nori	The Indian Infrastructure industry is huge, with investments of $4.5Tn planned by 2040. But since the industry is still run in an offline and distributed mode, processes are largely opaque & it suffers significant losses from lost productivity, time and wasted resources. Traxion helps orchestrate all processes in the ecosystem, optimizing efficiency & productivity to reduce project costs, on one unified platform. Traxion guarantees 3-5*% of overall budget savings for most Infra projects	Traxion is a SaaS solution that offers an end-to-end, cloud+mobile collaborative platform & tools for managing large projects with thousands of moving parts. By bringing Assets, Manpower & Processes onto the same digital platform, the execution process is made transparent and measurable. The platform enables real-time alerts of tasks, automatically measures productivity, efficiencies and deviations in the processes and gives managers a visual dashboard to control the project from.	Digital Progress Monitoring of Infrastructure (Construction & Maintenance phases of Assets), Law Enforcement & Surveillance (same platform can be used as a Task/Workflow management platform for any Vertical, with minimal customization), Revenue Management & Citizen services
Vacus Tech Pvt Ltd	Energy	Pratik Magar	Vacus is trying to solve the broader issue of Energy in smart cities. The product that we have developed can be used in multiple subsegments in the smart city. We are depicting one such example that can be used for Data centres: Problem 1: Reducing Downtime (disrupt normal functioning and are sources of huge revenue loss) Problem 2: Reducing the PUE (High PUE in a Datacenter is a measure of how efficient the Datacenter is. Higher the PUE value, less efficient the Datacenter is.)	Vacus has US Patented technology to make Cities/ data centres go towards green approach. We have developed a sensor that is capable of Indoor Location & Tracking (Proprietary Technology US Patent Number: 10,429,485 Accuracy = 80 cm), temperature & Humidity Measurement (+/- 1Deg, +/-3RH), Vibration Measurement, Low-Power. Battery Life = 5 Years. Battery Type = Replaceable Li-Ion Coin cell. Accurate tracking helps in reducing downtime by minimizing the human errors.	Making Cities Greener by targeting the big energy consumption companies like Data centres/ Manufacturing facilities
VirtuBox Infotech Private Limited	Information and Technology	Prakash Chandra Rastogi	Smart Cities have huge facilities and they have multifunctional activities going around the city. The huge areas of facilities or organizations are often difficult to manage. Today, when cloud and mobiles are at the peak of the IT wave, smart cities, companies, businesses, etc, are struggling to provide Digital Customer Experience to citizens due to its technical complexity, digital security, and high cost of development. They find it difficult to provide a complete package to the citizens.	Unique CMS to update and manage data from a centralized backend. Create a white label mobile app/website/interactive touch screen kiosk using the platform without coding. Display of information, sharing and managing this information, messaging and alert system, safety features, POS, Wayfinder or the indoor positioning system, call to action. Fast deployment,SaaS model, cloud-based, smart search engine and low cost are some key features	Information Display and Share Messaging and alert system Wayfinder to Navigate locally Multilingual Platform Ads and Promotion Ticketing and payment Local Experts Directory Feedback/Survey Save Paper
Yobny Technology Solutions Pvt Ltd	Safety and Security, Health, Queue & Crowd management	Saurabh Vyas	We are solving problem of queues and crowd, and digitizing the queuing experience to reduce wait time and increase operations efficient.	We helps businesses in improving their customer engagement, customer's experience by managing their queues & unmanaged crowds. Our SaaS platform, QueueOne, created digital avatar of day-to-day queues and automate various aspects for businesses.	Use-cases QueueOne can be put for in Smart Cities: - Crowd control in public places (Malls, Metro stations, Bus stands, etc) - Queue management at Hospitals, Labs, Clinics, Banks, Restaurants, retail stores, etc - Ticketing/Registration/contact-less validations/capacity management at tourist attractions - Digital dashboards (signage) showing crowd level (low/moderate/high/critical) even raising alerts as needed.
YuTu Electronics Pvt Ltd	Safety and Security	Abhishek Srivastava	Removing pilferage and theft from Logistics Transportation and warehousing.	YuTu® has developed a smart transportation security solution combining vehicle tracking with lock operations monitoring to fool proof the system to remove pilferage and theft during transportation of goods. There is no way it can be found who, when & where the lock has been opened. But then “Lock meets internet” and the situation changed drastically. Rudo smart lock provides enhanced security which was never even thought of and tracks the location and lock operations.	smart locking and tracking, adding and removing electronics access,
Zerotouch	Safety and Security, Health	Venkat Keetha	We're solving India's biggest practical problem, of touching a toilet. In India, unhygienic toilets are never addressed. One of the biggest and most common concerns of using toilets is avoiding diseases and bacteria. Current cleansing methods including health faucets create a lot of spillage on the toilet seat and the bathroom floor when used Health faucets are also not a ergonomic way of cleansing and often lead to wet, messy and unhygienic bathrooms. People forget to flush sometimes	Zerotouch is a 100% touch-free commode, which comes with Auto-open/close of Lid, and seat can be lifted with wave of a hand, Auto-flush, and UV-C clean technology, user can also control the toilet from his personal mobile app in public places without even touching a single button Zerotouch save around 1700l/p/y. Zerotouch Hygiene Network is a Network of Self Administrated Smart Toilets in 200+ cities, in India. To ensure hygiene in public places across the country.	Zerotouch gives more weight for any location to be called as a smart city, good hygiene is everyone's right and a necessity, Despite of having some much advancements in technology we all still go touch a toilet, touch-less toilets will be the next Industry Standard & Revolution, Instead of other smart equipment Smart Toilets should be Installed on priority bases, which will also improves peoples health and transform the nation

Zodhya	Energy, Efficiency	Rohith	We found that commercial spaces/ business establishments spend up to 30% of their OPEX on energy bills, the next highest after rentals. With ongoing COVID19, COOs & Facility managers are under pressure to reduce costs and improve operational efficiency. Most of the available solutions just provide IoT/ analytics to your usage, like a post-mortem. But there isn't a solution where clients can directly benefit from implementing with Immediate effect. "Smart also should be sustainable in long-term"	We are a startup reducing the energy bills of commercial spaces by 30% using tech. Our devices enable reduction on energy bills right from Day1 (T minus Zero), with ZERO operational changes.	Energy optimisation & reduction for buildings Lowering carbon footprint on the whole Connecting misc demand to microgrids/ renewables Lowering demand on the grid and improving efficiency