सत्यमेव जयते

Office of the Principal Scientific Adviser
to the Government of India

BCKIC
Bhubaneswar City
Knowledge Innovation
Cluster Foundation

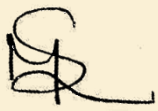
COMPENDIUM OF

DEPLOYABLE TECHNOLOGIES

MESSAGE

Bhubaneswar City Knowledge Innovation Cluster (BCKIC) Foundation (CINU85320OR2022NPL038973), a Section 8 Company, stands as the official embodiment of Bhubaneswar City Knowledge Innovation Cluster. This initiative, directed by the Office of the Principal Scientific Advisor to the Government of India and guided by PM-STIAC, ingeniously connects research institutions, academia, industry, and corporates through a Hub & Spoke Model. This dynamic cluster framework nurtures innovation and knowledge creation, allowing BCKIC to actively engage stakeholders in generating knowledge-driven solutions for local, regional, and global challenges.

This report is a compendium of Deployable technologies, carefully curated by BCKIC and supported by our incubator stakeholders. These technologies are primed for deployment, pilot-scale integration, or meaningful support through Corporate Social Responsibility initiatives. As we navigate through this collection of “Make in India” innovations, addressing challenges in healthcare, agriculture, and the industrial ecosystem, I urge policymakers, government bodies, industries, corporates, and fellow stakeholders to embrace the potential for partnerships, collaborations, and conversations. By uniting around knowledge-driven solutions, we can propel transformative change.



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e-File: G-30011/62/2021-PROJ
Prn.SA/Bhubaneswar Hub/2019
Government of India
Office of Principal Scientific Adviser
to the Government of India

Vigyan Bhawan Annexe
Maulana Azad Road
New Delhi 110011

Dated: the 20th April, 2022

OFFICE MEMORANDUM

Subject: Bhubaneswar City Knowledge Innovation Cluster (BCKIC) - Establishment of Section 8 Company

The "Office of the Principal Scientific Advisor" to the Government of India has initiated the establishment of City Knowledge and Innovation Clusters in selected cities across the country under the guidance of the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC). Under this initiative, the Bhubaneswar City Knowledge Innovation Cluster (BCKIC), has been set up at Bhubaneswar, to foster growth and development in the region.

The Bhubaneswar City Knowledge Innovation Cluster is now registered as the Bhubaneswar City Knowledge Innovation Cluster Foundation (CIN U85320OR2022NPL038973), a Section 8 company under the provisions of the Companies Act, 2013 on 18th February, 2022. Bhubaneswar City Knowledge Innovation Cluster Foundation (BCKIC Foundation) is the bonafide legal entity of the Bhubaneswar City Knowledge Innovation Cluster, an initiative of the Office of the Principal Scientific Adviser to the Government of India.

The aim of the city cluster is to seamlessly connect R&D institutions, academia, startups, government institutions and foundations to leverage the complementary strengths towards facilitating innovations and knowledge creation with translational impact. The company will work with a multi-sectorial outreach towards creating a Hub & Spoke Model, to drive the translational innovation and deployment of the technologies for larger public good including creation of shared ecosystem, addressing the local and regional challenges as well as working on projects of national and global importance including:

- Harnessing the knowledge and expertise available in partnering academic, R&D institutions and industries
- To address the various local, regional and national challenges through science and technology interventions
- To stimulate manufacturing and commercialization of research discoveries
- Channelizing interventions and innovation for social impact in close collaboration with academia, industry, government bodies and philanthropic organizations
- To engage in industry oriented applied research to help industries stay competitive and sustainable
- Creating innovation pipeline and pathways for entrepreneurs at institute level
- To support and drive start-up ecosystem through incubators, R&D institutions, industry linkage and capacity building programs
- To promote Atmanirbhar Bharat and nurturing local manufacturing through collaborations and consultancy services.

(Jitendra R Gaikwad)
Deputy Secretary to the Government of India
Tel. No. 011-23022112

BCKIC
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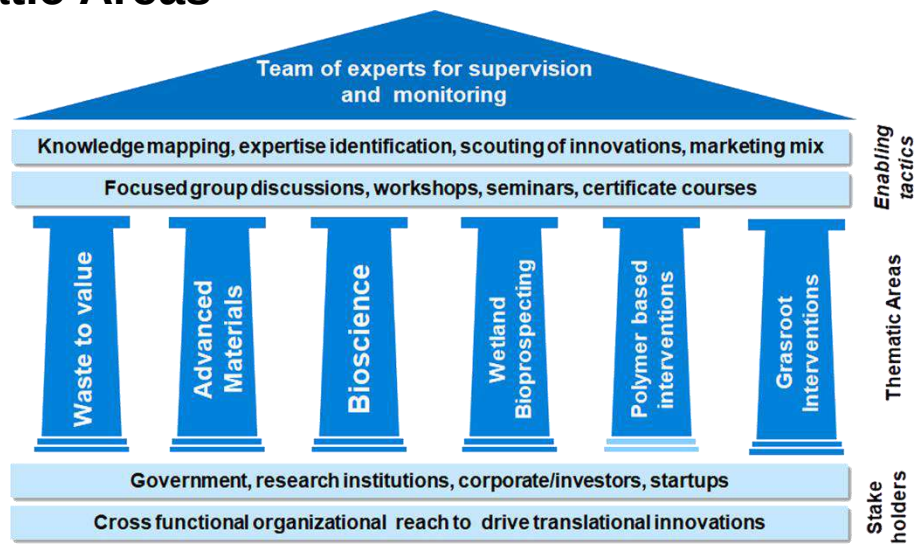
Knowledge Innovation
Cluster Foundation

Genesis

Bhubaneswar City Knowledge Innovation Cluster Foundation, an initiative by the Office of the Principal Scientific Adviser to the Government of India, is set up under the direction of the PM-STIAC to seamlessly connect research institutions, academia, industry, and corporates towards creation of a Hub & Spoke Model, actively facilitating innovation and knowledge creation as well as technology development and deployment.

The vision of the BCKIC is to create strong linkages between existing academic institutions, national & state research laboratories, industries, start-ups, MSMEs, union ministries, state governments, philanthropic foundations, and international organizations, to propel scientific & technological innovations and develop market-ready products/solutions/technologies.

Thematic Areas



Strategic Focus

BCKIC offers a versatile research based shared ecosystem contributed and curated by all the partner R&D institutions, IP-rich startups, based out of Odisha & North East. The core of BCKIC lies in technology development, refinement and deployment by:

- A comprehensive think tank encompassing conceptualization, R&D, pilot projects & field adaptations.
- Harnessing the knowledge & expertise available in partnering academic, R&D institutions and industries.
- Stimulating manufacturing and commercialization of research discoveries.
- Helping industries with technology scouting, and technology transfers from academia/IP-rich startups.
- Channelizing Innovation for Social Impact; creating sustainable development solutions through technological innovations.
- Facilitating industry-oriented applied research to help industries stay competitive and sustainable.
- Enabling field implementation of developed technologies.
- Promoting capacity building through exposure visits and workshops.
- Creating innovation pipeline and pathways for entrepreneurs.
- Enabling institutional infrastructure through PPP for IP-rich start-ups.
- To promote Atmanirbhar Bharat: Nurturing Local Manufacturing.

Leveraging the Strength of

Innovations from Research Institutes	Innovations from Start-ups	Grassroot level Innovations

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- ENABLING LAB TO MARKET
- COLLABORATIONS & CO-CREATIONS
- FUNDING SUPPORT
- MARKET ACCESS
- MENTORSHIP & CONSULTING
- IP MANAGEMENT
- LIVELIHOOD AUGMENTATION

Core Components

Institute Network	Industry Network	Investor Network	Tech Transfer Office

BCKIC Foundation Ecosystem Landscape

26 Collaborations	**16K+** Individuals Connected	**42** Programs/ Workshops
3 Regional Chapters	**5** International Outreach	**15 Cr+** Funds Raised & Facilitated

Footprints

05+ Startups Deployed	100+ Innovators Mapped	500+ Ideas Scouted
04+ North East Outreach	20+ Districts Footprint	70+ Institutional Outreach
12+ Forest Cluster Development Project	22+ Rural Livelihood Projects	200+ Restore Promise of Water

CONTENTS

TECHNOLOGIES READY FOR DEPLOYMENT & CSR FOCUSED

TECHNOLOGIES READY FOR DEPLOYMENT

DEMONSTRATION USE CASES

CSR WTP SNAPSHOT

TECHNOLOGIES READY FOR DEPLOYMENT & CSR FOCUSED

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★ DEPLOYED

KARMA

Thematic Area

Solar Micro Pump- Affordable Solar Power for Small and Marginalized Farmers

APPLICATION

The first solar micro pump certified by Ministry of New and Renewable (MNRE) provides a game changer for more than 75 % of farmers with 2 hectares or less land.

COMPANY NAME

Kalinga Renewable Energy Manufactures (KARMA) Pvt Ltd

FOUNDER'S NAME

Saroj Nayak

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Installed and operated successfully in 1000s)

INTELLECTUAL PROPERTY

Multiple Patents

PROBLEM ADDRESSED

More than 50 % of farmers do not have access to year Around irrigation thereby restricting their full potential Income while farmers with diesel powered pump spend more than 30 % of total input cost as recurring expenses. Earlier solar pumps were targeted for farmers with 5 hectares or more. In addition, KARMA solar micro pump uses surface water and does not exploit ground water. KARMA introduced portable solar water pumping systems for use in irrigating the large number of small farms- it is Unerization of Irrigation.

ABOUT THE TECHNOLOGY

The portable solar panel uses Copper Indium Gallium Selenide (CIGS) and uses AC/DC power through patented technology which minimizes solar panel cost. The light weight and foldable panel allows total pump system as portable unit useful for multiple farmers and pumping at various locations. When pump is not used panels are used to charge battery, provides power to other items such as small flour mill, etc.

FUNDS RAISED/ACHIEVEMENTS

- Farmers, small shop owners, individual households for
- multiple uses such as pumping water and using solar
- power for reducing electricity bills. About 200 million
- farmers could use such pumps to provide year round
- irrigation with affordable price.

PRODUCT IMAGE

USP

- First solar micro pump certified by MNRE and
- Industry standard.
- With flexible and light panels pump goes mobile!
- Tie up with Kirloskar service is provided within 48 hrs
- With patented technology uses beyond pumping!

END USERS/CUSTOMERS

- More than INR 10 crores has been raised so far from various govt funding programs and private investments

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 39*

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★ DEPLOYED

Bariflolabs

Agritech

Intelligent waterbody management system for water body rejuvenation and inland shrimp aquaculture

APPLICATION

The management system have huge application in rejuvenating the water bodies, brackish water inland aquaculture, urban water body rejuvenation.

COMPANY NAME

Bariflo Labs Pvt Ltd

FOUNDER'S NAME

Mrutyunjaya Sahu

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Deployed units in close collaborations with government bodies)

INTELLECTUAL PROPERTY

PCT Application No.
PCT/IN2021/050611

Indian Patent Application No.
202031026797, 202031026796, 201831031000, 34443-(1-6)

PROBLEM ADDRESSED

The approach of novel invention focused on farmers who are unable to produce a profitable output because of hypoxic circumstances caused by excess feed and excreta accumulation in the sediment in moderate density shrimp farming. Also, traditional farmers use a time-consuming manual procedure of tying a rope in the middle of a pond and spraying feed by traveling around it in a dinghy, which prevents farmers from providing feed precisely in the habitable space. To address the issue, an intelligent mobile multipurpose feed spraying dispenser AIMSD for feeding shrimps and probiotic administration in a livable space has been developed.

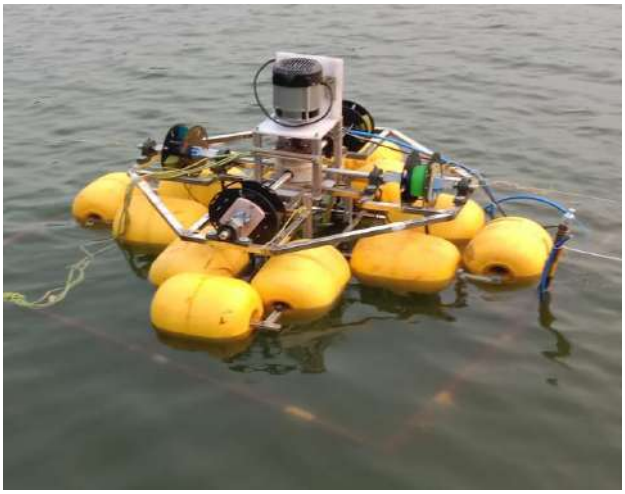
ABOUT THE TECHNOLOGY

The invention discloses an intelligent maneuvering hypolimnetic aerator with an internet of things monitoring system that can autonomously navigate to different coordinates and aerate the hypolimnetic region of a water body to improve dissolved oxygen demand (DO) and thus maintain water quality standards.. The data so transmitted can be used to rebuild a 3D image of the bathymetry, temperature distribution, DO distribution, and ORP distribution of the waterbody. Furthermore, the aeration system oscillates vertically in a sinusoidal way, resulting in the generation of standing waves horizontally, resulting in wave propagation to transmit DO farther from the device position and It also improves mixing at the sediment-water interface, allowing DO to penetrate into the sediment.

FUNDS RAISED/ACHIEVEMENTS

- BIRAC BIG of INR 50 Lakhs
- BIRAC SEED fund of INR 25 lakhs
- DST NIDHI PRAYAS of INR 7 lakhs
- MeitY TIDE 2.0 Grant of INR 7 lakhs
- MeitY SASACT of INR 20 lakhs
- Startup Odisha Fund of INR 15 lakhs
- RKVY RAFTAAR Grant of INR 20 lakhs
- Recognized as top 10 Agri-startup in Agri-Udaan

PRODUCT IMAGE



USP

- Intelligent Sediment aeration system
- Intelligent weather and water quality monitoring system
- Intelligent nutrient control module
- Auto-corrected dissolved oxygen, Un-ionized ammonia, phosphate sensors, carbon dioxide, methane sensors
- Disease and water quality prediction DSS

END USERS/CUSTOMERS

- Brackish water farmers
- Freshwater aqua farmers
- FPOs
- Contractors
- Govt bodies

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 44*

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★ DEPLOYED

tan90

Agritech

Portable Cold Storages with Proprietary Phase Change Material for Cold Supply Chain

APPLICATION

The eutectic solution has a lifespan of 500 cycles. From the business model point of view, it would replace the thermal batteries after the specified time at a minimal cost. This technology has applications in field of logistic solution for agricultural products, food products and beverages, drugs and vaccine supply.

COMPANY NAME

Tan90 Thermal Solutions Pvt Ltd

FOUNDER'S NAME

Soumalya Mukherjee

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue generation phase)

INTELLECTUAL PROPERTY

Fast freezing of PCM Aat -4 degrees centigrade

Patent No: 201941028298

PROBLEM ADDRESSED

Given the COVID19 scenario, the demand for refrigerated transport and storage exploded globally, with customers preferring retail food to restaurants. Hence, it is important for building infrastructure that can limit the food wastage along the supply chain and cold storage is one of the solutions. However, in most cases, a centralized cold storage model is followed where farmers and aggregators have to come to local cold storage. This model leaves out a majority of the small scale and marginal farmers.

ABOUT THE TECHNOLOGY

The portable cold storage capacity of 58 liters that are run by proprietary thermal batteries. As compared to other solutions available in the market, the proposed thermal batteries can be charged twice as fast, resulting in giving the users a faster turnaround time. Since, each of the boxes have self-standing cooling solutions, they can be stacked on top of each other and any logistics services can be used for transporting temperature-sensitive perishables. It can be a two-wheeler, three-wheelers or even scaled up in trucks. This negates the need for refrigerated trucks and reduces the operational costs by 32. In order to further increase the shelf life of the perishables, Tan 90 is introducing a hydantoin based anti-microbial polymers that can increase the lifetime of the perishables without a cold solution. This will further decrease the operational costs involved.

FUNDS RAISED/ACHIEVEMENTS

- Received BIRAC BIG Grant worth INR 50 lakhs
- Equity fund from INVENT Program and Social Alpha worth INR 90 lakhs
- Received CSR funds worth 60 lakhs from CISCO and CINI (IAIN)
- Raised INR 5 Cr from Blue Ashva Capital and 3i Partners

PRODUCT IMAGE

USP

- Portable storage capacity.
- Gets frozen thrice as fast as compared to existing product.
- Portable cold storages can extend the shelf life of greens to 2.5 to 3 days in transit.
-
- Being modular, users can stack these boxes and convert any room or vehicle to cold storage infrastructure.

END USERS/CUSTOMERS

- Agricultural practitioners, Food industries, Govt. agencies

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 47*

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★ DEPLOYED

MedTel Healthcare Pvt. Ltd.

Healthcare: Devices

iLAB & iRPM: Remote Patient Monitoring System

APPLICATION

The tele-health platform can be used for remote health monitoring of patients in hospitals, remote locations, etc.

COMPANY NAME

MedTel Healthcare Pvt Ltd

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Revenue generation phase)

FOUNDERS' NAME

Lalit Manik
Soumyakant Das

PROBLEM ADDRESSED

Increasing burden of chronic diseases like – diabetes, hypertension, heart diseases, etc. have resulted in 70% deaths world wide. The major gap is in the constant real time health monitoring of chronic diseases which results in delay in the treatment procedures and eventually leads to death. Only 25% of hospitals are equipped with remote health monitoring system. Furthermore, the rural PHCs are not at all equipped with any health monitoring system through which the doctors can remotely treat the patients.

ABOUT THE TECHNOLOGY

MedTel's RPM platform incorporates connected diagnostic devices, a smartphone app, and a web-based dashboard for hospital access and review. These devices include the digital blood pressure machine, body composition monitor, glucometer, pulse oximeter and many more. Our advanced solutions manage diseases like diabetes, hypertension & obesity and endeavor timely interventions. We also provide remote pregnancy care which reduces physical clinic visits and monitors complication parameters In the COVID-19 pandemic, connected healthcare and remote patient monitoring are important tools for hospitals, poly-clinics and individual practitioners.

FUNDS RAISED/ACHIEVEMENTS

- BIRAC LEAP fund worth INR 50 lakhs
- Pre Series A: 5 Cr INR raised already. 2.5 Cr INR to be raised
- Singapore based institutional funding
- HNIs and Angels from Australia, USA and Europe
- Majority of funds to be utilized in Business Development & Product Improvement

PRODUCT IMAGE

USP

- 15+ Point of Care Devices
- Personalized Tele Health App
- Automated Prescription & Reports
- Emergency Management Module
- Integrated Payment Gateway

END USERS/CUSTOMERS

B2B & B2B2C model

- Devices one time buy and Platform on Subscription
- Devices + Platform on rental subscription

Sell to hospitals, polyclinics, healthcare organizations and others

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 45*

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MINIONLABS

Green Energy

Minion Energy Management Solution

APPLICATION

MinionLabs helps businesses & Consumers to reduce their electricity costs and improve their productivity by providing real-time device-level electricity consumption insights using a smart energy management solution by leveraging on data & 5 Ai practices. Thus, making energy-efficient, sustainable and less climate risk.

COMPANY NAME

MinionLabs India Pvt Ltd

FOUNDER'S NAME

Gokul Shrinivas

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **8** (Early Revenue Generation Stage)

INTELLECTUAL PROPERTY

PCT Application No.
PCT/IB2020/055564

Indian Patent Granted No.
363286

PROBLEM ADDRESSED

In order to save energy costs in any buildings and facilities, the MEP engineer or the facility maintenance should have each and every equipment level energy consumption data, then only the client can able to find out the problems and make necessary timely actions for energy savings. At current scenario, to get equipment level energy consumption data, Businesses has a choice of using traditional / smart energy meters for which there is a requirement of dedicated meters/sensors to be installed for every equipment which is high capital investment along with operational and implementation costs involved making no Return on Investment anywhere near to 5 years.

ABOUT THE TECHNOLOGY

Minion uses state-of-the-art Machine Learning and AI-Based EDGE Computing approach to detect energy signatures of individual electrical assets and study patterns of their energy consumption used inside the facility at single point of connect and also to generate real-time notifications of various events and reports on predictive analytics, enabling the users to save up to 30% of their energy consumption along with CAPEX & OPEX savings over traditional & smart metering solutions.

FUNDS RAISED/ACHIEVEMENTS

- Currently Raising INR 11.25 Crores in Seed Round at INR 63.75 Crores Pre-Money Valuation.
- March 2020 – INR 96 Lakhs INR Pre-Seed raised at INR 7.5 Crores Pre-Money Valuation from Indian Angel Network.
- Received MeiTY SASACT Grant worth INR 7 lakhs
- Raised investment of INR 40 lakhs from TIDE2.0 Investment Scheme
- Received DST NIDHI4COVID Fund worth INR 30 lakhs
- Winner of Top Industry 4.0 - Internet of Things (IoT) award at the National Startup Awards 2020 ceremony

PRODUCT IMAGE

USP

- There is no need of device level sensors to get device level electricity consumption.
- Three steps Install – A Layman can install it as minion device is plug & play.
- No Plugins or Software needed, just login with a browser & start tracking.
- Personalised energy efficiency recommendations via WhatsApp at real-time.

END USERS/CUSTOMERS

Energy Contractors, Energy Consultants, Real Estate Players, Facility Maintenance Companies, EMS/BMS Resellers, Green Energy Source / Clean Tech Companies, HVAC Solution Providers, System Integrators, ESCO's (Energy Service Company), Energy Auditing Companies, etc.

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Dhanvantri Biomedical

Healthcare: Devices

Sahayatha a smart defecation cleansing assistive device for immobile population

APPLICATION

The smart defecation assistive device is a great boon to immobile population, the device can be used in old age homes, hospitals for bedridden patients to assist themselves in cleaning their body after defecation.

COMPANY NAME

Dhanvantri Biomedical Pvt Ltd

FOUNDER'S NAME

Sruthi Babu

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation Phase)

INTELLECTUAL PROPERTY

SMART LOCOMOTORY ASSISTIVE DEVICE
App No: 201941015140
US Patent : 17420525
Trade mark:5023260
Design patent : 355538-001 & 355539-001

PROBLEM ADDRESSED

- In India 30.8 million are mobility impaired out of which 10 million requires defecation assistance.
- About 4% death results each year during the transfer of patients to the toilets

ABOUT THE TECHNOLOGY

- Product Utility: Sahayatha a smart defecation cleansing assistive device for immobile population
- Sahayatha assists the patients in defecation cleansing with inbuilt defecation and cleansing assembly.
- Helps the patients to maintain their dignity with hygiene
- Reduces the patient transfer which occurs to perform their defection process.

FUNDS RAISED/ACHIEVEMENTS

- Raised INR 5 Lakhs from Social innovation immersion program by BIRAC
- INR 49.75 lakhs grant-in-aid from BIRAC BIG scheme
- Raised INR 48 lakhs fund from DST NIDHI4COVID
- Received INR 1 Cr from All Sharks in Shark Tank

END USERS/CUSTOMERS

- End Users: Elderly, Physically challenged and immobile population
- Customers: Hospitals, Retirement Villas and NGOs

PRODUCT IMAGE

USP

- Inbuilt defecation cleaning assistance
- Maintains hygiene with dignity
- Reduces the patient transfer
- Reduces the negligence associated with repeated manual care
- Nurses /care giver can be more productive and effective
- Hassel free experience
- Independent defecation cleaning and locomotion

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★ DEPLOYED

CLUIX

Clean Water

Cluix- Strip based water quality testing device

APPLICATION

This new portable water quality testing device may be used to test a variety of parameters related to drinking water and can determine whether water from a given source is suitable for consumption or not. It can test various parameters such as pH, turbidity, color, total hardness, free residual chlorine, TDS, lead, chromium, and copper.

COMPANY NAME

Cluix Pvt Ltd

FOUNDERS' NAME

Robin Singh
Chitaranjan Singh

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **8** (Early Revenue Generation Phase)

PROBLEM ADDRESSED

Due to the limited drinking water resources, intensive money requirements, growing population, urban change in rural areas, and the excessive use of sea resources for salt extraction has significantly worsened the water quality available to people. The high use of chemicals in manufacturing, construction and other industries, fertilizers in farms and also directly leaving the polluted water from industries into nearby water bodies have made a huge contribution to the global water quality reduction, which has become an important problem Even due to containment water various water born are increasing day by day, due to which many human beings are losing their lives.

PRODUCT IMAGE

ABOUT THE TECHNOLOGY

This innovative technology entails the reader circuit can measure the change in conductivity and excess charge caused when a drop of sample and an oxidase are mixed on the strip. The reaction on the strip is recorded and shown on the screen by a reader similar to a glucose meter. The meter also indicates if the test sample is permitted or not. They evaluated the known levels of lead by mixing *Dimethyl Sulphoxide* water with the test sample, and the oxidation reaction was recorded by the reader, which precisely displayed the quantities.

USP

- Multiple parameter testing with no reagent which makes it more user friendly.
- Easy to use device with one step method.
- AI Analysis of result with permissible levels.
- Portable hand held device- Can be carried across the field.
- IoT based data storage transfer.
- Low cost device for mass adoption of technology.

FUNDS RAISED/ACHIEVEMENTS

- INR 24.45 lakhs grant-in-aid from National Jal Jeevan Mission challenge.
- INR 35 lakhs under SISFS Scheme
- INR 60 lakh under NIDHI SSS

END USERS/CUSTOMERS

- Domestic Household customers
- Government agencies to monitor water quality
- Industrial bodies

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 44*

Healthcare: Devices

COSMO for Rapid Sterilization of Air, Water & Surfaces

APPLICATION

Indoor decontamination solutions for densely occupied spaces: Eta Purification's COSMO technology provides 24x7 protection of both air and high-contact surfaces. Adopted from nature and is proven to be harmless to people with safe exposure limits our COSMO systems are currently operational in a variety of environments including:

- Hospitals and healthcare settings to reduce the spread & severity of secondary infections
- Mass transport, Professional facility environments & Institutions where protection from infections is needed most

COMPANY NAME

ETA Purification Pvt Ltd

FOUNDER'S NAME

Dinesh Venkatachalam

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation Phase)

PROBLEM ADDRESSED

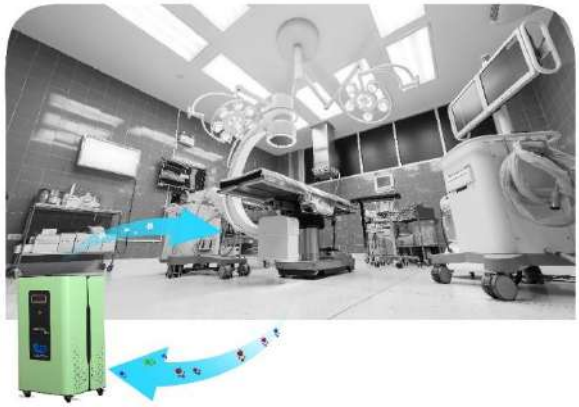
The emergence of new life-threatening microbes such as Covid-19 pose a serious threat to individuals and communities alike. In particular, healthcare settings face special challenges, where healthy frontline personnel are more vulnerable due to high exposure risk. It is therefore obvious that rapid and effective disinfection/sterilization of air, aerosol & high-contact surfaces is vital to prevent further contamination. The innovative **COSMO systems** that produce controlled concentration of free-radicals such as O3, OH^- & NO^- utilizing our patented & proprietary micro-plasma technology to eliminate the pathogen colonies and prevent contamination.

ABOUT THE TECHNOLOGY

Eta Purification's COSMO technology is backed by more than 15 years of R&D and protected by more than 80 international patents to offer efficient and effective solutions for humanity. Our philosophy is to utilize innovation for the betterment of the society using green principles. COSMO (Complete Sterilization by Micro-plasma Oxidation) utilizes the oxidative power of free-radicals, which are generated using our proprietary and patented non-thermal micro-plasma technology. The innovative products are scientifically validated by public health and safety organizations, research laboratories and industries for their effectiveness in the reduction of pathogens in air, water and surfaces.

Through continuous education, we help our customers understand the current global challenges that face humanity and provide solutions to create safer and cleaner environments.

PRODUCT IMAGE



USP

- A broad-spectrum agent with sky-high efficiency levels
- Completely chemical-free and consumes very less little energy
- Designed and developed in the USA as per EPA standards
- Tested, validated and accredited by hygiene institutes (NSF, AMPC etc.)

END USERS/CUSTOMERS

- Hospitals & Healthcare Settings
- Mass Rapid Transport & Transit
- Food Processing and Storage
- Pharmaceutical Processing Facilities
- Professional Facilities
- Educational Institutions, Entertainment Facilities and more.

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 47*

Agritech

CHMS: Cattle Health Monitoring Solution

APPLICATION

Flixdrop Technology is progressive startup based in Bangalore, working in dairy digitization technology and looking for eco-system support to impact Indian farmers increasing farm yield.

COMPANY NAME

Flixdrop Technology Pvt Ltd

FOUNDERS' NAME

Dharmendra Kumar
Uttiya Mukherjee

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Validated & Early Revenue Stage)

INTELLECTUAL PROPERTY

Cattle Health Monitoring System
App No: 2021201IN-CS

PROBLEM ADDRESSED

Breeders face huge amount of loss every year due to rising health problems and diseases in their cattle. India has the largest cow population with lowest milk productivity due to lack of heat data and ineffective breeding. Lack of technology identifying disease leads to many problems like – lesser cow reproductivity, lack of cow health information, very low lifespan of cows, etc. Hence, constant cattle health monitoring is an important step towards better productivity of the cattle breeders.

ABOUT THE TECHNOLOGY

Smart collar – IOT based cattle health tracking and insight generation regarding cattle health. Thereby taking right decision like on time insemination, Vet consultation to increase milk yield per animal. The ecosystem platform enables smoother communication of marginal farmers with Insemination Specialist, Doctors, Nutritionist etc. A highly affordable device matching global accuracy of Precision Cattle Farming domain. CHMS uses a multi-metric analysis on each individual cows behaviour enabling more accurate and timely heat detection.

FUNDS RAISED/ACHIEVEMENTS

- BIRAC LEAP fund worth INR 50 lakhs
- Seed Round: 1.02 Cr on Jan-2021
- Bridge Round 1 Cr on Feb 2022
- Selected for Animal Husbandry cohort under INVEST India

END USERS/CUSTOMERS

- B2B: Private large & small dairy farms, Agricultural universities, NGOs, etc.
- B2G: Govt Gaushalas, Govt Undertaken bodies, etc.

PRODUCT IMAGE

USP

- Pre-breeding, CHMS identifies both cystic and non-cycling cows enabling early intervention and treatment.
- CHMS monitors a cows feeding and nutrition/feed behaviour, compares this to her usual behaviour and to that of the rest of the herd.
- The CHMS application runs on your smart phone, desktop or tablet 24/7 from anywhere
- Friendly User Interface built with Native Indian languages
- Interactive performance Dashboard

BCKIC
Bhubaneswar City Knowledge Innovation Cluster Foundation

★ DEPLOYED LARKAI HEALTHCARE

Healthcare: Devices

ThoraCare: A non-invasive easy to use early stage heart and lung abnormalities screening device

APPLICATION

The device can be used as non-invasive portable device for advance screening of Heart and Lung disease using two step detection procedure.

COMPANY NAME

Larkai Innovations Pvt Ltd

FOUNDER'S NAME

Pritam Dhalla
Abhilash Chakraverty

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 7 (Validated & Market Ready)

INTELLECTUAL PROPERTY

PCT Application No.
L-92172/2020

Indian Patent Application No.
202031010803

PROBLEM ADDRESSED

Cardiovascular diseases (CVDs) and Lung diseases are the leading cause of deaths globally with an estimated 17.3 million and 3.2 million annual deaths respectively. CVDs are expected to reach over 23 million by 2030 and COPD has grown at 11.6 % in the last 25 years. India contributes to 20 – 35 % of the global mortality rate for the cardiovascular and pulmonary diseases. To further add to the issues of high mortality rate, a recent study published in British Medical Journal found that the doctor to patient ratio in India is 1:1278 with about 70% of the rural population having minimal access to healthcare professionals. The number of villages that doesn't have presence of doctors is reported to be around 43.5 %. Physicians are responsible for the treatment, it is often the nurses who are the primary users of such medical devices. In these environments, devices should be designed in a way that they can be used by untrained and low-skilled users.

ABOUT THE TECHNOLOGY

ThoraCare is a portable device that replaces several distinct elements of a traditional ECG and Stethoscope setup. A novel AI algorithm which diagnose early stage real-time heart impulse and valvular disease for futuristic predictive analysis. The device provides comprehensive heart and lung condition screening report within 30 seconds and this report can also be examined by a low skilled person. The Model Available is a Desktop model.

FUNDS RAISED/ACHIEVEMENTS

- DST-NIDHI EIR: INR 3.6Lakhs.
- MeitY- TIDE 2.0 Grant : INR 7 lakhs
- Received Startup Odisha Product Development Grant worth INR 15 lakhs
- Received The Best Young Entrepreneur" in The BENGAL PRIDE AWARDS 2021
- Raised INR 2.5 Cr from Qi Venture & Real Time Angel Fund

PRODUCT IMAGE

USP

- Screens Heart and Lungs at one Point of Care, providing a comprehensive test
- Real time AI powered impulse and auscultation waveform and data on screen
- Real time noise reduced sound of Heart and Lungs with recording feature
- Standalone device, requires no external power or accessories to function
- Our device's working principle is based on bio signal acquisition and their analysis -
- For the screening of the Heart- beat-to-beat Heart signal acquisition done by recording ECG (Electrocardiogram) and PCG (Phonocardiogram) and analyzing them using AI based system for detection of any abnormal impulse or heart auscultation related abnormalities.
- For screening of the Lungs- respiratory signal acquisition by recording Bronchial and Vesicular breath sounds and comparing them using the AI based system for detection of any abnormal lung conditions in a few seconds.

END USERS/CUSTOMERS

Healthcare centers, Hospitals, Physicians

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 46*

Agritech

Tech Enabled Responsible Supply Chain for Farm Products

APPLICATION

A reliable market place both for farmers to sell their products easily and for the consumers to get healthy products

COMPANY NAME

Villamart Pvt Ltd

FOUNDER'S NAME

Ramesh Chandra Biswal

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **8** (Revenue generation phase)

INTELLECTUAL PROPERTY

2 Trademarks Own
2 patents provisionally filed

PROBLEM ADDRESSED

FOR FARMERS:

- Distress Selling
- Inadequate Marketplace
- Wastage of Produce
- Untapped Rural SHGs

FOR CONSUMERS:

- Dearth of Genuine Products

PRODUCT IMAGE

ABOUT THE TECHNOLOGY

- Tech enabled Mobile Outlet
- State of art procurement cum fulfilment centre
- Cleaning of vegetable from Chemicals & pesticide
- Multi-weather solar dryer to reduce farm wastage

USP

- Market at doorstep
- Zero waste in farm products
- Temp & Mositure Control for Food products
- Easy to install and flexible operations at any locations

END USERS/CUSTOMERS

- No of Farmers Connected 4000
- No of FPOs Connected 28
- No of SHGs Connected 48
- No of Consumers (B2C) 8000
- No of HoReCa units 48

FUNDS RAISED/ACHIEVEMENTS

- BIG Grant for AI/ML based sorting grading unit for vegetables supported by KIIT-TBI
- MSME innovation grant
- National Startup Award 2021 in Agriculture and got the chance to talk with Hon'ble Prime Minister, India
- Selected among the 20 international organization for "Future of Food Fellowship" 2021 by DO School, Germany
- Selected among the 10 startups that made 2020 better, by Social Story
- Supported by Startup Odisha and INVENT Fund
- Adjudged as TOP 10 Finalist Social Venture of India, in the TATA Social Enterprise Challenge (2017-18)

Healthcare: Devices

Swaasa: Artificial intelligence platform as a screening tool and diagnostic aid in the assessment of respiratory diseases

APPLICATION

Swaasa can identify underlying respiratory lung conditions by analyzing a 10 second (solicited) cough sound recording. Swaasa can be thought of as PoC SaMD for instant evaluation of respiratory health. The equivalent of home monitoring for Blood Glucose and Blood Pressure-for respiratory health

COMPANY NAME

Salcit Technologies Pvt Ltd

FOUNDER'S NAME

Narayan Rao Sripada

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **8** (Early Revenue Generation Phase)

INTELLECTUAL PROPERTY

PCT Application No.
PCT/IN2018/050745

Indian Patent Grant No.
308156

PROBLEM ADDRESSED

Screening for respiratory diseases is an unmet need as due to limited human expertise and lab facilities, it is not possible to do pulmonary function tests at primary care level centres. The inability to **screen**, **diagnose** and **monitor** lung health at scale, in real-time is causing significant global burden on respiratory diseases

ABOUT THE TECHNOLOGY

Ourproduct, Swaasa, is able to detect respiratory diseases by analyzing cough sounds *remotely*. Over 300,000 assessments have been done on our platform. Swaasa is HIPAA, ISO27001, SOC2, ISO13485/IEC62304 compliant/certified. Backed by seven clinical trials we are on the path to regulatory approvals (FDA/CE/HealthCanada/TGA). The core technology also has international patents and publications. Swaasa is the ideal tool to selftest/monitor for lung health anywhere, anytime especially since it is a **SaMD** (Software as a Medical Device) so no hardware needed.Using timely alerts and interventions can be a powerful tool for preventing acute episodes of chronic lung conditions.

FUNDS RAISED/ACHIEVEMENTS

- Received ISO and IEC Certifications for the product
- SASACT fund of INR 24 lakhs from KIIT TBI
- BIRAC BIG grant of INR 50 lakhs

PRODUCT IMAGE

USP

The Swaasa AI platform provides easy and cost-effective tests to reach larger populations at a much higher frequency of testing.

The platform:

- Doesnot require trained professionals
- Doesnot require any specific hardware-can work on smartphone, tablet or laptop
- No other consumables needed
- Requires very low-bandwidth

FUNDS RAISED/ACHIEVEMENTS

- B2B –Enterprise health service providers, tele and home health service providers, Occupational health service providers
- B2G –Public health

Healthcare: Devices

Mobilab - Affordable IOT Enabled Smart Multi Diagnostic device for chronic diseases detection

APPLICATION

The device can be used as a point of use device for Kidney Function Tests, Liver Function Tests, Heart Function tests, and Pancreatic Function Tests.

COMPANY NAME

Primary Healthtech Pvt Ltd

FOUNDER'S NAME

Sahil Jagnani

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Clinical trials are completed; Early Revenue Generation Phase)

INTELLECTUAL PROPERTY

Portable Cuvette based Reagent Mixer (Application No – 202131038898)

Portable low powered optical system for colorimetric analysis and characterization (Application no – 202231004664)

PROBLEM ADDRESSED

70% of people are dying because of Non-communicable diseases which are disease related to kidney, liver, heart, pancreas etc. There are rare symptoms of these disease and if detected early can be treated at primary care with proper medicine. But more than 50% of diagnosis happens only at later stage. Establishing laboratory set up in Rural and Semi-urban area is not economically viable for diagnostic companies. The solution in this case is the point of care diagnostic solution which can provide affordable, portable, accessible instant diagnosis.

ABOUT THE TECHNOLOGY

Nanotechnology principles have been used for antibody conjugation to improve Sensitivity of detection for better accuracy, Reduced steps of detection and improved Kinetics to reduce testing time. Detection of biomarkers have been done using colorimetry principles using Beer Lambert's Law where concentration is correlated to absorbance. We are also working on a microfluidics system to simultaneously detect various biomarkers with a drop of blood. Reader device internal arrangement and optical detection part has been patented which not only gives the compact size but also significantly reduces the cost of the device. Electronics part is optimized such that reader device requires ultra-low power and is driven using proprietary firmware. As internet and mobile phone usage is on rise, we have moved our entire system on cloud and all the tests and calculations are using processing power of mobile phones.

FUNDS RAISED/ACHIEVEMENTS

- INR 50 lakhs from BIRAC BIG Grant
- INR 25 lakhs from BIRAC SEED fund at KIIT TBI
- Raised INR 25 lakhs from Pontaq Venture & STPI
- INR 33 lakhs from MeiTY SASACT
- INR 25 lakhs from Villgro
- Raised INR 1 Cr from Sage Venture

END USERS/CUSTOMERS

In house patients, Govt agencies, Hospitals, Insurance providers, Local Medical Centers

PRODUCT IMAGE

USP

- Affordability - Device will be priced in sub-15k range and it will bring down the cost of tests by 1/10th using economic raw material.
- Portability - Smartphone-sized device, needs no heavy set-up & can be used in home conditions while to set up a diagnostic lab a lot of space & infrastructure is required.
- Easy to Operate - Anyone who understands how to use a phone can use it without difficulty, and testing simply takes four simple steps.
- Vernacular Language - Our smartphone application is multilingual, with a goal to help technicians comprehend and use our device with ease.
- Battery operated - Device is robust for low resource setups, it has a power backup of 4-6 hours.
- Modularity - Modular architecture with specified modules, this makes the device future proof.
- Instant results with Few drops of Blood/Urine
- Smart Clinical/ Technician App - A dedicated Mobile application has been developed for clinician/ technician with data processing using our algorithms and data analysis to predict health parameters.

Agritech

Innovative Multi-crop seed drill for sowing during the cultivation for small & Marginal Farmer

APPLICATION

The innovative seed sowing farm machinery can be used for seed sowing of pulses like – ground nut, black gram, Bengal gram, white gram, etc. It is also very effective for maize and dal related crops.

COMPANY NAME

Balasore Agro Pvt Ltd

FOUNDER'S NAME

Manoranjan Das Adhikari

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation Phase)

INTELLECTUAL PROPERTY

An Indian Patent has been filed on Single row Multicrop seed drill (App No: TEMP/E1-5608/2019-KOL)

PROBLEM ADDRESSED

At present the marginal farmers and cultivators sow the seed by hand scattering the seeds as a result no line and space is maintained between the trees and crop plants leading to reduced oxygen and nutrient level in the soil and hence lead to low yield and huge financial loss. Furthermore, the small marginal farmers are sowing groundnut by bullock drawn plough which is a tedious, expensive and more time consuming activity. Big seed drill is utilize for the sowing of pulses where the people should have large area to operate by the tractor drawn seed drill.

ABOUT THE TECHNOLOGY

Balasore agro private limited is developing a Single row multicrop seed drill (a seed sowing machine) for groundnuts, maize & dal seeds to sow in crop field. This Single row multicrop seed drill machine helps to keep seeds in a line & proper space which leads to higher yield. This machine will help those farmers who sow seeds by hand scattering resulting improper space between seeds ultimately leads to lower yield & financial loss. The user friendly seed drill costs INR 6000 – 7000 which perfectly targets the marginal farmers.

FUNDS RAISED/ACHIEVEMENTS

- Raised INR 49.48 lakhs grant-in-aid from BIRAC BIG scheme.
- Raised INR 15 lakhs grant-in-aid from startup Odisha Product Development and Marketing fund.

PRODUCT IMAGE

USP

- Breakage and (Pilling of the skin of the groundnut) is very less upto 0.5%
- One acre of land can be sown by two person within 4 -5 h. Hence, less time consuming.
- Affordable to farmers and user friendly operations
- Seed to seed space & depth is adjustable
- Can be utilized by both manual (hand) and bullock

END USERS/CUSTOMERS

Small and marginal farmers, NGOs, Govt agencies

Agritech

KrishiBOT- A smart Agriculture robot

APPLICATION

krishiBOT ensures uniform density in the field by sowing the seeds at optimum depth and pitch, applying adequate amount of fertilizers and covering the seed and fertilizer with the soil after sowing. It empowers growers and does tedious field task with precision, automation and optimization thus ensuring maximum farm potential.

COMPANY NAME

Terracroft Agritech Pvt Ltd

FOUNDER'S NAME

Vaibhav Thacker

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **7** (Deployable Stage)

INTELLECTUAL PROPERTY

Indian Patent Granted No. 202041011208

PROBLEM ADDRESSED

Growers worldwide face serious challenges of workforce shortage, increasing production costs, and reducing crop yields, preventing them from meeting their full farm potential.
As confirmed by our on-site research with 1000+ growers, factors that contribute to the drastic reduction in the Agri-outcome are:
1. Lack of mechanization.
2. Unavailability of labor during peak requirement.
3. Higher input costs due to wastage of seeds, fertilizers, etc during sowing/input on field.
Due to unavailability of machinery during peak requirement, growers rely heavily on labour. This results in unscientific practices.

ABOUT THE TECHNOLOGY

krishiBOT is equipped with the seeding mechanism that sows only one seed at a time at the pitch of 20 cm(for groundnut crop) and depth of 6 cm with the accuracy of over 95%. This helps reduce the amount of seeds that go into the field. It houses swappable battery technology that the growers can swap the batteries and replace them with the charged ones, thus ensuring 24 hour working machine.Parallel Seeding Lane: Using series of sensors and Machine Learning, krishiBOT moves in a perfectly straight line and automatically aligns itself if it deviates due to external factors.

FUNDS RAISED/ACHIEVEMENTS

- INR 25 Lakhs as equity investment
- INR 21.25 Lakhs from HDFC grant
- INR 6 lakhs as grant (NIDHI Prayas)
- INR 25 Lakhs as loan (converted to equity at later stage)
- INR 20 Lakhs Alleviate 2021 by Startup Karnataka

PRODUCT IMAGE

USP

- Optimization: Ensures only one seed is sown in the soil and adequate amount of fertilizer is given to the crop. This ensures uniformity. The accuracy of this system is over 95%.
- Automation: Performs all the operations using Machine Learning without depending on labour. The grower just navigates krishiBOT from a distance.
- Uniform seeding lane: Using series of sensors and Machine Learning, krishiBOT moves in a perfectly straight line and automatically aligns itself if it deviates due to external factors.
- Increases acreage of crop production: krishiBOT reduces the wastage of the farmland that happens due to current machinery (tractors, etc). Example: when tractor takes a turn and navigates to another lane, it leaves about 1-2 meters of the radius/unused land on the boundaries of the field. krishiBOT has a zero radius steering system that helps growers cultivate every inch of their land.

END USERS/CUSTOMERS

- Small and Marginal farmers
- FPO's
- Agri Universities for their Research
- Custom Hiring Centre's or equivalents to rent machine to farmers.

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Bhubaneswar City Knowledge Innovation Cluster Foundation

PRO-BIOKEM INDIA™

Waste Management

Value added products (Cellulose and Amorphous Silica) from rice husk

APPLICATION

The synthesized silica powder can be used in healthcare, petrochemical, plastic, food processing and brewery industries. The cellulose powder can be used as Processed food texturizer, Instant Beverages gelling agent, Cosmetics fat substitute, Tablet manufacturing binder, etc.

COMPANY NAME

Pro-Biokem India Pvt Ltd

FOUNDERS' NAME

Mahhamad Gulebahar Sheikh
Baisun Nesha

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation Phase)

INTELLECTUAL PROPERTY

A process for cellulose or silica extraction/isolation from raw rice husk

Application No: 201831027208

PROBLEM ADDRESSED

India is the second largest rice growing country in the world. A large quantity of rice husk is generated as a by-product in Rice mills during the milling process, which is used as solid fuel, which leading to wastage of naturally produced valuable Biochemical/ fine chemical products like cellulose and amorphous silica. Burning rice husk has a greater environmental footprint. Currently available cellulose powder is largely produced from wood pulp, using KRAFT Process, which is highly polluting and utilizes wood as a feed stock leading to deforestation. Currently available synthetic amorphous silica is manufactured from sand (crystalline silica). Sand in crystalline powder form is a well-known health hazard (Silicosis) for operating personnel and poses health hazard to the nearby localities

ABOUT THE TECHNOLOGY

Pro-biokem has developed a process to extract cellulose and silica from raw rice husk. The proposed process has already been developed in pilot scale, to isolate Cellulose and amorphous Silica in homogenous form with high purity and yield. The feed stock was processed to generate cellulose pulp. The cellulose pulp was further processed Bio/chemically to generate Microcrystalline cellulose. Silica was isolated from the pulp filtrate liquor. The proposed process will also be effective if rice stubble is used as a feed stock since the composition (qualitative and quantitative) of rice husk and rice stubble are very similar. The proposed process shall resolve majority of the above issues, while also generating local employment, minimizing energy use, reducing stubble burning and better management of agricultural and agro-Industrial waste.

FUNDS RAISED/ACHIEVEMENTS

- BIRAC BIG Grant of INR 50 lakhs
- BIRAC SEED fund of INR 25 lakhs
- Startup Odisha Product Development Fund of INR 12.5 lakhs

PRODUCT IMAGE

USP

- Multi-product Isolation from single feedstock with wider applications
- Non-Wood/ Non-Cotton derived products
- Low pollution compared to currently used process technology
- Products derived from Agro residue/waste
- Offer better margin to supply chain
- Lower cost of feedstock and Production cost

END USERS/CUSTOMERS

- Processed food industries, Pharmaceutical industries, Feed industries, Construction and paint industries, Breweries, etc.

TECHNOLOGIES READY FOR DEPLOYMENT

BCKIC
Bhubaneswar City Knowledge Innovation Cluster Foundation

IG DRONES

Defence

IG Drones - India's Leading Enterprise Drone & Solutions Platform

APPLICATION

Enterprise Grade Drones for verities of Industrial & Agriculture Applications and a multifunctional platform to fly ,manage, capture, process, analyze, share and collaborate different drone and geospatial projects.

COMPANY NAME

IG Drones Pvt Ltd

FOUNDER'S NAME

Bodhisattwa Sanghapriya
Om Prakash Das

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation Phase)

INTELLECTUAL PROPERTY

Design Patents on Hardware & Proprietary Software Platform

PROBLEM ADDRESSED

IG Drones is Solving the following pain points of the Industry using its state of the art Drones & Data Analytics SaaS solutions.

PRODUCT IMAGE

ABOUT THE TECHNOLOGY

IG Drones offers AI-powered Drones and SaaS Platform for the drone, geospatial & inspection data analytics for various industries. It is backed by decentralized IG Drones CoEs to cater the larger global needs of data processing & analysis. This platform enables Data Capture, Data Processing, Data Analysis & Data Sharing allowing large enterprises to benefit from improved project management & situational awareness. It serves the Agriculture, Infrastructure, Power Utility, Mining etc. industries for digital transformation & operational excellence.

USP

- Selected in 120cr PLI (Production Linkage Incentive by Govt of India)
- Engaging trained Micro Entrepreneurs as per demand
- AI powered Data Analytics for Multi Dimensional Data Sets
- IG Drones Community Driven Ecosystem
- Robust & Scalable SaaS Platform for Hybrid Operations

END USERS/CUSTOMERS

150+ enterprise Clients already onboarded to platform Which includes JSW , Adani , Aditya Birla , Reliance etc.

FUNDS RAISED/ACHIEVEMENTS

- Received INR 50 lakhs grants from govt agencies for product development
- Revenue – 4.3 Cr (FY 22) , 20 Cr (FY 23)
- Global Best Drone Startup Award by Airwards , London
- CIO Best Enterprise Drone Company in India
- 30 MoUs with Govt of India and different state Govts and corporate houses

BCKIC
Bhubaneswar City Knowledge Innovation Cluster Foundation

APChemi
ACCELERATING SUSTAINABLE CARBON-TRANSITION™

Waste Management

Pyrolysis Oil Purification Technology

APPLICATION

The applications for PUROIL are Advanced/Chemical recycling of plastic waste, Production of 2nd generation biofuels from plastic waste, Production of circular economy plastics and sustainable chemicals, Landfill plastic waste management, Multilayer packaging plastic waste management, Recycling of postconsumer plastic waste & Plastic to fuel and chemicals.

COMPANY NAME

APChemi Pvt Ltd

FOUNDER'S NAME

Suhas Dixit

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Manufacturing unit setup for scaling up)

INTELLECTUAL PROPERTY

- **Granted Indian Patent (374847)**
- **Other Indian patent applications numbers:** 1727/MUM/2014, 201921018856, 201921023312, 201921034161, 202022024823, 202021044836, 202021047134, 202021055299, 202021055940, 202121000068, 202121000628, 202121020957, 202121021166, 202121024040, 202121034264, 202121053114

PROBLEM ADDRESSED

Globally 300 million metric tons per annum of plastic waste generated and less than 9% of plastic waste is currently recycled. Most of the plastic waste generated today is mechanically non-recyclable. Hence needs to be recycled chemically by converting this plastic waste into circular economy plastics and sustainable chemicals via pyrolysis technology. The key problem in pyrolysis of plastic waste is production of oil with very high impurities of oxygen, chlorine, asphalt, silica, nitrogen and Sulphur. APChemi's PUREMAX™ technology drastically reduces these impurities from pyrolysis oil to manufacturing PUROIL™. PUROIL™ can replace petroleum naphtha and crude oil for production of circular economy plastics and sustainable chemicals.

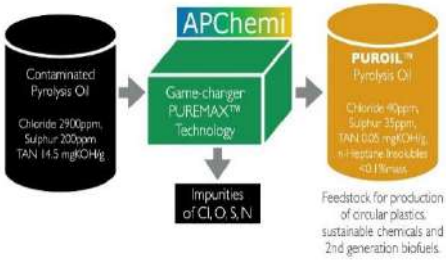
ABOUT THE TECHNOLOGY

APChemi's pyrolysis oil purification technology, PUREMAX, removes organic as well as inorganic impurities of Chlorine, Nitrogen, Oxygen, and Sulphur from pyrolysis oil. Patent-granted PUREMAX™ technology has a very unique novel and inventive step. APChemi is actively looking for partners to synergistically exploit this technology. Pyrolysis oil, produced from Mumbai's post-consumer laminate (Packaging + Carry bags) waste, had a Chlorine content of 2900ppm, Sulphur of 200ppm and Total Acid Number (TAN) of 14.5 mgKOH/gm. After application of APChemi's PUREMAX™ technology, the oil quality was improved to Chlorine < 50ppm, Sulphur < 50ppm, TAN mgKOH/gm, n-Heptane Insolubles <0.1%mass. Thus, PUREMAX™ technology truly unlocks pyrolysis based chemical recycling of plastic waste.

FUNDS RAISED/ACHIEVEMENTS

- Raised INR 30 lakhs in CCD from Startup India Seed Fund Scheme at KIITTBI.
- Winner of Clean Air India Challenge hosted by Smart Cities Procurement, ACT Grants and Social Alpha (April 2022)
- Received Grant in aid of USD 1.2 million Indo-Danish Green Hydrogen Call

PRODUCT IMAGE



USP

- Drastically reduce oil impurities due to PVC/ PVDC/ PET/ Nylon/ PUR/ Acrylates contaminated polyolefin feedstock'
- Enable use of landfill and post-consumer plastics waste for plastic pyrolysis

END USERS / CUSTOMERS

Petrochemical Companies, FMCG Companies, Packaging Companies & Industries, Biofuels, Carbon Transition, Plastic circularity and Material Recovery facilities

BCKIC
Bhubaneswar City Knowledge Innovation Cluster Foundation

★ DEPLOYED

i-panelKlean nA2

Cleantech

Disruptive Patented Technology in Waterless Solar Panels Self Cleaning System

APPLICATION

The developed system can be used to clean solar panels installed at various locations like – Solar plants, houses, industries, corporates, govt establishments, etc.

COMPANY NAME

IpanelKlean Solar Pvt Ltd

FOUNDER'S NAME

Suchin Jain

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **7** (Prototypes are under installation for pilot scale field testing)

INTELLECTUAL PROPERTY

An Indian Patent granted and PCT Application has been filed

PROBLEM ADDRESSED

Solar Plants are loosing power generation upto 70% due to Dust, there is scarcity of Water in cleaning it and Cleaning manpower runs the risk of life due to high voltage DC electrocution and falling while working.

ABOUT THE TECHNOLOGY

ipanelKlean has disrupted solar panel cleaning with its award winning waterless patented technology. Our research has resulted in upto doubling power generation of solar plants, reducing payback period upto 40%. Our work enables compliance with ESG and SDGs of UN by creating annual economic impact of extra 8 Billion USD, save 100 Billion litres water, save 60 Million tons carbon emissions and save numerous lives of solar panel cleaning workers from electrocution or falling while working. Our innovation combines nano technology, pneumatics, IOT, automation, wireless and mobile app to create value. We work with solar plant owners and investors to increase their ROIs upto 15X.

FUNDS RAISED/ACHIEVEMENTS

- BIG BIRAC grant – KIIT Incubation- 2021
- Recognized by NITI Ayog, digit.in, Yourstory, Share America and Mckinsey & Company
- Got investment commitment worth INR 2 Cr from multiple investor groups in the SEED round.

PRODUCT IMAGE

USP

- **Saves Water** upto 100% in Air mode
- **Saves Carbon Emissions** by doubling solar power generation
- **Saves Human lives** from electrocution or falling while working
- **Brushless** and no moving parts on solar panels
- **Extra 15X ROI** over 25 years system life
- **Saves investment** in Rooftop space or Land Area

END USERS/CUSTOMERS

Solar Plant Owners, Equity investors in Rooftop and Utility Categories across India, Middle East, US, Africa, SE Asia, Australia, South Korea & Japan

★ *For more details on deployment, refer to "Demonstration Use Cases" – Page No 46*

BCKIC
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BonAyu

Industrial Biotechnology

Oral Thin Film Platform For Delivery of Nutraceuticals, Cosmetics & Personal Care Industry as a better alternate to conventional tablet, Capsule, Liquid & Gel

APPLICATION

The oral film can be used for multiple applications for delivery of nutraceuticals, cosmetic formulations, personal care products, etc.

COMPANY NAME

Bonayu Lifesciences Pvt Ltd

FOUNDER'S NAME

Vishal Kataria

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue generation phase)

INTELLECTUAL PROPERTY

Patent Number 300396- Oral Dispersible film composition

Patent Number IN201741033521- for Topical Film

PROBLEM ADDRESSED

Mouth dissolving films or strips are thin, flexible sheets that are designed to dissolve rapidly when placed on the tongue or in the oral cavity. They have gained popularity in the pharmaceutical and healthcare industries due to their convenient administration and unique properties. Here are some of the key needs and beneficiaries of mouth dissolving films/strips:

- Patient Convenience
- Rapid Onset of Action
- Accurate Dosing
- Improved Compliance
- Localized Delivery

ABOUT THE TECHNOLOGY

Bonayu has developed technology for Mouth Dissolving Strips which has taken over the pharma-world, upstaging tablets, capsules, syrups and even effervescence tablets that have been used over a long period of time. BonAyu's mouth-dissolving strips are the new way to administer any health supplement. Just peel the pouch, retrieve the thin film, place it on the tongue and let it to dissolve in few seconds. This new method of drug health supplement drug consumption is revolutionary for the industry, as it has immense benefits for the consumer. Bonayu developed oral film platform through BIRAC grants and angel fundings and has patent on the platform.

FUNDS RAISED/ACHIEVEMENTS

- BIRAC BIG grant, Department of Biotechnology: INR 50 Lakhs
- Winner of Start-up India Award in healthcare category 2020
- "Top Innovator Award 2019" in Healthcare sector in Global Bio 2019
- Raised private investment worth more than 200 K USD from Angel Investors & HNIs

END USERS/CUSTOMERS

- B2B Clients: Pharmaceuticals, Nutraceutical, Personal Care companies
- Distributors and Retailers
- Direct to consumer through E com site Platforms like Amazon, Nykaa, Tata 1Mg, Reliance, etc.

PRODUCT IMAGE

USP

- Convenient and Easy Administration
- Rapid Onset of Action
- Accurate Dosing and Precise Delivery
- Improved Compliance
- Expanded Market Opportunities
- Brand Differentiation
- Enhanced Patient Experience
- Highly beneficial for pediatric & geriatric population and Psychiatric & Neurological Disorders patients

Healthcare: Diagnostics

Manufacturing and Commercialization of Urine Microalbumin Measurement System Proflo-U®

APPLICATION

The kit can be used for urine microalbumin measurement for early diagnosis of CKD in diabetic patients, hypertension patients, geriatric people, etc.

COMPANY NAME

Prantae Solutions Pvt Ltd (OPC)

FOUNDER'S NAME

Sumona Karjee Mishra

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **7 (**The final MVP is ready and currently the product is under extensive field trials)

INTELLECTUAL PROPERTY

Patent Number: 308432 & 360496
Design Registration: 316100-001 324401-001, 322092-001
Trademark: Proflo-U ® , PregaMo ®

PROBLEM ADDRESSED

Chronic Kidney Disorder (CKD) one of the major non-communicable disorder with global prevalence of 10%. Unfortunately, it has been reported the kidney damage can progress upto 70% without any clinical symptom manifestation. At this stage reversal of damage is very difficult and patient eventually progresses to end stage renal disorder. However, early diagnosis can save lives and even reverse kidney damage. At present, the early diagnosis can happen only in centralized diagnostic laboratories. They are expensive and cumbersome. Proflo-U® with its innovative technology enables early diagnosis with convenience and cost effectiveness

PRODUCT IMAGE

ABOUT THE TECHNOLOGY

It is an inventive and innovative technology. It is non-invasive method where an early biomarker for CKD from the urine specimen. The process has lab in cuvette where the sensing mechanism is fluorescence. The fluorescence is analyzed by a palm size reader with optimized optical and electronic system. The optical intensity is converted into concentration of the biomarker (urine albumin) through a smart phone interface based on the standard curve fed in the backend, generated through 1000+ data points collected with the system.

USP

- No requirement of cold chain logistics
- Simple to operate test result in 3 steps
- Rapid time from sample preparation to Result 3mins
- Simple interactive interface of the App
- Bluetooth enabled
- Internet connectivity not required for its operation
- Can operate with simple 9 V alkaline battery
- Portable system with the palm size reader device

FUNDS RAISED/ACHIEVEMENTS

- Founder Sumona Karjee Mishra has received BIRAC SIIP Fellowship
- INR 1.2 Cr from BPCL Ankur
- INR 30 lakhs from Millenium Alliance
- BIRAC GCE India worth INR 35 lakhs
- MeiTY SASACT Fund worth INR 20 lakhs
- BIRAC TiE WinER Award worth INR 5 lakhs
- Swayam Siddha Samman worth INR 1 lakh
- TATA Trust Harvard SAI worth INR 5 lakhs
- BIRAC – Ignite Award 2019
- Pride of Odisha Award (Make in Odisha Conclave 2018)

END USERS/CUSTOMERS

B2C: Diabetic Patients, Hypertension Patients, Geriatric People, Genetic Disposition, Preeclampsia survivors, etc.

B2G: PHC, Screening Camp, Asha Workers

B2B: Tier II & III city and rural area diagnostic labs

BCKIC
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ARISHTI CYBERTECH PRIVATE LIMITED

Cybersecurity

MessageMe™ - A NextGen Enterprise Messaging platform for Sensitive Communications using Quantum Technology

APPLICATION

MessageMe™ is a first of its kind Enterprise Messaging platform for critical communications. It focuses on Consent based messaging with Data Privacy at its heart. It comes with its own Administration dashboard which helps control and monitor the control within the organization. The patented technology helps reduce the chances of cyber attacks by 80%. With its Forensic and Investigation capabilities, the platform can be truly used for critical communications.

COMPANY NAME

Arishti CyberTech Pvt Ltd

FOUNDER'S NAME

Kanak Kawadiwale

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation)

INTELLECTUAL PROPERTY

PCT Application No. Inprocess
Indian Patent Application No. 202121015792
Trademark No: 5373435

PROBLEM ADDRESSED

The problem of Insecure & Uncontrolled communications in the enterprises is increasing day by day due to increased use of consumer messaging platforms which:

- Uses traditional encryption technology
- No control over sensitive data
- No Audit & Forensics of communications

Enterprises need Secure Messaging platforms, but the existing consumer messaging platforms are not reliable enough that make up around $3 Billion industry

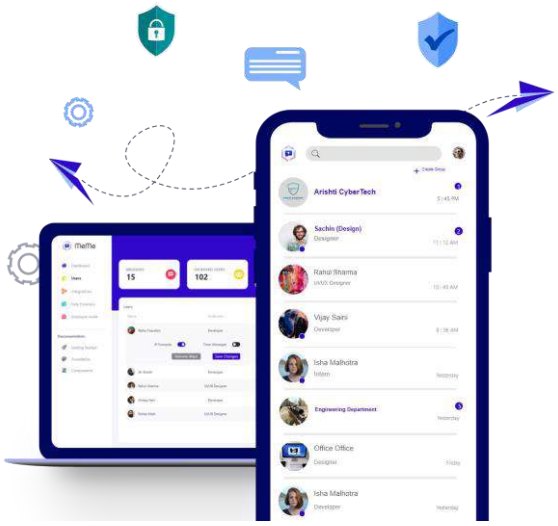
ABOUT THE TECHNOLOGY

The platform uses cloud based Quantum cryptography which makes the application secure and unique in itself. It also works on the principle of Consent based messaging, in sense the ownership of the critical data remains with the creator of data.
The platform uses Zero Trust Network architecture which believes "Never Trust, Always Verify" principle. Centralized control and administration of the internal communications become easy due to Admin Panel dashboard.

FUNDS RAISED/ACHIEVEMENTS

- TIDE Grant worth INR 7 lakhs from KIIT TBI
- Awarded Persistent Inspiration Award
- Recognized by Ministry of Defence & MeitY
- Innovative Product by AICTE National startup committee.
- Top 30 startups under 5G hackathon organized by Department of Telecom
- Supported under NIDHI-EIR by SINE IIT-Bombay
- Finalist at Aegis Graham Bell Awards under Enterprise Solution category

PRODUCT IMAGE



USP

- Patent Pending Hybrid Encryption using Quantum Technology reducing the attack chances by 80%
- Consent based critical Messaging
- Admin Controlled Communications
- Messaging Forensics & Monitoring capabilities
- Data Loss prevention over the Sensitive Data being shared

END USERS/CUSTOMERS

- Banking Enterprise
- Teleperformance – BPO/BPM Market
- Defence agencies and firms

Industrial Biotechnology

Development of marine polysaccharides mediated nano products for shrimp disease management

APPLICATION

The developed polysaccharide based nanocomposite feed supplements is commercialized as a potential feed additive for shrimp aquaculture in order to prevent diseases and protect the industry from huge economical losses.

COMPANY NAME

Suveshika Bi Products Pvt Ltd

FOUNDER'S NAME

B. Vaseeharan

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **7** (Validated & Market Ready)

INTELLECTUAL PROPERTY

Method for production of carbohydrate from seaweed and applications thereof.

Application No. 201941035845

PROBLEM ADDRESSED

Aquaculture being a multi-billion dollar industry is occasionally facing setbacks, due to infectious diseases, which are major impediment to the development of aquaculture, particularly shrimp culture. Among the diseases, Early Mortality Syndrome EMS or more technically known as Acute Hepatopancreatic Necrosis Disease AHPND and Running Mortality Syndrome RMS are the common disease in shrimp culture cause huge economic losses to the industry. It has been reported that the pathogenic Vibrio belonging to Vibrio harveyi and V. parahaemolyticus are the causative agent for the EMS/AHPND and RMS. Likewise, White Spot Syndrome Virus WSSV is a highly contagious viral pathogen infecting all crustaceans.

PRODUCT IMAGE

ABOUT THE TECHNOLOGY

The technology is focused on production of the polysaccharides mediated nanoproducts to enhance the immune activity and disease resistant effect against the major shrimp aquaculture pathogens V. parahaemolyticus, V. harveyi and WSSV in shrimp Litopenaeus vannamei to conserve the aquaculture industry. At this point, diet plays a major role which significantly contributes growth and immune status of fishes. The technology would help to explore a novel mechanism of formulating nano feed supplements using marine polysaccharides fucoidan and alginate from marine sources for enhancing the disease resistance in shrimp against V. harveyi, V. parahaemolyticus and WSSV. The experimental animal, i.e. shrimps were fed with commercial feed incorporating formulated marine polysaccharides coated zinc oxide nano products with different concentration. They were experimentally infected with WSSV and its immune response were analyzed by immunological parameters following standard methodologies.

USP

- The BIONAN COMPO feed supplement were now available in 1, 2.5 and 5 L packs.
- Enhance both physiogical & immunological response.
- Increase disease resistant capacity
- Yield high quality aquatic animals with in stipulated time frame
- Vibriosis and WSSV control by potential BIONAN COMPO feed additive for aquaculture.

FUNDS RAISED/ACHIEVEMENTS

- Supported Under BIRAC BIG Grant worth INR 50 Lakhs
- The BIONAN COMPO feed supplement are now available in 1, 2.5 and 5 L packs.

END USERS/CUSTOMERS

- Shrimp Farmers, Aqua consultants, Aqua Dealers, Aquaculture feed supplements manufacturing companies.

Clean Water

e - Jal Mini

APPLICATION

e-Jal mini (PE-145) tests color, total hardness, free residual chlorine, turbidity, TSS, Ammonia, Nitrate, Chromium and Phosphate. The device is portable and hence can be used in remote locations for water testing

COMPANY NAME

Elico Ltd

FOUNDERS' NAME

KVSN Raju

TECHNOLOGY READINESS LEVEL (TRL)

TRL: **8** (Early Revenue Generation Phase; GEM Onaboarded)

INTELLECTUAL PROPERTY

1. Trademark Registration,
Application No: 5358974, 5358974, 5358976

2. Design Registration,
Application No: 359319-001

PROBLEM ADDRESSED

In many parts of the world, water is not safe enough to drink. There are basic qualitative observations that quickly determine if water is not safe to consume. However, there are also many "invisible" substances that must be tested for professionally to identify the contaminants and to figure out how the specific polluted water can be purified. Depending on the manufacturer and funding, portable tool kits can be very pricey for local organizations or NGO's. However, Elico Ltd. Has developed this affordable and portable water testing device that can be carried to fields or used in a laboratory setting.

PRODUCT IMAGE

ABOUT THE TECHNOLOGY

This unique innovation uses 4 different measurement techniques that are Potentiometric, Electrical Conductivity, Colorimetric & Nephelometric. Their devices are IoT & Cloud enabled systems that "Bringing Lab to Field" instead "Sample going to Lab". The mobile application connected to the devices make the testing easier and provides instant reports to the users.

FUNDS RAISED/ACHIEVEMENTS

- INR 20 lakhs grant-in-aid from National Jal Jeevan Mission challenge.

USP

- Pre-calibrated for water parameters..
- Supports ready to use liquid, powder and tablet reagents.
- Online data transfer and cloud storage.
- Step by step guidance to user provided in mobile app.
- Mobile app supports local languages.

END USERS/CUSTOMERS

- Government agencies to monitor water quality (state level & panchayat level requirements).
- Water purifiers company
- Domestic Households
- CSR Activities

Clean Water

HD Flip- Water testing device

APPLICATION

The device can be used to detect turbidity, color, conductivity, temperature, TDS, nitrate, fluoride, free residual chlorine, iron, pH, total hardness, and alkalinity of water. The device is portable and hence can be used in remote locations for water testing

COMPANY NAME

Hueristic Devices Pvt Ltd

TECHNOLOGY READINESS LEVEL (TRL)

TRL: 8 (Early Revenue Generation Phase; GEM Onaboarded)

FOUNDERS' NAME

Samuel Rajkumar

PROBLEM ADDRESSED

Water quality is a critical problem in the country today, affecting everyone from rural to urban areas. Small amounts of hazardous pollutants can cause major health concerns. Fluorosis and arsenicosis are two well-known cases. Field test kits, on the other hand, are frequently difficult to use and are only semiquantitative. Testing labs are scarce and difficult to access. Our current inability to conduct credible field testing and properly utilize that data is costing us a lot in terms of poor health and lost livelihoods.

ABOUT THE TECHNOLOGY

Hueristic Devices Private Limited suggested a revolutionary technology in which the camera of a calibrated smartphone is used to match the intensity of color of the sample + reagent with the parameter concentration. The smartphone correlates this and displays the result in parts per million (ppm) or milligrams per liter (mg/L). The camera of a calibrated smartphone is used to match the intensity of sample reagent color with parameter concentration. The smartphone correlates this and displays the result in parts per million (ppm) or milligrams per liter (mg/L). Spectrophotometers, which are very expensive instruments, are used in lab testing for the same purpose.

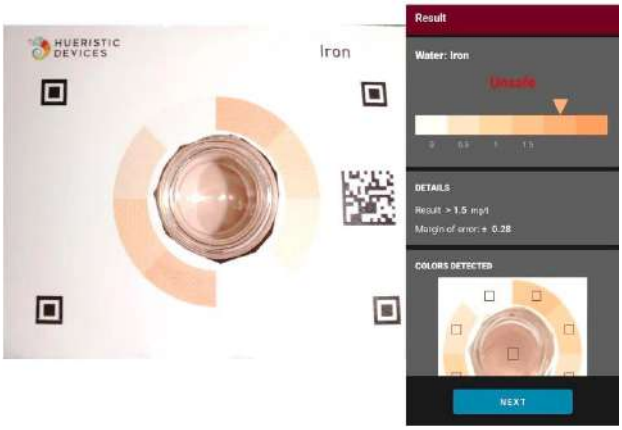
FUNDS RAISED/ACHIEVEMENTS

- INR 24.50 lakhs grant-in-aid from National Jal Jeevan Mission challenge.

END USERS/CUSTOMERS

- Domestic Household customers
- Government agencies to monitor water quality
- Industrial Consumers with inline water
- Quality monitoring and customized filtering.

PRODUCT IMAGE



USP

- Light weight device with in-built battery.
- The device can be easily calibrated with low maintenance.
- It has built-in power supply for testing which makes it more user friendly than other FTKs.
- Automatic data transfer to smartphone app, and onto cloud helps in data analysis.
- Testing is done using color cards and light box, the mobile application provides accurate values for all testing parameters

DEMONSTRATION USE CASES

Demonstration Use Cases

Bariflo Labs India Pvt Ltd

Intelligent delivery management platform empowering billions of shipments to homes.

Parvati Sarovar, Puri, Odisha

Deployment with Ministry of Housing and Urban Affairs

Status: Completed on 28th Feb 2023
Area Covered: 3 Acres
Funding Support: INR 20 lakhs

Jaganathpur, Barbil, Odisha

Deployment with JSW Steels Ltd

Status: Completed on 31st Jan 2023
Area Covered: 3 Acres
Funding Support: INR 34 lakhs

ipanelKlean Pvt Ltd

Disruptive Patented Technology in Waterless Solar Panels Self Cleaning System.

SJVN Solar Plant, Khavda, Gujarat

Deployment with SJVN Solar Power Plant, Khavda

Status: Ongoing since March 2022
Units Deployed: 75
Funding Support: INR 30 lakhs

Capitalland, Hinjewadi, Pune

Deployment with Capitalland, Pune

Status: Ongoing since April 2022
Units Deployed: 6
Funding Support: INR 55 lakhs

MedTel Healthcare Pvt Ltd

iLAB & iRPM: Remote Patient Monitoring System

Balangir, Odisha

Deployment with Zila Swasthya Samiti, Balangir

Status: Ongoing since 15th Aug 2021
Units Deployed: 140
Funding Support: INR 38 lakhs

Berhampur, Ganjam, Odisha

Deployment with BeMC at Berhampur Household

Status: Ongoing since 19th Dec 2022
Units Deployed: 110
Funding Support: INR 50 lakhs

Demonstration Use Cases

Tan 90 Thermal Solutions Pvt Ltd

Portable Cold Storages with Proprietary Phase Change Material for Cold Supply Chain.

Secundrabad, Telengana

Deployment with Delightful Gourmet Private Limited

Status: Ongoing since 1st Feb 2023
Units Deployed: 92
Funding Support: INR 10.2 lakhs

ETA Purification Pvt Ltd

COSMO for Rapid Sterilization of Air, Water & Surfaces

Chennai Metro, Tamil Nadu

Deployment with Chennai Metro Raill Ltd

Status: Completed on April 2023
Units Deployed: 10
Funding Support: INR 1 Cr

KARMA Pvt Ltd

Supporting Agency: Jindal Steel Work
Status: Ongoing
Units Deployed: 400
Collaborating Partners: OneLab (MIT) and Rice University
Deployment Sites: LV Prasad, Kalinga Hospital, Falcon, Foresight Enterprise, Mahakali Flour Mill

IG Drones India Pvt Ltd

Drone based Agri assessment And Sprying

Jajpur, Odisha

Deployment with Jajpur Block development office, Govt. of odisha

Status: Ongoing
Units Deployed: 1
Funding Support: INR 2 lakhs

CLUIX Pvt Ltd

Cluix- Strip based water quality testing device.

Birachpur, Karnal, Haryana

Deployment with Public Health Engineering Department, Haryana

Status: Ongoing since 3rd April 2023
Units Deployed: 170
Funding Support: INR 35 lakhs

LarkAI Healthcare Pvt Ltd

A non-invasive easy to use early stage heart and lung abnormalities screening device.

UPHC, Bhubaneswar, Odisha

Deployment with Antennae & Qi Ventures at Bhubaneswar

Status: Ongoing since Dec 2022
Units Deployed: 25
Funding Support: INR 3.5 Cr

CSR WTP SNAPSHOT

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Bhubaneswar City Knowledge Innovation Cluster Foundation

OVERALL IMPACT

5 Number of WTPs	**5** Districts Covered	**8** Blocks Covered	**6500+** Participants Reached
1500+ Total Trained	**35** Micro Enterprise Established	**5** Funding Partners	**1220+** SHGs Associated

WTP Chikiti

Supported by DST, GoI

विज्ञान एवं प्रौद्योगिकी मंत्रालय
MINISTRY OF SCIENCE AND TECHNOLOGY
सत्यमेव जयते

The Women Technology Park (WTP) at Chikiti, Ganjam was established in 2017 with the support of DST to encourage women for capacity building and economic upliftment by establishing micro enterprises completely led by local women in that area.

Chikiti, Ganjam Location	**42 Lakhs** Funds Sanctioned	**1200 +** Total Outreach	**37** Trainings Conducted
157 Total Trained	**6** Micro Enterprise Established	**2** GPs	**1** Block Covered

WTP Jagatsinghpur

Supported by Paradeep Phosphate Ltd

PPL

The Women Technology Park (WTP) at Jagatsinghpur was established in 2019 with the support of PPL to create women-led micro enterprises on bio-degradable sanitary pad, Incense stick, mushroom farming, and organic phenyle. The micro enterprise functioning on production of bio-degradable sanitary pad is generating a revenue of more than INR 10 K per month.

Jagatsinghpur Location	**10 Lakhs** Funds Sanctioned	**15 +** Total Outreach	**4** Trainings Conducted
20 Total Trained	**1** Micro Enterprise Established	**2** GPs	**1** Block Covered

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Bhubaneswar City Knowledge Innovation Cluster Foundation

WTP Koida

Supported by SNM Group

The Women Technology Park (WTP) at Koida, Sundergarh was established in 2017 with the support of SN Mohanty Group. So far more than 650 SHG women have been trained in the manufacturing of 3 Layer Bio-Degradable Mask, Leaf Plate, LED Bulb, Millet Based Noodles, Organic Phenyle, and Hand Sanitiser under WTP Koida in different batches. Currently, SHGs are earning more than 7000 per month by Phenyl manufacturing.

Koida, Sundergarh Location	**45 Lakhs** Funds Sanctioned	**2200 +** Total Outreach	**13** Trainings Conducted
452 Total Trained	**11** Micro Enterprise Established	**15** GPs	**3** Blocks Covered

WTP Raikia

Supported by HDFC Parivartan

HDFC BANK PARIVARTAN
A step towards sustainable progress

The Women Technology Park (WTP) at Raikia, Kandhamal was established in 2021 with the support of HDFC Parivartan. So far more than 2500 SHG women have been connected and 400 SHG women been trained in the manufacturing of LED bulb, millet-based noodles, natural toothbrush making and different value-added products from sweet potato under WTP Kandhamal in different batches.

Raikia, Kandhamal Location	**6.42 Cr** Funds Sanctioned	**5000+** Total Outreach	**34** Trainings Conducted
797 Total Trained	**16** Micro Enterprise Established	**17** GPs	Blocks Covered

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WTP Jharsuguda

Supported by Vedanta

vedanta
transforming for good

The Women Technology Park (WTP) at Jharsuguda was established in 2023 with the support of Vedanta Aluminium Ltd. So far more than 30 women from 10 SHG groups were trained in the manufacturing of biodegradable sanitary napkin. Also, they got training on Sales, Marketing, Digital Marketing and exposure to differ market areas in Jharsuguda, Sambalpur and Sundargarh District. Currently, 1 full fledged production unit is operational.

Jharsuguda Location	**37 Lakhs** Funds Sanctioned	**50** Total Outreach	**4** Trainings Conducted
30 Total Trained	**1** Micro Enterprise Established	**1** GPs	**1** Blocks Covered

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BCKIC Foundation Stakeholders

INDUSTRY & CORPORATES

NALCO
British High Commission New Delhi
NRDC
JSW Foundation
Bharat Petroleum
INDIA HEALTH FUND
BAYER
SRF
The Rotary Foundation
ROYAL SOCIETY OF CHEMISTRY
ACS
Chilika Development Authority
SPRINGER NATURE
PRABHAT EDUCATION FOUNDATION
kotak
ABLE
Red Dot Foundation
National Innovation Foundation
OMC
cytiva
HUWEL LIFESCIENCES PVT.LTD
metsol
HERO FUTURE ENERGIES
planet positive power
CSRBOX
MODULUS HOUSING
FICCI Flo Bhubaneswar
The Power to Empower
YES BANK

INSTITUTES

immt
Institute of Life Sciences Bhubaneswar
CIPET सि पे ट
KIIT
NISER
IISER BERHAMPUR
CTTC BHUBANESWAR
KIIT-TBI
BGU BIRLA GLOBAL UNIVERSITY

GOVT COLLABORATIONS

Science & Technology Department
Government of Odisha
ODISHA FORESTRY SECTOR DEVELOPMENT SOCIETY
MINISTRY OF DEVELOPMENT OF NORTH EASTERN REGION

INTERNATIONAL COLLABORATIONS

Collaboration with Kobe Biomedical Innovation Cluster, Japan for Biomedical research/ innovation & startups

KBIC
KOBE Biomedical Innovation Cluster

BCKIC
Bhubaneswar City
Knowledge Innovation
Cluster Foundation

Bhubaneswar City Knowledge Innovation Cluster Foundation

The Bhubaneswar City Knowledge Innovation Cluster is now registered as the Bhubaneswar City Knowledge Innovation Cluster Foundation (CINU853200R2022NPL038973), a Section 8 company under the provisions of the Companies Act, 2013 on 18- February, 2022. Bhubaneswar City Knowledge Innovation Cluster Foundation (BCKIC Foundation) is the bonafide legal entity of the Bhubaneswar City Knowledge Innovation Cluster, ***an initiative of the Office of the Principal Scientific Adviser to the Government of India.***

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