वीरमाता जिजाबाई तंत्रज्ञान संस्था, मुंबई. www.vjti-tbi.in



## STARTUP BOOKLET



IS6F





# "SMART INCUBATOR OF THE YEAR"

DIAMOND AWARD WINNER INNOVATION AWARDS 2021

HOSTED BY









## **About Us**

VJTI Technology Business Incubator (TBI) was established at the prestigious Veermata Jijabai Technological Institute (VJTI) in 2017. VJTI is one of the oldest technological institutes in India (established in 1887). It is an autonomous institute of Government of Maharashtra.

VJTI-TBI is supported by the Department of Science and Technology (DST), Government of India. It is currently supporting 37 startups working in the areas of energy, clean-tech, AI/ML, IoT, EV and cyber security.

### **VISION**

"To be a world class Technology Business Incubator that will create a credible cluster of sustainable technology based businesses that will create a social and economic impact on the region and the nation as a whole."

#### **MISSION**

- ~ To nurture and support start-ups focusing on the thematic areas.
- ~ To leverage on the scientific, industrial and technological competencies of the region to create scalable and sustainable businesses.
- ~ To enable start-ups have access to high quality technical assistance and mentorship.
- ~ To provide training infrastructure for start-ups to fill existing gaps in their current knowledge set-up.
- ~ To collaborate and create sustainable models of engagement with government, academia, corporate and industries, both at a national and international level.



## **A Snapshot View**

'Smart Incubator of the Year' awarded by India Smart Grid Forum as part of ISGF Innovation Awards 2020 Event.



Domains Supported - Deep-Tech, Al, ML, Big Data, IoT, Energy, Cyber Security, Clean-Tech



Number of Startups - 37



Products developed by incubated Startups ≈ 50



Total revenue generated by incubated Startups ≈ 10 Cr.



Awards won by incubated Startups - 14



Jobs created by incubated Startups ≈ 80



Services offered by incubated Startups ≈ 20



Student interns hired by incubated Startups ≈ 100



Mentors ≈ 50 (Experts from Industry, Academia, Research, Entrepreneurs)



Collaborations/Partnerships established by the incubator ≈ 20





## **Incubation Offerings**



LAB INFRASTRUCTURE



INVESTOR CONNECT



LEGAL ASSISTANCE



TRAINING & WORKSHOPS



MARKETING ADVISORY



FINANCIAL ADVISORY



MENTOR CONNECT



**HIRING & INTERNS** 

## **Our Partners**











## **VJTI-TBI Partnership with LTI**



Larsen and Toubro Infotech (LTI) is one of the leading information technology service provider rendering IT and consulting services worldwide. It is engaged in various social responsibility initiatives by leveraging employee engagement initiatives for skill development of disadvantaged section of society.



LTI as a part of its Corporate Social Responsibility (CSR) executed the AVISHKAR CSR initiative at VJTI-TBI to provide an ecosystem to create a credible cluster of sustainable technology-based startup businesses for creating a social and economic impact on the region and the nation as a whole.

LTI through AVISHKAR CSR Program provided seed support to selected startups incubated at VJTI-TBI based on pre-decided eligibility and selection criteria.

10 INR Lakhs

Each of the following Startups received a SEED support of INR 10 Lakhs and got benefited under the AVISHKAR CSR Program. The SEED money was utilized for the various stages of their growth journey and achieving certain important milestones such as:



**Aidgo Technologies Pvt Ltd** build novel and affordable solutions for next generation electric wheelchairs and manufacture battery packs for electric vehicles.



**Wings Bionic** used the seed support to complete product development and implementation of its business project entitled 'Asha Hand - An affordable Myoelectric technology for India.



Marjan Machinery LLP has developed the Semi-automatic Solar Panel Cleaning Device and donated the same for Rural Schools.



**JD Enerbiz Pvt Ltd** used the SEED support for Community Microgrid for Rural Community.



Sandbird R&D Pvt Ltd developed an IoT-enabled Smart Power Tiller for Farmers.



Mag9 Energies Pvt Ltd manufactured Electric Bike and donated to Delivery Personnel from Socio-economically Challenges Backgrounds.



The Startup **Farmchain Services** was granted a Seed Support of INR 8 Lakhs and **FasalTech** was granted a Seed Support of INR 2 Lakhs.



The funds were utilized by the Startups for the benefit and would impact the socio-economically challenged communities.





## **VJTI-TBI Accolades**

















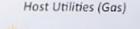






## ISGF INNOVATION AWARDS

05 March 2021 | Hotel Pullman, New Delhi, India









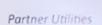






INDRAPRASTHA GAS LIMITED















## **Awards Won by Startups**

#### AMBEDKAR YOUNG ENTREPRENEUR LEAGUE 2022 WINNER – SOCIAL ENTREPRENEUR

WINGS BIONIC - DR. AKSHAY CHAVAN (ONE OF THE FOUNDERS) RECEIVING AWARD FROM HON. CENTRAL MINISTER FOR MINISTRY OF SOCIAL JUSTICE AND EMPOWERMENT.







#### 'BEST STARTUP OF THE YEAR' 2021, ET AWARDS MUMBAI

RISHI PALEKAR AND PRANITA PALEKAR, CO-FOUNDERS OF AURIFY SYSTEMS RECEIVING THE STARTUP OF THE YEAR AWARD UNDER 'CONSUMER TECH AND E-COMMERCE' CATEGORY



#### WINNER OF CLIMATE LAUNCHPAD CHALLENGE 2021

VISHWESH BHAT, CO-FOUNDER OF SMDPOWER SOLUTIONS HAVE BEEN ANNOUNCED WINNERS OF THE GLOBAL CLIMATE LAUNCHPAD CHALLENGE 2021







## 'TECHNOLOGY INNOVATION PIONEER' AT THE TIP 2020 SUMMIT, UAE

MARJAN MACHINERY WAS AWARDED THE 'TECHNOLOGY INNOVATION PIONEER' AT THE TIP 2020 SUMMIT ORGANIZED BY UAE MINISTRY OF ECONOMY



## 'BEST STARTUP AWARD' AT CIRED 2019 EVENT IN SPAIN

YASH KULKARNI AND AKSHAT KULKARNI, CO-FOUNDERS OF ORXAGRID LIMITED RECEIVING 'BEST STARTUP AWARD' AT CIRED 2019 EVENT HELD IN SPAIN



**Orxa**Grid





## **Awards Won by Startups**

### WINNERS OF PITCH-FEST CHALLENGE, CHENNAI

AJITH KANNAN AND BALA SURYA, CO-FOUNDERS WERE WINNERS OF PITCH-FEST CHALLENGE ORGANIZED BY KCG INSTITUTIONS, CHENNAI







#### FELICITATION & SIGNING OF MOU WITH BEML FOR DEVELOPMENT OF UGVS - AERO INDIA EXPO 2021

TORUS ROBOTICS SIGNED AN MOU WITH BEML FOR DEVELOPMENT OF UGVS AMIDST HON'BLE DEFENCE MINISTER, SHRI.RAJNATE SINGH DURING THE AERO INDIA DEFENCE EXPO 2021.



#### PROTOTYPING GRANT FROM GOA STATE INNOVATION COUNCIL

VISHWESH BHAT, FOUNDER OF SMDPOWER SOLUTIONS RECEIVING THE PROTOTYPING GRANT FROM GOA STATE INNOVATION COUNCIL







#### IIGP 2.0 AWARD FROM DST-LOCKHEED MARTIN-TATA TRUSTS CONSORTIUM

SHINIL SHEKHAR AND NEERAJ WAGHCHAURE, CO-FOUNDERS OF AIRPIX GEOANALYTICS, RECEVING THE PRESTIGIOUS IIGP 2.0 AWARD FROM DST-LOCKHEED MARTIN-TATA TRUSTS CONSORTIUM



## 'BEST STARTUP OF THE YEAR' 2021, BIGLEAP AWARDS MUMBAI

AJITH KANNAN AND BALA SURYA, CO-FOUNDERS OF SANDBIRD R&D RECEIVING THE AWARD DURING THE BIGLEAP STARTUP AWARDS 2021 CEREMONY









## **Achievements**



- Winners of India Innovation Growth Program 2.0 organized by DST, Tata Trusts and Lockheed Martin (2019)
- Winners of Ankur Program by BPCL (2020)
- Finalist in SHELL E3i Program (2020)
- Best Smart Grid Project, ISGF (2019)
- Best Startup of the Year, CIRED (2019)
- Finalists in several accelerator programs namely DOTFORGE (UK), EDP Starter (Europe), Microsoft Catapult (US) and New Energy Nexus (US), YES SCALE (India)





- Aurify was awarded by CIO Review India as one of the '20 Most-Promising Manufacturing Technology Solution Providers of 2019'.
- Pranita, the Co-Founder was also awarded as 'Leader in Technology Award' by International Women Leaders Forum (2019)
- Top 10 Start-ups in Energy Sector at EDF Pulse (2020)
- Top 29 Start-ups at TIP-2020 Summit, Abu Dhabi (2020)
- Top 40 Start-ups at Data Innovation Bazaar (2020)
- Selected for Seed Support under AVISHKAR CSR Program by Larsen & Toubro Infotech (2021)





- Selected among the Top 10 innovators under the 'Springwise Positive Innovation Challenge' organized by Springwise Intelligence (UK) in collaboration with Startup India (2020)
- Finalists at STPI Motion Accelerator Program (2020)
- Selected for Seed Support under AVISHKAR CSR Program by Larsen & Toubro Infotech (2021)





- Winner at FLCTD Low Carbon Innovation Challenge 2020 by UNIDO, FLCTD, Bureau of Energy Efficiency and Global Environment Facility
- Winners at the South Asia International Climate Launchpad 2020 for Low Carbon Motor Technology
- 2nd Runner-up in the Global Innovation Challenge 2020.
- Recognised as "Pioneer Defence Innovator" by Indian Defence Excellence (IDEX-DIO)





## **Achievements**



- Top 25 startups in India to be recognized by UNIDO's FLCTD Low Carbon Accelerator.
- Top 25 products of CZC- IITM and covered by various media.
- Winners of TNIGC 2020 initiated by Tamil Nadu Government.
- Recognized as one of the top 30 innovative product in India with strong impact potential by Youth Co:Lab organized by UNDP, AIM and NITI Aayog.
- Selected for Seed Support under AVISHKAR CSR Program by Larsen & Toubro Infotech (2021)
- Winner of the 'Prototyping Grant Award' from Goa State Innovation Council.





- Final winners under NIDHI-PRAYAS at IIT-Mandi (2021)
- Top 8 Start-ups at Big Leap 2020 India
- Top 15 Start-ups at Falling Walls 2020 (Germany)
- Top 28 fundable Start-ups at India Fund Fest 2020











- AYE League 2022 Winner from Ministry of social justice and empowerment and IFCI venture capital and DICCI
- Funding by IFCI venture capital which is 30 Lakh rupees for three year in year 2022





## **Summary of Startups**

We are currently incubating 37 startups out of which 8 startups are in the Scale up stage, 11 in the Validation stage and 11 in the Prototyping Stage. 7 start-ups still in Ideation Stage.

Scale up Stage	Page No.
Airpix Geoanalytics Private Limited	Page 01
Orxagrid Solutions Private Limited	
3. Aurify Systems Private Limited	
4. Marjan Machinery LLP	
5. Punaha Battery Renescance Private Limited	
6. Aumsat	
7. Yotaka	_
8. Bombay Powerco Pvt. Ltd	
Validation Stage	
Mag 9 Energies (Previously known as Magnes Motors)	Page 16
2. Farmchain Services Private Limited	Page 18
3. JD Enerbiz Private Limited	Page 20
4. Torus Robotics Private Limited	Page 21
5. Sandbird Research and Development Private Limited	Page 23
6. SMD Power Solutions (OPC) Private Limited	Page 25
7. Blockeye Technologies	Page 27
8. Monter Technologies Private Limited	Page 28
9. Zigyasa	Page 30
10. Optimum Data Analytics	Page 31
11. Paritta SHM	Page 32
Prototyping Stage	
PMV Electric Private Limited	Page 34
2. Finemen Diagnostics & Instruments Private Limited	Page 36
3. Fasaltech Private Limited	Page 37
4. JyoSH AI Solutions Private Limited	Page 39
5. Wings Bionic LLP	Page 41
6. Aidgo Technologies	Page 42
7. XProtect	Page 43
8. Gridsentry	Page 44
9. Volt Automation LLP	
10. Sunny Synergy Solutions	Page 48
11. Tweetshodh	Page 49



# AIRPIX

Company Name : Airpix Geoanalytics Private Limited

Year Founded

: November 2013.

Sector

: AI / ML & Drones.

Brief about the Company

: AIRPIX has two technology verticals namely drone based services for large area surveying, mapping, critical asset inspection and project progress monitoring and AI based video analytics platform to enable autonomous remote monitoring and insights for retail, oil & gas, manufacturing and infrastructure. Some of our clients include BPCL, L&T, ACC, JSW, Delhi Metro, Indian Railways and more.

USP

end users to deploy, manage and scale video analytics over the air in a no-code environment and no dependencies on systems integrators. With Alsyte, you can just click and deploy video analytics modules to specific IP cameras selected, configure alerts, access dashboards and download reports. Our product is already deployed in retail fuel stations for customer recognition, safety compliance checks and turnaround time analysis.

#### Product Offering

: Cloud platform + edge software for on-premise video analytics management, cloud platform to tag, annotate and collaborate on drone videos, cloud platform for drone based inspection report generation and drone based surveying, mapping and inspection services.

## Some of our use cases are

- : A) Al Based video analytics to generate customer insights, ensure employee SOP & safety compliances and turn around time analysis for retail fuel stations for BPCL.
  - B) Computer Vision + AI for automated defect identification on assembly line for L&T EBG.
  - C) Topographic survey and land record data integration for WAPCOS (a Govt. of India PSU) of 50,0000acre area in Gujarat to carry out canal network design and distribution of water during heavy rains.
  - D) Mapping and digitization of the DMRC alignment along with feature extraction and identification of encroachment areas in DMRC land parcels.
  - E) Topographic survey, cut fill volume estimation and geo-tagged drone videos based project progress monitoring of Navi Mumbai International Airport.





## **AIRPIX**

Traction so far

: We have completed more than 300 projects across India for both Government bodies and leading MNCs. Some of our clients are L&T, AECOM, BPCL, JSW, Lafarge Holcim (ACC, Ambuja Cements), KPMG, Shapoorji Pallonji, Kalpataru, Suzlon, Greenko and GVK.

Notable : Achievements

Winners of India Innovation Growth Program 2.0 (organized by DST,
 Tata Trusts and Lockheed Martin), BPCL Ankur Scheme 2019 Cohort and finalists for Shell E4 Digital Track 2021.

Previous Funding Round

: INR 75 Lakhs through India Innovation Growth Program and BPCL Ankur Program.

Funding Ask: INR 350 Lakhs.

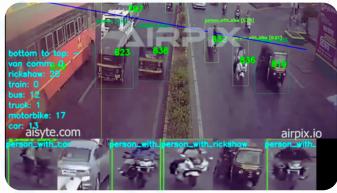
Revenue till date

: INR 440 Lakhs.

**Team Details :** Mr. Aniket Tatipamula who is the Director, Technology has experience of over 5 years in developing AI and drone solutions, over 4 years in software and AI development and has successfully delivered more than 200 projects.

Mr. Shinil Shekhar who is the Director, Sales has experience of over 5 years in business development and sales, 4+ years in Oil & Gas and has closed over 4 crores of cumulative business.

Mr. Arvind Krishnaswamy is an Advisor to AIRPIX Team. He is an ex-Executive Director of BPCL with over 20 year of experience as an IT leader in BPCL, with Enterprise IT, Oil & Gas expertise.



**Image**: Analysis of traffic surveillance videos performed using Airpix platform.



Image: Drone-enabled monitoring of civil infrastructure project of Indian Railways was undertaken by Airpix.





: Orxagrid Solutions Private Limited

Year Founded

: September 2019.

**Sector** : Energy, AI / ML & IoT.

Brief about the Company

: We are a tech start-up based in UK and India that develop embedded IoT sensors and machine learning analytics for smarter electricity distribution.

#### Product Offering

: We make IOT sensors and Artificial Intelligence analytics for smarter energy management. Our area of focus is in energy efficiency, health analysis of connected electrical assets and fault management. Our machine learning algorithms predict abnormal or undesirable grid conditions such as network inefficiencies such as voltage violations, phase imbalances, power outages and asset health features or asset failure.

## Some of our use cases are

Real time management of power transmission and distribution networks, energy management systems for private industries, fault and outage management for energy distribution companies and predictive maintenance of critical assets in various industries.

## Traction so far

: OrxaGrid has a stable platform and sensors deployed at scale to multiple site locations and has won an award for best smart grid deployment from India Smart Grid Forum. We have onboarded MSEB and APEPDCL (distribution companies) and have sales partnership with Tata Projects.

## Notable : Achievements

Orxagrid has been conferred with numerous recognitions since its inception, including 'Innovate UK' grant, 'Best Startup of 2019' award from CIRED and 'Best Smart Grid Project of 2019' award from ISGF, India

The startup has already been selected as finalists in several accelerator programs namely DOTFORGE (UK), EDP Starter (Europe), Microsoft Catapult (US) and New Energy Nexus (US).

#### Previous Funding Round

: INR 18 Lakhs raised through YES SCALE Accelerator and around INR 4 Lakhs through family and friends.







Funding Ask: INR 45 Lakhs.

Revenue till: Around INR 23 Lakhs.

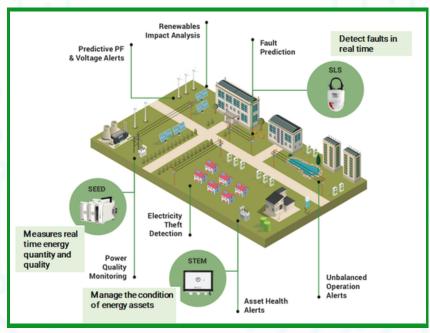
date

Team Details: Yash is an Electrical Engineer from University of Illinois Urbana

Champaign. A smart grid enthusiast with over 9 years of experience working in electricity sector across India, Europe & USA. As CTO of Orxagrid, he has developed IoT sensors and AI analytics platform & is actively engaged in deploying & enhancing the product as per

user requirements for energy systems optimisation.

Akshat (CEO, Orxagrid) is an expert in low carbon technologies (solar, storage & EV's), energy transition strategy, IoT and AI product development. He has diverse experience in the energy sector energy optimization in the UK, smart grids in India+ China, energy policies in Thailand and renewable energy in the US & is a prominent figure in international technical committees such as CIGRE that create energy system guidelines. He has done his MBA from London Business School and Electrical & Computer Engineering from University of Illinois at Urbana Champaign.



**Illustration**: Orxagrid makes IoT-enabled sensors and AI-based analytics for managing energy utilization effectively.







: Aurify Systems Private Limited

Year Founded

: March 2017.

Sector : AI/ML.

**Brief about** the Company

: We provide Al-based solutions relevant to various industry verticals like retail, manufacturing, real estate, banking, energy & utilities etc. and specialize on data & video analytics.

USP

: Proprietary solutions, remote deployment & support, highly scalable, maximum use of existing infra (CCTV/Computer), higher accuracies due to pre-trained models, on premise and cloud models available, minimum entry costs due to lighter infrastructure requirements, solutions available on subscription basis, no use of any special Bluetooth, sensors, beacons or RFID and shorter devices, deployment timeframe.

#### Product Offering

- 1. Customer profiling (people counting, gender demographics, age, clothing category & emotions).
- 2. Facial recognition (repeat customer analysis. workforce management, feed to access control systems & visitor management).
- 3. Safety & compliance (PPE non-compliance).
- 4. Lead generation (interactive kiosks based intelligence to digital signages).
- 5.QA & productivity (task monitoring, QA through image analysis & loading / un-loading duration capture).
- 6. Surveillance (suspicious activity, perimeter security, crowd monitoring, theft, asset protection).
- 7.E-commerce (conversational commerce, smart search & recommendation).
- 8. Sales/inventory forecasting, customer segmentation, booking cancellation prediction.
- 9. Miscellaneous (proctoring, parking assistance & seat occupancy).

## use cases are

Some of our : A) Fashion Retail: In-Store analytics does customer profiling and provides footfall, outsider count, gender demographics and clothing analytics. Also we are doing queue management and billing counter monitoring at POS counters.







## Some of our : use cases are

- B) Mall: Through people counting technology we are regulating entrants by keeping a count of entries and exits through multiple gates simultaneously and raising alerts as real time mall count reaches the set threshold. We are also providing them footfall and gender demographics.
- C) Manufacturing: contactless facial recognition based attendance and visitor's management deployed along with surveillance features like perimeter security and asset protection.

## Traction so far

: Our retail installations have crossed 350 PAN India with few marquee customers like Tata and Aditya Birla. Couple of pilots running outside India.

#### Notable : Achievements

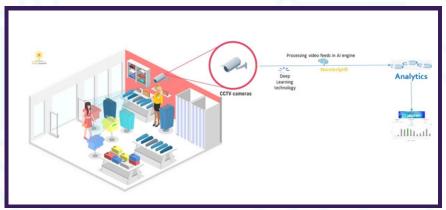
- 1. Company was awarded as 'Startup of the year' at 'Leaders of Tomorrow' season by ET Now under 'Consumer Tech and E-Commerce' category.
- 2. Aurify was awarded by CIO Review India as one of the '20 Most Promising Manufacturing Technology Solution Providers' earlier.
- 3. Pranita, the Co-Founder was also awarded as 'Leader in Technology Award' by International Women Leaders Forum.

**Funding Ask**: Funding will be opted for after 6 months (currently bootstrapped)

Revenue till : > 3 Crores. date

#### Team Details:

- Rishi Palekar, the MD, has over 25 years of IT experience. He has worked with TCS, HCL and many other companies in India and UK.
- Pranita Palekar, the CEO has over 23 years of experience in IT. She has worked with TCS, IBM, Capgemini and few other companies.



**Illustration**: Aurify's product StoreScript can predict footfalls and predict future demand and sales for various industries including retail.





## **Marjan Machinery**

— robotic solar panel cleaning technology

Company Name : Marjan Machinery LLP

Year Founded

: March 2018.

Sector

: Cleantech and Energy.

Brief about the Company

: We have developed autonomous roof-solar module cleaning technologies that eliminate risks of accidents of roof cleaning personnel, provides smart operations and maintenance to owners and saves precious volumes of water (avg. 10,000 L water for cleaning 1 MW-generating solar panel).

USP

: Our solution does not reduce the use of water but completely eliminates it from the solar O&M process, unlike the competitors.

#### Product Offering

We offer full automatic solar cleaning solution for solar power systems which may either be ground-mounted, rooftop or carport type installation. Our solar cleaning solution are a fleet of robots that perform daily cleaning of the solar power plant without water & labor and we also have semi-automatic cleaning solutions that are ideal for smaller commercial and residential systems.

Some of our use cases are

**Some of our**: Building façade cleaning.

## Traction so far

: We have 5 paying customers in India & Middle East that are using our solution.

#### Notable : Achievements

Marjan Machinery was awarded as 'Technology Innovation Pioneer' for 2020 at TIP Summit 2020 organized by the UAE Ministry of Economy and The Department of Economic Development, Abu Dhabi.

The startup was also selected among Top 30 finalists under EDF Energy Challenge 2020 in the energy sector.

Marjan also has featured in 'Top 40 Startups in Data Innovation Bazaar 2020' organized by Startup India.

#### Previous Funding Round

: Marjan has raised about INR 25 Lakhs as a pre-seed investment.

Funding Ask: INR 50 Lakhs.





# **Marjan Machinery**

— robotic solar panel cleaning technology

Revenue till : INR 10 Lakhs.

date

Team Details: The founders Mr. Samruddha Parkar and Mr. Anirudh Railkar both,

have a background in robotics & industrial automation as well as

HT/LT power maintenance sectors.



Image: Marjan Machinery's flagship product is an IoT-enabled solar cleaning robot which has found customers in Europe and Middle-East.



Image: Marjan Machinery has also developed a semi-automatic handheld solar panel cleaner that is gaining traction.





: Punaha Battery Renescance Private Limited.

Year Founded

: January 2019.

Sector : Cleantech & Renewable Energy.

**Brief about** the Company : Punaha Batteries is a cleantech startup which aims to reduce ewaste in the traction/deep storage battery industry by upto 50% through a novel mechanism to reduce the number of lead acid and nickel cadmium batteries that are discarded. The startup uses a software-controlled 'desulphation' process to regenerate the batteries, allowing them to be used for up to twice as long. This also results in reduction in GHG by 77% for every regenerated battery.

USP

Regenerate old & used deep storage and traction batteries, reduce E - waste, save cost & environment.

Product Offering Provide preventive maintenance & regeneration service for the Batteries on a regular basis, promote effective battery management system using latest cloud-based technologies, independent battery evaluation test and extend battery life span resulting in cost saving to customers.

use cases are

**Some of our** : A) A 2014 Vintage 340 Ah, 24 V battery of M/s Godrej regenerated and capacity enhanced from 35% to 85 %.

> B) A 2015 vintage 625 Ah, 48 V, Jungheinrich Battery regenerated and capacity enhanced from 19% to 65%.

Traction so far

Successfully completed regeneration of more than 50 batteries since inception.

Notable Achievements

: The startup was selected among the Top 10 innovators under the 'Springwise Positive Innovation Challenge' organized by Springwise Intelligence (UK) in collaboration with Startup India.

Previous Funding Round

: INR 99 Lakhs has been raised through bank loans and INR 50 Lakhs has been raised through shareholders.

Funding Ask: INR 100 Lakhs.







Revenue till: INR 15 Lakhs.

date

**Team Details:** Founder / Director: Commander Harihara Subrahmaniam (Retd.) is an Ex-Indian Navy Officer with a Master's degree in Systems and Control Engineering from IIT, Powai, Mumbai and BTech in Mechanical Engineering.

> Co-Founder / Director Ms. Shalini Shyamsundar - A qualified MBA from IIM, Calcutta, is an astute Human Resources professional with over 20 +years' experience of diverse multi -cultural global experiences across various MNCs to leverage Human Resource potential effectively in improving business operations.

> Business Partner: Ms. Pavitra Subramanian - Master's in Economics and an Investment professional with over 25 years of experience in relationship management, business development and financial markets specifically tracking Indian Equity/Debt markets for over 17



Image: Battery regeneration system sold by Punaha Battery can reduce e-waste by up to 50%.





: Aumsat Technologies LLP

Year Founded

: 2019.

Sector

: Smart Water, Geointelligence.

**Brief about** the Company : Aumsat provides precision-driven, Al-Enabled, Satellite-based hydronalytics for detecting, predicting, and forecasting leakages in water pipeline networks. .

USP

Unlike traditional survey methods and SCADA based systems. Our Structural Equation Modelling (SEM) Neural Network derives data from Satellite, drone imagery, and sensor networks to help public utilities, irrigation departments accurately detect, analyse, forecast water leakages, ruptures, spills in water transmission networks without physically being present in the field hereby saving cost economically and logistically by 75%

#### Product Offering

: We offer 2 Kinds of services: Leak Detection and Leak Forecasting to Smart Water Utilities.

## use cases are

Some of our : Our Used Case Studies in Singapore, Mumbai, Bangalore and Hyderabad have been published as follows: Page 48: http://eawater.com/eMagazine/oct 2021.html

#### Traction so far

: Having completed ideation, pain storming, and market research, we have reached 29 (B2B and B2G) users by now with a revenue of \$90,000 and have a strong competent team in place. By 2023 we aim to reach a \$0.4 Million target and by 2024 we plan to establish India's first decentralized catchment management authority by proving hydro informatics to our various users.

Funding Ask: 0.4 Million Dollars.

date

Revenue till: \$90,000 by Revenue Alone





# Aumsat Technologies LLP

#### Team Details:

We are specialized engineers, scientists and big thinkers having worked under ISRO, UNOOSA, Google and Harvard school of design, passionate about making information accessible and actionable. We believe in being a part of the future of technology and pushing it to go even further. Our team came together to be problem solvers and solution finders by bringing together geomatics, predictive analytics, remote sensing, object detection and statistics for the smart water sector. In this way, Aumsat thus represents a major contribution to the on-going development of India's scientific, technical and industrial capabilities. Our consistent foundations are built on innovation, precision and trust.



# YOTAKA

Company Name

: Yotaka Solutions Pvt. Ltd.

Year Founded

: December 2017.

Sector

: Information Technology.

**Brief about** the Company YOTAKA SOLUTIONS PRIVATE LIMITED is a private limited company based in India. The company is duly registered at Registrar of Companies, Mumbai (RoC-Mumbai) and is classified as the Non-govt company. The corporate identification number (CIN) of the company is U74999MH2017PTC303163 and the company registration number is 303163.

The use of cameras for surveillance has been prevalent for years now and its adoption is rapidly increasing across public and private sectors. However, majority use the camera feed as a post-mortem tool, for investigation after an incident has occurred.

Manual monitoring of feed is cumbersome and prone to human error. The probability of which is only going to increase with the growing adoption of cameras. Our aim is to make camera usage proactive by adding a layer of intelligence to the feed and extending its application to real time detection and pattern analysis

USP

- : We create innovative and customized applications of Computer Vision technology, using Deep Learning techniques, that automate the use of camera feed in three simple steps:
  - 1. Detect.
  - 2. Identify and
  - 3. Notify, all in Real Time

Product Offering

- 1. Smart Parking Solution YAHA
- 2. Illegal Hawking Prevention Programme (IHPP)
- 3. Land Encroachment Prevention Programme (LEPP)
- 4. Smart School Surveillance System

use cases are

**Some of our**: Automated Land Encroachment Prevention System Project awarded to us from Vadodara Smart City via our SI partners

Previous Funding Round

Bootstraped





# YOTAKA

**Team Details:** Shashank Jayakumar - Co-Founder; Masters from Purdue University, West Lafayette, Indiana. Independent Technology, Consultant at The World Bank. Co-Founder of Dark Horse IT, Consulting Pvt Ltd (Exited in 2014), Bachelors from St Xaviers Mumbai.

Prasad Khadkikar Head - Technology; Computer Science Bachelor, Technology head at HDFC Red (Now bought over by Quikr Homes). With over 14 Years in technology he's worked on everything from Green screen applications to AI/ML based algorithms. With a keen interest in politics he has a good grasp on the government machinery





Company

: Bombay Powerco Pvt. Ltd. (Trade Name: BPC)

Name

Year : 2021. Founded

Sector : Electric Mobility.

Brief about : EV Charging Systems' OEM the Company

USP : Manufacturing technically advanced and clean-cut EV charging

systems.

Product 1) AC chargers: (2 products) Offering

• 7.4kW -- single phase Type 2 charger 22kW -- three phase Type 2 charger

2) DC chargers: (1 product) • 30kW -- Fast CCS 2 charger

use cases are

**Some of our :** Installing charging systems at various parking spaces like government pay and park lots, government department ward offices and branches, residential and commerical buildings, hotels,

restaurants, malls, theatres, etc.

Traction so : Final product developed. far

Pilot project and first enquiries servicing under process.

Funding Ask : INR 10,000,000.

: Founder -- Jugal G. Shahdadpuri Team

Details Director -- Ghanshyam H. Shahdadpuri







: Mag9 Energies (Previously Magnes Motors India)

Year Founded

: March 2020.

Sector

: Electric Vehicle.

the Company

Brief about : We are an automotive startup working on last mile delivery using electric vehicle technology. We have in-depth experience in EV segment by developing India's first smart electric go-kart which has served more than 50,000 customers till date.

USP

: We are focusing on two major technologies i.e. mid-drive transmission & integrated electronics. Mid-drive transmission enables leveraging gear system as well as ensuring that the entire electrical system stays in efficient zone. Integrated electronics includes seamless communication between BMS, controller & DAS thereby enabling real-time customization as per driving style &requirements.

Product Offering 1. Nimble an electric Bicvcle. 2. Ion an Electric Go-kart. 3. Dtrion an electric Dirt bike.

use cases are

Some of our : Nimble: last mile delivery using 2-wheelers for school going students, factory labourers and for micro-commute in city by office staff.

far

Traction so : Go-Kart which generated a revenue of INR 1cr and more than 50,000 customers were served. Also, two international dealership offers are under negotiation. Successful trials with Swiggy, Amar restaurant, Borivali and trial confirmation with Shadowfax.

Notable **Achievements**  Selected as finalists in STPI Motion.

Previous Funding Round

: Bootstrapped INR 1.14 Cr.

Funding Ask: INR 5 Cr.

Revenue till: INR 1.25 Cr.

date







**Team Details:** Sunit Shah, the CEO, ensures that the team is thriving towards its vision. He also manages the finance of the company.

Nikunj Shah, the CMO, leads the sales for the company & has successfully generated revenue upto INR 1 Crore for the company.

Vikas Gupta, the CTO, looks after the technology & product development. He has successfully developed 3 products in the EV industry.



Image: Nimble is an e-bike developed by Mag9 Energies and are focusing on hyper-local delivery sector in Mumbai and Pune region.



**Image**: Mag9 Energies is also developing a robust edelivery bike that will be a game changer in the logistics sector.





: Farmchain Services Private Limited

Year Founded

: February 2020.

Sector

: Agritech, IoT and Blockchain.

Brief about the Company

: We are a technology based start-up developing solutions for a complex supply chain of farm products. We are enabling small farmers to compete in e-commerce market by providing them tools and technology for creating transparency while directly selling to consumers.

USP

We have a transparent settlement process for farmers and other supply chain partners that allows small local groups to directly sell to customers without middlemen and corporate giants. We have increased farmer's returns by upto 60% higher compared to local market rates under optimal operations. Through our IoT-Farms concept, we connect farms to remote horticulturist for better quality production targeted for a specific market or customer and use blockchain technology.

#### Product Offering

: Our products are categorized under three models:

- 1. The first model is the 'Farm to Fork' model where we supply fresh vegetables and fruits to home consumers, retailers and provision stores in Mumbai.
- 2. Under the second model, 'Farm to Wholesale Markets' we supply large quantities in markets, to wholesalers and exporters.
- 3. Under the last model, 'Connected Farms' we use technology to connect farmers to agri experts to ensure required quality and quantity. Customers can have real time visibility into produce which includes pre-harvest and post harvest process and logistics.

Some of our : use cases are

Farm-to-Fork, Contract Farming, IOT-enabled Connected Farms, Certification via blockchain for exports markets, Agri Ledger and End-to-End settlement services.

Traction so far

We started in early 2020 and we were fortunate to serve 100s of families and farmers during critical times. We have already connected with 200+ farmers, managed cultivation over 1500+ acres of land, grown and supplied over 35+fruits and vegetables and reached out to 1000+customers.





Notable Achievements

: Selected for Seed Support under LTI AVISHKAR CSR Program.

Previous Funding Round

: INR 8 Lakhs raised through LTI under their CSR program

(AVISHKAR).

Funding Ask: INR 50 Lakhs.

Revenue till: INR 23 Lakhs.

date

Team Details: Prashant Baj, a B. Com graduate is the Co-founder, CTO & Architect with 20 years of IT experience in large global organizations. He is known for having delivered innovative solutions and leading successful teams. He is a hands on technologist and entrepreneur who has executed multi million complex projects.

> Sudeep Baj who has an MBA in Operations is the Co-founder & Director, Sourcing and Operations & Farmer Relations. He has 5 years of experience in operations, audit and controls and process automation, mainly in retail sector.

Ms. Sapna Baj is the Co-founder & Director, Accounts & Finance.

Prof Balwant G Pawar is an M. Sc. in Agri, Horticulturist, Mentor and Speaker. He has 40 years of experience in Agri research, education and farm management and has published 17 scientific publication and 6 book chapters. He has worked in the Maharashtra Agriculture Department at MPKV, Rahuri.

Vijay Dhule is the connected farm in charge, and also the Sourcing & Quality Control Supervisor with 15 years of experience in farming and nursery.





Company

: JD Enerbiz Private Limited

Name

: September 2020. Year

Founded

Sector : Cleantech and Energy.

**Brief about** the Company

: We are a Mumbai based company who have interdisciplinary approach in crafting robust, functional and engaging products and services that delight and delivers results in the solar & technology industries. We provide a range of solar energy solutions to residential, commercial and industrial customers.

Product Offering

: Solar rooftop design and installation, IoT-based remote monitoring solution for solar plant and water heat pump design solutions, LED lights, BLDC fans, solar water pumps and solar water heater.

use cases are

Some of our : JD Enerbiz is a vertically integrated solution provider for solar rooftops, solar pump, solar street light, solar water heater, LED lights, DC fans for all small, medium and large-sized industries.

Traction so far

: The startup has received total order value of INR 1 Crore till date.

Funding Ask: INR 40-50 Lakhs.

Revenue till: INR 10 Lakhs.

date

Team Details: Dr. Sneha H. Jondhle is the founder and CEO of the startup. She holds the best experience in designing of solar roof tops on-grid and off-grid systems. She has a MTech and Ph.D. from VJTI, Mumbai and has worked in the area of solar system, microgrid, fuel cell & power electronics. She has been supported by LTI under AGRIM, a CSR initiative that focuses on solar panel conditioning & monitoring through IoT. She has also presented and published her research work in many reputed conferences and journal publications respectively.

> Harsh Jondhle is the Co-founder and holds exceptional degrees in ME. He is pursuing PhD and has expertise in technical and legal background. He has many years of senior managerial experience across a broad range of industries with an exceptional passion for the solar business.





: Torus Robotics Private Limited

Year Founded

: September 2019.

: Electric Vehicle. Sector

**Brief about** the Company

: Torus Robotics is a Startup India recognized tech start-up working on unmanned ground vehicles (UGV) and robotics. Their flagship technology includes the world's most compact, lightweight and powerful motor technology, which is 50% lighter, 15% more efficient and 10% more cost effective than the commercially imported

motors available in the market.

USP Youngest Startup to indigenously design, develop & deliver India's largest fully electric unmanned ground vehicle to the Indian

Defence.

Product Offering : Unmanned Ground Vehicles, Electric Powertrain (motors).

use cases are

Some of our : Unmanned Ground Vehicles (UGV) in logistics, medical evacuation, attack, surveillance & reconnaissance. Motors to power electric two wheelers, three wheelers, in robotics, Aviation, Defence, Pumps,

Generators, etc.

Traction so

: Delivered India's first fully electric UGV to Indian Defence.

Notable Achievements

: Winner at FLCTD Low Carbon Innovation Challenge 2020 by United Nations Industries Development Organization (UNIDO), FLCTD, Bureau of Energy Efficiency (BEE) and Global Environment Facility (GEF).

Also winners at the South Asia - International Climate Launchpad 2020 for Low Carbon Motor Technology and 2nd Runner-up in the Birla Global Innovation Challenge 2020.

Torus is also recognised as "Pioneer Defence Innovator" by Indian Defence Excellence (IDEX-DIO) and has a MOU signed with BEML LTD, as R&D partners for Defence UGV development.

**Previous** Funding Round

: INR 55 Lakhs raised through Govt Grants and Competitions.

Funding Ask: INR 400 Lakhs.







Revenue till : Pre revenue.

date

Team Details: Vignesh. M, Vibhakar Senthil Kumar and K. Abbhi Vignesh, all have

an MBA & BTech in Mechatronics Engineering. The team has been working together for the past 8 years on electric vehicles & robotics

for the defence & commercial market.

The startup is being mentored by Mr. Raghunandan Jagdish - MD & CEO of Nandan GSE Pvt. Ltd, Mumbai who has 15+ years of Industry experience serving the Defence & Aviation industry.



**Image**: Co-Founders of Torus Robotics displaying their unmanned vehicle system at Aero India 2021 in Bengaluru.







: Sandbird Research and Development Private Limited

Year Founded

: September 2019.

Sector

: Agri Tech, Electric Vehicle, IoT.

**Brief about** the Company

: Sandbird, Microsoft accelerated enterprise is working on smart, ecofriendly and high return on investment product to ease the efforts of low income farmers.

USP

- 1. Sand Bird's Magma comes as an alternate to conventional power tillers, which offers 3x lower lifetime expense for rental agencies and 25% lower rental cost for low-income farmers.
- 2.Some of our use cases: Sandbird's smart electric tiller is a multifunctional agro machine that can be used for tilling, ploughing, levelling, furrowing, cultivating, sowing and transportation. This operation can be done by sitting at one part of the farming land with smart wireless technologies without any need for a driver.
- 3. Traction so far: Developed 2 prototypes with strong funding and mentoring support from IIT Madras for which more than 570 farmers and rental agencies have provided us a 'Letter of Intent' to buy it after being tested in farm land for more than 3 months.

#### Product Offering

: Smart Electric Power Tiller

use cases are

**Some of our:** Sandbird's smart electric tiller is a multi-functional agro machine that can be used for tilling, ploughing, levelling, furrowing, cultivating, sowing and transportation. This operation can be done by sitting at one part of the farming land with smart wireless technologies without any need of a driver.

Traction so far

Developed 2 prototypes with strong funding and mentoring support from IIT Madras for which more than 570 farmers and rental agencies have provided us a 'Letter of Intent' to buy it after being tested in farm land for more than 3 months.

Notable Achievements

• One of the first 11 startups in India to be accelerated by Microsoft where they are helping us with the technical aspects of the automation.

One of the top 10 startups across the globe to present on World Energy Storage Day at IESA where the program has witnessed 40,000+ footfall from 60 different

Sand Bird has been recognized as the 'Best Startup of the Year 2021' in the Big Leap program organized by Sid Angel where the esteemed juries who had selected us were Dr. Niranjan Hiranandani (MD, Hiranandani Group), Mr. Sushant Naik (Global Head- Govt & Public Affairs, Tata Motors), Dr Kalpana Saroj (Padmashree awardee & Chairperson, Kamani Tubes), Mrs. Praveena Rai (COO, National Payment Corporation of India), Shri Deependra Singh Kushwah (CEO- Nodal Officer, Maharashtra State Innovation Society). We had also received a grant of INR 10 Lakhs to scale our technology.







#### Notable Achievements

National Finalist of 'World's Largest Green Business Idea Challenge-

Climate Launchpad' organized by Climate Collective.
Received a Silver award from KPIT for best product of the year in presence of Shri Nitin Gadkari (Minister of Road Transport and Highways of India) with a grant of INR 2.5 Lakhs.

Sand Birds was featured in 20+ magazines and articles including

Renewable Watch, Inc41 etc.

Previous Funding Round: Raised INR 45 Lakhs as a grant from IIT Madras, Govt. of Tamil Nadu, DST NIDHI Prayas, KPIT Sparkle, NGIS Chunauti, VJTI TBI through LTI- Avishkar Seed Fund scheme and Sid Angel through Big Leap startup program.

**Previous** Funding Round

Raised INR 25 Lakhs as grant from IIT Madras, Govt of Tamil Nadu,

DST NIDHI Prayas, KPIT Sparkle, NGIS Chunauti & KCG TBI.

Funding Ask: INR 150 Lakhs. Revenue till : Pre revenue

date

Team Details: Mr. Bala Surya S, the CEO, is a serial innovator with 4 patents, a profound market analyst, and has also led various teams for the past 6 years before leading Sandbird in Sep 2019. He handles operations and also does farming in his leisure hours.

> Mr. Ajith Kannan is the Chief Production Officer of Sandbird. He has earlier headed the product team at Inferno Racing for 4+ years where his primary responsibility was to take care of the correlation between the mechanical and electrical subsystems. He heads the product development at Sandbird and also connects with the other industry professionals. With great love for off-road vehicles, he leads Business events at FMAE Quad Bike Challenge.

> This duo has been working together for the past 5 years on 15+ projects before taking this as a lifetime goal of improving farmers life.



Image: Sandbird's MAGMA will provide Indian farmers with an affordable IoT-enabled EV power tiller.



Image: 3D rendered designs of the EV power tiller that Sandbird will launch in the market by 2022.







Company

: SMDPower Solutions (OPC) Private Limited

Name

Year Founded

: October 2016.

Sector

: Energy & IoT.

**Brief about** the Company

: We are an energy startup and have developed an IoT-based technology for increasing energy efficiency of existing/in-use air conditioners. Our product can reduce electricity consumption by upto 50% yet retaining the same cooling comfort.

USP

: Operate your AC via mobile and save huge on electricity bills without any additional investment.

Product Offering : iAC - Intelligent Air Condition Controller.

use cases are

Some of our : AC users who operate establishments like Spa/Saloon, Apparel shops, Hotel Rooms, Hospital, Restaurants, Office, Industrial Meeting room, Server room have tried and testified our algorithms that saved electricity on their Room AC.

Traction so far

: We have installations since 2019 through which product was validated & improvements on control algorithm for iAC was achieved. Present users are Power Engineering, Cyber Garage, Cadila and Tally.

Notable Achievements Council.

: Winner of the 'Prototyping Grant Award' from Goa State Innovation

Previous Funding Round

: INR 5 Lakhs raised through Angel Investor.

Funding Ask: INR 50 Lakhs.

Revenue till : Pre revenue.

date

Team Details: Vishwesh Bhat- Founder (Business, Strategy, IoT), 12 years of field

experience in business development along with 5 years working

knowledge in installing & servicing heavy-duty UPS.







**Team Details:** Purushotham Nayak- Co Founder (Software Architect, Data Analytics) 14 years of software development activity includes data security, data management.

Sudhir Gera- Mentor (Advisor-Blue Star, VJTI 82 Electrical batch).



**Image**: SMDP has developed an innovative IoT-enabled system to reduce energy consumption by existing and new AC units in commercial settings.





: Blockeye Technologies

Year Founded

: Registration in Process.

Sector : Blockchain and AI / ML.

the Company

Brief about: We work on Blockchain Analytics to provide compliance and risk management software to government and financial institutions dealing with Crypto currencies

USP : Intelligent analytics on multiple blockchains mapped out together.

Product Offering : CoinTracker: Software which accurately maps out risky blockchain transactions and alert the users before they happen.

use cases are

Some of our : VJTI Mumbai campus blockchain (2019), LBSNAA Mussoorie campus blockchain (2020), AgriChain, KYC/AML for blockchain exchanges. Dashboard and analytics for compliance desks.

Traction so far

: We are working with researchers in City University London, IMT Atlantique France, and collaborators who have shown interest in our software. We are also looking to work with Govertnment of India on calibared regulations on Crypto currencies.

Previous Funding Round

: N/A (seed funding received from govt. funded research projects to create Campus Blockchains)

Funding Ask: INR 20 Lakhs.

Revenue till: Pre revenue. date

Team Details: Mr. Sanket Shanbhag, B. Tech I.T. Blockchain developer with experience in building core blockchain and enterprise technologies, writing crypto algorithms and protocol specifications and understanding of distributed systems.







: Monter Technologies Private Limited

Year Founded

: May 2017.

**Sector** : Cleantech and Energy.

Brief about the Company

: We are in the core business of providing clean decentralized energy by hybrid renewable source at up to 30% less unit rate with a power backup of up to 6 hours daily, to Industries facing frequent power outages.

USP

: Our hybrid energy system comes at 54% less cost, gives 7% more output, ensures 58% faster payback, has 58% less LCOE and requires 68% less area for installation. Wind system is multi-rotor with inbuilt mechanical battery.

### Product Offering

: Rooftop Solar Solutions (On-grid and Off-grid rooftop solar energy system), RESCO Project( On-grid solar energy system / MHCES with PPA for 10-15 years), Rooftop MHCES (Rooftop wind and solar based clean energy system) and Micro-Grid with MHCES (ground mounted setup of wind and solar).

# Some of our : use cases are

Rooftop Application which can be used for Manufacturing Plants, IT Companies, Commercial Buildings, Hotels, Schools, Hospitals, etc. and On-Ground Application which can be used for Rural Micro-Grids, EV Charging Stations, etc.

# Traction so far

We have a working Prototype - TRL5, technology has been validated by IIT-Bombay. We also have an agreement for a paid PoC with a customer for an order value of INR 9 Lakhs approximately and 7 Letter of Intent's from prospective customers in the region.

# Notable : Achievements

Monter has won several national and international innovation competitions and challenges including Climate Launchpad, DAAD - Falling Walls Lab and India's Top Fundable Startups of 2020.

### Previous Funding Round

: We have raised around INR 57.9 Lakhs through IIT-Mandi, Angel Investors, Early Customers and DST NIDHI-PRAYAS including financial support from VJTI-TBI to the tune of INR 3 Lakhs for marketing, exhibition and testing of product.







Funding Ask: INR 200 Lakhs.

Revenue till: INR 2 Lakhs.

date

Team Details: Mr. Ankit Singh who is the Founder & CEO is a B.E Production Engineer with an industry experience in manufacturing space at Forbes Marshall of 6 years. He has expertise in new product development, new process development, service sector and in managing teams. He is known for executing International and special purpose orders of high capital value and looking after

complete operations from supply chain to delivery.

Mr. Rishabh Anand who is the Co-Founder & CTO is a B.E. Mechanical Engineer with system design proficiency in Solid Works, Auto-cad, etc. He has 6 months of experience in S. K. Robotics and is with Monter Technologies from the past 4 years. He has gained expertise in renewable energy especially wind energy and also in simulations in Matlab and Ansys.



Image: Multi Source Hybrid Clean Energy System (MSHCES) developed by Monter Technologies is more effective in generating energy in less space.







: Zigyaasa

Name

Year

: 2020.

Founded

Sector

: Video Telecommunication.

**Brief about** the Company

: A deep tech real-time Video optimization and Super Resolution

provider.

USP

: We are under the process to patent our idea. We offer runtime and compile-time solution that is easily integrated. It caters to both endusers and developer. It is a one touch solution or a simple calling of

our libraries removing need for extra h/w.

Product Offering

: Video Optimizer for pre-recorded & live videos.

use cases are

**Some of our:** Video optimization for E-Learning players: They have hours of video that is either stored on their private cloud or some VoD player like YouTube, Vimeo etc. Our optimization solution will help them increase the hours of upload and quality received at the end user. Video optimization for short video messaging player (includes Social network): Tik-tok, Josh etc. have users uploading hours of video on their platform. Our solution will optimize the videos at client hardware and make the upload faster and provide QoE at receiver

> Video optimization for Surveillance: With or without computer vision, a lot of video data is getting captured and stored for a specific duration. Our solution will optimize the data on the capture

end and reduce the streaming cost and storage burden.

Traction so

: 2 clients. 5 PoCs.

far

Funding Ask: INR 2.3 Crores.

**Team Details:** 2 full time, 2 part-time employee







Name

: Optimum Data Analytics Pvt. Ltd.

Year

Founded

: 2017.

Sector : Data Science and Al

the Company

Brief about : We are a Data Science and Digital Transformation Company with a core objective of utilizing the power of data using AI and Machine

Learning for the betterment of world.

USP : Bindu - wearable assistive device helps visually impaired people

improve their daily quality of life and make them employable.

Product Offering

: Hardware proudct and Software Application

Face/object/scene **Some of our :** Reading, Navigation, Location Sharing,

use cases are recognition etc.

**Traction so :** It's at POC stage. Tested by 10 users so far

far

Funding Ask: INR 1 Crore. Seed Fund

**Team Details:** 4 Leadership team memebers, 4 advisors and developers



Image: Bindu Logo.







: PARITTA SHM

Name

Year Founded

: 2021.

Sector

: Structural Health Monitoring.

Brief about the Company

: PARITTA SHM provides real-time monitoring of structures and give accurate diagnostics based on results. We also deliver cost-efficient loT-based structural health monitoring systems and consultancy services.

USP

: Cost-efficient IoT based structural health monitoring sensors, systems and services

### Product Offering

: IoT-based Tilt Sensor. Deflection measurement sensor.

# Some of our : use cases are

- 1. Crack Width monitoring of cracks present on on rock mass of hill which also acts as early warning system for Shri Gandhiya Mahadev Mandir, Antophill Wadala, Mumbai.
- 2. Providing Inclination monitoring of Shoring wall for the Proposed Residential Project on land bearing C.T.S. No. 921/9 situate at Rustom Irani Marg, Dahisar (West), Mumbai 400 068.
- 3. Installation of 61 meter open web girdles with the aid of IoT based wireless inclinometers at Jasai -JNPT Line for Central Railway.
- 4. IoT based LVDT's were used for measurement of deflection during load test of D point flyover of NHAI at Panvel.
- 5. IoT based LVDT's were used for measurement of deflection (vertical) and longitudinal and lateral movement of girders during load test and brake testing of Vishakapatnam Port trust bridge in 2019.

# Traction so far

: From last 5 years, we were working on research and development of IoT-based structural health monitoring sensors. In the last 2 years we have installed our sensors on various sites. currently, Via the incubation process of VJTI, our company registration is in progress.

Funding Ask: INR 20-25 Lakhs.







**Team Details:** Founder: Dr. Abhay Bambole (Professor, Structural Eng. Dept, VJTI)

### Co-founder:

- Dr. Faruk Kazi (Professor, Electrical Eng. Dept, VJTI);
- Dr. V. B. Nikam (Associate Prof. Computer Tech & IT Eng Dept, VJTI)
- Dr. V. M. Phalle (Associate Prof., Mechanical Eng. Dept, VJTI)

### Advisor:

- Dr. R. D. Daruwala (Professor, Electronics Eng. Dept, VJTI)
- Dr. Dhiren Patel(Dierctor, VJTI)
- Dr. G R Reddy(Adjunct Professor, Structural Eng. Dept, VJTI)

Business Development: Ms. Sonali Ramteke

Finance: Ms. Ritika Mukherjee

### Sensor Development:

- Mr. Ashutosh Bambole,
- Mr. Burhan Sakarwala

### Structural Engineering:

- Mr. Gaurang Raut,
- Mr. Ahmed Kunda,
- Mr. Prathamesh Bhoir,
- Mr. Sunny Sharma







: PMV Electric Private Limited

Year Founded

: November 2018.

: Electric Vehicle. Sector

**Brief about** the Company : PMV, an acronym for personal mobility vehicles is currently developing their flagship product, EaS-E, a fully electric smart car for everyday use with a focus on sustainable personal mobility to address the global challenges of pollution, climate change, urban congestion & parking issues.

USP

: Sustainable & purpose built alternative to everyday intracity travel requirements with focus on technology based solutions to help make the microcar intuitive.

Product Offering : A 2 seater fully electric smart microcar for everyday use which is faster, smarter and greener. It has some top of the line benefits like cruise control, feet free driving mode in traffic, remote parking assist, over the air updates besides the regular air-conditioner, music system, navigation, safety seat belts etc.

use cases are

Some of our : Sustainable & purpose built alternative to everyday travel requirements which can be utilized under various business models including rental sector for cars.

Traction so far

: We have received more than 200+ inbound leads for the product, and have got an initial confirmation from an existing OEMs distributor (Exports) to exclusively distribute our product in their market. It can translate into INR 10 Cr of order book.

**Previous** Funding Round

: Startup has raised INR 19 Lakhs through Angel Investors in November 2020 and has got a further commitment for INR 35 Lakhs for which documentation is under process.

Funding Ask: INR 120 Lakhs

Revenue till : Pre revenue.

date







Team Details: Mr. Kalpit Patel, the sole founder, is an engineer by qualification from DJ Sanghvi College of Engineering, with an MBA from Symbiosis, Pune. He has 10 years of experience, spread across sales and strategy role with an MNC bank followed by entrepreneurial stint driving business for an SME firm, before starting up PMV Electric. PMV Electric has a small and young team of engineers to help the startup in its progress and external support is sought for technical development as per work requirement.



Image: Eas-E is a 2 seater fully electric smart microcar for everyday use which is faster, smarter and greener.





Name

: Finemen Diagonostics & Instruments Private Limited

Year

Founded

: October 2020.

Sector : Energy.

the Company

**Brief about**: We provide AI/ML-based solutions to assess the health of electrical equipments in the Power Industry and are developing an IoT-based platform for online health monitoring of electrical equipment such as transformers, bushings, etc.

USP

Our IoT-based diagnostics systems are more robust and precise than existing monitoring platforms available in the market.

Product Offering Onsite transformer testing services, offsite transformer testing services. FEM simulation services, electrical equipment and machines and power system simulation services.

Funding Ask: INR 5 Lakhs.

Revenue till : Pre revenue.

date

**Team Details:** Krishna Kanakgiri the Co-founder, is an Assistant Professor in VJTI, Mumbai is pursuing Ph.D. and presently a Research Scholar in Department of Electrical Engineering, IIT Bombay. His research work is on topological modelling, transformers and other electrical machines.

> Rishabh Raj, the Co-founder is a Masters student at KTH Royal Institute of Technology, Stockholm, Sweden and a former Research Associate from IIT BOMBAY. He holds a Bachelor's degree in Electrical Engineering. His research field includes development of transformer, loss measuring setups using analog and power electronics and instrumentation engineering. He is a multiple patent holder and looks after research and development in the team.

> Amit Pujari, the Co-founder is also a Director, of a transformer manufacturing and testing company "Shree Transformers" located in Panvel.







: Fasaltech Private Limited

Year Founded

: October 2020.

Sector : Agritech, AI / ML and IoT.

the Company

**Brief about**: We provide personal advisory to farmers depending upon crop biology, local weather data, soil type and previous farming actions.

USP

: The USP is the personalized advisory provided to farmers using AI/ML and IoT tools which will help to increase the quality and quantity of the yield. Also providing timely support in nutrient management and early disease detection can result in increased profits for farmers.

### Product Offering

Our app will give everyday personalized scientific crop advisory which will include daily tips, water, diseases and effective medicine. We are also creating an Ecommerce platform for the agriculture sector.

# use cases are

**Some of our**: Currently we are building our crop advisory targeting watermelon crop in Jalgaon belt before slowly expanding into other regions. The company is confident that by offering crop advisory and tracking everyday operations, the data retained will be priceless and allow to monetize into vertical fields such as buyer-seller platform, supply chain speedy system, etc.

### Traction so far

: We are aiming to launch our Phase 1 Trial in September 2021 when the watermelon cycle officially starts and aim at getting around 1000 farmers.

### Notable Achievements

: Selected for Seed Support under LTI AVISHKAR CSR Program.

### Previous Funding Round

: INR 2 Lakhs raised through LTI under their CSR program (AVISHKAR).

Revenue till: Pre revenue.

date







### **Team Details:**

Aryan Thepade, the Founder is currently in his final year BTech, Information Technology at VJTI. He is increasingly passionate about creating a difference in the oldest profession in human history.

He started this project in his third year and has visited thousands of fields, studying watermelon crop and meeting agronomists and scientists to build the best possible crop advisories.

Piyush Tidke who handles the Field Operations, has an experience of over 5 years with a wide range of network among farmers and distributors and understands agriculture economy and psychology.

Prashant Sole, is the Agriculture Consultant who has an experience of over more than 20 years in agriculture and helps in establishing relations and partnerships in the agricultural market and also with seed and pesticide companies for our e-Commerce platform.





: JyoSH AI Solutions Private Limited

Year Founded

: August 2020.

Sector : Agritech, AI / ML, IoT and Robotics.

**Brief about** the Company

: JyoSH Integrated Agriculture Robot is a smart, precision farming solution for entire automation cotton cultivation which includes weed management, crop health monitoring and cotton harvesting. It improves productivity and profitability of cotton farmers by saving

labours and chemical costs.

It is part of NASSCOM Deep Tech club.

USP Leveraging AI for benefit of Indian farmers through improving

productivity and profitability.

Product Offering JyoSH Integrated Agriculture Robot for automation of cotton cultivation. Scalable Robotics platform for other crops, vegetables

and fruits.

Some of our use cases are

: Automation of cotton cultivation which includes seed sowing, weed

management crop health monitoring, cotton harvesting.

Traction so far

: JyoSH AI is currently at pre-revenue stage but have received LOIs

from 12 FPOs (Farmer Producing Organizations).

**Previous** Funding Round

: Winner of BIRAC BIG 18 grant (50 lakhs), NIDHI PRAYAS Grant (10

lakhs) and ARISE 21 grant (5 lakhs).

Funding Ask: INR 50 Lakhs.

Revenue till : Pre revenue.

date







Team Details: Dr Sharadchandra Lohokare is the CEO and Founder with over 30 years of experience in mechatronics product design, business development, artificial intelligence and has worked with Aplab, Patni, KPIT, L&T and Capgemini. He has worked in US and Japan for 5+ years.

> Mr. Jay Lohokare is co-founder with 2 years of experience and worked with Google, McKinsey and Amazon.

> Mr. Sambhaji Jadhav is the R&D Head with over 25 years of experience in mechatronics product development and reliability engineering.

> Mr. Uday Sant is the Sales head with over 30 years of experience in business development, sales & operation and business growth. He has worked with GE. FMC and JBT.

> Dr. V.M Mayande is the Chairman, Advisory Board with over 40 years of experience in Cotton mechanization and an Ex. VC of PDKV patents on cotton picker.



Image: Prototype of JyoSH AI robot is currently being tested at cotton farms of farmers in Akola district.







: Wings Bionic LLP

Year Founded

: 2020 LLP Registration.

Sector : Robotics, AI / ML & IoT.

**Brief about** the Company

: We are developing 'Made-in-India' sustainable and affordable bionic technologies for differently abled people to improve the quality of life and improving healthcare system. Wings bionic coming with breakthrough technologies in field of prosthetic and assistive devices with all new holistic approach. We are winner of Ambedkar young entrepreneur league organized by Ministry of social Justice and

empowerment.

The solution is most innovative and affordable, accessible and robust USP

tech-enabled product compared to other products available in the

market for people with various disabilities.

**Product** Offering Bionic Hand.

use cases are

**Some of our**: Prototype has been tested with 5 disabled patients tested at All India Institute for Physical and Medical Rehabilitation (AIIPMR), Mumbai under Ministry of Health and Family Welfare, Government of India.

Funding Ask: INR 200 Lakhs.

Revenue till : Pre revenue.

date

Notable Achievements • AYE League 2022 Winner from Ministry of social justice and empowerment and IFCI venture capital and DICCI.

 Funding by IFCI venture capital which is 30 Lakh rupees for three year in year 2022.

Team Details:

Dr. Akshay Chavan has done his Masters in prosthetics and orthotics. He is one of the Founders of Wings Bionics and National awardee for the best researcher from OPAI India and is presently working as clinical Prosthetist and orthotist in National Centre for Divyang Empowerment (paramilitary forces CRPF) Gc RRY Hyderabad.

Anish Uday Bhurke has done his ME in Electronics and is presently pursuing PhD from VJTI, Mumbai. He has industry experience of 5 years in the field of embedded system and power electronics. He has been working on various interdisciplinary projects during the course has successfully developed prototype of the Bionic Hand.







Name

: Aidgo Technologies Private Limited.

Year

Founded

: September 2021.

Sector : Electric Vehicle and Mobility Aid.

the Company

**Brief about**: We are focused on creating innovative electric wheelchair solutions to provide aidless self-reliant experience for differently abled, elderly

and patients.

USP : Innovative and affordable convertible system to convert manual

> wheelchair into an electric wheelchair for indoor and outdoor use. We provide technically enhanced mobility aid to movement disable.

Product Offering Convertible Mobility Aid.

Funding Ask: INR 40 Lakhs.

Revenue till : Pre revenue.

date

Notable

Achievements

: Selected for seed support under LTI Avishkar CSR program.

Team Details:

Dr Chetan Kamble, Co-founder & CEO, is researcher, engineer, and social entrepreneur. He has completed his MTech and PhD (Tech) in Electronics engineering from VJTI Mumbai. He was visiting research scholar at IIT Bombay during 2015-18. He is SERB (Science and Engineering Research Board) National Postdoctoral Fellow of 2020. He is passionate to solve real problems through innovations and technologies.

Dhanshree Thulkar, Co-founder, has PhD from VJTI Mumbai and MTech from SGGS Nanded. She has published various research publications in international journals and conferences. Before chasing her entrepreneurial dream, she was working as Quantitative researcher and Assistant professor.





: Xprotect

Name

Year Founded

: Registration in Process.

Sector

: OT Security.

**Brief about** the Company

: Xprotect develops in-house security solutions for OT networks which includes IDS, threat intelligence, and SIEM platform. We also provide services like security consultancy, security assessment of OT network, pentesting of OT products of various vendors. We provide cross-platform solution, real-time traffic, and log analysis. Our solutions provide mapping, visualizing, and detecting a change in OT assets and also proactive detection of the cyber threats integration with existing security solutions to detect threats.

USP

Our Idea is to focus on building an indigenous integrated security solutions for OT/ICS networks which involves traffic analysis along with OT/ICS asset log analysis and correlate with existing security solutions like a firewall to dynamically detect threats.

Product Offering : IDS, threat intelligence, SIEM, OT security consultancy and OT security assessment.

use cases are

**Some of our**: Anomaly detection in OT network as well as correlate with logs of OT device to alert and help SOC team for further investigation. OT security assessment includes actively identifying weaknesses and vulnerabilities in the OT network by rigorous pentesting.

Funding Ask: Startup in Ideation Phase.

Team Details:

Imran Jamadar, is a PhD research scholar in the area of critical infrastructure cyber security and network management. He has over 4 years of experience in the field of networking and cyber security and 2 years in related research.

Abhishek Pandey is a PhD research scholar with a passion for applied research in the field of cyber security smart grid wide-area protection monitoring and control and ICS having 6 Years of research and academic experience.

Parul Sindhwad is a research scholar in the area of OT device pentesting. She has 7 years of industry experience.





# **GRID**sentry Powergrid Cybersecurity

Company

Name

: Gridsentry Private Limited.

Year

Founded

: 2021.

Sector : Cyber Security.

the Company

Brief about : Powergrid Cybersecurity startup providing intrusion protection and detection mechanisms for electric power substations.

USP

: Domain specific defensive deception technology based intrusion protection and detection solutions.

Product Offering • IPS.

IDS and

VAPT

Team Details: Founder and CMD -

• Mr. Rajesh Rathi

Founder and CEO -

• Dr. Devika Jay

Co-Founder -

Mr. Kiran Krishna.

Mr. Prasan Kaikini

Prof. Faruk Kazi





# 

Company Name : Volt Automotive LLP.

Year Founded

: 2021.

**Sector** : Automotive & Energy

# Brief about the Company

: With last mile delivery market exploding in India, vehicle owners are moving towards electric two wheelers to reduce cost. However, over 90% of current 2W EVs in India are neither built for Indian roads nor for heavy use case of delivery.

Volt is an electric two-wheeler & a battery company, building a Robust & Reliable Electric two-wheeler built for Indian market, with a hyper convenient battery solution. Robustness and convenience are our key focus areas. Our electric vehicle is not only robust with chassis able to go over 200,000 KM but also modular (IKEA of electric vehicle), allowing vehicle to transform into multiple forms without structural change. Our compact battery is one of the lightest in the market with hot swap to enable quick swapping. Users can customize vehicle and range based on requirements. The combined design not only provide convenience to consumers but also save up to 40% in maintenance and service costs.

### USP

- : 1) Modular Vehicle Platform- Build multiple variants on the same base chassis.
  - 2) High functional value & convenience- Light & Ergonomically designed battery packs with cable free operations.
  - 3) Scalable & Interoperable-75% BOM commonization target for new variants.
  - 4) TCO- INR 0.64/KM.

### Product Offering

- \*Volt Vehicle as a Product:
  - a) Vehicle wt- 50kgs
  - b) Payload Capacity- 350kgs
  - c) Max speed- 85kmph
  - d) chassis warranty- 2lac km
  - e) Battery carrying capacity-3 Packs
  - \*Volt Battery as a Service -
  - a) Battery capacity- 1.7kwh
  - b) Battery wt-8.5kgs
  - c) Range- 195km with 3 packs





Some of our : E commerce:use cases are

60-80 km/day Food delivery:-60-80 km/day Bike taxis:-80-100 km/day Shared mobility:-30-50km/day Logistics / Delivery :-80-100 km/day Others:-30-50 km/day

### Traction so far

We have completed below key Milestones :-

- 1.BUSINESS PLAN: Identified market gaps, target customers, and revenue streams in the Indian electric vehicle market to develop a unique solution
- 2.MVP: Created a functional prototype for battery and electric 2 wheeled scooter
- 3. DESIGN: Vehicle and battery design completed
- 4.USER ERGONOMIC TEST: Completed along with personal interviews for feedback
- 5. PARTNERSHIP: Letter of intent signed with two OEMs to manufacture and distribute electric vehicles.

### In Progress:

- 1.Intellectual Property Rights filling for Vehicle and Battery design.
- 2. FUNDING: Currently Raising funds through Angel Networks.

Previous Funding Round

: Self invested /bootstrapped till date

Funding Ask

: INR 1 Crore.

Revenue till : Pre-Revenue Phase

date

Team Details: Our team's expertise lies in a highly experienced and driven multifunctional team Founding team: Our Co-founders come

> from a design and engineering background with experience in building 2 wheeler EV + Ecosystem (Swap stations) from scratch in a

leading shared mobility company.

Product design: Our design experts from NID, Ahmedabad have industrial & transportation design experience with leading automotive companies Strategy formulation: More than 25 years of combined Consulting experience in big 4 to devise strategies for existing and new businesses. Our business team comprises

renowned alumni of NTU Singapore.







Team Details: Technology team: BITS Pilani alumni with vast experience in IoT, Analytics, backend server We also have strong advisory onboard from Vehicle OEM, EV Fintech leaders and battery technology to support us on respective topics.

### Founding Team :-

- Aniket Patil.
- Nachiket Morye.

### **Business & Strategy:-**

- Haridesh Sharma
- Ashwini P.

### **Engineering:**

- Samuel F.
- Saswat B.
- Prathamesh G.





: Sunny Synergy Solutions.

Year Founded

: Registration in Process.

**Sector** : Energy sector.

Brief about the Company

: Sunny Synergy Solutions provides one point solution for:

- 1. Optimized schedules for Renewables and Distributed Energy Resources (DERs).
- 2. Enhancement in monitoring, protection, and control.3. Power system analysis and planning for large systems.

**USP** : Al/ ML Based Solutions for performance analytics and enhancement

of power utility industry.

Product Offering

: DSA Tool, Forcasting Tools, and Tool for model integration.

Funding Ask: Startup in Ideation Phase.

**Team Details:** Sunny Kumar is a Ph.D. research scholar in the area of the Power/
Energy sector (Smart Crid Operation and Control). He has done the

Energy sector (Smart Grid Operation and Control). He has done the simulation study of the Mumbai grid disturbance on Oct 12, 2020. He has also worked in the area of AI/ML and has over 3 years of

research experience.

Abhishek Pandey is a Ph.D. research scholar in the area of the Power/ Energy sector (Wide-area Protection Monitoring and Control) and ICS Cyber Security having 4 Years of Research Experience and 3

Years of Academic Experience.







Name

: TweetShodh

Year

Founded

: 2020.

Sector : Social Media Analytics.

the Company

Brief about : Indian social media is multi-ethnic, multi-religious and multilingual. We pledge to provide deep down analytics about the reach of marketing campaigns, listening to grievances of users from different sections and detecting the hate propagations and terror threats.

USP : Focus on Indian Languages.

**Product** Offering : Cutting edge analytical tool box which will break down large information into simpler form.

use cases are

**Some of our**: Provide a B2B social listening platform which will have conversation data from all possible sources in order to answer following factors:

• Product/Brand/Competitor perception

Trend Identification

Performance of third party factors

Traction so : None.

Funding Ask: INR 25 Lakhs.

Team Details: Our team consists of two VJTI alumni:

1. Aum Patil &

2. Aman Framewala.





# **Infrastructural Facilities at VJTI - TBI**



**NVIDIA SUPERCOMPUTING FACILITY** 



SIEMENS SMART GRID LAB



**EMERSON PROCESS MANAGEMENT LAB** 



RAPID PROTOTYPING LAB



**POWER ELECTRONICS LAB** 



**AUDITORIUM FACILITY** 



**CONFERENCE & MEETING ROOM** 



**COMMON SEATING SPACE & CABIN** 



# **Co-Working Space of VJTI - TBI**



**CONFERENCE ROOM** 



PRESENTATION AREA



**IDEATION ROOM** 



**MEETING ROOM** 



MAIN AREA WITH FLEXIBLE SEATINGS

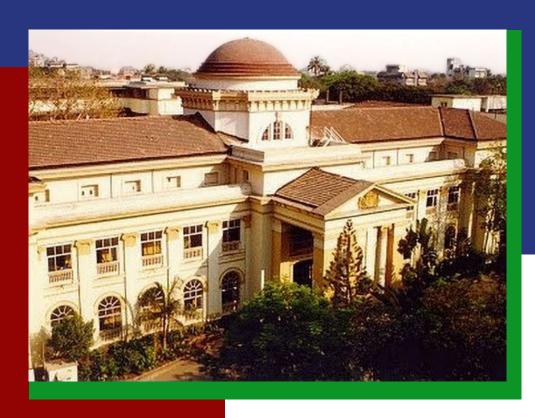


**PANTRY** 





# **NOTES**







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