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Post-Show Report

ELROMA 2021

“Smart Efficient Rotating Machines and Control Solutions for a Greener World”

Digilec Bharat

2nd Edition

20th - 26th October, 2021



30



50



54



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In Depth : Bearing wear in Electric Motors and Rotating Equipment

In Focus : Evaluation of Electric Motor Designs for EV Application

Expert Speak : Technologies For High Efficient Electric Motors

Guest Article : Lightning and Protection for Humans (& Animals)



**COVID-19
Stay Safe**

Innovative Solutions for the Electrical and Electronics Manufacturing Industry: Startups from VJTI Technology Business Incubator

According to a report published by India Brand Equity Foundation, India is the third largest producer and the second largest consumer of electricity in the world. Further the World Bank's Ease of Doing Business for Getting Electricity report has ranked India at 22nd position up from 137th rank in 2014. Further the Government's focus on providing 'Power for All' has only fueled the growth of this industry significantly. According to a report on Indian Electrical Machinery and Equipment Industry published by EEPIC India, the electrical equipment market production is estimated to touch USD 100 Bn and shall provide employment, both directly and indirectly, to 3.5 Mn people by 2022.

Since the Government of India has de-licensed the industry and also allowed 100% foreign direct investment, the sector has seen significant investment in the sector from national and international players. A factsheet from Department for Promotion of Industry and Internal Trade suggests that the cumulative FDI equity inflow in the Electrical Equipment industry was USD 10,015.97 mn during the period April 2000 to March 2021. This constitutes 1.89% of the total FDI inflow received across sectors. Further this had facilitated the entry of global majors and also promoted R&D and adoption of advanced technologies. This has also fueled the growth of startups and

entrepreneurs bringing innovative and value added products and services to the sector.

In line with these trends, VJTI Technology Business Incubator (VJTI-TBI) was set up in 2017 at the prestigious Veermata Jijabai Technological Institute (VJTI), Mumbai with the support of Department of Science and Technology, Govt. of India under the NIDHI-TBI Scheme. VJTI (established in 1887 as Victoria Jubilee Technological Institute) has been a pioneer in imparting engineering education, research and training ecosystem in the country ever since its inception. Considering the expertise, resources and industry collaborations fostered by VJTI over the last few years it decided to create VJTI-TBI, a platform for supporting ambitious entrepreneurs and startups in the country focusing on thematic areas including energy, cleantech, EV, IoT, AI/ML and cyber security of critical infrastructure.

All start-ups (selected through a rigorous process) under the program are provided with co-working space, access to state-of-the-art lab infrastructure (SCADA & Automation



Oxagrid has developed IoT-based energy optimisation analytics that improve energy efficiency, optimise assets and prevent faults

Lab, Power Electronics Lab and AI/ML and Embedded Systems Lab) equipped to test products and prototypes in the domains mentioned above. In addition, VJTI-TBI also provide advisory services in business management, IPR, finance and accounting, legal and technical domains through collaborations with third party service providers and industry associations. Start-ups incubated with the incubator also get access to free tools including AWS credits, ZOHO platform, Zendesk CRM, SOLIDWORKS licenses, MatLab and Simulink licenses and MyOperator cloud telephony credits.

VJTI-TBI has also partnered with various corporates (Larsen and Toubro Infotech (LTI), Emerson, NVIDIA, Siemens and CISCO) and industry bodies (India Electrical and Electronics Manufacturers Association, Cyber Peace Foundation, The Institute of Engineering Technology, India Energy Storage Alliance and India Smart Grid Forum) to provide support the start-ups either through mentoring, funding and infrastructure support (including lab infrastructure). The incubator has also forged partnerships with LTI, ITD Cementation India, SIDBI Capital Ventures and Technotalent Engineering India for providing seed funding to startups through CSR support. Partnerships with these stakeholders in the relevant domains plays a key role to help the entrepreneurs tide the difficult part of the journey in their initial years.



VJTI-TBI was awarded the Smart Incubator of 2021 by India Smart Grid Forum during ISGF Innovation Awards

24X7 Alertness Automation Industry 4.0
Theft Detection Seasonal Trends Loss Prevention
 Visitors Management Face Recognition
 Customers Interest **StoreScript** Notifications
 Artificial Intelligence Video Analytics InStore Cameras
 Footfall Vs Conversion Staffing Pattern
 Repeat customers
 Automated surveillance Machine Learning



AI-based tools developed by Aurify Systems are easy to deploy, highly scalable and can be applied in real time to manufacturing industry

VJTI-TBI was awarded the 'Smart Incubator of the Year' at ISGF Innovations Awards 2020. Currently the incubation program at VJTI-TBI is supporting around 30 startups and entrepreneurs selected through a robust 2-step process by a panel of eminent experts from industry, academia and investment sector. Some of the promising start-ups and entrepreneurs incubated at VJTI-TBI focusing on energy, cleantech and AI/ ML & IoT are summarized below:

Orxagrid Solutions Pvt Ltd

Orxagrid Solutions is an Indian counterpart of Orxagrid Limited, an energy startup based in UK. Orxagrid has developed IoT-based products and solutions, including sensors and customer driven analytics software for energy optimization. The Orxagrid Team has some strong, dynamic and talented individuals who have consistently delivered rapid results.

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

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Airpix Geoanalytics Pvt Ltd

AIRPIX is a 6-year-old company with two technology verticals - drone based services for mapping, inspection and project monitoring in sectors including transport, utilities, energy and oil & gas; and AI based video analytics edge software + cloud platform for remote monitoring. The startup has completed more than 300 projects across India for both Government bodies and leading MNCs. The team is headed by Aniket Tatipamula, Neeraj Waghchaure and Shinil Shekar with a combined experience of 15 plus years in developing AI software development, business development and industry projects.

Airpix has raised INR 75 Lacs in grants through Govt and Private Organizations and have been winners of India Innovation Growth Program 2.0 (organized by DST, Tata Trusts and Lockheed Martin), BPCL Ankur Scheme 2019 Cohort and are finalists for Shell E4 Digital Track 2021. Their current customers include BPCL, Indian Railways, L&T, WAPCOS, ACC Ltd., Suzlon, GVK, NMIA, IOCL, GAIL, Ambuja Cements, DFCCIL, JSW, Tata, AECOM and KPMG.

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Aurify Systems Pvt Ltd

Aurify Systems co-founded by Rishi Palekar and Pranita Palekar, is a

Mumbai based startup, which enables automation of business processes & optimize operations using next-gen technologies of artificial intelligence and associated analytics across various industries. The startup has currently achieved more than 300 installations PAN India with few marquee customers including Tata, Aditya Birla and more. Their comprehensive list of offerings helps in the areas of automation, operations, customer profiling, end customer experience, safety & compliance, surveillance, lead generation and predictions.

Aurify now has solutions which addresses challenges and requirements across various industry verticals. They are currently at scale up stage and are aggressively building their partner network, and also currently engaged in doing few pilots outside India. The startup 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'.

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VJTI-TBI is actively looking out to collaborate with IEEMA Member companies to explore innovation-based hackathons, product development challenges and to create fund-raising opportunities for our startups. Interested parties may connect.



Airpix offers an extensive solution to Indian Railways catering to Project site monitoring, Project Planning and Project Construction



Dr. Roshan Yedery

Chief Executive Officer
 VJTI Technology Business Incubator

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