

Startup Name GNSU Vent : Electrovent LLP – Powering the Future of EVs through Innovation

Gopal Narayan Singh University (GNSU) is proud to showcase its commitment to innovation and entrepreneurship through its latest incubated venture – **Electrovent LLP**, a pioneering startup in sustainable electric mobility, developed in collaboration with the esteemed **IIT Mandi Catalyst**.

BAAS Model for Electric 3-Wheelers – "No More Battery Ownership"

Electrovent LLP introduces a game-changing **Battery-as-a-Service (BAAS)** model tailored for India's electric rickshaw (E-Rickshaw) ecosystem. This model redefines battery usage by **decoupling battery ownership from vehicle ownership**, enabling users to swap batteries as a service instead of bearing the cost of recurring replacements.

With the **battery-swapping model**, e-rickshaw drivers no longer need to invest heavily in lead-acid batteries that require annual replacement. The transition to **lithium-ion technology**, powered by IIT Mandi's technical mentorship, promises longer life, cost efficiency, and a sustainable solution for urban mobility.

Pilot Implementation

The startup has commenced operations in **Uttarpara, Hooghly (West Bengal)**, targeting over **897 toto (e-rickshaws)** across the Bally to Dharsa belt. With over **2 million** electric rickshaws operating in India and rapid monthly growth, the market is ripe for disruption.

Innovation Backed by Experience

The core team brings together seasoned professionals:

- **Ms. Monika Singh (Ph.D.)** – Entrepreneur and academic leader with a decade of experience.
- **Dr. Rajesh Dey (Ph.D., Post-Doc)** – Research and academic expert with 6+ years of industry experience.
- **Mr. Asoke Paul (M.Tech, IIT-KGP)** – Former Research Head, SAIL, with 22 patents.
- **CA Pratik Sarkar** – Chartered Accountant with expertise in startup financial strategy.

Progress & Achievements

- Elevated from **TRL 3 to TRL 6** through rapid prototyping, field testing, and IIT Mandi's mentoring.
- Developed working prototypes for electric loaders, scooters, and thelas with integrated BAAS.
- Devised a revenue model ensuring break-even within 1 year of each BAAS station.

Support & Future Vision

Electrovent seeks support for setting up its **first battery-swapping station** with 100 batteries in Uttarpara, with expansion plans across India via a **dealership model**.

GNSU, through this initiative, reaffirms its mission to foster **industry-academic collaboration, sustainable innovation, and entrepreneurship with social impact**.