

nexcharge
Exide Leclanche Energy
Private Limited

Corporate presentation



AN ALLIANCE OF TWO PIONEERS

Nexcharge, incorporated in September 2018, is an exclusive joint venture in India between



- India's largest battery manufacturer
- India's #1 automobile-related super category brand
- Market leader for more than 100 years
- Battery range from Cap Lamp to Submarine

www.exideindustries.com



- 100+ years of energy storage expertise
- Bringing German quality with Swiss precision to global markets
- Only listed pure play energy storage company in the world
- Equipped to deliver complete customer solutions

www.leclanche.com



VISION & MISSION

**We fast-track the world's
transformation towards
sustainable energy
solutions**



OUR FACILITIES

Our Headquarters in Prantij, Gujarat

- Nexcharge existing land : 56,680m²
- Existing built-up area : 9,528m²

Our Li-ion Assembly Lines

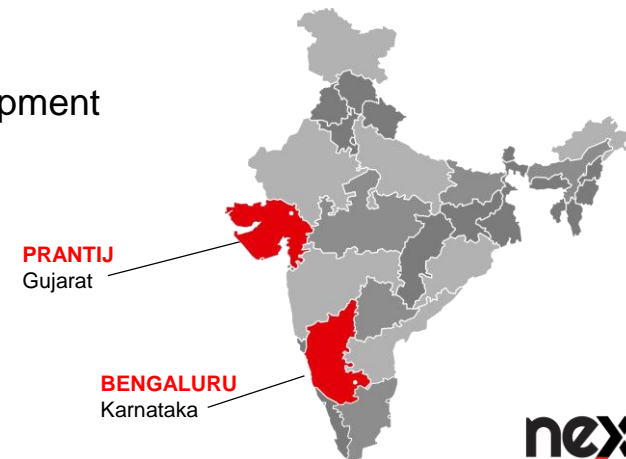
- Pouch/Prismatic/Cylindrical cell to module
- Module to pack/rack
- Cell testing lab
- Prototype and pilot line

Our Facility in Bengaluru, Karnataka

- Total area : 149m²
- Activity : Development Centre
- Located at RMZ Eco Space Tech Park

Our Capabilities

- Electronics and firmware development
- Mechanical and Thermal design
- Software development





OUR VALUE PROPOSITION

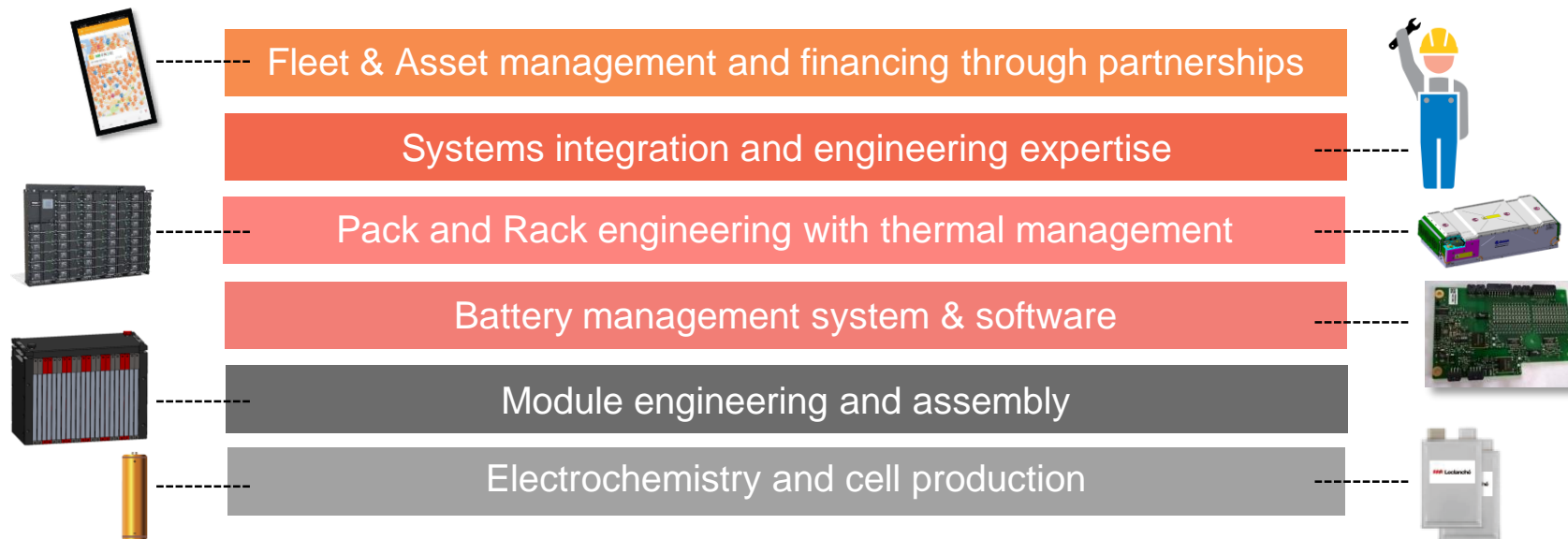
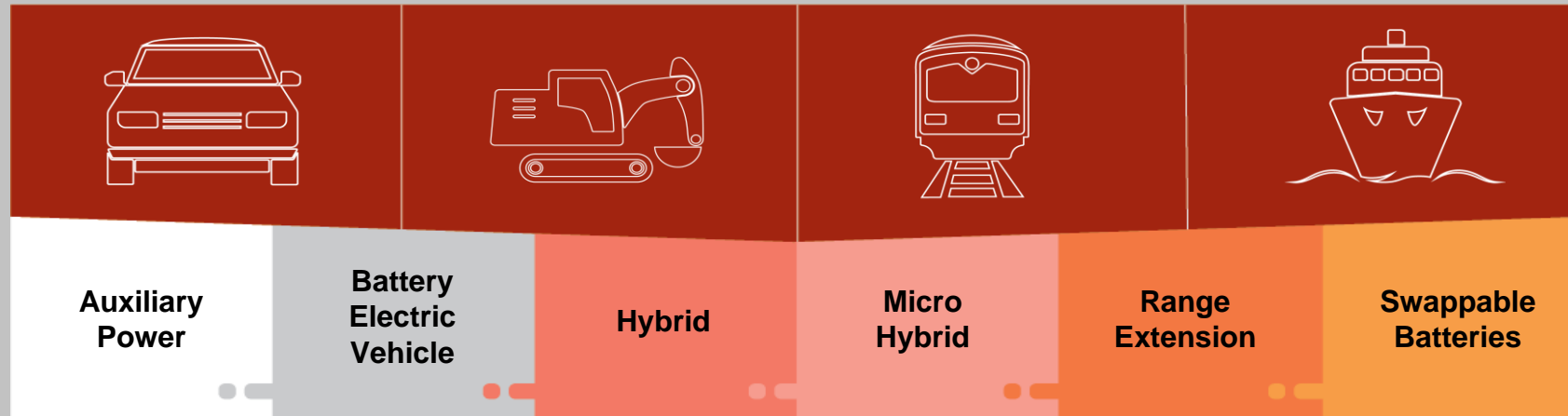
Quality Manufacturing	Deep Design Expertise	In-House BMS Competences	Competitive Scale
› Automated manufacturing ensuring highest quality in compliance with industry standards	› Deep design capability providing leading energy density, thermal stability and functionality	› In-house BMS giving ability to modify and customize and optimize performance	› High scale manufacturing for competitive cost for OEM and replacement market sales
› Rigorous quality testing procedures at cell, module and pack level	› Ability to provide application matched cells across form factors and chemistry	› Flexibility to add latest advanced features to match customer requirements	› Competitive sourcing of cells via strategic sourcing relationships



FOCUS AREAS TRANSPORTATION

- Two wheelers, Three wheelers
- Passenger cars
- Buses, Trucks
- Marine
- Off highway equipment
- Rail
- Robots

TRANSPORTATION SOLUTIONS





LECLANCHÉ TRANSPORTATION REFERENCE PROJECTS



Brugge eBus

Location: Brugge, Belgium

System: 38kWh LTO

COD: Oct-2015

- First wirelessly charged fully electric buses to enter public operation in Belgium
- Three Van Hool A308E buses equipped with an LTO battery delivered by Leclanché
- Project partners included Van Hool, De Lijn (Belgian bus operator) and Bombardier



Paus mining vehicles

Location: Germany

System: 26.9kWh G-NMC

COD: Q1-2017

- Minca project, hybrid mining vehicle equipped with M1-based G-NMC modules and BMS
- Services included design of battery pack



LECLANCHE TRANSPORTATION REFERENCE PROJECTS



ENAG/CGN electric bow thruster

Location: France and Switzerland

System: 51kWh G-NMC

COD: Q4-2017

- Upgrade of traditional Swiss lake cruising vessel
- Use of dedicated marine battery solution
- High power peaks and a need to operate in variable ambient conditions



BB Green

Location: Sweden

System: 200kWh LTO

COD: Q2-2016

- Battery system and integrated BMS for a demonstrator project of a fully electric high-speed commuter ferry
- LTO technology means batteries may be fully charged in as little as 10 minutes
- Battery capacity divided into two identical battery packs for redundancy





FOCUS AREAS INDUSTRY & UTILITY

- Commercial & Industrial (C&I)
- EV Charging
- Hybrid Power Generation
- Microgrids & Islands
- Renewable Integration
- Residential ESS
- Street Lighting
- Telecom
- Transmission & Distribution (T&D)
- UPS & Data Centre

INDUSTRY & UTILITY SOLUTIONS

- Arbitrage
- Asset life extension (T&D)
- AT&C loss reduction
- Black start
- Demand response
- Diesel displacement
- Peak shaving



- Grid congestion relief
- Power smoothing
- Ramp rate control
- Seamless power backup
- VAR control
- Frequency & voltage regulation



Energy Management System (EMS)

Solutions delivery including financing and EPC

Systems integration and engineering expertise

Rack engineering with thermal management

Battery management system & software

Module engineering and assembly

Electrochemistry and cell production





LECLANCHÉ STATIONARY REFERENCE PROJECTS

École polytechnique fédérale de Lausanne

Location: Lausanne, Switzerland

System: 500kWh LTO BESS

COD: Dec-2015

- › Turnkey BESS for ancillary services, solar PV, solar integration, peak shaving, load management and fast frequency response
- › 10-year performance warranty by Leclanché on its LTO batteries
- › Largely co-financed by the Canton of Vaud



Ontario IESO/grid ancillary services

Location: Ontario, Canada

System: 53MWh G-NMC BESS

COD: Q4-2018

- › Fast frequency response for grid reserve/ voltage control services
- › 15-year performance warranty by Leclanché on its G-NMC batteries
- › Partners include Deltro Energy and Greensmith with Leclanché providing development capital and arranging Swiss Export Credit (SERV)



LECLANCHÉ STATIONARY REFERENCE PROJECTS



Cremzow – primary control reserve

Location: North Germany

System: 22MW/34MWh BESS

COD: Q2-2019

- Turnkey BESS to provide frequency control to the German primary control reserve (PCR) market
- 10-year BESS performance warranty by Leclanché
- 2 MW capacity built by Leclanché as a first phase, on BOT basis
- Inception of the facility in May 2019, with 22MW/34MWh capacity, with leading European energy company Enel
- Project partner and DSO: ENERTRAG AG



Graciosa energy island / microgrid


Location: Graciosa, Azores Islands, Portugal

System: 3.2MWh LTO BESS

COD: Aug-2017

- Microgrid supplying power for 4,500 inhabitants; turnkey solution for energy storage plant and distribution management integrating solar PV, wind park and diesel genset technologies
- Increase in proportion of renewable generation used from 15% to 65% of annual consumption
- 20-year performance warranty by Leclanché on its LTO batteries





CUSTOMER CHALLENGES, NEXCHARGE SOLUTIONS

• After-sales service	• 40,000+ distributors across India
• Availing subsidies	• Local manufacturing (Make in India)
• Best cost/kWh, best TCO	• Full technology ownership
• Business risks	• Dependable leadership spanning 200+ years
• Eco-friendly solutions	• Sustainable initiatives, like responsible battery disposal
• Smooth supply chain	• Localised presence, streamlined network
• Technical issues	• Customised & integrated solutions
• Technological risks	• Products with superior life



LET'S CONNECT FOR A POWER-PACKED PARTNERSHIP



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