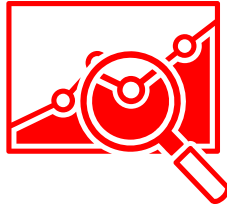




Agenda

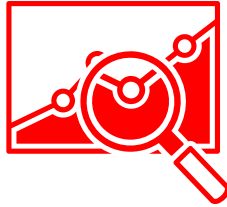


Overview of current business



Strategic bets for future

Agenda



Overview of current business



Strategic bets for future



We are working towards distinct priorities in each segment



Trade

Grow and transform the business to improve revenue and cost



OEM

Maintain the market share Exide without sacrificing margins

Continue to capture large part of new businesses



Exports

Double the size



Overview of Export Business



Exports will be a key pillar of growth



Target



1

Double size the export

2

Increase the market share in SE Asia and MECA

Our export facilities

- Branch Office has been established in UAE
- Manpower relocation to our Singapore office
- Pune Plant exports to middle east
- Haldia plant exports to south east Asia

Currently, exporting seven different brands



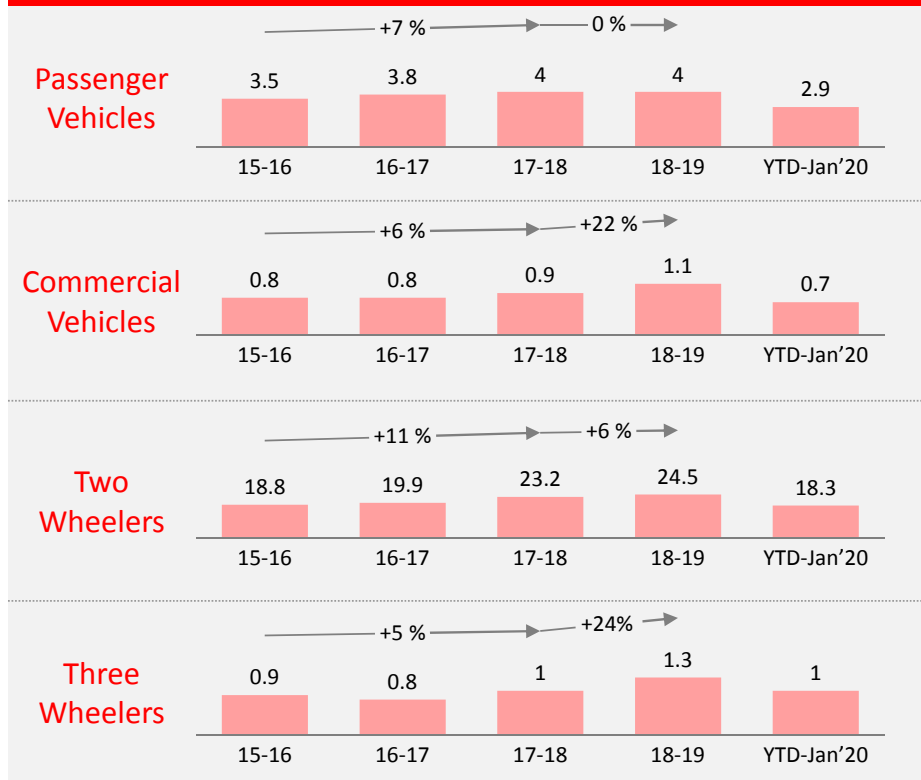


Overview of OEM Business



Automotive industry has slowed down in the past 2 years, however key drivers of growth are getting favorable

Automotive production trends in millions



Source: SIAM

Though subdued but a few Optimistic Triggers Which May Increase Demand in FY2020-21

- Improvement in liquidity of NBFCs
- Reduction in interest rates
- Expected scrappage policy implementation from April-20
- Increase in rural demand due to reasonably better agriculture output
- Greater spending in Govt. Infrastructure Projects which Impacts CV demand
- Increased STU buying of buses



Overview of Replacement Business



We have the widest distribution network in the industry

- 151 Spokes, including 18 ELCs,
- 600 FJCP Vehicles



- 48,000+ Direct & Indirect Dealer Network

- 170 company owned and operated Service Centres
- Batmobile On-road service provided to consumers in 87 cities

- **EXIDE:** 10,000+ Direct Dealers billed directly every month, supported by a 29,000+ strong sub-dealer network
 - Over 1800 branded Exide Care outlets
- **DYNEX:** A growing network of approx. 300 Distributors helping penetrate in to Tier2/3 towns
- **SF SONIC:** 1500 Distributors & Direct Dealers driving growth



3 Power-packed brands catering to every application and market segment



#WhatDrivesYou



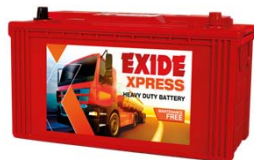
Wide product portfolio for every application



PVs



CVs



Tractors



3-WHs



ERK



2WHs



NV



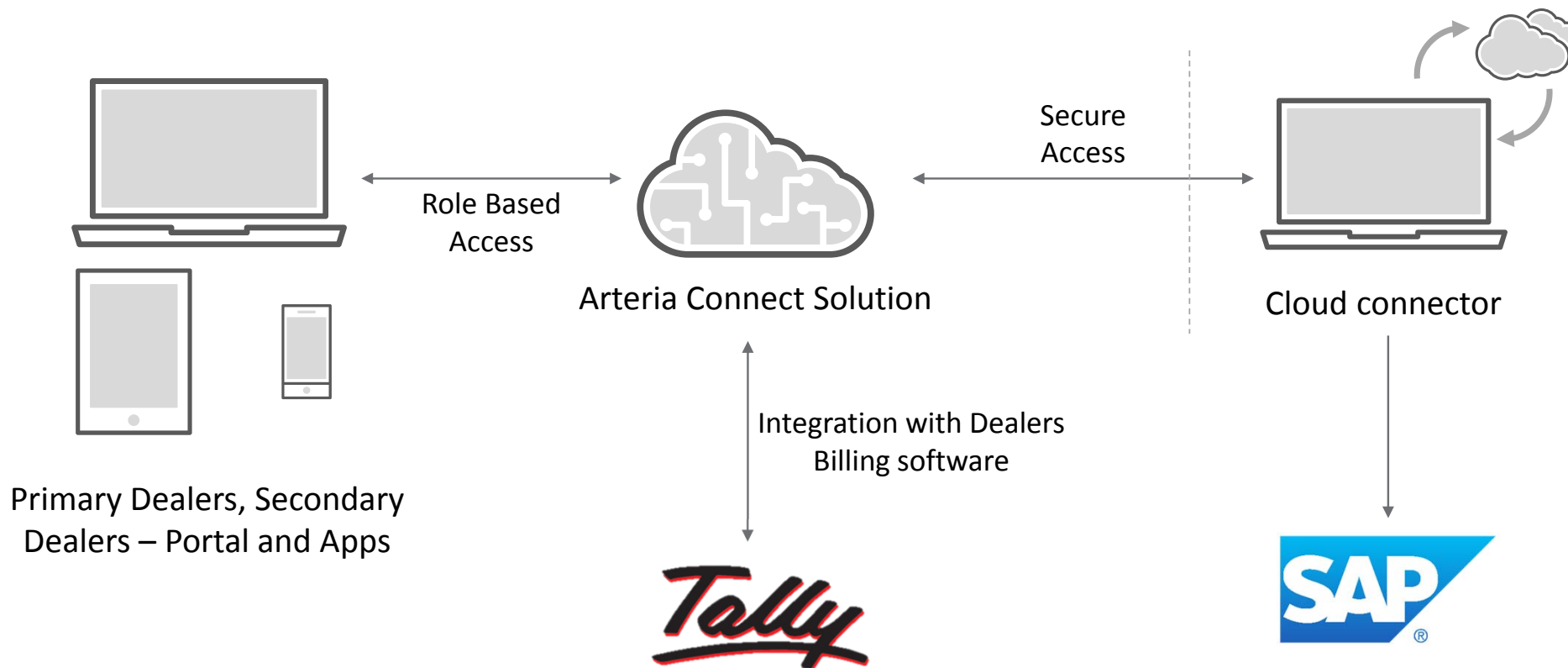
HUPS



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Trade channel: Large scale digitization program underway



IT Enabled Sales Team & Channel Partners

- Connected through state-of-the-art mobility solutions
- Real time information on Stocks, Targets & Incentives



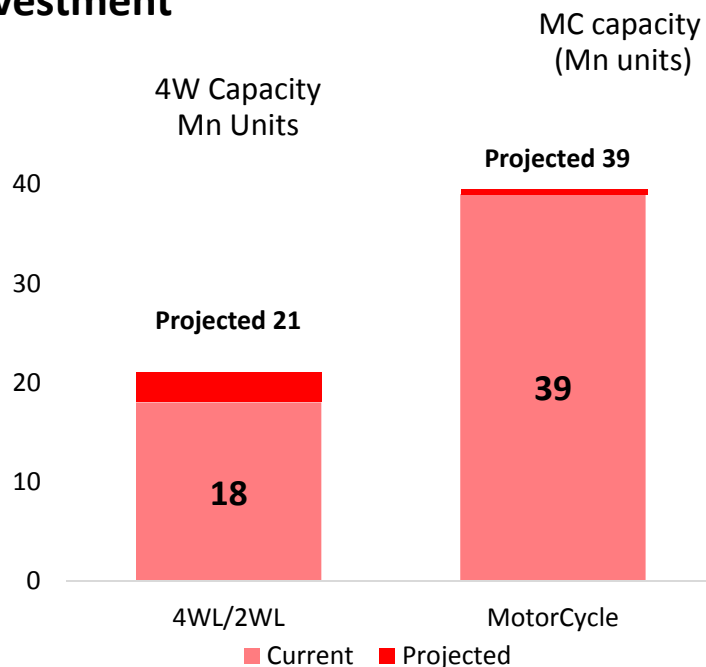


Overview of Manufacturing capacities and Technology



Manufacturing: Plant expansion being planned to meet the future requirement

Expansion does not require additional investment



Multiple cost reduction initiatives underway



Consolidation of production for 2W batteries from 4 to 2 factories



Bringing select production operations in house



Setting up of captive power plants

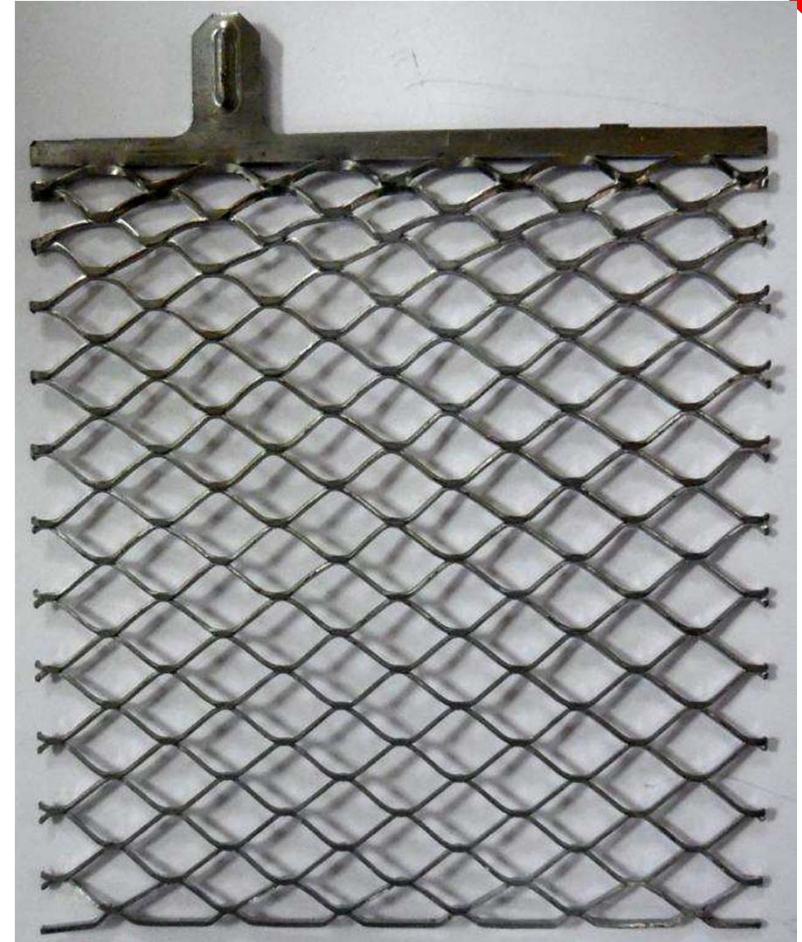


New secondary smelter being set up with a capacity of 50,000 MT p.a

Expanded Positive Technology :

Key Advantages:

- Improved MF characteristics
- Less Grid weight - High Power to weight ratio
- Ensures improved corrosion resistance
- Special Antimony strip : Improves Active Material & Grid adhesion
- High productivity - Low production cost



Collaboration with Hitachi Chemicals

Hitachi Chemical
HITACHI

#WhatDrivesYou



Punched Plate Technology For 2WL :

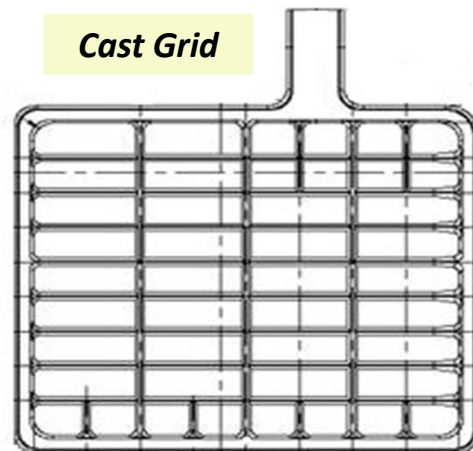
Product Improvement :-

- HIGHER PERFORMANCE
- INCREASED LIFE
- REDUCED WARRANTY

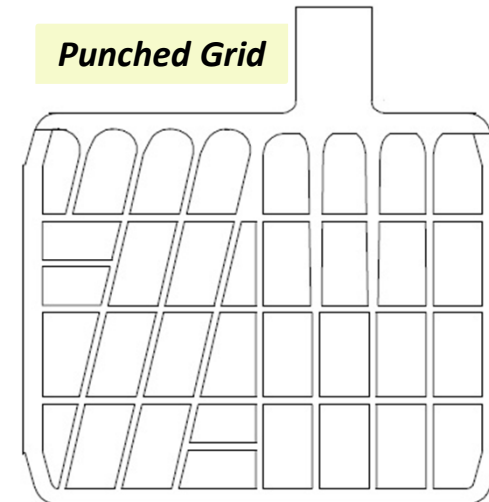
Process Improvement :-

- HUGE REDUCTION IN MANPOWER
- BETTER QUALITY

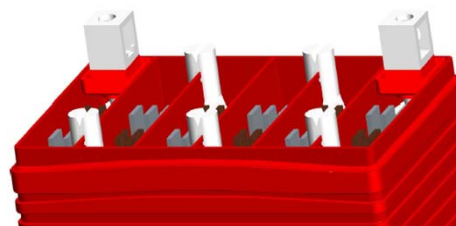
**FIRST IN INDIA TO INTRODUCE
PUNCHED PLATES IN MOTORCYCLE**



Cast Grid



Punched Grid



The Intercell Connectors rise above the cell partition walls giving an advantage of plate height.



ULTRA Batteries for Automotive :

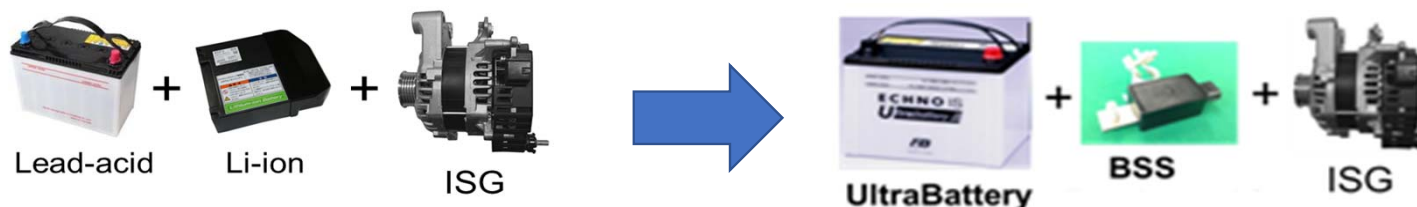
Advantages of Ultra Battery

- Excellent charge acceptability-2x
- Excellent durability under HR-PSOC condition – 2.5x
- Suppress stratification under deeper discharge / charge condition by Capacitor hybrid negative electrode and Ion exchange mechanism of capacitor layer
- Fuel economy improvement (CO₂ emission reduction) - Approximately 3% improvement in fuel economy

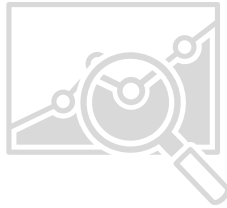
Advantages of Ultra Battery in Hybrid Vehicles

	Start /Stop	Micro	Mild
Engine Stop	✓	✓	✓
Regenerative Braking		✓	✓✓
Motor Assist		✓	✓✓
Battery Voltage(V)	12		
Considered Battery	Lead Acid ISS/EFB		
		Lead Acid ISS/EFB with Li-Ion	
	Lead acid Flooded Ultra battery		

Ultra Battery system is an effective solution for 12V micro & mild hybrid!



Agenda



Overview of current business



Strategic bets for future



India is gearing up for electrification megatrend to become a reality

Major drivers



Improving cost economics

Falling upfront Costs

Battery prices to fall

Improved Performance

Products with better performance



Government push

Urban Pollution

Significantly above acceptable standards

CO2 Emissions

India in top CO2 emitters

Trade Deficit

Crude oil is 20% of 2019 imports



Traditional OEMs have started investing to transition to EVs



New players with bold ambitions are entering the market



Power the Change



Hence, we have made two strategic investments in the automotive space



Li-Ion Module and Pack Assembling Plant

- Aims to become a leading provider of customized energy storage solutions
- Building prototypes for e-bus, e-3 wheeler, e-2 wheeler , and telecom



Exide NEO

- Launched a battery powered e-rickshaw with robust design and stylish looks
- Entered e-rickshaw market to showcase our technology prowess in Li-Ion



WHEN TWO GREAT
FORCES MEET,
IT IGNITES A
POWERFUL SPARK.

Presenting

nexcharge

Exide Leclanche Energy
Private Limited

A new-age joint venture between India's largest battery manufacturer **EXIDE** and Europe's leading battery storage energy provider **LECLANCHÉ** to design future-enabled Li-ion battery solutions for E-Vehicles.

EXIDE **Leclanché**

Exide Leclanche Energy Private Limited | Regd. Office: Plot No. 101, Koratpur NH-4 No. 8, Prantij - 383006, Sabarkantha, Gujarat, India | P: 02770-220100 | CIN: U74999GJ2018PTC04408 | www.exideleclanche.com

We are undertaking early lead in the nascent li-ion battery market in India

Our Headquarters in Prantij, Gujarat

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

Our Li-ion Assembly Lines

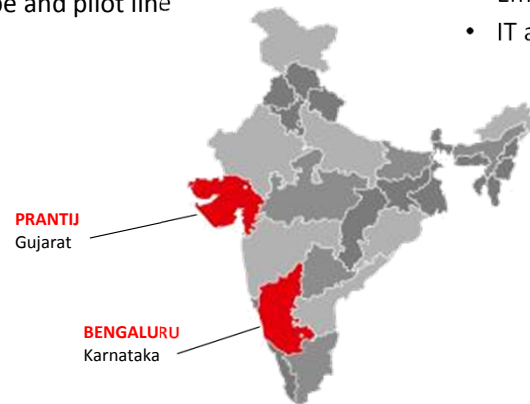
- Pouch/Prismatic/Cylindrical cell to module
- Module to pack/rack
- Cell testing lab
- Prototype and pilot line

Our Facility in Bengaluru, Karnataka

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

Our Capabilities

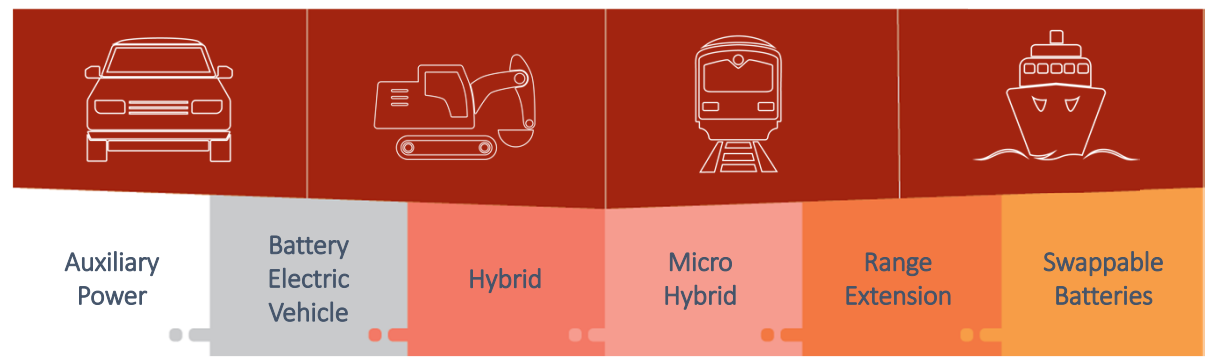
- Electronics and mechanical product design and testing
- Embedded software development
- IT and ITES services



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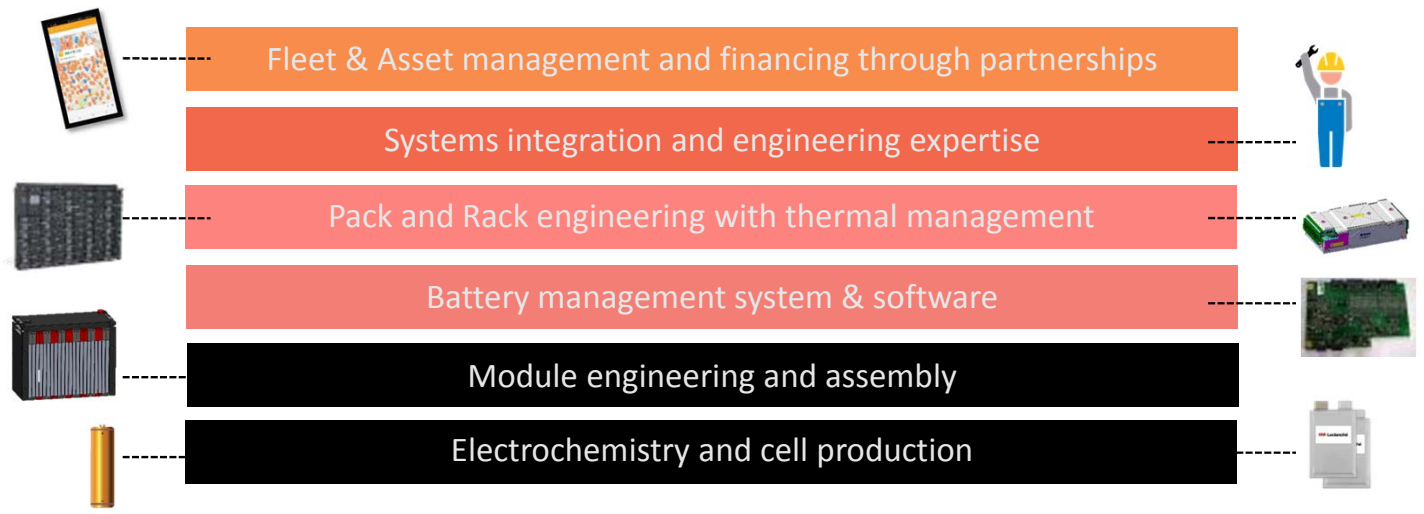


TRANSPORTATION SOLUTIONS



Transportation

- Buses, Passenger Cars, Three Wheelers, Two Wheelers, Trucks
- Marine
- Off Highway Equipment
- Rail
- Robots





Overview: Nexcharge Development Centre



Associates

32 associates with a mix of Electrical, Electronics, Software, Mechanical & Industrial Engineering



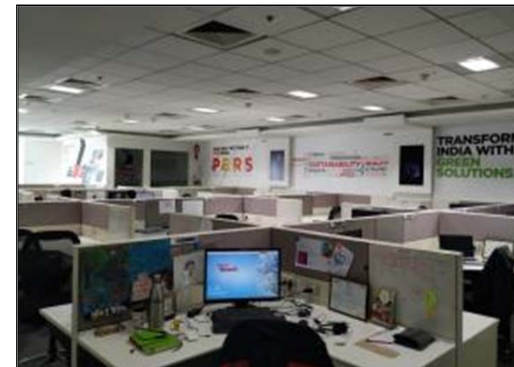
Skill set

Mech Design & simulation

Electrical Eng.

Industrial Eng.

Software and Tools

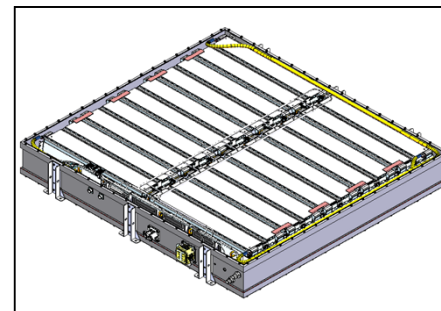




Battery Pack: Electric Bus



e-Bus



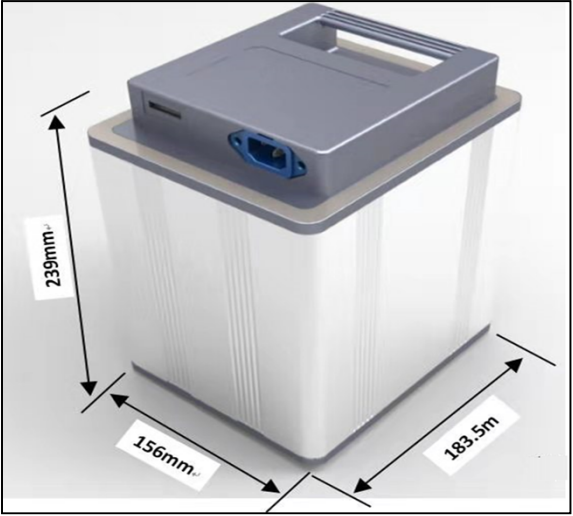
Technical Description	Particular
Chemistry, Nominal Voltage	LFP, 640V
Type of Cells	Prismatic
Pack Dimension (in mm)	1705 X 1653 X 235
Weight	~860kgs
Life Cycle @ RT	3500



Battery Pack: Two Wheeler



Electric two wheeler



Technical Description	Particular
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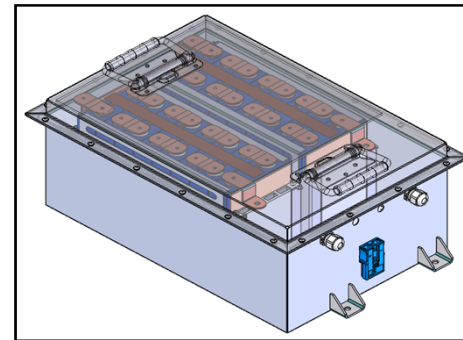
Chemistry, Nominal Voltage	NMC, 50V
Type of Cells	Cylindrical
Pack Dimension (in mm)	239 X 156 X 183
Weight	~8 kgs
Life Cycle @ RT	1000



Battery Pack: Three Wheeler



Electric three wheeler



Technical Description	Particular
Chemistry, Nominal Voltage	LFP, 50V
Type of Cells	Prismatic
Pack Dimension (in mm)	239 X 156 X 183
Weight	~37 kgs
Life Cycle @ RT	3500



The Manufacturing and R&D set-up will be one of India's most advanced for Li-ion pack assembly

State of the Art Manufacturing



Total HV capacity of ~500 mWh and LV capacity of ~250 mWh



7 assembly lines for different form factors and voltages



Automated setup with limited manual intervention



Flexibility to handle any form-factor and chemistry for Li-ion battery

R&D innovation center



R&D innovation center in Bangalore with 30+ electrical and mechanical design engineers



Software for pre-processing and simulation of different design ideas



Software for developing Battery Management System



Comprehensive equipment for testing (Life Cycle Tester, Temperature Testers)

Thank You
