

December 14, 2019

National Stock Exchange of India Limited
"Exchange Plaza",
Bandra - Kurla Complex,
Bandra East
Mumbai - 400 051
NSE Symbol: AMARAJABAT

BSE Limited
Corporate Relations Department,
Phiroze Jeejeebhoy Towers,
Dalal Street, Fort,
Mumbai - 400 001
BSE SCRIP CODE: 500008

Sub: Presentation made to the Investors/Analysts at the Meeting(s) held on December 13, 2019 under Regulation 30 and 46 of the SEBI (Listing Obligations and Disclosure Requirements), Regulations 2015

Further to our letter dated December 12, 2019, please find attached the presentation made to the Investors/Analysts at the meeting(s) held on December 13, 2019, pursuant to Regulation 30 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

Pursuant to Regulation 46 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, the presentation is being uploaded in the Company's website i.e. www.amararajabatteries.com

We request you to take the above information on record.

Thanking you

Yours faithfully
For Amara Raja Batteries Limited



M R Rajaram
Company Secretary





AMARA RAJA

Gotta be a better way

Amara Raja Batteries Limited

Investors Presentation

Dt: 13th December 2019



Safe Harbor

Some of the statements in this presentation that are not historical facts are forward looking statements. These forward looking statements include our financial and growth projections as well as statements concerning our plans, strategies, intentions and beliefs concerning our business and the markets in which we operate. These statements are based on information currently available to us, and we assume no obligation to update these statements as circumstance change. There are risks and uncertainties that could cause actual events to differ materially from these forward looking statements. These risks include, but are not limited to, the level of the market demand for our products, the highly competitive market for the types of the products that we offer, market condition that would cause our customers to reduce their spending for our products, our ability to create, acquire and build new businesses and to grow our existing businesses, our ability to attract and retain qualified personnel, current fluctuations and market conditions in India and elsewhere around the world, and otherwise not specifically mentioned herein but those that are common to industry.

CORE PURPOSE

*To transform
our increasing spheres of influence
and to improve the quality of life
by building institutions
that provide better access
to better opportunities
to more people. . .
all the time.*



AMARA RAJA
Gotta be a better way



Vision

Through the Amara Raja and through enduring progressive partnerships we will be a Global Leader in Batteries and Battery Technologies and a dominant player in the Indian Ocean Rim.



The Amara Raja Way

VALUES	COLOR	ELEMENT	MIND STATE
Innovation	Burgundy	Space	Synthesizing
Excellence	Magenta	Wind	Disciplined
Entrepreneurship	Orange	Fire	Creative
Experiences	Blue	Water	Spiritual
Responsibility	Green	Earth	Respectful and Ethical

Amara Raja Batteries Limited



Automotive Batteries

- ❖ Leading Automotive Battery Brand
- ❖ Largest Exporter of 4W Batteries in India
- ❖ First AGM battery manufacturer for 2W

- ❖ 7 Battery Manufacturing Plants
- ❖ Largest Private Sector Employer in AP
- ❖ Strong work force with average age of 29 years

ARBL



Industrial Batteries

- ❖ First VRLA Battery Manufacturer in India
- ❖ Market Leader in Telecom.
- ❖ Largest Integrated Facility for MVRLA Batteries.
- ❖ Pioneered Battery Solutions for Indian Railways.

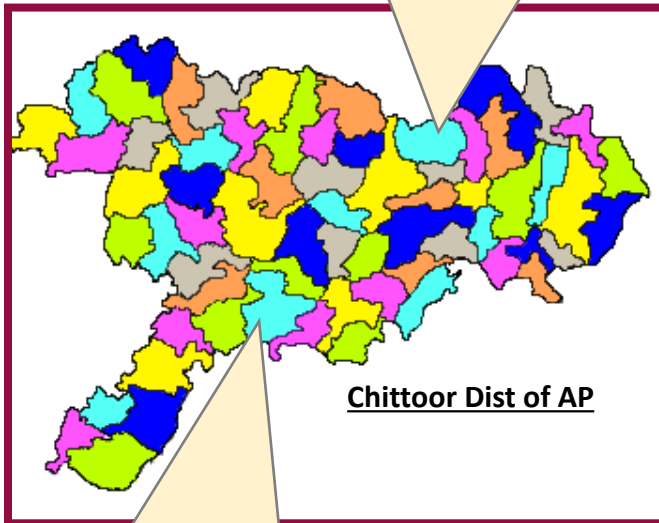
Manufacturing Locations & Capacities

Manufacturing Locations

Karakambadi Industrial complex:

Tirupati

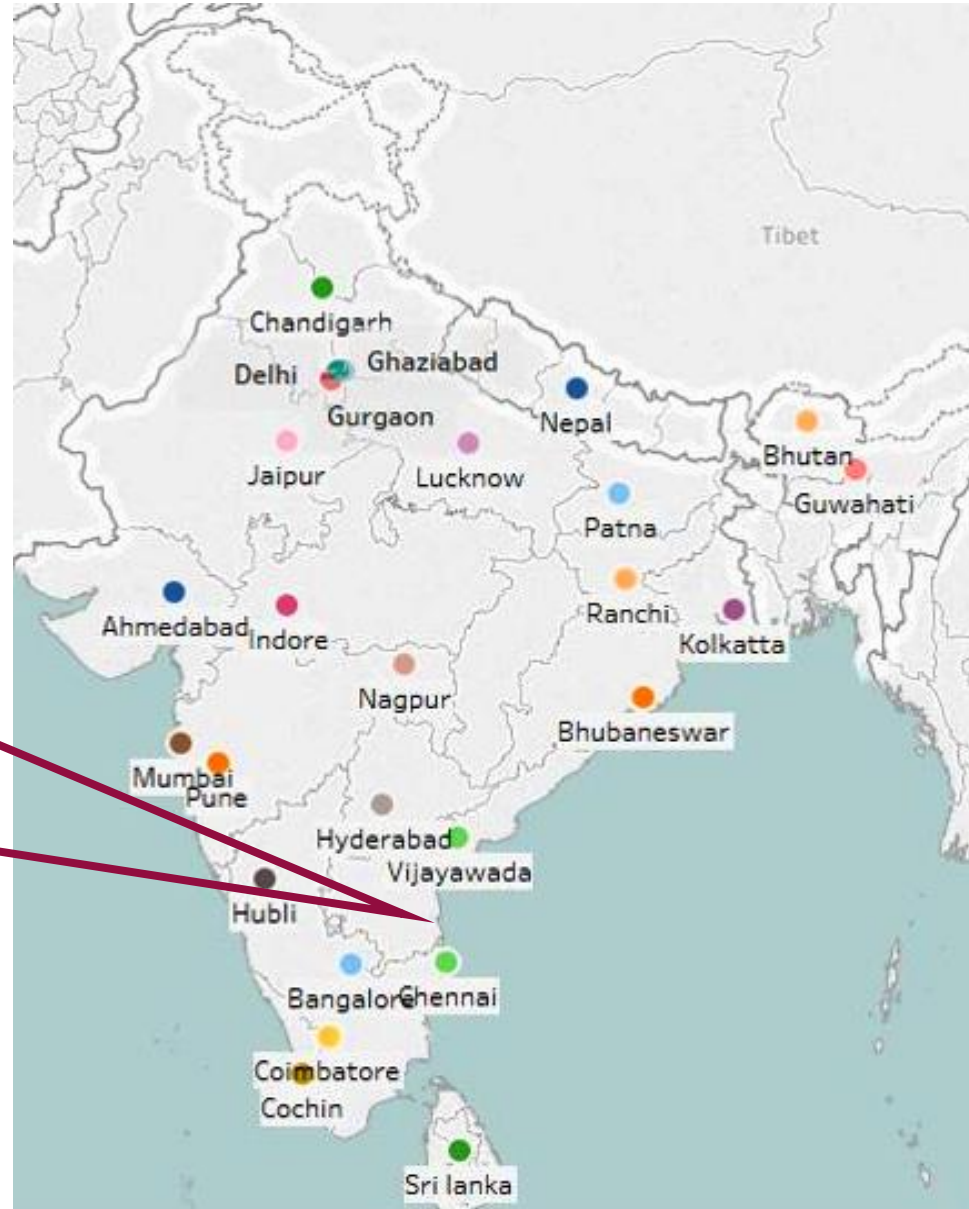
- ❖ 1st 4W Battery plant
- ❖ 1st 2W Battery Plant
- ❖ LVRLA Battery Plant



Chittoor Dist of AP

Amara Raja Growth Corridor, Chittoor

- ❖ MVRLA Battery Plant
- ❖ 2nd & 3rd 4W Battery Plants
- ❖ 2nd 2W Battery Plant
- ❖ Tubular Battery Plant



Current Capacities

4W Batteries

- ❑ Annualised Capacity: 11 Mn Nos

2W Batteries

- ❑ Annualised Capacity: 15 Mn Nos

Industrial Batteries

- ❑ Annualised Capacity: 2 Bn Ah

Tubular Batteries

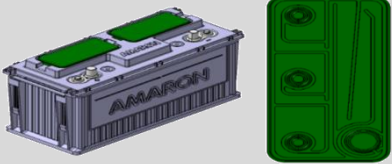
- ❑ Annualised Capacity: 1 Mn Nos

Product Engineering Capabilities

- ❖ Advanced 3D Modeling & Simulation Analysis for component design and evaluation
- ❖ Product Design and Development through Robust APQP Methodology , Predictive Analysis & comprehensive performance evaluation in accordance with OEM / International standards
- ❖ Value Engineering, DOE and Design for manufacturing

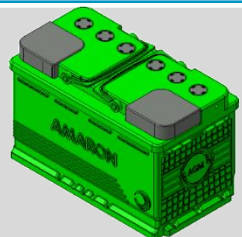
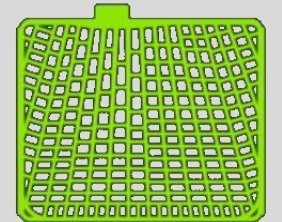


Liq Arr™ vents



- ❖ Innovative Designs - Design Registrations
 - ▶ Innovate poly and venting designs for stringent OEM specific requirement
 - ▶ Innovative “UPMC” (UNIFORM PRESSURE MAINTAIN COVER) for Motorcycle Battery

- ❖ New Advanced Stamped Grid design for future requirements
 - ▶ Rolled strip, hi speed punching and dividing
- ❖ Formulation of new paste recipes for advanced lead acid batteries (EFB)

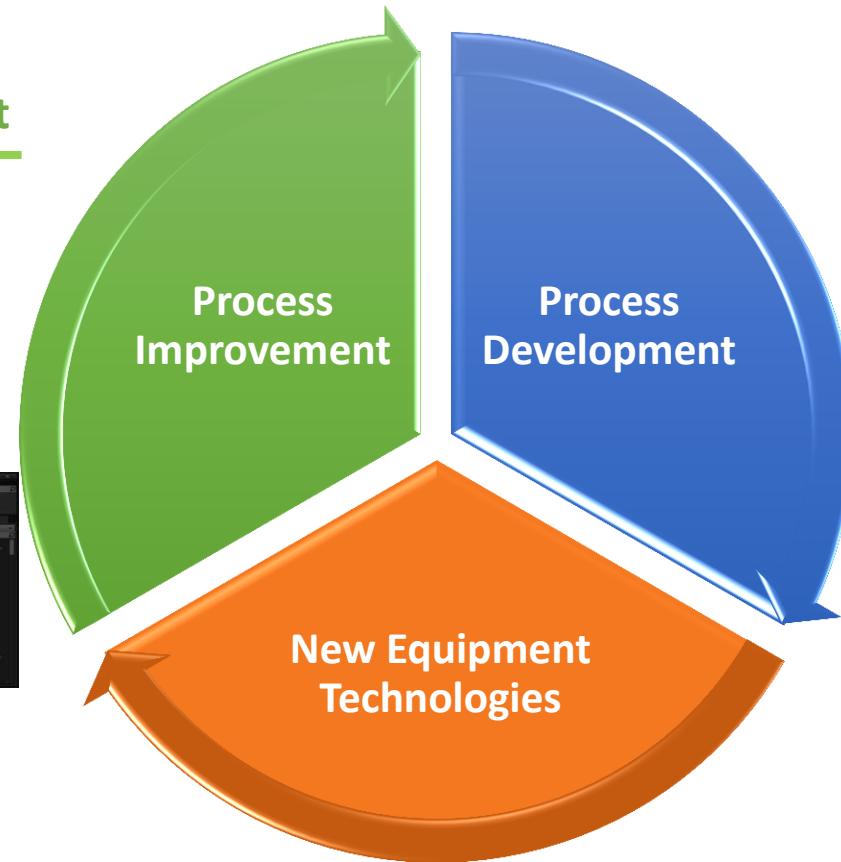


- ❖ Design & Development of EFB /AGM batteries for automotive ,SVRLA for UPS applications
- ❖ High performance battery developed for Honda Motor Cycle Start-Stop application
- ❖ Continuous enhancement of SLI batteries

Process Engineering Capabilities

Material Efficiency Improvement

- ❖ Optimized paste recipe & morphology
- ❖ Improved PAM efficiency
- ❖ Material reduction/Ah
- ❖ Retaining performance level



Gang Vent Cleaning technology for DIN battery

- ❖ Design, Development and Commercialization
- ❖ Enable dump and refill for DIN
- ❖ Cycle time and Energy reduction
- ❖ Throughput improvement



Advanced Plate Making –Multi Grid Punching & Pasting for 2W

- ❖ Design, Development and Commercialization
- ❖ Lead conservation
- ❖ Higher Productivity
- ❖ Manpower reduction

WORLD
FIRST



Distribution Network



Sales & Distribution Network - INDIA

23	32	400+
Branches	Warehouses	Amaron Franchisees
40,000+	1000 +	2000 +
Amaron Dealers	Power Zone Retail stores	Extensive Service hubs.

Some of our Customers

Supplier of choice to Auto OE's



Mercedes-Benz



HONDA



Private Label Brands



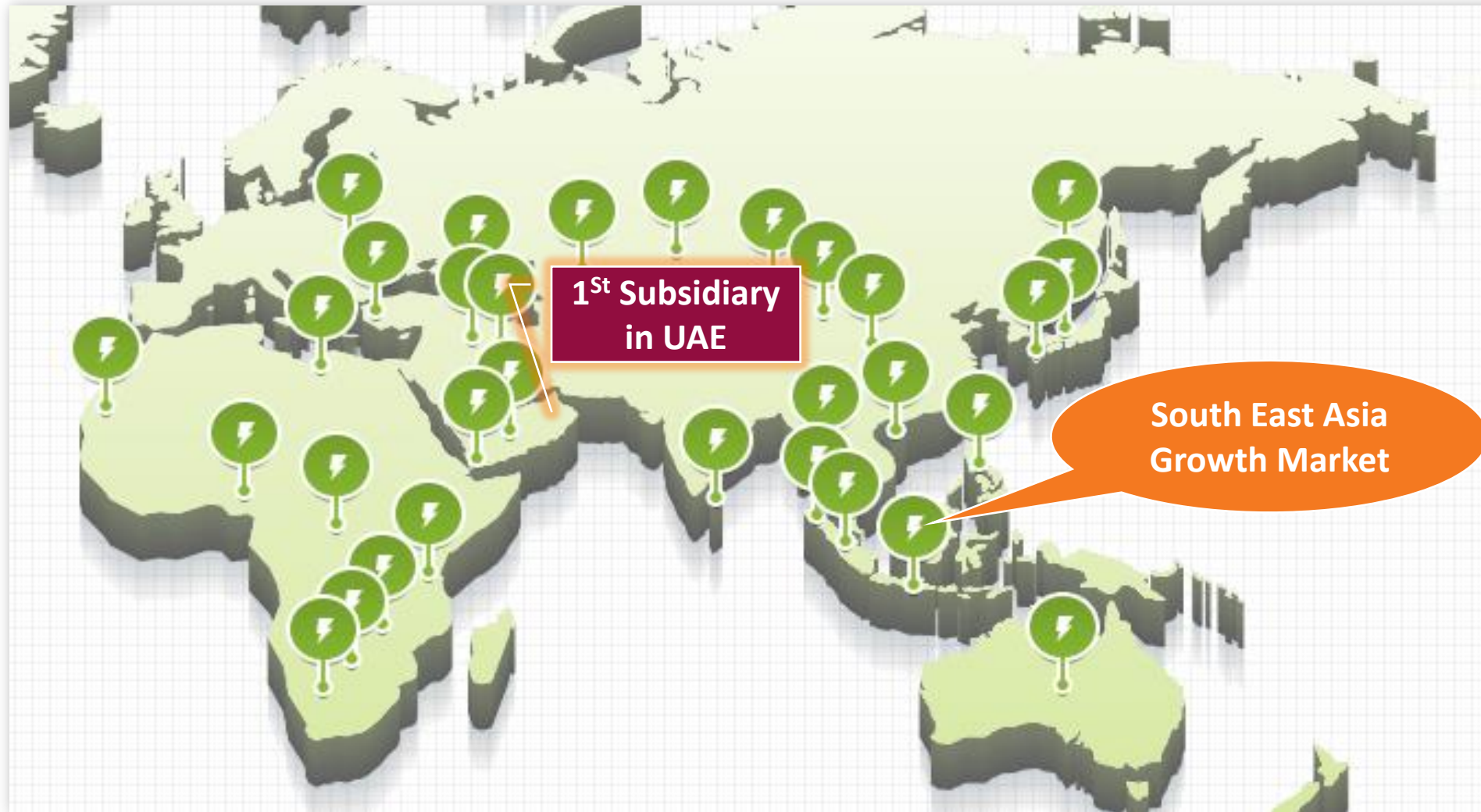
Industrial Customers



Eaton Towers

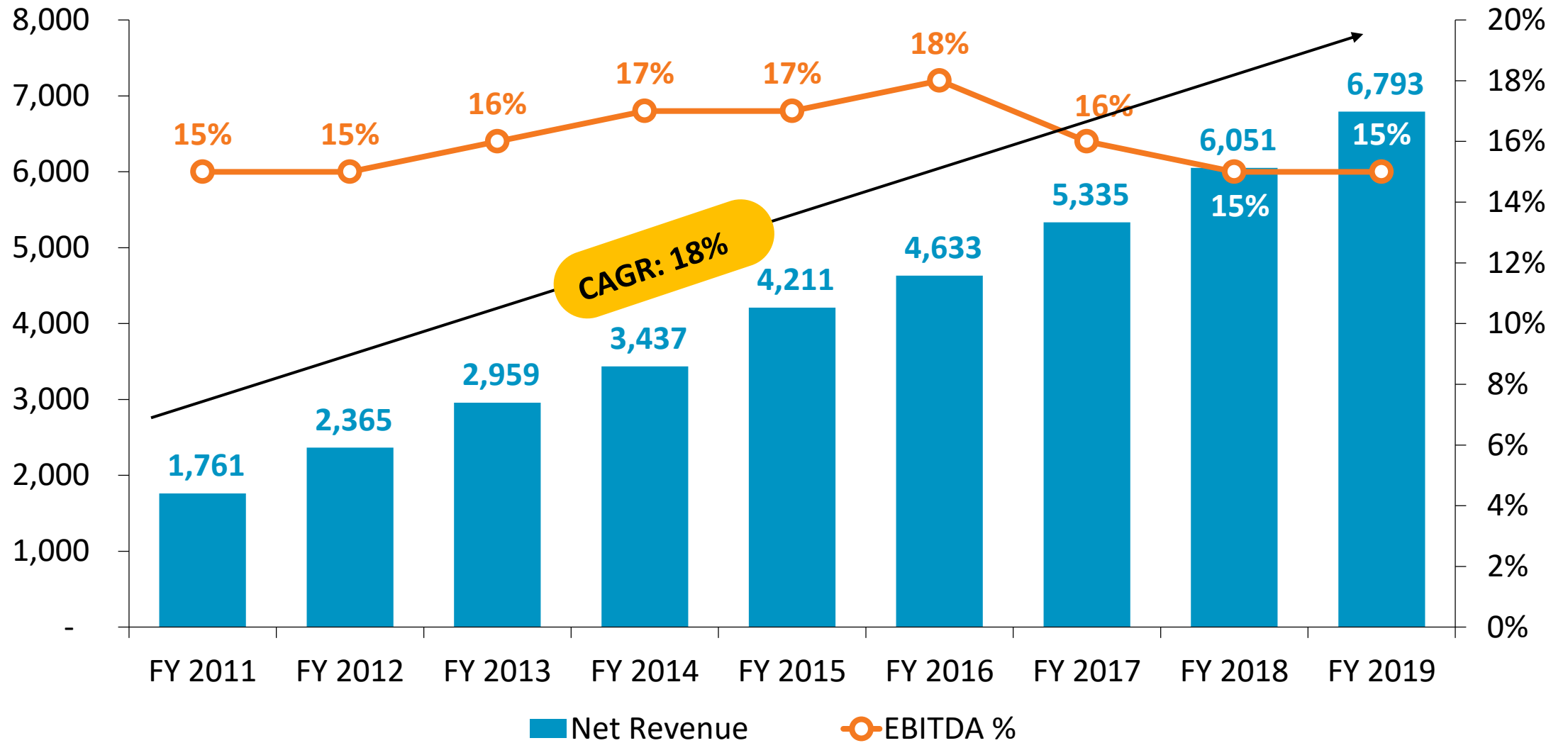


International Markets - 35 Countries and growing



- ❑ 11% of Total Revenue from Exports
- ❑ Last 3 years Revenue CAGR of 35%
- ❑ 40 Distributors

Financial Performance

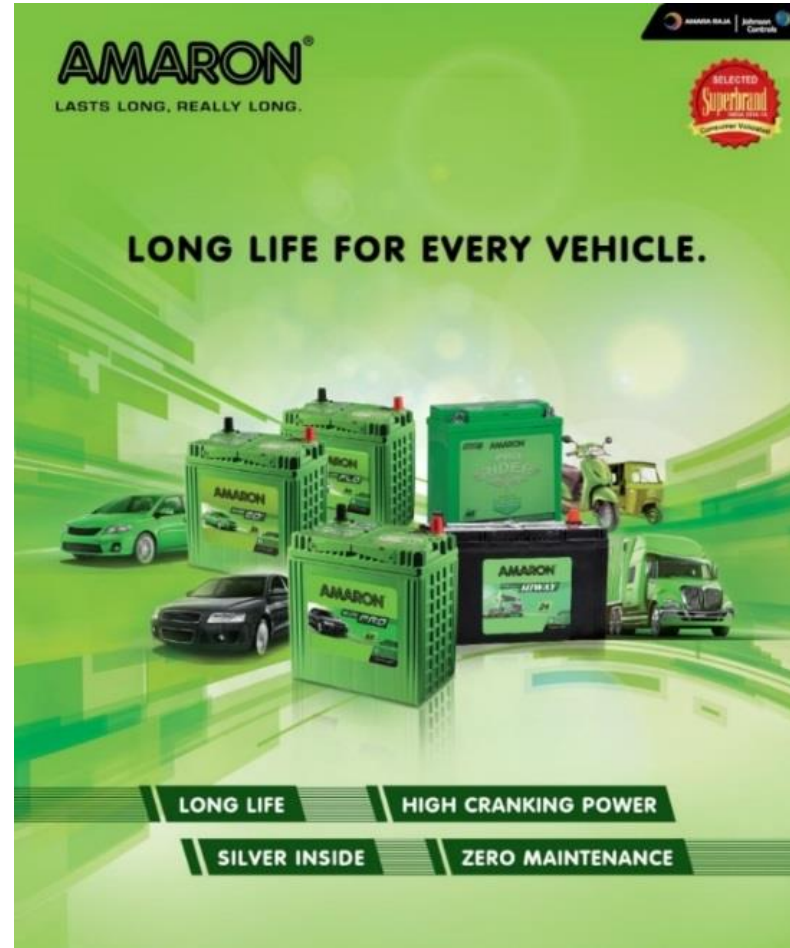


FY 19 witnessed strong growth in after market business.

ARBL– Automotive Batteries

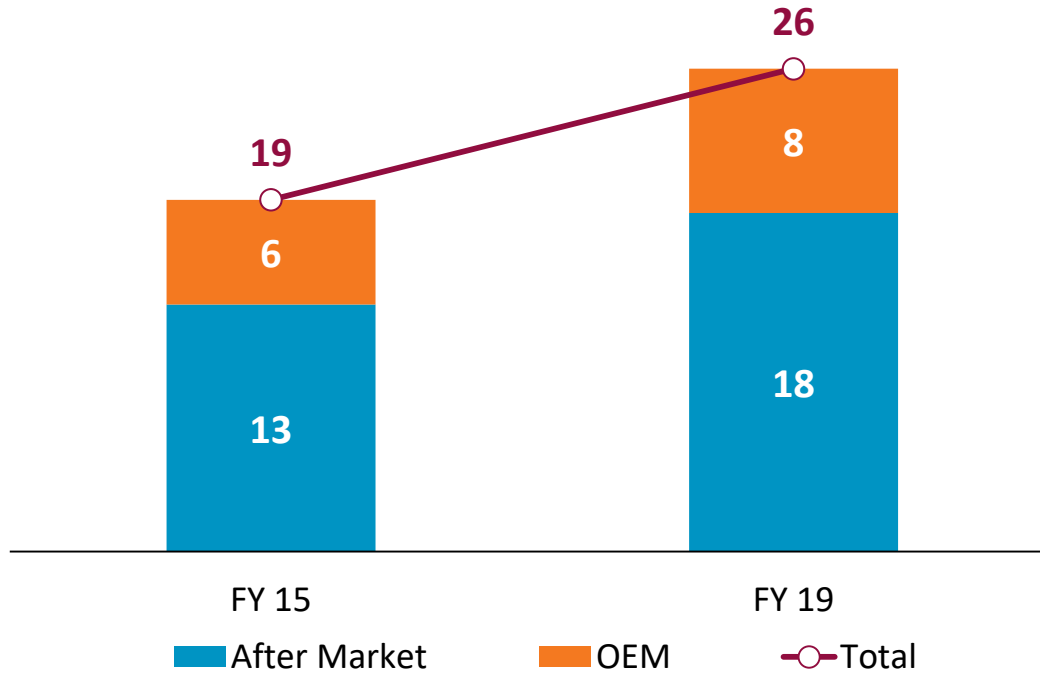
Application Segment & Product Range - **Automotive**

- ❖ Automotive batteries
- ❖ Passenger cars
- ❖ 3 wheelers
- ❖ 2 wheelers
- ❖ Tractors
- ❖ Trucks
- ❖ Inverters
- ❖ Home UPS/Inverters



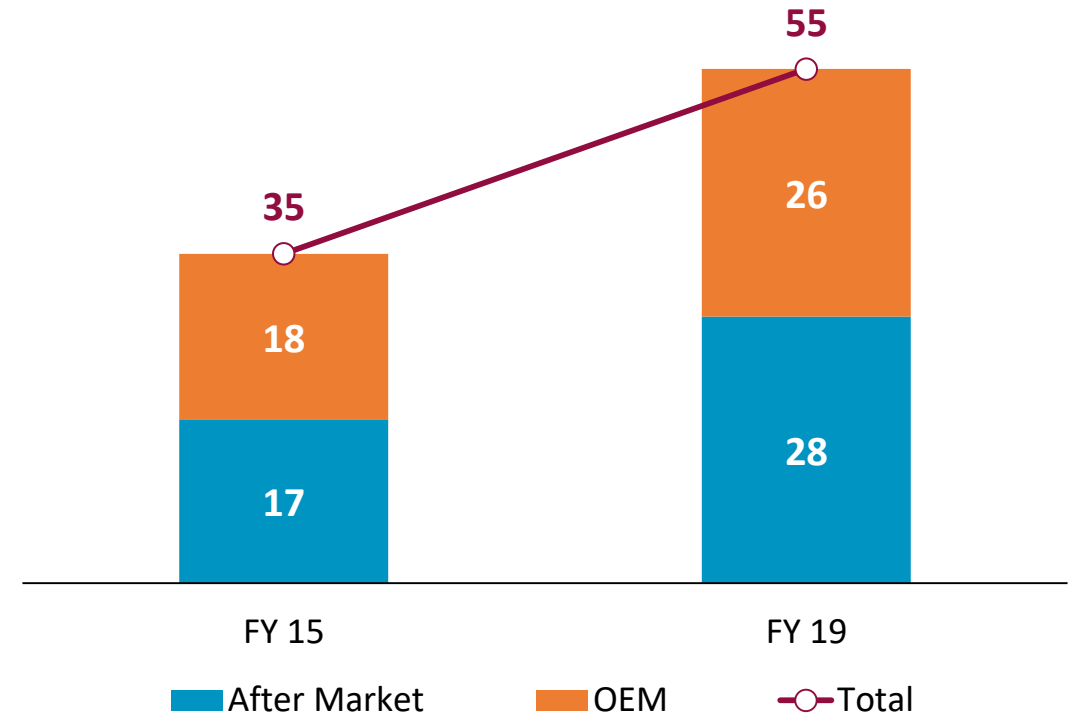
Automotive battery market in India, becoming largely organized

4W Battery Potential (in Mn nos)



After Market Growing a CAGR of 8%

2W Battery Potential (in Mn nos)



After Market Growing a CAGR of 12%

Initiatives for Growth

Grow

- ❖ Leverage OEM Relationships by Offering Future Ready solutions
- ❖ Accelerate Growth by Strengthening Distribution Channel

Expand

- ❖ Widen International Market reach
- ❖ Enhance Market Access through innovative Channel Initiatives

- ❖ Reinforce Brand Strength through enhanced customer experience
- ❖ Digitizing of service and distribution operations

Sustain & Compete

- ❖ Products for newer applications like EFB & AGM
- ❖ Deep discharge and high cycle life applications like E-Rickshaws

Products / Applications

ARBL- Industrial Batteries

Application Segment & Product Range for Industrial Batteries

- ❖ Power Generation units
- ❖ Transmission & Distribution
- ❖ Telecom
- ❖ Railways
- ❖ Offshore units
- ❖ Other Industries



Amaron Sleek



Amaron Volt

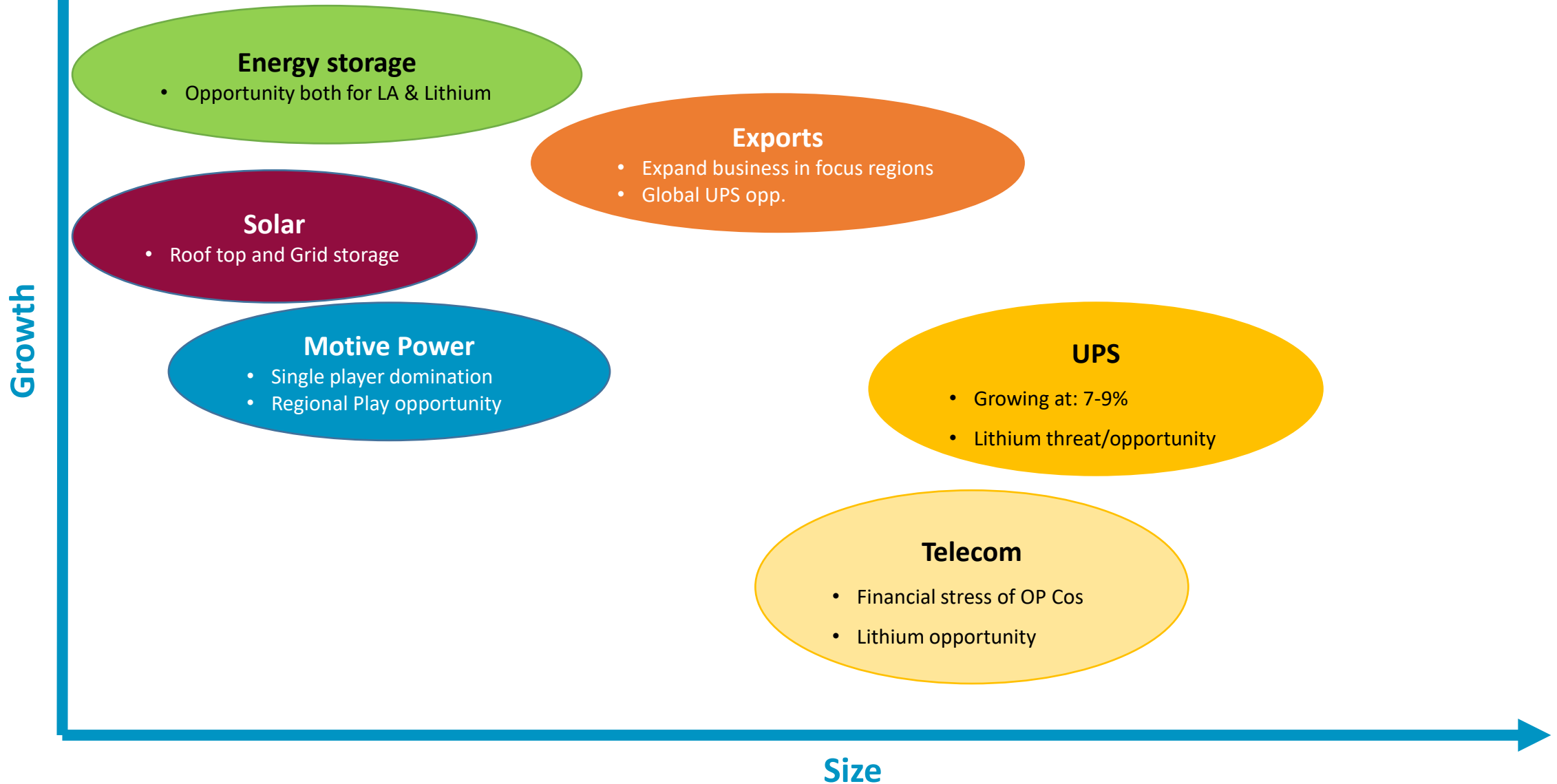


Quanta



Power Stack

Customer/Application Segments : Size and Growth



Initiatives for Growth

Grow

- ❖ Access Global markets by leveraging Global OE Relationships
- ❖ Enhance customer value by Innovative business models

Expand

- ❖ Establish local presence in select International Markets

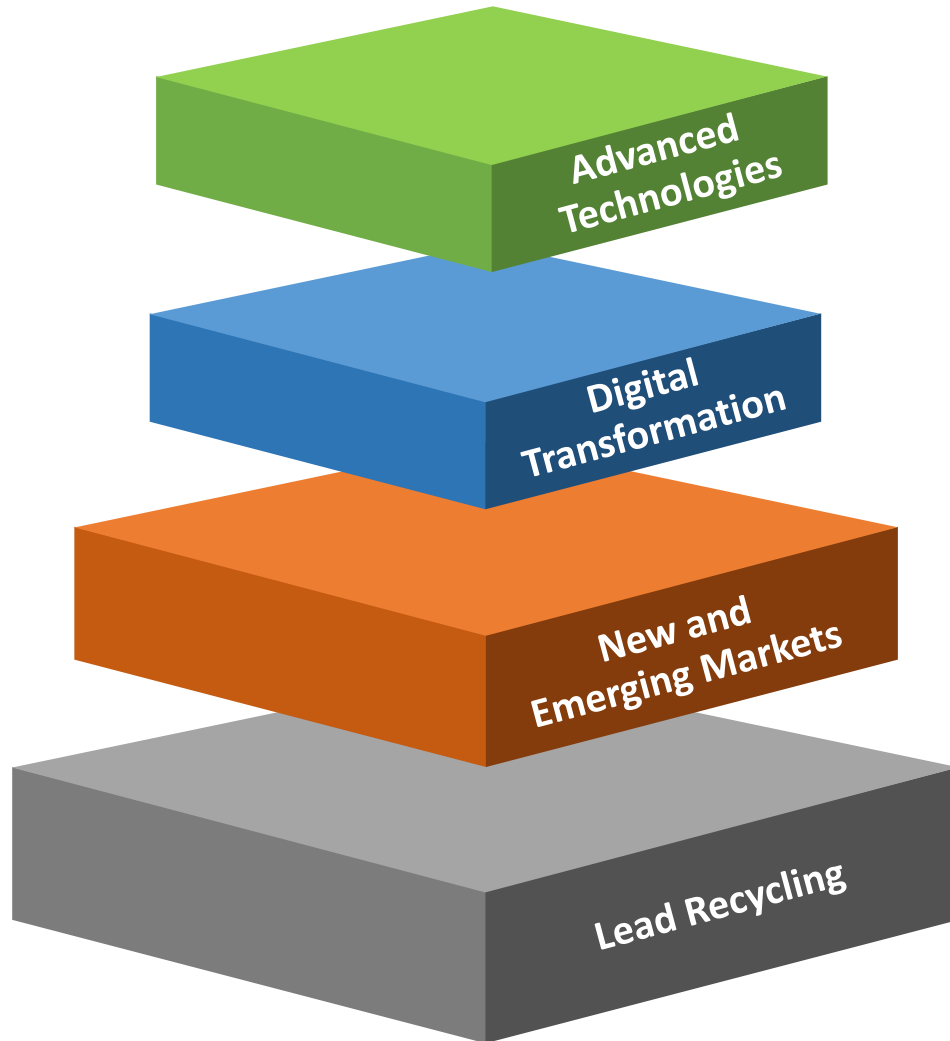
- ❖ Offer comprehensive battery management solutions.
- ❖ Continuous improvement of product cost and quality.

Sustain & Compete

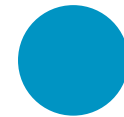
- ❖ New product/solution offering to address sunrise application segments like solar/Energy Storage.
- ❖ Broaden product portfolio to address customer specific needs

products/applications

Building Blocks



- ❖ Invest into Alternate Chemistries
- ❖ Introduce EFB/AGM product Range



- ❖ Road map for Digital factory
- ❖ Invest into Digital solutions for better customer experience



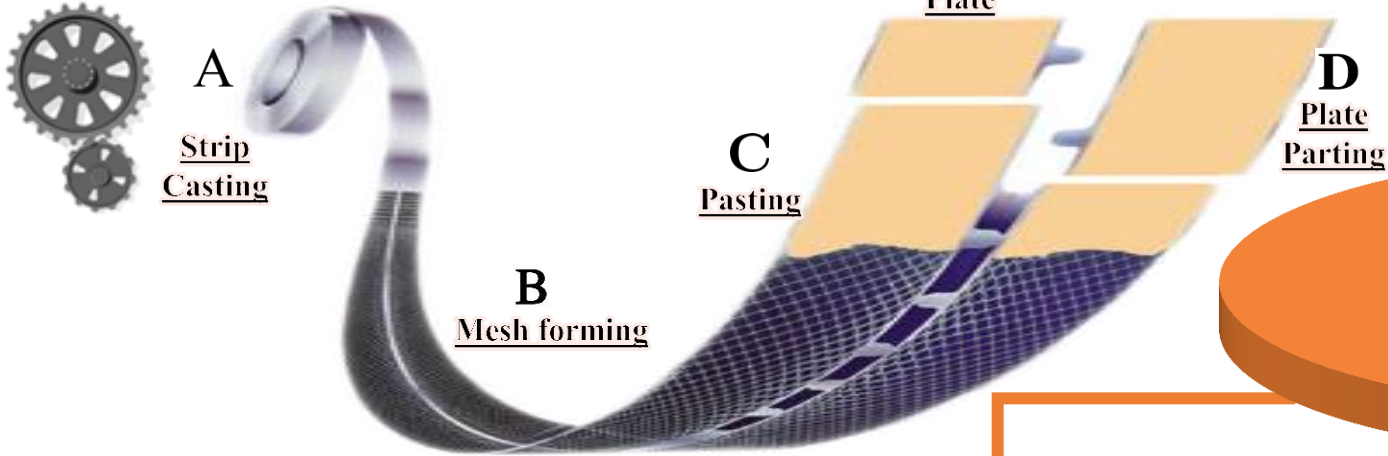
- ❖ Offer Products/Solutions for EVs & Energy Storage.



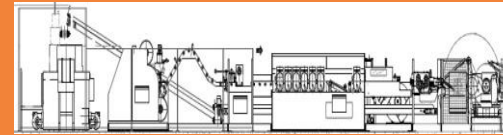
- ❖ Integrated Approach to Scrap Battery Collection and Recycling

Continuous Plate Making Technology

Advanced Technologies



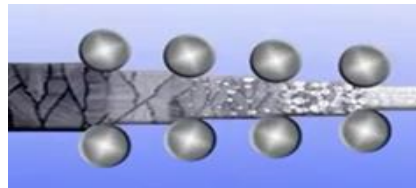
- ❖ Productivity improvement in plate making
- ❖ Possible grid wt reduction



Continuous Plate making Technology

- ❖ Continuous Expanded Plates
- ❖ Continuous Punched Plates

Consistent Quality



Increased Productivity



Cleaner Environment



Enhanced Safety

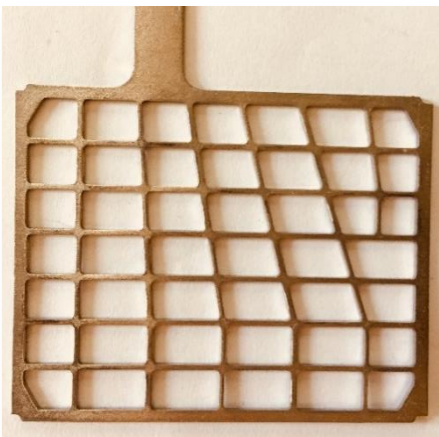


First Ever Punched Grid 2W Battery Manufacturer in the world

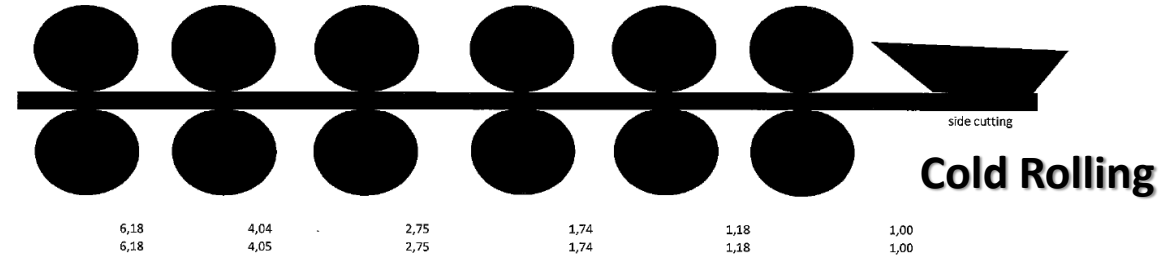
Advanced Technologies



Punched Strip Roll



Punched Grid



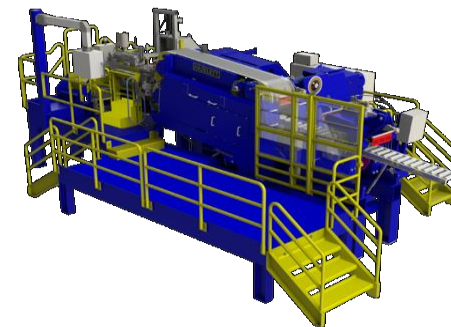
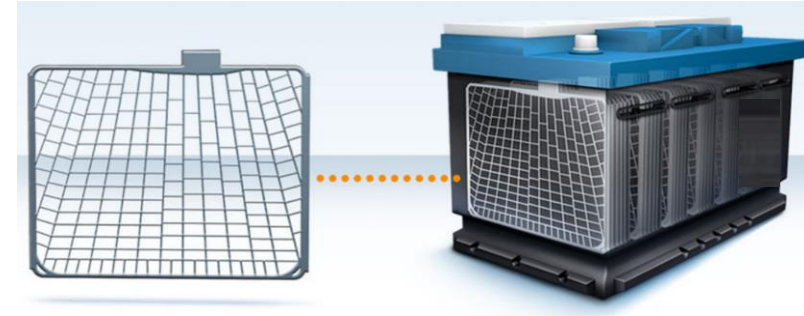
Punched Grid Advantages

- ❖ Structurally durable and last longer than traditional grids .
- ❖ Reduces the internal resistance of the battery facilitating the flow of the current
- ❖ The best grain size is achieved by rolling the lead strip at a reduction rates between 90 to 99%.
- ❖ This leads to higher mechanical strength as well as higher corrosion resistance for grids
- ❖ 4 step punching, the progressive punching leads to good mechanical strength to grid while punching

4W: Advanced Stamped Grid Project

Advanced Technologies

- ❖ **PowerFrame® Technology** : Licensed from erstwhile Johnson Controls in 2018 for perpetual use of Stamped grid technology.
- ❖ ASG grid is up to 66 percent more durable and more corrosion-resistant compared to other grid designs.
- ❖ The technology brings precision process control, improvement in operational efficiency and global environmental standards.



- ❖ Project established in Nov 2018
- ❖ Plant Construction as per schedule

Overview on Li-Ion Technology Development@ AR



Pilot Run – Field & Lab Testing

- Pilot Packs – Field testing 3W(PMS) - >1,23,000 Kms run
- Pilot Fleet Run – 10 e-Autos with Bulk charging stations at Tirupati.



Pilot Plant – Cell Making

- Pilot Plant for R&D on cell chemistry & designs



Pack Assy Plant Portfolio

- Assembly Plant capacity – 100 ~500 MWH



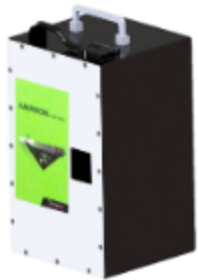
Products for eMobility & Standby

eMobility

- 2W/3W – Fixed Battery and Battery Swapping concept

Standby

- Products Developed for Telecom and UPS Applications



Technology Transfers & Collaborations

- Pack Assembly Technology license with IITM
- Cells Development – Technology Transfer with ISRO
- Advanced Cell Technology Collaboration – IISC & CECRI (Indo German funded)

Products For eMobility & Standby

Products for 4Wheeler Under Development

- ❖ 345V – 15KWh
- ❖ 350V – 30KWh
- ❖ 650V – 122KWh



Products for eRickshaw / eAuto

Products Developed

- ❖ 1.25KWh
- ❖ 1.50KWh
- ❖ 2.50KWh
- ❖ 3.00KWh
- ❖ 3.75KWh
- ❖ 4.00KWh
- ❖ 4.30KWh
- ❖ 4.50KWh
- ❖ 5.30KWh



Products for Standby

UPS:

- ❖ 0.36KWh
- ❖ 0.5KWh
- ❖ 0.72KWh
- ❖ 1.12KWh
- ❖ 1.23KWh
- ❖ 1.44KWh

Telecom:

- ❖ 1.0KWh
- ❖ 1.50KWh
- ❖ 2.0KWh
- ❖ 2.50KWh
- ❖ 3.75KWh
- ❖ 5.30KWh

ESS:

- ❖ 300KWh



Products for 2Wheeler

Products Developed

- ❖ 48V – 1.4KWh
- ❖ 60V – 1.8KWh
- ❖ 48V – 2.3KWh
- ❖ 48V – 1.5KWh



REA – Nigeria – World's largest Lead Acid energy storage system



AR Idea Digital Transformation Journey

Analytics & Mobility Layer

Transaction Layer

Automation Layer

Wave 1



Business Analytics



Mobility

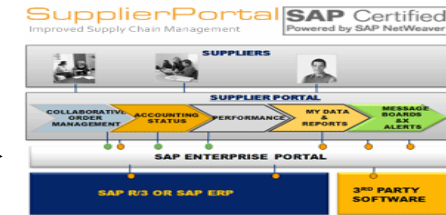


Wave 2

Employee Portal

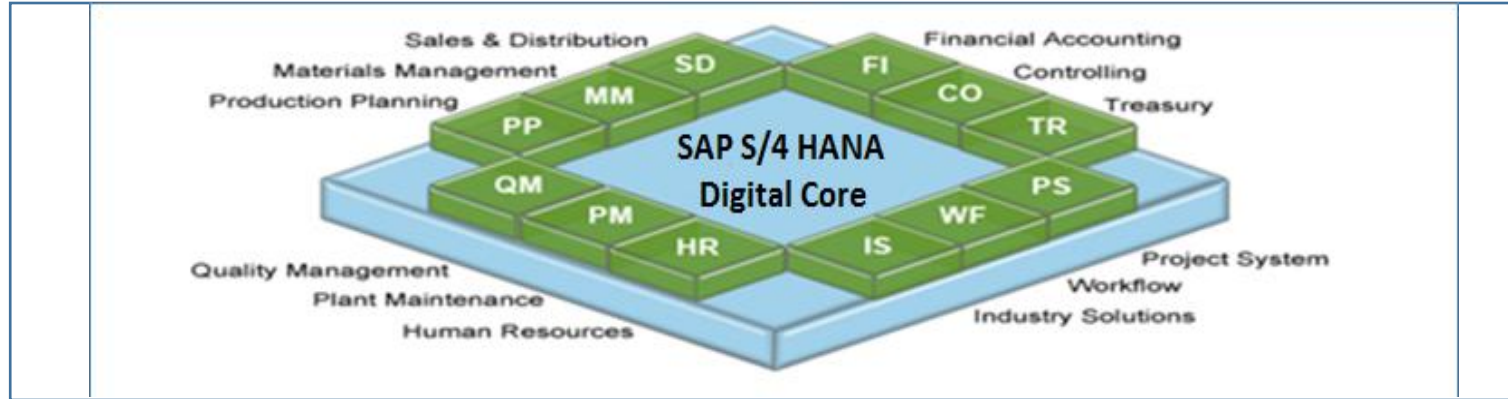
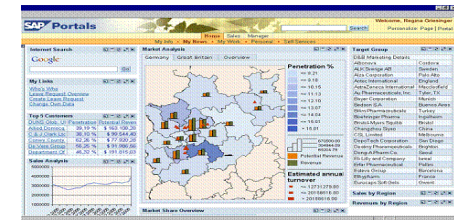


Vendor Portal



Customers/
Vendors

Customer Portal



Wave 3



Machine/Operational Analytics

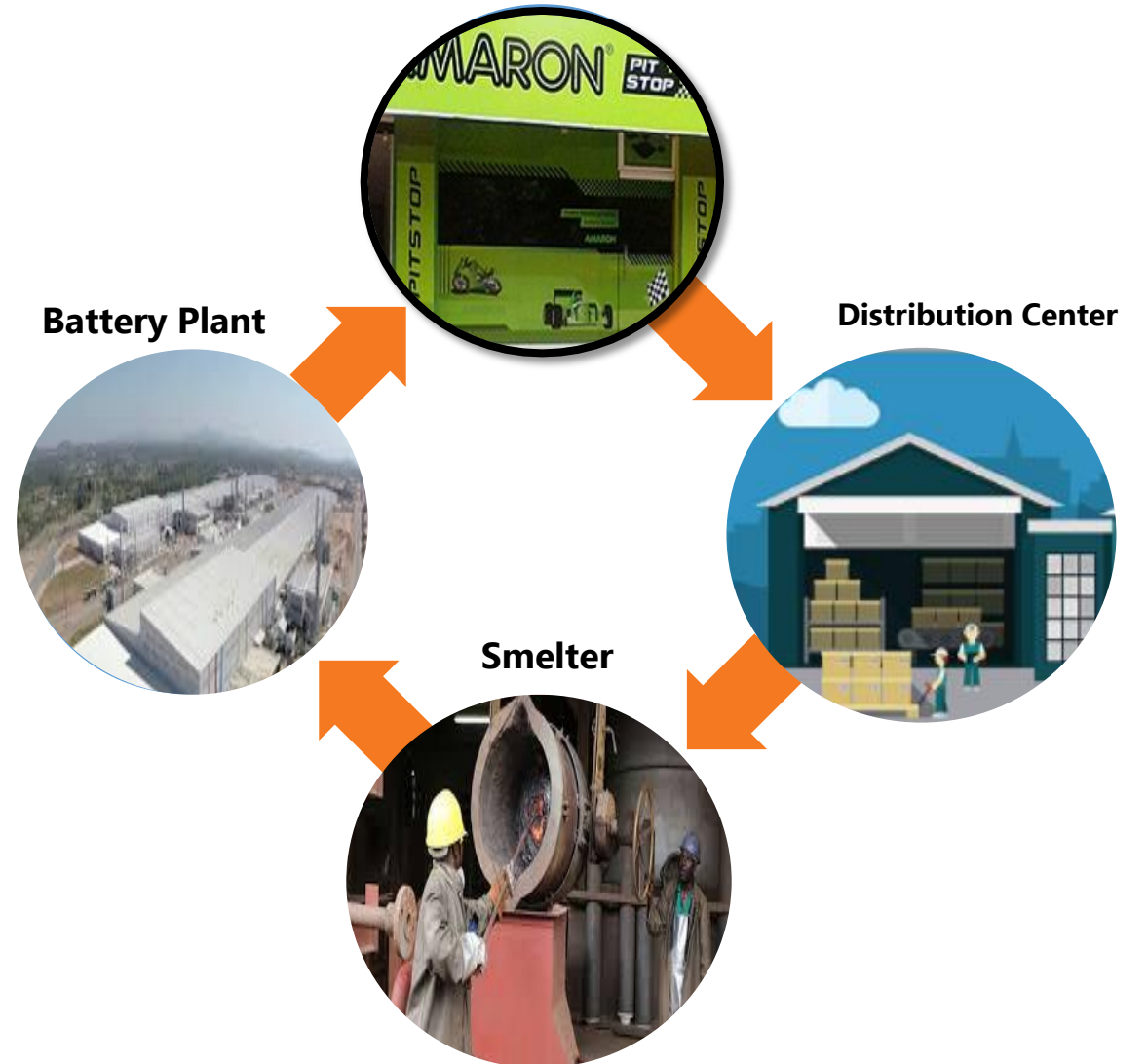
DAQ/MES



PLCs/
Machines



Integrated Approach to Lead Recycling



❑ Backward Integration of Smelting Operations

Corporate Social Responsibility

Corporate Citizenship

Amara Raja CSR Vehicles



Rajanna Trust

Employee Volunteering

Amara Raja CSR

KECA
as principal donor, coordinator & administrator

Amara Raja Educational Society

All companies contribute 2% of Profits towards CSR, much before it became a law in the year 2014

Amara Raja Skill Development Centre

Mission: Skilling Rural India to 'Make in India'

- ❖ Integrated skilling center with hostel
- ❖ 5 acres of land, Investment of Rs 30.0 Cr
- ❖ Committed annual expenditure of Rs 3.75 Cr
- ❖ 800 students per year
- ❖ Entire course is residential and free of cost

Amara Raja Trainee Scheme:

- ❖ Engaging of 10th, Inter and ITI Students
- ❖ Structured Training Program for a period of 1.6 and 2 Years for ITI & Inter and 10th respectively
- ❖ Course Pattern of 5 Days On the Job and 1 Day Classroom training with comprehensive evaluation.
- ❖ Employment Opportunity, provided based on their interest
- ❖ Trained 10,000+ Trainees so far....



Thank you

