



MANAGEMENT DISCUSSION & ANALYSIS

AN ECONOMIC OVERVIEW



Global economy

The global economy made a strong comeback in 2021 as it grew by 6.1%, the highest growth rate recorded in more than four decades. The growth was fueled by an increase in output, improved consumer spends, higher investments, and a jump in global goods.

The recovery could have been more pronounced had it not been for the new Omicron variant which resulted in reimposition of restrictions impacting economic activity and supply-chains disruptions resulting in higher-than-expected inflation.

The Omicron variant had a short-lived impact on the economy; and the projected global economic recovery is majorly affected by Russia-Ukraine crisis. Due to the heightened geopolitical tensions, there has been a sharp increase in fuel and food prices across the globe.

As per the latest IMF estimates, global economy is expected to grow by 3.6% in 2022 and 2023. The deceleration in 2022 is primarily due to the elevated inflation levels on account of supply chain disruptions and high energy prices.



Indian economy

Similar to the global economy, the Indian economy witnessed a resurgence in FY21-22. After contracting in FY21 (ending March 31, 2021), the Indian economy grew by 8.7% in FY22, according to revised estimates, as compared to the contraction of 6.6% in FY21 suggesting that economic activity in India has surpassed pre-pandemic levels.

Early in FY22, India was impacted by the “second wave” of the Covid-19 pandemic; however, its economic impact was modest vis-a-vis FY21. This was partly supported by timely interventions and relief measures announced by the government and regulators like extension of

Emergency Credit Line Guarantee Scheme in May 2021 to certain impacted industries, creation of employment and building healthcare infrastructure.

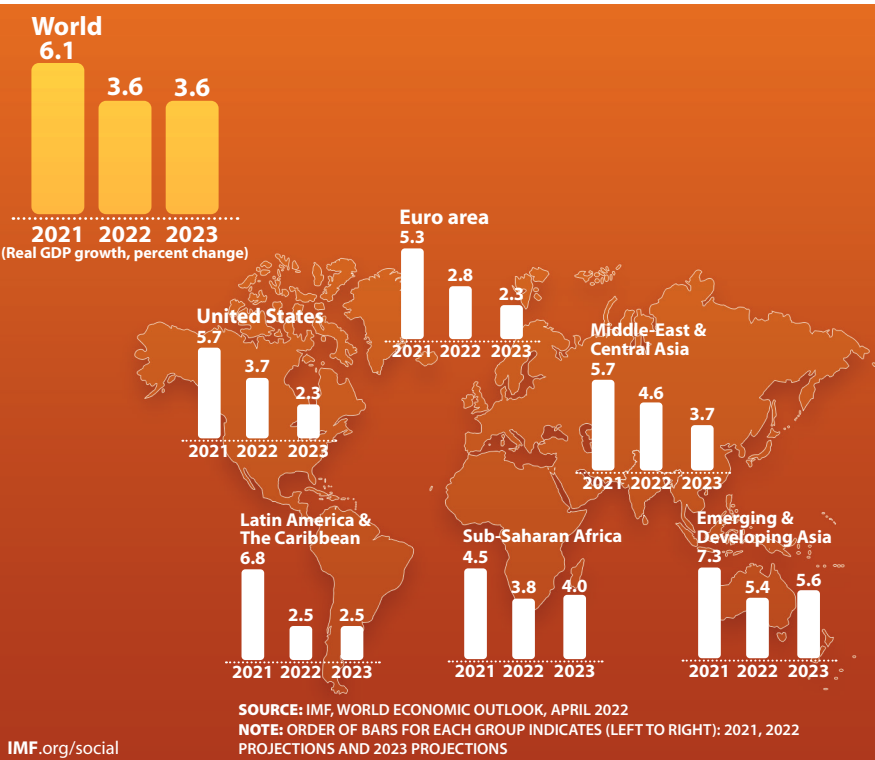
The three sectors, Agriculture and allied services, Industry and Services are estimated to grow by 3.9%, 11.8% and 8.2% respectively in FY22.

Additional factors contributing to the high growth rate in FY22 include increase in demand for consumption by 7.0% and the increase of exports by 16.5% and imports by 29.4%. This was even witnessed in total GST collections which increased by 30% to ₹14.8 lakh crore in FY22 from ₹11.4 lakh crore in FY21.

Favourable Government schemes (such as the PM Gati Shakti initiative to improve India’s logistics infrastructure) coupled with an increased financial and technical support to states to expand capital investment is expected to boost infrastructure spending and spur economic growth.

Going forward, the Reserve Bank of India estimates India’s GDP to grow by 7.2% in FY23 in keeping with the challenges emanating out of prevailing geo-political tension. This will position India as the fastest growing major economy in the world.

WORLD ECONOMIC OUTLOOK, APRIL 2022
GROWTH PROJECTIONS BY REGIONS [PERCENT CHANGE]



01 **AUTOMOTIVE BATTERY DIVISION**



A **MARA RAJA** excels in making batteries for the automotive sector. Our novel technology has enabled us to deliver high-powered, longer-lasting batteries that has disrupted the battery space for the automotive sector. This has allowed the Company to emerge as the leading player in India for automotive batteries among OEM's and in the aftermarket segment.

The Company enjoys a 'preferred brand' position with some of the leading automotive OEMs operating in India for some of their high-value and high-growth platforms. Its automotive batteries and home UPS/ Inverter battery brands **AMARON™**

and **PowerZone™** respectively are distributed through its pan-India distribution network comprising 30,000-plus **AMARON™** and **PowerZone™** retailers. The Company also exports its automotive batteries to 30+ nations across the globe.

Our performance in FY22

A year that was platformed on resurgence suddenly turned volatile as the second wave wreaked havoc in India. A determined India ensured that its intensity was short lived. Within two months from the start of FY22, business bounced back.

OE standpoint: Four-wheeler (4W) vehicle production experienced high growth during FY22 across all vehicle categories. Additionally, very high growth in exports of vehicles contributed to a sharp recovery after a pandemic hit 2020-21. The exception to this recovery was the two-wheeler (2W) domestic sales, which continued to slide during the year primarily owing to the significant damage done by the pandemic in rural India. Though exports of these

vehicles showed very high growths, it was not sufficient to bring in the production growth in 2W vehicles. In spite of various challenges faced, we were able to maintain our shares in the OE business segment.

Aftermarket viewpoint: Our performance in aftermarket business remained strong. During the year, 4W & 2W battery segments registered double digit growth despite prevailing challenges. This is a testimony to the brand strength of **Amaron®** and **PowerZone™**. The wide and deep distribution strength, ensured that batteries were always available at places, when and where, the customers wanted them. We continually maintained high capacity utilization, to ensure adequate product availability.

Two years of Work from Home, resulted in a dip in demand for batteries, as life of batteries started improving owing to reduced usage of vehicles. This is, however, expected to be a temporary phenomenon. Various initiatives taken in past year and those planned for the current year, will ensure that we will always remain ahead, and continue aggressive growth.

Exports: Our business in international markets continued to grow at a healthy uptick supported by a strong brand, quality product and distribution strength in key and focused markets in the Indian Ocean Rim.



Opportunities & Optimism

India enjoys a strong position in the global heavy vehicles market as it is the largest tractor producer, second-largest bus manufacturer, and third-largest heavy trucks manufacturer in the world. The Indian automotive industry is expected to reach US\$ 300 billion by 2026. Key trends that will drive growth over the coming years:

- Rise in middle class income and young population may result in strong growth

- The Indian automotive industry is plans to increase export of vehicles five-fold between 2016-26
- Automotive Mission Plan 2016-26 is a mutual initiative by the Government of India and Indian Automotive Industry to lay down the roadmap for development of the industry
- In September 2021, the Indian government issued notification regarding a PLI scheme for

automobile and auto components worth ₹25,938 crore (US\$ 3.49 billion). This scheme is expected to bring investments of over ₹42,500 (US\$ 5.74 billion) by 2026

- The Union Cabinet outlaid ₹57,042 crore (US\$ 7.81 billion) for automobiles & auto components sector under the Department of Heavy Industries



Two-wheeler

The two-wheeler industry, largely driven by the middle and lower middle class of the Indian populace, experienced considerable hardship during the multiple waves of the pandemic and logistical restrictions. With the impact of the pandemic receding, this demand is expected to return in the current year. Moreover, the Government's thrust on infrastructure creation and development of new roads is expected to put more money in the hands of villagers. This should spur 2-wheeler purchases.



Passenger vehicles

Industry veterans suggest that India is expected to witness robust growth in passenger vehicles in FY23 as the demand for personal mobility should come back strongly.



Commercial vehicles

Credible estimates suggest that the domestic MHCV sector is expected to witness an upswing in business fortunes aided by uptick in economic growth, pick-up in private capex cycle and higher freight demand. It is estimated that the industry will surpass the FY19 peak volumes in FY25E.



Tractors

Higher cash flow from healthy Rabi crops made it easier for farmers to purchase farm equipment. Also, owing to high exports of wheat from India, the demand for Indian wheat crop has been very high leading to farmers receiving higher prices for the crop in the open market over MSP. The healthy liquidity in the hands of the farmer community is expected to increase the demand for tractors going forward.



Aftermarket

In the automotive sector, the aftermarket is a huge segment, especially for the passenger vehicles and two-wheelers, owing to the millions of vehicles plying on the Indian roads - 120.02 million 2-wheelers (FY13-19) and 15.11 million passenger vehicles (FY15-19).

The road congestion in most urban pin codes leads to increased cranking, and use of air-conditioning and other features in the vehicle, which

has reduced the life of batteries necessitating faster replacement. In the two-wheeler segment. Batteries are emerging as a critical part of

the automobile (like the passenger vehicle) owing to the auto-start, no-kick feature in the newer variants. This is a large and continuously growing opportunities for the Company.

Business strategy

Amara Raja undertook a comprehensive strategy exercise where it calibrated the technology disruptions that are transpiring and newer technology options that maybe adopted with detailed scenario analysis. From a Lead-Acid perspective, which is a 100-year plus technology, and in which Amara Raja has gained significant expertise over its multi-decadal business journey,

the team looked at the entire globe as its market place. It bucketed geographies with applications and undertook detailed studies of the opportunities and its duration for each geography and each application. Based on this opportunity size-duration length filters, the team has cherrypicked certain geographies to establish a presence. Moreover, the **'go-to-market'** strategy would

be more aligned to distribute manufacturing as opposed to trans-shipment from a centralised operations hub. For this blueprint, the Company has allocated resources and budgets - the strategy execution should happen in the near- to medium-term.



Business risks



Growth risk

Domestic demand could taper down over the coming years.

Mitigation measure: There is an increasing buzz of graduating to an EV ecosystem. But this journey will happen with some gestation. The Government and private players will take time to create the requisite infrastructure and ancillary services to make this ecosystem viable. Till then the lead-acid batteries will continue to energise automobiles in India. Besides, every e-vehicle will necessarily require a lead-acid battery for powering the low voltage electrical requirements like the AC, power windows, power steering, audio system, navigation, locking-unlocking etc.

Additionally, the Company enjoys a 30+ nation presence which is being expanded further over the coming years. It should amplify the Company's growth opportunities going forward.



Cost risk

Heightened prices of inputs would dent business margins.

Mitigation measure: This is a challenge faced by all battery manufacturers. ARBL would be no exception. But the Company enjoys certain advantages which should help it manage the cost hike better.

- Its large volumes of purchases facilitate in negotiating better
- Its huge capacities facilitate economies of scale allowing for better absorption of fixed costs
- Its sales are prudently balanced between OEs and the aftermarket - for OEs some of the input expenses can be passed on
- In the aftermarket, the Company's established product performance allows it to command a slight premium over other players

As a result, the inflationary pressure would have an impact on margins, but it would not be as severe as other battery manufacturers.



Concentration risk

Increased reliance on a particular geography or business space could be detrimental to business growth.

Mitigation measure: Cognizant of this reality, Amara Raja caters to all segments in the automotive sector. This is important for the Company as every segment's performance is influenced by a different set of factors. Hence a dip in one segment is most likely compensated by a rise in the others. For example, FY22, the sales volume of the auto sector dipped marginally against the previous year. This was primarily owing to depressed sentiments of the 2-wheeler segment (it constitutes more than 70% of the auto sector sales). At the same time, the passenger vehicle and commercial vehicle segments reported healthy double-digit growth.

Additionally, the Company has an India-wide and an expansive global presence. This also ensures that a subdued performance in any one geography does not significantly impact the Company's overall performance.



India has significant cost advantages. Auto firms save 10-25% on operations vis-a-vis Europe and Latin America.

02 INDUSTRIAL BATTERY DIVISION

THIS division provides energy back-up solutions to diverse sectors which are critical for economic progress. They include Telecom, UPS, Railways, and Solar among others.



In the telecom space, the Company is one of the prominent suppliers of batteries owing to its preferred partner position with some incumbent telecom players. The Company is providing its batteries to leading UPS OEs operating in India

and to prominent data center players in India. Its key products are marketed under various brands namely PowerStack®, Amaron Quanta®, Amaron Volt®, Amaron Sleek®, Amaron Brute and Amaron Solar.



Our performance in FY22

Overall perspective: The Industrial Battery Business reported a healthy growth of 28% over the previous year in value terms. The growth was contributed by all the segments of the business. The overall demand was seen picking up in the market though there were some hiccups in the first quarter due to the Pandemic second wave.

Telecom: While the impact of the second wave of the pandemic was intense, its duration was limited. Moreover, as the work-from-home trend became more acceptable, the need for strong and seamless connectivity increased substantially. Also, the steadily increasing ARPU from telecom players provided them the runway for new site rollouts - providing interesting business operations. Demand from the telecom sector was a mix of increment in O&M replacement, energy-saving projects and new site rollouts. The Company added telecom sites in its O&M portfolio in Andhra Pradesh and Orissa circles. The Company also participated in new site innovation to support the customer's evolving requirements. The Company continued with its pilot studies for Lithium batteries in tower

applications. They are expected to move to commercial supplies over the near term.

UPS: Overall demand from the UPS sector remained robust primarily owing to the pent-up demand which surfaced post the second wave of the pandemic. The Company established business relations with new players entering the data center business space. The focus on long customer relations helped sign rate contracts with multiple large customers. In a breakthrough, the team grabbed the account of Adani for their upcoming Data Centers. Despite prevailing global supply chain disruptions, the Company ensured material security through accurate planning and timely execution. As a result, the UPS vertical registered healthy growth in volumes and value over the previous year.

Railways: Demand from this user segment was significantly impacted owing to multiple waves of the pandemic. Despite the delayed resumption of train operations, the Company could sustain business volumes with this reputed customer.

Motive Power: The Company strengthened its position in the domestic market as sales volumes

doubled over the previous year. It strengthened its presence in the aviation cargo space which has a large and growing need for batteries for its equipment. The Company strengthened its presence among independent rental companies - during the year under review, it added 4 Independent rental companies to its portfolio. Amara Raja successfully forged business relations with OEs in this space and commenced supplies. It also entered into rate contracts with some industries - this provides revenue visibility over the medium term.

Exports: The Company's efforts in widening its global footprint paid rich dividends as it registered healthy business growth in exports in the regions of Middle East and APAC. The Company, through virtual engagement with customers, was able to secure healthy business volumes. The Company commenced sales operations in Nigeria and Indonesia in FY22. The Company registered a healthy increase in business volumes in the UPS and Home UPS segments apart from supplies to telecom customers with whom it enjoys a preferred partner status.

Opportunities & Optimism

Telecom: India has already begun trial runs of 5G technology. This is expected to generate huge volumes of data. According to an Ericsson Mobility Report, 2021 edition, India will have 500 million 5G users by 2027, accounting for 39% of all mobile subscribers. When that happens, the average monthly data usage per user is expected to grow from 18.4 GB per month - the second-highest globally - to 50 GB per month in 2027.

But, ahead of the rollout of the high-speed 5G network, the government is set to give a massive push to telecom infrastructure across the country with plans to take the mobile tower inventory to eight lakh towers in the next two years - apart from ensuring that nearly three out of four are connected through an optical fiber to increase their data-carrying capacity.

Data Centers: The Indian Data Center industry is witnessing meteoric growth. A large and still growing internet user base, the explosion of data and the creation of a conducive atmosphere via the government's Digital India mission has transformed India into a fast-growing Data Center hub. A report on the Indian Data Center market by Arizton Advisory and Intelligence estimates that the industry will grow at a CAGR of 12% until 2026.

UPS: The UPS industry is growing swiftly, both in terms of size and demand. With the digitisation revolution also happening in rural and semi-urban areas, the demand for uninterrupted power supply for various tech devices is expected to grow exponentially in these areas also. As an immediate alternative power source for every office and shop, the domestic UPS manufacturers are also seeing a big uptick in demand. The UPS market in

India is projected to grow at a CAGR of 5.8% during 2020-2026 as per the market forecast by KVA Rating.

Motive power: The demand for batteries from the motive power segment is expected to remain robust. This optimism is based on two credible estimates.

- 1) According to Knight Frank Research, Indian e-commerce is to occupy most warehousing spaces in the next 5 years from FY 2022-2026 at 9.1 mn sq.m. (98 mn sq.ft.), 165% more than the preceding period of FY 2017-2021.
- 2) The Government is expanding the domestic aviation market in the country. The Government plans to build 220 new airports by 2025 to fuel that growth. He also highlighted India's growing air cargo industry, saying that cargo flights for perishable food items will be increased to 30%, with 133 new flights in the coming years.



Business strategy

Region-wise focused approach strategy

Positioning sales resources in Indonesia (APAC), Nigeria (Africa) and Dubai (Middle East).

Vertical wide focus

- Sustain relations and business volumes with Telecom players, leverage India relations to secure export opportunities

- Strengthen business relations and increase business with UPS OEMs
- Establish a stronger foothold in the Data Center segment

Business risks



Demand Risk

Demand for batteries could witness a slowdown from key user segments.

Mitigation measure: An increasingly digitised and connected world needs to be energised all the time. A momentary power outage could result in colossal loss and irreparable damage. As economic resurgence gains momentum, demand for standby back-up power will always remain robust, especially in sectors in which the Company has a presence namely telecom, data center and in other all other sectors which require a UPS.



Technology Risk

New technologies dampen the Company's prospects going forward.

Mitigation measure: In keeping with its articulated ethos, the Company continues to endeavour to remain at the cutting edge of technology. In line with sectoral dynamism and changing customer preferences, the Company is working on relevant technologies that appear to be gaining acceptance. It has made considerable headway in its endeavour. Case in point: the Company's Lithium batteries for telecom applications are currently undergoing field trials and should be ready for commercial deployment shortly.



Geographic Risk

Over-dependence on single geography could impact business prospects.

Mitigation measure: The Company's products are being regularly exported to a number of nations, primarily in the Indian Ocean Rim. Going forward, the Company plans to widen its geographic footprint for which its blueprint is in place and will be implemented from the current year.

03 NEW ENERGY DIVISION

FOR Amara Raja, New Energy Business will be the new growth engine. The focus on e-mobility as a solution to reduce India's carbon footprint has put the spotlight on lithium-ion technology.



The emergence of lithium ion chemistry as an advanced energy storage technology opens up exciting growth opportunities.

Hence, the Company is convinced that the New Energy platform will provide substantial thrust over the coming decade. Amara Raja has drawn up a comprehensive blueprint for establishing a strong presence in this space.

The central theme of this road map orbits around lithium-ion cell manufacturing. Mastering this building block will enable the Company to provide an integrated and customised solution to customers in diverse sectors namely the electric vehicle sector, renewable energy markets and energy storage systems.



Li-ion battery packs

Amara Raja's core technology competencies are in designing customized battery packs to cater to various OEM's requirements - to be adaptable, efficient, reliable, safe, and cost-effective while withstanding the rigors of an automotive environment. The Company manufactures and tests its Lithium-Ion battery packs at its manufacturing facility located near Tirupati in Andhra Pradesh. In addition to offering its battery packs to Battery Electric Vehicles (BEVs), the Company offers battery packs for various other applications like energy storage.

It leverages component-level technologies from its E-mobility application and adopts a complimentary approach for its energy storage solutions. This modular approach for designing battery systems allows the Company to optimally utilise its manufacturing capacity among diverse energy storage products. The Company has invested in extensive testing and R&D capabilities for battery cells, packs and systems. The team possesses an expansive

body of knowledge on lithium-ion cell chemistry types and performance characteristics. The Company has created a portfolio of 0.5Kwh to 21.0Kwh products catering to e-mobility and energy storage applications in India.



Our achievements in this space
1) The team has successfully developed the HV Li-Ion Battery pack for E-Mobility application using Pouch cells, Active liquid cooling system (BTMS) and Smart BMS with Master & Slave concept along with OTA, IoT features. This initial success promises to open interesting opportunity windows for the Company in the coming years.



2) The team has also successfully developed High Energy battery packs for Data Center applications. As part of the Proof of Concept technology demonstration project, these battery packs have been installed at the company's Corporate and Head Office locations. This successful demonstration could emerge as the harbinger of opportunities in the Data Center space which is expected to witness meteoric growth in coming times.



3) Amara Raja is one of the first players to achieve IATF 16949:2016 & ISO 9001:2015 Certification for Li-Ion battery pack assembly and manufacturing operations.

Li-ion cells

Li-ion cells are key to designing and manufacturing safe, reliable and durable battery pack for EV and ESS applications. As such, manufacturing Li-ion cells is at the heart of being successful in the Li-ion battery space. In full cognizance of this reality, Amara Raja is planning to establish a Giga factory to manufacture Li-ion cells on a commercial scale in India. With this objective, the Company has embarked on making business critical investments.



Research facility: It has invested in a state-of-the-art R&D pilot plant for prototyping Li-ion cells which will be a corner stone facility to develop futuristic technologies. This facility will develop the critical raw materials, design and build prototype products for extensive testing to conform to the demanding field usage conditions of EV and ESS applications. It will also be utilised to undertake research on advanced materials and diverse battery technologies with premier institutions. This is the first pilot-scale facility established by a private sector player for research on Li-ion cell technology in India. At this facility, the team has successfully designed and developed India's first 21700 cylindrical cell. This important breakthrough showcases the team's prowess in technology-driven innovation and their passion to align with evolving trends in the dynamic business space

Technology absorption: The Company entered into technology collaboration with ISRO for cell manufacturing. It has successfully received the technology transfer from the Indian Space Research Organization ("ISRO") for the development of various types of Li-Ion cells as power sources for satellite and launch vehicle applications. In addition, the Company has invested in promising technology start-ups in the Li-ion technology space and is continuing to explore partnerships opportunities to develop globally competitive Li cell technology and manufacturing infrastructure as part of the Giga factory investments.

Clean Energy Solutions



SRM - Amara Raja Batteries Limited has established a joint research center at SRM University, Amaravati to design and develop low-cost, fast-charging, next-generation Lithium-ion battery innovations for smarter E-mobility. Established at an investment of ₹20 millions the Centre will house state-of-the-art facilities, managed by leading research experts from industry and academia to drive innovation from the laboratory to the market. Researchers working on this include cross-discipline experts from ARBL and SRM-AP faculty.

While the Company has made considerable progress in the New Energy space this far, the Company

has set for itself an ambitious priority list to be accomplished in the current year (FY23).

- Implement commercial scale pilot plant for Li-Ion Cell Manufacturing (Mega-scale Customer Qualification Plant) Incorporate creative/functional features in its Li-Ion battery Packs with highest priority on product safety and improve the ergonomics by collaborating with design houses for new applications
- Implement and demonstrate Automatic pack assembly process with an embedded Poke-Yoke mechanism to increase productivity and reliability

- Implement Robotic systems for Auto Cell & Module insertion to reduce fatigue to operators on the production line
- Implement and demonstrate an Auto cell sorting machine with Auto data logging to increase productivity and reliability and eliminate manual errors
- Implement a High-speed Pack assembly line with a total capacity of 500MWh
- Develop advanced high-energy Li-ion cells with significantly enhanced cycle life and safety
- Develop Li-ion batteries with LFP Chemistry for high-temperature applications

Over the next 3-5 years, Amara Raja will establish a leadership position in the Li-ion battery space with a wide range of products catering to diverse applications.



Other technologies

Amara Raja, a master at disruptive technology in the energy storage solution space has successfully developed the 18650 cylindrical cell leveraging the Na-ion cylindrical technology at the Lab Scale.

MANUFACTURED CAPITAL

8	NUMBER OF PLANTS
2.4	CUMULATIVE SHOP FLOOR AREA (MN SQFT)
16.2 Mn Nos	4W ANNUALISED CAPACITY
29.1 Mn Nos	2W ANNUALISED CAPACITY
2Bn AH	INDUSTRIAL BATTERY
1.8 Mn Nos	TUBULAR BATTERY

AMARA RAJA has established itself as a dominant player in India's storage battery space. Consistent investment in capacities has pioneered the brand in the marketplace.

Over the last decade; the Company has continued to augment capacity in both business divisions with the objective of meeting the growing demand. It delivers value by promoting technological innovation at its plants, and through their

performance and development of capacity. The Company's manufactured capital comprises physical infrastructure, including manufacturing plants, buildings, machinery and equipment.



Improving Productivity

With a very forward-looking approach, the Company is focused on automation. The gradual upgrade will yield the following benefits:

- Cut down operator fatigue in critical areas
- Improve ergonomics & safety
- Improve consistency in the processes

To improve the efficiency & consistency in the process, various initiatives has been institutionalised such as Industrial Engineering

(IE), Lean Six Sigma & TPM. These initiatives have strengthened processes to enhance product quality and improve man-machine productivity. The Company undertook numerous projects to reduce operator fatigue and eliminate the NVA in operations. Some of them were:

- Connecting conveyors from formation to finishing sections to eliminate movement in the process (ABD Unit 1)
- COS unloading automation by ROBO

- Launched a Real-time battery traceability system (ABD-I)
- Introduced a Paperless system for elimination of Log sheets (ABD-II)
- Invested in Battery Readings automation in Formation section (MVRLA)
- Commissioned an auto finishing line to improve productivity & reduce fatigue (LVRLA)
- Started an auto scheduling system from barcode (ABD-II)
- Initiated Multi-layer formation (SBD-1)

Improving Productivity

The Company carried on with its dedicated and focused energy conservation efforts through upgrading of process technology, effective production scheduling and various energy-saving initiatives including installation of energy efficient equipment. Few initiatives are:

- Implemented superior energy-saving practices in all equipment and processes, including plant lighting

- Installed BLDC fans for AHUs
- Installed Auto descaling system for condensers of chillers
- Improved the power factor at SDB level
- Replaced old conventional chargers with improved IGBT chargers
- Reduced the demand for Compressed air
- Effective utilisation of reduced unit rates during off-peak hours by thermal storage

- Scheduled non-continuous operating machines during off-peak hours and normal hours and avoided on-peak hour operations
- Reduced skin temperature of lead melting pots
- Optimised process parameters and cycle times
- Conducted awareness sessions on energy conservation to suppliers
- Trained employees on ISO 50001:2018 and energy savings techniques

Renewable energy initiatives

- Rooftop solar installations in manufacturing plants at Tirupati
- Rooftop solar installations for the parking area in Tirupati

Reward & recognition

- Received the Excellent Energy Efficient Unit award from CII, during the 22nd National Awards for Excellence in Energy management 2021
- Bagged the Innovative Project Award from CII during 22nd National awards for Excellence in Energy management for one of the energy-saving projects on "Pneumatic cylinder size optimisation"



Quality Management

The quality ethos at Amara Raja is embodied in its articulated philosophy - **Gotta Be A Better Way**. Like an inspirational mantra, this propels the entire team to push the efficiency bar higher. This culture practiced for years has now integrated with the organisational DNA, which inspires the Company to strive to seek improved methods of performing the tasks.

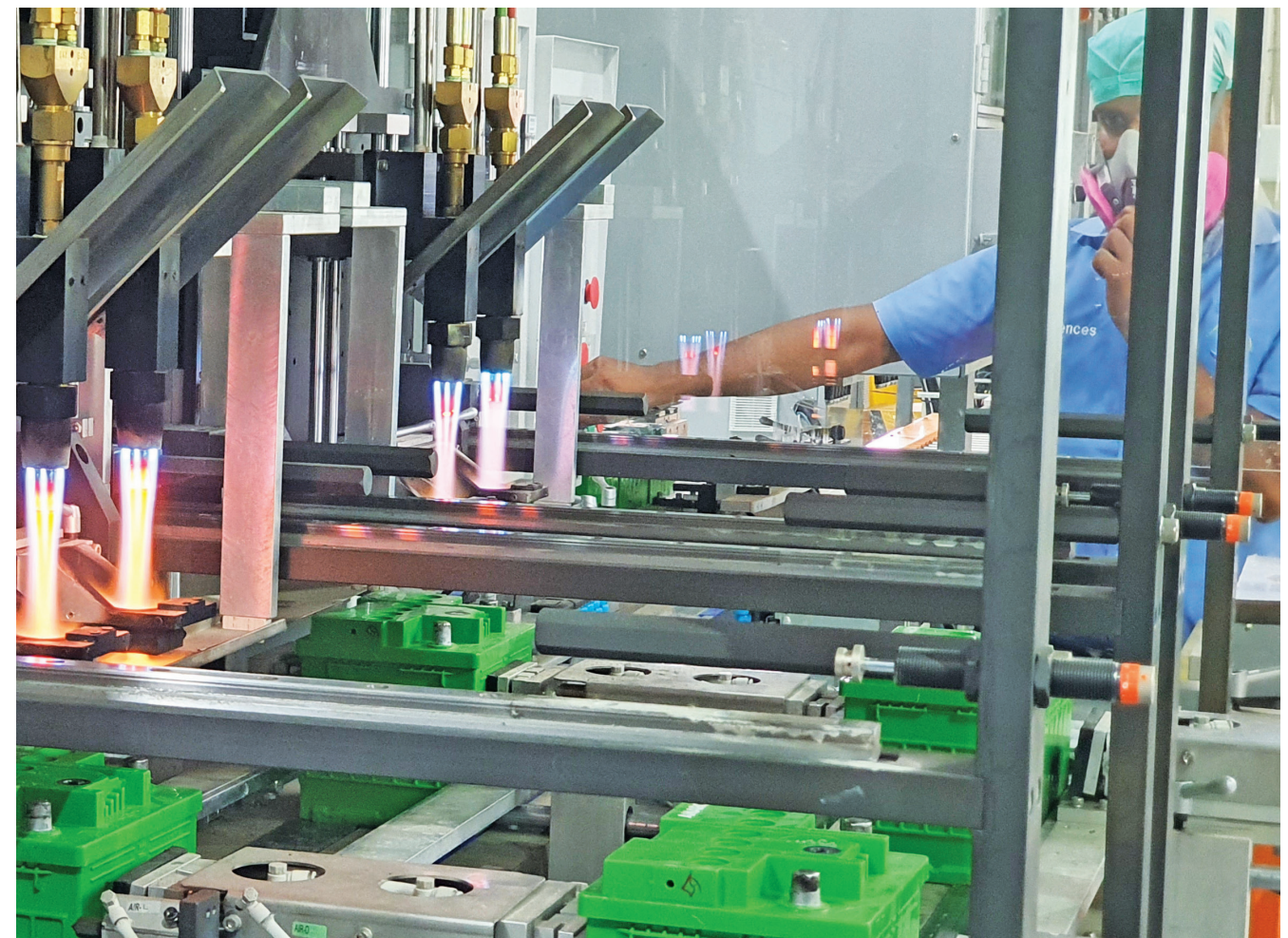
Amara Raja believes in compliance, excellence & sustainability. The endeavor to build world class products enables the Company to build on quality management systems.

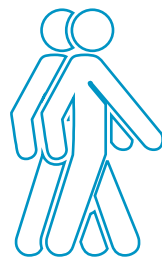
Securing certifications of ISO 9001 and IATF 16949 for all the facilities and improving the maturity level of Quality Management System (QMS) to serve the customer better improved business performance. The imbibed culture drives every team member to transform every transaction with Amara Raja into a heart-warming experience.

Learning is a journey towards excellence and continues to effectively enhance the competency of people by conducting need-based trainings to do the job better. To embed the passion for quality across the organisation, the Company has institutionalised globally accepted

operational tools and techniques namely Continuous Improvement (CI), Lean Implementation programs - TPM, Poka Yoke, Single Minute Exchange of Dies(SMED), Visual Management, 5S, work place ergonomics, Industrial Engineering (IE) studies & Lean Six Sigma and Quality Circle concepts.

Encouraging employees to undertake trainings and certification courses in the quality management tools and engaging consultants to inculcate next and best practices across the business are making a visible difference in upping the quality commitment.





Key initiatives in 2021-22

The Company continued with its principles of upping its quality commitment by implementing several initiatives. They are:

1. Emphasising on quality culture through World Quality Month celebrations across all manufacturing sites & remote locations.
2. Developed E-learning modules for 5S (work place Management) and Lean awareness for improving the learnability. 5900 employees have

completed the course through Alt-learning portal.

3. Standardised and sustained the usage of E modules for QCC, Suggestion Scheme and Six Sigma programmes.
4. Enhanced the lean momentum by participating in national level competitions.
5. Programmes conducted to institutionalise the focus on Ergonomics by conducting assessments to enhance the process.

Recognition:

Under "Manufacturing-Auto/Engineering/Discrete Projects in Manufacturing /Operational Areas" category:

- **LVRLA (Team 1)**- won the "Platinum - 1st Runner-up" award under Machines/Tools category
- **LVRLA (Team 2)**- won the "Gold - 1st Runner-up" award under Assembly Line category

3.3 CII National Kaizen competition

Award:

LVRLA has been recognised with 1 Platinum award, 2 Gold awards & 2 Silver awards

4) Quality Systems

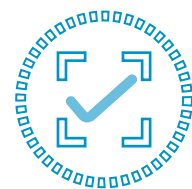
Certification:

Received ISO 9001:2015 & IATF 16949:2016 certifications for Lithium-ion Battery Plant.

Award:

Awarded Bronze medal in recognition of sustainability achievement by Eco Vadis (The world's largest and most trusted provider of business sustainability ratings).

- 601** - Quality circles
- 1,100** - Quality circle projects
- 3,412** - Six Sigma projects
- 1,329** - Six Sigma Certified (Black and Green Belts)
- 18** - Quality circle awards at national and international level



5S, Quality Circles & Lean Six Sigma

In 2021-2022, 601 quality circles completed 1100 QC projects. To embed the Six Sigma approach throughout the organisation, the Company trained 306 Black Belts and

1023 Green Belts, and successfully completed 3412 projects as of March 31, 2022. This task force has provided valuable insight into simplifying operations and increasing product uniformity.

Awards:

- At the 46th International Conventions on Quality Circles 2021 - Hyderabad, received 4 outstanding Platinum Awards
- 14 teams received the highest level of Quality Circles awards at the National Convention on Quality Concepts 2021 in Coimbatore

3) Lean concepts

3.1 CII National Poka-Yoke competition

Recognition:

Under "Manufacturing-Auto/Engineering/Discrete Projects in Manufacturing /Operational Areas" category:

- **SBD1 & LVRLA (Team 1)**- was recognised with Gold under Shutdown category
 - **LVRLA (Team 2)**- was recognised with Gold under Control category
- #### 3.2 CII National SMED (Single Minute Exchange of Die) competition

Awards and recognitions

Under "Manufacturing-Auto/Engineering/Discrete Projects in Manufacturing /Operational Areas" category:

1) SIX SIGMA

Recognition:

- **SBD2**- has been recognised with Platinum and won "2nd runner Up award"
- **SBD1 & ABD1**- has been recognised with Gold
- **Logistics ARBL**- has been recognised with Silver

2) Quality Circle

Recognition:

- QCFI recognised Amara Raja for consistently participating in the ICQCC for a decade with a greater number of teams each year
- Received Best Supporting Organisation award from QCFI under private sector at NCQC 2021, Coimbatore



Occupational Health

The well-being of Amara Raja employees amid Covid waves remained a priority throughout the year. At each of our facilities, the Company continued to implement safety measures in accordance with local regulations and employed best practices to reduce the risk for our employees.

The Company took proactive and pre-emptive steps to respond to the pandemic and initiated the preparedness of the health system to address all aspects of Covid-19 management. Additionally, we have continued to monitor the risk of Covid and respond as required when there has been an increase in positivity rate in any of the regions in which we operate.

Even before the outbreak of Covid-19, the health and safety of our employees has always been our top priority. Throughout the pandemic, Amara Raja has worked to ensure all its facilities adapted and continued to operate safely. For employees working at our manufacturing facilities, we adjusted processes to support social distancing in production areas and adapted our material handling processes. For employees working at our office locations in Covid hit regions, we

implemented appropriate work-from-home options and office re-entry protocol.

In cases where employees tested positive, the action plan was self-isolation of affected employees, conducting contact tracing to identify any possible interaction with other employees, shutting down and deep cleaning all impacted areas. Beyond the need to keep employees safe, we have recognised a need to evolve in the way we operate while preserving our culture and spirit of teamwork in a dislocated world. Throughout Covid, we have sought to ensure that our employees remain highly engaged and confident about the future.

Key initiatives

1. Conducted Amara Raja Workplace Vaccination Programme (ARWVP) for all people (Employees, Retainers, ARTS Trainees etc.)
 - One of the first organisation to conduct a mass vaccination drive at workplace
 - 19000+ vaccination doses inoculated in 4 phases
 - Provided refreshments to all people after vaccination
 - Superior vaccines with high effectiveness like Sputnik & Covaxin inoculated

- Completely compliance with guidelines stated by MoHFW(Ministry of Health & Family Welfare) and got approvals from local govt bodies(District Immunisation Officer)
 - Executed the Covid-19 vaccination process with support of premium private health care partner
 - Overall, 99.7% of employees got vaccinated

2. Quarantine facility created in working men's & women's hostel to cater to the symptomatic & primary contacts employees.
3. Hygienic diet provided in quarantine facility.

4. Exclusive Covid vehicles organised to cater to Covid affected employees.

5. Virtual medical supervision provided for the persons in quarantine facility.

6. Oxygen concentrators provided to all the branch offices across India to support employees.

7. Introduced CNH-Connect & Heal care application for immediate medical guidance and support for all employees.
8. Provided face masks for all employees daily to contain the spread of infection.

9. Stringent sanitisation & disinfection guidelines followed (Plants, Offices, Cafeteria, Washrooms, Buses, common areas, amenities etc.).

10. Tele medical support for Covid-19 infected employees and primary contacts by OHC team.

Safety

Safety has always been of utmost importance for Amara Raja. Increasing employee ownership towards health and safety has been encouraging. The Company has pledged to develop a culture of sustainable excellence in Safety.

New initiative

Initiated the safety maturity assessment for the employees conducted by DuPont sustainable Solutions for enhancing the safety culture.

Sustenance

1. Sustenance of ISO 45001:2018 Management system requirements by strengthening elements to maintain a safe workplace.

2. On time renewal of Fire No Objection Certificates for the manufacturing plants from State Disaster Response and fire Services Department.

3. Celebrated the 51st National Safety Day by organising various safety programs through virtual mode for institutionalisation of safety culture.

4. Sustained practice of **Lock Out Tag Out (LOTO)** in all manufacturing plants to safeguard the employees.

As part of its corporate social responsibility program, the Company conducted safety awareness programmes in AP Govt Industrial Training Institute in Chittoor District.



FINANCIAL CAPITAL

12.55	EBITDA MARGIN (%)
1.85	CURRENT RATIO
0.01	DEBT-EQUITY RATIO
444.57	CAPEX IN FY 2022
11.67	RETURN ON NETWORTH (%)
88.30	CASH & BANK BALANCES (₹ CRORE)

AMARA RAJA follows a robust system on capital allocation and judiciously allocates capital among various competing capital expenditure project.

Capital allocation for various capability and capacity development projects is done by adopting suitable financial thresholds without compromising strategic growth imperatives. This philosophy has allowed the Company to invest ₹2,484.72 crore in the last 5 years in capacity augmentation and other capital-intensive projects largely out of internal accruals. Despite this large investment, the Company has maintained a low debt-equity ratio of 0.01x as on March 31, 2022.

FY22 was a considerably volatile year for the Company. It started with the second wave of the pandemic which was a significant challenge for the business.

The Company utilised this liquidity pool to tide over the initial months of business disruption. It ensured timely payment of all dues to its other stakeholders namely employees, vendors and other business partners. To tide over the tough times, the Company also extended the payment cycle for its key dealers to enable them tide over these trying times.

As the intensity of the pandemic reduced, demand spiked almost immediately. The Company adopted a nimble footed approach to cater to business opportunities while maintaining business liquidity.

While economic resurgence multiplied opportunities, it also increased the inflationary pressure on the Company's margins as prices of commodities increased steadily. The Russia-Ukraine crisis in the fourth quarter of the year further complicated the prevailing supply chain issues globally. It resulted in a sudden spike in commodity and fuel prices.

To manage this cost pressure, the Company intensified its cost rationalization efforts across every business department with considerable success. While the Company's operating margins dropped when compared to the previous year, the slide was manageable.

During the year, the Company invested ₹444.57 crore in capacity augmentation and other capital-intensive projects which should start delivering the desired returns in the current year.

The Working capital cycle increased owing to the Company's need to increase inventory of critical inputs to tide over the supply chain issues that are expected to continue for some time owing to the increasing duration of continuing geo-political tensions.



HUMAN CAPITAL



9,911	TEAM SIZE
31	AVERAGE AGE OF TEAM (YEARS)
87.74	REVENUE PER PERSON IN 2021-22 (₹LAKH)
5.16	NET PROFIT PER PERSON IN 2021-22 (₹LAKH)

AMARA RAJA's journey towards leadership at all levels is powered by People at its core. Our people are one of our core strategic assets which fuels the inspiration to go beyond the boundaries within the mind, to open doors and drive performance that not only contributes to industry growth but aims at setting the trends.

Our Core Purpose of “Transforming our increasing spheres of influence” is our philosophy that is driven by the attitude of making everything better. Our motto ‘Gotta be a better way’ inspires us to bring together the passion of people in creating better experiences and achieve excellent results.

World over, the pandemic has played havoc with lives and livelihoods even during 2nd and 3rd Waves. We, as a responsible organisation have also continuously tracked and monitored

the developments and taken proactive steps to prevent the spread of Covid-19. Our actions were based on inputs from global experts and governments’ directives from time to time. During the lockdown period, we provided support to the States and Central government in running essential services like Telecom infrastructure, data centers, essential services transport, supply of electrical equipment required by Power generating companies, Transcos, Discoms, etc for augmenting

transmission and distribution systems. We remained committed in providing uninterrupted supplies of essential services during the lockdown.

During the total lockdown, all our teams across different locations have made extraordinary efforts to carry out their duties despite the challenges, providing services to the customers and also ensuring supplies from plants. Be it working in the plants, attending essential services or attending to the calls of our customers on the field, our

teams have shown Resilience and Agility that were widely appreciated. This attitude of “If not me who else” has been contagious and consistent across all our people and teams.

This clearly demonstrates the life of an Amara Rajaian Living The Amara Raja Way®. This reinforces our belief as an organization, that people are our core strength and with such people, we will be able to successfully manage any adversity. Some of the actions and experiences are described below in brief.





Dealing with Pandemic Second and Third waves

The Amara Raja Way® of dealing with the pandemic is by being nimble-footed and taking appropriate actions at every juncture with the prime motive of keeping our people safe while catering to the customers. This has helped us to minimize the impact of second & third waves of Covid-19. Continuing our efforts in addressing the Customer requirements during second & third waves of COVID in the essential services of telecom, power networks, automotive applications during lockdowns.

We were clear that planning is more important than plans. Our people were up to the challenge, ensuring seamless productivity irrespective of their place of work. During the midst of the pandemic, the organisation went on to adopt the 'Fusion' work model, which enabled the organisation to adapt to new and contemporary ways of working. Technology enablement played a critical role in making this happen. IT infrastructure and support for the Internet were provided as needed to people, who are working from home. All employees continued to be digitally connected through mobile

apps and collaboration tools to mark attendance and make important communications.

We ensured our Multiple levels of communication to share more details of the situation from the organizational context and its intended responses. Both internal collaboration platforms and public platforms were utilized extensively. The new recruits who joined at the factory locations are guided by us to be in quarantine and attend orientation sessions before stepping into the shop floor. Management recognizes that the frontline Operators both at the plants and field locations are the core bread winners

of our organization. A special reward was given to the employees who have demonstrated valour under critical conditions to serve our customers.

During the pandemic second and third waves, the Family and Foundation Committee got together and decided to celebrate **Foundation Day on a virtual platform** on 20th December 2021. Our employees and their family members connected virtually for the celebrations. It was a unique experience for the leaders and our people to bequeath and receive recognitions and awards for their numerous achievements.

In the New Way of Life, as against the annual reviews, the leadership team has brought in a change to completely revamp the Performance Appraisal system with more frequent reviews and feedback from 2021-22. We strongly believe the higher frequency of review and feedback mechanism with transparency enables performance that is sharply aligned to the business focus areas. The revamped process provided higher visibility of the performance of individuals and teams. Periodical review and continuous feedback also ensured high levels of engagement and support to talent in achieving the objectives.



Support to employees during pandemic

To support our people in this unprecedented situation in addition to the General Medical Insurance coverage, an exclusive Covid-19 Medical insurance Policy for all Non-ESI people and their families was introduced.

The existing medical insurance policy also covered Covid-19 treatment and if required the same can also be utilised.

A special leave with pay called 'Covid-19 leave' was introduced, which is available beyond the Present Leave Policy that is applicable to

different categories of People. Our people could avail this leave in case of infection to them or their family members. There was no limit on the number of days of Covid-19 Leave.



Integrated health care and support services to ARG Employees

Employees Wellness and Wellbeing is of high priority for us in Amara Raja. In view of providing integrated health care and support services to our employees and their families, we tied up with 'Connect & Heal' agency, which renders their services like Telemedicine, Lab testing, Ambulance Services, Hospital Assistance, Purchase of Medicines and Covid-19 Kits and a host of other Covid care services.



People Strong Super App

In the process of Digitalisation of HR Processes, Amara Raja launched People Strong Super App (with advanced features, on 15th February 2022) which is a compilation of all modules of alt work-life applications (Attendance, Leave, Recruit, Learning, help desk, Payroll, Resignation, AR TalentUP) included in a single platform.

Doctor on Cell

'Doctor on Cell' programme, which is an online Doctor Consultation initiative for the employees covered under Covid insurance policy. These services are only for non-ESI persons, who are covered under our Covid insurance, tied up with Apollo Tele Health. This is in addition to the doctor-on-call provided through our tie-up with 'Connect and Heal'.

Covid-19 Vaccination Drive for all Employees and family members in ARG

We have organised Covid vaccination drives for all our employees covering 100% staff across locations as part of Employee wellness, wellbeing and safety.

We have started an initiative to capture and update the progress on vaccination. Full-fledged support has been extended to our employee and their family members to counsel and prepare them for 100% vaccination.

Group Life Cover Policy

Welfare, Wellness and Wellbeing of the people has been Amara Raja's focus since its inception. Continuous investment in the areas of Welfare, Wellness and Wellbeing has been one of our key focus areas. As part of the same principle, this policy has been evolved to provide to a certain extent the comfort of financial security to survivors of our people, in the event of loss of life while during on service/engagement with Amara Raja Group.

This policy will apply to the persons working in various businesses in the Group as listed herein: On roll Employees, Trainees, Fixed Term Employment Persons, Persons on Retainers, Persons Engaged under ARTS and/or ARTIST scheme, Apprentices engaged under various provisions, Temp Staff engaged through other temp staff agencies and those engaged under Contract Labour Act.

Capability Building

Amara Raja continued to invest in its people, building their capability, sharpening their expertise and nurturing leadership, making Amara Raja a transformative institution, which also facilitates sustaining its top industry level performance.

Our organisation continued to adopt technology, taking learning to the fingertips of our people. In these times of pandemic, eLearning has become the preferred mode. More than 50 eLearning programmes both in technical and behavioural areas were developed and deployed across the organisation through the Learning platform. Several learning programmes on different health-related topics including mental health were specifically organised for employees and families. Culture-building programmes like ‘Living the Amara Raja Way’ were also adopted to eLearning mode and deployed. Many programmes like ‘Prevention of Sexual Harassment’ were made mandatory for all the employees across levels to undergo and get certified. More than 14,000 programmes were completed by our people across the levels.

People strategy Model

We remain committed to our People Strategy, that is providing us with continuous success. Through the **Amara Raja Way®**, we achieved organisation objectives in an invigorating digital work environment by excelling in people Engagement, Development and Performance.



Amara Raja Talent Management Model

Our comprehensive Talent Management Model enables us to initiate and institutionalise innovative programmes in line with the People Strategy of the organisation. As part of the talent management model, the team steered various initiatives during the year aligned with the Company’s business strategy.



“Our People Strategy Defines and Talent Management Model Delivers”

Highlights of some of the major initiatives

01 Amara Raja Covid Response Support Centre (CRSC)

Beyond the Service provider, in order to be available for our people at times of need, we have formed Amara Raja Covid Response Support Centre (CRSC) - a core team amongst our employees that will actively monitor the support services.

Objectives of CRSC:

- Actively monitor the medical support services provided to the people through outsourced agencies and in-house services

- Provide support as much as possible to the aggrieved person (employee, family member) in order to resolve issues related to Covid-19 emergency requirements (excluding financial commitment)

Covid Response Support Centre Team (CRSC):

- A small team of ‘Covid-19 Support Heroes’ has been formed for every business in each of the plant locations and in field offices
- The said Covid-19 Support Heroes

in field, office and respective plant locations will be led by the Covid-19 Support Champions

- The entire team of Covid-19 Support Heroes and Covid-19 Support Champions constitutes the Covid Response Support Center Team (CRSC)
- These teams will provide the support as needed like, coordinate with Connect and Heal (the external service provider), provide information on hospital, oxygen cylinders, ambulance etc.

02 Expansion of Internal Hostels for Employees

In view of employee wellness, wellbeing and safety, to ensure the safety of ARTS employees, after studying the requirement at plant locations, management expanded the Internal Hostels by building new

C&D blocks at ARGC with all facilities. Existing facilities at men’s hostels were enhanced by providing sports kits, CONWAY water coolers (with sensor provision) at both locations, store for essential needs, shuttle and volleyball courts, swiping readers at men’s hostel dining at ARGC Location,

CCTV Cameras at HO Bachelor hostel. We are also constructing Internal Hostel for Women Employees too, which is expected to be inaugurated soon at ARGC Location.

03 Revamped PMS

A revamped Performance Appraisal System had been introduced and implemented for the FY 2020-21. The revamped appraisal system provides for a higher focus and increased frequency of review.

This review will be held quarterly once. The primary focus of this new performance appraisal system is:

- To enable performance planning that is sharply aligned to the business focus areas

- To enable higher visibility of the performance of individuals and teams
- To enable periodical review in order to ensure high levels of engagement and support to talent to achieve the objectives

04 Adopting ‘Fusion Model’ of Working Patterns

In the current pandemic, we have transformed to new working patterns for all our people at different office locations, across the organisation. Our organisation was also at the forefront of adopting technology to enable remote working.

We have implemented a new flexible pattern of working known as the ‘Fusion Model’ (Flexible, Unlimited, Smart, Intelligent, Open, and Nimble). Based on the roles, members in a team are classified to make it easy to

switch between work-from-office and work-from-home. We have also made arrangements to enable all talent to report at the office on specific needs and as and when role/business situation demands.

05 “AR TalentUP” (AMARA RAJA TALENT UP)

Amara Raja has always been at the forefront in adopting and infusing technology in people processes to enhance productivity and performance. As part of this journey, we have launched “AR TalentUP”

(AMARA RAJA TALENT UP) our “Automated Skill & Competence Management Process” across groups. The primary aim of this programme is to make the skill and competence management process paperless. It also provides on-demand skill & competence data online, anytime.

This will help managers make the right decisions on the manning of their sections and also make appropriate development plans.

06 First Time Managers Programme

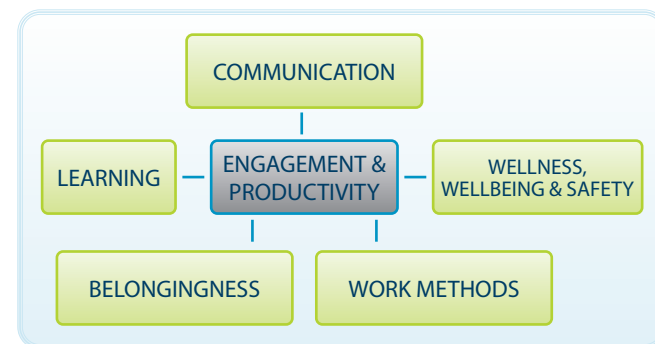
Re-initiated the First Time Managers Programme (FTM), which is a flagship program facilitated for talent, who have for the first time stepped into a managerial role (in M07 Grade) and completed a year of their journey with the Amara Raja Group.

This programme aims to build a strong foundation in the talent’s managerial journey by improving knowledge of Business Strategy, Personal Effectiveness, Marketing Management, Finance Management, Business Law & Operations Management and Digitalisation.

In this regard, we have initiated the VALEDICTORY SESSION and this was held on 11-Aug-21. After successful competition of all 3 Batches (Batch 10, 11 & 12), the Valedictory Session was conducted, which was attended by HR Leadership Team, OD and L&D team, FTM participants along with other dignitaries.

07 Revamped AR Speak Employee Experiences Survey

AR Speak Experiences Survey, has been a good platform that has given us key insights and urged us to take actions to continually enhance experiences. The 14th ARSPEAK Experiences survey started on 15th Sept’21 and ended on 13th Oct’21. The survey was conducted 100% online covering Employees across the AR group, including all grades, and locations. **AR Speak** - Revamped the Employee Experiences Survey Dimensions and also Change the action team in 2021.



08 AR-Buddy

Our Psychological wellness program that was launched last year during 1st wave of pandemic in collaboration with a reputed organization ‘YourDOST’ has helped us to successfully contain the impact by helping employees this year too. The program has been extended to cover the employees family members as well. The counselling for Covid19 affected individuals and

their family members continued. In order to encourage more people to get assistance as per their needs, counsellors periodically visits the factory locations and has interactions. In the larger interest of enhancing mental health of employees, monthly reviews are carried out by the HR leadership and YourDost leadership team and appropriate supportive actions are taken up.

‘AR-Buddy’, brings expert advice from 1000+ external experts, with complete privacy, confidentiality and anonymity available for our people and their families 24x7 on a wide range of subjects including Stress, Time Management, Confidence Building, Career Coaching, Relationships, Covid-19 Anxieties, and much more...

Awards & Accolades for people practices

01 Four Par EXCELLENCE awards at International Convention on Quality Circles

Amara Raja has once again distinguished itself on the world stage. All the four teams that participated have won the highest category “PAR EXCELLENCE” awards at the recently held ICQCC (International Convention on Quality Control Circles) 2021 competitions at Hyderabad, India from 24th - 27th November, organised by Quality Circle Forum of India (QCFI).

This year about 7734 employees participated in the Quality Circles programme throughout Amara Raja and the results are indeed very valuable.



02 15th Six Sigma National Competition - September 2021-

Amara Raja is always at the forefront in demonstrating Excellence and strongly believes in Continuous Improvement culture across for sustainable growth.

Amara Raja Batteries Ltd has been recognized in the “15th Six Sigma National Competition” held virtually on 28th & 29th Sep’21 by CII, Bengaluru and bestowed with 1 Platinum recognition, 2 Gold recognitions and 1 Silver recognition wherein, one project is

significantly awarded. SBD2 team has been recognized with Platinum, under “Manufacturing Auto sector-Improvement in Manufacturing/ Operation” category. SBD1 & ABD1 teams has been recognized with Gold, under “Manufacturing Auto sector-Improvement in Manufacturing/ Operation” category.

Gr. SCM(Logistics) team has been recognized with Silver, under “Manufacturing sector - Improvement Projects in Transactional area” category.





03 Amara Raja Group in Forbes List of Best Employers in the World
Amara Raja Group has been featured second time in a row in the Forbes List of Best Employers in the World. We are ranked 405 this year. Significantly noteworthy is that there are only 31 conglomerates that are listed across the World in the top-750 and we have been placed 18th amongst the global top-31 conglomerates. Also to add, this time there are only 19 organisations from India that are listed in the top 750 (last year was 31) and we have been placed 11th amongst the 19 organisations from India.
This is an emphatic reinforcement of the trust and deep collaboration among all employees in making this organisation reach great heights. These rankings bolster our consistent efforts in strengthening our People

Systems and Processes through people-centric practices. That it has come amid the pandemic - at a time when companies have had to be especially empathetic - is even more of a testament to our values as a Group and to the values espoused by each of the individuals, who form this Amara Raja Group.
Our people have been our magnificent ambassadors of 'The Amara Raja Way®' that personifies our unique culture, attitude and behaviour that define the Core Purpose, Values and Vision as a diverse yet cohesive group.
Thanks to our engaged employees, empowered teams and collaborative leadership, we constantly keep endeavoring to make things better for our environment, society, customers, suppliers, employees and shareholders.



04 AR-ProPEL: Amara Raja Programme for Powering Emerging Leaders
Building leaders through 'The Amara Raja Way®' is a key strategic differentiator that has enabled the organisation towards sustained success over the years. We have believed in building the right talent from within the Group and groom them to take leadership roles. We have also been successful in infusing talent from outside at leadership positions and integrating them into our culture. We continue to be committed to investing in our future.
AR ProPEL is a general management and leadership development programme that has been designed in partnership with ISB, Hyderabad.

This will bring all our next generational leaders on a common platform to learn contemporary management practices, deliberate and develop strategies for achieving our vision, collaborate amongst ourselves to foster innovation, and groom our leaders to be agile leaders for shaping our future.
The future lies in courage, agility, risk-taking, eagerness and speed. The Future lies in our ability to rapidly assimilate the changes in the emerging world, innovate to find solutions, integrate with our systems to build resilience, foster relationships within and outside and be rooted in the journey to transform our increasing spheres of influence. We believe that this will take us places into the future and make us an admirable global organisation.

The full listing of the employers is available at: <https://www.forbes.com/sites/samanthatodd/2021/10/12/meet-the-worlds-best-employers-2021/?sh=3b5981913b37>



INTELLECTUAL CAPITAL

Battery Technology

1,037	MAN-YEARS OF CUMULATIVE EXPERTISE IN BATTERY TECHNOLOGY
40	IP PATENTS/DESIGN REGISTRATIONS FILED & 15 GRANTED
19	NEW-PRODUCT LAUNCHES IN FY22

AMARA RAJA believes that innovation is the driving force behind both technological & process advancements and business excellence. Making innovation our core mantra, we further strive to maintain our growth momentum by having a continuous focus on Capability-building initiatives that are critical to organisational performance and are also the drivers of a great journey with an excelled performance.

Amara Raja believes that capability development always begins by listening to the customer's voice and understanding and analysing the pain points to ideate and develop solutions that elevate the customer experience. The company has imbibed an **Articulate Approach** to have a journey of technology and innovation

improvement. Thrust is also laid by identifying and implementing the appropriate technologies and by institutionalising the appropriate strategies to accomplish the desired outcomes. Amara Raja's innovative program is driven by '**The Team Technology**' of 125 employees with enriched

experience in diverse areas. Because of this outstanding passion for Innovation, the Company has been able to bring in disruptive technologies and produce world-class products that have changed the industry landscape over the years.



The ‘Technology’ activities are categorised under three broad areas of focus:

PRODUCT TECHNOLOGY	MANUFACTURING ENGINEERING	RESEARCH & ANALYSIS
Commercialised 2W batteries - AMARON range with Advanced Plate Making Technologies	Optimised and implemented paste recipe and formation program to enhance OCV in Multi Stamped Grid 2-wheeler batteries	Developed Ni-rich NMC chemistry-based cylindrical cell technology for electric vehicle applications
Conducted a comprehensive study on high warranty Tubular product for e-Rickshaw application	Developed , validated & optimised formation cycle time to reduce the conversion cost of UPS and Telecom Batteries	Developed the in-house test setups to evaluate the Mechanical integrity of Lead Acid batteries under hostile environmental conditions
Developed high-performance 2W batteries with Multi stamp grid technology	Introduced Advanced Welding technology for Li-ion Battery manufacturing	Evaluated eco-friendly polymer materials and introduced LVRLA variants
Developed high-performance commercial batteries with Ca-Ca technology	Designed and developed India's first 21700 Cylindrical Li-Ion Cell	Demonstrated Na-ion cylindrical technology at the Lab Scale
Executed Field validation of Fast Charge VRLA Battery for the cellular application successfully	Implemented Traceability system(computerised) for entire Li-Ion pack assembly line	Executed In-house validation of 2V Traction batteries of Pilot Project product
Implemented High Energy battery packs for Data center application as POC	Implemented and optimised curing process for the negative plate of 2-wheeler battery to reduce power and cycle time	Upgraded the raw material specifications and made digital access across the group
Demonstrated HV Li-Ion Battery pack E-Mobility application using Pouch cells, Active liquid cooling system (BTMS) and Smart BMS with Master & Slave concept along with OTA, IOT features		
Developed and commercialised Optimised Short tubular batteries for HUPS Application		
Developed and commercialised a cost-effective battery model for UPS Applications		

Going forward

Gotta Be A Better Way... this is like a *shloka* that makes us inch towards perfection, which is manifested in our upgrading of products and processes continuously. The Technology Team's aspirations in the coming years include a huge list of process, material and product improvements that promise to enhance the product performance and strengthen the Company's position in the competitive market.

- Development of high-performance Advance Lead Acid Technology batteries for automotive application
 - Development of a smart intelligent battery that updates the user on the battery's health regularly
 - Development of advanced ISS batteries with stamped grid technology for automotive applications
 - Process validation and implementation of Advanced Plate Making process for UPS batteries
 - Developing a novel curing oven (prototype) to enhance plate quality with reduced cycle time and energy
 - Process validation and launch of ABS poly for UPS batteries
 - Process validation and implementation of Auto TIG welding process for SVRLA (18Ah) battery to eliminate manual soldering process
 - Implementation of the optimised formation process of UPS & Telecom batteries
 - Evaluating alternate new formation process technology for 4W automotive batteries w.r.t enhanced productivity and manufacturability
 - Introduction of Novel adhesives for terminal sealing application in UPS batteries
- Evaluation of different grades of polypropylene to meet the market demand/customer requirements
 - Optimisation of Pasting materials to enhance the productivity of automotive plates
 - New paste formulations with advanced adsorbents to enhance the electrical performance of 2W batteries
 - Design and Development of a New 600Ah Plate profile as a part of a technology demonstration for Telecom Application
 - Development of a new vent seal for LVRLA Batteries
 - Concept Evaluation of Advanced Plate making technology for cellular and UPS applications
 - Design and development of cost-effective batteries for UPS applications
 - Design and Development of high-life 200Ah Premium product for HUPS export market
 - Development of New SVRLA Products for UPS Application
 - Traction New product Pilot Project 2 models - Designs ready
 - A study on Grid spine design for the e-rickshaw application
 - Developing advanced high-energy Li-ion cells with improved cycle life and safety
- Developing Li-ion batteries with different Chemistry for high-temperature applications
 - Development of solid-state Li-ion battery technology for future business
 - To incorporate creative/functional features as well as improve ergonomics for Li-Ion battery Packs by collaborating with Design houses for new applications
 - Implementation and Demonstration of Auto screwing solution with embedded Poke-Yoke mechanism like Torque monitoring and Auto screw counting solution to increase productivity and reliability
 - Implementation of Robotic systems for Auto Cell & Module insertion to reduce fatigue to the operators in the production line
 - Implementation and demonstration of Auto cell sorting machine with Auto data logging to increase productivity and reliability and eliminate manual errors
 - Implementation of the high-speed Pack assembly line
 - Demonstration and Installation of High Energy battery packs for Hybrid ESS

Information Technology (IT) & Digital

CHANGING times calls for dynamic measures. In FY22, Amara Raja continues to invest in Information Technology & Digital Solutions to automate more and more processes and provide security to existing IT Assets.

We fully transitioned to Remote working, effectively learning from 2020 to deliver significant new capabilities for Amara Raja and its partners.

The Company continued to focus and deliver on our Digital Transformation Journey by focusing on SAP S/4 HANA expansion and upgrade and further adding solutions like Vendor Invoice Management, Robotic

Process Automation, End Point Security tools, Patch Management Solutions and Readiness for Cyber Attacks and Network Monitoring Tool Implementation.

We built secure and easy collaboration platforms that enabled us to become more proficient in brainstorming and synthesizing ideas into powerful applications that enabled us to deliver services more

effectively. Besides, we implemented several security measures to protect our assets and ensure seamless systems and services.

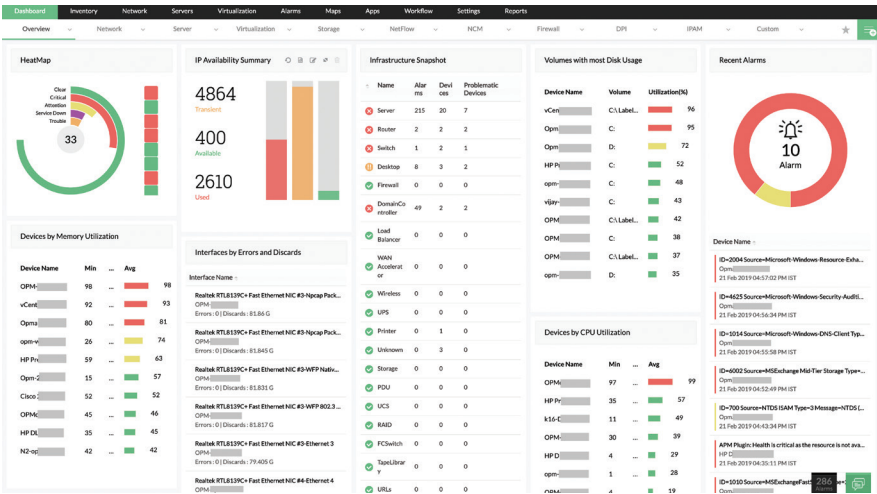
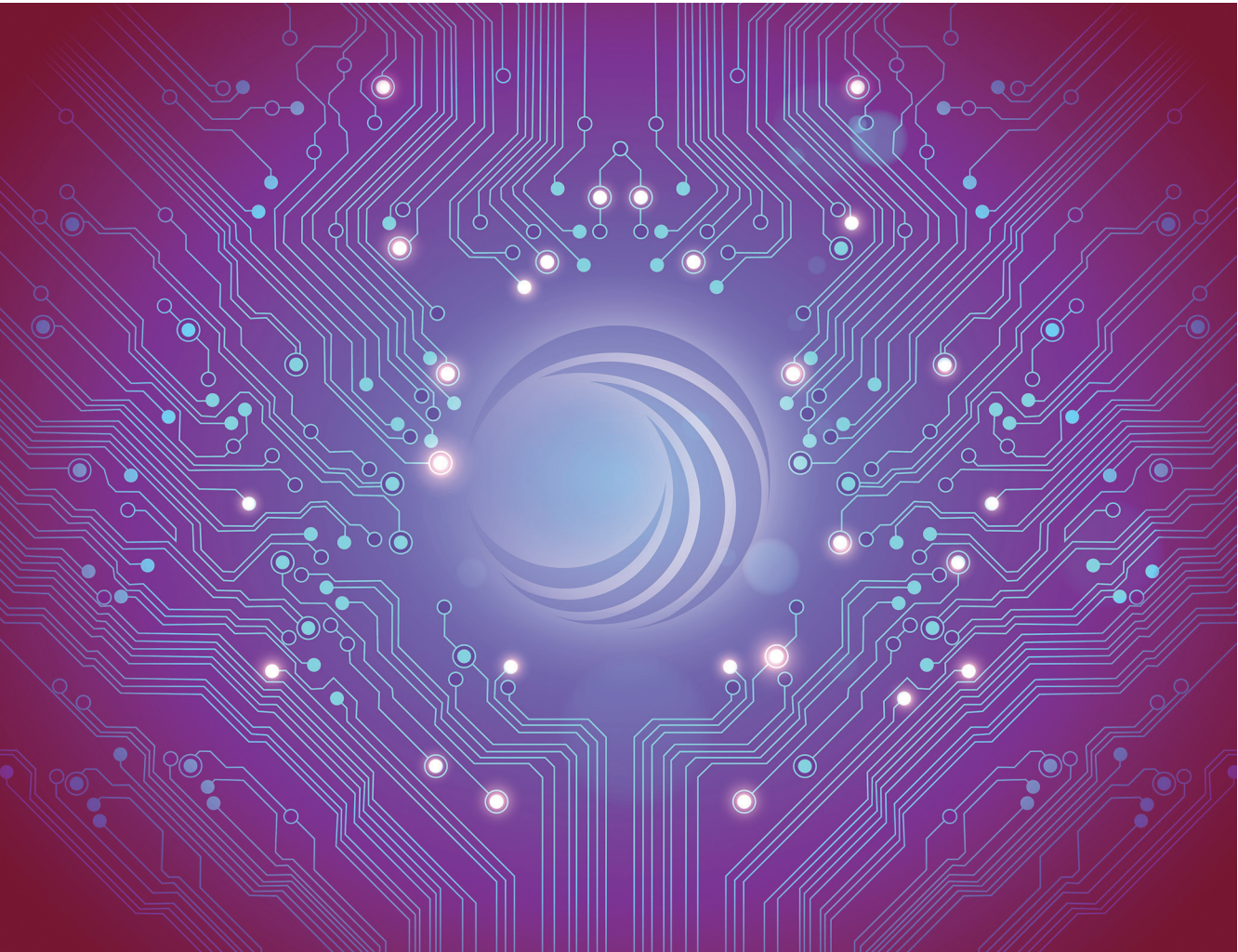
We built several new capabilities for Amara Raja that allowed us to stay competitive in a very tough business environment.

Enabling Cyber Security - Protecting People, Assets & Identity



Protecting the Perimeter
Safeguarding out virtual territory and workspace is immensely essential to thrive as an organisation. To improve the endpoint security and enable auto-response, a new XDR solution was implemented to minimise the time to detect a cyber-attack and improve the response time. The new Vulnerability Management brings the visibility of security gaps and enables rapid response and resolution while minimising the risk to the organisation. Endpoints play a major role in the organisation's security as they are vulnerable spots for all inbound emails or threats which lead to Data theft. Various security filters allow us to protect ourselves from Threats, Ransomware, and Browser control and ensure reputation protection.

Secure the Existing Assets
We successfully reduced the probability of ransomware attacks to a great extent. We rolled out a best-in-class Management solution in Patch management helping our team continuously monitor and respond to security issues. The team was able to deploy new patches and security updates as and when they were released by following a robust test process.



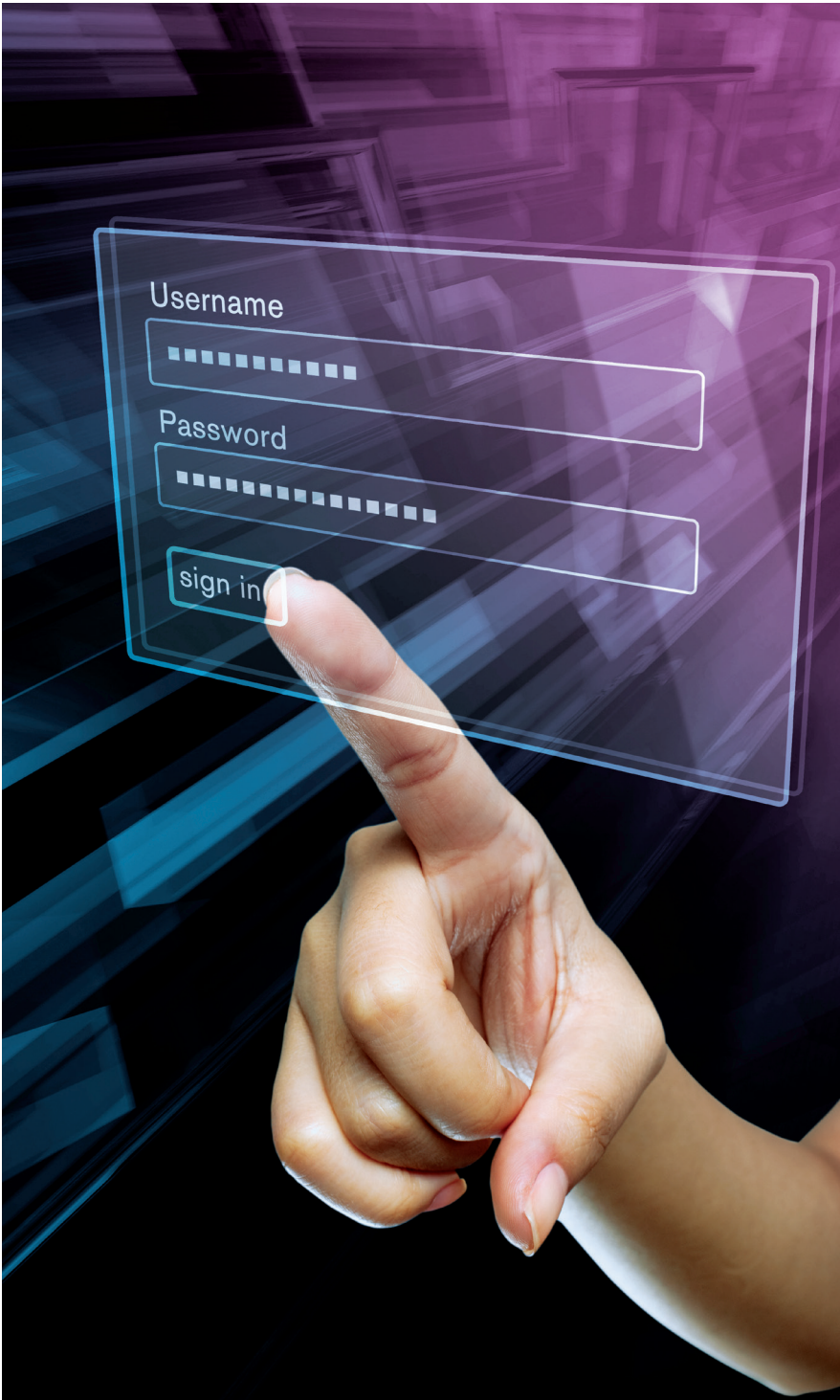
Monitor and Optimise
Constant monitoring and optimisation are the keys to stable and sustainable IT processes. We monitor availability, traffic, packet loss, performance metrics and response time of various devices including servers, routers, switches and virtual machines. We analyze network traffic patterns and bandwidth consumed by different devices and applications to configure traffic to balance the system by better understanding bandwidth consumption and performance. We have deployed a network management solution that includes network and server monitoring, bandwidth analysis, configuration management and fault management.

Cyber Attack Awareness and Response Plan

In 2021, 83% of organisations faced phishing activities. It made cyber-attack awareness must and a comprehensive response plan a necessity that cannot be ignored. 97% of people cannot identify a phishing attack. 1 in 99 emails triggered a phishing activity. Ransomware - cybersecurity attack vector wreaked havoc on individuals and organisations around the world. All of this led often to significant data and consequent financial loss.

We created a Cyber War Drill to sensitize and train key leaders on preparing and operating under a cyber-attack by simulating cyber war. We set up Mock Drills, User awareness and created Playbooks. We initiated Leadership training to protect them from business email compromise (BEC) Scams. At Amara Raja, we focused on multiple fronts to combat threat and threat actors. Threat actors specifically target Leadership and First Line Managers, in part because of their privileged access and access to sensitive communications.

We identified the gap in business resiliency considerations and enhanced a culture of security awareness led by strong executive sponsorship 'tone at the top'. We enhanced the understanding of the current tools, processes, roles, responsibilities and abilities to understand and make decisions in situations without having complete information. We were able to test the exchange of information between the security incident response team members and the Leadership and First Line teams.



IDEA Digital Journey Continued...

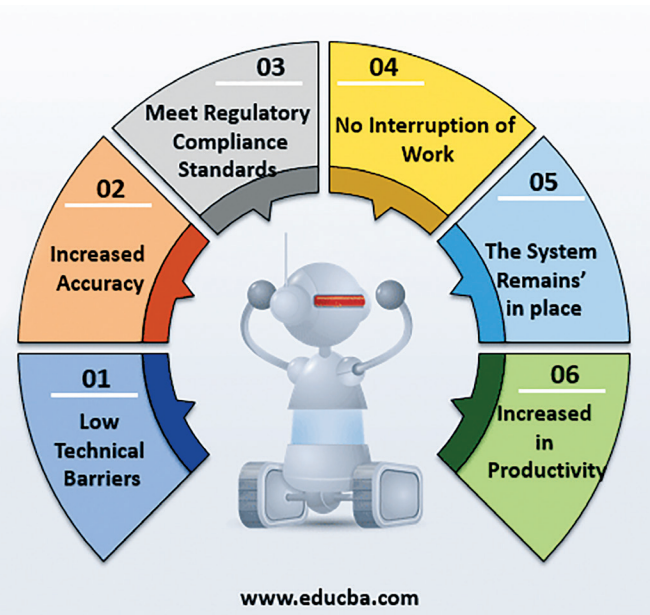
Amara Raja, IT continued with its mission of building a Digital Enterprise by leveraging its S/4 HANA Platform. As part of the digitalisation, we have enhanced our core Digital platform to roll out new functionalities and addition of automation tools to increase productivity.

We enhanced our Human Resources platform to enable more self-help processes and simplified access to key employee information. We continued with our Digital transformation by building new solutions enabling simplified access to Finance information, accelerating vendor payments and faster onboarding of suppliers. We rolled out Remote Process Automation to automate manual activities allowing us to utilise our employees for higher-value activities.

Enable new Capabilities on our Enterprise Resource Planning System

To meet dynamic requirements from our various businesses, we upgraded the SAP S/4 HANA System to the latest service pack level. We implemented several new features in the areas of Extended Warehouse Management (EWM), Transport Management (TM), and Production Planning & Detailed Scheduling (PPDS).

- a) Automated the process of sharing payment information to Suppliers once after posting the payments in the S/4 HANA system which enables suppliers to reconcile their accounts quickly.
- b) Rolled out the TDS/TCS solution as per statutory changes proposed by Govt of India.
- c) Further strengthened our exports/ imports processes in the areas of LC's/BG's monitoring and controlling.
- d) SAP Focused Run - Enabled dashboards related to system health and performance and established system monitoring for all SAP S/4 HANA Production and Non-Productions Servers. The key achievements are real-time dashboards related to performance, Proactive monitoring of the SAP landscape and reduced efforts for monitoring of multiple servers.
- e) Enabled Digital Signature solution for all commercial invoices across all Manufacturing Plants & Distribution Centres which drastically reduced the efforts and cost of printing, signing & scanning the invoices.



Automating Business Processes

To simplify our business processes and automate the recurring manual activities, we have invested significantly in Robotic Process Automation. We have adopted the UiPath platform to deliver increased operational effectiveness by automating manual processes. We started the journey in FY 2021 by running a pilot to automate two business processes.

Using the lessons learnt from the Pilot, we are currently implementing RPA for multiple processes in Finance as well as identifying business processes in other functions. We have created a framework for identifying business processes with clear ROI for automation.



Empowering Employees

We continue to empower our employees by enhancing our digital HR platform - **WE@AR**. We have deployed a unified mobile Super App addressing Learning, Payroll and Talent Recruitment to serve as one platform to provide employee-centric information in a simple and

fast manner, leading to enhanced productivity. We enhanced the AI Based Bot “Jinie” to provide employee information in a simple conversational manner. We deployed a vaccination scheduling application that helped us keep our employees and their families safe during the pandemic.



AR Finance Connect - An Intranet Portal

Finance Portal has been built as a platform to share and disseminate all of Amara Raja's Finance processes and information to all Amara Raja employees. The platform has been

built as an interactive and easy-to-use Portal. Finance information - classified into SOPs, SLAs, Knowledge Hub, FAQ and Events are distributed for ready reference and continuous learning & development.



Delivering Quality

We work with multiple partners and suppliers to deliver high-quality products and services to our customers. To enable our suppliers to effectively align to our quality strategy, Amara Raja IT implemented a Quality portal, that allows us to

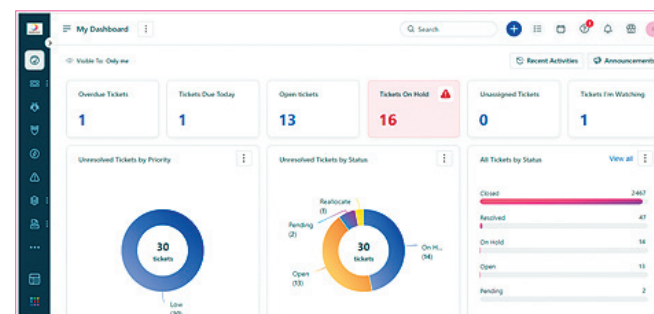
onboard suppliers through a rigorous supplier evaluation program. We conduct stringent audits and review the corrective actions, ensuring quality is maintained end to end through effective use of the Quality Portal.



Simplified Payments enabling better relationships with Partners

We have implemented SAP Vendor Invoice Management (VIM) to streamline SAP Accounts Payable operations. VIM has optimised and simplified the process of Amara Raja vendor bill processing in SAP. Invoice recognition, Invoice verification and Auto posting of the invoices were enabled through seamless scanning of the vendor bills. This allowed

Amara Raja's Accounts Payable team to focus on issue resolution of the exceptional cases and problematic invoices and reduced their effort by 80%. VIM workflow allows for accelerated validation of the invoices and ensures quick payments to vendors. More than 1 lakh invoices have been processed in the last 6 to 8 months allowing us to re-deploy our critical resources for other strategic activities.



Customer (internal) Service Management System - A Ticket Management System

We deployed a Ticket Management System, to provide a platform for all Amara Raja users to report issues and raise new requests related to Finance & Accounts [AP, AR, GL, FA, Taxation, Commercial & CoE Taxation] which are handled by FSSC (Financial Shared Services Centre) presently. Due to tickets getting logged into the system, we are now able to predict the time required to respond and resolve issues resulting in a better end-user experience. We are also able to allocate resources optimally based on the trend of user requests.

Our blueprint for FY23

Seamless Collaboration with Partners and Customers

To strengthen our relationships with our customers and to create a collaborative ecosystem, we are taking the next step in our Digital Transformation Strategy by deploying the Customer and Vendor Portal. We will set up an omnichannel platform to enable seamless digital transactions for our customers. The portal shall provide Customers a 360-degree view of inquiries, quotations, market information, lost orders and customer interaction history to be able to respond to and resolve customer queries. This will near real-time visibility between Amara Raja & Customers for sales & service operations.

We are deploying a Vendor portal to enhance our supply chain efficiency by managing the procurement process and suppliers efficiently and effectively. Vendor Portal will ensure end-to-end collaboration in the supply chain and allow Amara Raja to meet changes in demand more accurately and in time. We will also be able to manage supplier contracts effectively through benchmarking process leading to efficiencies in procurement.

Analytics

Amara Raja's shall implement an Analytics program to create dashboards providing insights for multiple KPIs addressing business performance in Finance, Manufacturing, Working Capital Management, Inventory Management,

Sales Performance and Warranty Management and allow insightful and rapid decision making.

Cloud

Amara Raja is transitioning to cloud-based computing to leverage the agility and scale provided by Cloud. We have built B2C capabilities by building digital warranty applications on Cloud leveraging the microservices and container technologies allowing us to incrementally scale up the applications as per business need. In addition to this, we have also planned to set up our Disaster Recovery (DR) Landscape in the cloud for achieving the cost-effectiveness of a DR solution that provides faster recoverability and scalability.

Industry 4.0

We have started our Industry 4.0 journey by setting the stage for the Industry 4.0 Model Plant covering Solar Power management, Water Management and providing Traceability in battery manufacturing processes - battery preparation, formation and finishing processes. These initiatives will allow us to capture process data in real time and take appropriate corrective actions. Our key focus to improve on the Overall Equipment Effectiveness (OEE), Reduce product rejections and reduce workmen operations variations will lead us to become operationally more efficient and deliver higher quality batteries faster to market.

Sharepoint Repositories

We plan to implement Sharepoint document repositories for our manufacturing, engineering, finance and HR departments to enable easy sharing of documents along with a personalised view of the documents. This will enable businesses to be able to collaborate better.

Enterprise Document Management

We plan to deploy an Enterprise Document Management System to enable agile and seamless collaboration with internal and external stakeholders. Key features for collaboration include workflows, retrieval of documents, images and videos based on search parameters, version control and records management will reduce paper proliferation and reduce storage duplication meeting our sustainability objective while simplifying operations.

Powering IT to become a Key Business Partner

Amara Raja's IT is on a journey to become a significant partner in creating business value for Amara Raja customers. We are implementing IT Infrastructure Library (ITIL) framework to effectively plan, allocate and manage IT resources to meet the business need. IT Service Management shall be used as a strategic approach for designing, delivering, managing and improving the way information technology (IT) is used within Amara Raja. We will streamline incident management and project management activities to ensure optimal usage of IT resources.

SOCIAL & RELATIONSHIP CAPITAL

320+	DESTINATIONS PAN INDIA
35+	INTERNATIONAL DESTINATIONS
2,500+	CHANNEL PARTNERS
28	OEMS SERVICED

AMARA RAJA is rooted in strengthening its bond with communities - be it value chain partners or beyond, to wider society through a meaningful and purposeful engagement.

Committed to deliver

Demand for storage batteries always dwells in the 'Now' - ready availability and instant delivery. Be it automotive OEM to the vehicle driver, telecom tower maintenance to any mobile user, Data Center owner to homemaker, for a man on the street or a honcho - a storage battery is always an urgent emergency. Delivering and meeting this 'now' need with crucial supply chain efficiency is what propels the success of a battery manufacturer.

For Amara Raja, this challenge to deliver to this demand has become more complex given the scale at which the Company grows and thrives. The Company services more than 3000+ Amaron Franchisees/ Power Zone Retail Partners/Aqua channel partners/Direct customers PAN India as well as distributors spread across the Indian Ocean Rim. Additionally, it caters to the exacting JIT schedules of leading Automotive OEMs. Besides, the Company services its expansive customer footprint from two operating plants based in South India. All these tasks are equally challenging.



Domestic Logistics

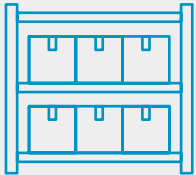
Amara Raja over the years has emerged as a respected entity in the market place not only for its industry-defining products but also for the ability to ensure that the Company's products are always available Pan India.

This has been achieved by disciplined management and painstaking efforts of the Company's supply chain

team that ensure product delivery (380+ Industrial and Automotive SKUs) across 350+ destinations in India through efficient Multi Modal Logistics planning and managing increased volumes and optimising costs despite ever-increasing fuel costs. This also includes the demanding requirements of 26 OEMs with distances ranging between 60km and 3400 km. Even as supply chain complexities increase every year owing to business growth (India and

international destinations), the teams and stakeholders continue with the rigorous efforts towards strengthening the delivery commitment and optimising delivery costs. Despite pandemic and state-specific challenges, the Company has been able to meet despatch requirements with tireless support from our Logistics Service Providers (LSPs) for all OEMs.

Primary Logistics
(PLANTS TO OE CUSTOMERS/DISTRIBUTION CENTERS)



Maximised MMTS thereby reducing surface mode. Enhancing the Green Logistics initiative, ARBL has laid greater emphasis on Rail and Sea Shipments as part of a multi-modal transport system that helped to minimise the transit time and ensured safe transportation.

Direct Delivery model implementation ensured quicker reach to Customers, where FG despatches are being executed from Plant directly for 28 Channel partners located in 4 districts in Phase-1. The Company will be expanding over 200+ channel partners in Phase-2. This not only helps quicker deliveries but also results in avoiding multiple handling and achieving associated cost benefits.

Advanced shipment note (ASN) and e POD yielding dividends in the form of Customer delight.

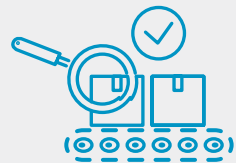
Training drivers' community on adherence to Standard operating procedures on Safety, HIV, Cultural practices and Discipline towards transit hurdles. Moreover, as a progressive partner approach, we have been supporting Drivers and other staff by establishing an amenity centre for them to relax, refresh and recreate at plants. CSR initiatives of the company were also channeled towards them for Health and Safety.

GPS enabled in Fleet Owned transport, which assisted the company in minimising transit damages and ensured timely reach to customers as compared to the Traditional transport system.

Optimised carbon emissions by focusing on reducing fleet deployment by enhancing packing re-configuration to fit volumetric as a part of CFT approach. The team has worked exuberantly to make the Company more environment-friendly.

Secondary Logistics

(DISTRIBUTION CENTERS TO CHANNEL PARTNERS)



Biometric systems at all Distribution Centers were installed as part of safety and security measures to meet local regulatory requirements.

G+2 high storage racks were implemented as a part of the space optimisation initiative, which optimised space management.

Deployment of conveyors was done in FY22 in phased manner to ease unloading of specific high volumetric batteries.

Efficient Contract Management to process bills as well timely renewal of contracts for Distribution Centres, Freight contract & other agreements.

Effective WMS has been achieved by deploying TMS, tracking the product serial no's minimising the aged inventories through automated FIFO.

e-POD acknowledgement process introduced, which will help customers track their shipments and streamline Transit Damage settlements and monitor the delivery lead times effectively.

Automated bill desk process to minimise TAT; also established infra as per BWMR norms across 18 Distribution centres.

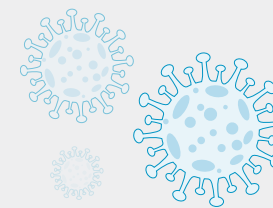
International Logistics

FY22 was all about revival and growth after the pandemic kept a lid on global trade and economy. In the first quarter, many ports still faced Covid blues as the global supply chain remained subdued. The terminals' slowdown caused inefficiencies along intermodal connections. Freight costs went up to unprecedentedly levels while adherence to IMO guidelines by shipping lines only added to the freight cost. But as the world left the worst of pandemic behind, the Company's international endeavours

and commitments were steered by favourable winds of change and prosperity. As a result, the Company was able to successfully cater to 35+ international destinations. The Company implemented important measures to ensure that it could meet customer commitment while optimising freight costs. Engaged in direct liaisoning with Freight forwarders & shipping lines helped freight optimisation, allowed material to reach on time and facilitated ease of transactions during disembarking.



Amara Raja earned and retained the AEO-T2 status importer by Indian customs, which facilitates cost-effective management of port operations including deferred payment of Customs duty fortnightly.



Committed to Covid-19 battle

Amara Raja believes in thriving with the communities'. This core mantra became even more critical since the advent of Coronavirus in human lives in 2020. In the first quarter, when India and the world were grappling with Omicron; the Company went all out to stand by its people and the communities within which it operates. Proper healthcare for those in need were ensured and the organisation helped many thwart the Covid challenge.



Contributing to Covid Relief Fund

Amara Raja pledged support to communities through its CSR initiatives. In this commitment, our people also set an example by giving away one day's salary on their part to the relief and other efforts of the Government in fighting the pandemic. These were in addition to continuous support to the local administration. The Amara Raja Group including Amara Raja Batteries Ltd. supported Government initiatives by contributing to the Andhra Pradesh CM Relief fund and the Telangana CM Relief fund.



Commitment to Community

Amara Raja takes its commitment to the community very seriously. A bouquet for initiatives is offered to mainly the underprivileged sections of the community residing in the vicinity of the Company's operational domain. Our core mantra is social upliftment of the underprivileged by pushing them towards economic independence and empowering their lives with education and healthcare.

Education

Amara Raja Educational Society (ARES) realises the Company's dream of an educated India. ARES has three Schools located at Karakambadi, Petamitta and Diguvmagham in the Chittoor district, which are affiliated to CBSE. In FY22, 4462 children benefitted by getting quality education. Of them, 80% are from the marginalised community. Students from 90+ villages from 05 surrounding Mandals attend school. 41 buses are also run for transportation. ₹2.32 have been

spent on the construction of the high school building for Amara Raja Vidyalayam, Dighuvamagham. CBSE approval received to commence Classes 11 and 12. The first batch of Class 10 students appeared for the board exam in 2021-22 academic year. All schools have quality infrastructure, equipped laboratories, libraries and playgrounds. The students have secured state-level ranks in competitive entrance examinations and have marched ahead in engineering and chartered accountancy courses.

Primary Health

Amara Raja shares a dream of a healthy nation. The company's CSR aims at providing healthcare access to the downtrodden, which don't have the resources to afford quality healthcare. The company has built a network of centres providing Primary

Health Services in rural areas. In FY22, over 12250 outpatients have been attended to while around 10500 lab tests have been performed as per the needs of patients.

Water

The Trust built 23 check dams and desilted three tanks under Rajanna Jalasayamu Programme in Chittoor district. It continues to undertake

periodic maintenance of the check dams. Around 60 villages, covered under 12 panchayats, continue to benefit from this initiative.

Rural Development

The Trust continues to support the adopted panchayats of Karakambadi, Pettamitta and Diguvmagham in Chittoor district. The Trust has drawn the blueprint for improving the infrastructure in villages over the coming years. The Trust funded

building of connecting roads, tanks for safe drinking water in villages through RO plants, street lighting, leisure parks with internet access and a library in Chittoor district. These facilities are maintained by the Trust on an ongoing basis.

Social Forestry

Amara Raja dreams of a green future for the generations to come on this planet. The Company had adopted a 250-hectare plot on a hillock at Pemmagutta in Chittoor district to create a green cover. Moreover, the Trust purchased and donated a 30-acre adjoining plot to the government.

Committed to Skilled India

Amara Raja Group believes in the call of Atmanirbhar Bharat and is committed to playing a role in Skill India movement. The Company already has a dedicated team on the field, gathering youth force and providing opportunities to them, especially in rural areas, to enhance their skills and enable them to seek non-migratory employment opportunities. The motto is to bridge the skills gap across sectors and channelise the workforce into the making of a new and empowered India.

There is a visible mismatch between the requirements and the availability of the talent pool. There is a dire need for initiatives to bridge the skill gap. On this line, Amara Raja Skill

Over the years, the Trust has planted **70,000** saplings in and around the hillock and will continue to do so in future. The plantation project provides livelihood to about 40 tribal families. Under the Blue Sky CSR initiative, the Rajanna Trust enjoyed assistance from nearby communities, school children and its employees.

Development Centre (ARDC) was set up way back in 2014. This Centre runs under the aegis of Rajanna Trust, which Amara Raja fully supports. In FY22, 1098 students including 266 women got training free of cost to become specialised in working in industries. 100% of them were from marginalised communities.

The courses focus on skill development, personality development and enhancing employability and are approved under Government's National Apprenticeship Promotion Scheme (NAPS).

Practical hands-on training methodology is followed with 70% emphasis given to practical and 30% on theory. The entire curriculum has been designed by ARSDC with suggestions and inputs from the Industry.

Committed to vendors & customers

Amara Raja is on a mission to bring the digital warranty product. It is committed to making the service on a digital platform the way forward. There is a very clear plan laid out to bring both vendors and customers

on digital platforms so that the transactional activities can be done seamlessly and over a period of time, this data will enable strong business analytics, which makes the business decision making a lot more scientific and fast.

NATURAL CAPITAL



18,824	TREES PLANTED INSIDE THE FACILITIES IN LAST THREE YEARS
50MW	RENEWABLE POWER INFRASTRUCTURE (TO BE COMMISSIONED)
746,174m ³	CAPACITY OF RAINWATER HARVESTING INFRASTRUCTURE

At Amara Raja, we respect the environment as an important stakeholder in our progress. As such, we care for the environment by adopting technologies and processes that utilise resources efficiently. We complement that by recycling of the waste in everything we undertake.

We aim to go a step higher. Through our systematic and process-oriented approach, reinforced by the spirit of responsibility, we continually endeavour to make a positive impact to the environment where we operate. The Company's passion for the ecosystem is enshrined in its Health, Safety and Environment policy, which not only takes care of the safety and health of employees but also protecting the environment.

Complying with global standards, Amara Raja focuses on improving its environmental score sheet with every passing year. With this objective, it adopts global and business relevant technologies and adheres to all the international standards. The Company's operating facilities are ISO 14001:2015 certified which drives us towards building a sustainability enterprise.

01 Energy Management
Preserving our natural environment is of utmost importance to Amara Raja. As such, it works towards our dependence on the natural resources and conserve them for our future generations. We have been using advanced technologies in renewable energy and green technology sector. The Company continues to adhere to the global energy management systems. Its manufacturing facilities are ISO 50001:2018 certified which allows us to ensure energy conservation with planned actions.

The Company works passionately to implement energy conservation measures every year across all the manufacturing plants. They include process improvements, instrument (equipment) replacements, and installation of energy efficient equipment etc. Connecting to India's ambitious renewable energy program, Amara Raja to be commission 50 MW Solar project by Q2 FY 23, demonstrating its commitment to utilising green energy and optimizing carbon emissions.



02 Water Management

Amara Raja understands the ground reality. Climatic changes and significant wastage have drastically depleted the availability of freshwater. The Company, over the years, has undertaken important steps to reduce freshwater consumption at all its facilities.

The Company has installed irreversible electromagnetic water flow meters to monitor water consumption in the plant. This allows us to analyze and identify the consumption of water in different areas, points of concern and accordingly undertake remedial measures in high water consumption areas.

The Company has created rainwater harvesting bodies developed at its operating units to improve groundwater levels. The Company established the facility of storm water collection pond for collecting runoff

water for the first 30 to 45 minutes during rainy season. It also created storm water collection pits to hold contaminated soil if any.

03 Pollution management

Amara Raja has installed state-of-the-art pollution control equipment, inside its facilities, to take care of dust and fumes that are generated in the process. Regular monitoring is in place to maintain the levels below statutory requirements.

In addition, the Company has installed Continuous Ambient Air Quality Monitoring Stations (CAAQMS) for real time monitoring of PM10 and PM2.5 at Karakambadi location.

Domestic sewage and process effluents from the plant are taken care through well-established Sewage Treatment Plant & Effluent Treatment Plant facilities.

The existing effluent treatment plants of all divisions were upgraded with the latest technology. Amara Raja has established Zero Liquid Discharge (ZLD) system to ensure that all the treated effluents are recycled in a process that confirms to global water footprint.

04 Lead sourcing & recycling

Amara Raja strongly believes in sustainable and safe sourcing of Lead and Alloys and closely engaged with several Industry bodies, Distributor partners, various internal and external stakeholders and statutory bodies in achieving and establishing the circular economy principles.

Your Company, in FY22, as part of sustainable sourcing have substantially increased sourcing of Lead and Alloys requirements through environmentally safe and sound lead recycling initiatives, through strong scrap collection programs, establishment of collection centers and also robust reverse logistics operations..

05 Green Logistics

As a part of Green Logistics initiative, Amara Raja has increased its emphasis on Rail and Sea Shipment as part of multi-modal transport system. This has helped in minimising transit time and ensured safe transportation.

06 Green cover

Plantation is a continuous practice at Amara Raja to improve the green belt within the fence and beyond the fence. About 47% of the area at its operating units is under green cover. In the last three years, the Company has planted about 18,824 saplings inside its facilities.

07 Sustainability Reporting

As a responsible corporate, Amara Raja promised to stay with the United Nations Sustainable Developmental Goals (SDG) along with its sustainable journey to protect the ecology. The Company is preparing a comprehensive Sustainability Report as per the guidelines from UN SDG's for internal circulation and usage.

08 Supporting the Paris Agreement

Amara Raja aligns with the Paris Agreement goal to keep the rise in global average temperature this century to well below two degrees Celsius (2°C) above pre-industrial levels and inventorisation. The Company diligently reports Green House Gas emission to upkeep that agreement.

09 CII-SR EHS Excellence Awards 2021

CII EHS Excellence awards are one of the prestigious recognitions given by CII for the industries who follow the best practices in the field of Environment, Health and Safety. Award process consists of assessment checklist covering 20 elements of sector based and a detailed guide notes to assessors.

110 assessors with 750 man-days including 32 Lead assessors, 32 Co-assessors and 42 new assessors are put into the whole assessment process for picking up the best-in-class companies in the field of Environment, Health and Safety practices.

Assessment was programmed with multi-layered audits of Virtual Assessment followed by Physical/onsite assessment and then presentation through virtual mode on the Environment, Health and Safety best and beyond practices of the last 3 years.

194 companies across India participated in the competition and 20 companies received Gold award which is highest level of appreciation covering 21 sectors.

CII Southern Region has conducted EHS excellence awards 2021 ceremony at ITC Grand Chola Hotel, Chennai on 29th March 2022.

Amara Raja Batteries Ltd has been awarded the highest level of Gold award - Sectoral topper in Auto components in CII-SR EHS Excellence Awards 2021 by Confederation of Indian Industry (CII) and received from Mr. T T Ashok - Past Chairman, CII-SR & Managing Director, Taylor Rubber, TTK Group, Mr. Raju Ketkale - Chairman, CII-SR EHS Excellence Awards 2021 & Executive Vice President & Director, Toyota Kirloskar Motors Pvt Ltd and Mr. R. Rajagopalan - Co Chairman, CII-SR EHS Excellence Awards 2021 & Chief Manufacturing Officer, Titan Company Ltd.



ANALYSIS OF FINANCIAL STATEMENTS

DURING the year under review, the Company recorded a profit before tax of ₹689.80 crore (previous year: ₹873.33 crore). The decrease is primarily on account of increase in material prices. The basic and diluted earnings per share was at ₹29.93 per share (previous year: ₹37.87 per share).

STATEMENT OF PROFIT & LOSS ₹in Crore			
(a) Revenue from operations			
	FY 22	FY 21	% Change
Sale of products	8,611.53	7,091.49	21%
Sale of services	41.84	41.65	0%
Other operating revenues	42.45	16.54	157%
Total	8,695.82	7,149.68	22%

DURING the year under review, sale of products was higher as compared to the previous year, primarily due increased volumes in automotive battery products and industrial battery products. Other operating revenue increased mainly due to accrual of export benefits under Duty Drawback and RoDTEP schemes.

(b) Other income			
	FY 22	FY 21	% Change
Other Income	77.98	87.36	-11%

OTHER income was less primarily due to decrease in write back of liabilities and provision for doubtful trade receivable as compared to previous year and partly offset by increase in net foreign exchange gain.

(c) Cost of material consumed and Purchase of stock-in-trade			
	FY 22	FY 21	% Change
Cost of materials consumed	5,969.39	4,382.54	36%
Purchases of stock-in-trade	473.80	429.99	10%
Changes in inventories of finished goods, work-in-progress & stock-in-trade	(321.86)	(67.85)	374%
Total	6,121.33	4,744.68	29%

DURING the year under review, the cost of materials consumed increased due to higher purchase cost of lead, other inputs & increase in volumes. Purchases of stock-in-trade was higher as compared to the previous year due to higher trading revenue.

(d) Employee benefits expense			
	FY 22	FY 21	% Change
Employee benefits expense	498.76	426.04	17%

EMPLOYEE cost increased due to increments and remuneration of Executive Directors appointed during the year.

(e) Finance costs			
	FY 22	FY 21	% Change
Finance costs	15.10	10.53	43%

DURING the year under review, finance costs increased as compared to previous year primarily on account of increase in lease liabilities and unwinding of discount on warranty provision. Company doesn't have any interest bearing debts.

(f) Depreciation and amortization expense

	FY 22	FY 21	% Change
Depreciation and amortization expense	395.72	319.16	24%

THE increase in depreciation and amortisation expense is due to addition of capacities in 4W and 2W battery manufacturing units with advanced stamped grids and depreciation on right-to-use asset on lease contracts.

(g) Other expenses

	FY 22	FY 21	% Change
Other expenses	1,053.09	863.30	22%

OTHER expenses were higher as compared to the previous year primarily on account of increase in outward freight expense, power cost and increase in warranty expense. Outward freight and power & fuel: Due to higher volumes and fuel prices. Warranty expense: Due to provision made for the higher input costs and increase in volumes.

(h) Tax expense

	FY 22	FY 21	% Change
Current tax	187.92	229.91	-18%
Deferred tax expense	(9.37)	(3.39)	176%
Total	178.55	226.52	-21%

DECREASE in Tax expense of the current year is majorly on account of decrease in Profit Before Tax. Increase in deferred tax expense is mainly on account of timing differences of depreciable assets as per books of accounts and as per Income Tax.

BALANCE SHEET ₹in Crore

(a) Property, plant and equipment and Right-to-use asset

	FY 22	FY 21	% Change
Property, plant and equipment	2,127.59	2,116.03	1%
Right-to-use asset	285.18	243.65	17%

INCREASE in carrying value of Property, plant and equipment as at the end of the current fiscal year is primarily on account of capitalization during the year and increase in Right-to-use assets.

(b) Financial assets

	FY 22	FY 21	% Change
Non-current			
Investments	43.05	7.12	505%
Other financial assets	8.32	4.30	93%
Current			
Investments	34.73	273.42	-87%
Trade receivables	792.56	787.46	1%
Cash and cash equivalents	34.31	96.73	-65%
Other Bank balances	19.26	79.08	-76%
Other financial assets	16.66	25.52	-35%

INCREASE in non-current investments at the end of the current fiscal year is due to investment in Log 9 Materials Scientific Private Limited as part of strategic initiatives to venture into new energy business and EV batteries. Current Investments were lower as compared to the previous year, primarily due to liquidation of investment in mutual funds for working capital requirement.

(c) Inventories			
	FY 22	FY 21	% Change
Inventories	1,803.78	1,438.24	25%

INVENTORIES at the end of the current fiscal year were higher, primarily due to increase in cost of raw material and other inputs and higher stock of certain inputs to mitigate supply chain risks.

(d) Financial liabilities			
	FY 22	FY 21	% Change
Non-current			
Borrowings	16.52	23.39	-29%
Lease Liability	77.28	38.59	100%
Current			
Trade payables	806.45	746.47	8%
Lease Liability	25.22	19.39	0%
Other financial liabilities	298.78	205.32	46%
Borrowings	6.87	10.95	-37%

THE decrease in the borrowings is pertaining to repayment made during the year. Lease liabilities increased due to recognition of new lease liabilities. Increase in trade payables is primarily due to increase in pending payable for purchase of materials. Increase in other financial liabilities due to increase in payable for purchase of property plant and equipment.

Key Ratios and their movement			
	FY 22	FY 21	% Change
a) Debtors Turnover (No. of times)	10.95	10.02	9%
b) Inventory Turnover (No. of times)	3.78	3.68	3%
c) Current Ratio	1.85	2.12	-13%
d) Debt Equity Ratio (No. of times)	0.01	0.01	0%
e) PBT to net sales (%)	7.93%	12.21%	-4%
f) PAT to net sales (%)	5.88%	9.05%	-3%
g) Return on networth (%)	11.67%	16.45%	-5%

INTERNAL CONTROL

THE Company is committed to ensuring an effective Internal Control System and Internal Control Environment that will help in preventing and detecting errors, irregularities and frauds, thus ensuring security of Company's assets and efficiency of operations. The Company has an internal control system and mechanism which is commensurate with the size and complexity of business and aligned with evolving business needs.

The Company has laid down Internal Financial Controls as detailed in the Companies Act, 2013 and has covered major processes commensurate with size of the business operations. Controls have been established at the entity level and process levels, and are designed to ensure compliance with internal control requirements, regulatory compliance and appropriate recoding and reporting of financial and operational information.

