



Leclanché Group

2022 Management Report



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1 BOARD OF DIRECTORS' MESSAGE

The Company's main focus this year has been to concentrate all its efforts towards its heavy-duty industrial battery manufacturing knowhow in order to secure long term growth and innovation and lay a solid groundwork for numerous future prospects. As announced through its various press releases during the year, these efforts have been observed by the industry which has allowed Leclanché to see a significant growth of its pipeline and firm orders. In this context, the Board firmly believes in the Company's ability to generate value for its shareholders and foster future expansion.

Over the past years, the Company has strategically allocated substantial resources to enhance its manufacturing capacity and has diligently invested in research and development, all while actively building its order book. These ongoing efforts are indicative of the Company's proactive approach towards progress and continuous improvement, highlighting its unwavering commitment to strategic investments that will pave the way to future success.

Summary of 2022 Financials and Business development outlook:

We are pleased to announce that our company achieved consolidated revenues of CHF 18 million for the fiscal year 2022, maintaining a relatively stable performance compared to the CHF 18.9 million generated in 2021. This accomplishment is particularly remarkable considering the significant challenges we faced due to global supply chain delays. Notably, the latter half of 2022 marked an increase in revenues of 44% compared to the preceding first half of the year. In the same period, the Operating Loss was reduced, and performance of Net Working Capital improved, primarily driven by inventory reduction and decrease in days of sales outstanding. These improvements were observed throughout the second half of 2022, suggesting sustained progress in enhancing the company's cash flow management.

These results clearly showcase the capabilities of our new management team in seizing market opportunities and optimizing operational efficiencies.

In 2022, the company incurred an EBITDA loss of CHF (57.5) million, slightly higher than the loss of CHF (44.9) million in the previous year. However, it is important to highlight that this increase in loss is primarily due to strategic investments in production facilities and proactive measures taken to address supply chain challenges, as mentioned earlier.

These investments and initiatives are essential for the company's long-term success, growth, and competitiveness. Although they have temporarily impacted the financial performance, they demonstrate the company's commitment to improving its operations and ensuring future sustainability.

Overall, the company's strategic investments and proactive measures reflect its dedication to overcoming operational challenges and positioning itself for future growth.

Some positive factors and challenges that should be acknowledged are as follows:

- Firstly, the company demonstrated strategic foresight by making investments in its production facilities. Specifically, it allocated resources to enhance the assembly line in Yverdon-les-Bains and the cell production line in Willstätt, Germany, with the objective of expanding the existing cell production capacity. These investments reflect the company's dedication to growth and its proactive approach to meeting the anticipated rise in product demand in the future.



- Additionally, the company encountered supply chain issues on a global scale, leading to delays in sourcing electronic parts and specialized plastic components. These challenges had a direct impact on meeting customer delivery deadlines. However, it is crucial to perceive these obstacles as opportunities for improvement. The company's active endeavours to address these challenges and explore alternative solutions demonstrate its commitment to ensuring customer satisfaction and its determination to overcome adversities.

Moreover, these achievements serve as a testament to the effectiveness of our implemented strategies and prudent financial management during the second half of 2022. By positioning our company for a favourable outlook in the future, we have demonstrated our commitment to sustainable growth and long-term success.

On the business development side, we have witnessed significant growth in business development notably on our E mobility business line, expanding our customer base and securing major wins. The company supplies today battery systems to large electric and hybrid ferries for customers like Scandlines and Brittany Ferries. Leclanché has also won projects in the Megayacht & Superyacht space. In ground transport, the company continues to grow in the rail and specialized vehicle market, serving customers such as Alstom Rail, Canadian Pacific Rail, and FCC with its leading battery pack designs.

In addition, a major development was the signing of a Memorandum of Understanding (MoU) between Leclanché E-Mobility and Cummins Inc. in order to come up with an offer in the next 12 months on integrated power solutions for marine and rail applications. This future collaboration will allow Cummins to expand their portfolio of products to include hybrid, battery-only, and fuel cell hybrid solutions, strengthening Leclanché's market presence and driving growth in these sectors. Cummins Inc. is a US international company, part of the S&P 500, specializing in the design, manufacturing, and distribution of engines, filtration, and power generation products. They also offer after sales services throughout the world for their engines and related equipment. With headquarters in Columbus, Indiana, Cummins operates in around 190 countries through a network of over 600 distributors and approximately 7,200 dealers. In 2022, Cummins achieved a net income of \$2.15 billion from \$28 billion in sales.

In addition, 2022 was a year during which the Company experienced a notable transformation in its leadership, bringing about positive changes. On September 30th, 2022, there has been a transition in the board of directors with new members assuming key roles, indicating a fresh direction for the organization (i.e. concentrate on its core competences and refine its business model). This move was followed by an internal reorganization of the Executive Management as of 31st October 2022.

In this context, Pierre Blanc assumed the position of Group CEO, providing a visionary and dynamic leadership approach. Additionally, Phil Broad was appointed as CEO of Leclanché E-Mobility, contributing expertise and innovation in the rapidly evolving electric mobility sector. Pasquale Foglia joined the team as Group CFO, bringing a wealth of financial acumen and strategic guidance.

These changes in leadership reflect the Company's commitment to adapt to the evolving business landscape and position itself for sustained success. With a refreshed and diverse management structure, the Company believes it is well-positioned to drive growth, foster innovation, and meet the needs of its stakeholders effectively.



2 Leclanché Globally

Leclanché is a fully integrated heavy-duty industrial battery manufacturer with expanded production lines and R&D capabilities. Our core markets revolve around marine, rail and industrial e-Transport Solutions as well as Stationary Solutions. Battery and module production facilities are located in Germany and Switzerland. The group employed 352 full time equivalent (as of 31-Dec-2022) across operations in Switzerland, Germany, USA, UK, France, Norway and Finland.

Our core technology expertise ranges from electrochemistry, through system engineering to a first level of energy management software. Leclanché develops, designs and manufactures complete battery storage solutions covering the entire technology chain from cells to pack solutions for Hybrid Electric Vehicles (HEVs) and Battery Electric Vehicles (BEVs), as well as complete, energy storage solutions for utilities, grid operators and other large scale energy storage applications.

Leclanché is an environmentally conscious manufacturing company with 100% renewable electricity used in cell, module and pack production process. Leclanché is one of the only companies in Europe that manufactures all of its cell electrodes using patented water-based binder technology. This state-of-the-art manufacturing process reduces the energy consumption of production and allows for a more stable cell, while conventional cell manufacturing involves the use of harmful solvents. We have systematic monitoring and reduction of CO₂ emissions of our supply chain and operations and, moving forward, 90% of our cell materials will be recyclable and/or recoverable, as the foreseeable future will see an increasing use of recycled materials in the manufacturing process. Leclanché works in close collaboration with recycling partners to optimise and improve the efficiency of recycling.

Leclanché earned its IRIS certification for the design, manufacturing and maintenance related to its hybrid and electric locomotive power system drive units and auxiliary systems. The IRIS standard is designed to secure higher quality in the railway industry by enabling railway component suppliers to meet globally recognized levels of quality for their railway components. IRIS is the standardization group of UNIFE, the Association of the European Rail Supply Industry. UNIFE represents European train builders and rail equipment suppliers. Its mission is to proactively foster an environment within which members can continue to provide high-quality railway systems needed to meet the growing demand for rail transport – both passenger or freight services – in Europe and beyond.

3 Organisation structure

In January 2022, the previous management had created a separate entity in order to imbed all the business of E-Mobility. This entity name is Leclanché E-Mobility S.A. and is a fully owned subsidiary of Leclanché SA. This entity was designed in order to give the opportunity for investors that are specifically interested in transport applications to focus their investments in a dedicated entity. This newly formed company contains all of the assets, both production sites for cell manufacturing in Germany and for system manufacturing in Switzerland, as well as all of the R&D teams for cell development, electronics development and system development. This entity contains the core of Leclanché's activities.

To summarize, today, Leclanché group of companies consists of the holding entity, Leclanché SA, which owns both the Stationary and Specialty businesses, as well as the wholly owned subsidiary, Leclanché E-Mobility S.A.



Leclanché E-Mobility S.A.: sells and supports customers requiring heavy-duty industrial batteries for transport applications in marine, railway and specialised ground transport. This entity contains also the production entities, the R&D entities as well as the main engineering teams.

Stationary Storage Unit: sells and supports customers requiring storage solutions with distributed power generation like PV solar/wind/diesel gensets for utility-scale grid ancillary services and micro-grid applications. In the past the focus of the business was to provide EPC (Engineering, Procurement and Construction) services, as well as BOO (Build Own Operate) models. With the new management, this has been discontinued with a focus on providing heavy-duty battery products and services as a supplier only.

Specialty Battery Systems Unit: sells and supports solutions for customers mainly in the areas of medical and defence. This unit has less synergies with the other businesses of the company and a review for its current structure is ongoing, as Leclanché is keen to well serve its customers, all with the goal to provide the entity with the best chances for growth in its specific segments.

The average of full-time employees during year 2022 was at 351.2.

4 Business Review / Perspective

In recent years, the Company has made significant up-front investments in manufacturing capacity and Research and Development and continued to invest in working capital to support the expansion plan. As a result, we have had negative cash flow in operating activities in the last years. We have proactively established effective measures to ensure prompt payments, including implementing advance payment options, implementing proactive customer follow-up processes, and implementing a streamlined customer pre-approval system.

We project that there will be cash outflows associated with the continuous execution of our business plan and other development initiatives. To sustain future expansion, augment revenue generation, and achieve EBITDA breakeven, the company is pursuing fundraising endeavors with various external entities.

E-Mobility:

This year has seen a significant increase in business development activities, resulting in a further increased customer base and exponential business wins. Leclanché is partnering with some of the world's largest marine integrators supplying its battery systems to some of the largest electric and hybrid ferries for end customers such as Scandlines and Brittany Ferries. Leclanché has also won several projects in the Megayacht & Superyacht space.

The ground transport business has been equally successful in the continuation of its growth in the rail and specialised vehicle market. Leclanché has received repeat business with multiple customers in the rail, locomotive and specialised truck business from customers such as Alstom Rail, Canadian Pacific Rail, FCC. These customers are using a combination of customer specific and generic battery packs all with Leclanché's class leading cell, modules and pack designs.

Stationary:

The Stationary business has seen large market acceptance of its newly launched product called LeBlock™, a highly safe, modular, and scalable battery energy storage solution. Two multi-MWh



projects using LeBlock have been secured and one already delivered at the moment of writing these notes.

Speciality:

This year was a year of transition for the Speciality business unit, with several new batteries moving into high volume production, as well as new orders from new customers such as Varian (Siemens) and NBC. At the same time, Leclanché received important orders from long-standing customers such as Linde and Armasuisse.

5 Research & Development

A considerable part of our in-house Research and Development efforts focuses on the development of integrated ESS solutions, including battery management systems and complete storage systems, in order to meet the specific requirements of our customers. We often work alongside our customers to develop, test and optimize new products while also continuously improving the performance of existing products.

In addition, our research and development efforts focus on new or improved cell and battery technology for which no customer order has been received. These projects are typically managed and supervised by our in-house research and development teams. With regard to selected parts of a specific project, we draw on our worldwide network of research and development partners who support us on raw materials and basic research.

- **Raw Materials.** In this field we primarily focus on the development with our key suppliers of new raw materials fitting the requirements of our specific applications and the implementation of these raw materials in the production process. Our suppliers are well known companies all over the world.
- **Basic Research.** In this field we primarily focus on the basic study of individual cell components for potential use as future materials in our cell production. Our partners and contacts include the Swiss Federal Institute of Technology in Zurich ("ETHZ", i.e. the Paul Scherrer Institute), Zentrum für Sonnenenergie und Wasserstoff-Forschung Baden-Württemberg ("ZSW"), University of Applied Sciences Offenburg (Hochschule Offenburg) and others.

In the three preceding financial years, we initiated and concluded the following research and development projects:

- Development of multifunctional management boards for large cascaded battery modules;
- Development of improved processes for leaner and more efficient production; and
- Development of new electrode materials for power application, energy application.

We focus our current research and development efforts on cell cost reduction by developing new electrode formulations for anode and cathode materials. In addition, we are working on developing a high voltage, as well as high energy density, cells which would increase the energy capacity as compared to standard cells, thereby reducing cost per kilowatt hour. Our research and development teams also continue to focus on other technologies and cost reduction programs that complement our core cell technologies, such as module, pack & rack, BMS, asset planning, asset management and



asset services. Illustrative projects include new module design, a new multi-purpose in-house BMS platform, and a smart multi-asset cloud database.

Leclanché has achieved in 2022 a breakthrough in the environmentally friendly production of modern G/NMCA cells. As the first manufacturer worldwide, Leclanché is able to process these high nickel content materials in an aqueous process. In doing so, Leclanché completely dispenses the use of the highly toxic organic solvents (NMP) that are otherwise common in the production process. The new G/NMCA cells from Leclanché have a 20 per cent higher energy density – with the same size, weight and performance level. These materials target high energy density cells and lower considerably the cobalt content.

6 OUTLOOK

Leclanché is looking at how to adapt its organisation from the current three business unit structure to a more product line focused business. This will bring increased efficiencies to our business and allow Leclanché to focus more intensively on our chosen markets. The business segments of marine, rail & specialised truck are real addressable markets using Leclanché’s own cell technology and Leclanché is undergoing internal reviews to see how its own cell technology can be incorporated into its already quite successful LeBlock product. In this context, Leclanché Stationary is moving forward to develop the version 2.0 of LeBlock to make it even safer and more suitable to specific high-growth applications such as the ones in the microgrids and genset hybridization marketplaces.

Leclanché E-Mobility also plans to release its next generation Marine Rack System (MRS 3) which will ensure that Leclanché remains at the forefront of the Marine energy storage business segment with its differentiated products.

Leclanché E-Mobility has been working hard over the past 18 months to announce a Memorandum of Understanding (MOU) between Leclanché and global power and technology leader, Cummins Inc. announced on March 29th, which will enable both companies to offer customers a range of hybrid, battery-only and fuel cell hybrid packaged solutions in marine and rail applications. This collaboration represents a significant step forward in providing customers with a broader portfolio of integrated power solutions and will enable Leclanché to strengthen its position in these markets. Continued growth is expected in the Rail & Marine segments as Leclanché continues to increase its global visibility with some additional major partners in Marine & Rail.

Leclanché Speciality Business has many more opportunities, especially in the medical sector. The year 2023 will be a crucial year for the Specialty business, with an expected move at the end of the year to concentrate operations on a single site at Yverdon-les-Bains.

7 CORPORATE GOVERNANCE

7.1 Enterprise Risk Management

Risk Management is an integral part of the day-to-day Management processes and the Corporate Governance of the Leclanché Group. Leclanché’s Audit & Risk Management Committee is responsible for monitoring and maintaining the effectiveness of the Group’s Risk Management activities and internal control processes.



The Enterprise Risk Management is an ongoing process that started in 2016 and from 2021 risk assessment process has been managed regularly in ERM software and according to ISO 31000:2018 ERM framework.

Risk Owners from all Business Units and Departments are required to conduct an annual review of their risks and they are responsible for their mitigation, detailed action plan and monitoring. The latest update was made in October 2022. The principal risks that were in focus in 2022 were related to the Company's funding, newly implemented ERP as well as project delays and inadequate production capacity. Risks with the highest criticality (likelihood x impact) along with the respective measures, are presented to the Audit & Risk Management Committee once per year.

Internal controls are key elements of Risk Management Framework. Leclanché internal control system aims to provide reasonable assurance regarding the effectiveness and efficiency of operations, reliability and integrity of financial reporting and Group's compliance with respective laws and regulations.

