# Annual General Meeting of Leclanché S.A. Shareholders

30<sup>th</sup> June 2021







# O2 Going Forward: 2021 & beyond

**2020** Financial Summary



AGENDA

#### Leclanche At-a-Glance



<sup>1</sup> Based on IDTechEX Research Dec. 2020 (COVID Adjusted) and LUX report. <sup>2</sup> Contracted Revenue = Backlog and framework supply agreements including general T&C / MOU / Long Term Supply Agreement



# Vertical Integration Enables Greater Customization, Market penetration & Margin Advantage

Unique R&D and design capabilities across the complete battery system



Leclanché

**Energy Storage Solutions** 

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### **Trusted Customer Partnerships based on comprehensive offer**

Broad-based strategic customers across the global battery value chain

Existing & Long-term Strategic Partnerships with Leading OEM Customers



## Highest Level of Certifications, Safe & Reliable Performance

#### **Corporate Certifications**

- ISO 9001:2015 Quality management System
- ISO 14001:2015 Environmental management System

#### • ISO 45001:2018

Occupational health and safety management system



#### **Industry Certifications**

• Marine type approvals



• Railways applications ISO/TS 22163





#### Creating a technology leader: ... A European leader in Energy Storage Solutions

#### eTransport Solutions: winning strategic customers worldwide

#### eMarine Successes in 2020

- Leclanché has delivered & commissioned 7 vessel battery systems in 2020 with a combined capacity of nearly 30MWh
- Vessels have been commissioned in shipyards around the world such as China, Romania, Norway & Scotland for use in Europe and North America
- Leclanché is growing its business within Switzerland. Awarded 3 hybrid ferries operating on Swiss lakes between 2021-2023



Zero Emission

Yara Birkeland

#### eTransport Solutions: winning strategic customers worldwide

#### eGround Transport Successes in 2020

- Leclanché has developed a best in class flexible, modular product range INT-39, 53 & 105 to address multiple target markets
- Products operating in long life applications generating recurring long-term revenues
- Leclanché has secured purchase orders & MoU's with multiple specialised truck manufactures operating globally
- Toyota Motors North America additional protos delivered for hybrid truck testing in the USA



#### eTransport Solutions: winning strategic customers worldwide

GRIMALDI HYBRID RoRo

#### eMarine looking forward

- Reduce customer TCO through unmatched cell performance and deploy differentiated profitable digital IoT services
- Gain market share by leveraging experiences and promoting our unique value proposition as owner of the complete value chain
- Development in progress of the next generation of Leclanché marine battery system and associated digital IoT services ZERO EMISSION IN PORT

Deploy a complete port infrastructure solution to provide fast & efficient vessel charging



#### eTransport Solutions: winning strategic customers worldwid

#### eGround 2021 looking forward

- Leclanché secured purchase order with Canadian Pacific Rail for Hybrid locomotives
- Won the first 5 of 50< battery systems for French rail retrofit project. Exponential growth in the rail & locomotive market is forecasted
- MoU now secured with a 3rd specialized truck manufacturer
- Construction & Agriculture / Mining industry segment is growing. Purchase Orders received from major industry OEMs.
- Leclanché is in a phase of significantly increasing the number of customers using its new INT product range

#### Stationary Storage Solutions: growth momentum built on strong Credentials

- 150 MWh installed, 76GWh of annual energy throughput
- Leading Energy Management Software (EMS)enabling revenue stacking and extended battery life management
- Multi-platform design, integration, end-to-end solution with LeBlock<sup>™</sup> modular system
- Positioned in high-growth markets such as Renewable Generation (Solar/ Wind)+Storage Microgrid, Fast EV Charging, Load Displacement and off-grid expertise
- ESaaS implementation expertise & experience through ongoing project in St.Kitts





### **Green Power Plants: Solar/ Wind + Storage Microgrid**

#### **Displacing Fossil Fuels For Electricity Generation**

- Dispatchable green electricity- as & when needed- solving the demand & generation gap
- Leclanché' proven design and experience of commissioning one of the first Battery-based Energy Storage Systems (BESS) for simultaneous integration of Solar and Wind
- Constructing Caribbean's largest Green Power Plant in St. Kitts





## **EV-Charging**

#### Enabling Fast and Ultra-Fast EV Charging

- Average Charger Power is set to increase 4-fold from 75kW to 300kW by 2030
- Avoiding massive cost and delay in upgrading Grid infrastructure
- Accelerating and enabling Green Mobility
- Leclanché' offer covers all forms of Transport, including Electric Cars





### **Utility-scale**

## More dispatch of Renewable energies in the Grid

- Grid Ancillary Services
- Replacing Gas Peakers
- Addressing Power-to-Gas demand to generate and store Green Hydrogen
- Saving wastage from 'curtailment'
- Leclanché has strong install base of more than 150MWh around the world





### Leclanché Stationary Storage Solutions enabling ESaaS







- Modular and scalable concept
- Plug & Play: easy to interconnect
- Simplified logistic
- ► Fast installation on site
- Integrated Battery Auxiliaries
- Reduced Carbon Footprint
- Optimized LCOE







#### Different Blocks to build LeBlock™





#### Battery Block

- High density
  lithium-ion batteries
  including fire
  suppression system.
- 744 kWh with LFP technology.



#### CombiBlock

- Interconnection and protection of the batteries
- High efficiency temperature management for the batteries



# **Business Operations Update**

Going Forward: 2021 & beyond

**2020** Financial Summary



#### Key priorities: 2021 & beyond



Putting the investment and loss in perspective



Strategic customers and USD 0.5 billion product pipeline de-risk profitable growth



Competitive Cost-base de-risk profitable growth



Strategic expansion into Automotive sector to gain scale and long term competitivity





## Putting the investments and loss in perspective (1 of 2)

## It is a Scale-Business

Increased turnover level to break-even is driven by significant reduction in Average Selling Price over past five years

- 2020 volume-weighted battery pack price has fallen by 53% over 2016-2020<sup>(1)</sup>
- Leclanché estimated the breakeven turnover of CHF 100 million to CHF 125 million in 2020; the Company now estimates the breakeven turnover of CHF 175 million to CHF 200 million in 2023
- Market Comparable: Microvast Inc, being merged with Tuscan Holdings Corp. I (Nasdaq:THCB, "Tuscan")- a publicly-traded special purpose acquisition company, has reported an estimated 2020 revenue of USD 101 million and -11% Adjusted EBITDA<sup>(2)</sup>

(1)- Bloomberg New Energy Finance, April 2021. (2)-Microvast Investor Presentation February 2021.



# Putting the investments and loss in perspective (2 of 2)

## It is a Scale-Business



TOTAL R&D + Investments cost by Nature (In MCHF): 106.6 MCHF

- Leclanché has invested ca. CHF 110 million in R & D, Engineering, Capex, M & A
- Delay in reaching the critical-scale: inability to fully funding the three-year's business plan in one-go. Annual funding agreements with SEFAM<sup>(1)</sup>, practically the sole source of funding since past five years providing more than CHF 300 million of patient capital
- Significant opportunity to monetize the investment through licensing in the Automotive sector

(1)- SEFAM (formerly FEFAM) means: AM INVESTMENT SCA, SICAV-SIF - Illiquid Assets Sub-Fund and AM INVESTMENT SCA, SICAV-SIF – R&D Sub-Fund together with STRATEGIC EQUITY FUND - Renewable Energy SubFund, STRATEGIC EQUITY FUND - Multi Asset Strategy Sub-Fund, STRATEGIC EQUITY FUND – E Money Strategies Sub-Fund (also called Energy Storage Invest) and, all these funds being in aggregate the main shareholder of Leclanché, hereunder referred to as "SEFAM." not



#### Key priorities: 2021 & beyond



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## Robust Growth founded on USD 0.5 billion of Contracted Revenue

Our USD 3.1 billion product pipeline is bolstered by established key customer relationships

Strong Pipeline of Opportunities



# More than 10X increase in Revenue by 2025, from the expected USD 38-44 million in 2021.



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<sup>1</sup> Contracted Revenue = Backlog and framework supply agreements including general T&C / MOU / Long Term Supply Agreement. <sup>2</sup> Scheduled to complete framework agreement in H2 2021.

#### Key priorities: 2021 & beyond



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## Competitive Cost-base: CHF 110 million invested during past five year in R & D, Engineering, Industrialization, and Certifications

Umlaut AG (leading engineering consultancy firm) mandated to review the cost structures of cell manufacturing when moving to large volumes:

- Deep analysis covering technology choices, manufacturing processes and scale effects, shows high level of competitiveness in large volume manufacturing.
- **Cost decreases from USD 226 to USD 80 per kWh** as production volume ramps-up from 400 MWh to 4 GWh per year





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\*Validated by umlaut AG

#### **Competitive cost-base driven by increasing energy density of cells**

#### **Technology Leadership**

Lithium Cells- ready to enter the automotive sector

- Development driven by sustainability in material sourcing
- Low carbon footprint manufacturing process
- Continuous reduction in Cobalt content



Materials with lower carbon footprint and energy-saving processing steps will make the batteries more sustainable



Less cobalt in the cathode materials and high-energy materials will further reduce the costs per kWh





# Competitive cost-base driven by next generation battery module design and production processes

#### **Technology Leadership**

Modules-crucial building block to design a wide range of solutions for electric vehicles

- Production Designed for high volumes
- Energy density (Wh/kg) 15 to 20% improvement
- Configuration Up to 47 configurations possible
- Size (volume) More compact with 7% volume gain
- Construction Use of high precision laser assembly
- Designed in a simultaneous engineering process with
  Comau, part of the Stellantis Group.









### **Competitive cost-base driven by industry leading battery management system**

#### **Technology Leadership**

#### Leclanché battery management system (BMS) and internet of things (IOT) platform



In-house software platform for battery and energy management takes the batteries into the clouds for services and maintenance



Hardware and software development out of one hand, perfectly matching the proprietary cell technology of Leclanché or best BMS performance

Driven by digital innovation roadmap with IOT solutions, advanced BMS algorithms, wireless communication and smart sensors for connected batteries



Systems designed to be functionally safe with automotive safety integrated level ASIL-C (ISO 26262), SIL 2 for railway and DNV-GL for marine applications



**IOT** platform





#### **Competitive cost-base driven by Smart Energy Management Software Architecture**

### **Technology Leadership**

#### **Energy Management System**

- Smart Energy Management drives the Energy Transmission
- Multi-applications-Revenue Stacking
- Smart Energy Management guaranties base load dispatchable power from battery to grid
- Maximize the REN penetration vs. genset use
- Energy Management for EV fast charge stations





### **Competitive cost-base driven by large-scale production processes and capacity**

#### Industrial Capacity Ramp-up Cells

- Existing line installed in 2012, which a capacity of up to 1 million cells per year.
- Initial line was designed to be extended within existing buildings.
- Brown field expansion: increase cell production capacity to 3'000'000 cells/year in existing buildings.
- Green field expansion or Automotive Joint Venture: increase cell production capacity to 9 million cells/year with the addition of new buildings
- Production expansions to use latest production equipment for higher productivity and lower machine footprint.
- Implementation of some new process steps to reduce overall energy consumption during production process.



Capacity expansion



Capacity expansion in GWh includes cell production increase as well as cell energy capacity increase.



#### **Competitive cost-base driven by large-scale production processes and capacity**

#### Industrial Capacity Ramp-up Modules

- Introduction of a new production line for the latest generation of modules for transport applications. 6x the capacity (up to 0.5 GWh/year) and further expandable.
- Designed in a simultaneous engineering process for codesign of module and assembly line for optimized assembly processes.
- Advanced inline control systems, including electrical, optical and Al supervised welding control.
- Use of Comau's interactive **IoT and MES** (manufacturing execution system) for real-time data processing leading to better monitoring of production, processes and maintenance.
- Setting the foundations for a transition towards industry 4.0





# Competitive cost-base driven by 80% shared technology stack while serving multiple markets

#### Industrial Capacity Ramp-up Packs & Racks

- Close to 80% of the content of packs and racks are common technology.
- The assembly of packs and racks is a low automated process and labor intensive.
- Small volumes produced in Yverdon, options for larger volumes being investigated.
- All inhouse technology, from cell to pack and BMS.
- Standard building blocks used for rail, bus, truck ...







#### Key priorities: 2021 & beyond



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### Expansion into Passenger EVs, Reaching Competitive-Scale

#### Entry led by proven technology leadership

- Almost doubles future addressable market with massive potential.
- Adds substantial scale to procurement activities reducing overall product costs for our other eTransport verticals.
- Allows monetization of R&D expenses through licensing agreements OR contributing as equity in joint ventures with partners.
- Offering a fully integrated product encompassing "Powder-to-Pack" proprietary technologies: electrochemistry, cells, battery modules, battery management systems, and battery pack design
- One of the largest pools of ~350 trained personnel in Europe with extensive experience in electrochemistry and mass production, and protected IP with more than 200 patents over 13 families
- European based and well-established supply chain relationships
- Time-to-market advantage based on proven manufacturing processes





#### **Key Takeaways**







## Thank You

## Leclanché is on a clear path to deliver profitable growth.





info@leclanche.com www.leclanche.com

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### **Proven, Proprietary & Vertically Integrated Battery Systems**





### **Proven, Proprietary & Vertically Integrated Battery Systems**

Hydrogen fuel cells are an ideal and complimentary technology with Leclanché battery systems

#### Leclanché is already actively working on multiple hybrid fuel cell projects





### Building Caribbean's largest Green Power Plant: Solar+Storage Microgrid project in St. Kitts



\*BESS – Battery-based Energy Storage System; PPA – Power Purchase Agreement; ESaaS – Energy Storage-as-a-Service



#### St Kitts – the largest Solar + Storage project in the Caribbean



- > Solar PV 30 MW peak / 45 MWh
- > 30% of the Island's baseload
- > USD 70 million capitalization / 20-year PPA



St Kitts prime minister Timothy Harris and Leclanché Bryan Urban at the groundbreaking December 15, 2020









AGENDA

# **2020 Financial Summary**

**Continued strong customer wins** 

**Continued investment support from the majority shareholder** 

**Company's strategy in eTransport fully validated** 

For further details, please see the Annual Report 2020 on Company's website.



Strong growth momentum

- Consolidated total income for the financial year 2020 was CHF 23.9 million, up 46% from CHF 16.3 million in 2019
- Net loss, although lower than in 2019, remains high and will remain so until the Company reaches the scale required to become profitable again
- Record production of 180,000 cells in Willstätt
- Continuous financial support of SEFAM, Leclanché's majority shareholder
  - On-going financing of Company's growth plan
  - Balance sheet restructuring including debt conversion into equity (CHF 51 million in 2020, CHF 33.8 million in March 2021 and a commitment to convert an additional CHF 29.7 million in September 2021)



**P & L** (in KCHF)

2020 revenue un 46% from		2020	2019
CHF 16.3 million in 2019	Total income	23,854	16,314
2020 EBITDA loss was CHF (61.0) million compared to CHF (58.9) million in 2019	Raw materials and consumables used	-36,100	-31,783
	Personnel costs	-32,174	-26,579
	Other operating expenses	-16,542	-16,256
	Net impairment losses on financial and contract assets	-1,194	-9,601
	Depreciation, amortisation and impairment expenses	-7,403	-7,383
	Operating Loss	-69,559	-75,287
2020 net loss was CHF (78.2) million compared to CHF (83.4) million in 2019.	Finance costs	-8,678	-7,557
	Finance income	440	332
	Share of net loss of associates accounted for using the equity method	-517	-540
	Loss before tax for the period	-78,314	-83,052
	Income tax	89	-306
	Loss for the period of the Group	-78,225	-83,357



#### **31 December 2020 Balance Sheet** (in kCHF)

	31/12/2020	31/12/2019
ASSETS		
Non-current assets	41,734	32,725
Current assets	31,501	40,365
TOTAL ASSETS	73,234	73,090
EQUITY AND LIABILITIES		
Share capital	26,007	15,382
Reserve	46,359	3,291
Accumulated losses	-93,884	-31,398
TOTAL EQUITY	-21,518	-12,725
Convertible Loans	3,164	31,004
Loans	36,234	7,208
Trade and other payables	32,851	25,808
Other liabilities	22,503	21,795
TOTAL LIABILITIES	94,752	85,815
TOTAL EQUITY AND LIABILITIES	73,234	73,090



Funding + Balance Sheet Restructuring Update

- Majority shareholder has undertaken to continue support the Company in the following ways:
  - Conversion of debt into equity of CHF 33.8m in March 2021
  - Additional conversion of debt into equity of CHF 29.7m in September 2021
  - Investment in the St Kitts project through a USD 24m construction loan
  - Provide an additional financing of CHF 60m in 2021 through five new credit facilities. To date, CHF 32.6m has already been provided
- However, the remaining CHF 27m are difficult to obtain, as from a compliance perspective, the Luxembourg sub-funds (SEFAM) are now over-weighted in their investment in Leclanché



Funding + Balance Sheet Restructuring Update (Cont'd)

Going forward:

- Leclanché has engaged BTIG, a US-based investment bank, to raise the capital required to deploy its growth plan until 2025
- This fundraising will dilute our current majority shareholder who has agreed in principle to this capital increase
- In parallel, the Company is still looking for new investors, in the form of debt or equity, who could relieve SEFAM of the financing of Leclanché until the end of 2021



- Despite adverse financial conditions, aggravated by the impact of the pandemic, we continued to lay the foundations for a leading company in the field of energy storage
- Solid and sustainable development of the e-Transport business with a strong customer endorsement, confirmed by deliveries in the Marine, Rail and Truck segments
- Willstätt's cell production capacity almost returned to normal after investment in a new formation tower
- Design and ordering of a new M3 module automated assembly line completed in Q1 2021 that will increase the current capacity sixfold
- Framework supply agreements signed in the e-transport sector will lead to an exponential increase in revenues in 2022 and beyond.



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SPECIALTY BATTERY SYSTEMS