



# SUSTAINABILITY REPORT

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**2023**



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# Foreword from our CEO & Sustainability Manager

The Earth's temperatures have never been higher for millennia, and extreme climatic events have never been as prevalent. **The decarbonisation of heavy mobility**, responsible for 6%\* of total greenhouse gas emissions in Europe, is vital, thanks to batteries.

However, **the battery industry bears a larger responsibility**: it must pave the way for higher sustainability in how we produce, use, and dispose of batteries, thereby reducing both its own and its customers' environmental impact.

To achieve this objective, Europe has developed a **robust regulatory framework** as part of the Green Deal, initially focusing on batteries before future generalisation to other products.

We are pleased to present **Leclanché's first non-financial report**, which demonstrates how we integrate sustainability and environmental impact reduction within the company. Additionally, it explains how we have been proactive in adhering to new and future sustainability regulations, such as the **European Battery Regulation** and the **future PFAS restriction** known as "forever chemicals" due to their toxicity and persistence in the environment.

While Leclanché is not yet directly affected by the **Corporate Sustainability Reporting Directive (CSRD)**, we recognise the importance of **following the core principles**, and we have started to populate the data points requested.

For our **voluntary and non-audited** sustainability report, we have chosen to narrow down the scope to encompass activities related to **heavy mobility and energy**, while deliberately excluding the activities of the Specialty Battery Systems (SBS) business unit.

In closing, we extend our gratitude to all those who have contributed to the creation of this report, especially **Ana Ferreira**, specialist in Sustainability and Life Cycle Assessment, and **Annick Bidiville**, responsible of the Marketing and Communication department.

**Pierre Blanc**  
CEO

\*source: EU commission: [link](#)



Pierre Blanc  
CEO of Leclanché SA



Cyril Carpentier  
Sustainability Manager

A misty, foggy landscape with silhouettes of trees on a hillside. The scene is dominated by a thick, white fog that obscures the lower parts of the terrain. In the foreground and middle ground, the dark silhouettes of various trees, including evergreens and bare deciduous trees, are visible against the lighter background. The overall atmosphere is serene and quiet.

# Leclanché Presentation



# Leclanché at a Glance

## Key Figures



**1909**

Founded



**350+**

Employees



**50+**

Electrochemists  
& Engineers



**170+**

Customers

## Key Markets Addressed

Advanced batteries for heavy-duty commercial applications

### Marine



e-MARINE

### Rail



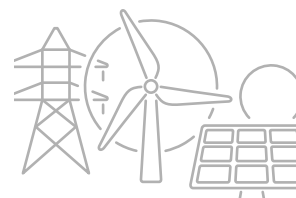
e-RAIL

### Road



e-TRUCK

### Stationary



STATIONARY  
SOLUTIONS

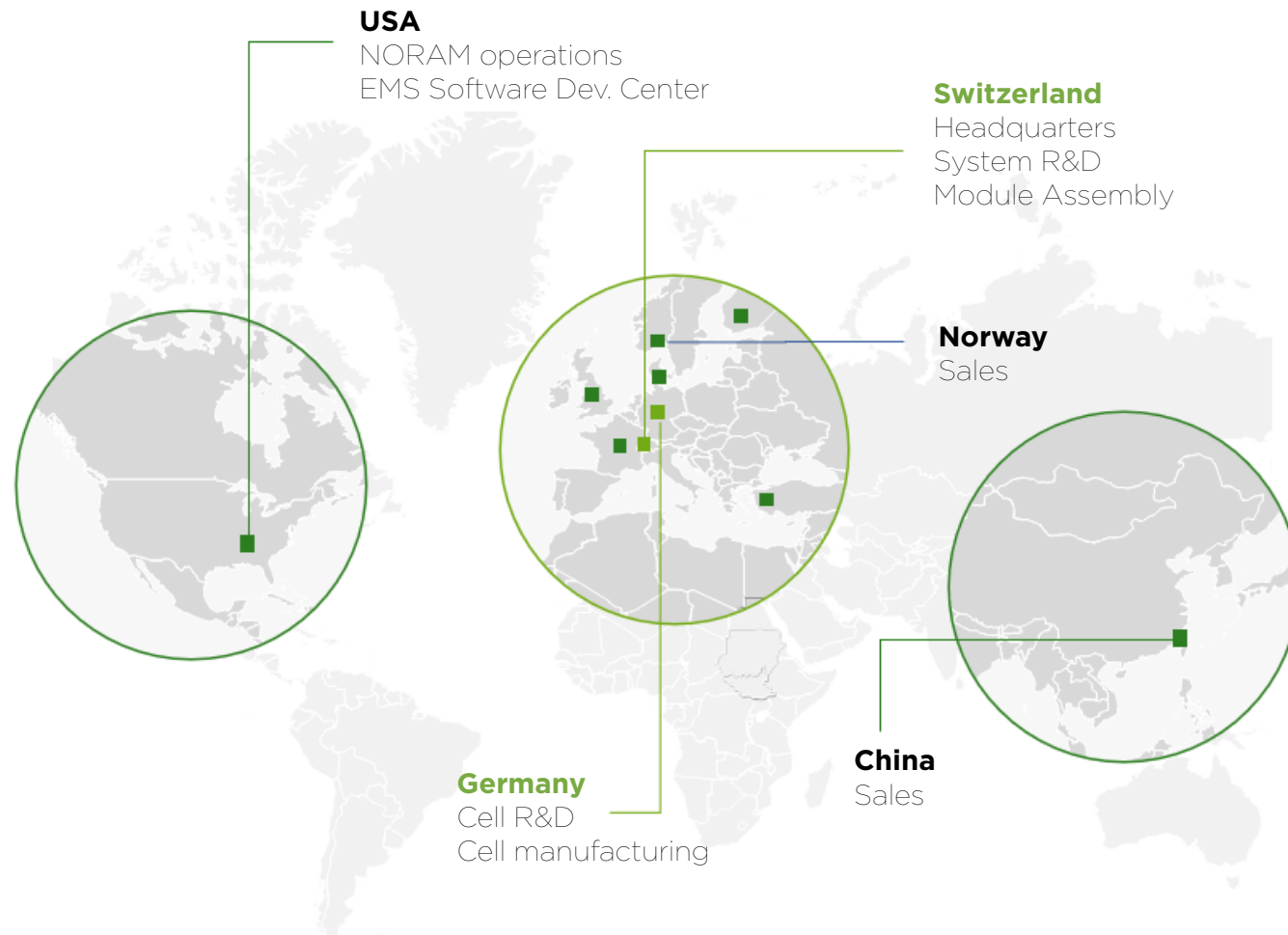
## Sustainability

- **100% renewable electricity** used for all production
- Unique **water-based electrode** manufacturing process (no solvents)
- **90% recyclable** and recoverable cell materials
- Systematic **reduction of CO<sub>2</sub> emissions** of supply chain and operations

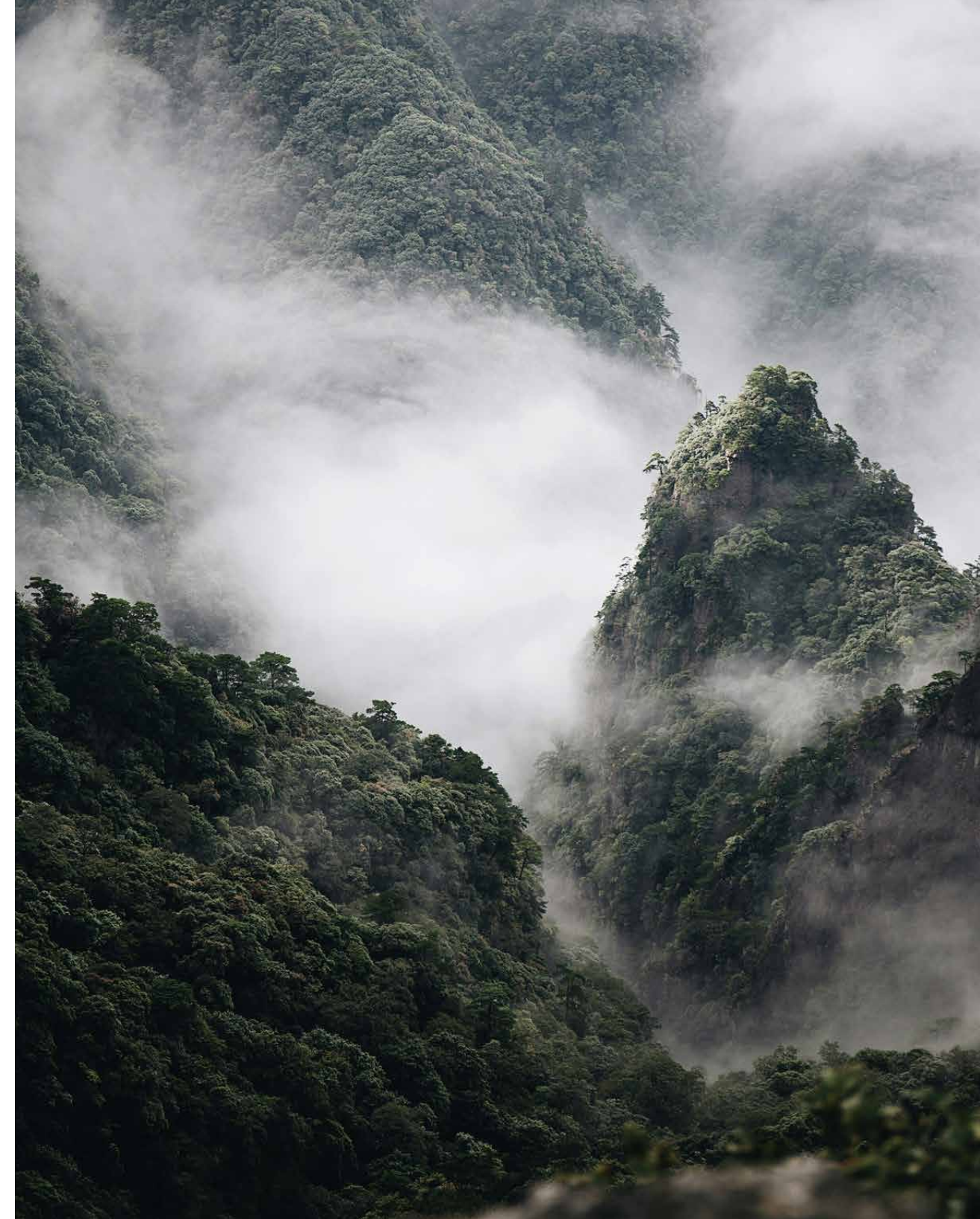
## Certifications



# Leclanché Global Presence: European Focused Footprint



**Sales / Agent / Rep. Office**  
Norway | Denmark |  
France | UK | Turkey | China | Greece







## Cell Production Line

Germany



- **In-house cell production**
- Patented unique **water-based** manufacturing process for all electrodes, in production since 2012
- Producing pouch cells with **multiple battery chemistry**.



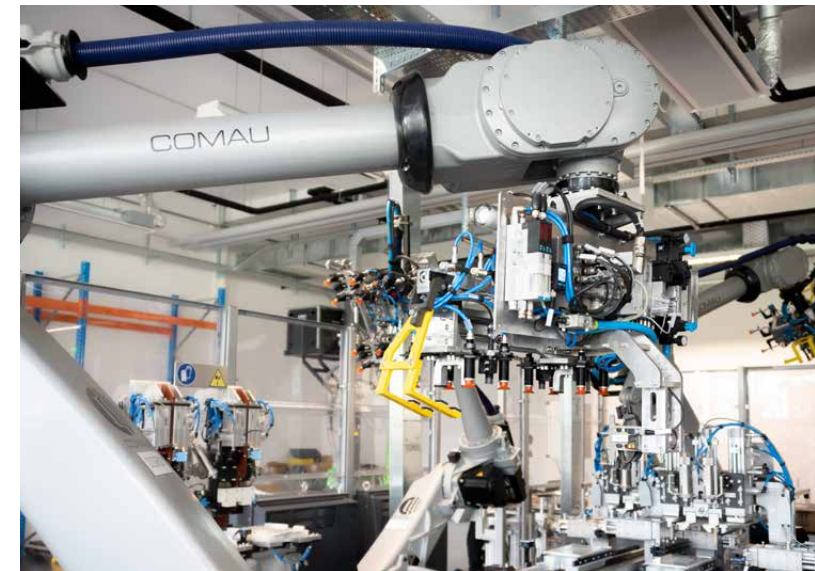
Willstätt

## Module Assembly Line

Switzerland



- **State-of-the art, automated production facility**, designed with leading engineering company.



Yverdon-les Bains

# Heavy Mobility

## a Niche Market of Long-lasting Batteries

### Heavy mobility requires specific batteries with outstanding lifespan

Unlike cars, which often remain unused 95% of the time, heavy vehicles are used intensively and continuously. Moreover, the lifespan of these vehicles is further extended.

Heavy mobility requires batteries specifically designed for these applications, capable of enduring several thousand discharge cycles to ensure reliable and durable performance.

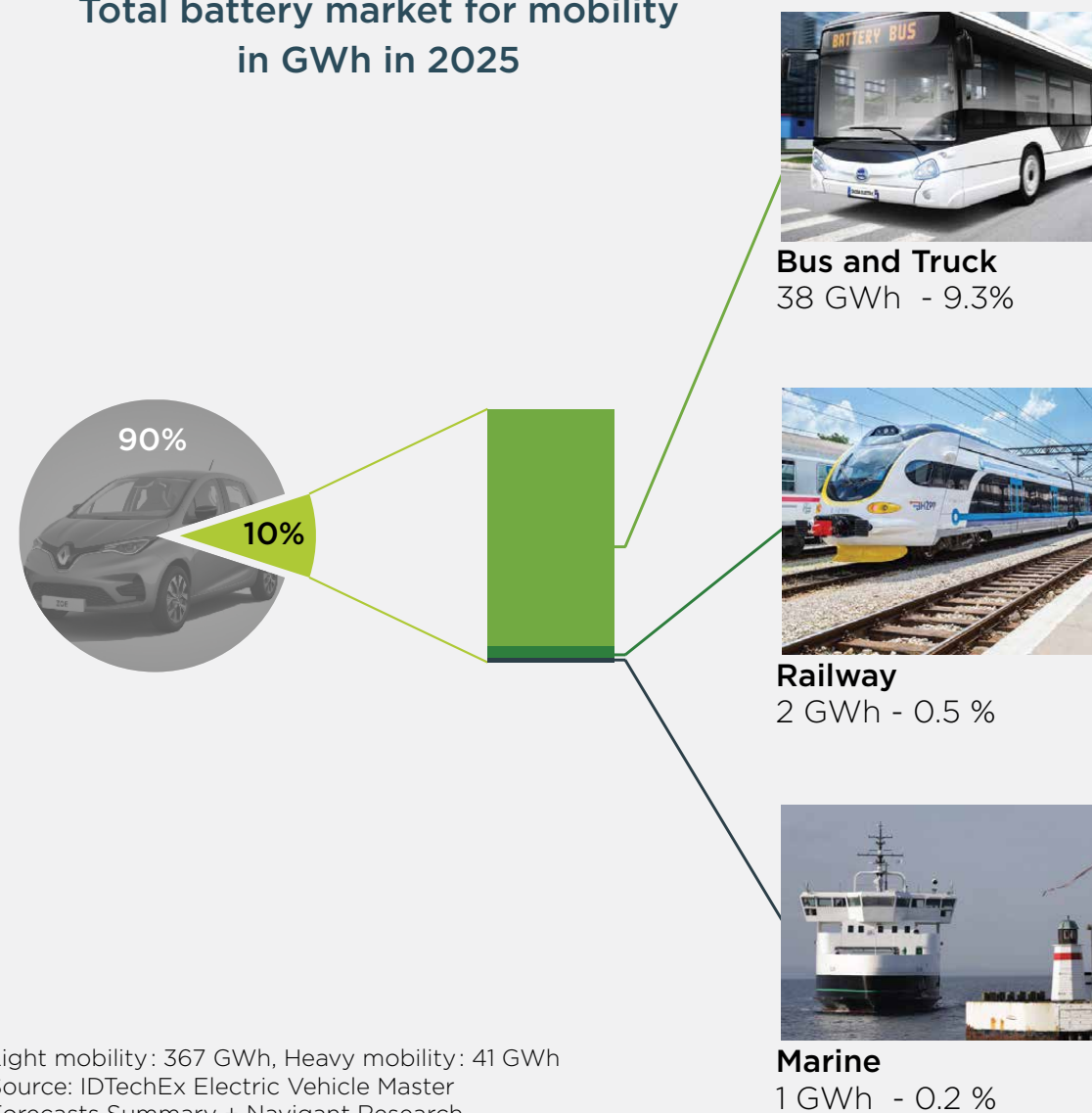
**This is precisely the case with Leclanché's high-performance batteries.**

### Heavy mobility: a niche market compared to EV

The electrification of heavy mobility, encompassing railway, marine, and truck transportation, represents 10% of the batteries for the mobility market, dominated by batteries for light electrical vehicles (EV).

	Light Mobility	Heavy Mobility
<b>Usage</b>	95% of the time unused	Intensive use everyday
<b>Lifetime</b>	10-15 years	15-30+ years

### Total battery market for mobility in GWh in 2025



Light mobility: 367 GWh, Heavy mobility: 41 GWh  
 Source: IDTechEx Electric Vehicle Master Forecasts Summary + Navigant Research



# A Growing Market Driven by Regulations and Cost Saving

## Regulatory constraints

As for the light mobility market, **heavy mobility** has a strong pressure to decarbonise, with a confluence of regulatory imperatives and compelling economic considerations.

Stringent emissions regulations, such as the European Union's commitment to **phasing out internal combustion engines** by 2035 and integrating maritime transport into the **carbon quotas of the Emissions Trading System (ETS)**, underscore a global commitment to reduce environmental impact.

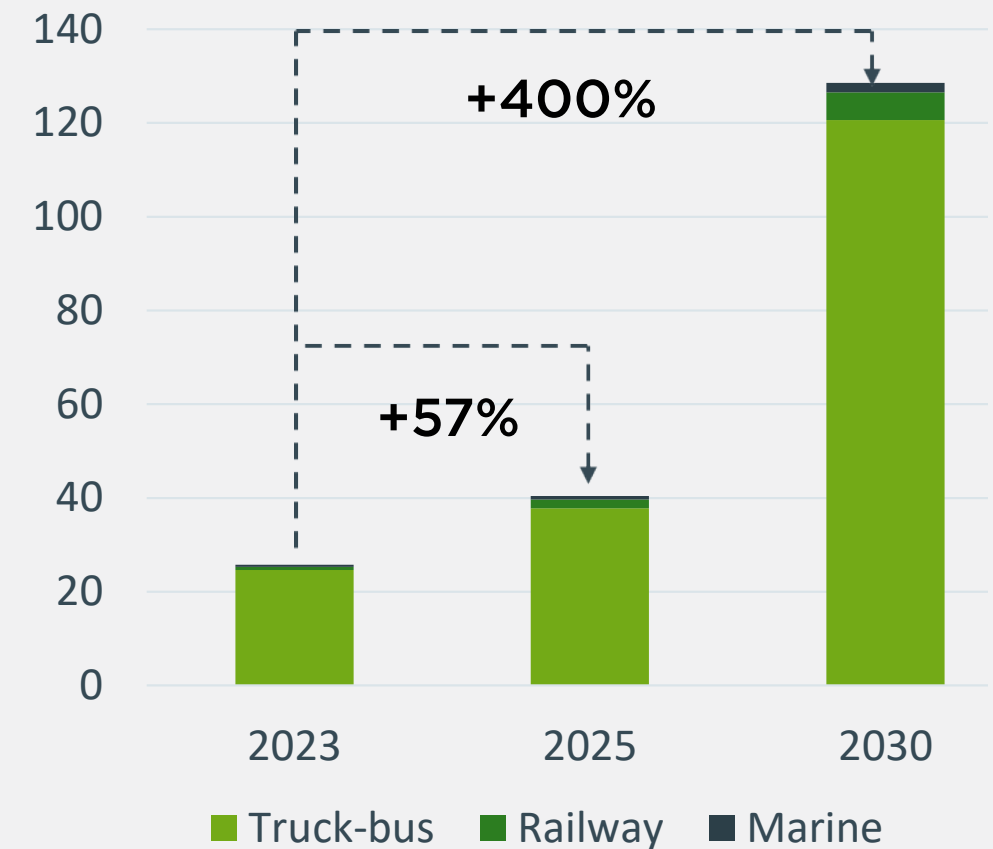
The International Maritime Organization's target of a 15% emission reduction by 2030 further amplifies the urgency for cleaner propulsion methods.

## Opportunities for cost saving

Beyond regulatory compliance, the **total costsavings** act as a powerful incentive. Electric vehicles promise lower operating and maintenance costs, presenting an economically attractive alternative for heavy-duty transportation operators.

This intersection of environmental mandates and economic advantages propels the electrification of heavy mobility towards a sustainable and cost-effective future.

## Battery market in GWh for heavy mobility



Source: IDTechEx Electric Vehicle Master Forecasts Summary + Navigant Research

# Leclanché Manages the Complete Value Chain of its Batteries





# Product Portfolio for Heavy Mobility & Energy

- Catalogue and **customer specific products** engineered and **certified to industry standards**.
- E-Mobility products are based on our **in-house manufactured cells, modules and battery systems**.
- Dedicated **Multi-String Managers** designed to combine multiple battery systems.

Marine



**MRS-3™**



Ferries, Ro-Ro/Ro-Pax,  
Offshore, Deep Sea,  
Cruise Ships, Yachts

Rail

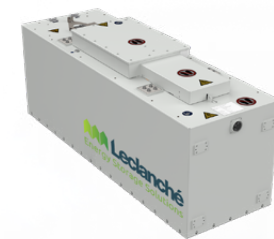


**Energy Series**



Trains,  
Locomotives,  
Maintenance Vehicles

Road



**Fortius and Energy Series**



Truck,  
Agricultural Vehicles,  
Construction Vehicles

Stationary



**LeBlock™**  
Intelligent Energy  
Integrated by Leclanché



Utilities,  
Commercial & Industrial,  
Microgrid

# Key Features and Benefits of our Products

## Exceptional Cycle Life

Adapted to **intense-use applications** in heavy mobility  
Up to 7000 cycles with 80% DoD



## Class Leading Safety

Exceeds class requirements for fire safety

**Passive and active safety system**

## Low Environmental Batteries

Produced with renewable electricity using **water-based** and toxic solvent free process

35% lower carbon footprint



## European Made Battery Systems

**Fully integrated** manufacturer from cell to system, all produced in Europe



# Core Business Alignment with the UN Sustainable Development Goals

We contribute to **decarbonise heavy mobility** with **low environmental** impact batteries...



**Reduce battery carbon footprint** by 60% in



**Eliminate toxic solvents** and «forever pollutants» by 2025

... and **high-performance** systems... ..



**Maximise lifespan & efficiency** to minimise total cost of ownership

... for a **circular economy** transition.



Be at the forefront of the **European battery regulation** on the circular economy



Be Integrated in a **transparent supply chain** committed to the transition



The **UN Sustainable Development Goals** (SDGs) are a set of 17 global objectives.

- They aim to address socio-economic and environmental challenges by 2030.
- The SDGs foster international cooperation for a more equitable and prosperous world.

Leclanché supports the UN SDG and contributes directly, through our mission, to 5 of them.

# ESG Initiatives & Certification

## UN Global Contract

In 2024, Leclanché joined the **United Nations Global Compact**, reaffirming our dedication to follow the Compact's principles in the areas of human rights, labour, environment, and anti-corruption.

By joining this initiative, Leclanché commits to integrating these principles into our business strategy, operations, and corporate culture.

This demonstrates Leclanché's commitment to sustainable development and responsible business practices on a global scale.



## EcoVadis

Since 2021, we have actively engaged in the EcoVadis survey, a renowned assessment that evaluates companies' sustainability performance across various criteria.

In 2023, we have been awarded the **Silver Medal by EcoVadis** with a score of 60/100, compared to 55/100 at the previous evaluation.

This achievement shows our ongoing efforts to integrate sustainable practices into our operations and supply chain.

We are proud of this accomplishment and remain dedicated to further improvement.





# Evolving Sustainability Regulations

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# Europe and the Green Deal

The Green Deal is a roadmap proposed by the European Commission to make the European Union's economy sustainable. Its primary objective is to transform Europe into a climate-neutral continent by 2050. Key goals of the Green Deal include:



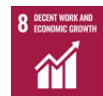
Achieving **climate neutrality** by reducing greenhouse gas emissions to net-zero levels by 2050



Accelerating the **transition to clean energy sources** and increasing **energy efficiency**.



Promoting **sustainable mobility** and **decarbonising transportation**.



Ensuring a just and inclusive transition, focusing on **social equity** and **job creation in green sectors**.



**Protecting biodiversity** and promoting sustainable agriculture practices.



**Enhancing circular economy** principles to reduce waste and promote **resource efficiency**.



Supporting **innovation** and **investments in green technologies and industries**

The **Green Deal** and the **Paris Agreement** are complementary frameworks that reinforce each other's objectives.

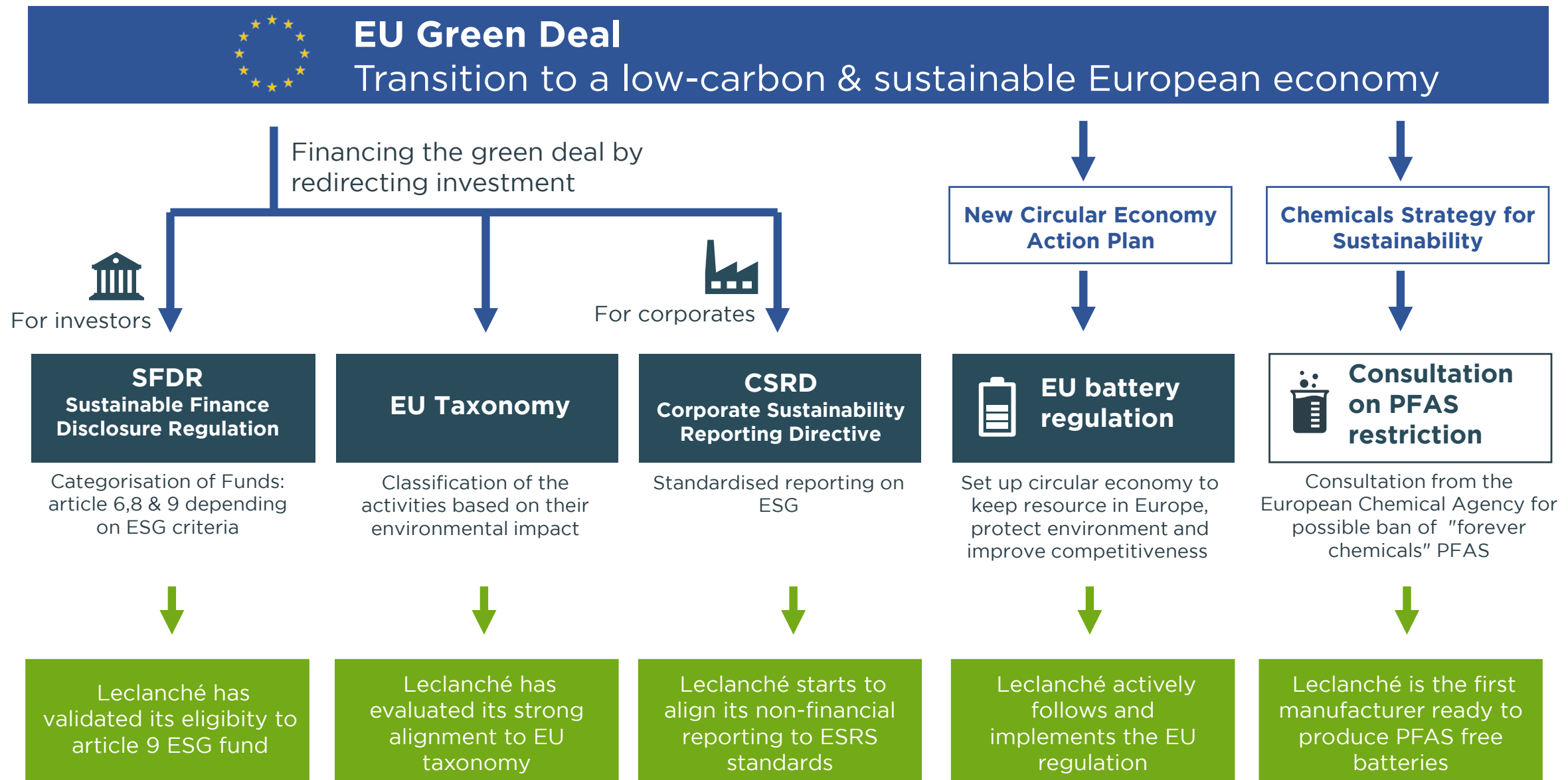
The Green Deal's goals of achieving climate neutrality and promoting sustainable development are in line with the long-term objectives of the Paris Agreement.

The EU's commitment to the Paris Agreement is reflected in its NDC, which outlines the block's collective emission reduction targets and climate adaptation measures. The Green Deal provides a roadmap for implementing and exceeding these targets at the regional level.

Both initiatives emphasise the importance of international cooperation, innovation, and investment in clean technologies to drive the global transition to a low-carbon and resilient future.



# A Strong Regulatory Framework for the Battery Industry in Europe



# EU Taxonomy Alignment

## EU Taxonomy

The EU taxonomy is a classification system, designed to support in achieving the European Green Deal objectives.

To reach Carbon neutrality by 2050, the EU set up the Green Deal action plan, in which, one of main pillars is sustainable finance to **redirect investments toward sustainable companies.**

As a standardised objective framework classification tool, the EU taxonomy seeks to provide clarity for companies, capital markets, and policy makers on **which economic activities are sustainable.**

The Taxonomy also addresses greenwashing, providing more transparency and credibility, enabling market participants to identify and invest in sustainable assets with more confidence.



## Leclanché's Contribution to a Sustainable European Economy

To be classified as a **sustainable economic activity**, Leclanché activity has been evaluated according to the six environmental objectives of the EU Taxonomy (image).

Leclanché is actively contributing to the first objective - **Climate Change Mitigation** - while causing 'no significant harm' to any of the others objectives while respecting basic human rights and labour standards (adhering to minimum social safeguards), as recognised in the Taxonomy.

## Leclanché Alignment

With the support of PwC Luxembourg, Leclanché has assessed its **alignment with the European Taxonomy** for sustainable activities, finding that 82% of Leclanché's 2022 turnover was consistent with these standards. This compares with an average of 22% in industrials and puts Leclanché in a unique position in the market.

Calculation has been updated with the 2023 financial figures. Leclanché reaches 78% alignment to the EU Taxonomy.

# 78 %

**Alignment to the EU taxonomy.**  
Eligibility for Leclanché mobility & stationary sales for 2023.





## Eligibility to ESG Investments Funds

### SFDR – a European Framework to Redirect Investment

The Sustainable Finance Disclosure Regulation (SFDR) framework is a critical initiative by the European Union (EU) to direct investments towards more sustainable entities. It categorises funds into three distinct groups based on their sustainability characteristics:

- **Article 6 Funds:** Financial products with no integration of sustainable approach.
- **Article 8 Funds:** Financial products promoting environmental and/or social characteristics.
- **Article 9 Funds:** Financial products with a sustainable investment objective, recognised as the most sustainable options.

### Eligibility to Article 9 fund

At the end of 2023, Leclanché has validated the eligibility for Article 9. This eligibility is driven by the company's core E-mobility activity, aimed at reducing CO<sub>2</sub> emissions in heavy transportation sectors, including railways and marine, as well as in the broader energy sector. Leclanché is therefore, by assimilation, also eligible for Article 8 and 6 funds.

### Validation by PwC Luxembourg

PwC Luxembourg played a pivotal role in validating Leclanché's compliance with the necessary ESG Key Performance Indicators and policies.

# Batteries: A strategic Sector

## with a Progressive European Regulation on Circular Economy

### An ambitious Regulation

In July 2023, the European Commission unveiled a groundbreaking regulatory framework, designated as Regulation 2023/1542, aimed at revolutionising the battery industry.

This visionary initiative is part of the European Union's Green Deal objective, demonstrating a commitment to environmental sustainability with major requirements for the first time in the world:

- **Traceability and due diligence**, from mining to recycling.
- A **carbon footprint declaration** with a standardised calculation methodology
- Reduction of raw material demand through stringent recycling standards and increased use of **recycled content**.
- The implementation of a **battery passport**, designed to maximise the lifespan of batteries and consequently minimise their environmental impact.

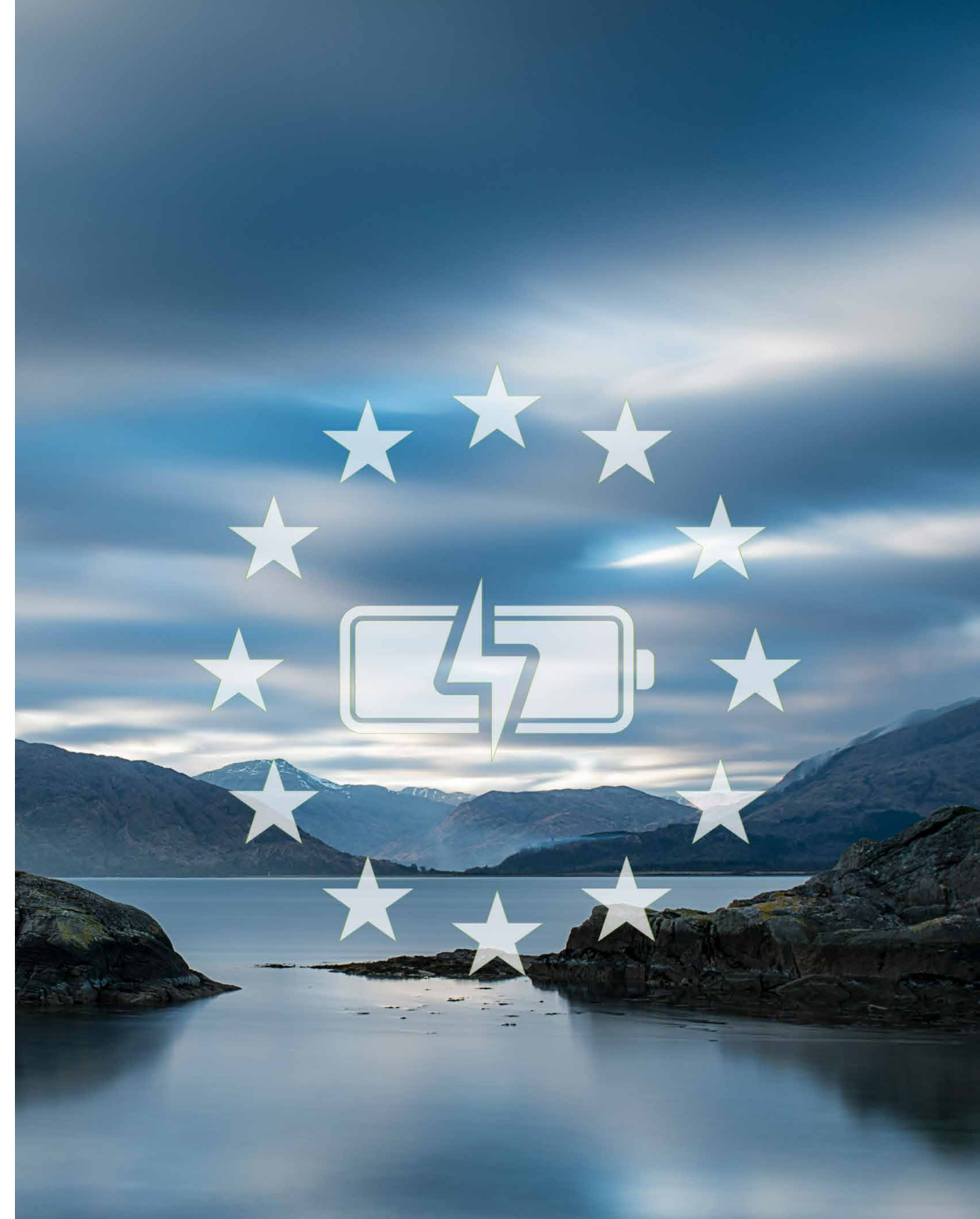
This regulation is considered a pilot for future endeavours, as its concepts are poised to be integrated into the **Ecodesign Directive for Sustainable Products** (ESPR), encompassing diverse sectors such as textiles and electronics.

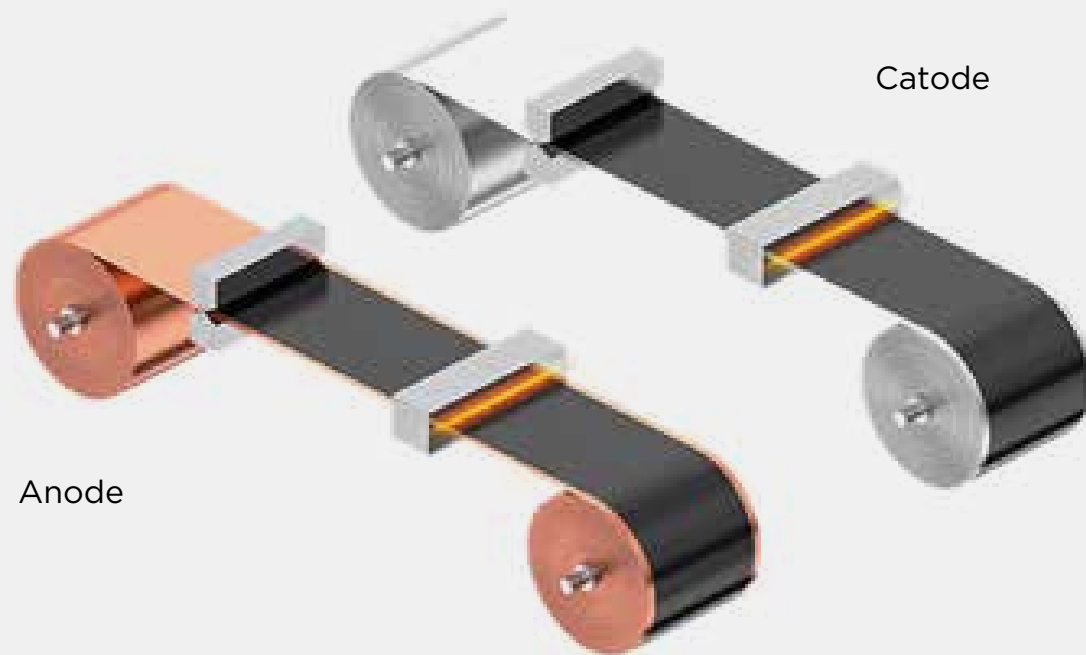
### A deep Involvement via Recharge

As a fully integrated European lithium-ion battery manufacturer, Leclanché joined the Recharge battery association in 2022.

Recharge is the leading association advocating for the sustainable development of an innovative and competitive rechargeable and lithium batteries value chain in Europe.

Leclanché is actively engaged in the regulation's oversight and contribute to the development of the methodology for calculating the Battery Environmental Footprint.





## PFAS Restrictions on the Horizon

### What are PFAS ?

PFAS (Per - and Polyfluoroalkyl Substances), often referred to as '**Forever Chemicals**' for their enduring presence in the environment, have been identified as **highly toxic** substances.

Numerous locations globally have been reported as significantly contaminated by these compounds. PFAS are being recognised as this generation's asbestos.

### Why are PFAS Used in Batteries ?

Battery cells consist of two primary electrodes: the cathode, which serves as the positive electrode, and the anode, which functions as the negative electrode.

**PFAS are mainly used as binders** for the coating of positive electrodes, since they are resistant to heat, oil, water and grease.

### When are PFAS from Batteries released in the Environment?

PFAS can be released during PFAS manufacturing and, especially, at the battery's End-of-Life stage for different reasons:

- Not all batteries are recycled and end up being incinerated or in a landfill.
- New recycling processes are using low temperature processes that are not able to eliminate PFAS.

### The Political will to ban PFAS

The European Chemicals Agency (ECHA) is currently assessing **potential restrictions on the use of PFAS**.

Meanwhile, in the United States, Maine's Department of Environmental Protection has set a prohibition on the sale of products with intentionally added PFAS, effective



# PFAS Restrictions

## an Opportunity for Leclanché

### Water Based Process

In 2010, Leclanché started the DELION project with ZSW (Center for Solar Energy and Hydrogen Research Baden-Württemberg) and Clariant to demonstrate the ability to **replace toxic organic solvent NMP with water** at large scale.

Leclanché was able to produce cells at industrial scale using a **water-based binder process from 2013**, removing NMP toxic solvents and most of the PFAS.

### PFAS Free Batteries

Leclanché decided in 2023 to **remove the last part containing PFAS compounds** from their batteries and plans to entirely shift production to PFAS free cells in 2024.

### A Game Changer for Sustainability

In the latest Battery Monitor (December 2023), Roland Berger identify PFAS free batteries as a game changer for more sustainable batteries in Europe:

“New European regulations on sustainability and ‘forever chemicals’ are the key recent developments. If a solution for PFAS-free batteries is found in Europe, a global shift can be expected”.



# PFAS Restriction

## an Opportunity for the Battery Industry

### Technology Easily Scalable to Existing Gigafactories

Any existing lithium-ion manufacturing plant could implement water-based processes easily.

OPEX and CO<sub>2</sub> emissions of existing production lines will be reduced by:

- Reducing heating temperature by 50-60°C
- Working in standard environment instead of humidity controlled
- No need for expensive PFAS

CAPEX will be reduced for new production lines by:

- Removing NMP recovery equipment
- Removing ATEX protection
- Reducing dry room size

Health and safety of workers is improved since they are not in contact with PFAS.

### Licensing to Accelerate the Transition

Leclanché is open to licensing its **water-based and PFAS free** technology to assist the battery industry in shifting towards more environmentally friendly and more competitive batteries.

#### Standard Battery Cell Production Using Toxic NMP Solvent & PFAS



Safety risk for employees



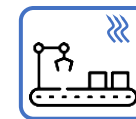
ATEX protection needed



Solvent recovery system needed



High drying temperature in coating



Humidity control space for most of the manufacturing process

#### Leclanché Battery Cell Production Using Water-Based Process



Safer working environment for employees



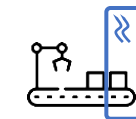
Non-explosive environment



No solvent recycling



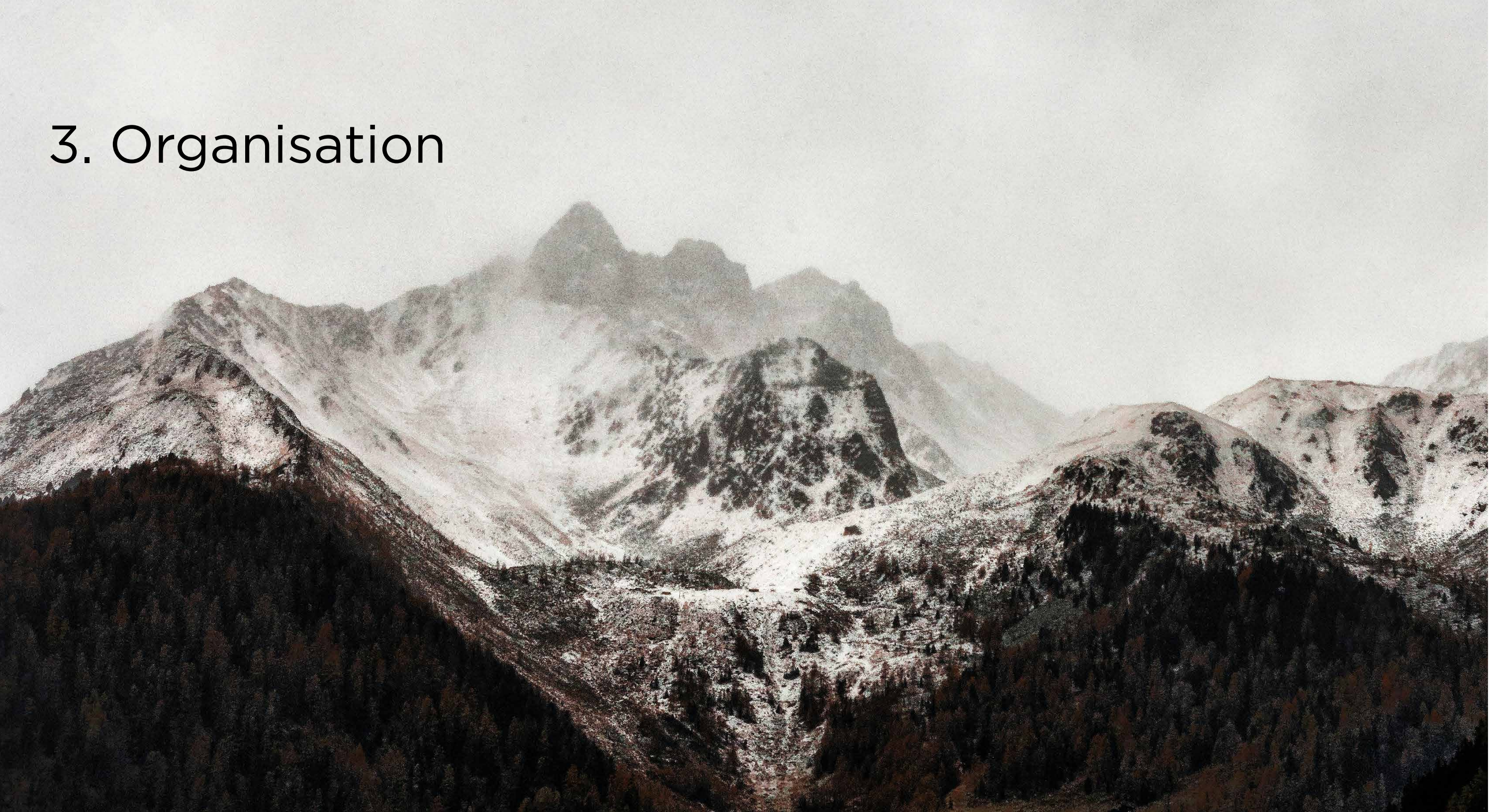
Low drying temperature in coating



Reduction in humidity control space in the manufacturing process



# 3. Organisation





# ESG Support System

## Set up of the ESG Support System

ESG stands for Environmental, Social, and Governance, representing a set of standards to assess an organisation's environmental and social impact. It encompasses the data and metrics needed to inform decision-making for companies and investors.

Our sustainability efforts have seen the establishment of a robust **ESG support system**, comprising policies, key performance

indicators (KPIs), and comprehensive reporting mechanisms on crucial ESG topics.

This system serves to furnish both internal and external stakeholders with pertinent ESG data, fostering transparency and accountability.

Leclanché's governance structure has been reinforced, ensuring alignment with strategic and management objectives and permeating throughout the organisation.

## ESG Implementation

In line with sustainability paradigms, we initiated a preliminary iteration of the double materiality concept, refining it further through stakeholder engagement, thus enhancing our understanding of both financial and non-financial ESG impacts. We set ambitious goals and targets, re-aligned our strategy and collaborative approach (stakeholder engagement), always striving to monitor and improve our sustainable performance.



# ESG Governance

## ESG Integration Within Leclanché

To integrate ESG within Leclanché, and with the growing interest and transparency needs from our external stakeholders, Leclanché has put in place a governance to manage and promote sustainable practices, led by the ESG department.

The ESG department develops and coordinates the sustainable development strategy for Leclanché, with an increasing number of missions and cross-functional project coordination, as well as a strong focus on environmental footprint.

## Stakeholder Engagement

In this ESG system, stakeholder engagement (internal and external stakeholders) is key to understanding emerging ESG concerns, societal expectations, and identifying areas for improvement.

This collaborative approach ensures that stakeholder views, interests, and expectations are integrated into decision-making processes.



# Double Materiality

## CSDR and Double Materiality

The **Corporate Sustainability Reporting Directive** (CSRD) is a set of requirements for companies to provide a range of non-financial public disclosures on environmental, social, and governance (ESG) topics. In the processes of disclosure, CSRD introduces an innovative, critical element: the **Double Materiality Assessment** (DMA).

Leclanché conducted the Double Materiality Assessment by identifying and prioritising materiality on the ESG issues that are most relevant in all our activity, by evaluating stakeholders' expectations and concerns and considering relevant risks and opportunities throughout our value chain and processes.

Performing this double materiality required the evaluation of sustainability aspects from two distinct perspectives:

- Assess and quantify the impacts of the company through an inside-out perspective, evaluating the **impact of Leclanché's activity in the community and environment**, the so-called impact aspect;
- **Integrate financial materiality** into the materiality assessment, adopting an inside-out perspective, by assessing the effect of specific sustainability risks and opportunities on the enterprise value of our company.

This process facilitates effective **risk mitigation** and **strategic decision-making aligned with sustainability matters** crucial to the organisation, its stakeholders, and society.

Within this framework, companies are expected to disclose how they manage the impacts, risks, and opportunities associated with each topic, thereby clarifying potential strategic implications.

## Guidelines from the CSRD

A **double materiality assessment** is the essential first step towards CSRD, enabling an understanding of the organisation's impact on the environment, society, and governance.

Companies subject to CSRD are required to report according to **European Sustainability Reporting Standards** (ESRS), offering relevant, comparable, and reliable information on sustainability-related impacts, risks, and opportunities. The ESRS aims to enhance transparency, accountability, and responsibility among businesses regarding their environmental and social impacts.

This disclosure ensures that investors and other stakeholders have access to information to assess **companies' impacts on people and the environment, as well as financial risks and opportunities** stemming from specific sustainability issues.

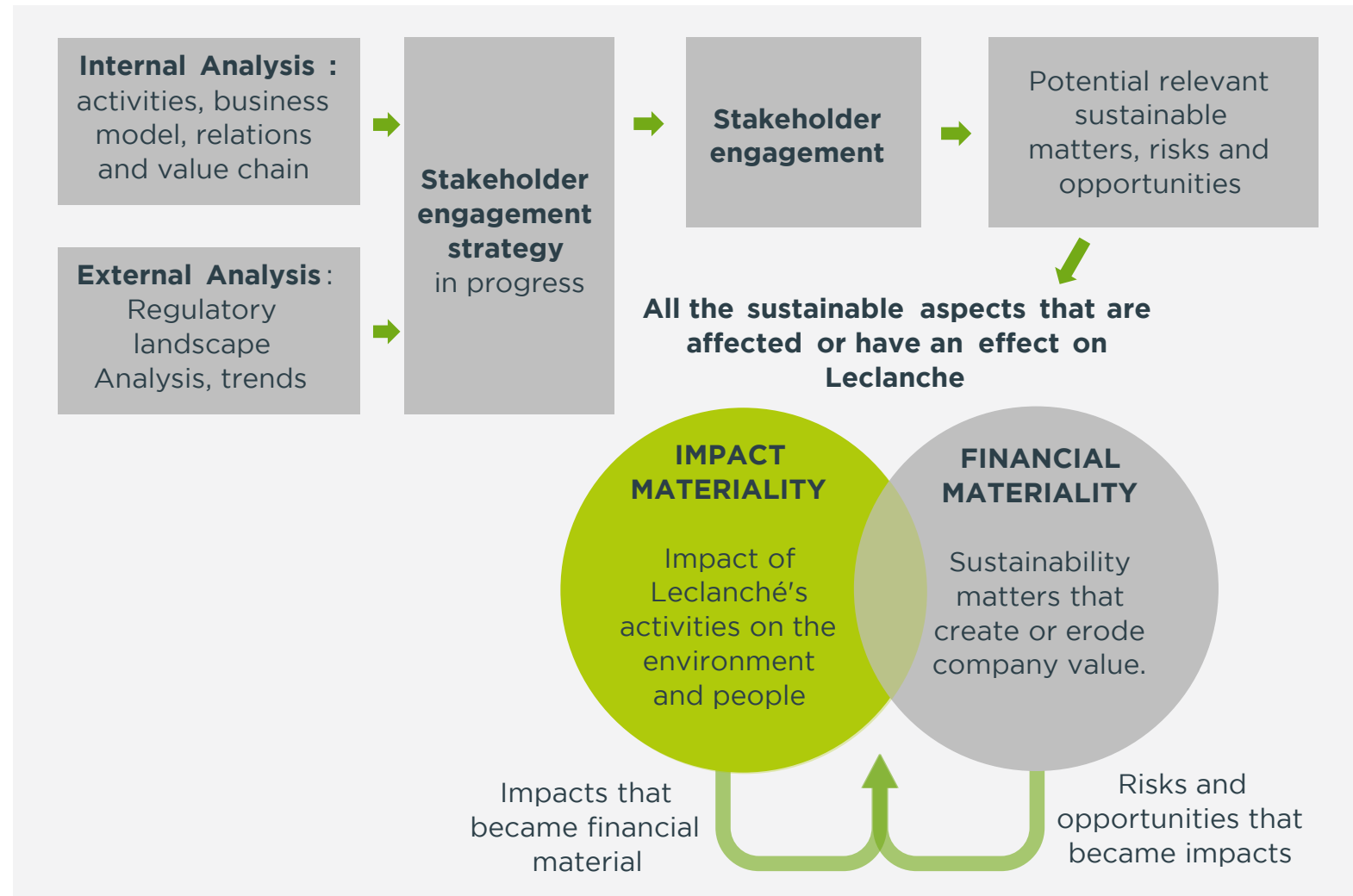
The ESRS consists of 12 standards, including two mandatory **cross-cutting standards** (ESRS 1 and ESRS 2) covering general requirements and disclosures, five **environmental standards** (ESRS E1 to E5), four **social standards** (ESRS S1 to S4), and one **governance standard** (ESRS G1). For the 10 thematic standard issues reported are determined based on the company's double materiality assessment.



# Double Materiality

## Materiality Assessment Process

### Double Materiality:



### Report:

#### On the process

The first step is to describe the process used to identify and assess material impacts, risks and opportunities, as requested in the **ESRS 2** guideline

#### On the outcome

The outcome is based on the following guidelines:

- **SBM 3** : Material impacts, risks and opportunities and their interactions with strategy and business
- **IRO-2** : Disclosure of all ESG information according the ESRS standards:



# Policies

## Update to Further Integrate ESG Within the Company

In 2023, collaborative efforts between the sustainability department, Environmental Health and Safety (EHS), Human Resources (HR), and management led to the revision of policies aimed at enhancing the integration of Environmental, Social, and Governance (ESG) principles throughout our company's operations and organizational framework.

These updated policies now incorporate specific requirements aligned with the new European Battery directive. For instance, the new version of the supplier code of conduct now includes mandates for traceability and due diligence within the supply chain.

The policies are supported by the governance and deployed within the departments and sites.

## List of Available Policies

### Internal Policies:

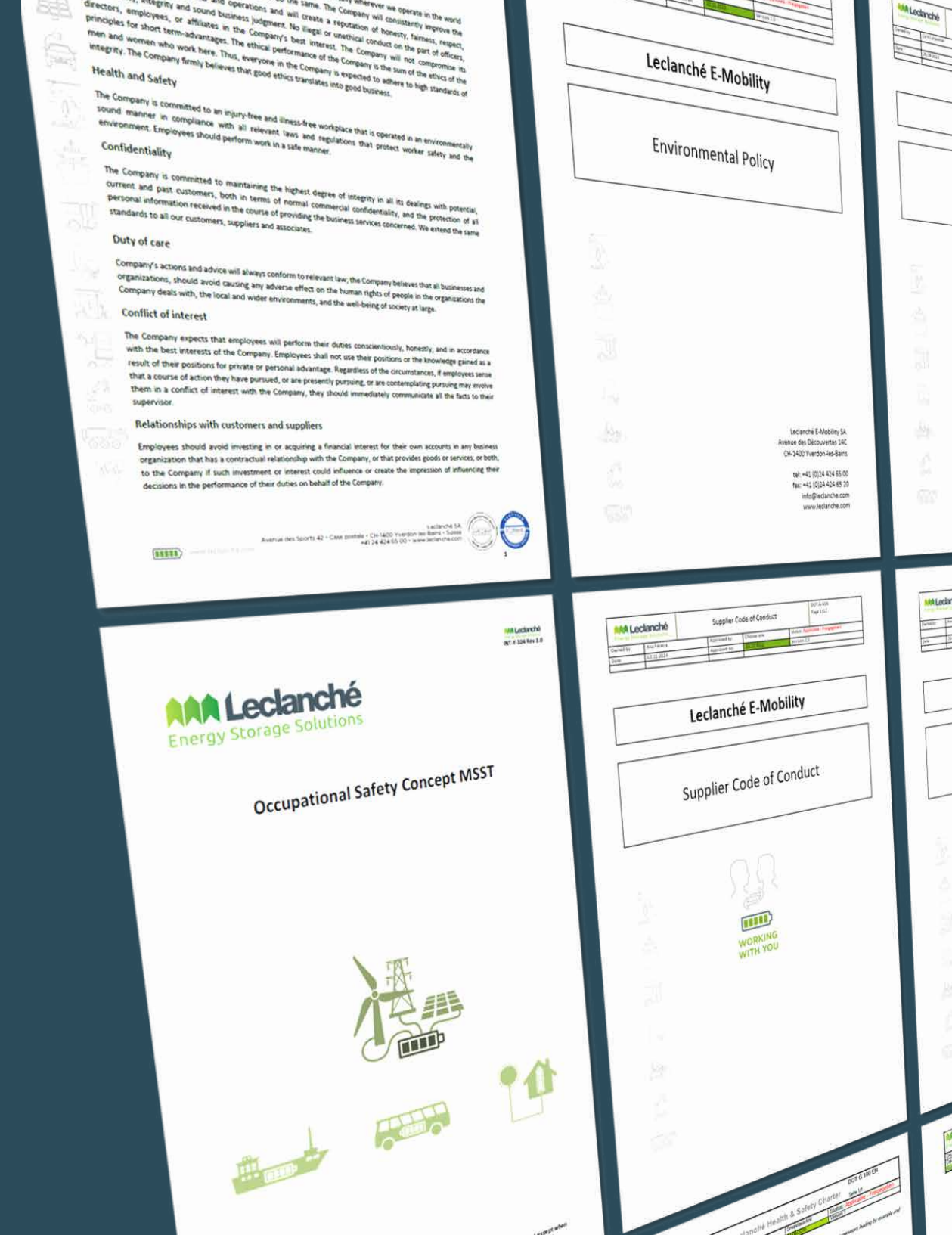
- Environmental Policy
- Password Protection Policy
- Acceptable use Policy
- Code of Conduct for Employees
- Business Integrity
- Home office Conduct
- Soft Mobility Policy
- Collective Agreement
- Entreprise Regulation
- Working Time Regulation

### External Policies:

- Supplier Code of Conduct

### Policies Under Development / Validation:

- Environmental Strategy
- Social Policy
- Social Strategy
- Governance Policy
- Governance Strategy
- Supply Chain Due Diligence and Traceability Strategy
- Customer Health and Safety Policy





# Responsible Mining and Supply Chain

## Demand Increasing in a Complex World

The exponential growth in demand for lithium, cobalt, graphite, and other **critical minerals** is straining global supply chains. As the mobility industry shifts towards electric vehicles, the excessive demand for these minerals has led to intensified mining activities, often in ecologically sensitive areas, accelerating environmental degradation and threatening biodiversity.

Moreover, the concentration of these critical minerals spread across a small number of territories can create geopolitical tensions. Geopolitical instability in key mining regions can disrupt supply chains, exacerbating market uncertainties and driving up prices.

Another pressing issue is the risk of monopolistic control over the supply of critical minerals. Fluctuations in commodity prices, driven by market speculation, geopolitical events, or supply disruptions, can impact the costs associated with battery production. Price volatility undermines investment certainty, complicates planning efforts, and poses financial risks to industry stakeholders.

## ESG Taken into Consideration

ESG issues are also a significant concern in the mining for battery production. The extraction of critical minerals often involves environmentally destructive practices, such as deforestation, water contamination, and carbon emissions. Additionally, labour rights abuses, child labour, and unsafe working conditions plague some mining operations, raising ethical concerns.

Leclanché understands that the collaboration with industry stakeholders, governments, and civil societies is essential for implementing effective policies and practices to mitigate these challenges and foster a more sustainable and ethical battery industry.

As a key player in the process, Leclanché is committed to comply with stringent sustainability standards, contributing to more responsible sourcing practices, promoting sustainable mining techniques, and upholding ESG standards throughout the supply chain, while maintaining transparent reporting on performance.





# Responsible Mining Initiative

## Participation in the Responsible Mining Initiative

As a battery producer, our participation in the **Responsible Mining Initiative** (RMI) reflects our commitment to sustainability and ethical practices.

Through RMI, we work with stakeholders to contribute to transparent and responsible mineral sourcing, mitigating risks of supply chain disruptions and market volatility. This aligns with our values, meeting the expectations of environmentally conscious consumers.



The Responsible Mining Initiative (RMI) is a collaborative effort focused on improving practices in the mining industry, with an emphasis on environmental, social, and governance (ESG) issues. It aims to ensure a sustainable, ethical and transparent supply chain by promoting.

- 1. Environmental Responsibility:** Encouraging practices that minimise ecological harm, such as reducing pollution and habitat destruction.
- 2. Social Accountability:** Ensuring local communities benefit from mining and are treated fairly, respecting indigenous rights and promoting inclusive development.
- 3. Transparent Governance:** Advocating for better regulation, transparency in licensing, and ethical business conduct to combat corruption.
- 4. Ethical Mineral Sourcing:** Promoting responsible supply chain management, including tracing mineral origins and avoiding materials from conflict zones or areas with human rights abuses.
- 5. Stakeholder Collaboration:** Fostering partnerships among governments, companies, civil society, and communities to find sustainable solutions and share best practices.

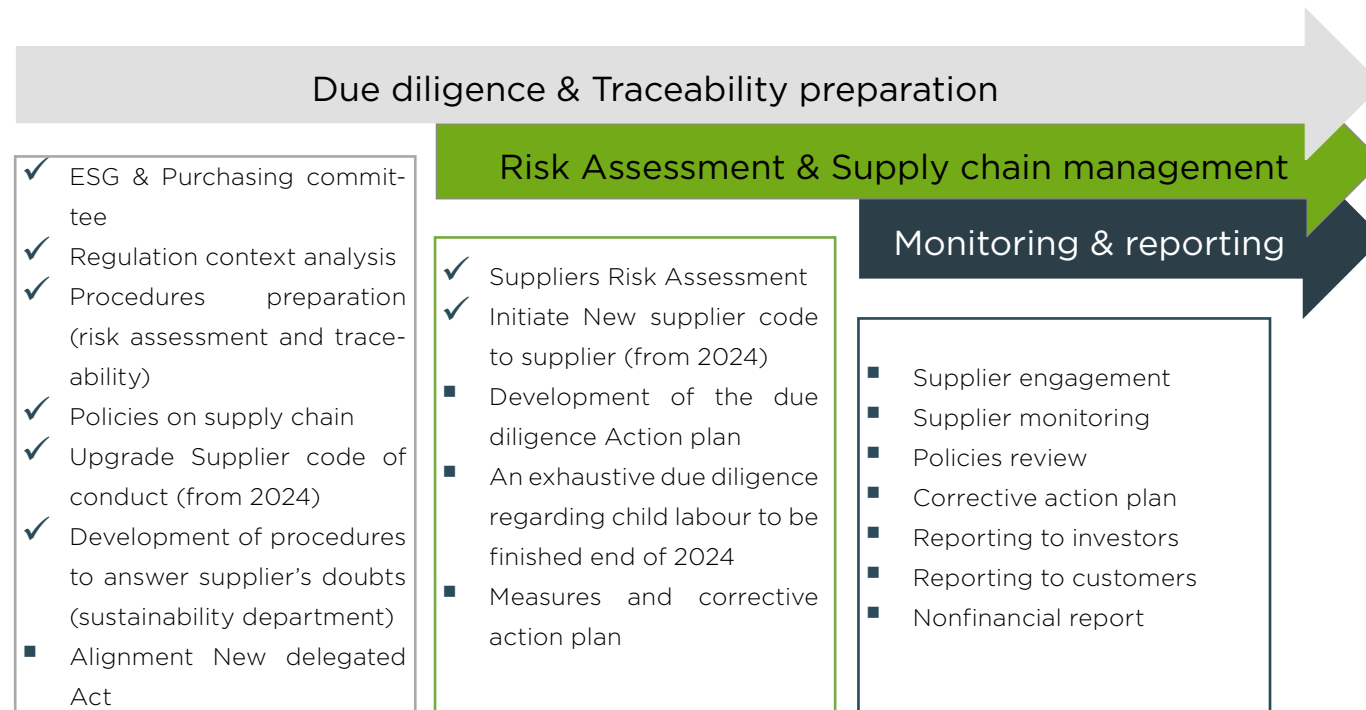


# Responsible Supply Chain

## Due Diligence in Progress

To ensure the long-term viability and sustainability of minerals and metal supply chains in supporting battery production, it is crucial to address challenges such as responsible sourcing, ethical labour practices, environmental impacts of extraction and processing, and the recycling of battery material.

By promoting **traceability** and **due diligence** practices, we ensure that every step of our supply chain adheres to rigorous standards, from mineral extraction to battery production. This commitment not only reinforces our accountability but also empowers informed consumer choices. For us this is key to responsible business conduct, fostering trust and driving positive industry change. Our progress in the due diligence process activities is highlighted in the process below.



## Traceability and due diligence in the European Battery Regulation

The **new battery regulation 1542/2023** establishes important new rules to increase transparency throughout the value chain.

Traceability & due diligence in the supply chain (Article 45) from 2025 for 4 main relevant materials: Nickel, Cobalt, Lithium, Natural graphite

Battery Passport and labelling (Article 65) from 2027 - mandatory digital ID for batteries sold in the EU by 2026. Includes supply chain data and the battery carbon footprint.

Our approach on supply chain due diligence is based on the

- United Nation Guiding Principles (UNGP),
- OECD Guidelines on Responsible Business Conduct and on Responsible Mineral Sourcing.



# Ethical Business Practices

## Ethical Conduct

At Leclanché, we are guided by a strong commitment to integrity, honesty, and ethical behavior in all our interactions, both internally and externally. Our ethical conduct policy serves as a guiding light for our directors, executives, employees, and business partners, outlining clear expectations and standards of behavior that reflect our core values.

**Integrity and Transparency:** At Leclanché, we uphold the highest standards of integrity and transparency in all our business dealings, ensuring that our actions are guided by honesty, fairness, and accountability.

**Compliance with Laws and Regulations:** We comply with all applicable laws, regulations, and industry standards. We take proactive measures to stay abreast of regulatory changes and ensure that our policies and practices remain in alignment with legal requirements.

**Conflicts of Interest:** We are committed to identifying, disclosing, and managing conflicts of interest in a manner that prioritizes the best interests of the company and its stakeholders.

## Anti bribery and corruption policy

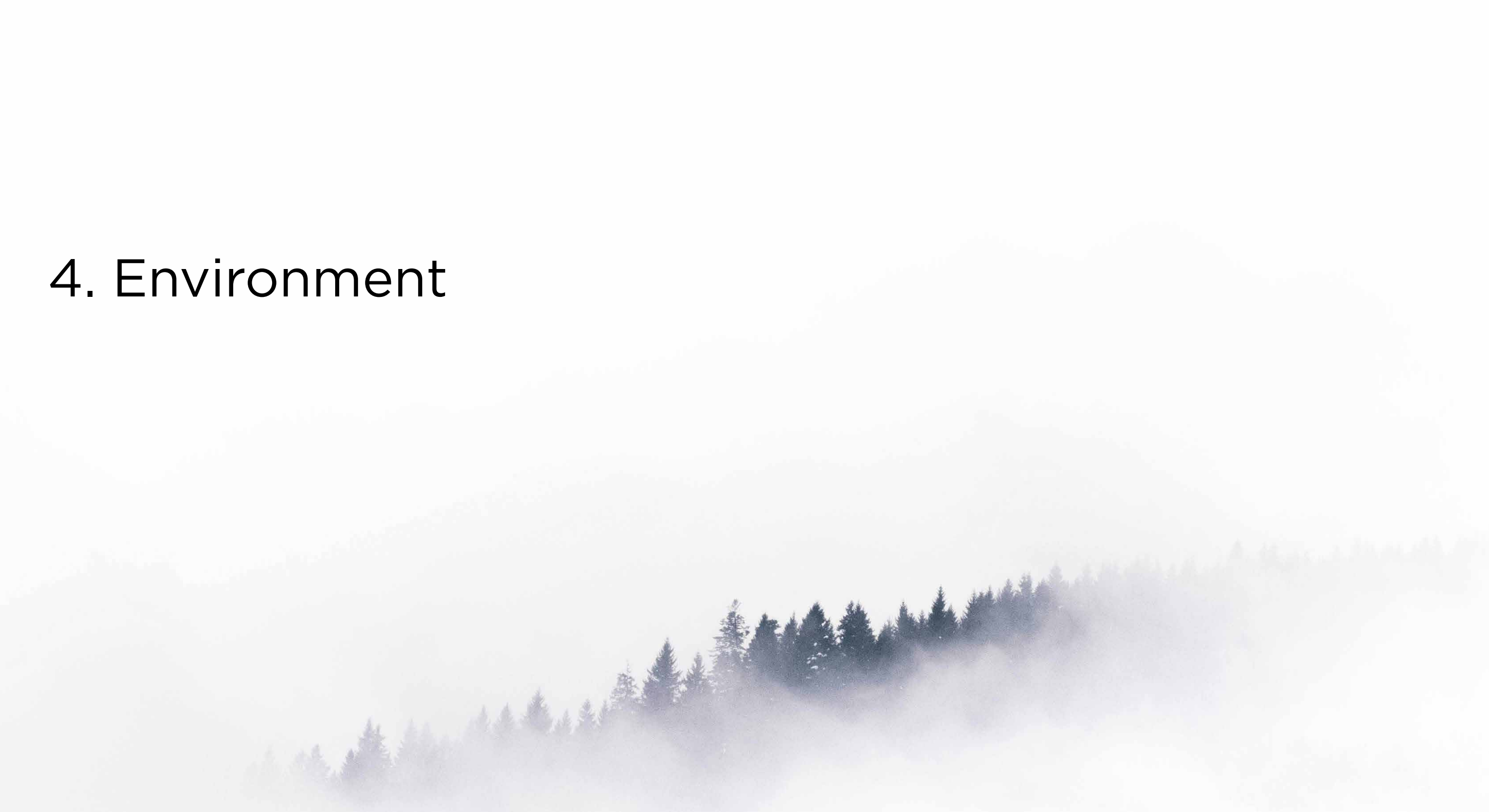
We are acutely aware of the risks associated with bribery and corruption, particularly in some sensitive regions. It is imperative that all members of our organization, including employees, contractors, suppliers, and partners, understands our commitment on having zero tolerance for any form of bribery or corruption. This commitment is clearly outlined in our **Code of Conduct** and **Supplier Code of Conduct**.

The **Business Integrity Policy** refers to all kinds of corruption risks and provides comprehensive guidance on identifying red flags, understanding roles and responsibilities, and adhering to relevant laws and reporting processes.

Every employee is required to review and accept the Code of Conduct upon joining our company, underscoring our unwavering dedication to ethical conduct in all aspects of our business operations.



# 4. Environment



# Climate Related Risks and Opportunities

## Climate-Related Risk

Given the uncertainties in the evolution of global GHG emissions and their climate impacts in different time horizons, the CSRD, aligned with the reporting framework from the TCFD (Task Force on Climate-related Financial Disclosures), requires climate-related risks and opportunities to be assessed using scenario analysis.

## Two Scenarios Identified

This approach requires identifying potential climate risks and opportunities by considering two future scenarios: a 'best-case' scenario with an effective and rapid, low-carbon transition, limiting global warming to 1.5°C, and a 'worst-case' scenario characterised by high physical impacts resulting in a temperature increase of up to +4°C by the year 2100.

Scenario  
**+ 1.5°C**  
Company impacted by transition risks

Best Scenario  
**Rapid Low Carbon Transition**

- Global CO<sub>2</sub> emissions decline dramatically
- Achieve Carbon neutrality in 2050
- Political motivation and will to combat and prevent climate change

Scenario  
**+ 4°C**  
Company impacted by physical risks

Worst Scenario  
**Fuel based development**

- Limited policies and carbon credits
- Limited political efforts to act on preventing and mitigating
- No significant measures, free markets, fuel based economic growth



# Leclanché Climate Related Physical Risks

Failing to transition to net zero and maintaining reliance on fossil fuel development exposes companies to significant physical risks.

Extreme climate events, extreme temperatures and water scarcity intensified by carbon emissions, pose direct threats to infrastructure, supply chains, operations and products.



## Physical Risks

**Extreme weather events** - Our battery production facilities may be vulnerable to damage or disruption from extreme weather events (hurricanes, floods, or wildfires). These can lead to facility closures, supply chain disruptions, and property damage, impacting production capacity and operational continuity.

**Water scarcity** - Exacerbated by droughts and changing precipitation patterns, can affect our battery production processes. Water shortages may lead to increased costs, production delays, and operational challenges.

**Supply chain climate-related disruptions** - Disruptions in raw materials and critical materials (lithium, cobalt, and nickel) supply chain, caused by extreme events can impact production and supply chain resilience.

**Extreme Temperature Events** - Heatwaves or cold snaps, can impact our production processes, infrastructure and product performance. Temperature extremes may require additional energy inputs for heating or cooling, increasing operational costs and energy consumption.

## Leclanché's Measures

**Investment in resilient infrastructure** - At Leclanché we are investing in resilient infrastructure and disaster measures to minimise the impact of extreme weather events (flood defences, strengthening buildings).

**Water Conservation and Recycling** - Implementing water efficiency conservation and recycling measures to mitigate the risk of water scarcity (Water Action Plan) and enhancing resilience to drought conditions.

**Diversifying and localizing supply chains** is a way to mitigate supply chain disruptions and enhance supply chain resilience. By amplifying and building strategic partnerships we can reduce dependence on vulnerable supply chain nodes and mitigate risks associated with climate-related disruptions.

**Investing in battery technologies** - At Leclanché we work to develop advanced battery technology optimised for extreme weather conditions, temperature fluctuations, and harsh operating environments.



# Leclanché Transitional Climate Related Risks

An efficient and rapid low-carbon transition, unravel a multitude of changes needed to achieve global economics and sustainability. In this transition, stringent climate policies and carbon pricing mechanisms drive the shift towards a decarbonised economy.

As technology evolves and markets adapt, companies like Leclanché face potential transitional risks and opportunities. These include legal complexities, technological advancements, reputational considerations, and shifts in market dynamics.



## Transitional risks

**Regulatory Changes** - Changes in environmental regulations and policies addressing climate change may impact the operations and regulatory compliance requirements. Failing to adjust can lead to increased compliance costs and operational adjustments..

**Supply Chain Disruption** - Transitioning to a low-carbon economy may result in disruptions of raw materials and components in the supply chain. Changes in market demand, availability of critical material, and geopolitical factors can also affect supply chain resilience, leading to supply shortages, price volatility, and production delays.

## Opportunities

**Leadership in Compliance and Innovation** - Leclanché is leveraging regulatory change as an opportunity to demonstrate leadership in compliance and innovation. By proactively adapting to new environmental regulations, investing in clean technology, and advocating for supportive policies, Leclanché can have a competitive advantage and strengthen its market position.

**Diversification and Localisation of Supply Chains** - This is an opportunity to diversify and localise our supply chain. This includes sourcing raw materials from multiple suppliers and regions, investing in domestic manufacturing capabilities, and building strategic partnerships to ensure a resilient and agile supply chain..

# Leclanché Transitional Climate Related Risks



## Transitionnal risks

**Technology Shifts** - Technological advancements and shifts in consumer preferences towards cleaner technologies and energy-efficient products may impact the demand for batteries and battery material. Failing to adapt to changing market dynamics or invest in innovation may face competitive pressures and market share loss.

**Investor and Customer Preferences** - Increasing awareness of climate change and sustainability issues among investors and consumers may drive shifts in investment preferences and purchasing decisions. Failing to demonstrate a commitment to sustainability, transparency, and ESG principles may lead to reputational risks and loss of market credibility.

**Renewable Energy Transition** - As the world shifts towards renewable energy sources, battery producers can face the transitional risk of adapting to changes in energy markets and supply chains. The increasing adoption of renewable energy technology, may lead to fluctuations in energy prices, availability, and demand, impacting the production processes that rely on renewable energy.

## Opportunities

**Investment in Research and Development** - We invest in research and development to stay ahead of technological shifts and changing consumer preferences. By developing innovative battery technology, improving energy efficiency, and exploring new market opportunities, Leclanché can maintain a competitive edge and capture emerging markets.

**Brand Differentiation and Reputation Management** - Opportunity to differentiate our brand and manage our reputation by aligning with investor and consumer preferences for sustainability and transparency.

**Establish strategic partnerships** - Establish strategic partnerships and collaborations with renewable energy developers, utilities, and technology companies to leverage complementary expertise and resources. We can create synergy.

# Climate change adaptation and mitigation

## Leclanché's Commitment to Climate Change Mitigation

To contribute to the Green Deal's main goals, Leclanché recognises the importance of designing and implementing a **complete low-carbon strategy** to identify hotspots and reduce emissions, setting science-based targets in alignment with the Paris Agreement.

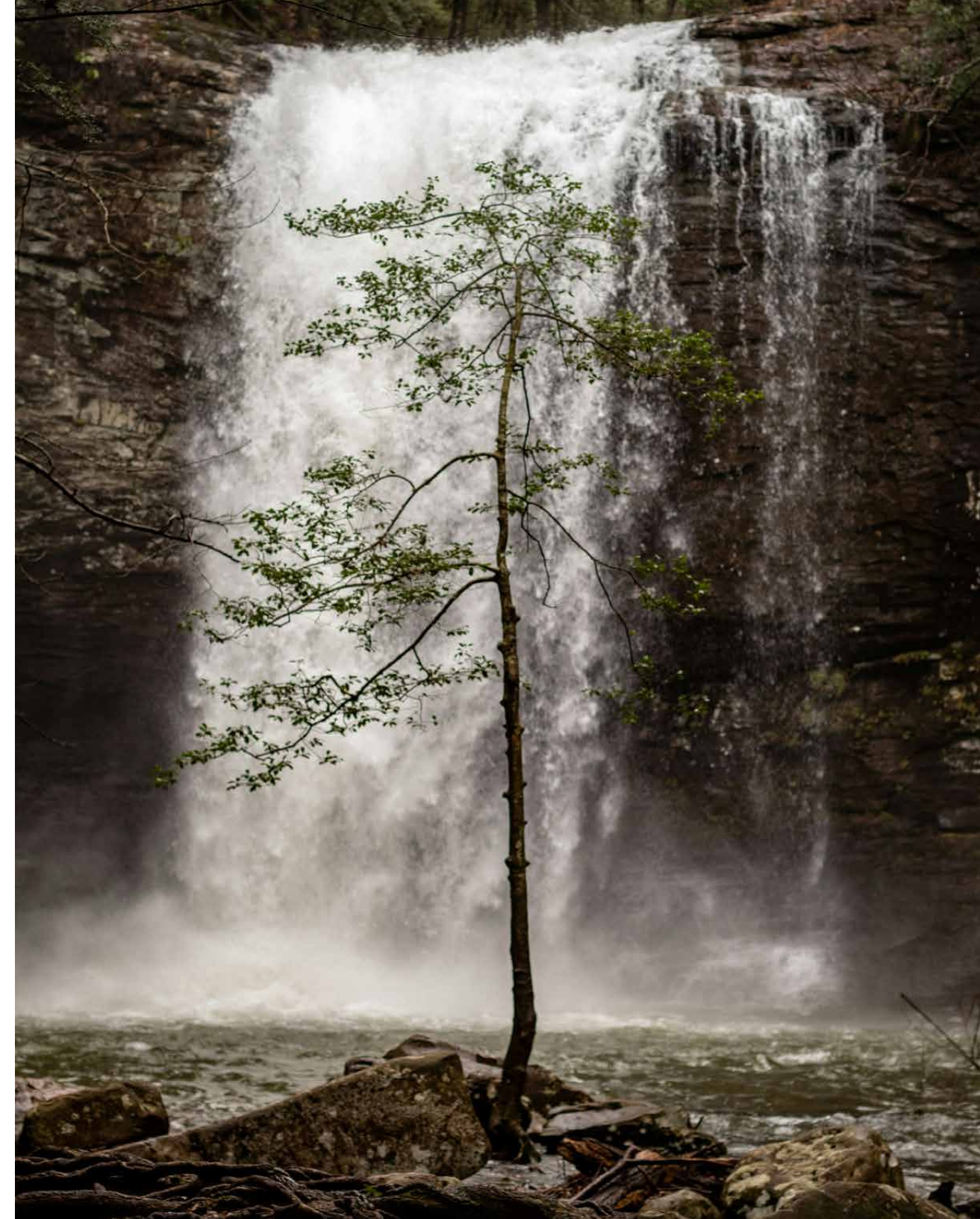
To establish a practical and pertinent strategy for mitigating emissions and to ensure transparency regarding our environmental impact, we have conducted a thorough calculation of the **company's greenhouse gas emissions**, aligned with the international Greenhouse Gas Protocol. For the products, Leclanché is also invested in calculating the complete **environmental footprint** following specific official standards. We also conducted a comprehensive assessment of the company's current energy consumption, and environmental impact associated with all our activities.

Our **transition plan** encompasses strategies and actions aimed at reducing greenhouse gas emissions, promoting sustainability, and building resilience throughout our opera-

tions and supply chain. We are also implementing measures to reduce our environmental footprint and minimise our reliance on fossil fuels by investing in energy-efficient manufacturing processes, transitioning to renewable energy and optimising our supply chain to reduce emissions.

Additionally, we are actively exploring **cleaner technology** and **innovative solutions** to improve the environmental performance of our **products**. By embracing sustainable materials, enhancing product efficiency, and promoting circular economy principles, we aim to contribute to the global effort to limit the extent of global warming and mitigate its adverse impacts.

In parallel, there is also the need to adapt to climate change, which means to manage and respond to the impacts of climate change that may affect our operations and stakeholders. We are implementing resilience-building measures such as enhancing our infrastructure to withstand extreme weather events, diversifying our sourcing strategies to mitigate supply chain risks, and investing in disaster preparedness and response systems.





# Environmental Strategy from the Double Materiality

<b>Decarbonise activity and promote energy efficiency</b>	<ul style="list-style-type: none"><li>▪ Measure Company Carbon Footprint (page 41) and Products Environmental Footprint (page 43)</li><li>▪ Develop several Action Plans to execute our Low carbon strategy</li></ul>
<b>Promote sustainable sourcing of raw materials</b>	<ul style="list-style-type: none"><li>▪ Ensure responsible mining (page 30)</li><li>▪ Ensure a sustainable and responsible supply chain (page 32)</li></ul>
<b>Promotion of sustainable battery usage</b>	<ul style="list-style-type: none"><li>▪ Develop and promote more energy-efficient battery technology</li><li>▪ Promote information to consumers for responsible battery usage, including proper disposal and recycling practices (customer Health and safe, product end-of-life)</li></ul>
<b>Research and develop for sustainable innovation</b>	<ul style="list-style-type: none"><li>▪ Research and development of more sustainable next-generation battery technology (page 12)</li><li>▪ Collaborate with academy, research groups, and partners to drive innovation in battery technology and manufacturing (pages 20, 41)</li></ul>
<b>Promote efficient use of resources</b>	<ul style="list-style-type: none"><li>▪ Establish closed-loops in manufacturing and supply chain (page 44)</li><li>▪ Design for repair, repropose and recycle (page 44)</li><li>▪ higher energy density and longer lifespan materials to maximize performance and durability (page 47)</li></ul>
<b>Promote circular economy, reduce waste generation and enhance recycled materials</b>	<ul style="list-style-type: none"><li>▪ 6 R concept (page 44)</li></ul>

# Company Carbon Footprint

## First Step for the Low Carbon Strategy

Since 2020, Leclanché calculates its yearly emissions using the greenhouse gas protocol methodology, for the 3 scopes:

**Scope 1:** Direct emissions from sources owned or controlled (oil, gas).

**Scope 2:** Indirect emissions from purchased electricity, heat, or steam.

**Scope 3:** Indirect emissions from activity related to its value chain.

- 1504 tCO<sub>2</sub> eq, wich corresponds to the upstream activity, mainly due to purchased goods and services
- 2124 tCO<sub>2</sub> eq to downstream, mainly due to electricity losses in the battery during charge and discharged cycles

The GHG values provided are for 2022. The GHG emissions calculation for 2023 is still pending.

## Future Synergy with the Battery Carbon Footprint

From 2024, Leclanché will calculate the battery carbon footprint following the European standardised methodology of the Product Environmental Footprint (PEF). This will improve Scope 3 calculation accuracy .

### Equivalent to:



**545**

world tours with a diesel car



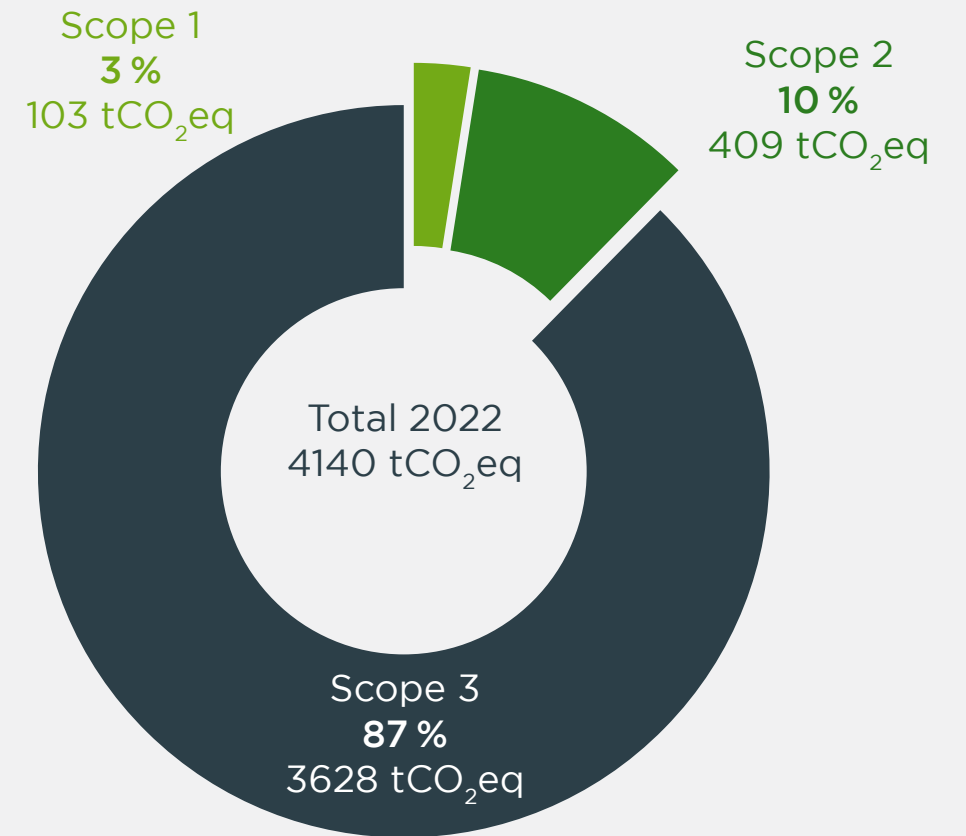
**414**

people at an average of 10 tCO<sub>2</sub> eq/year per European person



**2300**

Plane Round trips Paris/ New York



# Avoided Emissions

## Preliminary Calculation of Avoided Emissions

According to the GHG Protocol, **Scope 4** encompasses emissions reduced through the use of a product that replaces other goods or services, while offering similar functions, but with a reduced carbon footprint.

Leclanché has performed preliminary calculations on avoided emissions using scientific literature for batteries sold in 2023 in the marine and railway projects.

The calculation considers the emissions avoided by our customer thanks to the use of our batteries, over the entire life duration of the batteries. It does not take into account the production neither the end of life of the battery, since already taken into account in the Scope 3.

Avoided emissions equivalent to:



**12 500**  
world tours with a diesel car



**9 500**  
people at an average of 10tCO<sub>2</sub>eq/year per European person



**50 000**  
Plane Round trips Paris/New York



**90kt CO<sub>2</sub> eq**  
avoided by our customers





# Battery Carbon Footprint

## A standardised and Mandatory Calculation

The new EU battery regulation from July 2023 set up a mandatory carbon footprint declaration for batteries manufactured or imported in Europe.

The Environmental Footprint calculation will be performed according the standardised European methodology (PEFCR) - Product Environmental Footprint Category Rules.

This standardised calculation methodology allows a fair carbon footprint-based comparison of batteries, establishing it as a crucial purchasing criterion and a method to avoid greenwashing.

## Preliminary calculation

Leclanché has performed a preliminary calculation based on a previous version of the PEFCR and its old datasets.

For this preliminary calculation, the usage phase is not taken into consideration (cradle to gate only) since not defined yet for a marine or railway application in the PEFCR.

The results are not representative - they are just here to provide a first indication and test the methodologies, and can't be used to compare with other battery supplier.

Promising Outcomes and Future Objectives

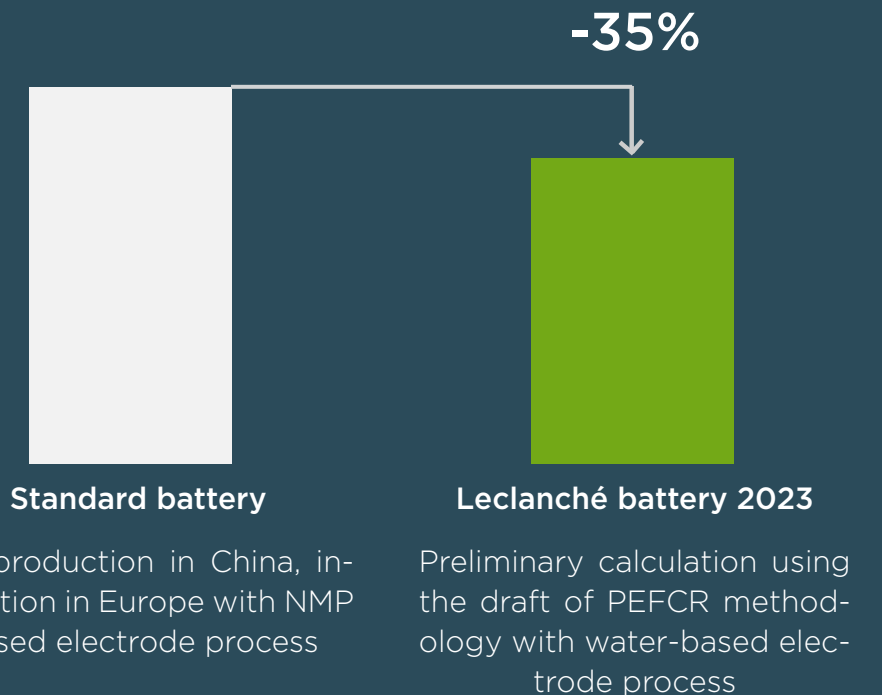
Preliminary results show a significant carbon footprint reduction between representative battery made in China and Leclanché battery.

This improvement is possible thanks to:

- the use of **100% renewable electricity**
- the **water-based electrode** process because it avoids energy-intensive steps like drying and solvent recovery, as normally needed with toxic solvent.

In 2024, Leclanché will calculate using the final methodology, once published. Leclanché aim to monitor all the necessary activities to improve the accuracy and identify hotpots. Leclanché targets a reduction of 60% in 2030 compared to the representative battery as defined in the European PEFCR methodology.

## Improvement of Leclanché's battery carbon footprint compared to the standard



# Leclanché 6R Concept for Circular Economy

## 6R concept as an internal guideline to implement a circular economy

In April 2023, Leclanché launched the 6R circular economy concept as a guideline to improve circularity.

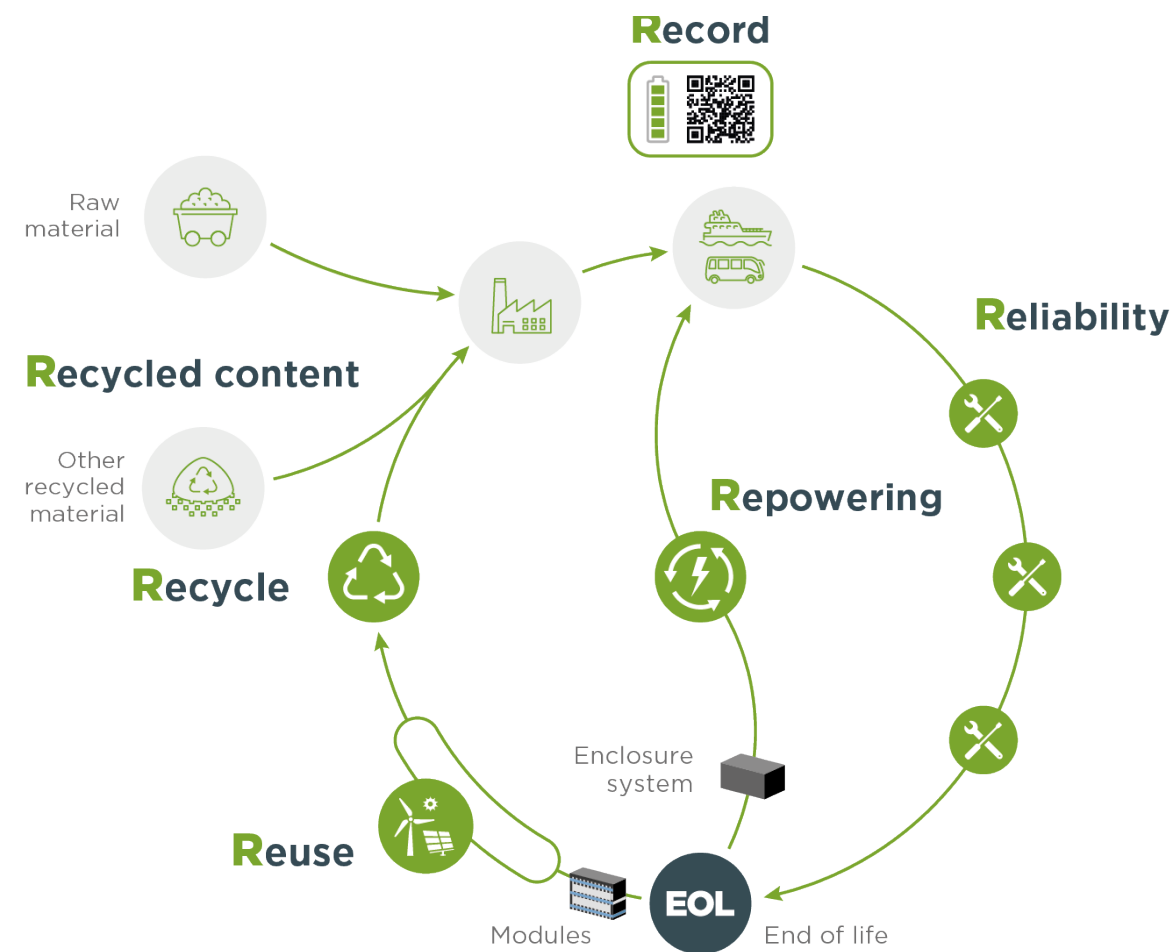
Leclanché's 6R concept stands for **Reliability, Repowering, Reuse, Recycling** and **Recycled Content** as well as **Record** throughout the life cycle of a battery, all of which contribute to a successful circular economy with:

- The monitoring and maintenance of the batteries, thus extending the service life (**Reliability**),
- The repurposing of components and used batteries for a second life stage (**Repowering** and **Reuse**),
- The recycling and use of recycled materials in production (**Recycling** and **Recycled Content**)
- The traceability of the raw material and the issuing of a digital battery passport, which enables full traceability in the future (**Record**).

## R&D Project to improve circularity

Leclanché is one of the 24 industry partners of the **CircuBat project**, aiming to reduce the ecological footprint of lithium-ion batteries and improve circularity.

In 2023, Leclanché engages several resources in the different workpackages and workshops



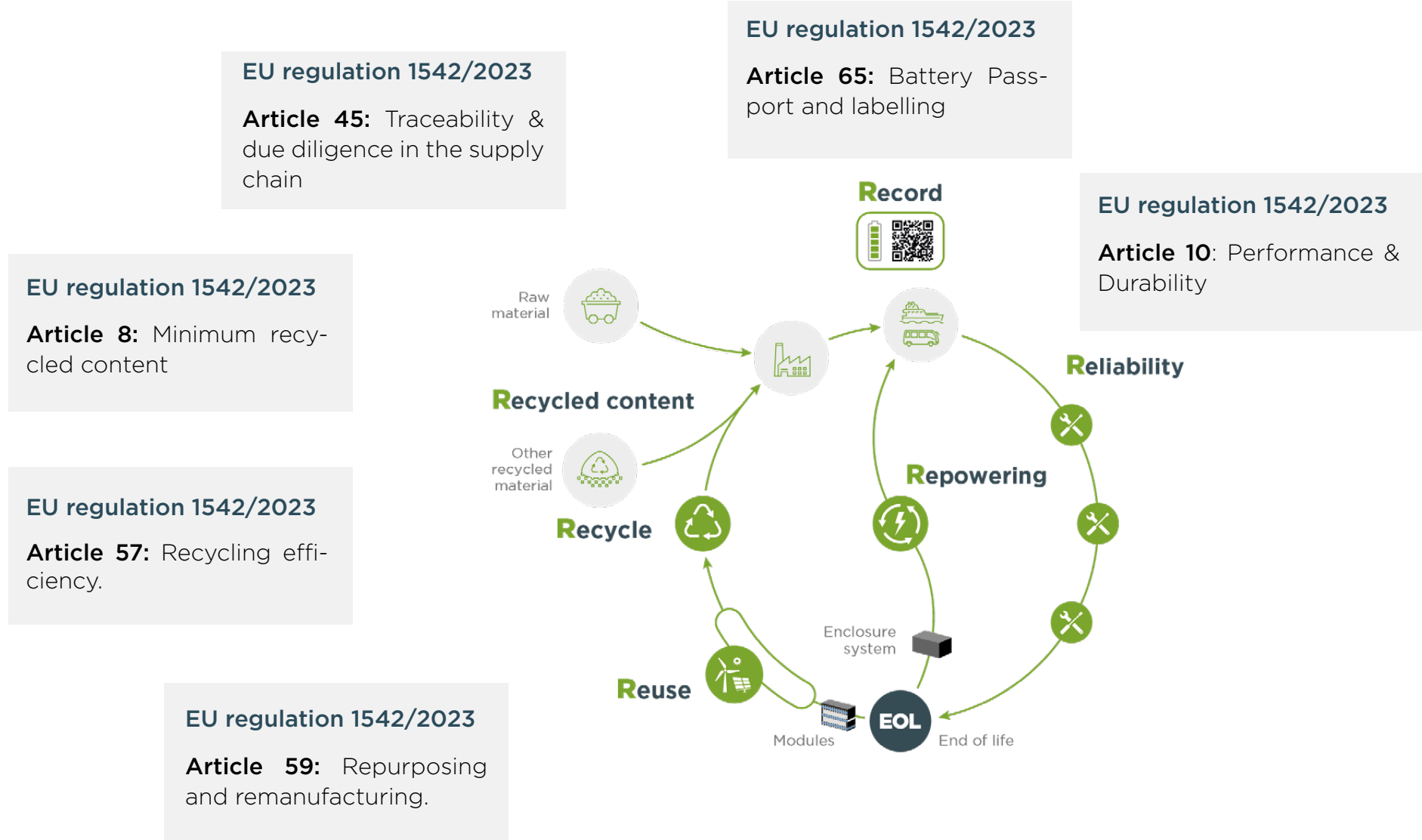
# Alignment of the 6R Concept with the EU regulation

## 6R Concept and EU regulation

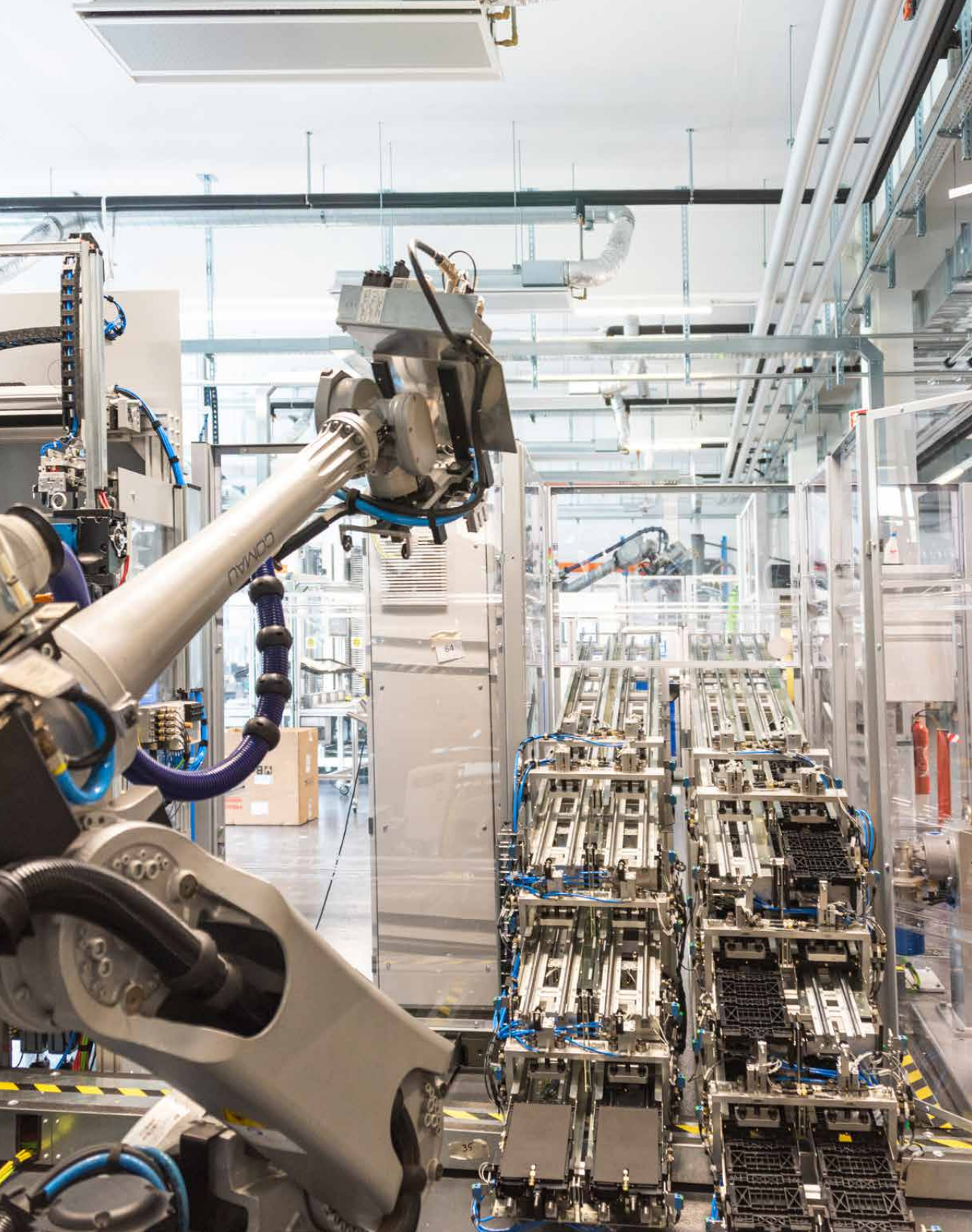
The 6R concept has been developed to align Leclanché's strategy with the new requirements of circular economy requested by the European regulation and the market.

This concept is divided into sub-actions to provide internal visibility to the concepts and objectives of the circular economy and ensure our compliance with the new European battery regulation.

The diagram on the right illustrates the relationships between the major articles and Leclanché's 6R concept of circular economy.







# Environmental Impact Reduction During Manufacturing

## Achievements

In 2023, multiple measures were successfully implemented to reduce environmental impact throughout the manufacturing process:

- Leclanché uses **100% renewable electricity** for its production sites in Germany and Switzerland, covering the cell manufacturing as well as module and pack integration.
- Cell electrodes are manufactured using a **water-based binder process** meaning that no harmful solvents are used and the energy consumption during production is reduced.
- **Recycled material** is already used in the production of cells, module and pack (copper and aluminum).

All factories are certified according **ISO 14001** for Quality and Environmental Management.

## Further emissions reduction coming

The manufacturing and upstream processes represent the most important environmental impact for the battery.

The new EU battery regulation will help to better measure the impact, identify the hotspots to reduce the environmental impact.

The due diligence and traceability of the supply chain will improve the activity data collection and accuracy of our calculations.

Last, but not least, Leclanché is deploying a roadmap to remove PFAS, persistent and highly toxic chemical components from its batteries.

# Environmental Impact Reduction During Usage

## Lifespan extension for circular economy and reduced environmental impact

Adopting a **circular economy model** entails a paradigm shift from production-based value creation to a focus on usage and the product's end-of-life phase. The objective during usage is to extend the lifespan, thereby mitigating environmental impact.



## Achievements

Given their specific use in heavy-duty transport, Leclanché batteries are designed for more intensive use compared to standard car batteries, which typically spend 95% of their time idle. The remarkable cycle life of Leclanché batteries contributes to an extended operational lifespan, minimizing the need for frequent battery replacements and thus lowering the Total Cost of Ownership (TCO) for our clients.

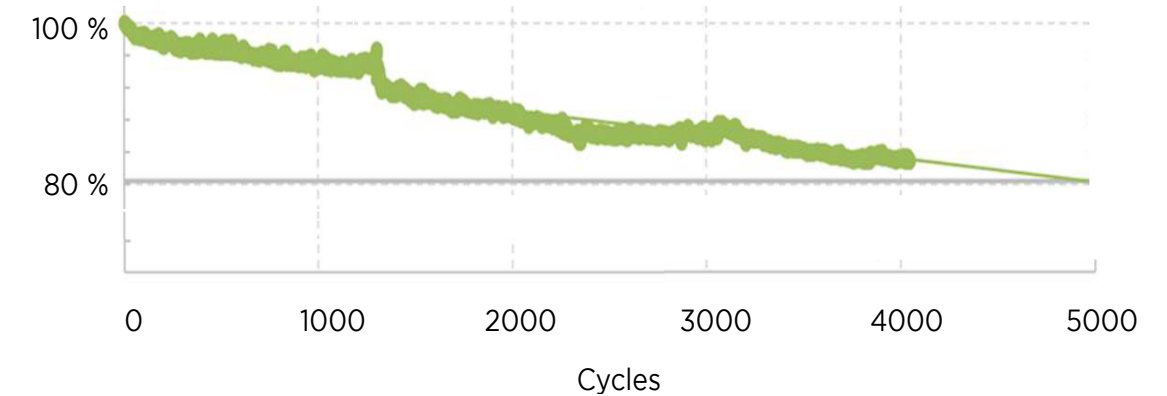
Lifespan can be extended only with appropriate monitoring and maintenance. Leclanché has set a global After-sales services with IoT for maintenance optimization

To reduce energy losses and associated electrical emissions, the roundtrip and battery internal resistance is key.

Leclanché cell tests show **low impedance** and **outstanding impedance stability** over the lifespan, as we can see in the graphic on right (60Ah cell cycling at 1C with 100 % Deep of discharge)

## Leclanché Battery: High Cycle Performance for Heavy-Duty Operations

Battery Capacity  
(State of Health)



**Battery capacity remains >80% after 4000 cycles at 100% DoD vs 1000 cycles for a car battery**



# Reuse and Recycling of Waste and Batteries

## Achievements

Leclanché has set up a production waste management with the aim to measure, reduce and valorise the waste produced.

In 2022 and 2023, Leclanché set up partnerships and processes to **manage the end of life of batteries** under our responsibility, as well as our battery production scraps, thanks to new recycling partners in Switzerland and Germany.



## Objectives for the Coming Years

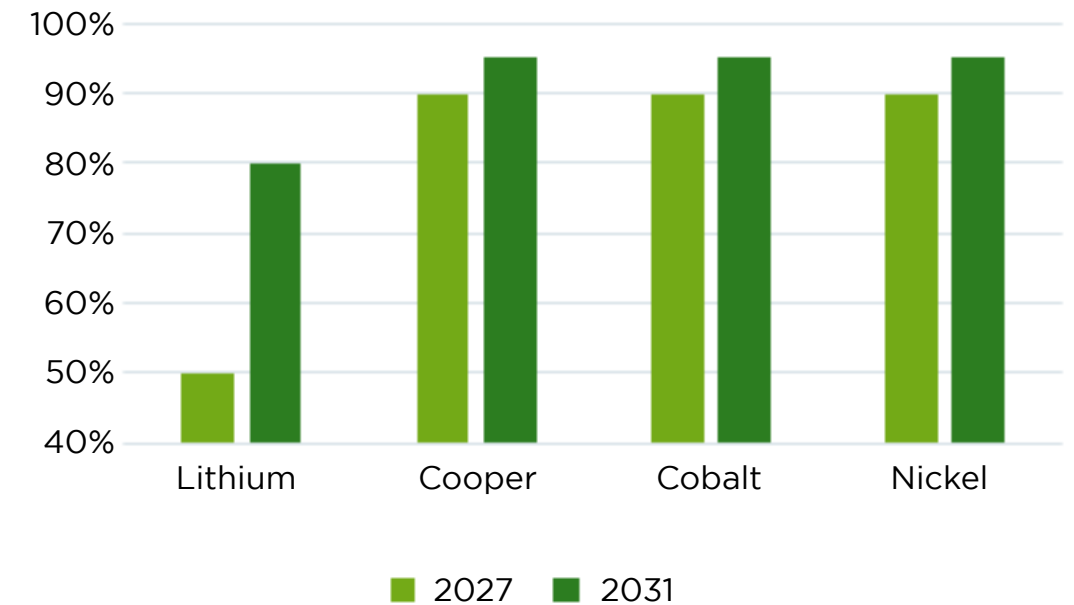
As part of the **6R circular economy concept**, Leclanché has several future objectives and goals regarding a battery's end of life management:

- Setup the first “2nd life systems” prototypes by 2025.
- Improve batteries design and the process to better repair and reuse batteries.
- Bring clarity and provide support to customers regarding the responsibility and partnership for recycling, ensuring EU battery regulation compliance.

## PFAS Free Blackmass

The black mass produced from future Leclanché's batteries" recycling will contain no PFAS. This represents a significant advancement as PFAS pose a substantial emission risk during the recycling process, making the entire process smoother and more efficient for recyclers.

Recycling rate for specific materials defined in article 71 of the European Battery regulation





# 5. Social



# Social Strategy from the Double Materiality

<b>Stakeholder Engagement</b>	<ul style="list-style-type: none"><li>▪ <b>Stakeholder engagement</b> (page 25)</li></ul>
<b>Promote Employee Well-being and Health &amp; safety culture</b>	<ul style="list-style-type: none"><li>▪ Prioritise employee well-being, career, training</li><li>▪ Promote <b>Health and Safety Culture</b> (page 53)</li></ul>
<b>Promote Employee Diversity and Equality</b>	<ul style="list-style-type: none"><li>▪ Promote <b>diversity</b> in recruitment and advancement and foster an <b>inclusive</b> workplace culture.</li></ul>
<b>Labor Rights and Fair Employment Practices</b>	<ul style="list-style-type: none"><li>▪ Provide <b>training</b> to employees and managers on labor rights, fair employment practices, and dispute resolution</li><li>▪ Establish a clear and accessible grievance procedure for labor-related concerns</li></ul>
<b>Human Rights and supply chain responsibility</b>	<ul style="list-style-type: none"><li>▪ Ensure supply chain responsibility by collaborating with suppliers to meet ESRS social requirements, such as fair labor practices and ethical sourcing.</li><li>▪ Conduct <b>Supply chain due diligence</b> and <b>traceability</b> (page 32) to assess and mitigate social risks</li></ul>
<b>Community Engagement and Philanthropy</b>	<ul style="list-style-type: none"><li>▪ Develop community engagement initiatives (community development, education, and social welfare).</li><li>▪ Invest in philanthropic programs that address local needs and contribute to sustainable development</li></ul>



# Leclanché Social Development

## Diversity and Corporate Culture

Leclanche is a multinational company that celebrates the richness and diversity of our workforce as a cornerstone of our corporate culture. We recognise that our employees bring unique perspectives, experiences, and talent to the table, driving innovation and fostering creativity.

At our company, we prioritise an inclusive environment where every individual feels valued, respected, and empowered to contribute their best work.

We actively promote equal opportunities for career growth and development, ensuring that every employee has the chance to thrive and advance within our organisation regardless of background or identity.

## Recruitment

Leclanché hires 75 persons in 2023, mostly at our cell production site in Willstätt, and our main office is in Yverdon-les-Bains, Switzerland. Our goal is to keep up with the demand for energy storage systems and improve our solutions.

## Welcoming the new employees (on boarding)

Every new employee goes through a training process covering topics linked to ESG:

- Code of conduct (strong focus on ethics and social aspects)
- IT and Cybersecurity
- Health and Safety
- Human Resources
- Finance Introduction and Procurement
- Sustainability (strong focus on company and product environmental impact)



# Leclanché Social Development

## Person of trust service

Leclanché put in place in 2022 a “person of trust” service.

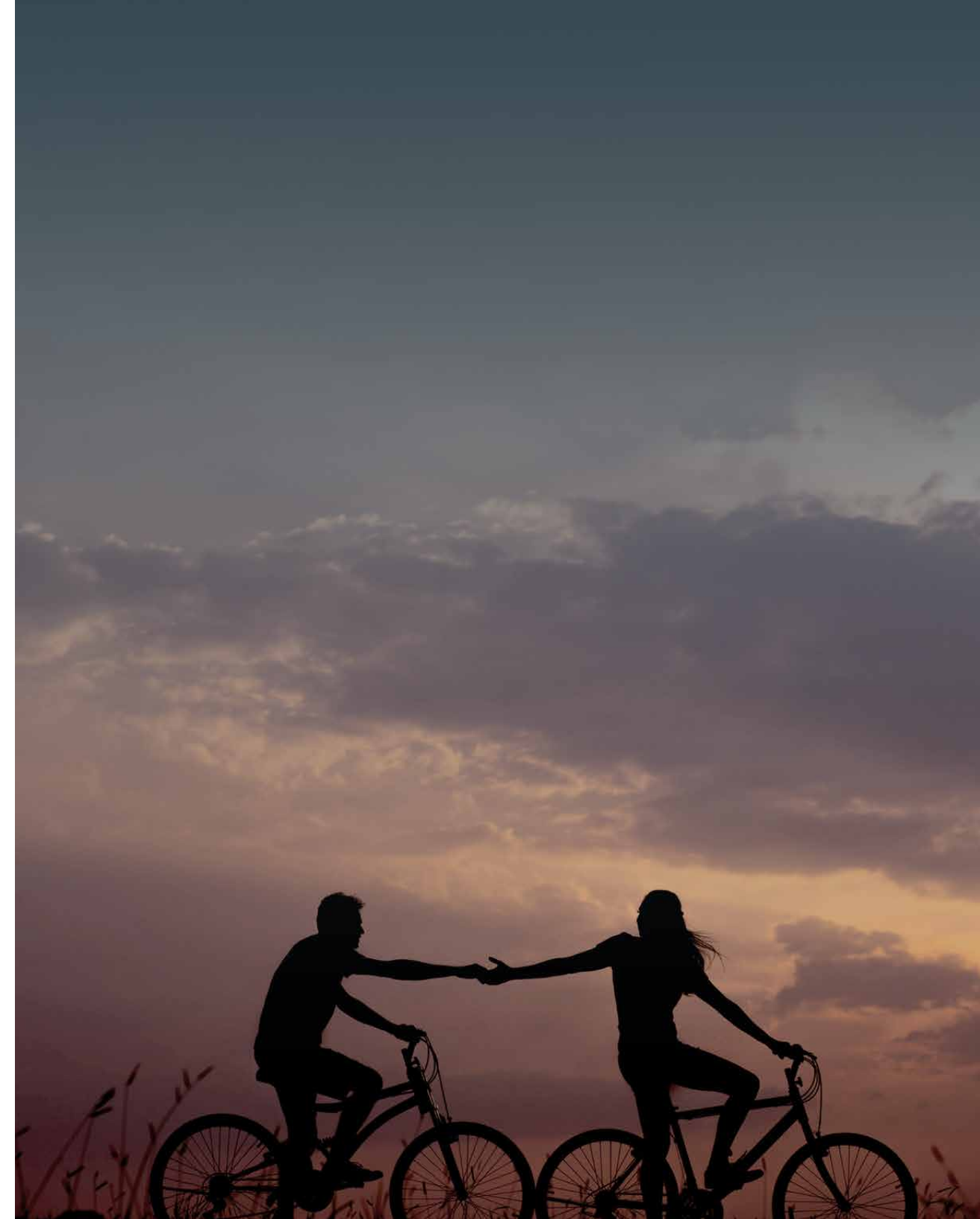
The Person of Trust is an external and independent service from outside the workplace to help any employee navigating conflicts, going through psychological harassment or “Mobbing,” addressing instances of sexual harassment, battling burnout, or confronting any other professional hurdles.

A mandated specialised company is available to listen, understand, and offer support in a safe and confidential way. In a world where work can be stressful, having a Person of Trust can make a big difference in feeling supported and valued.

## Leclanché believes in work-life balance (Home Office policy)

Leclanché put in place a policy to offer up to 3 days of remote working per week. By promoting the possibility of remote work, or home office, Leclanché offers employees increased flexibility, autonomy, and time savings by eliminating commutes.

It allows for a personalised work environment, better work-life balance, and improved productivity. Additionally, it enables workers to better manage personal commitments and prioritise health and well-being, ultimately leading to higher job satisfaction.



# Leclanché Sustainability Academy

## New Sustainability Topics

In 2023, Leclanché put in place a Sustainability academy. The goal is to train employees about important sustainability topics like circular economy and regulations.

These new concepts require training in order to be deployed and be part of the company culture.

## General Training for the EU Battery Regulation

Europe and the battery industry are leading the way in sustainability and the circular economy. The new EU battery regulation, introduced in 2023, incorporates several new concepts of the circular economy, affecting how we design, produce, use, maintain, and dispose of batteries.

A comprehensive training session was conducted for the entire company at the end of 2023 to explain these various concepts. Subsequent specialized training sessions were held for purchasing and engineering, as well as for sales and after-sales services.

## Raising Awareness About Climate Change

The Sustainability Academy organized several “lunch and learn” sessions to raise awareness about climate change, with workshops based on tools like the Climate Fresk.





# Health and Safety are our Priority

## Health and Safety from Day One

Health and Safety is part of Leclanché's DNA, with intensive training from day one about the safety rules. Each employee signs a code of conduct which includes safety rules to be applied.

## Survey on Health and Safety Regulations

We conduct **regular surveys** to assess compliance with health and safety regulations pertinent to our industry and geographical locations of operation. Through these surveys, we ensure that our practices align with local, national, and international standards, fostering a culture of safety and well-being across all levels of the organisation.

## Event Reporting and Risk Mitigation

Prompt and accurate reporting of health and safety events is fundamental to our risk management strategy. We encourage open communication channels for employees to report incidents, near misses, and potential hazards without fear of reprisal.

Upon receiving such reports, we employ a systematic approach to investigate causes and implement corrective measures swiftly. Through proactive risk mitigation efforts, we aim to prevent recurrence and continuously improve our safety performance.

## ISO 45001

Leclanché has certified all its sites to the ISO 45001 standard. ISO 45001 is an international standard outlining the requirements for an occupational health and safety management system (OHSMS).

This certification reflects Leclanché's proactive approach to systematically managing occupational health and safety risks, ensuring the well-being of its workforce and stakeholders.

## Audit

Leclanché conducts regular audits to maintain a high standard of health and safety, ensuring alignment with ISO 45001 requirements.





# Annexes



# GHG protocol

ESRS index			Details	Unit	2022	2023	Comments
ESRS E1	E1-6	§48 a	Gross Scope 1 greenhouse gas emissions	tCO <sub>2</sub> eq	103		Gas consumption in our German factory
ESRS E1	E1-6	§49 b	Gross market-based Scope 2 greenhouse gas emissions	tCO <sub>2</sub> eq	408		
ESRS E1	E1-6	§51	Other indirect (Scope 3) GHG emissions	tCO <sub>2</sub> eq	3627		
ESRS E1	E1-6	§44+52	Total GHG emissions	tCO <sub>2</sub> eq	4139		
ESRS E1	E1-5	§53	GHG emissions intensity, market-based (total GHG emissions per net revenue)	kgCO <sub>2</sub> / kCHF	208,05		

GHG emissions calculation for 2023 will be available in Q3 2024

# Environmental KPI

ESRS index			Details	Unit	2022	2023	Comments
			% of production site with ISO 45001	%	100%	100%	
ESRS E1	E1-5	§37	Total energy consumption related to own operations	MWh	3 687	4 400	
ESRS E1	E1-5	§37a	Total energy consumption from fossil sources	MWh	1 448	1 454	
ESRS E1	E1-5	§37c	Total energy consumption from renewable sources	MWh	2 239	2 946	
ESRS E1	E1-5	§37ci	Fuel consumption from renewable sources	MWh	0	0	
ESRS E1	E1-5	§37cii	Consumption of purchased or acquired electricity, heat, steam, and cooling from renewable sources	MWh	2 167	2 875	100 % of the electricity purchased is from renewable sources
ESRS E1	E1-5	§37cii	Consumption of self-generated non-fuel renewable energy	MWh	72	71	
ESRS E1	E1-5	§AR 34	Percentage of renewable sources in total energy consumption	MWh	2,0%	1,6%	
ESRS E1	E1-5	§38a	Fuel consumption from coal and coal products	MWh	0	0	
ESRS E1	E1-5	§38b	Fuel consumption from crude oil and petroleum products	MWh	0	0	
ESRS E1	E1-5	§38c	Fuel consumption from natural gas	MWh	1 448	1 454	



# Social KPI

ESRS index			Details	Unit	2022	2023	Comments
ESRS S1	S1-6	50a	Number of employees (head count)	Integer	352	362	
ESRS S1	S1-16	97 a	Gender pay gap	%		-0.3 %	External analysis from Landold & Maechler
			Average ratio of woman / man in the board	Integer	0	0	
ESRS S2	S2-3	AR 24	Third-party mechanisms are accessible to all workers		Person of trust service	Person of trust service	Service provided by external provider
ESRS S2	S2-3	AR 25	Grievances are treated confidentially and with respect to rights of privacy and data protection		yes	yes	Service provided by external provider
			Number of employee signing the code of conduct	%	100%	100%	
			Number of employee trained to EU regulation	Integer	0	80	
			Number of employee following environmental awrness / circular economy session during Lunch & learn	%	0	5%	
			Major accidents & Accidents	Integer	7	6	At group level
			Minor Accident, Incident & Hazardous situation	Integer	52	35	At group level

# Alignment to ESRS

ESRS 2 General Disclosures		Document/image
2. Governance	GOV-1 - The role of the administrative, management and supervisory bodies	Governance page 26
	GOV-2 - Information provided to and sustainability matters addressed by the undertaking's administrative, management and supervisory bodies	Governance page 26
	GOV-3 - Integration of sustainability-related performance in incentive schemes	Governance page 26
	GOV-4 - Statement on due diligence	Governance page 26
	GOV-5 - Risk management and internal controls over sustainability reporting	Governance page 26
3. Strategy	SBM-1 - Strategy, business model and value chain	
	SBM-2 - Interests and views of stakeholders	Governance page 26
	SBM-3 - Material impacts, risks and opportunities and their interaction with strategy and business model	Double Materiality matrix
4.1 Disclosures on the materiality assessment process	IRO-1 - Description of the process to identify and assess material impacts, risks and opportunities	Double materiality page 28
	IRO-2 - Disclosure Requirements in ESRS covered by the undertaking's sustainability statement	
4.2 Minimum disclosure requirement on policies and actions	Minimum disclosure requirement - Policies MDR-P - Policies adopted to manage material sustainability matters	Policies page 29
	Minimum disclosure requirement - Actions MDR-A - Actions and resources in relation to material sustainability matters	Strategies pages 40 & 41

# Alignment to ESRS

ESRS Environment		Document/image
E1 - Climate Change	Disclosure requirement related to ESRS 2 GOV-3 Integration of sustainability-related performance in incentive schemes	
	Disclosure Requirement related to ESRS 2 SBM-3 - Material impacts, risks and opportunities and their interaction with strategy and business model	Strategies pages 40
	Disclosure requirement related to ESRS 2 IRO-1 - Description of the processes to identify and assess material climate-related impacts, risks and opportunities	Climate risks pages 36-39, Double materiality matrix
	E1-1 - Transition plan for climate change mitigation	Strategies pages 40
	E1-2 - Policies related to climate change mitigation and adaptation	Policies page 29 Environmental Strategy & Policy
	E1-3 - Actions and resources in relation to climate change policies	Policies page 29 Environmental Strategy & Policy
	E1-4 - Targets related to climate change mitigation and adaptation	Policies page 29 Environmental Strategy & Policy
	E1-5 - Energy consumption and mix	Table KPI page 57
	E1-6 - Gross Scopes 1, 2, 3 and Total GHG emissions	GHG emissions page 56
	E1-7 - GHG removals and GHG mitigation projects financed through carbon credits	N/A
E1-8 - Internal carbon pricing	N/A	
E1-9 - Anticipated financial effects from material physical and transition risks and potential climate-related opportunities	Double materiality	



# Alignment to ESRS

ESRS Environment		Document/image
E2 - Pollution	Disclosure Requirement related to ESRS 2 IRO-1 - Description of the processes to identify and assess material pollution-related impacts, risks and opportunities	Double materiality page 28
	E2-1 - Policies related to pollution	Policies page 29 Environmental Strategy & Policy
	E2-3 - Targets related to pollution	Policies page 29 Environmental Strategy & Policy
	E2-4 - Pollution of air, water and soil	Policies page 29 Environmental Strategy & Policy
	E2-5 - Substances of concern and substances of very high concern	Policies page 29 PFAS page 23
	E2-6 - Anticipated financial effects from material pollution-related risks and opportunities	Double materiality matrix
EE3 - Water And Marine Resources	Disclosure Requirement related to ESRS 2 IRO-1 - Description of the processes to identify and assess material water and marine resources-related impacts, risks and opportunities	Double materiality page 28 Double materiality matrix
	E3-1 - Policies related to water and marine resources	Policies page 29 Environmental Strategy & Policy
	E3-2 - Actions and resources related to water and marine resources	Policies page 29 Environmental Strategy & Policy
	E3-3 - Targets related to water and marine resource	Environmental Strategy & Policy
	E3-4 - Water consumption	Table KPI page 57
	E3-5 - Anticipated financial effects from material water and marine resources-related risks and opportunities	Double materiality matrix

# Alignment to ESRS

ESRS Environment		Document/image
E4 Biodiversity and ecosystems	E4-1 – Transition plan and consideration of biodiversity and ecosystems in strategy and business model	Policies page 29 Environmental Strategy & Policy
	SBM 3 – Material impacts, risks and opportunities and their interaction with strategy and business model	Double materiality matrix
	Disclosure Requirement related to ESRS 2 IRO-1 Description of processes to identify and assess material biodiversity and ecosystem-related impacts, risks, dependencies and opportunities	Double materiality page 28
	E4-2 – Policies related to biodiversity and ecosystems	Policies page 29 Environmental Strategy & Policy
	E4-3 – Actions and resources related to biodiversity and ecosystems	Policies page 29 Environmental Strategy & Policy
	E4-4 – Targets related to biodiversity and ecosystems	Policies page 29 Environmental Strategy & Policy
E5 Resource use and circular economy	Disclosure Requirement related to ESRS 2 IRO-1 – Description of the processes to identify and assess material resource use and circular economy-related impacts, risks and opportunities	Double materiality page 28
	E5-1 – Policies related to resource use and circular economy	Policies page 29 Environmental Strategy & Policy
	E5-2 – Actions and resources related to resource use and circular economy	Policies page 29 Environmental Strategy & Policy
	E5-3 – Targets related to resource use and circular economy	Policies page 29 Environmental Strategy & Policy
	E5-4 – Resource inflows	
	E5-5 – Resource outflows	
	E5-6 – Anticipated financial effects from material resource use and circular economy-related risks and opportunities	Double materiality matrix

# Alignment to ESRS

ESRS Social		Document/image
S1 Own workforce	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-2 - Interests and views of stakeholders	Governance page 26
	Disclosure Requirement related to ESRS 2 SBM-3 - Material impacts, risks and opportunities and their interaction with strategy and business model	Double materiality page 28
	S1-1 - Policies related to own workforce	Policies page 29 Social Policy
	S1-2 - Processes for engaging with own workforce and workers' representatives about impacts	Sustainability Academy page 53 Suppliers' engagement
	S1-3 - Processes to remediate negative impacts and channels for own workforce to raise concerns	Person of trust service page 52
	S1-4 - Taking action on material impacts on own workforce, and approaches to managing material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions	Double materiality matrix
	S1-5 - Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Double materiality matrix
	S1-6 - Characteristics of the undertaking's employees	
	S1-7 - Characteristics of non-employees in the undertaking's own workforce	
	S1-8 - Collective bargaining coverage and social dialogue	
S1-9 - Diversity metrics	Social KPI page 58	



# Alignment to ESRS

ESRS Social		Document/image
S1 Own workforce	S1-10 – Adequate wages	
	S1-11 – Social protection	
	S1-12– Persons with disabilities	
	S1-13 – Training and skills development metrics	
	S1-14 – Health and safety metrics	Social KPI page 58
	S1-15 – Work-life balance metrics	
	S1-16 – Remuneration metrics (pay gap and total remuneration)	Social KPI page 58
	S1-17 – Incidents, complaints and severe human rights impacts	
S2 – Workers in the value chain	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-2 Interests and views of stakeholders	Governance page 26
	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-3 Material impacts, risks and opportunities and their interaction with strategy and business model	Double materiality matrix
	S2-1 - Policies related to value chain workers	Policies page 29
	S2-2 - Processes for engaging with value chain workers about impacts	Policies page 29 Supplier code of conduct
	S2-3 - Processes to remediate negative impacts and channels for value chain workers to raise concerns	Policies page 29 Supplier code of conduct
	S2-4 - Taking action on material impacts on value chain workers, and approaches to managing material risks and pursuing material opportunities related to value chain workers, and effectiveness of those actions	
S2-5 - Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities		

# Alignment to ESRS

ESRS Social		Document/image
S3 Affected communities	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-2 Interests and views of stakeholders	Governance page 26
	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-3 Material impacts, risks and opportunities and their interaction with strategy and business model	Double Materiality matrix
	S3-1 - Policies related to affected communities	
	S3-2 - Processes for engaging with affected communities about impacts	
	S3-3 - Processes to remediate negative impacts and channels for affected communities to raise concerns	
	S3-4 - Taking action on material impacts on affected communities, and approaches to managing material risks and pursuing material opportunities related to affected communities, and effectiveness of those actions	
	S3-5 - Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	

# Alignment to ESRS

ESRS Social		Document/image
S4 - Consumers and users	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-2 Interests and views of stakeholders	Governance page 26
	ESRS 2 General disclosures - Disclosure Requirement related to ESRS 2 SBM-3 Material impacts, risks and opportunities and their interaction with strategy and business model	Double materiality matrix
	Double Materiality	Double materiality matrix
	S4-1 - Policies related to consumers and end-users	Policies page 29
	S4-2 - Processes for engaging with consumers and end-users about impacts	
	S4-3 - Processes to remediate negative impacts and channels for consumers and end-users to raise concerns	
	S4-4 - Taking action on material impacts on consumers and end- users, and approaches to managing material risks and pursuing material opportunities related to consumers and end-users, and effectiveness of those actions	Double materiality matrix
	S4-5 - Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities	Double materiality matrix



# Alignment to ESRS

ESRS Governance		Document/image
G1 - Business Conduct	Disclosure Requirement related to ESRS 2 GOV-1 - The role of the administrative, management and supervisory bodies	Governance page 26
	Disclosure Requirement related to ESRS 2 IRO-1 - Description of the processes to identify and assess material impacts, risks and opportunities	Double materiality matrix
	G1-1- Business conduct policies and corporate culture	Policies page 29 Code of conduct
	G1-2 - Management of relationships with suppliers	Governance page 25
	G1-3 - Prevention and detection of corruption and bribery	Policies page 29 Code of conduct
	G1-4 - Incidents of corruption or bribery	Policies page 29 Code of conduct
	G1-5 - Political influence and lobbying activities	Policies page 29 Code of conduct
	G1-6 - Payment practices	Policies page 29 Code of conduct