POWERING THE WAY FORWARD

VERKOR SUSTAINABILITY REPORT 2022

VERKOR

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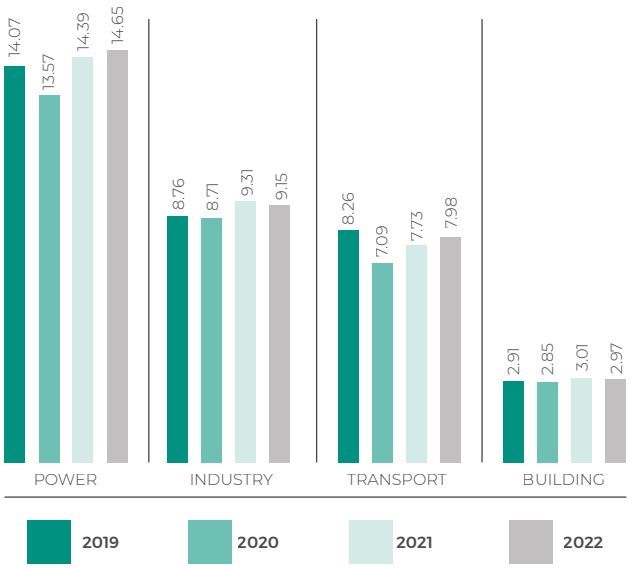
Overview of the **challenges driving our project**

ELECTRIFICATION OF TRANSPORTATION, A GLOBAL NECESSITY TO ACHIEVE CARBON NEUTRALITY

GLOBAL CO_2 EMISSIONS (GT CO_2)



SOURCE: IEA – 2022 – CO_2 EMISSIONS REPORT

The 2015 Paris Agreement[1] states the necessity to achieve net zero emission to limit the temperature increase to +1.5°C by 2050, above pre-industrial levels.

Among the main sources of CO_2 emissions identified by the IAE in 2022[2], transport emissions accounted for 22% of global carbon emissions. **At the European level, road transport is by far the main source of CO_2 emissions (20% of total EU greenhouse gas (GHG) emissions in 2019), and those emissions are mostly due to individual car use (12% of total EU GHG emissions in 2019)[3].**

According to the NGFS[4] in its 'Net Zero by 2050' scenario[5], coupling electric means of transport (domestic electric vehicles (EVs), electric trains, electric buses) and soft mobility solutions (walking, biking), would reduce global transport CO_2 emissions by 50%.

In a study comparing the necessity of EV adoption for different markets, Carbone 4[6] points out that even in countries relying on carbon-rich electricity (e.g., China, India), Electric vehicles (EVs) still have a lower over the lifetime carbon footprint than internal combustion engine (ICE) cars[7] (except for 20 highly coal-reliant countries). As many countries are transitioning towards decarbonised energy mixes, the carbon footprint of operating EVs is to be expected to keep on decreasing.

Electrification of the transport sector is at the core of the European Green Deal

In its 2021 'Sustainable and Smart Mobility Strategy', the European Commission centres its decarbonisation strategy on the adoption of low-emission mobility solutions, targeting a 55% reduction in its net greenhouse gas emissions by 2030 (compared to 1990 levels).

The 'Fit for 55' package specifically addresses consumer transport emissions and was officially adopted in March 2023. The EU targets all new cars and vans sold in the domestic market to be zero-emission vehicles (i.e., no GHG gases emitted in operation), with a strong emphasis on the most advanced electrified solutions, by 2035.

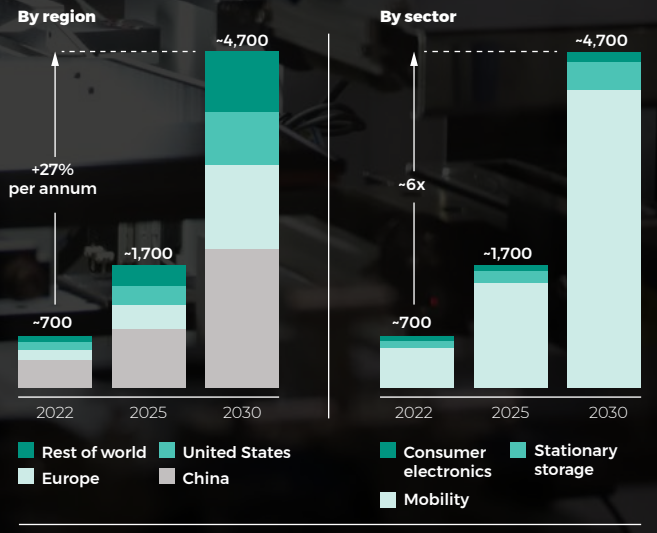
"Global demand for Li-ion batteries is expected to increase sevenfold in less than a decade mostly to complete transport electrification[8]."

A DEEP TRANSFORMATION OF TRANSPORTATION TECHNOLOGIES

Lithium-ion (Li-ion) batteries are the solution of choice to transform mobility as they have the highest energy density (250Wh/kg) giving EV users the greater range, while remaining price-competitive.

LI-ION BATTERY DEMAND IS EXPECTED TO GROW BY ABOUT 33 PERCENT ANNUALLY TO REACH AROUND 4,700 GWH BY 2030

Global li-ion battery cell demand, GWh, base case



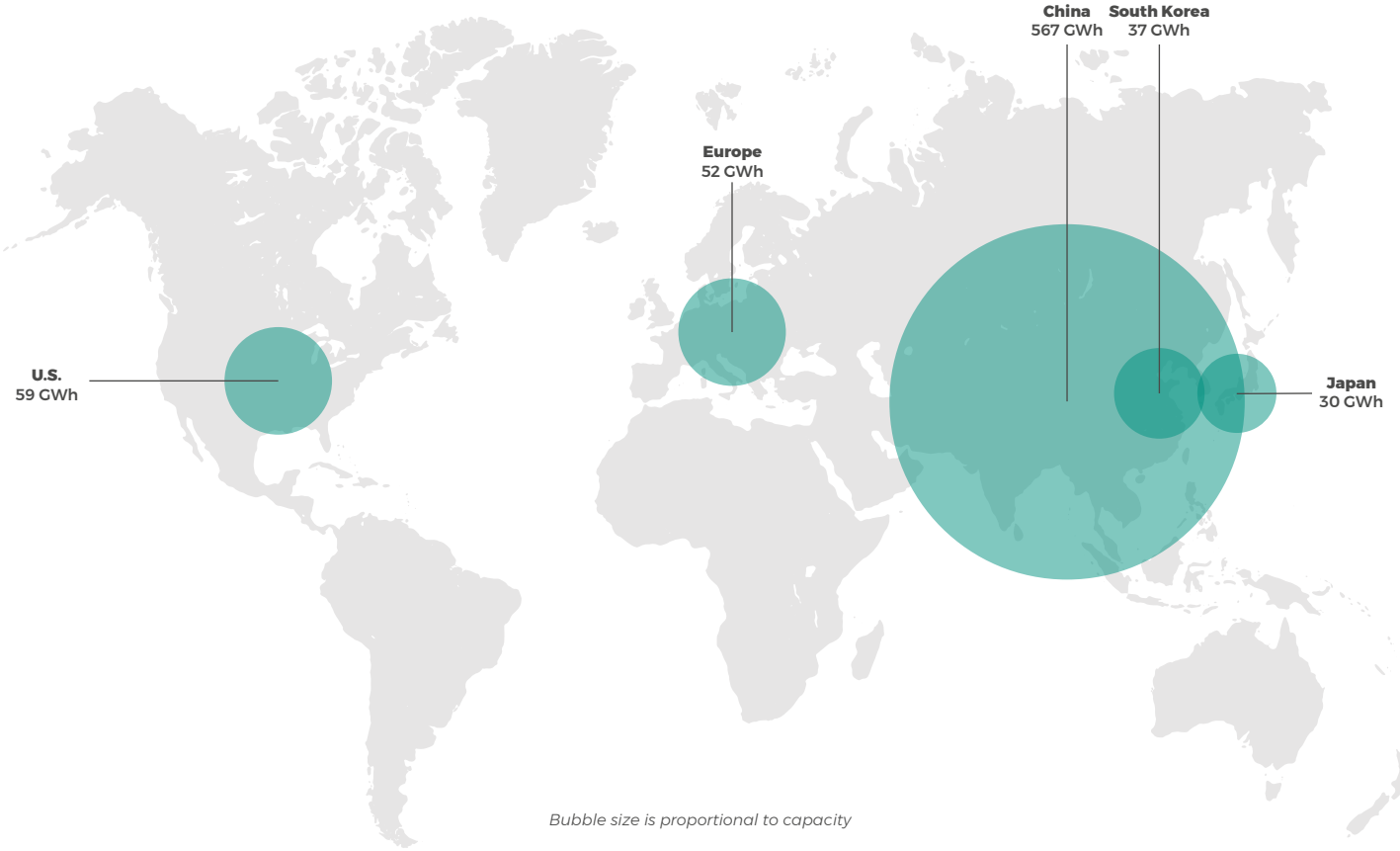
Including passengers cars, commercial vehicles, two-to-three wheelers, off-highway vehicles, and aviation.

SOURCE: MCKINSEY 2023, REPORT 'BATTERY 2030: RESILIENT, SUSTAINABLE, AND CIRCULAR

A transformation in which Europe is taking part

In 2022, the vast majority of global Li-ion battery production is in China[9].

At a regional scale, situations of oversupply and undersupply are expected: saturation in the Chinese domestic market looming[10], while **Europe is likely to face Li-ion batteries shortages[11], with a local production meeting only 75% of the expected domestic demand[12] in 2029.**



SOURCE: LITHIUM-ION BATTERY MEGAFACTORY ASSESSMENT, BENCHMARK MINERAL INTELLIGENCE, 2021

Clean transport... dirty production?

Statistically, manufacturing an EV generates more GHG than manufacturing an ICE vehicle[13], the main sources of emissions being the extraction and refining of the raw materials necessary for the production of cell components as well as the electro-intensive cell manufacturing activities[14].

However, as the carbone emissions during the use phase of an EV are three times lower than the carbon emissions of an ICE vehicle assessing an average european grid mix for the recharge, the EV repays its carbon depth before its end of life. For a battery manufactured in Europe, an EV becomes less carbon intensive after driving approximately 23 000 km[15].

A call for a progressive reshoring of strategic operations

The necessity to re-shore battery manufacturing activities goes beyond carbon mitigation objectives:

- It is about avoiding harmful supply chain disruptions.
- It is about maintaining Europe's sovereignty by reducing its dependency on Asian supply.
- It is about preserving the automotive value chain which represented 7% of EU GDP in 2022 and 14.6 million direct and indirect jobs[16].

This is why the European automotive industry is undergoing a deep reconversion, from being the world's second-largest motor vehicle producer to becoming a key player in EV battery manufacturing.

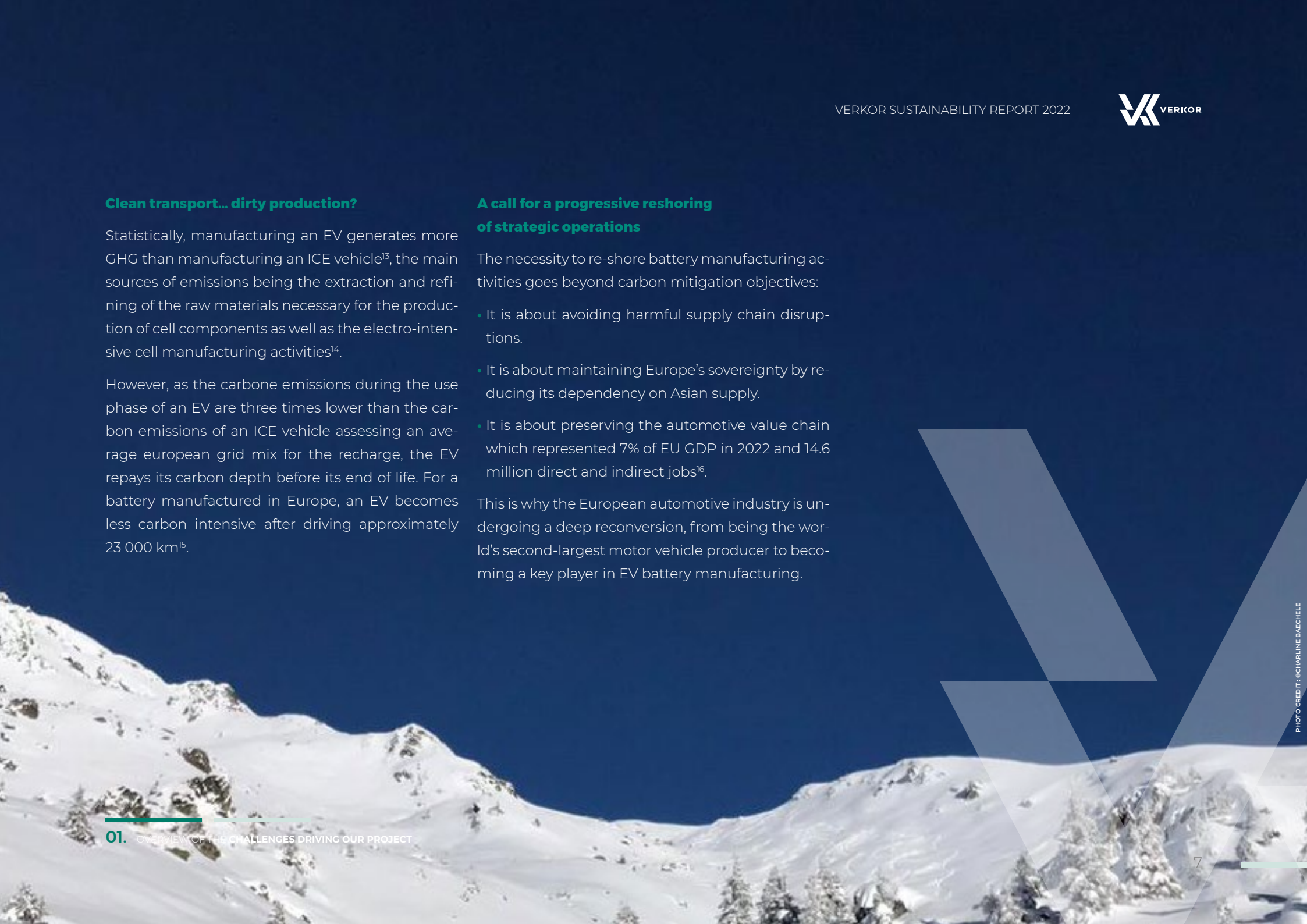


PHOTO CREDIT : ©CHARLINE BAECHELE

VERKOR WAS FOUNDED TO FAST-TRACK THE PRODUCTION OF LOW-CARBON BATTERIES IN FRANCE

Collectively engaged

While we focus on developing Li-ion battery cells, our ambition is to establish a resilient battery ecosystem in Europe and to bring together the main stakeholders of the battery value chain.

To complete our activities and build a closely knit ecosystem, we call industrial players who manufacture and / or recycle battery materials and components to reshore their operations in Europe.

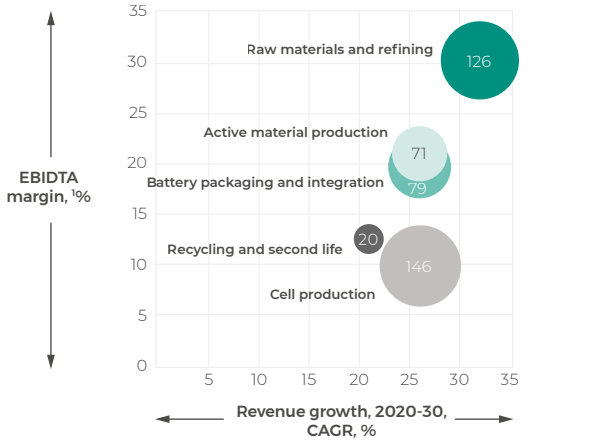
The EV challenge is without a doubt significant. The potential business opportunities are even greater. Not only for us but for the whole battery ecosystem we are building.

Total annual revenues throughout the whole battery value chain are estimated to reach over US$400 billion by 2030, as detailed in the graph opposite.

For Verkor, there is a major underlying opportunity to be not only a decisive economic actor but much more. We collaborate with public actors at all scales to become impactful social actors. By deploying cross-company training programmes, we hope to create new job opportunities in a more and more digitalised industry, while leveraging historical skill sets.

We hope to be an active contributor to a social transition which encapsulates economic prosperity, preservation of the environment and social equity to help Europe move forward.

Growth in revenue and margin for battery value chain



[1]Based on 2020 EBITDA figures for select companies in value chain step. High volatility seen in recent years because of surging demand, making estimates of long-term margins uncertain.

***Circle size indicates projected annual revenues in 2030,** $ billion*

- *Mine and extract raw materials*
- *Refine and process raw materials into usable products*
- *Chemically activate raw materials*
- *Produce cathode, anode, electrolyte and separator materials*
- *Reuse batteries for new purpose (second life) or recycle components and materials in batteries*
- *Assemble cells into modules, and modules into pack*
- *Connect hardware and software into complete package*
- *Manufacture battery cells*
- *Stack and roll cells into form factor (eg, pouche, cylindrical, prismatic)*

SOURCE: MCKINSEY - POWER SPIKE: HOW BATTERY MAKERS CAN RESPOND TO SURGING DEMAND FROM EVS – 2022

We are committed to constantly doing better

As we sowed the seeds of our project, we knew that being green at core requires a constant effort.

Installing resilient, sovereign, sustainable, and competitive battery valleys in Europe requires to be in capacity of coupling the highest technical performances, social practices, supply chain traceability and local procurement choices when possible.

As detailed in this report, structural and circumstantial factors may temporarily hamper our ambitions:

- Battery chemistry depends on the properties of raw materials involved in the manufacturing of cathode and anode materials. They are often blamed for being sourced and/or transformed in unsustainable conditions, on which buyers usually have very little information and leverage. As the demand for Li-ion batteries increases, some resources may get scarce and their prices more volatile. Finding substitutes requires time and major R&D investments.
- More than 70% of the suppliers manufacturing gigafactory equipment are currently operating and headquartered in Asia[17], where most of the technologies and production capacities to supply large-scale production sites are.
- Past waves of deindustrialisation have indirectly led to present industrial labour and expertise shortages in Europe.

We are conscious that these hurdles cannot be overcome overnight. However, we refuse to look at them as such and we are committed to doing our best:

- When making procurement choices, we strictly comply with our Code of Conduct.
- We rely on external assessment and traceability tools to remain as transparent as possible, throughout our supply chain.
- We favour local/regional actors as much as we can and help those who do not yet have the capacity to meet our needs to scale-up and become potential future partners and/or suppliers.
- We anticipate future regulations, to lead the way towards carbon-neutrality.

PHOTO CREDIT : ©ANTOINE CRÉTINON

We are committed to going above and beyond

As we enter the mobility market, we realise that electrification cannot fully leverage the decarbonisation of society if new means of transport are not being powered by mainly low-to zero-carbon electricity sources.

Hence, overcoming the intermittent nature of renewables to stabilise the grid is new emerging challenge. We will need efficient energy storage solutions (ESS), guaranteeing a constant and reliable access to green electricity. Verkor has been working on the development of 'front-of-the-meter' energy storage systems, to capture excess green supply energy and reinject it in the grid. These solutions aim to bridge the gap between energy production and usage.

02

Powering the way forward with sustainable batteries **for a responsible energy transition**

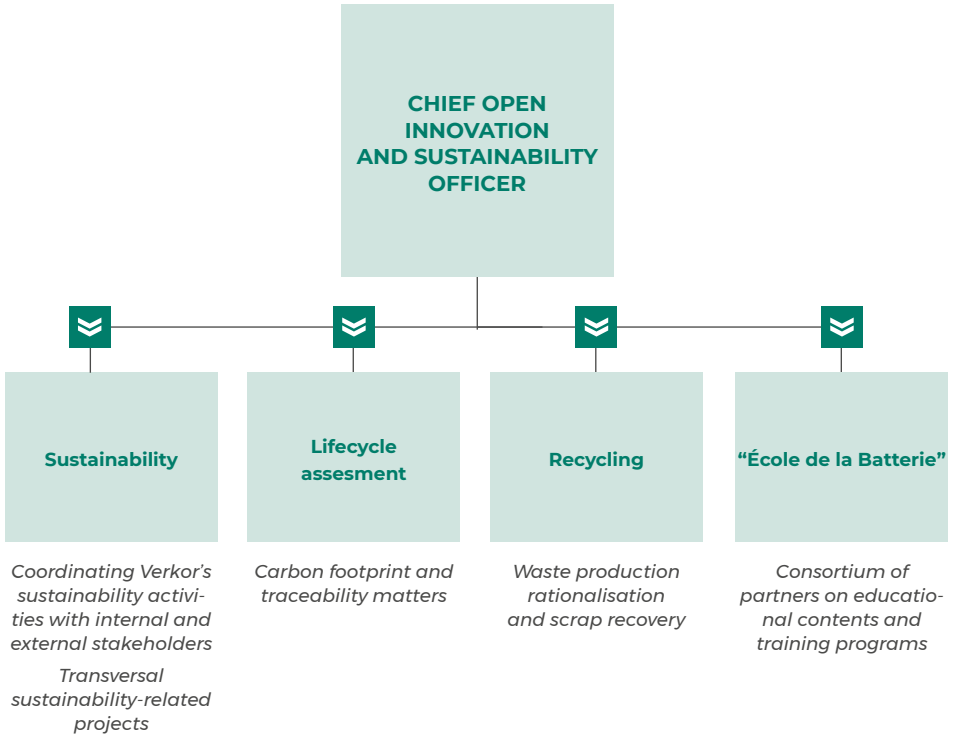
SUSTAINABILITY IS AT THE CORE OF VERKOR'S MISSION SINCE THE BEGINNING

Since our early days, sustainability has been embedded in our business strategy. Our mission is to locally manufacture low-carbon battery cells for a responsible energy transition. Through our business activities, we aim at tackling all ESG dimensions. Major internal decisions are taken in accordance with our core mission and in compliance with the three sustainability pillars.

Since 2020, the Sustainability team has been managed by Gilles Moreau, Verkor's cofounder. His nomination as our Chief Open Innovation and Sustainability Officer (CSO) shows our commitment to make technical performances indissociable from social-environmental responsibilities.

The Sustainability team defines and deploys Verkor's sustainability strategy and helps other departments measure the impacts and potential externalities of their decisions.

VERKOR'S SUSTAINABILITY TEAM ORGANISATIONAL CHART



OUR SUSTAINABILITY STRATEGY ROADMAP FOR 2027 AND BEYOND: A PATH TO REACH THE UN SDGS

In 2022, we formalised our sustainability strategy roadmap until the end of the decade.

We have set four top priorities, aligned with our motto and coming with quantified objectives, to guide us as we intensify and expand our operations. Our underlying ambition is to make a significant contribution to seven of the UN's Sustainable Development Goals (SDGs).

Reducing the carbon footprint of our cells

30 $kgCO_2eq/kWh$ by 2032

Maximising the recycling of production waste, with a closed-loop approach

95% of scrap recycled by 2027 (at Dunkirk gigafactory)

Ensuring full traceability throughout the supply chain

80% of Verkor's supply chain being traceable by 2027

Training talents for the battery jobs of tomorrow

1.600 talents trained every year by 2026/2027

Powering the way forward

With sustainable batteries

For a responsible energy transition

PHOTO CREDIT : ©ANTOINE CRETINON

Foreword from Verkor's **CEO and CSO**

03

The future is electric and Verkor is powering tomorrow's mobility

No one can deny the urgency to achieve a new energy transition by 2050 and to limit global warming to 1.5°C. As citizens, we realise that it implies a drastic change in our consumption patterns, starting with the electrification of transportation. As battery manufacturers, our ambition is to power this automotive revolution.

For us, reducing transport emissions is just the tip of the iceberg

At Verkor, our mission goes far beyond making transport habits more sustainable. Since 2020, we have been committed to sustainable battery production throughout our whole supply chain. For us, driving a responsible energy transition means overseeing all our responsibilities, from the materials we select to the recycling of our waste, and equally tackling all ESG dimensions.

As detailed in the report, we have been articulating our strategy and building day-after-day our project around three cornerstones:

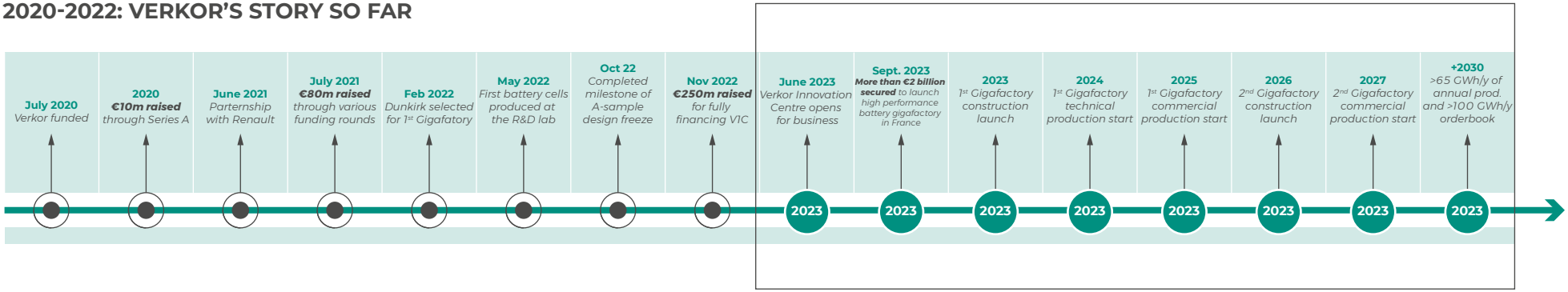
- Decarbonising our activities, to ensure they are environmentally viable and decrease the carbon footprint of our cells.
- Reshoring the battery supply chain, to secure responsible supply, locally create new opportunities and get back our strategic autonomy.
- Rehumanising industrial processes, to attract and retain talents.

Three years after Verkor's creation, we are already making significant impacts at different levels

Thanks to the incredible support we have been receiving from our multiple partners and our dedicated team of Verkorers, we can already review some of our milestones.

In less than two years, we managed to install our first R&D lab at the Verkor Innovation Centre, where the engineering teams have been developing the first prototypes, which our customer successfully tested in 2022. Our project took a step further by selecting Dunkirk as the location for our future 16-GWh-capacity gigafactory, while the Grenoble construction team began building the pilot line. In parallel, many challenges affected our upstream supply chain and as always, we refused to make any compromise on sustainability. Thanks to our partnership with Bureau Veritas and Optel, the sustainability department implemented V-Trace, a traceability platform to bring more transparency on material origins and to be cross-departmentally used for supply and quality-checking purposes. Coupled with our internal progress in terms of recycling, it proves our ability to set a more sustainable supply chain. As our project contribute to deeply transforming the European industrial landscape, we acknowledge our responsibility to help consolidate a local talent pipeline. This is why the sustainability team has been co-developing the *Ecole de la Batterie* project, alongside other battery specialists, public actors, and educators, to efficiently attract and train the workforce that will need to be operational in three years.

2020-2022: VERKOR'S STORY SO FAR



At Verkor, success is collective

Those few examples highlight our capacity to formalise our commitments. Overall, they demonstrate that Verkor is a people-centric company, which that continues to onboard stakeholders from different horizons on a shared journey.

When we created Verkor in 2020, alongside our four other co-founders, we knew that to turn the project into a thriving industrial company, we had to engage in deep stakeholder collaboration, establish a robust network of partners and pool our areas of expertise. We assessed the skills the six of us could bring and reached to our partners to provide us the additional support, expertise, and guidance we needed. In the meantime, we began recruiting talents from all over the world, to form a team of +350 Verkorers to this day. They bring their unique expertise and experience. Diversity is a key positive driver and a force for our company. In this report, we express our gratitude to every of our stakeholders for actively backing our ambitions and contributing to our growth.

As our industry advances on more and more fronts, multi-stakeholder engagement remains essential

With this report, we want our readers to understand that our actions clearly outpace the scope of battery manufacturing. Where we have faced hurdles, we have worked to build bridges to help others overcome these hurdles and ultimately make our industry more resilient. The creation of the *Upcell Alliance* Consortium is one example detailed in the report. As we were materially unable to source in Europe the machines needed for our first gigafactory, we had to procure from Asia to be ready by 2025. However, we are working with machine manufacturers to help them scale up so they can meet the needs of other future gigafactory projects.

More than ever, we are dedicated to play our part in achieving a multifaceted energy transition. As the challenges multiply, we crucially need our stakeholders to join our cause. For us, powering the way forward for a responsible energy transition is a collective effort, for which each one should assume their share of responsibility. This is why, after assessing our own impacts, we wanted to highlight the areas where collaboration has become vital for us. At the end of this report (page 56), we present a list of priorities where we would like our different partners to work with us.

04.

Designing innovative solutions ‘here and now’ **to rebuild Europe’s resilience and sovereignty**

In 2022, Verkor prepared to ramp up to become a large-scale industry.

On the process development front, the sample batches have been successfully tested. On the strategic front, we are making sure that our activities are both financially viable and sustainable for all the stakeholders we are onboarding.

For the last couple of years, we have seen the positive effects of our project at different scales. In this section, we wish to show that, behind our cells lies an entire ecosystem in full momentum. For us, proactively nurturing this ecosystem is the first step towards European economies reaching a balance between economic growth, sovereignty, social prosperity, and environmental preservation.

FIGHTING FOR THE REINDUSTRIALISATION OF EUROPE

Western Europe, weakened by waves of deindustrialisation

Following the offshoring of industrial operations since the 1990s, imports have replaced some local and regional productions for many intermediate and final strategic goods in the EU. This has also led to the formation of monopolies, with just a few players controlling some parts of the value chains.

The pandemic laid bare the risk of essential and strategic goods — among themmedical equipment, medication, and semiconductors — becoming scarce.

In 2022, Europe was the world's second largest market for electric cars[18] with 2.7 million EVs sold. However, the market was largely fuelled by Asian imports.

Our conviction underlying our project is that Europe will not be able to reach all its ambitious decarbonation targets if it continues to be increasingly dependent on battery imports. For us, a responsible energy transition begins with securing a responsible and local battery value chain.

Manufacturing batteries to sustainably repower the European transport industry

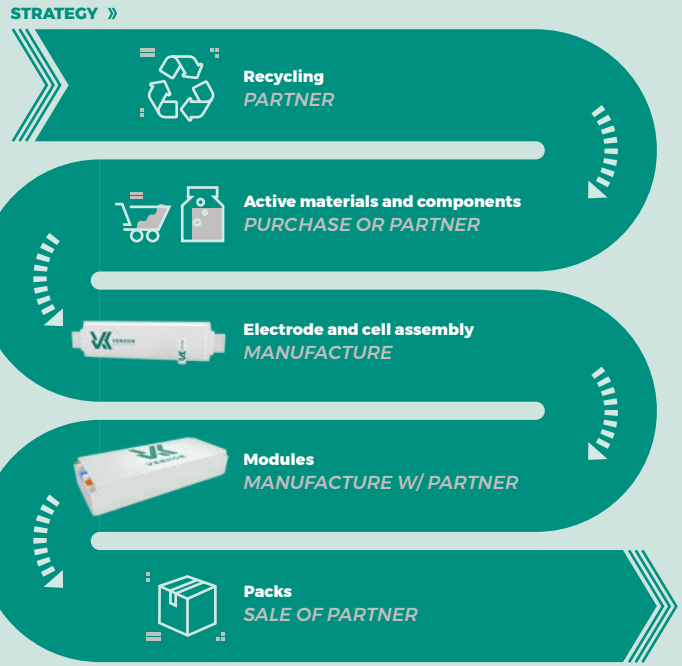
Accounting for 35 to 45% of the cost of an EV[19], batteries are at the centre of the EV value chain. So there is no doubt that achieving a sovereign mobility industry starts with building a robust battery ecosystem.

We strongly believe that sustainability and responsibility go hand-in-hand. New electrified mobility solutions are not sustainable by virtue of their use alone; their sustainability begins with how their components are manufactured.

We strongly believe that Western Europe has all the features to make our vision come to life, and have therefore chosen to bet on the continent's many assets to strike back against deindustrialisation.

By having raised €100m less than a year after its launch and securing financing to build our Innovation Centre, Verkor is proof that the European industry is still fiercely attractive to investors.

Verkor's positioning on the battery value chain: from electrode manufacturing to cell and module assembly



Laying down our foundations in France

After starting work on the Verkor Innovation Centre in Grenoble (VIC: R&D lab, headquarters, and future pilot line), we took a step further and selected Dunkirk as the location of our first large-scale production site in February 2022.

To build the Grenoble pilot line (150MWh/year capacity by 2023) and the Dunkirk gigafactory (16GWh/year capacity by 2025), we opted for sites that combine several advantages for our current and future activities:

- Supply of low-carbon and reliable energy sources
- Access to a ready-to-use industrial site in Dunkirk ('site clé-en-main Choose France'), multimodally connected to network infrastructures ('Grand Port Maritime' of Dunkirk)
- Part of a dynamic and supportive network of European public actors
- A showcase of the attractiveness of the automotive industry in Europe, which captures up to a third of EU R&D expenses[20]
- Reduced distances to final customers.

ENTERING THE BATTERY INDUSTRY WITH A HOLISTIC APPROACH

We aim to pool cross-functional expertise and knowledge

Since day one, we have been leveraging our collaboration with fellow industrial players, to share our knowledge while benefiting from their areas of expertise. The project we are defending is industry-wide, and so forming symbiotic relationships is key.

To bring a dynamic, resilient, and responsible battery ecosystem into maturity, we greatly need the support of early and new partners. Together, we can leverage tools and technologies to maximise our technical and environmental performance and drive European mobility markets competitively. The Dunkirk gigafactory gives us an exceptional geographical advantage, as it is a region that concentrates 50% of the European automotive industry, within a 600km radius.

In 2022, we successfully struck a strategic partnership with *Plastic Omnium* and with *Startec Energy*, to codevelop battery module and pack solutions.

Scaling up the battery value chain

The dynamics of global hyper-specialisation* have decreased Europe's industrial capacities, especially in equipment and machine manufacturing. That is why there are currently no local players able to match Verkor's equipment needs at the gigafactory scale.

Despite their valuable expertise, these suppliers crucially need to scale up to be able to supply future European battery plants.

Created in October 2022, *Upcell Alliance* is a non-profit initiative co-created by Schneider Electric and Verkor, represented by one of its cofounders Gilles Moreau, Chief Open Innovation and Sustainability Officer. It brings together battery manufacturers, universities, automation suppliers, specialty materials suppliers, and equipment and machinery specialists, all based in Europe. By joining the alliance, these players gain access to a networking platform, where they can increase their visibility, find new partners, seize business opportunities and/or join e-mobility academic research.

UPCELL ALLIANCE MEMBERS AND PARTNERS

Automation Supplier

Schneider Electric

Speciality Materials Suppliers

ARKEMA

Equipment and Machinery

BÜHLER · in-core · COMEXI · CAIRE AUTOMATION · fives · TECHNAX Quality Welding Solutions · INGECAL · DÜRR GROUP · COMAU · LAZPIUR · ALFI · CLEIA · NPB · JORGENSEN · Eltronic

Battery Manufacturers

VERKOR · SUNLIGHT · acc · BlueSolutions · InoBat · Leclanché Energy Storage Solutions · FREYR

Universities

HESAM UNIVERSITÉ · le cnam · CESI · universität OLDENBURG · POLITECNICO MILANO 1863 · GRENOBLE INP UGA · Arts et Métiers · BATTECH IREC eurecat

Supports

EVOLIS · PFA · Generalitat de Catalunya · N2E · CARA · Alliance Industrie du Futur

** Division of a process into smaller vertical processes.*

TAKING OVER SOVEREIGNTY-RESTORING PUBLIC INITIATIVES

European industrial sovereignty is a matter of public interest that call for engagement at all levels

The offshoring of industrial operations led to Europe's dependence on imports for its essential needs, with less leverage to make the rules in a global market.

The situation must be countered collectively and at all levels – a call that is embedded in Verkor's DNA and deployed in its strategy.

STRATEGY OF THE EUROPEAN INSTITUTIONS	VERKOR'S ACTION PLAN
Building autonomous and resilient industrial ecosystems *2020-21 EU Industrial Strategy*	**Installing a complete battery ecosystem near and on 'Verkor's decarbonised campus' in the Hauts-de-France area**
Twinning green and digital transitions *2022 European Commission Strategic Foresight Report* **Reducing European Dependance to imported critical materials** *2023 European Critical Raw Materials Act* **Deepening single market integration around industrial innovations** *2020-2021 EU Industrial Strategy*	**Deploying smart monitoring systems in future production centres** *In-real-time control of energy consumption and quality checking to reduce scrap and waste production* **Co-developping scrap retreatment technologies to maximise blackmass recovery, while minimising default rate**
Continent-wide industrial development programmes and subsidaries *- EIT InnoEnergy programme (European Battery Alliance project for 2050)* *- 'Horizon Europe 2030' subsidised collaborative projects*	**Collectively answering 'Horizon Europe 2030' project calls** *- GIGABAT project won in 2022, alongside consortium of 16 European partners* *- Applications for collaborative European projects on end-of-life battery recycling and digital twinning solutions for 2023*

STRATEGY OF THE FRENCH AUTHORITIES	VERKOR'S ACTION PLAN
Sustainably leading the 4th Industrial Revolution. *France 2030 plan*	**A dual mission: being an economic and social actor and contributing to the reindustrialisation of the country**
Supporting innovative and responsible French-based business projects **Alleviating the destructive effects of deindustrialisation on industrial jobs, through education & training**	**At the vanguard of Industry 5.0** *Combining optimised digital tools, human-empowering processes and environmental considerations* **Up to 1.200 permanent jobs provided at Dunkirk gigafactory by 2027** **Alongside a dozen of partners, anually training 1.600 talents to be mobilised by the battery industry**
Financial supports **Favouring public and private actors' collaboration on training programme conception to train up to 40.000 talents by 2030** *France 2030 project calls*	**First start-up to secure a 'Strategic Project Guarantee' from French Government** **Ecole de la Batterie, France 2030 "Compétences et métiers d'avenir" winning project**

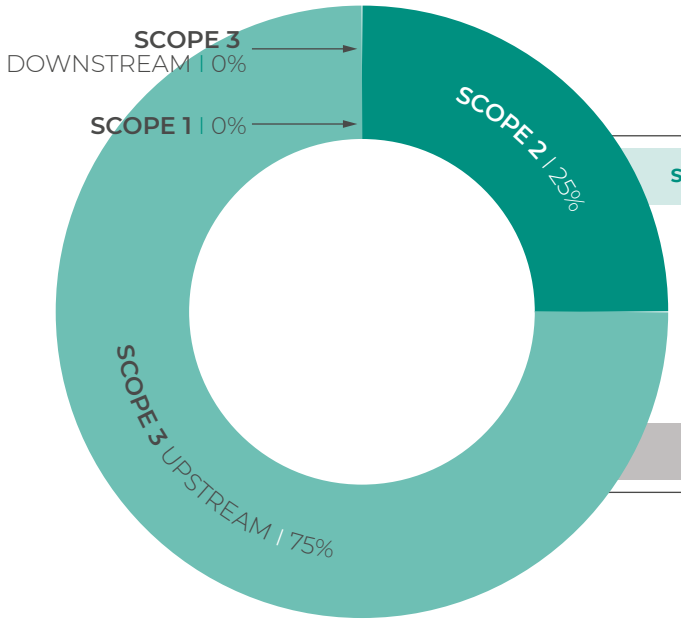
POWERING THE WAY TOWARDS EUROPEAN CARBON NEUTRALITY

Assessing our carbon footprint to identify the key drivers for improvement

To set a realistic and relevant emission-mitigating strategy and be transparent about our impact on the environment, we have calculated our greenhouse gas emissions as per the international Greenhouse Gas Protocol.

Please refer to the Appendix page 61 for data, calculation methods and detailed explanations. In 2022, our scopes 1 and 2 emissions were exceptionally low since we had yet to begin full-scale industrial production. Our emissions will naturally increase as we are about to start industrial production.

VERKOR'S CARBON FOOTPRINT IN 2022 (GHG PROTOCOL)



SOURCES OF EMISSIONS	VOLUME ($ktCO_2$ EQ)
Scope 1	0.00007
Scope 2	0.1301
Scope 3 Upstream	0.3922
Scope 3 Downstream	0
TOTAL	**0.5224**

We are gradually deploying a 4-key-point strategy to reduce our emissions.

As we identify our main sources of emissions, we are working on securing responsible sourcing, reshoring our supply chain and increasing energy efficiency to rationalise our future energy consumption and limit our activity-related emissions:

DECARBONASING OUR ENERGY CONSUMPTION	· Relying on France's low carbon energy supply · Benefiting from Dunkirk's industrial waste heat network
RATIONALISING OUR ENERGY CONSUMPTION	· In real-time process monitoring systems
REDUCING OUR PRODUCTION WASTE	· By 2023, in real-time default detection systems · **Production waste: under 10% of total production** (at Dunkirk gigafactory), (vs industrial baseline: 20%)
RECYCLING SCRAPS	· Progressive implementation of a closed-loop strategy for a supply chain integrating more recovered minerals • **By 2025: 95% of scraps recycled**
RESPONSIBLE SOURCING	· Securing responsible supply chain · Reshoring suppliers

PHOTO CREDIT : ©AKASH BASIA

Decreasing transport scope 4 emissions

With our downstream automotive partners, we aim to reduce European GHG emissions by replacing highly polluting internal combustion engines with 0-emission electric vehicles (i.e., no GHG gases emitted when operating). With battery cell production of 16GWh per year, the gigafactory will theoretically be able to power up to 200,000 EVs annually. The avoided emissions can be incorporated into an informal scope 4 emissions calculation, which is not included in standard carbon footprint measurements. Based on scientific research and for the French market which benefits from a low-carbon electricity mix, we estimate that all emissions avoided during the 200 000 km lifetime of one EV represent 24 Paris-NYC return flights (24tCO_2eq*).

**Electricity needed for a battery electric vehicle over the vehicle lifetime corresponds to around 12tCO2eq emissions vs an ICE car fuel cycle (well-to-wheel) which represents around 36tCO2eq emissions per vehicle lifetime[21].*

Expanding our product line to renewable-energy storage solutions

To reach the European Commission's climate-neutrality targets by 2050, we are conscious that powering the transition to electric mobility is just the first step. To fully achieve the energy transition, the share of renewable electricity should represent 70% of all power generation in 2030 (Busch et al., The development of renewable energy in the electricity market, Discussion paper 187, June 2023).

This is why we are pushing forward our business ambitions and developing first-life Li-ion battery Energy Storage Solutions (ESS). We are designing front-of-the-meter ESS to capture and store excess electricity, potentially from renewable energy sources. They are designed to counterbalance the disadvantageous intermittency of the renewables and stabilise the grid. Behind-the-meter solutions are under considerations to guarantee a sufficient and constant supply of electricity and reinforce energy resilience.

Anticipating the impacts of climate change on Verkor's activities

> *For us, improving Europe's resilience to climate change starts with ensuring our own resilience as a company. This is why we are committed to deploying an efficient risk management policy.*

In 2022, we began to identify climate change-related physical and transition risks and opportunities that could affect Verkor's future activities and production centres. Based on two possible scenarios – optimistic and pessimistic – we assessed how political, regulatory, and economic changes resulting from climate change could affect our supply chain, our business model, and our performance. Most of the risks we identified are in direct relation to our upstream supply chain, and the key points of the resulting mitigation strategy are presented below.

OPTIMISTIC SCENARIO:

Net Zero Emission scenario	Risks
By 2100, global warming is limited to +1.5°C. Energy transition is completed in Europe, thanks to the early deployment of standard-setting regulations on transport emissions, backed by public incentives. The reshoring of the EV value chain (from mining operations to car assembly) is achieved in Europe.	Shortages in strategic raw materials and active materials supply
	Volatility of virgin raw materials prices increasing active materials costs
	Booming energy prices
	Undersupply in low carbon energy
	Regulations evolving towards full transparency and traceability, not backed by upstream suppliers
	Opportunities
	Increased market demand for EVs, especially in the EU with a potential market of around 900 GWh by 2030

PESSIMISTIC SCENARIO:

'Backpedalling scenario'	Risks
By 2100, global warming reaches +4°C. Lack of public regulations and incentives, combined with an absence of major technological breakthroughs, has brought very few changes in consuming and mobility patterns.	Risks of natural disasters (flooding, sea level rising) harming extraction sites and production centres
	Temperature variations damaging working conditions and increasing energy demand for heating and cooling needs
	Intense competition on a shrunken market.

PHOTO CREDIT : ©ADRIEN TANGHE

Anticipating the externalities of Verkor's activities on local ecosystems

In 2022, Verkor did not formalise the measurements of the effects of its direct activities at the VIC on local ecosystems. As detailed in the following section of the report, the company focused its attention on the effects of its indirect activities on its upstream supply chain.

However, following the selection of the Dunkirk site, in 2022 Verkor conducted several mandatory evaluations to assess the risks and dangers related to the gigafactory's construction and its future operations, with a focus on wildlife, air contamination and water resource depletion and/or pollution. Specifically, the company reviewed its predicted and potential impacts on local biodiversity and surrounding communities to pre-set adequate mitigation and compensation policies (e.g., recreation of a wetland to host local wildlife). Those evaluations are to be included in Verkor's official "Demande d'autorisation environnementale", that will be publicly accessible in 2023 and open for public comments.

Given the size of its project in Dunkirk, Verkor also went through a specific national consultation process which lasted more than 3 months. During this consultation, Verkor held 12 meetings (from formal public meetings to mobile contact centres), covered 8 territories for the consultation, distributed close 15 000 concertation documents, and 5000 flyers. More than 100 ideas and questions were shared on the online consultation platform. 375 people have participated to at least one event. Overall, this consultation showed a very wide support of the local population.

Further studies centred around Verkor's large-scale impacts on biodiversity and natural resources (e.g., water, arable lands, minerals) are to be conducted in the years to come. By planning to do so, Verkor acknowledges the importance of going beyond the measurement of its carbon footprint to properly quantify its environmental impact.

Being responsible, **from the mine to recycling**

05.

To ensure all our activities are economically, environmentally, and socially viable, responsibly sourcing raw materials overtime is one of our top priorities.

Our 2022 scope 3 emissions data speaks for itself. To produce Li-ion battery cells with a carbon footprint of 30 kgCO2eq/kWh by 2032, decarbonising our manufacturing processes is not enough. We must take responsibility for our entire supply chain.

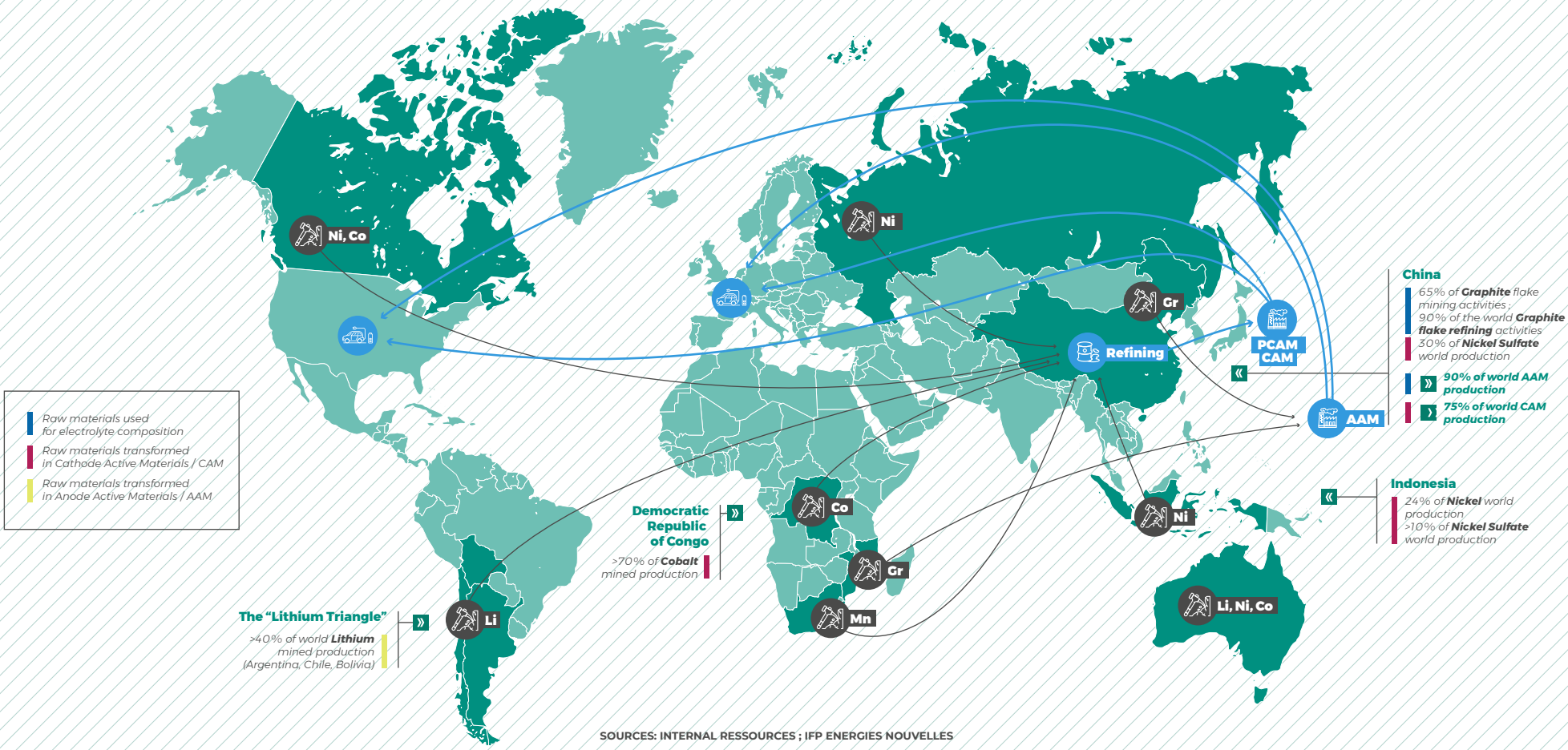
As illustrated in the analysis of our transition risks, to ensure our business stability, sustainable raw materials sourcing must be coupled with ethical procurement policies, to guarantee full traceability and transparency over our entire supply chain.

AN UNDER-PRESSURE MINING VALUE CHAIN

Li-ion battery performance depends on essential chemical reactions happening inside the cells between different active materials. At present, most active materials are obtained by refining, often through multiple steps, minerals extracted from mines. As illustrated in the map below, the raw material value chain on which battery manufacturers rely, is highly fragmented and global. However, a closer look shows that each mineral needed to make batteries is often concentrated in a few countries. Similarly processing capacity, that is the capacity to turn raw material into active battery grade material, is concentrated in China. As we are dependent on these raw material supply chains to achieve an urgent energy transition, our industry will have an important impact on the development of these value chains over time and we are committed to lead the way in setting high standards for a sustainable transition. We face many intertwined challenges, the root causes and consequences of which are summarised in this subsection.

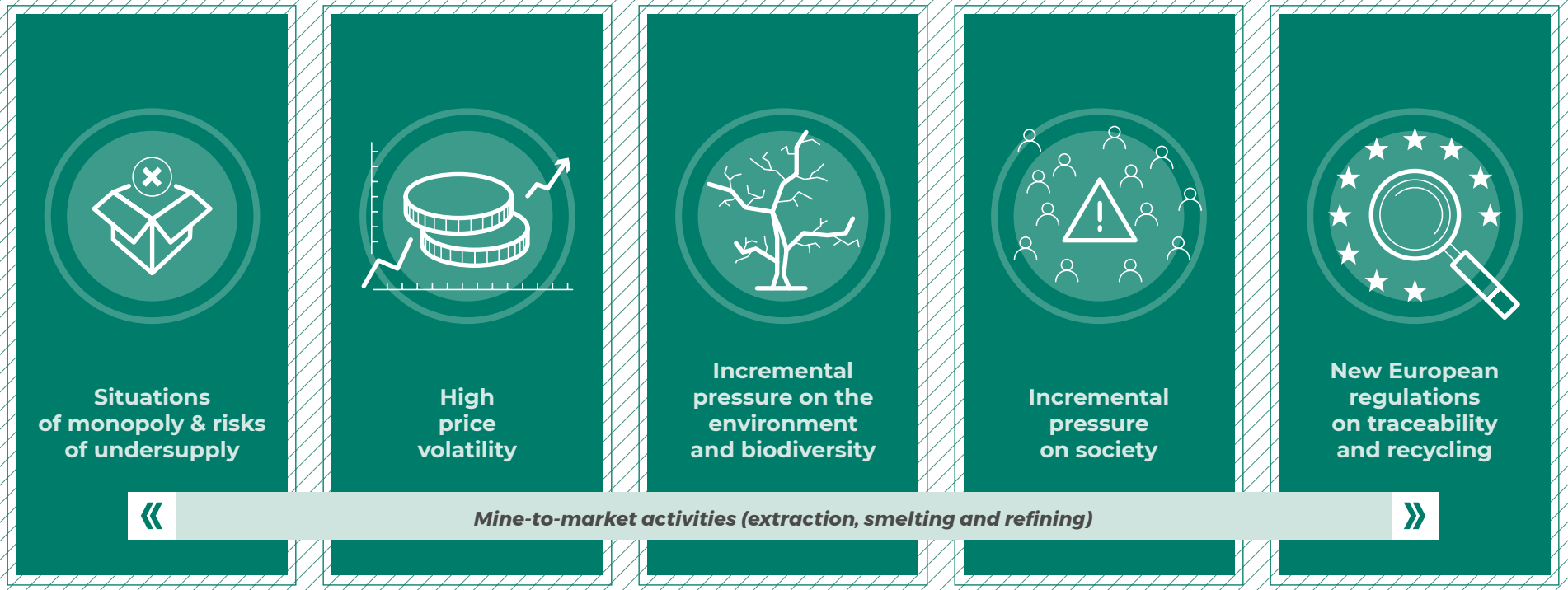
PHOTO CREDIT : ©ADRIEN TANCHE

OVERVIEW OF THE UPSTREAM SUPPLY CHAIN FOR BATTERY MANUFACTURING ACTIVITIES IN 2022



SOURCES: INTERNAL RESSOURCES ; IFP ENERGIES NOUVELLES

TOP CHALLENGES IDENTIFIED ON THE UPSTREAM SUPPLY CHAIN



SITUATIONS OF MONOPOLY & RISKS OF UNDERSUPPLY

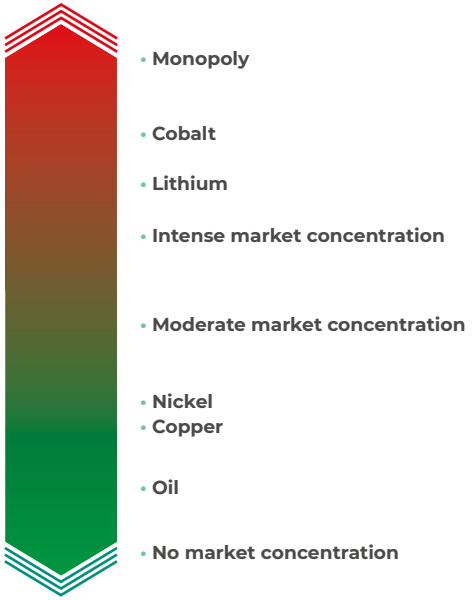
PHOTO CREDIT : ©ADRIEN TANGHE

To secure our future production, securing long-term access to key raw materials is crucial.

Global demand for Li-ion batteries is set to boom from 700 GWh in 2022 to 4700 GWh by 2030 (IEA). This has created substantial demand for battery raw material and refining capacity with global supply struggling to keep up. Many supply-side projects have been announced or launched to respond to the rising demand but exploration, permitting and construction lead-times mean access to certain raw materials will remain constrained in the near to medium term:

- **Lithium: Critical risk of undersupply by 2030.** Pressure is increasing on high-grade resources, essentially found in Argentina, Australia and Chile and new refining projects are being built outside China.
- **Cobalt: Limited risk of undersupply by 2030**
- **Nickel: Limited risk of undersupply by 2030**
- **Manganese: Limited risk of undersupply by 2030.**

RAW MATERIALS MARKET CONCENTRATION LEVELS

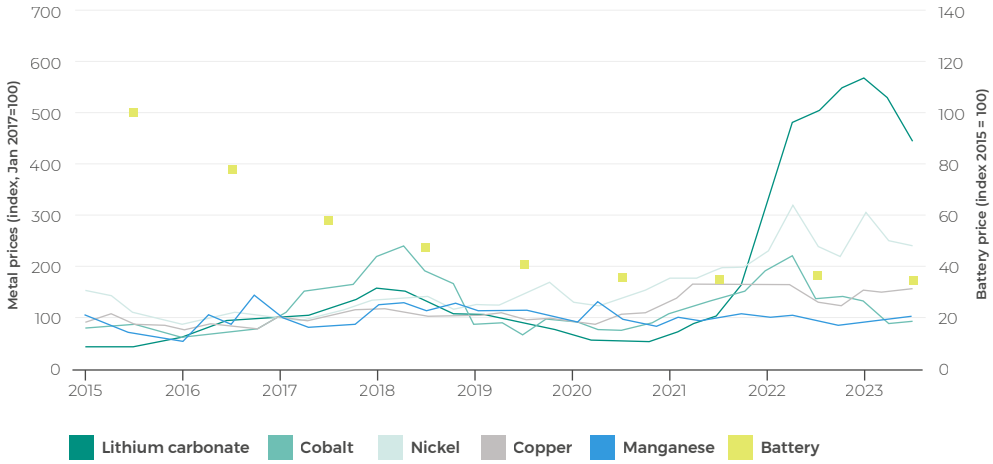


SOURCE: HERFINDAHL-HIRSCHMAN INDEX FOR RAW MATERIALS MARKET (IFP ENERGIES NOUVELLES)

A high price volatility is anticipated (IEA) and can be explained by:

- A booming industrial demand with uncertain supply ramp-up timeline to match it (as described above)
- National announcements aiming to steer and encourage changes in supply chain localisation and priorities
- Geopolitical events causing disruptions on the supply chains
- Concentration of worldwide supply by a few actors with significant hurdles for new entrants.

PRICE OF SELECTED BATTERY MATERIALS AND LITHIUM-ION BATTERIES, 2015-2023



IEA. Licence: CC BY 4.0

SOURCE: IEA 'GLOBAL EV OUTLOOK 2023'
WWW.IEA.ORG/REPORTS/GLOBAL-EV-OUTLOOK-2023/TRENDS-IN-BATTERIES

INCREMENTAL PRESSURES ON THE ENVIRONMENT ON BIODIVERSITY

PHOTO CREDIT : ©CÉCILE BRUN

As mine-to-market activities intensify to respond to growing demand, environmental and biodiversity pressures increase:

- **Extraction, smelting and refining processes to transform raw minerals into batteries create significant CO_2 emissions.** The level of emission depends on the processing technology, raw material properties and the energy-mix of the countries in which operations are performed.
- **SO_2 emissions and sulfuric acid releases**, caused by improperly handled extraction and refining operations
- **Improper handling of process waste**, such as water treatment or tailings disposal, has an important impact on the surrounding environment and biodiversity.

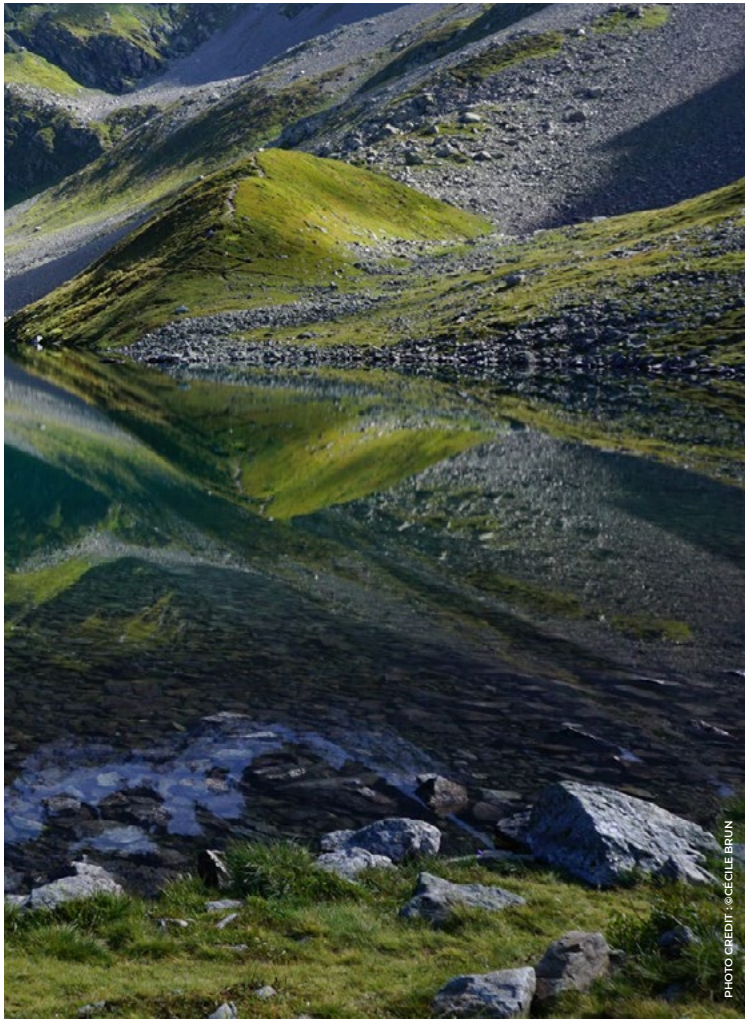


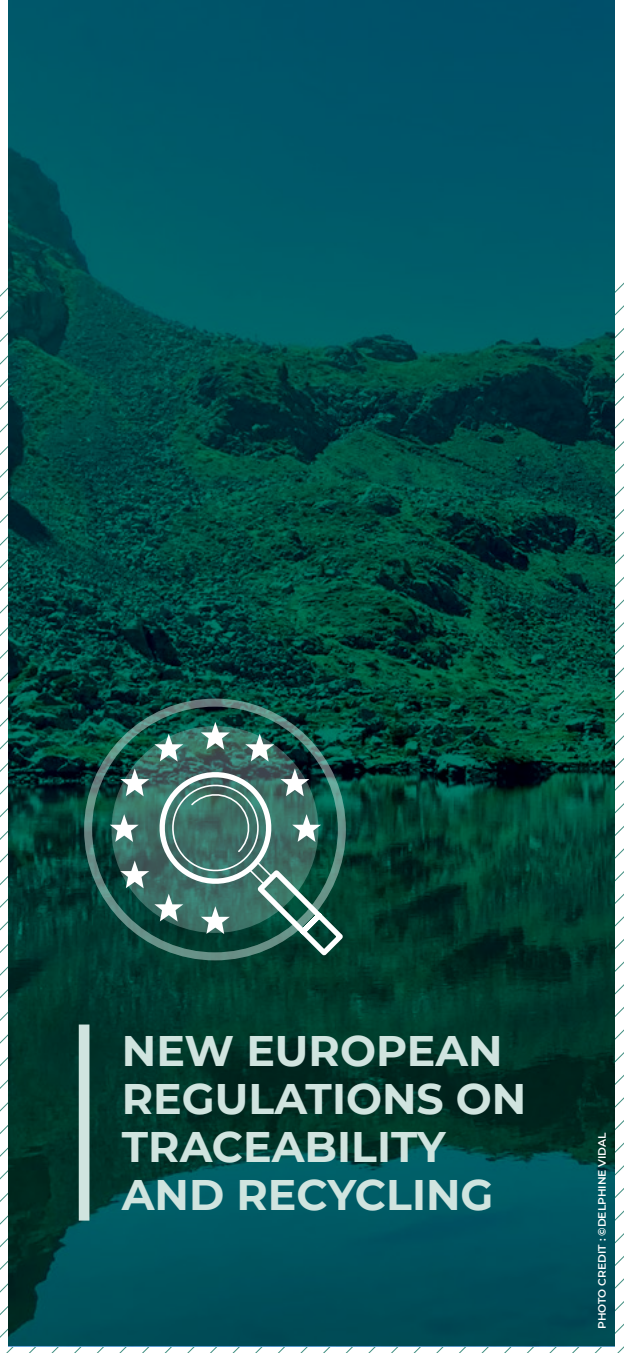
PHOTO CREDIT : ©CÉCILE BRUN

INCREMENTAL PRESSURES ON SOCIETY

PHOTO CREDIT : © DINO REICHMUTH

Most mine-to-market operations are conducted in countries where social and environmental regulations are not enforced or insufficiently stringent:

- Some examples of risks identified:
- Risks of on-site accidents because of insufficient Health-Safety-&-Environment (HSE) policies
- Risks of air pollution, soil deterioration, water, and land contamination due to insufficient HSE policies aimed at preserving surrounding communities and their living area
- Risks of resource usage conflicts and resource scarcity: land grabbing, forced displacements, water shortages
- Risks of modern slavery and child labour due to absence of labour regulations or no enforcement
- Risks for the workers/ operators to develop serious medical conditions due to poor working conditions
- Risks of destruction of local ecosystems
- Risks of accidents due to precarious facilities resulting from lack of investments
- Risks of corruption and thus indirect funding of illegal activities.



NEW EUROPEAN REGULATIONS ON TRACEABILITY AND RECYCLING

PHOTO CREDIT : ©DELPHINE VIDAL

In parallel, the EU is deploying strict regulations on traceability and recycling for batteries to be sold within the European market by 2030s:

- **Digital Product Passport,** a mandatory digital ID for EV batteries sold in the EU by 2026 (publicly accessible thanks to a QR code), including data about the supply chain and the battery carbon footprint. This requires increased transparency throughout the value chain.
- **Regulation of the European Parliament and of the Council concerning batteries and waste batteries (2023)** with the aim to increase Li-ion battery components recovery:
  - ***Mandatory recycled content declaration*** *for EV batteries containing Cobalt, Lithium and/or Nickel and sold in the EU, starting in 2027.*
  - ***Mandatory minimum levels of recovered raw materials to be used in EV batteries sold in the EU*** *(from production and/or consumption waste) by 2030 (12% cobalt, 4% lithium and 4% nickel).*

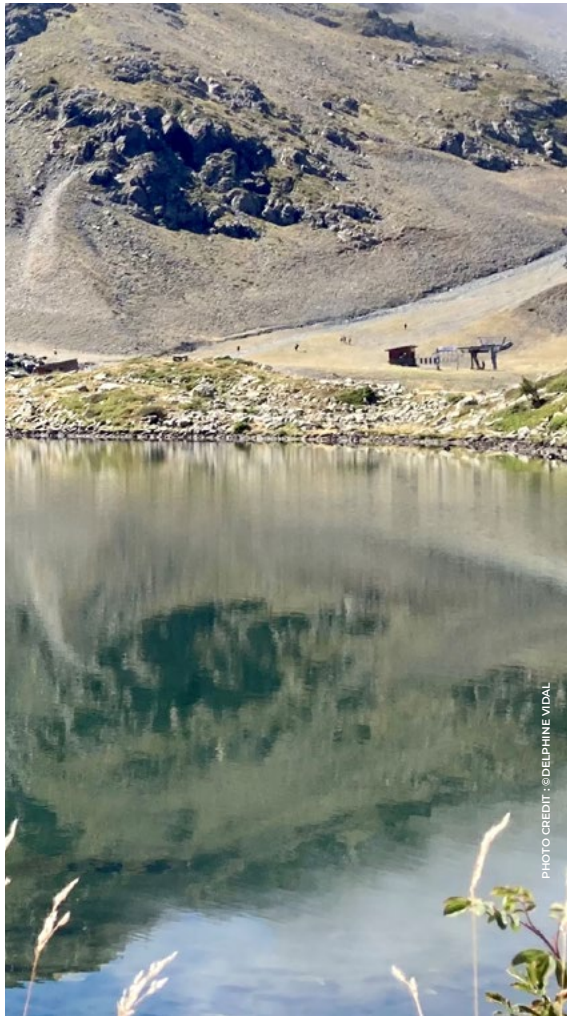


PHOTO CREDIT : ©DELPHINE VIDAL

MULTIPLE CHALLENGES IN THE BATTERY INDUSTRY

1 SCARCITY IN HIGH PERFORMANCE MATERIALS

- **Thread to cathode manufacturing**
- Supply chain disruptions

2 BOOM IN BATTERY MANUFACTURING COSTS

- **Raw materials: up to 70% of battery manufacturing costs**
- Booming **energy prices**

3 REDUCING THE BATTERY CARBON FOOTPRINT

- Relocalisation outside high-carbon energy countries needed
- New technology deployment to minimize extraction/refining-related emissions.

4 IMPLEMENTATION OF NEW EU REGULATIONS ON TRACEABILITY

- **A multi-divided and opaque upstream supply chain,** mobilising different suppliers
- **Reluctance from Tier 2 and Tier 3 suppliers** to share information

5 DEVELOPING SCRAP AND END-OF-LIFE BATTERY ACTIVITIES

- Most recycling activities **currently conducted in Asia,** in **open-loop systems**
- **Significant CAPEX investments** (building recycling lines) and **technological know-how development** (chemical processes) needed to reshore battery recycling activities ito Europe

6 INCREASED PRESSURE FROM PUBLIC OPINION

- Willingness to **make eco-and-social conscious consuming choices,** and be able to trace the origin of integrated components

A MORE VIRTUOUS SUPPLY CHAIN TO BE RESHAPED

This imperative is deeply rooted in our 'Sustainable Strategy Roadmap for 2027 and beyond'

Our team is working at different levels to enhance the performance of our final products while reducing the material inputs and production waste.

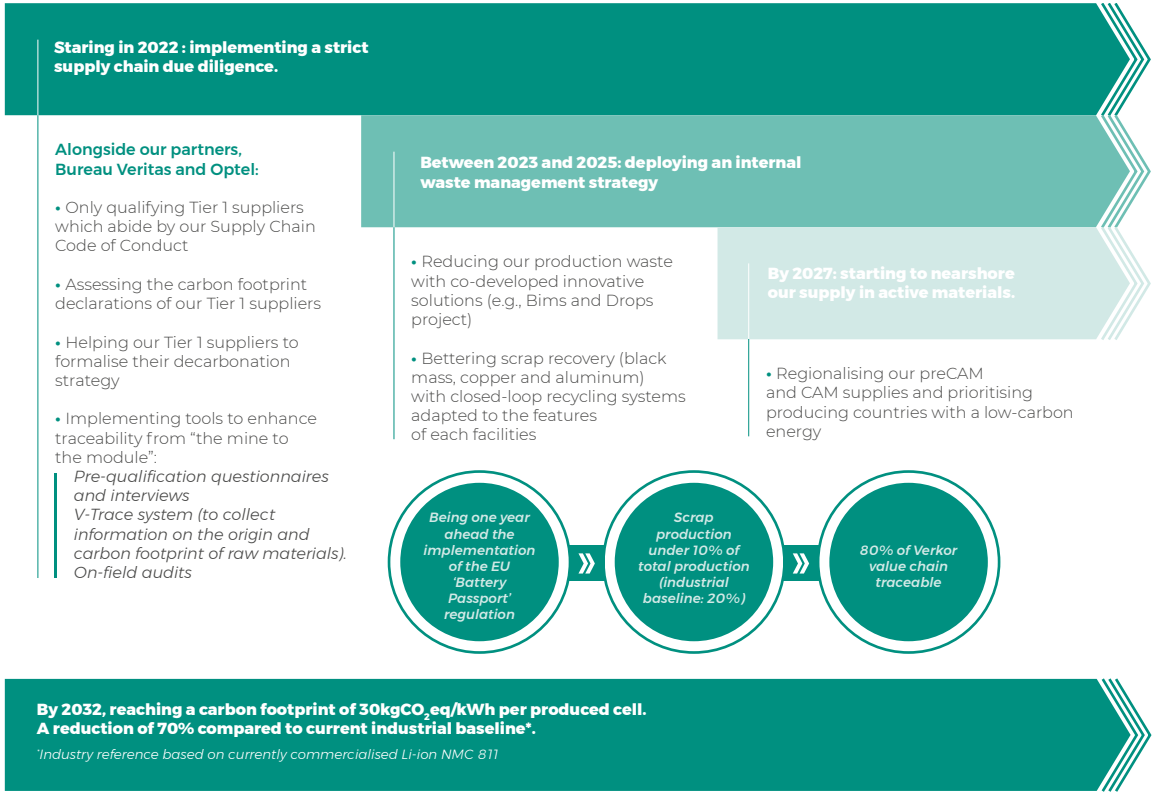
As Verkor, a company wishing to be truly 'green at core', we put all our efforts in building a virtuous upstream supply chain.

We are making every effort to produce low-carbon mobility solutions, while securing a responsible upstream supply chain. To do so, we scrupulously select our suppliers, and require compliance with our Supplier Code of Conduct.

We set a 10-year plan with top-priorities aligned with our core values.

We refuse to turn a blind eye on the sustainability issues related to raw materials and we are committed to realistically addressing these issues.

> *Please refer to the Appendix to learn more about Verkor's approach to cell Life Cycle Assessment (LCA).*



Nurturing good business practices across our supply chain

We are working on establishing a responsible upstream supply chain, to align our values with our actions. It consists of assessing and selecting partners abiding by our Procurement Policy and our Supplier Code of Conduct. The objective of our Code is to ensure that our partners fully comply with international norms, standards, and legal requirements. Through our partnership with Optel and Bureau Veritas, we are putting in place an effective system (V-Trace platform) to lead traceability throughout our supply chain. Alongside the Supply and Procurement team and external partners, Verkor's Sustainability Department works hand-in-hand with suppliers to help them adopt better business practices related to international norms. Alongside the Supply and Procurement team and external partners, Verkor's Sustainability Department works hand-in-hand with suppliers to help them adopt better business practices related to international norms.

Building our recycling strategy

OUR TARGET

- Maximising the recovery of **strategic minerals** and **metals** extracted from **battery manufacturing waste**
- **Taking advantage of NMC chemistry:**
  - *High recyclability properties (more than 95% recovery rate)*
  - *High recovered material value*

OUR APPROACH

- **Closed-loop systems:** re-introduction of recycled battery manufacturing waste into our own new cell production process
- Thanks to the **local battery recycling, supply chain ecosystem** and **win-win recycling business model**

OUR ACTIVITIES

- Short term (2022-2027): perform R&D activities, with recyclers with the pilot line scraps
- Open loop recycling for Gigafactory scrap, to allow the ecosystem to be built

---

- **Long-term (from 2027): Closed-loop recycling** consists of preparation for recycling at GF site; Metals salts recovery by the local recyclers; pCAM, CAM closed-loop by selected CAM supplier
- Sustainable win-win business model will be placed

OUR LONG-TERM ACTIONS FOR 2032

- Implementing a complete 'closed-loop supply chain' into the Battery Valley ecosystem
- **Achieving full circularity to:**
  - *Keep ownership of used raw materials: better resilience to supply disruptions*
  - *Build economies of scale, making recycled materials more cost competitive than virgin ones*
  - *Develop a local close-loop ecosystem to reduce the logistics constraints and carbon emissions*

PHOTO CREDIT : SADRIEN TANGHE

Undertaking a collective **endeavour**

06.

Starting with six cofounders in 2020, Verkor will expand to become a team of 1,600 collaborators in less than a decade.

Our early-day startup mindset has been a unique asset to build an exceptional talent pipeline. Prompted by the challenge to forge a new industry from scratch, and inspired to lead a society-transformative project, Verkorers from all over the world were onboarded. In the long run, we want to keep fuelling this primal driving energy. Beyond delivering on our promises, we must provide evidence that we have been doing our best, starting at company-level.

Embarking new talents also means reimagining opportunities for different generations of workers. This is why we believe our mission starts in the classroom.

The path towards virtuousness is winding but together we can move forward, one step at a time. In 2022, we took the first step by deploying measures to ensure the compliance of all levels of the organisation with national and European regulations.

OUR MOTTO: LEADING-BY-EXAMPLE

Combining the WHY, from which originates our business model, with HOW we are committed to conduct our business activities, for all our stakeholders.

Our core values: Commitment, Contribution, Communication, Team spirit

Our values are our compass. They guide our business and organisational decisions to build the unique company model we want to achieve alongside Verkorers.


PHOTO CREDIT : ©CHARLINE LACROSE

EMBODYING OUR PHILOSOPHY

GROWING A PROUD FRENCH MULTICULTURAL COMPANY

Diversity makes us stronger

Verkor has grown from 6 co-founders to more than 350 people in 2023, representing 37 different nationalities. When the adventure began, we knew that, theoretically, some time would be needed to successfully mature a brand-new industry. However, we only had a few years left to get on the train of the energy transition. Hence, we have been going worldwide to capture essential knowledge, from cell design to recycling processes.

Our talents are bringing their unique expertise and diversity has been essential to reach our goals. It gives us energy to overcome our challenges and find innovative solutions that result from people's multiple angles. For two years, their contributions have allowed us to simultaneously work on in-house innovations and on the construction of the pilot line while targetting industrial excellence.

As Verkor is growing, we have been committed to continue to foster an inclusive corporate culture based on our four core values. Below are presented some of our federating initiatives.

CARE AND CULTURE COMMITTEE (CCC)

Resulting from an initiative taken by several employees, the CCC was created in April 2022. It is composed of a dozen of volunteers from Verkor, coming from different countries, with various professional backgrounds and working in diverse departments. It promotes Verkor's unique cultural diversity at an internal scale. The CCC has been organising several corporate events to encourage Verkorers to share their traditions (such as Chuseok or Indian celebrations) with their coworkers and favour inclusion.

VERKOR'S COMMUNITIES

Every Verkorer is encouraged to share their passions with their coworkers so they hopefully can build an inter-department community of shared interests (e.g. joining Verkor's running club, organising chess and foosball tournaments).

VERKOR DAYS

The Verkor Days are corporate day events, which the executive team has been spurring to gather all company teams around work and non-work-related fun activities.

As their preparation requires time and organisation, it relies on a committee of volunteers from Verkor and the communication team.

VERKRONO

Since many Verkorers settling down in Grenoble may not be familiar with the surroundings, as a French company, we are also committed to help them discover the unique sceneries and activities we are proud to have near us. With the Verkrono editions, Verkorers and their families can enjoy hiking, biking, running and other sports.

Working on building a human-centric industrial company

Coming from all corners of the world, Verkorers bring knowledge, experience and energy. They are first-line change makers as they materialize their foresights directly by planning, implementing and piloting the digital tools to make the pilot line at the forefront of technology.

ESG committee

By joining Verkor's ESG Committee, as members or occasional volunteers, employees can directly contribute to the company better addressing all ESG dimensions, starting internally. The ESG committee conducts ESG actions in the company, structured as four pillars:

- **'Human at heart'**
- **'Planet preservation'**
- **'Safe job environment'**
- **'Life at Verkor'.**

We are ensuring efficient internal management of human rights and labour rights. As a French company, we abide by French human and labour rights regulations. They lie at the core of our internal rules, which precisely define the rights and obligations of our employees, to protect everyone's best interests and optimise the company's internal organisation.

Safety is our priority

With the pilot line under construction, the manufacturing and prototype testing were ongoing in the R&D lab. The risks that might affect the health and safety of our coworkers were identified, assessed and classified in our 'Document Unique d'évaluation des risques professionnels', called DUER. It was built with the collaborators on site and with the support of the Health, Safety and Environment department (HSE) to establish the safety guidelines, while preserving the surrounding environment.

At Verkor, we consider that safety is a priority and a collectively shared responsibility. The general health and safety guidelines must be adhered by all. To implement a cross-functional corporate culture of safety, being present on-site, daily meetings and safety training sessions are delivered including to all newcomers. It aims to:

- **Create awareness about on-site industrial and chemical hazards**
- **Deliver safety instructions and embed good practices among all**
- **Ensure Verkorers adopt the safest behaviours at work and in situations of dangers.**

Depending on each person's type of activity in Verkor's operations, further training is also provided.

Harassment and discrimination

To make Verkor a safe workplace, we make no compromise when it comes to all forms of harassment and discrimination. Following the French Labour Code, our internal rules set specific disciplinary sanctions to address them. A dedicated go-to-person, belonging to the CSE (French acronym for the 'Social and Economic Committee'), and ambassadors are trained to assist and support all employees and act upon any case of sexual harassment and sexist behaviour. They continuously work on ways to prevent and raise awareness on these subjects.

ATTRACTING TALENTS

In 2022, an internal wage standard was formalised to ensure there are no gender-related pay gaps within the company. To attract future female talents, the HR and Sustainability departments have been working on promoting the battery jobs at universities and vocational high schools.

We scored 78 out of 100 for our first gender equality index calculated in 2022. The maximum score was obtained for two out of five indicators required in the index, showing that there is no difference in wage increase between men and women. Objectives were set to improve the three other indicators in 2023 and 2024. By 2025, we aim to reach a professional gender equality index over 90.

REWARDING EACH EMPLOYEE'S CONTRIBUTION WITH AN INNOVATIVE CAPITAL SHARING SYSTEM

First comers have benefited from BSPCEs (Bons de Souscription de Parts de Créateur d'Entreprise, a French hybrid version of stock options). They reward the risk they took by joining the company in its very early days. As Verkor no longer meets the legal criteria to issue BSPCEs, all new employees have been receiving free shares or stock options since mid-2021.

Verkor is very proud to have deployed so early-on an equity-incentive system that reflects its willingness to build an engaging company able to share the future value creation.

> *The Ecole de la Batterie roadmap is to power a smart reindustrialisation in Europe.*

PREPARING THE NEXT GENERATION OF TALENTS TO BUILD THE BATTERY INDUSTRY

The automotive industry and the core competencies it mobilises are undergoing a deep transformation. New professional opportunities are being created and new skills will be needed with the battery industry development (such as chemistry, electrochimistry, mechanics, electronics and digital process engineering skills)

Since the creation of Verkor, we have been convinced that we have a role to play in this transformation. Alongside a consortium of 16 partners, we have been leading the 'Ecole de la Batterie' project since 2022. It is a multiscale project, involving public actors (financial support of the French government, through its 'France 2030' plan) and educational and training bodies and battery companies through clusters, with set targets to be gradually achieved by 2028.

PHOTO CREDIT : ©ADRIEN TANGHE

PHOTO CREDIT : ©ANTOINE GRETINON

OUR GOVERNANCE FRAMEWORK

Verkor is a public limited French company registered with the Registre du Commerce et des Sociétés de Grenoble and has only one establishment operating exclusively in Grenoble. It is a "Société Anonyme à Directoire et Conseil de Surveillance" in 2022.

While Verkor's governance structure is expected to change in 2023, Verkor currently has a two-headed governance structure. Indeed, it is divided into a Management Board (made up of Verkor's co-founders and headed by a Chairman elected from among its members) and a Supervisory Board (which represents Verkor's shareholders, also headed by a Chairman elected from among its members). The Management Board is responsible for the day-to-day running of the company, while the Supervisory Board is responsible for overseeing the company's business and strategy.

Employees' representation within the company

Because of its growing size, Verkor has been legally required to establish a formal works committee, the first elections of which took place in June 2022. The Social and Economic Committee ('CSE') is internally elected for four years and is a unique electoral college that is composed of office employees, technicians, supervisory staff members, and executive-status employees.

CSE members are to be consulted and referred to by the direction, when decisions likely to directly impact employees' working conditions and well-being (i.e. change in organisation, management, and general operations) are discussed.

The CSE has a unifying role to play within the company by better facilitating the dialogue between Verkorers and expressing collective views to the direction.

07

For a multistakeholder responsibly-led **energy transition**

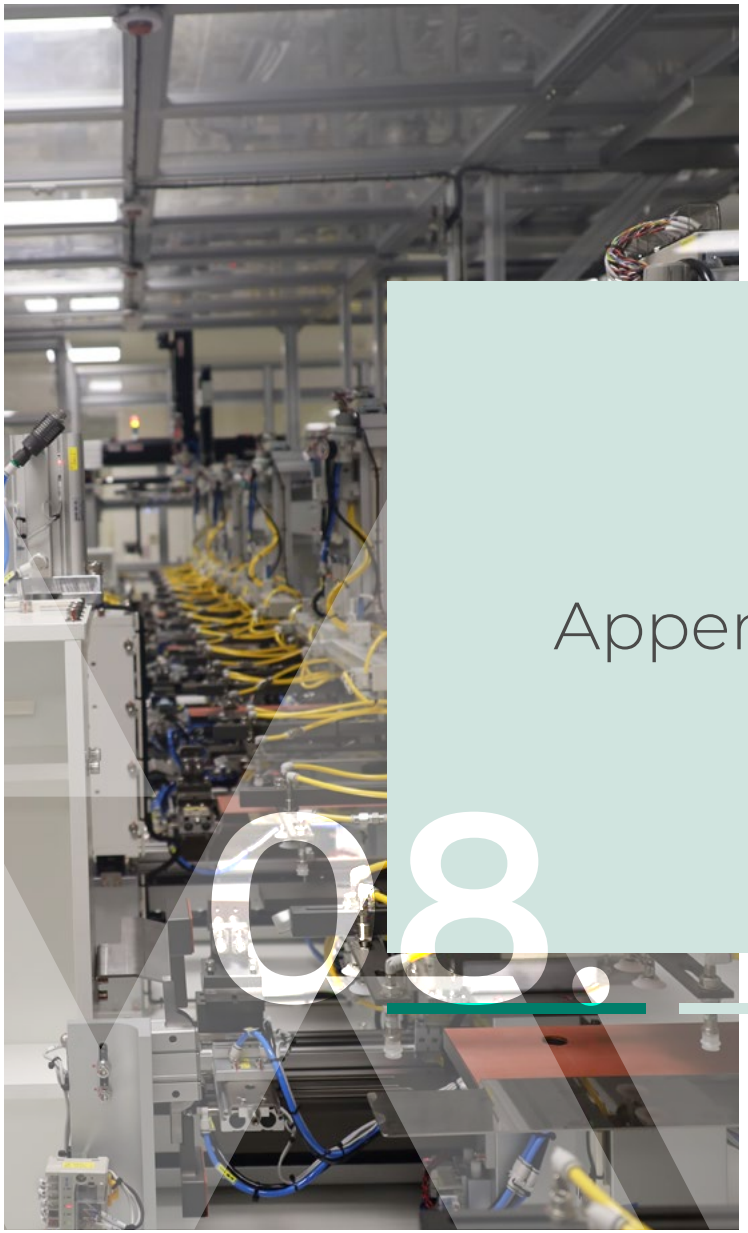
With this report, we wish to communicate with our different stakeholders on the major steps we have taken to power the way forward for a responsible energy transition:

- Inventing a new industrial model based on digital innovations, to be competitive, offer better work conditions, reduce waste, and rationalise emissions
- Being transparent on the negative impacts generated throughout our entire supply chain and, betting on traceability to make the most reasonable choices for the planet and living beings
- Prioritising collaboration and cooperation, to support the expansion of our industrial ecosystem and build a resilient battery value chain in Europe
- Being a social changemaker by offering (re)training programs, as the job landscape enters a deep transformation
- Contributing to change the Europeans' consumption patterns, towards more sustainable mobility choices.

As we reflect on the action drivers required, we need our stakeholders to join forces. We wish to work collectively with our partners on the priorities below:

Powering a responsible energy transition	
Verkor's top priorities	**Actionable levers**
Reducing by 70% the carbon footprint of our cells by 2032, while remaining price-competitive in the global market*	Guarantee a secure and long-term access to low carbon energy sources, at a competitive and stable price
Ensuring full traceability over the battery supply chain	Provide transparency on the battery value chain regarding the social and environmental impacts, and trace the raw materials from the mine to recycling
Beyond our carbon footprint, transparently assessing and mitigating the impacts of battery manufacturing on the biodiversity and resources	Preserve fragile ecosystems and common goods, such as water
Building resilient and sustainable industrial ecosystems in Europe	• Relocalise the battery value chain activities to avoid supply chain disruptions and reduce transport-related emissions • Playing collective and favouring local partners over companies carrying a dumping strategy in the European battery market **Through cooperation between public and private stakeholders:** • Formalising a mandatory 'Battery Score', which goes beyond the requirement of the Battery Passport to favour low-carbon battery manufacturing • Granting financial supports that efficiently compete with foreign grants and encourage actors involved in the battery value chain in Europe to be cost competitive on a global market
Attracting and retaining the talents needed to accelerate the European reindustrialisation	Develop expertise and skills needed for the battery value chain, as in the Ecole de la Batterie

** Compared to current industrial baseline, based on currently commercialised Li-ion NMC 811*



Appendix

08.

APPROACH TO REPORTING

Ambitions

This has been Verkor's first annual sustainability report since its official registration as a company in 2020.

The report aims to give a wide panel of stakeholders an overview of the company's attempts to address all ESG dimensions, through its business activities, operational decisions and internal organisation. The goal is to provide a relevant snapshot of Verkor's ESG achievements for the year 2022 as well as remaining questions to be addressed.

Target audience

This report is directly addressed to investors and financial partners, customers and prospects, final consumers and the general public.

Frameworks of the report

Verkor's impact report was framed with reference to the International Global Reporting Initiative (GRI) standards.

For each index, references to specific pages in the report are listed in page 68. Non-covered indices are mentioned.

Additionally, Verkor attempted to follow the European Taskforce on Climate-Related Financial Disclosure (TCFD) guidelines in this report.

Scope of the report

The report covers Verkor's existing facilities (headquarters and R&D lab at the Verkor Innovation Centre, in Grenoble) and on-construction production centres (pilot line at the Verkor Innovation Centre in 2023; Dunkirk gigafactory in 2025).

Reported actions and data are for the year 2022, from January 1st to December 31st. To bring clarity, anterior data (2020 and 2021) as well as projective data and targets may be included in the report. The report is published in 2023.

APPROACH TO REPORTING

Materiality topic selection

Content selection was conducted internally and did not commit Verkor's external partners. For the year 2022, Verkor did not carry a materiality assessment. However, the work is ongoing and the company aims to deliver a multistakeholder-engaging materiality matrix in its next report.

The 5 materiality topics Verkor selected for this report are:

- Company's contribution to the economy and economic resilience
- Product and process environmental excellence
- Responsible upstream supply chain
- Internal ethics and governance
- Attracting, training and retaining talents

The materiality topics covered in the report were conjointly pre-selected by Verkor's Strategy and Sustainability teams. The selection was then presented to the 'Social and Economic Committee' (CSE) and the ESG Committee, for discussion.

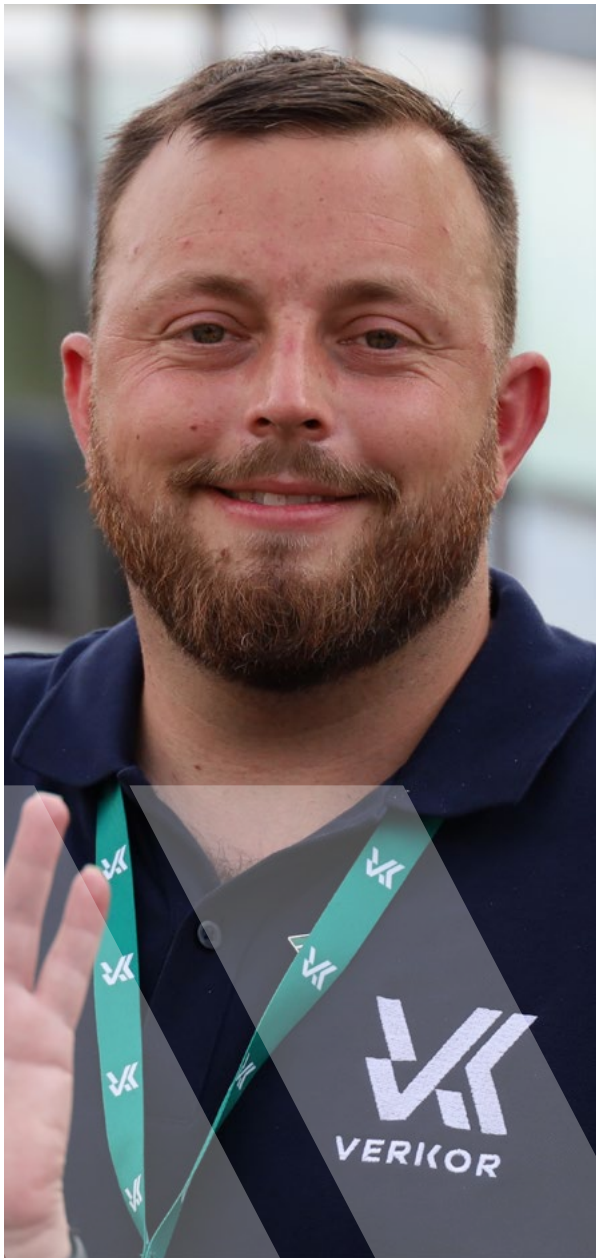
Chosen topics were identified as the ones on which Verkor has had the most significant economic, environmental and social direct and indirect impacts.

Review of the final report

The final review of the report was fully conducted internally and not subjected to an external assurance. The report was submitted to the CSE for final review.

Sources of information

Reported information comes from internal sources, literature, and official studies. All external sources of information are listed at the end of the Appendix. When possible (confidentiality matters), data and internal calculations methodologies are provided in the subsection "Quantified ESG performances and calculation methodologies".



QUANTIFIED ESG PERFORMANCES AND CALCULATION METHODOLOGIES

ENVIRONMENTAL DIMENSIONS

Company carbon footprint

Verkor calculated its carbon footprint for the year 2022 in accordance with the **international GHG protocol.**

It is to be underlined that the results do not reflect Verkor's future industrial emissions. Since the company had not been producing nor selling cells in 2022, most of its emissions come from employees commuting, supply purchases, and R&D activities. It is to be noted that R&D laboratory was essentially powered with electricity coming from the French grid in 2022.

With the VIC becoming a production centre by mid-2023, scope 1 and scope 2 emissions are logically expected to grow, while upstream supply chain emissions are to rise because of an increase in our raw material consumption (virgin minerals). However, in the long-run, we expect to counterbalance our scope 3 emissions coming from minerals extraction with the deployment of an ambitious closed-loop recycling strategy.

In 2022, the company is implementing monitoring systems to precisely measure its operating emissions, energy consumptions and waste production rates. Hence, as detailed in the chart below, delivered values are mainly based on internal estimates from scientific literature, statistics databases and energy and bills from service providers.

Precisely identifying and measuring all sources emissions at the VIC will help Verkor reach industrial and environmental excellences at Dunkirk Gigafactory by 2025. These data are to be used to build digital twins for the gigafactory. The goal is to help Verkor's engineering, process and recycling departments make necessary adjustments to minimise future scrap and black mass productions as well as energy consumption while diminishing production costs (from wasted materials and energy).

GHG PROTOCOL				
Scope		**Subcategories**	**Emissions ($ktCO_2$)**	**Data sources**
SCOPE 1		Fugitive Emission (Intentional or unintentional releases)	0.00007	*Verkor R&D lab monitoring measurements of unintentional leakages (all exhaust gases being fully retreated)*
Total SCOPE 1			**0.00007**	
SCOPE 2		Electricity consumption (office, R&D lab, VIC construction site)	0.1301	*Meter readings*
Total SCOPE 2			**0.1301**	
SCOPE 3	**SCOPE 3 UPSTREAM**	Purchased goods and services	0.2320	*Internal estimations based on mass, density and carbon intensity of raw materials purchased for the year 2022 ;*
		Capital goods (IT furniture)	0.0562	*LCA data from providers used when available*
		Upstream transportation and distribution of purchased materials to the VIC	0.0039	*Internal estimates based on mass and origin of raw materials purchased for the year 2022, considering boat and truck as means of transport used*
		Business travel	0.0344	*Business travels by bus, rain and plane registered by Verkors travel agency*
		Emissions from employees' commuting journeys	0.0658	*Internal surveys on commuting by bike, public transportation, and cars*
		TOTAL SCOPE 3 UPSTREAM	0.3922	
	SCOPE 3 DOWNSTREAM			*No commercial activities registered for the year 2022 (shipping of samples not considered)*
		TOTAL SCOPE 3 DOWNSTREAM	0	
Total SCOPE 3			**0.3922**	
TOTAL GHG EMISSIONS			**0.5224**	

Verkor's cell Life Cycle Assessment (LCA)

To quantify the carbon footprint of its future cells, Verkor has started conducting projective life cycle analysis. It is a direct response to the Regulation of the European Parliament and of the Council concerning batteries and waste batteries (2023). In 2024, battery manufacturers are to provide a clear battery carbon footprint assessment (following a precise methodology set by the EU), paving the way for a classification, and labelling of battery carbon footprint by 2026.

Three approaches (cradle-to-grave, cradle-to-gate, cradle-to-cradle) can be considered, and a common methodology to all reporting entities is still under development. As for now, Verkor has been developing a model based on a 'cradle-to-grave' approach and considering emissions generated by the extraction, refining, transformation, transport and distribution of raw materials, cell manufacturing emissions as well as the recycling of cells after the battery's end of life. Since no cell was manufactured in 2022, there is no data to be communicated for the reporting period.

For us, LCA is a precious tool to rely on to set effective action plans, aiming to lower the cell carbon footprint overtime. It implies to prefer near-located and environmentally-engaged active materials suppliers and focus on our upcycling strategy, to reinject recovered materials in our future cells. Therefore, we follow the ambition to manufacture cells with a carbon footprint of 30 kgCO2eq/kWh, by 2032 ('cradle-to-cradle' approach).

On-site hazards management

Verkor does not manufacture hazardous substances. However, it uses some in its manufacturing

process and generates hazardous waste (waste management detailed in the next subsection). To abide by the REACH regulation set by the European ECHA agency, Verkor uses the Process Material

Safety Data Sheets (MSDS) since the purchasing of chemical goods, to assess their dangerousness. They enable Verkor to set appropriate rules to be respected in the R&D lab. They are also a key component of the 'Document Unique d'évaluation des risques professionnels' the company is legally expected to establish. The Process Material Safety Data Sheets enable to build the protective measures to be respected in the R&D lab and elaborate safety/emergency recommendations.

WASTE, WATER AND DUST AND CONTAMINANT EMISSION MANAGEMENT

Waste management

The activities conducted in the R&D lab generates hazardous and non-hazardous production waste. This is why, in accordance with official regulations ('Code de l'Environnement français'), specific protocols have been conjointly developed with the Sustainability and HSE departments to ensure the collection, sorting, storage and disposal of production waste in labelled procedures and industries.

As required by the French legislation, the disposal of hazardous waste is fully traced, thanks to the 'TrackDechets' tracing system.

As previously detailed, scraps are separated into recyclable materials and non-recyclable materials.

Non-recyclable materials go through an externalized energy recovery process.

Water management

The annual water consumption at the Verkor Innovation Centre is estimated to 3,000m^3 (sanitary use mainly and industrial use for cleaning).

Water used for electrode manufacturing is classified as waste. After collecting, it is treated in labelled procedures and industries.

A water used for anode manufacturing project is developed so that it is internally retreated (graphite particles capturing) before being released in the wastewater collection system.

Verkor's industrial water discharge represents an annual volume of 600m^3.

Dust and contaminant emission management

Verkor does not emit any ozone-depleting substance (ODS), nitrogen oxides (NOx) and sulphur

oxides (Sox). It emits volatile organic compound (VOC) and dust particles. The R&D lab is

equipped with a complete treatment system, which filters and

purifies its emissions to reduce the concentration of solvents and particles. Emitted volumes are annually monitored starting in 2023.

GOVERNANCE AND SOCIAL DIMENSIONS

Verkor's workforce (31 December 2022)	
Number of permanent full-time employees (FTEs)	217
Number of permanent female FTEs	68
Number of permanent FTE hires during the reporting period	99
Number of permanent FTE departures during the reporting period	8
Number of non-permanent FTEs	10
Number of working days performed by temporary workers during the reporting period	34
Diversity	
Number of nationalities represented	34
Gender equality	
Ratio of female employees	31%
Ratio of female employees with top management positions	20%
Ratio of female employees with middle management level	30%
Professional gender equality index	78
Number of women among the 10 highest-paid employees of the company over the reporting period	2
Average unadjusted gender pay gap (fixed and variable compensation)	20.9%

GOVERNANCE AND SOCIAL DIMENSIONS

Training / Talent development programmes	
Number of employees attending at least one training course during the reporting period	143
Number of training sessions organised in 2022	26
Types of coaching and training organised during the reporting period	Safety Onboarding sessions (for all employees, suppliers and subcontractors operating on site). Mandatory onboarding trainings for all newcomers ("Battery for beginners"). Specific training programmes: · Quality · Management · Communication / Language mastering · Human resources
Collective bargaining agreement	
Number of members of the CSE Committee	6 permanent members and 6 substitutes
Health and Safety performances	
Number of on-site injuries during the reporting period	17 affecting employees 3 affecting subcontractors
Number of on-site fatal injuries during the reporting period	0
Frequency rate of work-related accident during the reporting period	2.87
Number of workdays lost to injuries, accidents, or illness	199
Number of employee engagement / social climate barometer surveys conducted since the creation of the company	1

Protection of workers and subcontractors on-site

In 2022, the construction of the Verkor Innovation Centre started. R&D activities, involving the use of chemicals, were also conducted at the R&D lab. The coordination of Safety and Health Protection ("Sécurité et Protection de la Santé") was developed and set on the construction site to prevent the risks from the co-activity of subcontracted builders and to plan the use of common tools. The workstations of Verkorers working on site were submitted to an assessment of integrated risks in the "DUER" ("Document Unique d'Evaluation des Risques Professionnels"). Safety measures were set and adapted through the year, according to the project progress status. Additionally, safety trainings were adapted and provided, while elaborating recommendations of good practices for Verkorers.

ECONOMIC DIMENSIONS

Membership associations in 2022

R&D key performance indicators

R&D KPIs	
R&D spending (€m)	8
Number of R&D sites	1 *(R&D lab located in Grenoble)*
Number of active patents owned in 2012	14
Number of achieved / to be achieved in-house innovations	40

Positioning on the EU taxonomy

The EU has been pursuing the ambition to valorise economic activities that fuel sustainable development. The EU taxonomy, framed by the European Commission, aims at directing investments towards companies that contribute to the transition towards a low-carbon, resilient and circular economic model.

Verkor's business activities i.e., rechargeable battery manufacturing and corelated recycling activities are considered in the EU Taxonomy (listed as 'activity 3.4 Manufacture of batteries' in Appendix 1).

In 2022, Verkor was not subject to mandatory disclosure requirements. However, we started assessing our alignment with the objectives centred around climate change mitigation and adaptation. Our first assessment of eligibility is that we are 100% eligible under the EU Taxonomy. We worked on evaluating our compliance with the “do no significant harm” and minimum social safeguards criteria.

GRI STANDARDS INDEX

Statement of use	Verkor has reported the information cited in this GRI content index for the period from 01/01/22 to 31/12/22 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION COMMENTS
GRI 2: General Disclosures 2021	2-1 Organisational details	58, 77
	2-2 Entities included in the organisation's sustainability reporting	58, 77
	2-3 Reporting period, frequency and contact point	58
	2-4 Restatements of information	N/A
	2-5 External assurance	58
	2-6 Activities, value chain and other business relationships	8, 9, 10, 12, 32
	2-7 Employees	45-52, 64
	2-8 Workers who are not employees	45-52, 64
	2-9 Governance structure and composition	53
	2-10 Nomination and selection of the highest governance body	53
	2-11 Chair of the highest governance body	53
	2-12 Role of the highest governance body in overseeing the management of impacts	53
	2-13 Delegation of responsibility for managing impacts	53
	2-14 Role of the highest governance body in sustainability reporting	53

GRI STANDARD	DISCLOSURE	LOCATION COMMENTS
GRI 2: General Disclosures 2021	2-15 Conflicts of interest	N/A
	2-16 Communication of critical concerns	62
	2-17 Collective knowledge of the highest governance body	53
	2-18 Evaluation of the performance of the highest governance body	53
	2-19 Remuneration policies	51
	2-20 Process to determine remuneration	51
	2-21 Annual total compensation ratio	51
	2-22 Statement on sustainable development strategy	13
	2-23 Policy commitments	13
	2-24 Embedding policy commitments	42
	2-25 Processes to remediate negative impacts	48, 49, 50
	2-26 Mechanisms for seeking advice and raising concerns	53
	2-27 Compliance with laws and regulations	N/A
	2-28 Membership associations	66
	2-29 Approach to stakeholder engagement	55, 56
	2-30 Collective bargaining agreements	50
GRI 3: Material Topics 2021	3-1 Process to determine material topics	58, 59
	3-2 List of material topics	58, 59
	3-3 Management of material topics	58, 59

Company's contribution to the economy and economic resilience		
GRI 201: Economic Performance 2016	201-1 Direct economic value generate d and distributed	53
	201-2 Financial implications and other risks and opportunities due to climate change	29, 30
	201-3 Defined benefit plan obligations and other retirement plans	N/A
	201-4 Financial assistance received from government	23, 24, 25
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	N/A
	203-2 Significant indirect economic impacts	20, 54
Product and process environmental excellence		
GRI 301: Materials 2016	301-1 Materials used by weight or volume	33
	301-2 Recycled input materials used	44
	301-3 Reclaimed products and their packaging materials	44
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	32-43
	308-2 Negative environmental impacts in the supply chain and actions taken	32-43
GRI 302: Energy 2016	302-1 Energy consumption within the organisation	N/A
	302-2 Energy consumption outside of the organisation	N/A
	302-3 Energy intensity	N/A
	302-4 Reduction of energy consumption	42
	302-5 Reductions in energy requirements of products and services	N/A

Product and process environmental excellence		
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	27, 61
	305-2 Energy indirect (Scope 2) GHG emissions	27, 61
	305-3 Other indirect (Scope 3) GHG emissions	27, 61
	305-4 GHG emissions intensity	N/A
	305-5 Reduction of GHG emissions	27, 61
	305-6 Emissions of ozone-depleting substances (ODS)	63
	305-7 Nitrogen oxides (NOx), sulphur oxides (SOx), and other significant air emissions	63
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	63
	306-2 Management of significant waste-related impacts	63
	306-3 Waste generated	63
	306-4 Waste diverted from disposal	63
	306-5 Waste directed to disposal	63
GRI 417: Marketing and Labelling 2016	417-1 Requirements for product and service information and labelling	62, 63
	417-2 Incidents of non-compliance concerning product and service information and labelling	N/A
	417-3 Incidents of non-compliance concerning marketing communications	N/A

Responsible upstream supply chain		
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	32-43
GRI 408: Child Labour 2016	408-1 Operations and suppliers at significant risk for incidents of child labour	32-43
GRI 409: Forced or Compulsory Labour 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	32-43
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	32-43
	414-2 Negative social impacts in the supply chain and actions taken	32-43
Internal ethics and governance		
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	65
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	65
	401-3 Parental leave	N/A
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	53
	405-2 Ratio of basic salary and remuneration of women to men	65
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	63
	403-2 Hazard identification, risk assessment, and incident investigation	63
	403-3 Occupational health services	63
	403-4 Worker participation, consultation, and communication on occupational health and safety	65
	403-5 Worker training on occupational health and safety	65
	403-6 Promotion of worker health	N/A
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	N/A
	403-8 Workers covered by an occupational health and safety management system	65

Internal ethics and governance		
GRI 403: Occupational Health and Safety 2018	403-9 Work-related injuries	65
	403-10 Work-related ill health	65
Attraction, training, and retention of talents		
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	65
	404-2 Programmes for upgrading employee skills and transition assistance programmes	51
	404-3 Percentage of employees receiving regular performance and career development reviews	65
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programmes	66
	413-2 Operations with significant actual and potential negative impacts on local communities	32

TCFD STANDARDS INDEX

Category	Description	Page
Governance	Describe the Board's oversight of climate-related risks and opportunities	N/A
	Describe the Management's role in assessing and managing climate-related risks and opportunities	29, 30
Strategy	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term	30
	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	30
	Describe the resilience of the organisation's strategy, taking into consideration different climate related scenarios, including a 2°C or lower scenario	28, 29, 30, 42
Risk management	Describe the organisation's processes for identifying and assessing climate-related risks	29, 30
	Describe the organisation's processes for managing climate-related risks	29, 30, 53, 55, 60, 62
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management	30, 42, 43, 44, 63
Metrics and targets	Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	13
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions, and the related risks	27
	Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	28, 42, 53

GLOSSARY

Active materials
Materials that participate in the electrochemical reaction during charge/discharge of the battery. They result from the chemical transformation of raw materials.

Black mass
Black powder made from crushed and shredded battery components, containing a significant amount of valuable metals.

Battery cell
Electrochemical device that chemically store energy. It is composed of positive and negative electrodes, a separator, and an electrolyte.

Battery module
Combination of several cells connected together in series and/or in parallel.

Battery pack
Final battery system, composed of several modules and control systems as a BMS (Battery Management System) or a cooling system.

Behind-the-meter Energy Storage Solution
Stationary battery pack that captures green energy produced in a specific site and stores it. The energy can be later used by close-located facilities. It is an off-grid system as it provides electricity that never flows into the grid.

Cell design
Characteristics of the cell including dimensions, weight, format, and components. 3 main existing formats: Cylindrical, Pouch, Prismatic.

Closed-loop recycling
Process by which a waste battery product/material can be reused and turned into a new battery product.

Cycle life
Total number of charge and discharge cycles of a battery.

Electrode
Solid electric conductor that carries electric current into non-metallic part of a circuit.

Electrolyte
Substance that carries the ions between electrodes, generally composed of lithium salt and organic solvent.

Energy density
Amount of energy a battery contains compared to its weight, evaluated in Wh/kg or in Wh/L.

Front-of-the-meter Energy Storage Solution
Stationary battery pack that captures electricity coming from the grid (i.e., from different production sites) and store it.

Gigafactory
Large battery manufacturing facility, the production capacity of which is measured in GWh/year.

Open-loop recycling
Process by which a waste battery product/material is recycled and used in different applications/sectors.

Pilot line
Small-scale production line, used to manufacture and test in-development technologies.

Scrap
Waste material produced during battery manufacturing.

Separator
A polymer-made membrane moistened with electrolyte positioned between the anode and the cathode to prevent electrical short-circuits while enabling the exchange of lithium ions.

INDEX

[1] Paris Agreement official statement 2015.
https://www.un.org/en/climatechange/paris-agreement

[2] IEA report 'CO2 emissions in 2022'.
https://iea.blob.core.windows.net/assets/3c8fa115-35c4-4474-b237-1b00424c8844/CO2Emissionsin2022.pdf

[3] European Environment Agency 2023.
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[4] Central Banks and Supervisors Network for Greening the Financial System.
https://www.ngfs.net/en

[5] McKinsey 2022 Report 'Mobility's net-zero transition: A look at opportunities and risks'.
https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/mobilitys-net-zero-transition-a-look-at-opportunities-and-risks

[6] Carbone 4, 'Misconceptions about electric vehicles' 2022.
https://www.carbone4.com/en/analysis-faq-electric-vehicles

[7] Hypothesis study 1: Cars sold in 2020; D Segment; 200,000km lifetime; projective decarbonised national energy mix.
Results scenario 1: Diesel car: 271 gCO_2/km carbon footprint; EV in France: 83 gCO_2/km carbon footprint; EV in Germany: 173 gCO_2/km carbon footprint; EV in Poland : 241 gCO_2/km carbon footprint ; EV in India : 269 gCO_2/km carbon footprint.
Hypothesis scenario 2: Cars sold in 2020; D segment; 200,000km lifetime; actual non-decarbonised energy mix.
Results scenario 2: Diesel car: 271gCO_2/km carbon footprint; EV in France: 79 gCO_2/km carbon footprint; EV in Germany : 134 gCO_2/km carbon footprint; EV in Poland : 176gCO_2/km carbon footprint ; EV in India : 219 gCO_2/km.

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[11] Lithium-Ion Battery Megafactory Assessment, Benchmark Mineral Intelligence, 2021.

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https://www.iea.org/reports/global-ev-outlook-2023/trends-in-electric-light-duty-vehicles

[19] McKinsey 2019, Report 'Recharging economies: The EV-battery manufacturing outlook for Europe'.

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Cradle-to-grave (from the minerals extraction to the battery end-of-life treatments), Cradle-to-gate (from the minerals extraction to the cell manufacturing) and Cradle-to-cradle (from mineral extraction to the direct reinjection of recycled battery components into the manufacturing process).

VERKOR

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