2021 SUSTAINABILITY REPORT

CARBIOS

Enzymes powering the Circular Economy

PREAMBLE

This sustainability report is CARBIOS' first voluntary sustainability report with the 2021 fiscal year used as the reference year.
More recent information has been included where relevant.
Although not subject to the NFRD (Non-Financial Reporting Directive) regulatory obligation, CARBIOS has decided to structure its report according to the requirements of the directive on Statements of Non-Financial Performance.
CARBIOS commit to publishing a Sustainability Report annually

Dear Readers,

Sustainable development has marked the last decade by becoming an issue at the heart of everyone's concerns. Natural disasters, the scarcity of resources and the dramatic acceleration of climate change show us how important it is to break away from current patterns and take new paths to protect the environment and reduce our impact on the climate.

Combating plastic pollution – one of the greatest challenges of our time

Each year, more than 350 million metric tons of plastics are produced worldwide and no less than 9 million metric tons of plastic waste end up in the natural environment, particularly in the seas and oceans. The environmental consequences of this pollution are beaches covered with plastic debris, large waste vortexes in the middle of the oceans that represent a major threat to marine biodiversity and the dispersion of so-called microplastics, which aggregate in all ecosystems and including in our food chain.

Alerted by the media and warnings from environmental protection organizations, consumers are increasingly aware of environmental issues and are keen to adopt more sustainable consumption patterns. Purchasing decisions are often made based on whether a given product is made from recycled or eco-responsible materials. Manufacturers must take this into account, and this is why more and more companies are publicly committing to achieve ambitious sustainable development goals.

Despite this collective awareness, to date, only 14% of plastic waste is recycled worldwide. Conventional technologies cannot meet the growing demand for recycled plastic, nor offer the quality required, for example for food packaging or the textile industry.

These figures clearly show the urgency of adopting new approaches to enable the responsible use of limited resources and to ensure the optimal and responsible recovery of plastic products.

Our vision: to develop innovative and sustainable industrial solutions for a circular economy of plastics and textiles

Research and technological progress are the most effective means of meeting the challenges facing humanity. Since CARBIOS was founded in 2011, our ambition has been to make a positive impact on the world by paving the way for a virtuous management of the life cycle of plastic and textile materials through the development of innovative and sustainable industrial solutions.

Now in the industrial deployment phase, CARBIOS' technology for the biorecycling of PET, the plastic used in polyester bottles, trays and textiles, is about to revolutionize the plastics and textile industry. Based on the use of high-performance enzymes, this process makes it possible to deconstruct any type of PET waste into its basic constituents which can then be reused to produce new products in 100% recycled PET of equivalent quality to virgin PET.

Another advantage of our approach is its circularity, which leaves conventional methods far behind. Based on the use of biological catalysts, the biorecycling process developed by CARBIOS allows the treatment of any type of PET waste without sophisticated sorting and operates under mild conditions, in an aqueous medium and at low temperatures (c. 65°C/149 °F). Convinced by our unique technology, several international companies have already partnered with CARBIOS to promote our circular economy solution in the plastics and textiles industries.

CARBIOS, ambassador for international cooperation to support global research in the field of the enzymatic recycling of plastics and textiles

At CARBIOS, we also see ourselves as ambassadors of the circular economy. By promoting solid collaborations with the scientific community, international organizations, industry players and all our stakeholders, we are anchoring the idea, in the academic, political and economic world, that responsible management of plastics and textiles is possible.

This international cooperation has resulted in the creation of two consortia: The first, created with L'Oréal in 2019, now brings together companies such as Nestlé Waters, PepsiCo and Suntory Beverage and Food Europe. Organized around a steering committee, an industrial committee and a business committee, this collaboration has made it possible to produce the first samples of food-grade bottles entirely made from enzymatically recycled plastic. In 2022, we also launched a textile consortium with On, Patagonia, PUMA and Salomon to accelerate the use of our biorecycling technology in the textile industry.

In December 2022, one month after the 27th Meeting of the Conference of the Parties of the UNFCCC[1] (COP 27), CARBIOS hosted the "World PET Biorecycling Summit", a scientific conference on PET recycling, in Paris. For two days, scientists from around the world discussed their research and innovations in the field of PET biorecycling. Meeting the challenges of environmental protection and in particular that of the life cycle management of PET-based products requires the mobilization of significant scientific and technical resources to ensure the best chance of success in the development of new eco-responsible solutions. The development of CARBIOS' bioprocesses is based on the unique combination of biotechnology and plastics manufacturing. These innovative technologies rely on many fields of expertise such as microbiology, enzymology, polymer chemistry, plastics engineering and process engineering. The aim of the summit was to raise awareness of the need to act quickly and to demonstrate that it is now possible, thanks to cutting-edge global research and collective mobilization, to recover PET waste according to a true circular economy principle.

Sustainable development is an integral part of CARBIOS' DNA

For CARBIOS, the development of our solutions is based on a strong conviction that the transition to a circular model of the plastics and textile industry is possible.

Sustainable development is an integral part of our DNA. This is reflected in the conduct of our day-to-day operations and in the attention paid to the values defended by the Company and all its employees.

Our sustainability strategy is based on three pillars: governance and ethics, the environment, and social and societal issues. For each of these pillars, priority challenges have been identified and actions implemented. With this first sustainability report, we want to share our sustainable development strategy, our values and our ambitions with as many people as possible in order to contribute to the construction of a sustainable future and a circular economy, with all our stakeholders.

As an eco-responsible company, we aim to create sustainable value by developing innovative industrial solutions that respect our planet. I would like to thank all those who contribute every day to shaping this path towards a world of circularity: our employees, our industrial and academic partners and our shareholders.

I hope you enjoy reading the report,

Sincerely,

Emmanuel LADENT

[1] United Nations Framework Convention on Climate Change.

CONTENTS

1 WHO ARE WE?

ENZYMES: A REVOLUTION IN THE WORLD OF THERMOPLASTICS

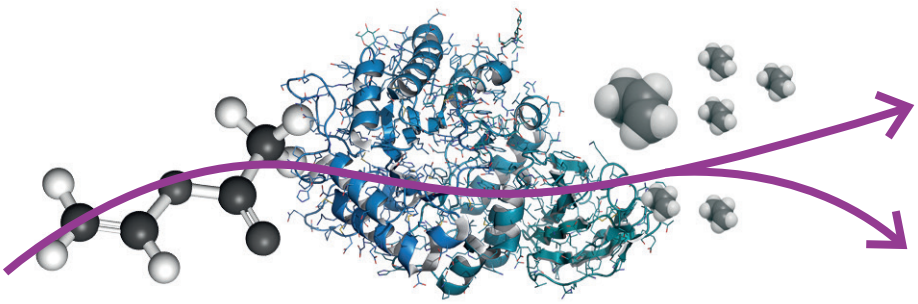
CARBIOS, a green chemistry company created in April 2011, develops innovative and competitive biological processes constituting a major innovation in the life cycle management of plastics and textiles, for the purpose of industrializing them. Through its unique approach combining biotechnologies and plastics for the first time, CARBIOS aims to **address new consumer expectations and the challenges of the broader environmental transition** faced by governments and industrial companies by taking up a major challenge of our time: the fight against plastic and textile waste pollution.

Building on the results obtained in its Research and Development work, CARBIOS has developed new industrial solutions, based on the foundations of the circular economy, to revolutionize the life cycle of plastic and textile materials. Through its **enzymatic recycling (or biorecycling) technology**, CARBIOS provides an **industrial solution to the recovery of PET**[2] (the plastic used in polyester bottles, trays and textiles), which is a global market of nearly 90 million metric tons per year[3].

This technology converts all types of PET waste into its basic components (monomers). These can then be reused to manufacture new products in 100% recycled and 100% recyclable PET, without loss of quality.

The Company has also developed a **biodegradation solution for single-use PLA (plant-based) plastics**[4], which is a market estimated at 440,000 metric tons in 2021 and experiencing strong growth. This technology makes it possible to **create a new generation of plastics that are 100% compostable at room temperature** thanks to the integration of enzymes at the very heart of these plastics. This innovation has been used under license by CARBIOLICE, a wholly-owned subsidiary of CARBIOS, since June 2021.

Enzymes are the new high-performance catalysts for the chemical industry



Polymers (plastics and fibers)

Carbios' Enzyme

Recovery of the initial monomers

ENZYMATIC DEPOLYMERIZATION OF THE POLYMERS

Repolymerization of monomers into polymers

ENZYMATIC RECYCLING

POTENTIAL RECOVERIES

BIODEGRADATION

Bioassimilation of the products of degradation by microorganisms present in nature

[2] Poly(ethylene Terephthalate).
[3] Source: IHS Markit in 2021.
[4] Polylactic acid.

OUR PURPOSE

We lead biotech expertise to catalyze plastic and textile circularity at scale.

Let's free our oceans and lands from further waste!
This is achievable when all plastics and textiles already in use are effectively reduced, reused or recycled.
That's why we rally forces.
That's why we catalyze unprecedented expertise-based partnerships to innovate in biorecycling and biodegradation technologies.
And every day, we optimize unique enzymes that make our core technologies thrive.
And every day, this teamwork makes the circularity of plastic and textile possible at scale.
At CARBIOS, we are renowned scientists, engineers and entrepreneurs. Nature is our source of inspiration.

OUR VALUES

RESPECT
for people

COMMITMENT
to the planet

INNOVATION
for the benefit of industrial reality

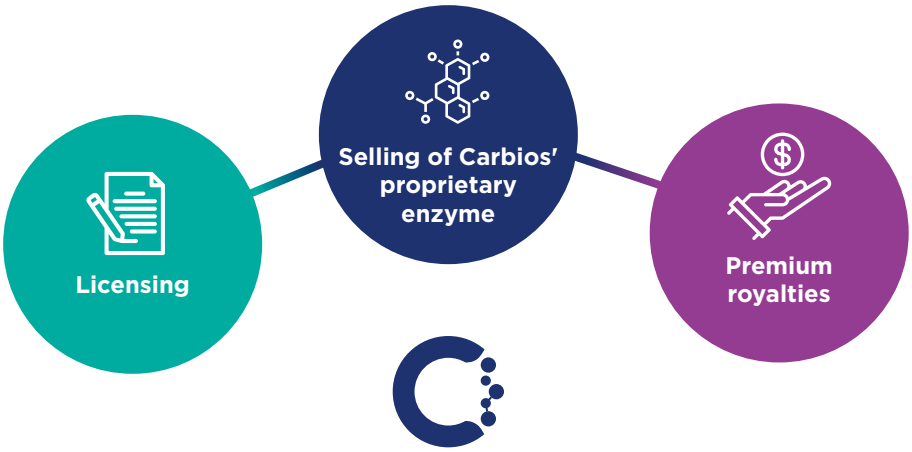
AGILITY
for performance

OUR BUSINESS MODEL

CARBIOS' business development model is based on three types of revenue:

- the **granting of licenses** for the use of its know-how and intellectual property: the licenses granted will generate revenues in the form of *upfront* payments, license fees or dividends;
- royalties from the **sale of proprietary enzymes** directly to manufacturers using technologies developed by the Company; and
- **royalties** from the Premium generated by manufacturers from the sale of biorecycled PET.

CARBIOS' business model



With a **technological offer unique in the world and the support of several global leaders** in their respective fields, CARBIOS engages all industry players (collectors, producers, processors, users and consumers) in the development of a true **circular economy for plastics and textiles** by reconciling today's needs and environmental concerns.

Thus, the CARBIOS model is based on the development of breakthrough innovations and intense collaboration with all stakeholders. Today, it offers manufacturers sustainable and eco-friendly alternative solutions for mass consumption markets.

The Company is now undertaking the **industrialization of its enzymatic PET recycling technology** with the commissioning of its industrial demonstration plant in Clermont-Ferrand, France in September 2021.

At the same time, the Company aims to complete the construction of a PET biological recycling reference unit in 2025, with a processing capacity of 50,000 metric tons of PET waste per year. This plant, which will be located in Longlaville in the Grand Est region of France, on a site of Indorama Ventures, the world leader in the production of recycled PET for the bottle market, will also secure the marketing of the first volumes of bio-recycled PET by 2025 and consolidate the Company's business model.

DEVELOPMENTS AND OUTLOOKS

Key dates in the development of the Company's activities:

April 2011
Founding of CARBIOS

June 2012
Launch of the THANAPLAST™ collaborative R&D project

Dec. 2013
IPO on Euronext Growth Paris

Sept. 2016
Operational launch of Carbiolice

Jan. 2019
Co-development agreement with Novozymes for the production of PET degradation enzymes

April 2019
Strategic partnership with L'Oréal, Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe (PET consortium)

June 2019
Awarded the "Efficient Solution" label by the Solar Impulse Foundation to the Company's PET enzymatic recycling technology

Jan. 2020
Co-development agreement with Novozymes for the production of PET degradation enzymes

April 2020
Publication of an article in the prestigious scientific journal Nature

May 2021
Great success for a €114 million capital increase

April 2021
Carbios and the members of its PET Consortium manufactured the world's first samples of food-grade PET plastic bottles produced entirely from enzymatically recycled plastic for some of their leading products including: Biotherm®, Perrier®, Pepsi Max® and Orangina®.

Sept. 2021
Commissioning of the industrial demonstration plant

Dec. 2021
The EIB grants to Carbios a €30 million loan to support the development of its enzymatic recycling technology.

Feb. 2022
Carbios and Indorama Ventures launch the construction project for the first PET biorecycling plant worldwide in France

July 2022
Consortium with On, Patagonia, PUMA, Salomon

2 THE ORIGINS OF OUR SUSTAINABILITY STRATEGY

RISK ANALYSIS

The identification of CARBIOS' material challenges in terms of environmental, social and governance challenges was carried out in two main phases:

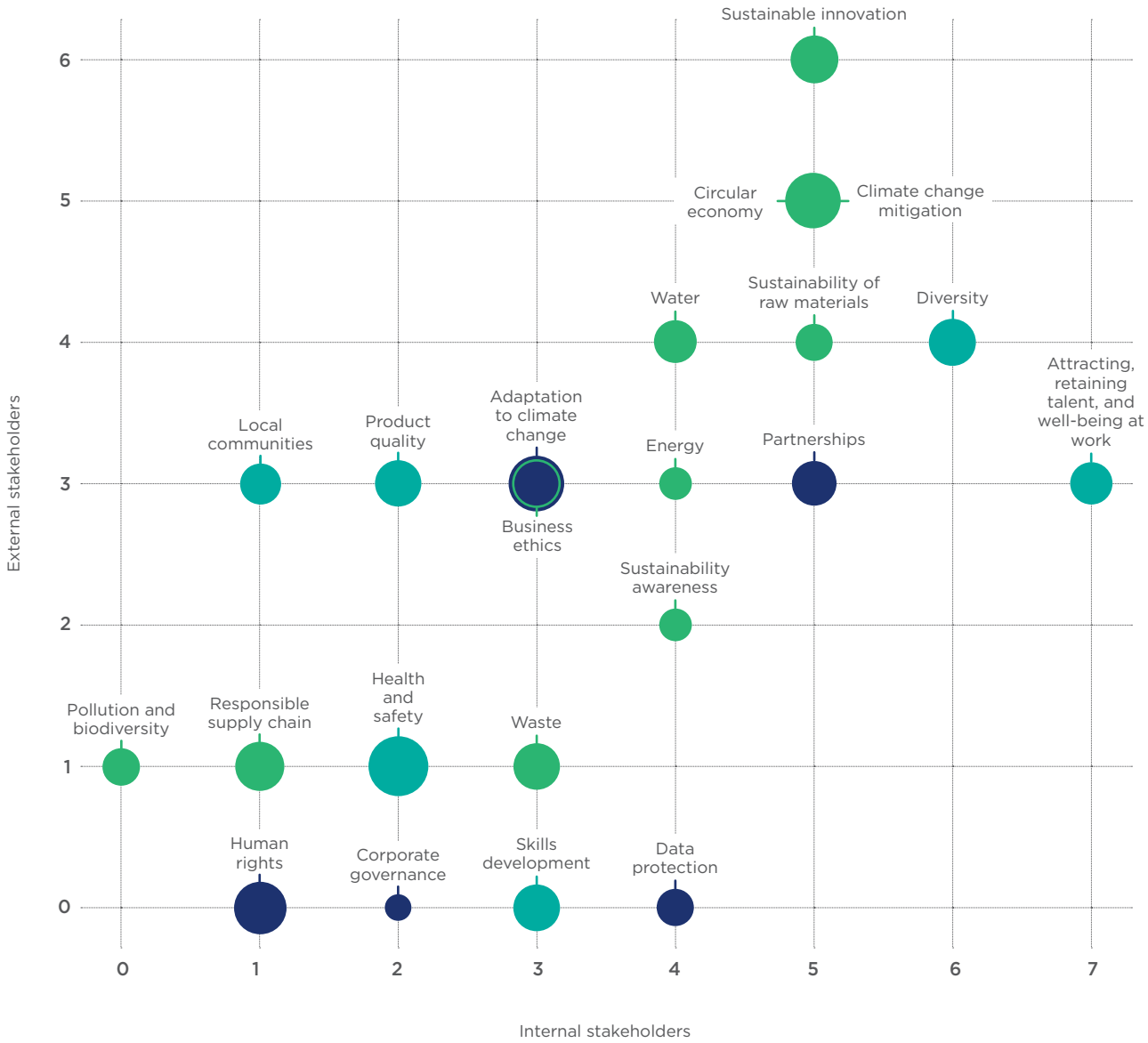
- a documentary review of sustainability reports or annual reports from companies in the sector to list the challenges identified for them; and
- interviews with internal and external stakeholders to select the most material challenges specific to the Company.

During the first phase of the review of material challenges, ten companies in the recycling technology sector or more broadly in the chemical sector were selected in order to include the challenges identified as material in their risk analysis. All of the challenges identified were then weighted by order of importance and fed into CARBIOS' final analysis.

Following this first step, interviews were organized with internal and external stakeholders. Each one was able to express the priority material challenges to be prefigured in the sustainability report. Thus, an order of importance for each challenge was established according to its number of occurrences and by separating internal and external stakeholders.

Finally, all of these elements made it possible to draw up the materiality matrix presented below. 22 challenges divided into three categories are listed: governance and ethics challenges (in blue), environmental challenges (in green) and social and societal challenges (in turquoise). The challenges are ranked according to their importance for internal and external stakeholders, from 0 (low importance) to 8 (high importance). The size of the discs reflects their importance, according to the documentary review from the first phase.

Materiality of challenges for internal and external stakeholders



OUR SUSTAINABILITY POLICY

Each of the material challenges identified leads to the implementation of a dedicated policy and the monitoring of performance indicators. The reconciliation between these various items is presented in the following table:

	MATERIAL CHALLENGES	POLICY AND ACTIONS IDENTIFIED	INDICATORS AND RESULTS
Governance & Ethics Pillar	Anchoring sustainable development at the heart of our governance	- Corporate governance - Partnerships	- Percentage of independent members on the Board of Directors: 4 - Percentage of women on the Board of Directors: 20%
	Being responsible for business ethics	- Business ethics	- Adoption of an Ethics Charter
	Protecting our data	- Data protection	
Environment pillar	Limiting our impact on sensitive resources	- Water - Pollution & Biodiversity - Sustainability awareness	- Water consumption (m^3): 1,097 - Implementation of a business travel policy in 2021 - Share of sustainable mobility in employee travel: around 36% > Target of 40% of sustainable mobility at end 2023
	Limiting the risks related to climate change	- Energy - Climate change mitigation - Adaptation to climate change	- Total energy consumption (MWh): 170,808
	Reducing and recovering our waste	- Circular economy - Waste	- The Longlaville plant project should make it possible to process 50,000 metric tons of PET waste per year that would otherwise be sent to incineration or landfill. - The operation of this unit[5] should also allow potential savings of 45,000 metric tons of CO_2 equivalent.
	Designing more responsible products	- Responsible supply chain and human rights - Sustainability of raw materials - Sustainable innovation	- RDI budget: €18,047 thousand - Number of patent families: 50 families - Amount of gross investments dedicated to the protection of intellectual property in 2021: €600 thousand
	Taxonomy	- Taxonomy	Taxonomy ratio: - Income: 0% - CapEx: 100% - OpEx: 99%

[5]According to the first results of the LCA commissioned by CARBIOS in 2022.

	MATERIAL CHALLENGES	POLICY AND ACTIONS IDENTIFIED	INDICATORS AND RESULTS
Social & Societal Pillar[6]	Developing a safe working environment	- Health and safety	- Percentage of training budget dedicated to safety: 42.8% - Number of accidents giving rise to an occupational accident classification: 1 - Absenteeism rate for work-related illnesses and accidents: 1.68%
	Promoting the development and well-being of our employees at work	- Attracting, retaining talent and well-being at work	- SEC (Social and Economic Committee) meetings: monthly - Percentage of permanent employees: 96.66% at the end of 2021 - Turnover rate: 36% (due to massive recruitment: 23 new hires and four departures for 38 people at January 1, 2021)
	Fighting against discrimination and promoting diversity	- Diversity	- Percentage of seniors in the workforce: 11.66% (over 55 years) - Percentage of women in the total workforce: 42% - Percentage of employees with disabilities: 1.66% - Fight against discrimination: commitment in the Ethics Charter
	Supporting and improving the skills of our employees	- Skills development	- Percentage of employees who received training during the year: 33% - Percentage of the workforce that had an annual individual assessment (including a forecast review of skills needs): 100%
	Connecting with local communities	- Local communities	- Added value: products with high social & environmental added value - Local player: academic collaborations, employment in the regions, partners, suppliers, etc.
	Ensuring the quality of our products	- Product quality	- 2 "Efficient Solution" labels awarded by the Solar Impulse Foundation - CARBIOS recognized as a Technology Pioneer by the World Economic Forum – *"Grand Prix"* of the Scale Up Challenge at the World Materials Forum (WMF) - Ok Home Compost certification by TÜV Austria Group awarded to several formulations using the Evanesto® solution (flexible films and rigid plastic packaging with a high PLA content) and the French Ministry for the Environmental Transition Greentech Innovation label obtained - CARBIOLICE, an industrial company certified ISO 9001, level 2

[6]The indicators and results of the Social & Societal Pillar relate only to CARBIOS' data.

3 THE THREE PILLARS OF OUR SUSTAINABILITY STRATEGY

CARBIOS' sustainability strategy is based on three pillars: governance and ethics, environment, social and societal. For each of these pillars, priority challenges have been identified and actions implemented. Each of these actions is closely monitored using the indicators identified.

PILLAR #1
GOVERNANCE & ETHICS

CHALLENGE 1

ANCHORING SUSTAINABLE DEVELOPMENT AT THE HEART OF OUR GOVERNANCE

Developing sustainable and efficient solutions for recycling plastic and textile materials requires an unprecedented level of innovation. This is made possible by **inclusive governance, strong international collaborations and the dissemination of a responsibility approach within CARBIOS**.

> Establishing qualified governance on sustainability issues

CARBIOS is organized around an industrial development division, an R&D and innovation division and support functions. All of these activities are under the responsibility of the members of the Executive Committee, supported by the Board of Directors.

In line with the values held by CARBIOS, the **members of the governance bodies manage ESG issues** through the implementation of actions in favor of sustainable development during their respective professional experiences and/or various training courses.

CARBIOS is also working to integrate sustainability objectives into the compensation policy for the members of its Executive Committee and Top Management.

Commitments of the members of the Executive Committee in terms of sustainable development[7]

Emmanuel LADENT
Chief Executive Officer

Pr. Alain MARTY
Chief Scientific Office

Vanina VARLAMOFF
Director of Legal and Social Affairs

Lise LUCCHESI
Director of Intellectual Property

Lionel ARRAS
Director of Industrial Development

Mathieu BERTHOUD
Sourcing and Public Affairs Director

Pascal BRICOUT
Director of Strategy and Finance

Stéphane FERREIRA
Chief Operating Officer

"Our shared ambition is to contribute to reducing the environmental impact of the plastics and textiles industries and to help our partners achieve their sustainable development goals by offering them an industrial solution."

[7] Members of the Executive Committee as of the date of this sustainability report

Commitments of the members of the Board of Directors in terms of sustainable development[8]

DR. PHILIPPE POULETTY
Chairman
Chief Executive Officer and Co-founder of Truffle Capital
Involved in many innovative projects serving healthcare and the planet. Truffle Capital has been a signatory of the UNPRI since 2012 and explicitly aims to meet the following SDGs: 3, 8, 9, 12, 13 and 14

JACQUELINE LECOURTIER
Director
Involved in research at IFPEN and ANR on the reduction of CO_2 emissions in industrial activities

ISABELLE PARIZE
Director
Involved in eco-design, energy transition, responsible governance, business ethics as Chairwoman of Delsey and Director of Air France KLM

JUAN DE PABLO
Director
Member of the National Academy of Sciences in the United States

VINCENT KAMEL
Director
Involved in Solvay's CSR reporting

JEAN FALGOUX
Director
Involved in the implementation of IMS/CSR and sustainable innovation in green chemistry/strains and feedstock

BOLD, Business Opportunities for L'Oréal Development (represented by LAURENT SCHMITT)
Director
At the origin of the creation of two impact funds and director of the BOLD Corporate Finance fund, which has a CSR vertical (fund created by L'Oréal to support the development of innovative start-ups)

Michelin Ventures (represented by Nicolas Seeboth)
Director
Trained in eco-design, ethics, regulation, ISO 14001 certification and Life Cycle Analysis

ALAIN CHEVALIER
Director
Involved in the ESG reporting of Truffle Capital and its main investments

JEAN-CLAUDE LUMARET
Director
At the initiative of the CARBIOS enzymatic R&D phase

> Building a strong collaboration around the PET Packaging and Textile Consortia

The collaborations promoted by CARBIOS make it possible to mobilize significant scientific and technical resources on a daily basis to ensure the best chances of success of the Company's industrial bioprocesses. With a unique technological offering, CARBIOS works with global partners within two consortia, in which the CARBIOS technology is proven and the technical results and product analyzes are shared.

- Thus, in 2019, CARBIOS and L'ORÉAL initiated the **PET Packaging Consortium**. They were joined by Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe. Organized around a steering committee, an industrial committee and a business committee that meet respectively three to five times a year, in 2021, CARBIOS and its partners produced the first samples of food-grade bottles entirely manufactured from enzymatically recycled plastic[9].

- In 2021, CARBIOS worked to create a **Textile Consortium**. Formed in 2022 by a partnership with On, Patagonia, Salomon and PUMA, this collaboration focuses on research on how textile products can be enzymatically recycled, the evaluation of solutions for collecting used polyester items and the testing of sorting and processing technologies[10].

INDICATORS AND RESULTS

- **Percentage of independent members on the Board of Directors:** 4
- **Percentage of women on the Board of Directors:** 20%

[8] Members of the Board of Directors as of the date of this sustainability report
[9] Please refer to the press release of June 24, 2021: https://www.carbios.com/en/global-consumer-brands-unveil-worlds-first-enzymatically-recycled-bottles/.
[10] Please refer to the press release of July 6, 2022: https://www.carbios.com/en/carbios-on-patagonia-puma-and-salomon-team-up/.

CHALLENGE 2

BEING RESPONSIBLE FOR BUSINESS ETHICS

In accordance with its Ethics Charter and in compliance with the legal framework, CARBIOS implements various actions to **protect against corruption risks**.

INDICATOR AND RESULT

• Adoption of an Ethics Charter in 2021

> Adopting an Ethics Charter

By adopting an Ethics Charter, shared with all its employees, CARBIOS reaffirms its ambition, its values, its commitments and its environmental and social principles of excellence, both inside and outside the Company.

> Protecting against corruption risks

Although it has very few, if any, activities in countries with significant ethical risks, CARBIOS benefits from the expertise of a Strategic Sourcing and Public Affairs Director who sits on the Executive Committee and whose role will be to safeguard **PET waste supply contracts for the industrial unit project by incorporating anti-corruption clauses**. The Company is thus aligning itself with the requirements of the so-called "Sapin 2" law of December 9, 2016, aimed at guaranteeing healthy and transparent commercial and institutional relationships.

As of February 2023, employees will have the opportunity to launch alerts via a system for collecting and processing secure alerts, in accordance with the European Directive on the protection of whistleblowers.

CHALLENGE 3

PROTECTING OUR DATA

CARBIOS is committed to protecting its data, and places the **security of its IT systems at the heart of its concerns**. This also includes the protection of personal data which is a fundamental right guaranteed by the European General Data Protection Regulation (GDPR).

> Ensuring the security of IT systems

As part of its work to secure its data, CARBIOS carries out an audit phase prior to the implementation of a dedicated strategy. The aim is to **continue to guarantee the security of all IT systems and personal data processing**.

> Raising employee awareness of data protection

In accordance with the IT Charter established in 2021, each CARBIOS employee is made aware of data security issues. Several back-up and protection instructions have been sent in this regard.

PILLAR #2
ENVIRONMENT

CHALLENGE 1

LIMITING OUR IMPACT ON SENSITIVE RESOURCES

By implementing its PET enzymatic recycling technology, CARBIOS reduces the **impact of end-of-life of plastics on sensitive resources and natural environments**. CARBIOS is also concerned about the environmental footprint of its activities and as such also works **to constantly optimize its industrial processes, and to promote sustainable mobility and workplace planning**.

> Reducing the impact on sensitive resources and preserving biodiversity

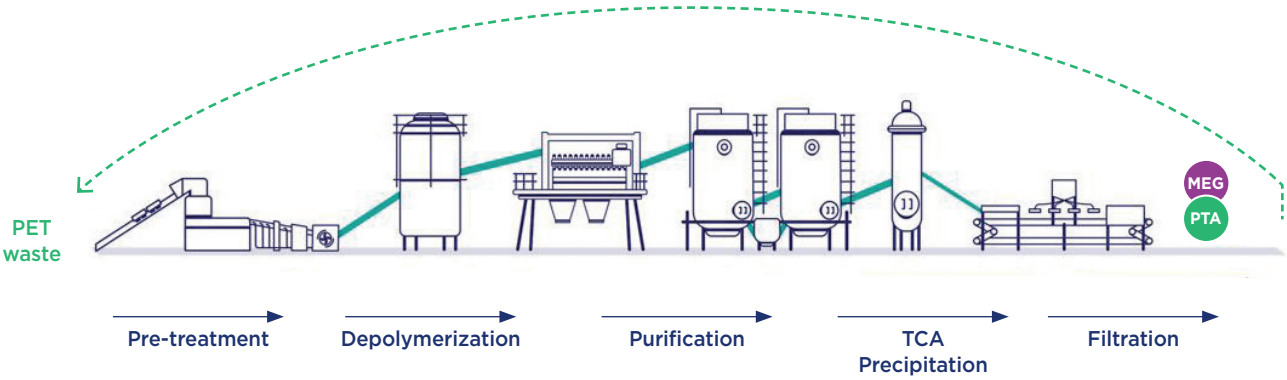
According to a study by the World Economic Forum and the Ellen McArthur Foundation, in 2050 there could be more plastics than fish in the oceans[11], so it seems urgent to act. Currently, end-of-life plastic waste is managed in one of three ways: recycling, incineration or landfills. Each of these approaches has different economic and environmental impacts. The OECD[12] considers that:

- *9% of plastic waste generated worldwide each year is recycled;*
- *19% is incinerated;*
- *nearly 72% currently accumulates in landfills.*

Better management of the end of life of plastic materials is at the heart of **technologies** developed by CARBIOS. By obtaining **PTA[13] and MEG[14] from PET plastic or textile waste**, the Company offers a solution that **can reduce the impact on sensitive resources and preserve natural environments**.

[11] Source: World Economic Forum, Ellen MacArthur Foundation and McKinsey & Company in 2016.
[12] Organization for Economic cooperation and Development.
[13] Purified terephthalic acid.
[14] Monoethylene glycol.

Modeling of the main stages of the depolymerization process of PET plastic and textile waste into monomers, as implemented at the CARBIOS industrial demonstration plant in Clermont-Ferrand



> Optimizing industrial processes

The various stages of the biorecycling process developed by CARBIOS, and in particular the enzymatic hydrolysis phase, are optimized in order to **limit the impact on water consumption**. This process, unique in the world, also operates under mild conditions with hydrolysis in an aqueous medium, at low temperature (c. 65 °C/149 °F) and at atmospheric pressure. The proprietary enzyme used by CARBIOS is also highly selective and particularly tolerant of impurities. This approach makes it possible to preserve all the use properties of the polymer and therefore its use in all the original applications, according to a true circular economy principle.

INDICATORS AND RESULTS

- **Site water consumption:** 1,097 m³
- Implementation of a business travel policy in 2021
- **Share of sustainable mobility in employee travel:** 36%

> Target of 40% of sustainable mobility at end 2023

> Raising employee awareness of the environmental values held by the Company

In September 2019, CARBIOS set up an **Environment and Sustainable Development Committee** (CESD). Driven by the Company's environmental values, this committee works to raise awareness among all employees through the implementation and updating of an Environment and Sustainable Development Charter. Consisting of concrete actions (energy saving, selective sorting for recycling and composting), it aims to reduce the Company's environmental footprint in its day-to-day operations. The CESD also organized five awareness-raising days for Company employees in 2021.

CARBIOS is working in parallel to structure a CSR governance integrating independent stakeholders through the creation of a dedicated commission.

> Promoting sustainable mobility and adapting the workplace

CARBIOS materializes its commitment by setting up a **"sustainable mobility" bonus for employees** that commute to work on bicycles, scooters and electric scooters. The car fleet is gradually moving towards electric and hybrid models. CARBIOS is thus aiming for a **target of 40% sustainable mobility by the end of 2023 (36% to date)**. In 2021, the Company initiated the regrouping of its activities with, firstly, the commissioning of its industrial demonstration plant then the merger of its teams on a single site belonging to the Michelin Group, and by bringing together the development laboratory, the pilot plant and the support activities, alongside its demonstration unit. This regrouping has made it possible to reduce employee travel while promoting synergies between the operational teams. Lastly, through its business travel policy, CARBIOS also recommends videoconferences rather than long journeys and favors the train to the plane for journeys of less than four hours.

CHALLENGE 2

LIMITING THE RISKS RELATED TO CLIMATE CHANGE

CARBIOS is committed to controlling the **impact of its activities on climate change** by developing processes **that promote the reduction of GHG emissions**, particularly those related to its energy consumption.

> Contributing to climate change mitigation

CARBIOS participates in the mitigation of climate change by developing an enzymatic recycling process to optimize the life cycle of plastics and textiles. Thus, **by producing r-PET, the Company can contribute to significantly reducing the landfill and incineration of PET waste, and limiting the extraction of mineral and fossil resources**. In addition, the monomers, resulting from the enzymatic depolymerization of PET, **are compatible with more than 95% of the industrial capacities installed by PET producers worldwide**; this means that producers will be able to use monomers from the hydrolysis of PET waste instead of monomers from fossil resources for the production of PET.

To date, CARBIOS and CARBIOLICE have few major infrastructures, which explains the absence of specific actions in favor of adaptation to climate change. However, this issue is taken into account by the CARBIOS operational teams, particularly for the construction of the Reference unit which will be located in Longlaville, Meurthe-et-Moselle, on an Indorama Ventures site.

> Saving energy with innovative processes

The innovation carried by the Company in the field of plastic and textile recycling has the ability to positively influence climate change, by reducing primary energy consumption.

Several LCA (Life Cycle Analyzes) have been carried out to optimize this industrial biorecycling process developed by CARBIOS. The encouraging and very promising results demonstrate the significant environmental benefits of this proprietary technology compared to the conventional end-of-life of plastic waste (in particular by replacing the production of virgin PET).

> Managing greenhouse gas emissions

CARBIOS is committed to a continuous improvement process through the development of an environmental policy to reduce GHG emissions. Thus, overall emissions are being managed by monitoring activities and sources of significant GHG items.

CARBIOS' main emission items are concentrated in Scope 3, in particular on industrial assets (machinery and equipment), purchases of goods and services and buildings. Direct and indirect emissions (Scope 1 and 2) represent 6% of the total Carbon Footprint for the 2021 fiscal year[15]. In anticipation of the industrial and commercial deployment of its technologies, the Company is committed to taking them into account in its climate strategy and in the conduct of its day-to-day operations.

INDICATORS AND RESULTS

- **Energy consumption of all sites:** 170,808 MWh

FOCUS ON THE 2021 CARBON FOOTPRINT ASSESSMENT RESULTS:

Total GHG emissions: **2,647 tCO_2e**	Scope 1 emission: **32 tCO_2e**
Scope 2 emission: **119 tCO_2e**	Scope 3 emission: **2,496 tCO_2e**

[15] Carbon Footprint (Bilan Carbone) assessment carried out according to the GHG Protocol methodology.

CHALLENGE 3

REDUCING AND RECOVERING OUR WASTE

By proposing two **unique and multi-sectoral French technologies**, CARBIOS, a world pioneer in the use of enzymes in the plastics industry, is making the transition to a **circular economy model** at the heart of its activity.

Placing the principle of circular economy at the heart of CARBIOS processes

> Providing a solution to the current limits of PET recycling

The circular economy aims to preserve the intrinsic value and quality of products and materials at every stage of their use. In contrast to the linear model of "produce, consume, then dispose", the circular economy creates the conditions for the development of a virtuous system, while limiting the wasting of raw materials and energy sources. Only new technologies can enable manufacturers to meet their sustainable development objectives and thus initiate a real transition towards solutions with neutral environmental impact.

Thanks to its **enzymatic recycling technology**, CARBIOS provides **an unprecedented industrial response to the recycling of PET plastics and polyester fibers** and particularly for those that are the most complex to recycle.

> Bringing technology to industrial scale

CARBIOS is the **first and only company in the world to develop a biological technology aimed at revolutionizing the life cycle of plastic and textile materials on an industrial scale**. For the first time in the history of the plastics industry, **the recycling of plastic waste into new plastic materials in a closed loop, without meticulous prior sorting, has become possible, by taking advantage of the natural selectivity of enzymes**.

Consecrated in April 2020 by the publication of an article in the prestigious journal *Nature*, the technology developed by CARBIOS achieved major new milestones in 2021, including:

- the production, in partnership with major global brands[16], of the first food-grade PET bottles[17], made entirely from enzymatically recycled plastic;
- the successful start-up of an industrial demonstration unit in Clermont-Ferrand.

INDICATORS AND RESULTS

- The Longlaville plant project should make it possible to process 50,000 metric tons of PET waste per year that would otherwise be sent to incineration or landfill.
- The operation of this unit should also allow potential savings of 45,000 metric tons of CO_2 equivalent.

[16] Partner members of the Consortium bringing together CARBIOS, L'Oréal, PepsiCo, Nestlé Waters and Suntory Beverage & Food Europe.
[17] For more information on this publication in Nature, please refer to section 1.4.2 of Carbios' 2021 Universal Registration Document.

CHALLENGE 4

DESIGNING MORE RESPONSIBLE PRODUCTS

CARBIOS is working on the **industrialization of sustainable innovations** after **more than ten years of research and development** bringing together the best public and private experts as well as many fields of expertise; while ensuring a **responsible sourcing of raw materials**.

> Offering innovative and sustainable "turnkey" biological processes

Since its creation, CARBIOS has implemented an innovation strategy aimed at offering manufacturers **"turnkey" biological processes** responding to specific application areas.

These technologies are based on the **implementation of many areas of expertise** (microbiology, enzymology, polymer chemistry, plastics and process engineering) and **more than ten years of research and development** (patents, results, know-how) from academic laboratories. From its creation, the Company set up several **collaborative Research and Development programs**, bringing together the best public (INRAE[18], TWB[19], INSA Toulouse through the TBI laboratory[20], CNRS[21]) and private sector experts, dedicated to the discovery and optimization of enzymes.

In 2021, an RDI budget[22] of €18 million was allocated to the industrial development of CARBIOS technologies.

CARBIOS also endeavors to measure the Eligible CapEx within the meaning of the green taxonomy, which is the European regulation that classifies economic activities according to their "environmentally sustainable" nature.

> Ensuring the protection of intellectual property with an active policy

Safeguarding its know-how and technological advances is a major challenge for CARBIOS. The Company's commercial success depends, in particular, on its ability to obtain the grant of patents filed in order to ensure the protection of its resulting innovations, products and processes. CARBIOS dedicates a significant share of its resources **to protecting its innovations**. As at December 31, 2021, gross investments made by the Company in patents amounted to €2,259 thousand, of which €600 thousand in 2021.

During the 2021 fiscal year, CARBIOS filed **four new proprietary patent applications**[23], focusing on the biodiversity associated with the degradation of PET and the innovative enzymatic recycling process.

At the end of 2021, CARBIOS and CARBIOLICE's intellectual property portfolio included **50 patent families**, representing 318 patents filed across the world's key regions and covering the Company's areas of development (biodiversity, enzymatic recycling process, biodegradable plastic production process and bioproduction).

> Working towards the responsible and sustainable sourcing of raw materials

Essential for its industrial and commercial development, CARBIOS has acquired the necessary resources to **secure the supply of PET waste to its future reference unit and prepare that of its future licensees**. Thus, advanced discussions were held with eco-organizations[24] and several industrial players that can supply raw materials to the Longlaville unit, which is scheduled to come on stream in 2025.

To date, the Company is in the pre-industrial phase and therefore has few purchasing procedures. These are mainly local in order to manage the supply chain and carbon footprint.

INDICATORS AND RESULTS

- **RDI budget in 2021:** €18,047 thousand
- **Number of patents:** 50 patent families at the end of 2021
- **Amount of gross investments dedicated to the protection of intellectual property in 2021:** €600 thousand

[18] National Research Institute for Agriculture, Food and the Environment.
[19] Toulouse White Biotechnology.
[20] Toulouse Biotechnology Institute.
[21] National Center for Scientific Research.
[22] Research, development and innovation.
[23] Please refer to the press release of January 14, 2021: https://www.carbios.com/actualite/carbios-renforce-significativement-son-portefeuille-de-brevets/.
[24] Extended Producer Responsibility Operators.

CHALLENGE 5

TAXONOMY

Reminder of the context

Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment, or the Green Taxonomy Regulation, is a **classification system for activities to promote sustainable investments**. The aim is to **establish a common framework for the definition of "sustainable" activities**, in order to redirect capital flows towards sustainable investments and limit green washing.

According to the Taxonomy, an activity can be considered sustainable when:

- **it substantially contributes to one of the six environmental objectives: climate change mitigation, adaptation to climate change, sustainable use and protection of hydrological and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystems;**
- **it does not cause any major harm the other five environmental objectives;**
- **it respects minimum social guarantees.**

Article 8 of the Taxonomy Regulation requires companies already concerned by the obligation to report non-financial information to publish the share of their income, capital expenditure (CapEx) and operating expenses (OpEx) associated with sustainable activities. These obligations are specified in Delegated Regulation (EU) 2021/2178, "Article 8". This reporting obligation does not apply to CARBIOS for the time being. However, a review of its activities and the calculation of its taxonomy indicators were carried out in order to align with best reporting practices.

The indicators published (revenue, CapEx and OpEx) for 2021 only concern the eligibility of CARBIOS' activities, i.e. whether CARBIOS' activities are concerned by the list of activities studied by the European Commission and published in Delegated Regulation (EU) 2021/239. The eligibility study does not in any way prejudge the effective sustainability of the activities.

From the 2022 fiscal year, companies will have to publish the so-called "aligned" portion of their activities and therefore meet the technical criterion or criteria associated with each of the eligible activities. These criteria are defined in Delegated Regulation (EU) 2021/239.

Eligible income

Net income means "the amount resulting from the sale of products and the provision of services, net of sales discounts, value added tax and other taxes directly related to income". The definition also refers to paragraph 82 (a) of IAS 1 and must therefore correspond to income presented in the income statement. For CARBIOS, this is the revenue presented in the simplified consolidated income statement without any specific restatement (see Section 5.1.2 of the 2021 Universal Registration Document).

For the 2021 fiscal year, CARBIOS' income corresponds to subsidies received to support the development of its activities. **The subsidies do not correspond to a category identified by the European Commission among the eligible activities.**

Thus, CARBIOS' eligible income for 2021 is zero compared to a total income of €0.97 million, i.e. a share of 0%.

Eligible CapEx

Capital expenditure covers increases in property, plant and equipment and intangible assets and right-of-use assets for the year [before revaluation, depreciation and amortization and excluding changes in fair value] as well as increases related to business combinations.

Based on the methods for calculating the key performance indicators defined by Article 8 of the European Taxonomy, the eligible investment expenditures identified for CARBIOS can be identified in two ways:

- when they are related to assets or processes associated with eligible economic activities (pursuant to §1.1.2.2 [a]);

- when they are linked to the purchase of the production of economic activities eligible for the Taxonomy and to individual measures (pursuant to §1.1.2.2 [c]).

However, due to the absence of eligible income for CARBIOS, all identified eligible CapEx are related to individual measures. They correspond to almost all of CARBIOS' CapEx. In particular, the activities eligible for CARBIOS are as follows:

- 7.7. Acquisition and ownership of buildings: these expenses correspond to buildings owned by CARBIOS;

- 9.1. Research, development and innovation close to the market: these expenses correspond to all other investment expenses involved in the development of the technology (equipment costs, etc. used in the laboratory, the pilot plant and the demonstration plant).

Lastly, in the case of CARBIOS, the CapEx do not include leases normally consolidated under IFRS. These amounts will be included in the OpEx.

For the 2021 fiscal year, CARBIOS' eligible capital expenditure amounted to 100% out of a total of €11.3 million.

Eligible OPEX

These are direct non-capitalizable costs covering R&D, short-term leases and other IFRS 16 exemptions, upkeep, maintenance and repair of assets, building renovation measures and any other expenses related to the routine maintenance of assets. It should be noted that the recommended reading of the OpEx is currently very strict and could change.

In the specific case of CARBIOS, all leases (short and long-term) are counted in OpEx.

As for CapEx, eligible OpEx identified for CARBIOS can be identified in two ways:

- when they are related to assets or processes associated with eligible economic activities (pursuant to §1.1.3.2 [a]);
- when they are linked to the purchase of the production of economic activities eligible for the Taxonomy and to individual measures (pursuant to §1.1.3.2 [c]).

Eligible OpEx identified for CARBIOS are related to the second category (mainly individual measures). Almost all of CARBIOS' OpEx have been identified as eligible. They correspond to the following activities:

- 6.5. Transport by motorcycles, passenger cars and light commercial vehicles: fleet of vehicles leased by CARBIOS;
- 7.7. Acquisition and ownership of buildings: real estate leases;
- 9.1. Market-related research, development and innovation: expenses related to CARBIOS' R&D activities, in particular salaries, maintenance costs, supplies and all other types of expenses.

As such, operating expenses according to the Taxonomy definition represent 99% of all CARBIOS operating expenses, i.e. €8.1 million.

Summary table

Amounts in millions of euros	Revenue	CapEx	OPEX
Activity 6.5	-	-	0.1 (1%)
Activity 7.7	-	10.3 (91%)	1.3 (16%)
Activity 9.1	-	1 (9%)	6.6 (82%)
Total eligible activities	**0**	**11.3**	**8**
Total	0.97	11.3	8.1
Taxonomy ratio	**0%**	**100%**	**99%**

PILLAR #3
SOCIAL & SOCIETAL

CHALLENGE 1

DEVELOPING A SAFE WORKING ENVIRONMENT

The health and safety of its employees is a priority for CARBIOS. The Company is committed to establishing **working conditions that guarantee the physical integrity and the physical and psychological health of its employees** through HSS **management** (Hygiene, Health, Safety) and **risk prevention**.

INDICATORS AND RESULTS

- **Percentage of training budget dedicated to safety:** 42.8%
- **Number of accidents giving rise to a classification as Workplace Accident:** 1
- **Absenteeism rate for work-related illnesses and accidents:** 1.68%

> Proposing an optimized working environment

CARBIOS' commitment to the health of its employees is reflected in the workplace **office layout** (modular desks, ergonomic chairs, footrests, etc.), in order to **prevent musculoskeletal disorders (MSDs)**, and through the purchase of high-end safety equipment. The Company also endeavors to adequately equip its employees eligible for remote working.

> Ensuring quality of work for each employee

In collaboration with occupational medicine, CARBIOS **covers the cost of regular medical visits** in order to be able to detect and treat as soon as possible any pathologies that employees may develop, particularly in terms of psychosocial risks and MSDs. During the 2021 fiscal year, CARBIOS **reported only one accident** giving rise to a qualification as a workplace accident.

> Training employees in safety issues

CARBIOS has also installed a **specific reinforced system for laboratory staff** and set up firefighting and workplace first aid training for all its employees. Procedures enabling the use of CMRs[25], toxic products and safe handling of class 2 and unknown strains have been implemented. More broadly, all of its employees are **made aware of safety issues**. Thus, in 2021, **42.8% of the training budget was dedicated to safety**. A Single Occupational Risk Assessment Document (DUERP) was also initiated.

CHALLENGE 2

PROMOTING THE DEVELOPMENT AND WELL-BEING OF OUR EMPLOYEES AT WORK

CARBIOS is committed to creating the conditions for its employees to foster innovation, individual and collective development and performance in accordance with its values. This is why the Company is placing the **well-being of its employees at work** at the center of its concerns in order to **support everyone** in a **context of strong growth**.

> Supporting the Company's strong growth

CARBIOS has seen the number of its employees increase tenfold in less than ten years since its creation in 2011. In 2021, CARBIOS' payroll totaled €5,064,525; i.e. an **increase of 90.51% compared to the end of the 2020 fiscal year**. This is reflected in part by the increase in CARBIOS' total workforce during the fiscal year: the Company had 57 employees, including 55 permanent employees at the end of 2021.

In order to **promote social dialog and best managerial practices, a Director of Legal and Social Affairs** as well as a **Human Resources Manager position** were created in 2020 and 2019 respectively.

[25] Carcinogenic Mutagenic Reprotoxic.

> Establishing a long-term relationship with each employee

In a constantly changing sector where companies must adapt quickly to meet their growth and innovation challenges, CARBIOS has opted for a **policy of trust by promoting permanent hires** as part of its recruitment policy. Thus, at the end of 2021, **96.5% of CARBIOS' workforce had permanent contracts**.

> Defining a compensation policy and benefits in line with the Company's values and strategy

CARBIOS practices an **attractive, incentive-based compensation** – while remaining rational – in relation to the sector of activity to **attract the best talent and satisfy each employee**. The compensation of managers and employees consists of a fixed portion and a variable portion. Depending on the level of skills, training and responsibility of each employee, the variable portion may represent from 3.5% to 35% of the fixed portion and is correlated with the achievement of individual and/or collective targets.

> Ensuring a working environment and internal dialog conducive to the development of each employee

To bring the Company's values to life on a daily basis, CARBIOS strives to guarantee a **climate of trust and goodwill** in which each employee can freely express their needs, whether in terms of equipment, training or other.

- In order to promote **cohesion between employees and foster internal dialog**, CARBIOS has set up convivial spaces within its premises, organized its first team building events, instituted its corporate events (Christmas, CARBIOS Day, etc.) and induction days for new employees. Employees **are regularly informed** about the Company's latest advances in terms of organization, innovation and strategic and financial information through a newsletter, a corporate social network, monthly breakfast meetings and seminars.

- To offer **more flexibility for its employees**, CARBIOS has set up a Flex-Work charter allowing for face-to-face and remote working time under the best possible conditions.

> Encouraging the development of good managerial practices

In order to maintain a managerial policy that contributes to the well-being of its employees, CARBIOS has formalized an **Ethics charter** in which are described the fundamental principles that guide the daily behavior of managers: compliance with laws and regulations, integrity, loyalty, honesty, respect for people, their dignity and their health.

> Promoting daily social dialog

CARBIOS encourages the development of **local management** by training managers on this subject. The objective is to ensure a **framework favorable to social dialog**, conducive to innovation and performance to promote personal and collective achievement in line with its values and social responsibility.

Thus, **labor relations revolve around the Company's Representative Bodies**: Economic and Social Committee (SEC) and Employee representatives. CARBIOS' employees elected two members (one permanent member and one alternate). Meetings of the Social and Economic Committee are held every month, in accordance with legal requirements. The minutes are circulated to all employees, who are also invited to send their questions to the Social and Economic Committee before each new meeting.

INDICATORS AND RESULTS

- **SEC meetings:** monthly
- **Percentage of permanent employees:** 96.66% at the end of 2021
- **Turnover rate:** 36% (due to massive recruitment: 23 new hires and four departures for 38 people at January 1, 2021)

CHALLENGE 3

FIGHTING AGAINST DISCRIMINATION AND PROMOTING DIVERSITY

Impartiality and transparency in judgments and choices are an ongoing commitment for CARBIOS' management and employees. Thus, at all stages of its employees' careers, the Company strives to **ensure fairness** in terms of employment and **equal opportunities**, based on objective criteria.

> Preventing all forms of exclusion or discrimination

In its **Ethics charter**, available to employees, CARBIOS reaffirms its values in terms of **non-discrimination and non-exclusion**. It has progressed on these issues, in 2021, the proportion of women in the total workforce was 42% and 45% in the management workforce.

> Fostering diversity

CARBIOS intends to act, in compliance with regulations, **to promote diversity in its workforce**. While the proportion of seniors in the workforce is still low, the average age of the workforce is 38.21 years in 2021.

Because promoting **access to employment for people with disabilities is both a social and economic challenge**, CARBIOS wishes to take initiatives in this area in the coming years. The proportion of employees with disabilities amounted to 1.66% of the total workforce in 2021, due to difficulties in finding candidates corresponding to the sought-after profiles, which are mainly of a technical nature.

INDICATORS AND RESULTS

- **Percentage of seniors in the workforce:** 11.66% (over 55 years)
- **Percentage of women in the total workforce:** 42%
- **Percentage of employees with disabilities:** 1.66%
- **Fighting against discrimination:** explicit commitment in the Ethics Charter and on the CARBIOS website

CHALLENGE 4

SUPPORTING AND IMPROVING THE SKILLS OF OUR EMPLOYEES

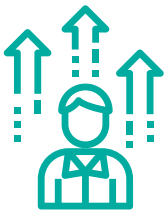
Skills management at CARBIOS is linked to the current and future needs of the Company and the aspirations of each individual. It aims to **develop the employability and value the talents of all employees** while guaranteeing equal treatment and professional development for everyone.

> Providing individualized support to all employees

In order to identify the training and development needs of employees, **annual assessments are carried out in the form of an Individual Activity Interview** allowing everyone to **express their desire to evolve, take stock of the past year and project themselves with regard to the targets for the coming year**. Employees who, through their contribution, have demonstrated their ability to grow, can access new responsibilities through career paths or training.

A **training plan** is also proposed to each employee and approved by the members of the Executive Committee at the beginning of the year.

Thus, the workforce training rate was 33% in 2021, with an average of 42.72 hours per person; an increase of 48.3% compared to the previous fiscal year.



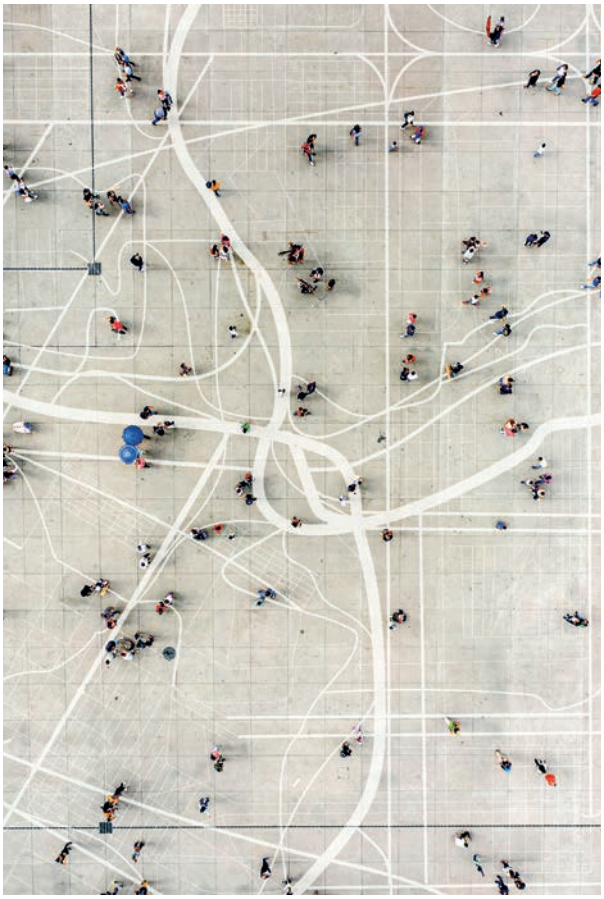
INDICATORS AND RESULTS

- **Percentage of employees who received training during the year:** 33%
- **Percentage of workforce that had an annual individual assessment (including a forecast review of skills needs):** 100%

CHALLENGE 5

CONNECTING WITH LOCAL COMMUNITIES

In accordance with its values, CARBIOS intends to participate in the construction of a local economic fabric and a regional dynamic by **working with local players** and by conducting a consistent **sponsorship policy**.



> Integrating regional dynamics to strengthen the research and development of its technologies

CARBIOS is committed to **engaging in the regions** in order to **support the economic fabric and revitalize their attractiveness**. To develop and implement its technology, in 2020, the Company set up several **collaborative research and development programs**, bringing together the best public (INRAE, TWB, INSA Toulouse through the TBI laboratory, CNRS) and **private sector experts**, dedicated to the discovery and optimization of enzymes.

In January 2020, CARBIOS wished to consolidate its know-how by setting up an enzymatic engineering research center for the recycling and biosynthesis of plastics[26] in partnership with INSA Toulouse through its TBI laboratory. This laboratory, called PoPLaB (Plastic Polymers and Biotechnologies) gives a new dimension to research activities by strengthening the internalization of its work and promoting the international influence of its know-how and its collaborative approach.

> Supporting a sponsorship policy in line with the Company's values

CARBIOS' commitment to the research and development of enzymatic technologies has led the Company to **support the INSA Toulouse Foundation**. The aim is to make a significant contribution to the training and international outreach of students and scientific executives with the **creation of a program** backed by the "Biotechnologies and Environment" Chair.

RESULTS

- **Added value:** products with high social & environmental added value
- **Local player:** academic collaborations, employment in the regions, partners, suppliers, etc.

[26] Please refer to the press release of January 17, 2020: https://www.carbios.com/en/carbios-announces-strategic-alliance-with-the-national-institute-of-applied-sciences-of-toulouse-insa/.

CHALLENGE 6

ENSURING THE QUALITY OF OUR PRODUCTS

CARBIOS develops **innovative and competitive technologies** constituting a major innovation in the life cycle management of plastics and textiles, for the purpose of industrializing them. These **recognized** technologies, meet consumers' new societal expectations and the challenges of the energy transition, which are faced by governments and manufacturers.

RESULTS

- 2 "Efficient Solution" labels from the Solar Impulse Foundation awarded respectively to the PET biorecycling and PLA biodegradation technologies developed by the CARBIOS Group
- "Grand Prix" of the Scale Up Challenge at the World Materials Forum (WMF)
- CARBIOS recognized as a Technology Pioneer by the World Economic Forum – "Grand Prix" of the Scale Up Challenge at the World Materials Forum (WMF)
- Ok Home Compost certification by TÜV Austria Group awarded to several formulations using the Evanesto® solution
- Greentech Innovation label received by CARBIOLICE from the French Ministry for the Environmental Transition
- Certification ISO 9001, level 2 of CARBIOLICE

> Offering labeled and certified products, recognized at European and international level

Having already received the **"Solar Impulse Efficient Solution"** label in 2019 for its infinite plastic recycling technology, an innovation combining technical feasibility criteria, positive socio-environmental impact and economic profitability[27]:

- CARBIOS was recognized as a **Technology Pioneer by the World Economic Forum** in June 2021[28]. Tech Pioneers, selected from among hundreds of candidates by the World Economic Forum, are fast-growing companies around the world. They develop innovations and use new technologies that have a significant impact on businesses, society and the environment;
- in June 2021[29], CARBIOS also won the **"Grand Prix" Scale Up Challenge at the World Materials Forum (WMF)** for the development of its enzymatic recycling process for PET waste enabling the production of transparent food-grade bottles. This award aims to recognize growth companies that have a high potential impact on WMF's goal of decoupling economic growth and the use of our natural resources;
- in 2020 and then in 2021, CARBIOLICE received the **Ok Home Compost certification by TÜV Austria Group**, awarded respectively to several formulations using the Evanesto® solution (flexible films and rigid plastic packaging with a high PLA content);
- in May 2021[30], CARBIOLICE received the **Greentech Innovation** label from the French Ministry for the Environmental Transition. This recognition attests to the innovative nature of the technology implemented by the Company and its ability to make a significant contribution to the environmental transition;
- as an industrial company, CARBIOLICE also has **ISO 9001, level 2 certification**.

[27] Please refer to the press release of June 3, 2019: https://www.carbios.com/en/carbios-awarded-a-solar-impulse-efficient-solution-label/.
[28] Please refer to the press release of June 15, 2021.
[29] Please refer to the World Materials Forum communication of June 17, 2021.
[30] Please refer to the CARBIOLICE press release of May 3, 2021.

CONCLUSION

CARBIOS HAS FORMALIZED SEVERAL ENVIRONMENTAL, SOCIAL AND GOVERNANCE TARGETS FOR 2023.

ENVIRONMENTAL TARGETS:

1. Use the Life Cycle Analysis (LCA) method to maximize circularity and aim for the lowest carbon impact of our technological offer. Carry out recurring life cycle analyzes to maintain our competitive advantages and set ambitious objectives

2. At the Cataroux site, thanks to our processes, commitment to depolymerize 60 metric tons of PET, i.e. the equivalent of approximately 2.4 million plastic bottles or 3 million food trays in 2023

3. Maximize the use of low carbon transport (rail, electric vehicles...) for business trips for all journeys of less than 1,000 km

SOCIAL TARGETS:

4. Promote the Company's contribution to local economic development in France with the installation of the Longlaville plant in Meurthe-et-Moselle, a source of creation of 150 direct and indirect jobs

5. In a context of strong growth, promote employee well-being and safety by developing training, and ensuring the prevention and management of PSRs (psychosocial risks)

6. Strengthen CARBIOS' commitment to supporting research (partnership with French and international universities, integration of post-doctoral students and publications in major scientific journals)

GOVERNANCE TARGETS:

7. Achieve 40% female members of the Board of Directors by end 2023, and 40% within the Executive Committee by end 2024

8. Achieve 60% independent members of the Board of Directors by end 2024

9. Incorporate sustainability targets into executive compensation from the 2023 fiscal year

10. Structure CSR governance including independent stakeholders (creation of a CSR Committee)

CARBIOS
Enzymes powering the Circular Economy

APPENDICES

	Suffix	2019	2020	2021
Risk of dilution of minority shareholders				
Share of capital held by founders, families and executives	%	18.47%	2.00%	0.56%
Control of the share capital (>= 34% shareholding) by a shareholder or group of shareholders	Txt	NO	NO	NO
Share of capital held in treasury stock	%	0.08%	0.02%	0.03%
Share of capital held by employees (excluding executives)	%	0.00%	0.00%	0.00%
Share of capital held by other shareholders holding at least 5% of total shares	%	38.79%	13.80%	11.80%
Existence of double voting rights	Txt	YES	YES	YES
Composition of governance bodies				
Separation of the roles of Chairman of the Board of Directors/Supervisory Board and Chief Executive Officer	Txt	YES	YES	YES
Number of members of the Board of Directors/Supervisory Board	VA	9	9	10
Number of executive members of the Board of Directors/Supervisory Board	VA	1	1	0
Number of directors representing a significant shareholder (holding> 10% of the shares or voting rights) (excluding founders and families)	VA	0	0	0
Number of (non-executive) members representing the founders and families on the Board of Directors/Supervisory Board	VA	1	1	1
Number of employee representatives on the Board of Directors/Supervisory Board	VA	0	0	0
Number of Independent directors	VA	4	4	4
Number of women on the Board of Directors/Supervisory Board	VA	1	1	2
Number of members on the Executive Committee (or Management Committee if dual governance structure)	VA	3	4	6
Percentage of women on the Executive Committee (or Management Committee)	%	0.00%	0.00%	33.33%
Operation of governance bodies				
Commitment to comply with the recommendations of a corporate governance code	Txt	YES	YES	YES
Assessment of the functioning of the Board of Directors/Supervisory Board	Txt	YES, self-assessment	YES, self-assessment	YES, self-assessment
Number of Board meetings	VA	8	12	11
Average attendance rate of directors at Board meetings	%	97.00%	96.30%	92.02%
Existence of an Audit Committee whose Chairman is independent and has significant experience in audit/finance	Txt	YES	YES	YES
Existence of a non-statutory Appointments and Compensation Committee	Txt	YES	YES	YES
Compensation of executives and directors				
Total amount of compensation paid to members of the Board of Directors/ Supervisory Board (€ k)	€K	164.48	138.38	212.64
Total compensation paid to the Chief Executive Officer (excluding compensation for the directorship) (€ k)	€K	333.79	410.95	1,363.64
Transparency on the criteria for variable compensation of the Chief Executive Officer	Txt	NO	NO	YES, with indicators and targets
Business ethics				
Publication of a formalized business conduct and anti-corruption policy	Txt	YES	YES	YES
Activities in countries exposed to corruption risks	Txt	NO	NO	NO
Existence of a whistleblowing system	Txt	NO	NO	NO
Number of alerts/questions/requests for advice received by the alert system	VA	0	0	0
Share of audit fees out of total statutory auditors' fees	%		70.05%	64.35%

APPENDICES

CSR policy and non-financial issues				
Formalization of a structured CSR strategy (with or without targets)	Txt	NO	NO	YES
Existence of a manager dedicated to CSR/sustainable development issues	Txt	NO	NO	YES, shared function
Presentation of the CSR strategy to the Board of Directors during the year	Txt	NO	NO	YES
Analysis and prioritization of the Group's ESG issues	Txt	NO	NO	Yes

SOCIAL	Suffix	2019	2020	2021
Characteristics and social policy				
Existence of a Human Resources Department at Group level	Txt	Head of HR	Head of HR	HR Department sitting on the Executive Committee
Total workforce at year-end (in FTEs, including fixed-term contracts, temporary staff, etc.)	VA	27	38	58
Permanent workforce at the end of the fiscal year (in FTE)	VA	24	36	56.5
Non-permanent workforce at the end of the fiscal year (in FTE: fixed-term contracts, interim, apprentices, etc.)	VA	3	2	1.5
Share of total headcount located in the country of the registered office	%	100.00%	100.00%	100.00%
Working conditions				
Publication of a commitment to promote freedom of association and social dialog	Txt	YES, general commitment	YES, general commitment	YES, general commitment
Departure rate of permanent employees (number of departures of permanent employees (FTE)/total workforce (FTE))	%	4.17%	6.45%	10.90%
Existence of profit-sharing schemes (profit-sharing, employee shareholding, etc.) excluding legal schemes	Txt	YES	YES	YES
Number of employees operating under collective agreements	VA	18	25	40
Employee surveys conducted over the last three years	Txt	NO	YES	YES
Percentage of headcount operating in countries sensitive to fundamental rights at work	%	0.00%	0.00%	0.00%
Skills development				
Percentage of employees having an annual individual appraisal interview	%	100.00%	100.00%	100.00%
Workforce training rate	%	78.00%	32.00%	33.33%
Average number of training hours per employee	x	1x	2x%	0x%
(Number of training hours/total workforce)	VA	30.39	28.8	42.72
Equal opportunities				
Percentage of women in the workforce	%	48.00%	50.00%	44.00%
Percentage of women managers	%	47.00%	52.00%	71.00%
Percentage of employees with disabilities	%	0.00%	0.00%	1.66%
Health and safety				
Existence of an HSS management system (hygiene, health, safety)	Txt	YES	YES	YES
Absenteeism rate due to work-related illness and accidents	%	1.06%	1.66%	1.68%

APPENDICES

ENVIRONMENT	Suffix	2019	2020	2021
Environmental policy and management system				
Percentage of products/services subject to a Life Cycle Assessment (LCA)	Txt			LCA on >10% of products
Total provisions for environmental risks	€K	0	0	0
Share of products/services (or revenue) with a recognized environmental label/eco-label	Txt			>50% of products
Energy and GHG				
Has the company set a quantitative climate target (energy, GHG emissions)?	Txt	NO	NO	NO
Measures to save energy and reduce greenhouse gas emissions	Txt	YES	YES	YES
Total energy consumption (MWh)	MWh		158,878	170,808
Total electricity consumption (MWh)	MWh		158,878	170,808
Total gas consumption (MWh)	MWh			
Greenhouse gas emissions for scope 1 (tCO2e)	tCO2e			32
Greenhouse gas emissions for scope 2 – location-based (tCO2e)	tCO2e			119
Greenhouse gas emissions for scope 2 – market-based (tCO2e)	tCO2e			119
Greenhouse gas emissions for scope 3 (tCO2e)	tCO2e			2,496
Contribution to the reduction (or offsetting) of greenhouse gases by financing carbon reduction or sequestration projects outside its sector of activity (tCO2e)	tCO2e	NO	NO	NO
Water				
Water consumption (m^3)	m^3		885	1,097
Existence of an action plan for waste management	Txt	YES	YES	YES

EXTERNAL STAKEHOLDERS	Suffix	2019	2020	2021
Relations with suppliers				
Responsible purchasing policy including social and/or environmental criteria	Txt	NO	YES	YES
Customer relations, civil society and product liability				
Existence of a quality management system and proportion of activities benefiting from external certification (e.g. ISO 9001)	Txt	Subsidiary CARBIOLICE certified ISO 9001, level 2	Subsidiary CARBIOLICE certified ISO 9001, level 2	Subsidiary CARBIOLICE certified ISO 9001, level 2
Conducting of customer satisfaction surveys over the last three years	Txt	NO	NO	NO
Presence of subsidiaries registered in countries at risk of financial opacity or tax havens	Txt	NO	NO	NO
Cybersecurity				
Presentation of IT risks to governance bodies at least once a year	Txt	NO	NO	YES

EUROPEAN GREEN TAXONOMY	Suffix	2019	2020	2021
Target 1 – Climate change mitigation				
Share of revenue eligible for the European green taxonomy for target 1 – climate change mitigation (%)	%			0%
Share of CapEx eligible for the European green taxonomy for target 1 – climate change mitigation (%)	%			100%
Share of OpEx eligible for the European green taxonomy for target 1 – climate change mitigation (%)	%			99%

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