
CARBIOS
Enzymes powering the Circular Economy

Enzymes powering the Circular Economy

July 2021

CARBIOS CORPORATE PRESENTATION

Euronext Growth Paris: ALCRB

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Enzymes powering the Circular Economy

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MAY 10TH, 2021 : CARBIOS SUCCESSFULLY COMPLETES ITS CAPITAL INCREASE AND RAISES €114 MILLION, SETTING A KEY MILESTONE FOR ITS INDUSTRIAL DEVELOPMENT PLANS



CARBIOS

Management team



Jean-Claude LUMARET

Founder & CEO

40 years' experience in the international agro-industry and intellectual property expert

- **METABOLIC EXPLORER**: VP Strategy & Innovation (Member of the Executive Committee)
- **ROQUETTE:** Director, Business Intelligence, Director BU Fermentation and Industrial Chemistry, Director, Intellectual Property and Regulatory Affairs
- Chemical Engineer, Lyon University, European Trademark Expert, CEIPI Center for International IP Study, Strasbourg



Martin STEPHAN

Deputy CEO

30 years' experience in the chemical industry

- **CHEMOURS:** Global Director of the Fluorotelomers business, EMEA Director, Sourcing, Logistics & Real Estate
- **DU PONT DE NEMOURS**: Global Product Manager, Business and Market Manager, Sales Director
- **ATOFINA**: Global Business Manager Fluorotelomers
- **ELF ATOCHEM**: Various positions in Finance
- MS in Business Management, HEC Paris, BA Economics Paris University.



Kader HIDRA

Chief Financial Officer

Financial markets expert

- **CITEGESTION (EDF)**: CEO of a digital start-up specialized in asset management and software development for Smart Cities
- **EDF:** Investor & Markets Director (Head of IR)
- **MORGAN STANLEY**: Utilities & Clean Energy Specialist Equity Sales
- **BERENBERG**: Utilities & Clean Energy Specialist
- Printing & Packaging Engineer (Ecole Polytechnique Grenoble), MBA from Duke University (Fuqua Business School).



Prof. Alain MARTY

Chief Scientific Officer

International expert in enzymology and biological processes

- **INSA** Institut National des Sciences Appliquées, Toulouse : Professor and Head of a research group
- **AERES** Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur and **ANR** Agence Nationale de la Recherche: Evaluator (France's National Education Research Agencies)
- PhD in Biology, Biochemical Engineer, University of Toulouse

CARBIOS

Carbios at a glance

Founded in 2011

38 patent families

Multi-source revenue business model

Strategic agreement with renowned brand owners

Exclusive partnership

novozymes®
Rethink Tomorrow

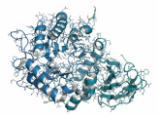
40 employees

The first and only company to have developed biological technologies for the end-of-life of plastics and textiles

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Ambition

Lead the transition towards sustainable plastics economy by developing technologies for the end of life of plastics



Technologies



Enzymatic biorecycling technology to recycle PET plastics and fibers to infinity

Evanesto® by Carbiolice:

First natural enzyme-based additive to fully biodegrade PLA-based plastics

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Enzymatic biorecycling technology: Demonstration plant start up on track

Operational launch in September 2021

- Technical data generation
- Main parameters definition for each step of the enzymatic recycling process
- Future industrial Unit operations planification
- Fully operational Process Design Package (PDP)



Demonstration plant under construction in Clermont-Ferrand

Engineering and construction in partnership with: T.EN TECHNIP ENERGIES

A key step towards building a first of a kind recycling facility

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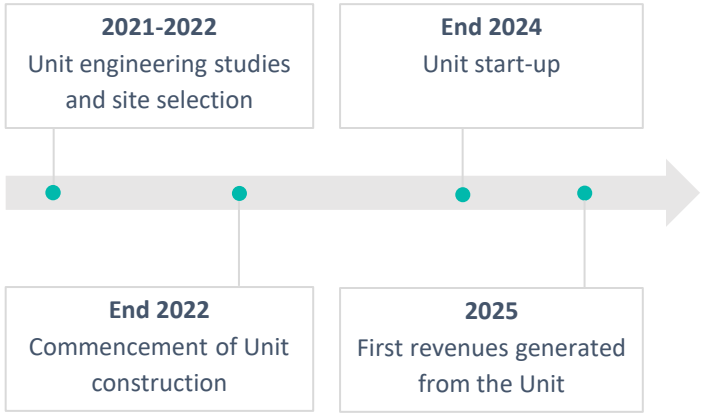
April 2021 Strategic update (1/2)

A new major step in the development of Carbios with the building of a first of a kind 100% PET recycling facility (the "Unit")

▪ Characteristics of the Unit

- annual production of c. 40,000 tons per year
- Potential saving of 30% CO_2 emissions compared to a conventional end of life mix of incineration and landfill, taking into account virgin PET production substitution(1)

▪ Key timetable for the building of the Unit



Estimated cost of the Unit of c. €100 million

1. Source : Preliminary data from Deloitte and Carbios in 2021

April 2021 Strategic update (2/2)

- **Signing of a non-exclusive and non-binding Expression of Intent agreement with a major PET producer** (April 26, 2021)

➢ **A leading PET producer which could host the Unit on its site**

➢ **The agreement foresees**

- an assistance in securing the sourcing of PET feedstock for the Unit
- Shared access to data coming from Carbios' demonstration plant, its biorecycling technology and from the PET producer's facilities

Combination of Carbios' unique biorecycling technology and of a major PET producer's manufacturing and R&D know-how

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Agenda

1. Adressing high growth potential markets with strong drivers
2. World first enzymatic technology to recycle and reuse PET-based plastics and fibers
3. Evanesto®: the world's first enzymatic biodegradation technology for PLA-based plastics
4. Clear roadmap to reach commercial success

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ADRESSING HIGH GROWTH POTENTIAL MARKET WITH STRONG DRIVERS



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The situation – Environmental issue

Each year…

- 86% of packaging waste goes unrecycled globally[1].
- **350 to 400 million tons**[2] of plastic are produced worldwide, including **70 million tons of PET**[3] worth approx. $80 billion (a market growing by 4% p.a.[4]).
- **150 million tons**[5] of plastic waste are generated including **9 million tons**[6] that ultimately end up in the natural environment, particularly in our seas and oceans.
- 500 billion units[7] of plastic bottles are produced each year and fewer than half are collected for recycling.
- Up to $120 billion[8] worth of plastic material is disposed of just after one single-use.





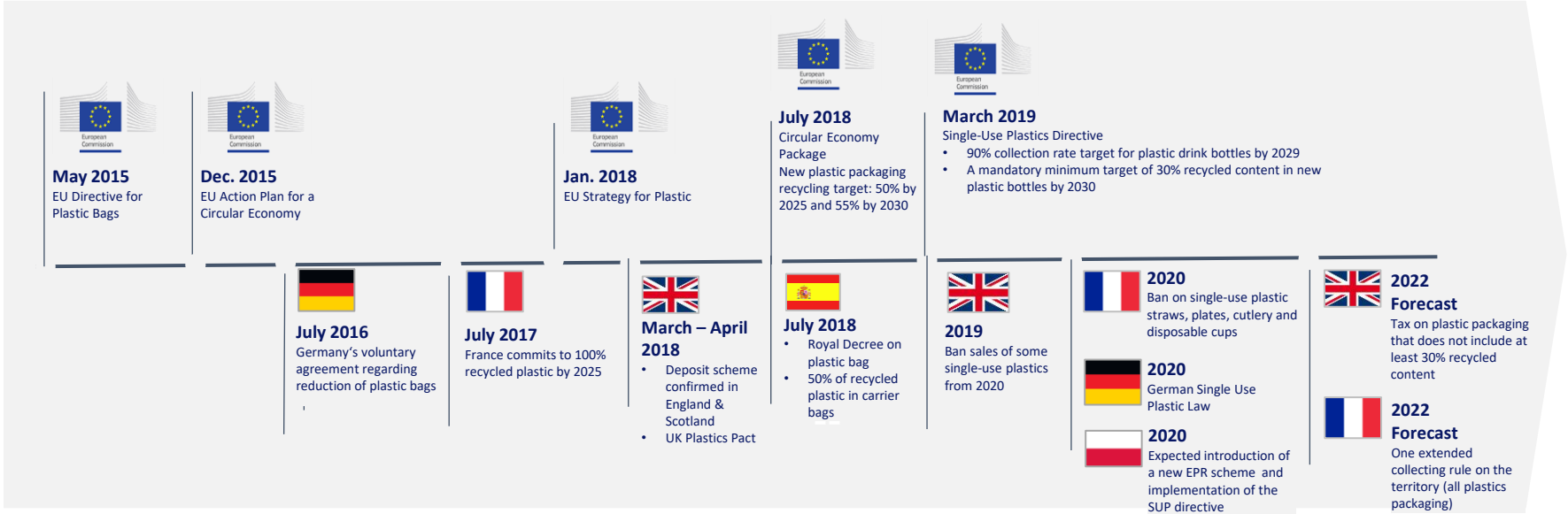


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1. Citigroup in 2018
2. PlasticsEurope in 2018
3-4 IHS Markit in 2018
5. Straits Times in 2015
6. Ademe in 2012
7. Citigroup in 2018, Euromonitor in 2017
8. Ellen McArthur Foundation & McKinsey: The New Plastic Economy in 2016

The situation – A growing regulatory pressure

Regulatory pressure is also growing at both the EU and national levels.



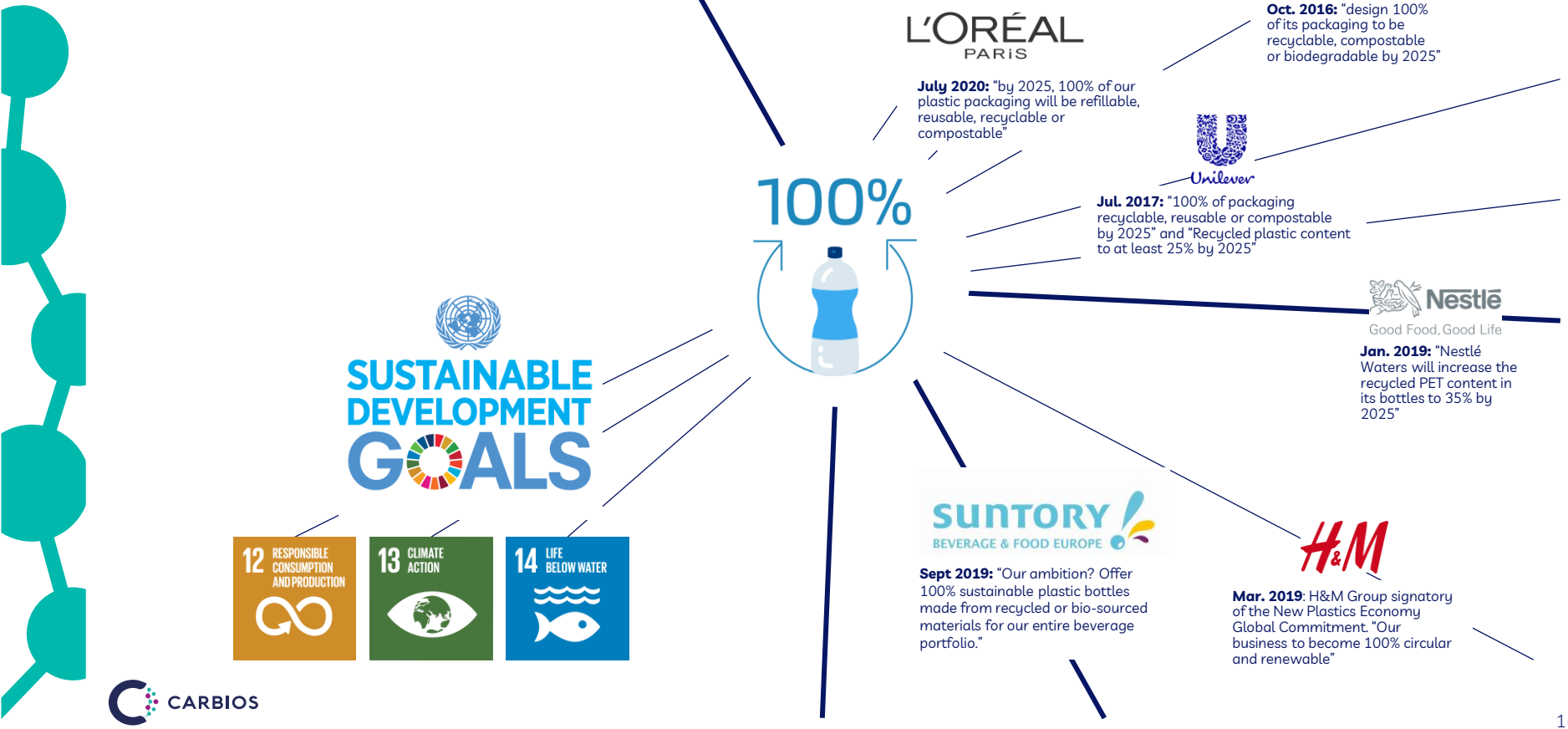
Many European initiatives and associations such as the European Plastics Pact and the Circular Plastic Alliance, bring together several actors from the industry, academics, and public authorities, to accelerate the transition towards Circular Economy. This is made possible by considering the whole plastic value chain, and notably by aiming at boosting the recycled plastic EU market.

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Carbios is part of the organizations that have signed the European Plastics Pact

EUROPEAN PLASTICS PACT

Strong drivers for more sustainable solutions



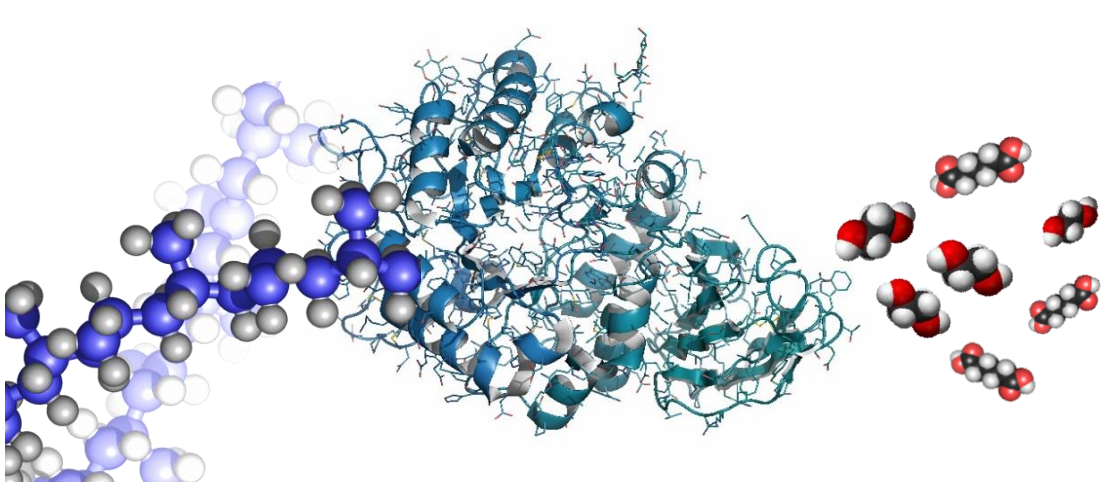
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WORLD FIRST ENZYMATIC TECHNOLOGY TO RECYCLE AND REUSE PET-BASED PLASTICS AND FIBERS

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Enzymes to fully break-down plastics!



Polymers

(plastics and fibers)

Carbios enzymes

Monomers

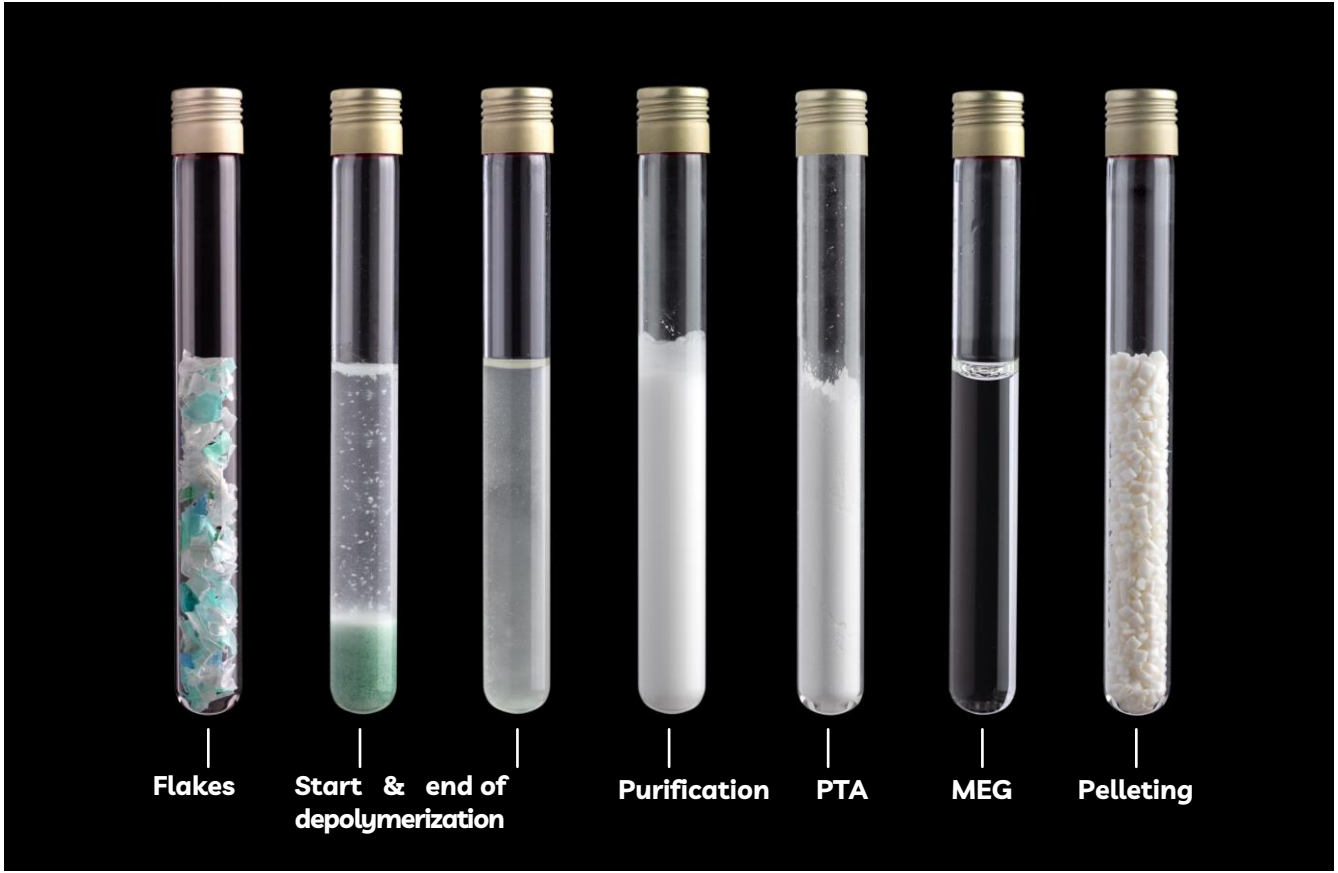
(building blocks)

INFINITE RECYCLING

A revolutionary process for infinite recycling of plastics and fibers

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How does it work?



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Benefits of the technology

- ✓ 100% recycled PET
- ✓ A process that can handle all forms of PET plastics (clear, colored, opaque, multi-layer…) and polyester fibers (textile & technical fibers for tires)
- ✓ No inhibition of the enzyme by colorants, pigments, carbon black or other polymers (PE, PA, PVC…)
- ✓ Depolymerization at low temperature, atmospheric pressure, water based
- ✓ Diversion of all PET-based plastics and polyester fibers from landfills and incineration

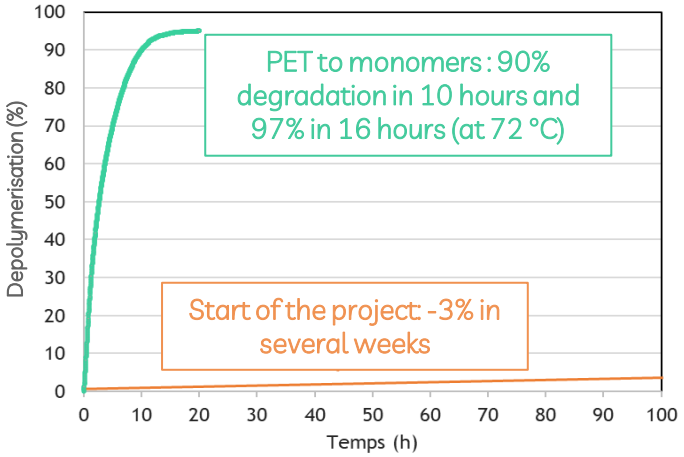


Carbios' innovation offers the potential to recycle PET plastics infinitely and contributes to achieving 100% recycled PET content in new products

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PUBLICATION OF AN ARTICLE IN THE PRESTIGIOUS SCIENTIFIC JOURNAL NATURE

co-authored by researchers at Carbios and Toulouse Biotechnology Institute (TBI) laboratory



Depolymerisation kinetics of commercial PET plastic waste (colored flakes, washed with 95% PET)

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PET brand-owners consortium agreement











- A 4-year agreement signed in April 2019
- Accelerate the technology's readiness and bring it to full industrial scale
- Increase the availability of high-quality recycled plastics
- Demonstrate the technical, economic and environmental efficiency of Carbios' technology
- Support the structuring of an industrial value chain for an efficient supply of consumer-grade PET

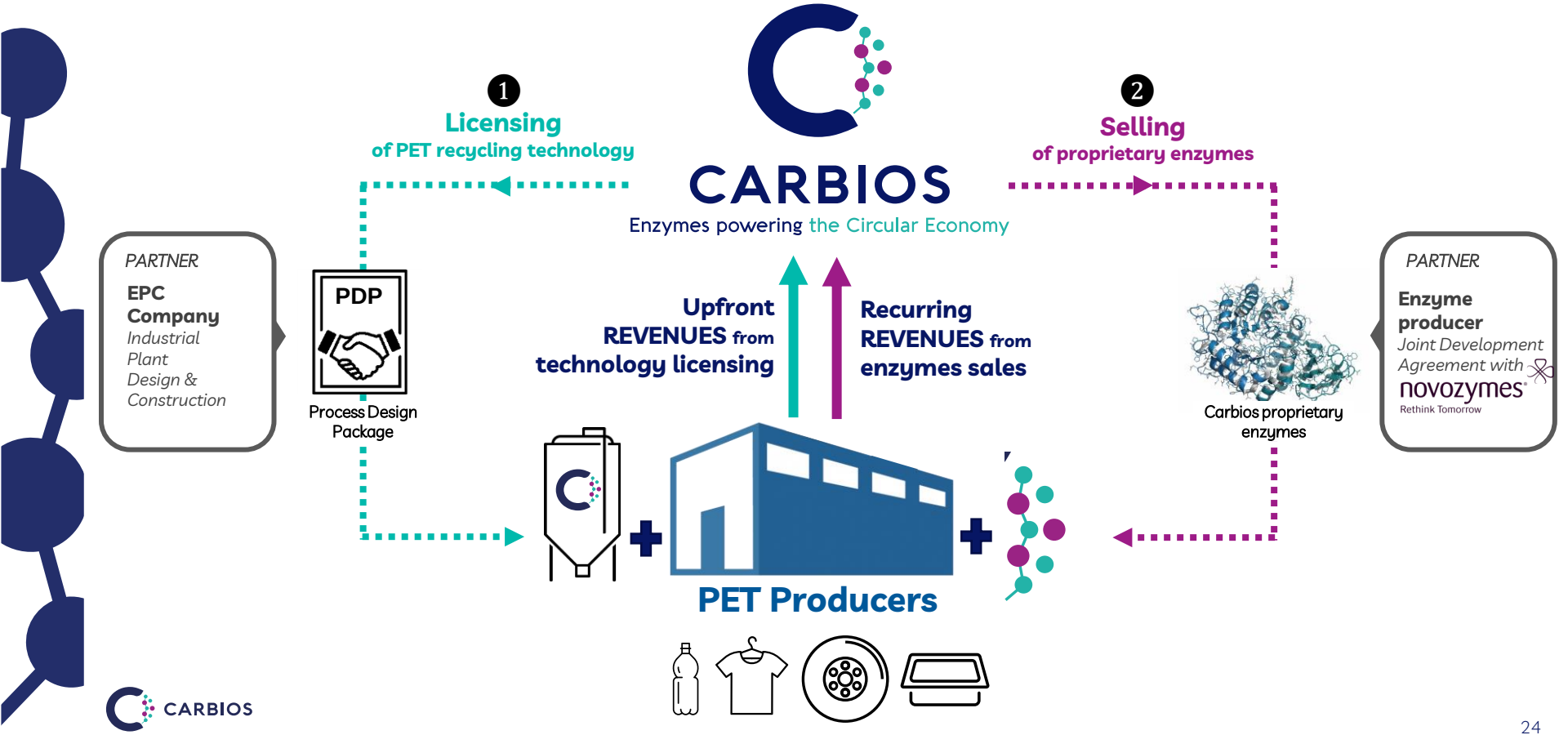
Global key players team up to boost recyclability of PET plastic products

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Carbios creates value for all players of the value chain



PET Recycling: our business model



CARBIOLICE

Biodegradability is the future

EVANESTO®, the world's first enzymatic biodegradation technology

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Carbiolice industrial production facility (Credit Carbiolice)

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Carbiolice at a glance

CARBIOLICE

Biodegradability is the future

Founded in 2016	25 employees
Exclusive license granted by Carbios	20 Patent families
Commercial launch in December 2020	1 shareholder CARBIOS

EVANESTO

- An enzyme-based additive
- Makes plant-based plastic fully compostable, even from home

Jan. 2019: Joint Development Agreement between Carbios, Carbiolice and novozymes® Rethink Tomorrow

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How does it work?

Step by step



Accelerate PLA-based plastics biodegradation and guarantees compostability in less than 200 days

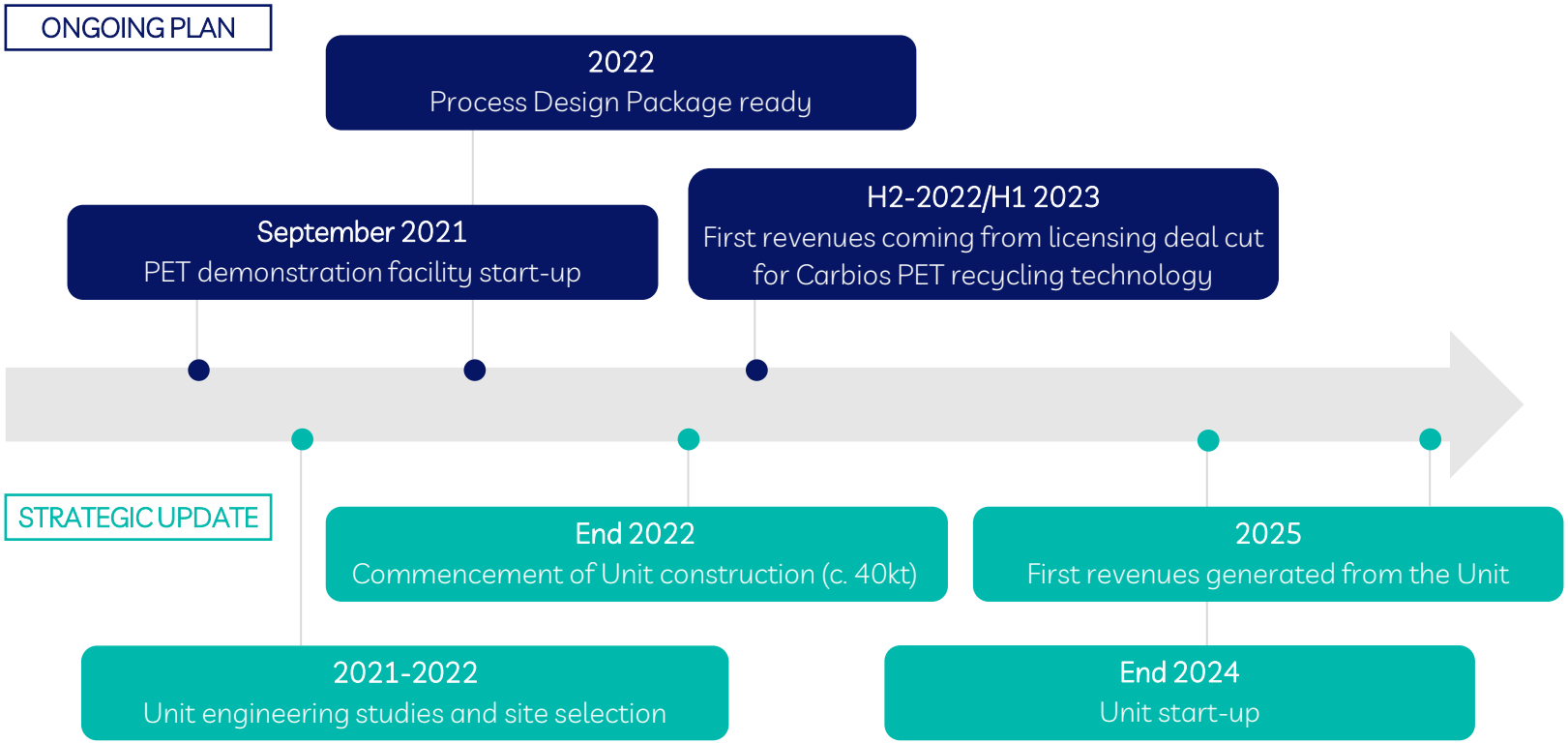
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A CLEAR ROADMAP TO COMMERCIAL SUCCESS



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What we plan to deliver next?



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Key takeaways

1. A pioneer in the development of enzymes for plastic processing
2. Breakthrough technologies to disrupt the plastic industry
3. Huge market opportunities and growth potential
4. Numerous strategic partnerships with worldwide blue-chip industry experts
5. Major milestones ahead including reaching licensing stage end of 2022/ early 2023 and first substantial revenues generation
6. Highly experienced management supported by renowned shareholders and partners

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APPENDIX



Intellectual Property

Carbios holds 38 patent families worldwide, including 18 protecting its recycling process as well as the associated proprietary PET-degrading enzymes



Patents granted in:

Europe, United-States, Canada, Mexico, China, India, Japan…

WORLDWIDE EXCLUSIVE EXPLOITATION RIGHTS

On all results of R&D collaborations

A UNIQUE KNOW-HOW

In the development of bioprocesses combining enzymes & polymers

A STRONG INTELLECTUAL PROPERTY

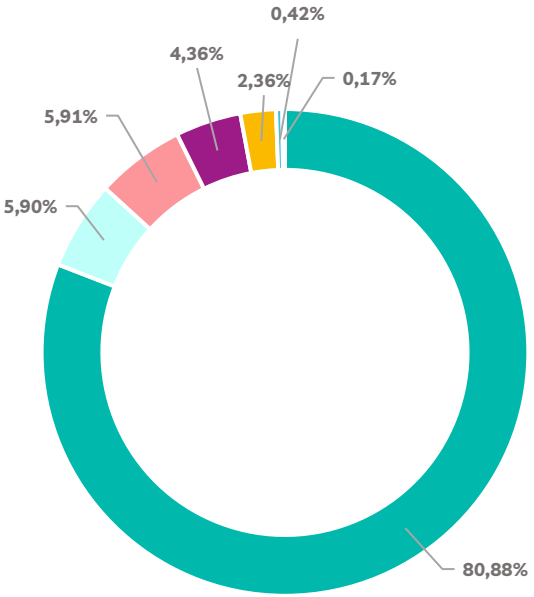
Protecting the applicative use of enzymes, processes and products

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Share & Shareholders

*as of May, 2021**

MARKET	Euronext Growth Paris
MNEMO/REUTERS/BLOOMBERG	ALCRB / ALCRB.PA / ALCRB:FP
SHARES ISIN CODE	FR0011648716
NUMBER OF SHARES	11,164,472
ICB CLASSIFICATION	Chemistry / Speciality chemistry
INDICES	Euronext Growth All-share, Euronext Growth Bpifrance Innovation Index, Enter Next PEA PME 150
FRENCH PEA-PME ELIGIBILITY	Yes
ANALYST COVERAGE	Kepler Cheuvreux — Baptiste de Leudeville
	Bryan, Garnier & Co — Xavier Regnard
	Gilbert Dupont — Alexandre Letz
	Oddo BHF — Hana Maalej
	Exane BNP Paribas — Laurent Gelebart



ALCRB EURONEXT GROWTH

ELIGIBLE PEA PME

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After the Offering dated May 10th, 2021

2020 and other post-closing Highlights

SCIENTIFIC MILESTONES:

- **Publication of an article** co-authored by Carbios and TBI in the **prestigious scientific journal Nature** (April 2020)
- Production of the **first clear bottles from enzymatically recycled textile waste** (November 2020)
- **Michelin has successfully validated the use of Carbios' enzymatic recycling technology** for PET plastic waste in its tires (April 2021)

CORPORATE:

- **JDA** with **Novozymes** for the production of **PET-degrading enzymes** (January 2020)
- **Launch of a cooperative lab** with the Toulouse Biotechnology Institute (January 2020)
- **Construction of an industrial demonstration plant for the enzymatic recycling of PET** (June 2020)
- **Successful Private Placement for a total amount of €27 million**, concurrently with a €10 million Secondary Offering (July 2020)
- **Carbios to move facilities** to a Michelin site in Clermont-Ferrand, France (September 2020)
- **Acquisition of Limagrain Ingredients equity stake** in the capital of Carbiolice (October 2020)
- **Commercial launch of Evanesto®** (December 2020)
- **Successful €114 million capital increase** (May 2021)
- **Acquisition of the SPI fund's equity stake** in the capital of Carbiolice (June 2021)
- Carbios awarded as **Technology Pioneer** by **World Economic Forum** (June 2021)

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FY 2020 Cash Flow Statement

Cash flow (in thousand euros)	**December 31, 2019**	**December 31, 2020**
Cash at the opening	**5,149**	**15,915**
Net cash generated by operations	(3,036)	(5,169)
Net cash from investments	(2,406)	(12,667)
Net cash from financing operations	16,209	31,019
Change in cash	***10,766***	***13,182***
CLOSING CASH	**15,915**	**29,097**

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FY 2020 Income Statement

(In thousand euros)	December 31, 2019	December 31, 2020
Operating revenue	1,450	1,643
Operating expenses	(5,986)	(8,464)
Operating Income	**(4,535)**	**(6,821)**
Financial Income	(29)	(93)
Current Income before Tax	**(4,564)**	**(6,914)**
Extraordinary profit (loss)	15	(720)
Income tax (Tax research credit)	800	1,488
NET INCOME (LOSS)	**(3,749)**	**(6,146)**

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FY 2020 Simplified Balance Sheet

Assets (in thousand euros)	**December 31, 2019**	**December 31, 2020**
Intangible assets	858	1,086
Tangible assets	1,107	1,236
Assets in progress	1, 308	3,558
Financial assets	12,027	20,907
Fixed Assets	**15,300**	**26,786**
Inventory	21	39
Receivables	1,065	2,150
Cash and marketable securities	15,915	29,097
Pre-paid expenses	75	139
Current Assets	**17,076**	**31,425**
Deferred financing costs	11	17
TOTAL ASSETS	**32,386**	**58,228**

Liabilities & Equity (in thousand euros)	**December 31, 2019**	**December 31, 2020**
Shareholder's equity	**22,005**	**45,135**
Conditional advances	**4,250**	**4,173**
Loans	3,818	5,647
Trade payables and related accounts	1,387	1,952
Other liabilities	750	1,146
Prepaid income	176	176
Payables	**6,131**	**8,921**
TOTAL LIABILITIES & EQUITY	**32,386**	**58,228**

CARBIOS

Our Values

Our corporate culture focuses on 4 strong pillars shared by our employees and our partners.

RESPECT for people: Our employees are our most precious assets. At Carbios, we aim to respect people in their diversity and ensure an ideal, stimulating work environment. The key importance of respect at Carbios also concerns the integrity of our words and actions with our partners.

COMMITMENT for the Planet: By proposing sustainable solutions to rethink the end-of-life of plastic materials and textiles, Carbios shows its commitment to protecting the environment and its desire to support a Circular Economy that benefits future generations.

INNOVATION benefiting industrial reality: Thanks to high level scientific research combining for the first time the world of enzymology and plastics, we innovate every day to be able to offer sustainable and industrial solutions that address the major environmental and societal challenges of our time.

AGILITY serving performance: The agility of our teams along with the diversity of their expertise is one of Carbios' major strengths enabling us to provide the best in innovation to our partners.



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