



# CARBIO

Biotechnology **powering**  
plastic and textile **circularity**

## 2022 Annual Results Presentation

April 6, 2023

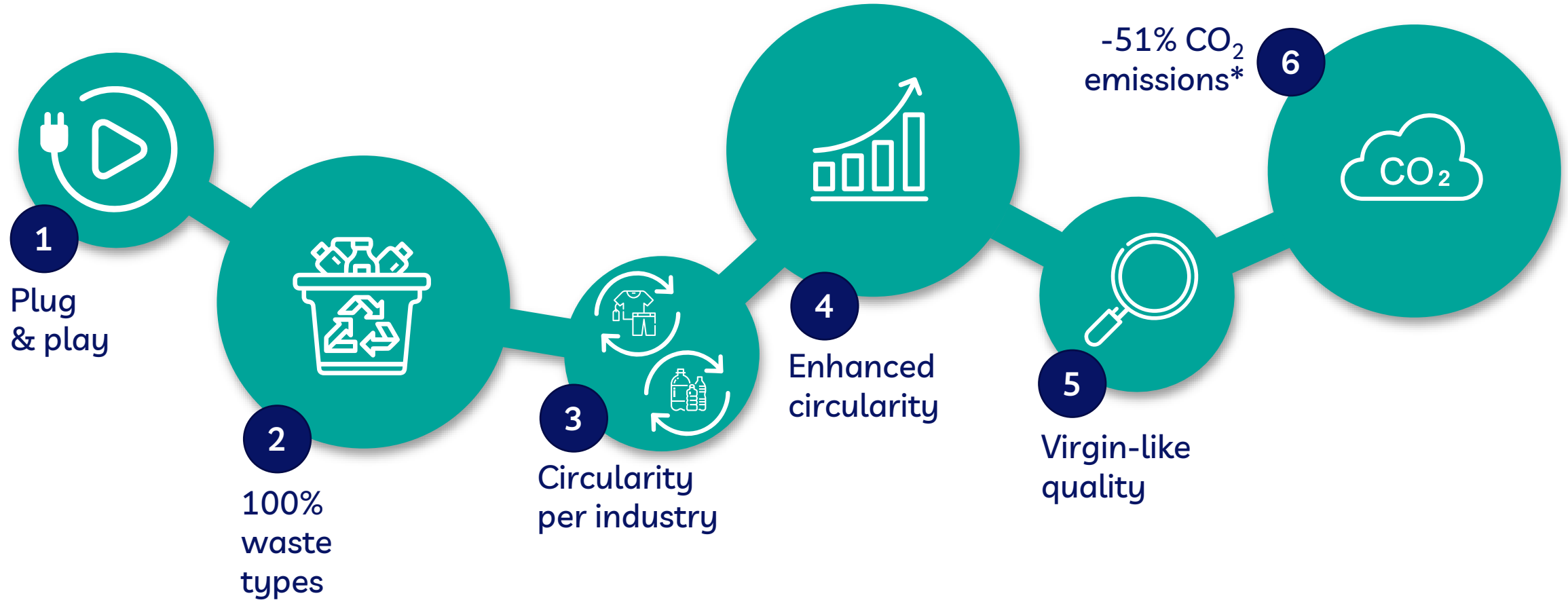


# 2022 and post-closing highlights



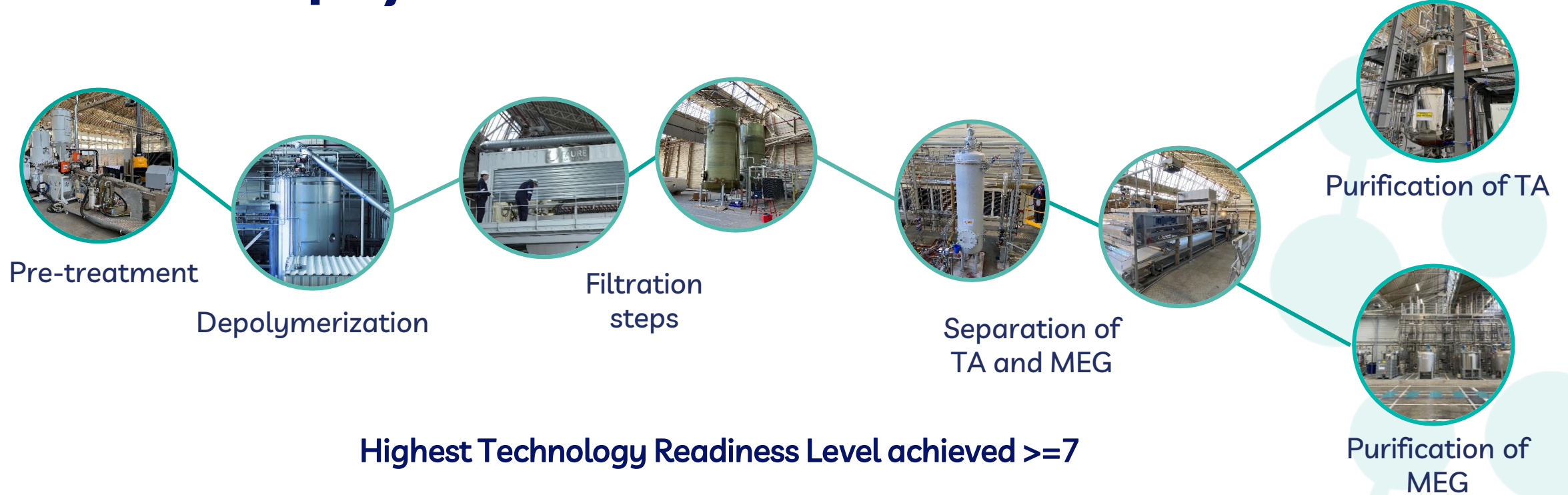


# Carbios brings value along the chain while preserving the planet



\* Versus one cycle of virgin PET production taking into account diversion of 50% PET waste from a conventional end-of-life  
Virgin PET: 2.19kg CO<sub>2</sub>/kg (cradle to gate)

# Carbios has achieved the last demonstration step enabling full-scale deployment



Highest Technology Readiness Level achieved  $\geq 7$



Enzymatic reaction kinetics and PET conversion: no impact of scale



Low sensitivity to process conditions: Robust!



Monomer of virgin-like quality  
Sampled with positive feedback from potential end-users  
✓ Food contact applications



# Demo plant fully operational from PET feedstock to r-PTA and r-MEG

A major milestone that enables Carbios to start licensing its technology:

- €20 million project , > 120 equipments, 2500 m<sup>2</sup> for process technology
- 25 field technicians, engineers, and PhDs
- Designed in collaboration with Technip Energies and best experts in the field
- Processing capacity : 2 tons / batch

## Timeline of operations







# Licensing Documentation ready for industrial and commercial deployment

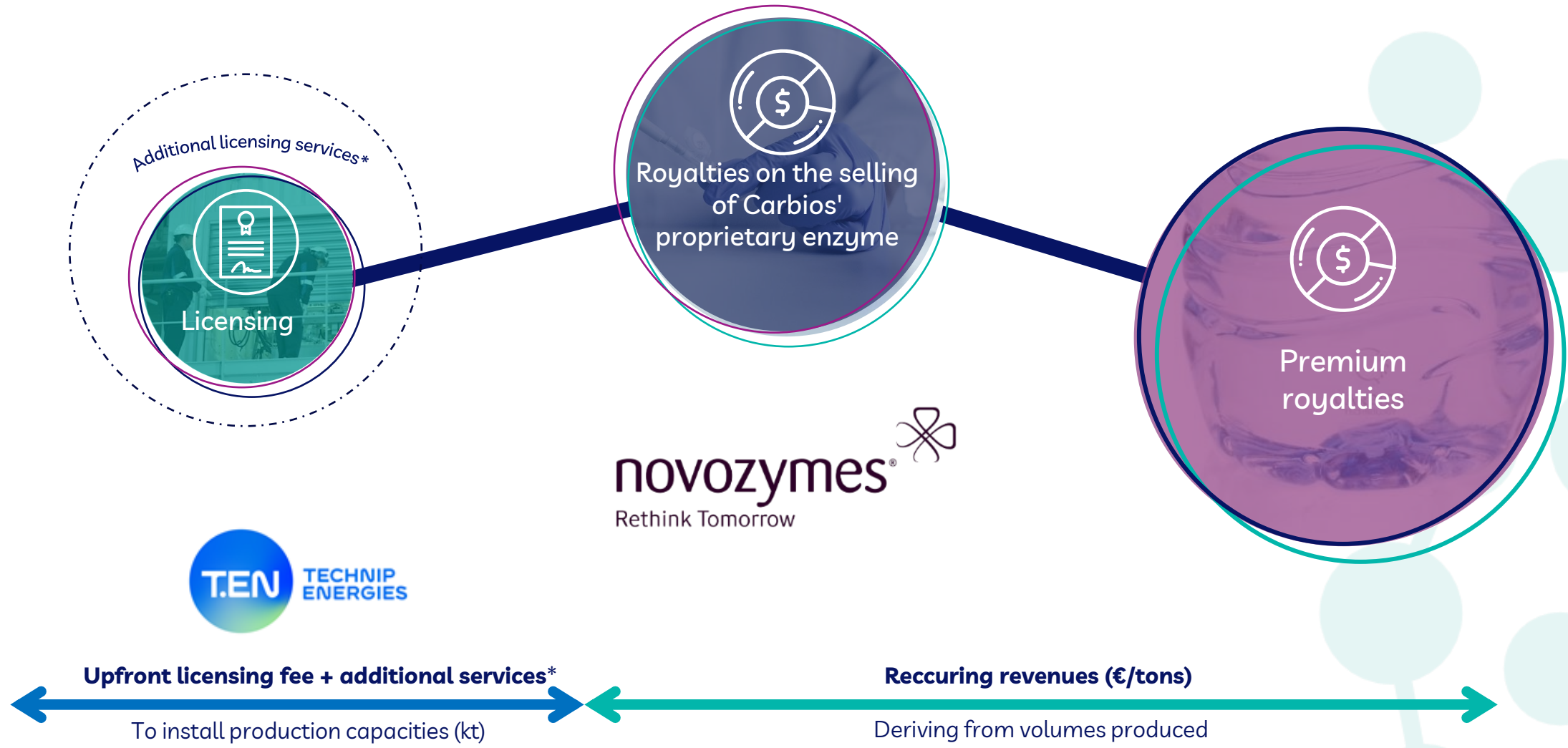
(March 2023 press release)

- Outputs from the demo plant and advanced engineering study for the reference unit allow the transfer of Carbios' PET biorecycling technology to potential licensees
- Technical Information Summary, Process Design Package and Process Book make up the engineering documentation deliverables for the design and construction of Licensed Plants
- Completion of the Technical Information Summary marks the start of international prospection





# Licensing business model: capex lean with mostly recurring revenues





# A technology ready to start licensing from small to large scale



50 to 200  
ktons  
units

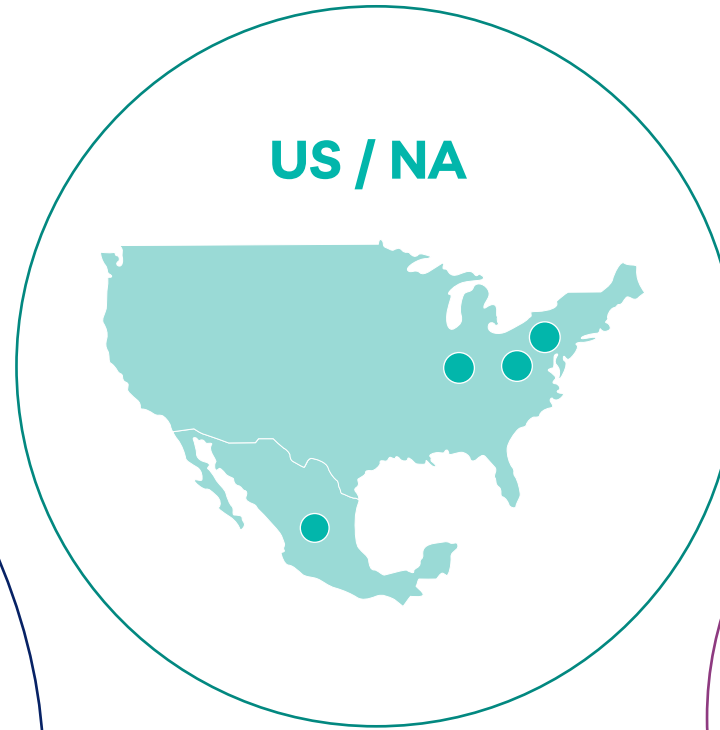
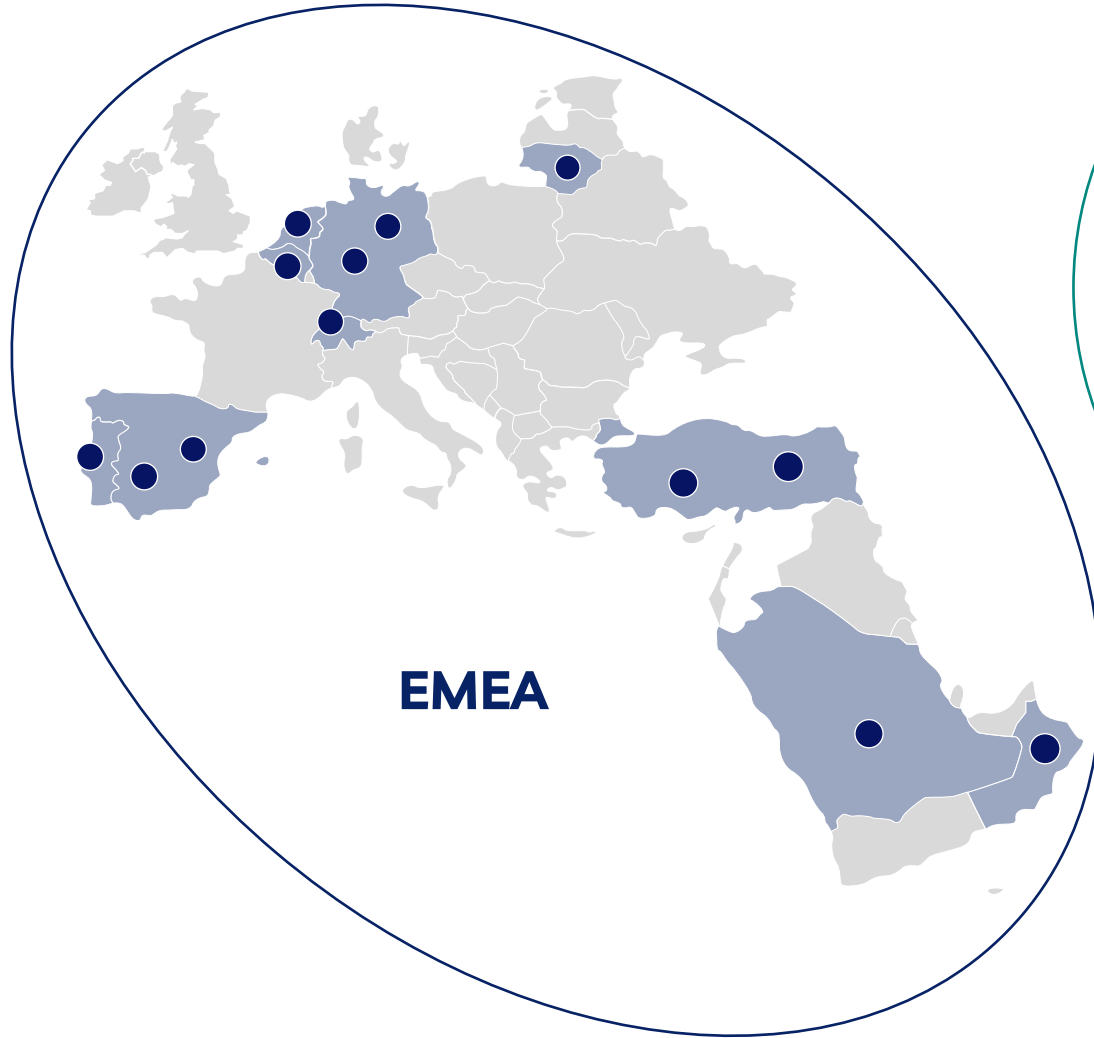
- Derived from the design of Carbios' reference unit

10 to 20 ktons  
units

- For high-end chemical applications
- Capex savings in sites with slack capacity on infrastructures
- Carbios design simplifications

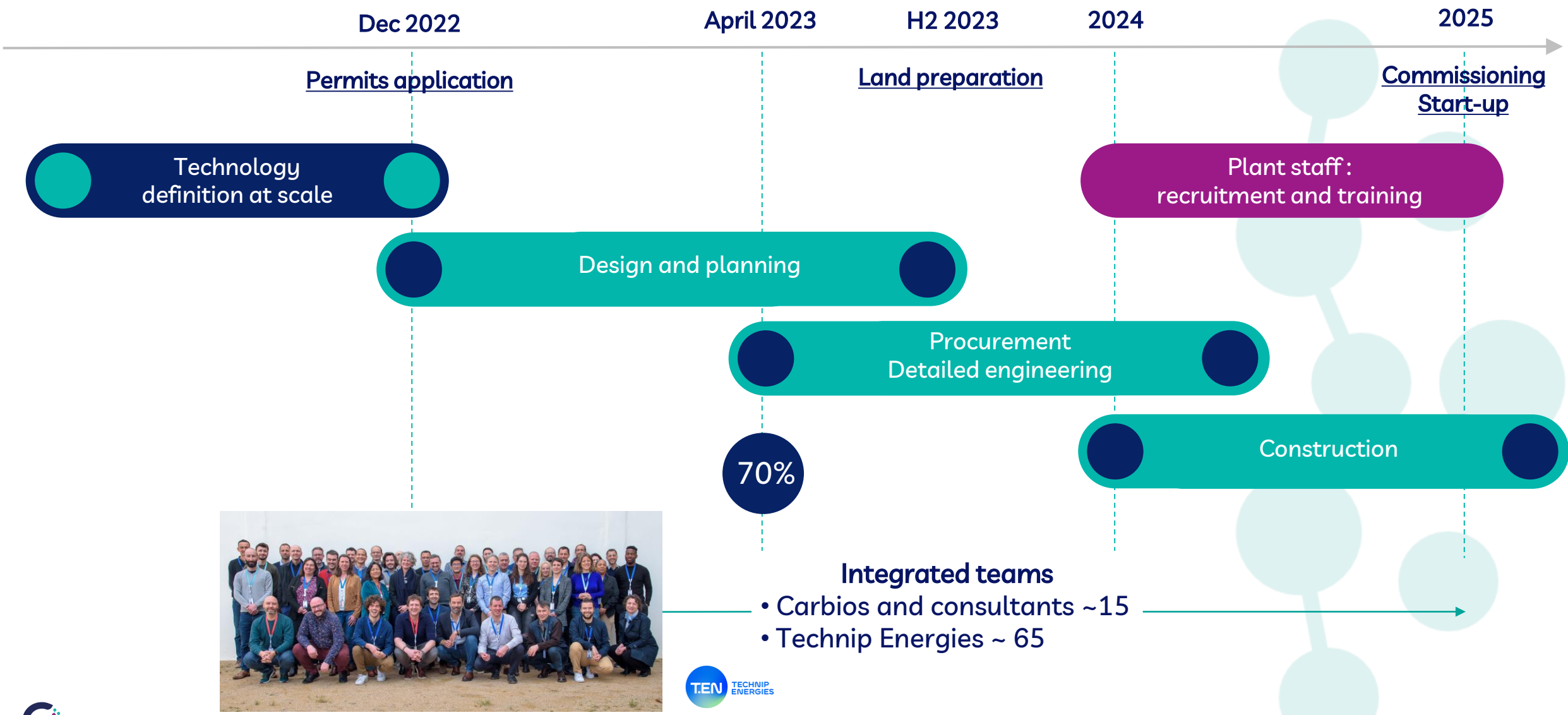


# First geographical licensing pipeline





# On track for the commissioning of Carbios Reference Unit in 2025





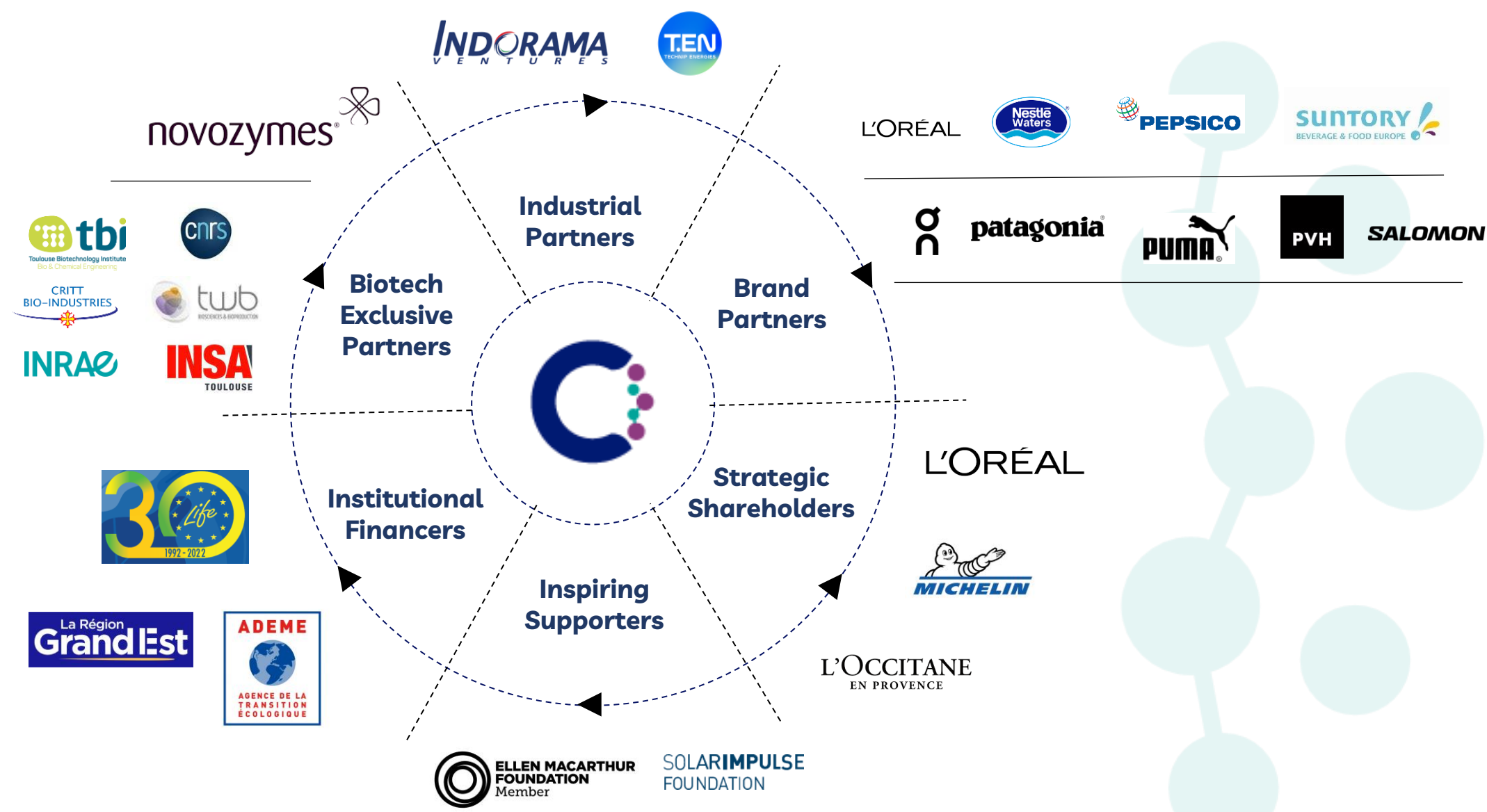
50 ktons PET feedstock capacity  
Mechanical complete : 2025

Green Field project  
70 000 m<sup>2</sup> with room for expansion

5 shifts – 24 hours, 7 days a week  
~ 70 direct employees, 150 total



# Carbios supported by a strong ecosystem of leading partners







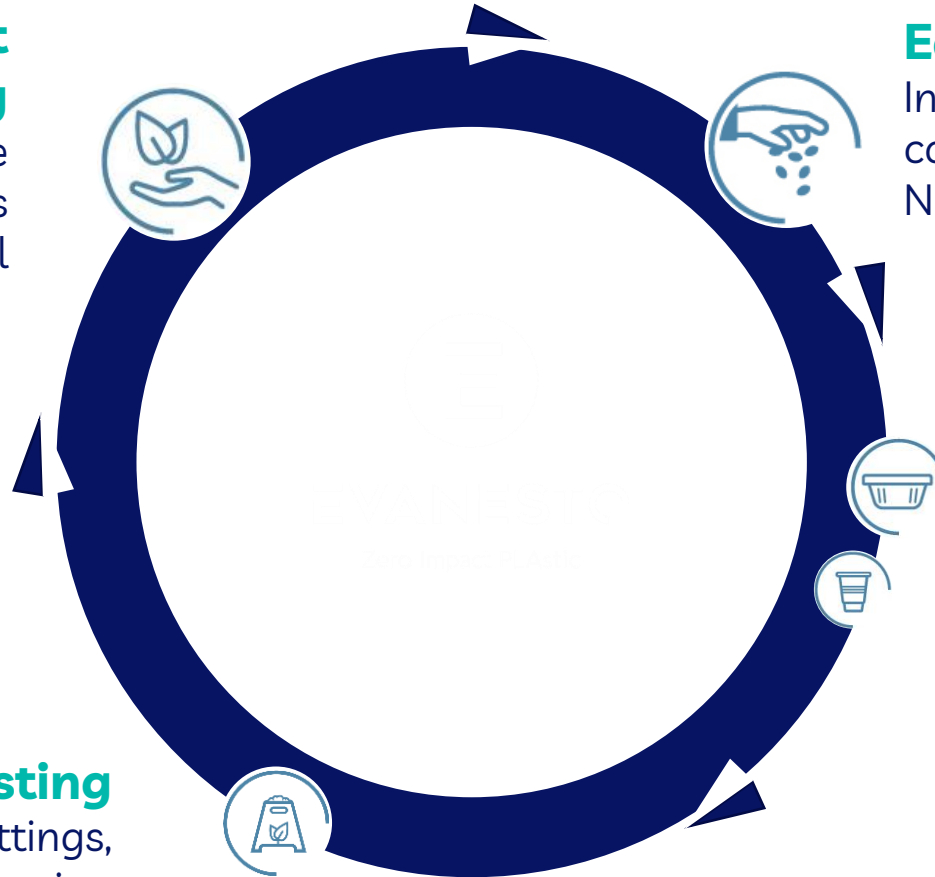
# Carbios' biodegradation technology: an innovative solution for PLA-based single-use plastics

ENZYMATIC SOLUTION TO MAKE PLA COMPOSTABLE AT AMBIENT TEMPERATURE



## Excellent compost quality

No toxic residue  
No microparticles  
Carbon return to soil



## Ease of use

Introduced as masterbatch on  
conventional industrial lines  
No investment

## Compostable

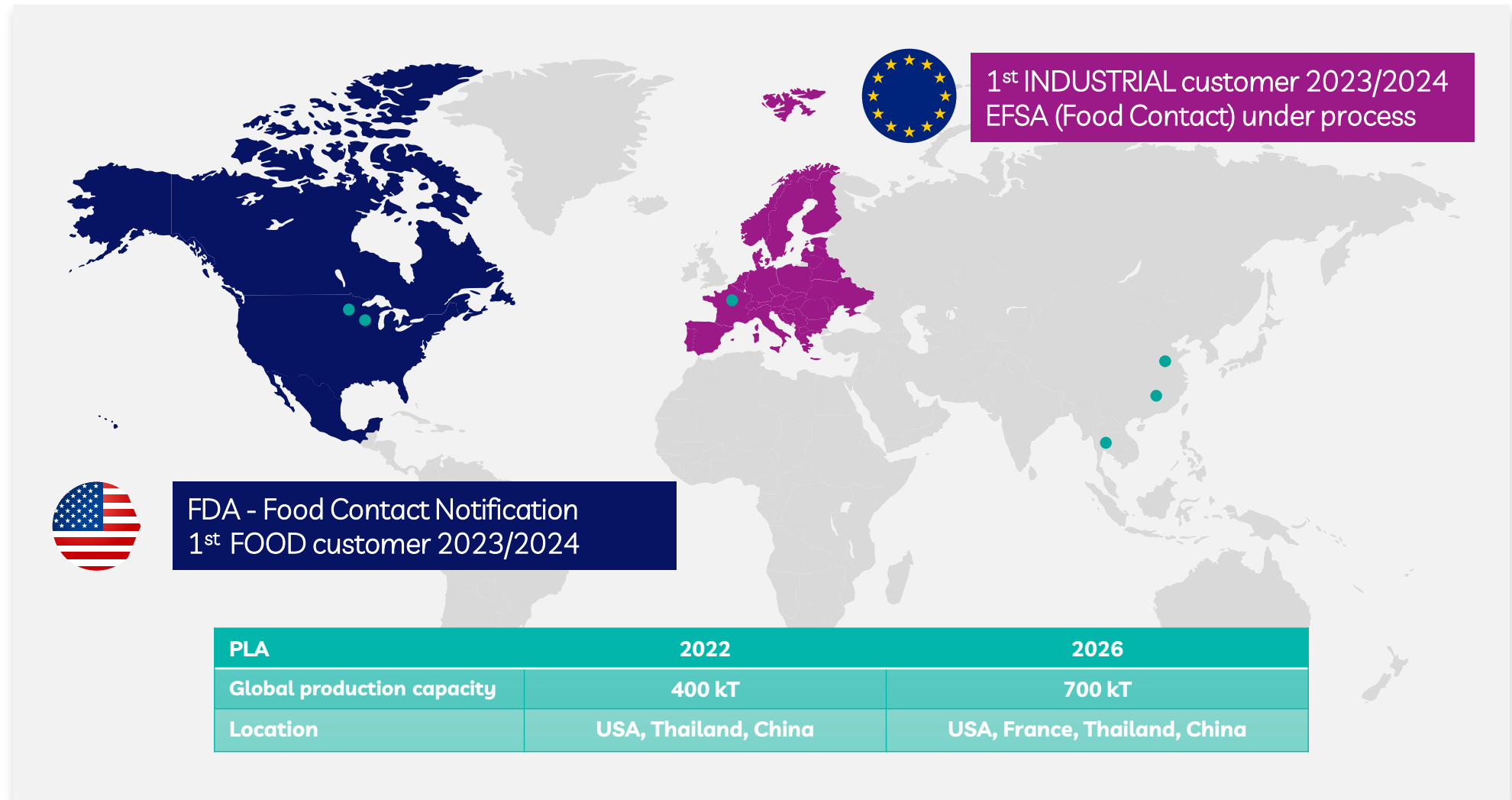
Disintegration in less than 8 weeks,  
Home compost certified

## For universal composting

Industrial or domestic settings,  
methanization



# PLA : consumer market test & first sales in North America in 2023/2024





# 2022/ 2023 YTD Highlights

## Scientific milestones

- Production of a 100% enzymatically recycled **white fiber from colored textile waste** (March 2022)
- **Publications** in the prestigious **Biophysical Journal** (July 2022) and **Chemical Reviews** (March 2023)
- **Biocat Award** for Carbios' CSO, Prof. Alain Marty (August 2022)

## Industrial scale-up

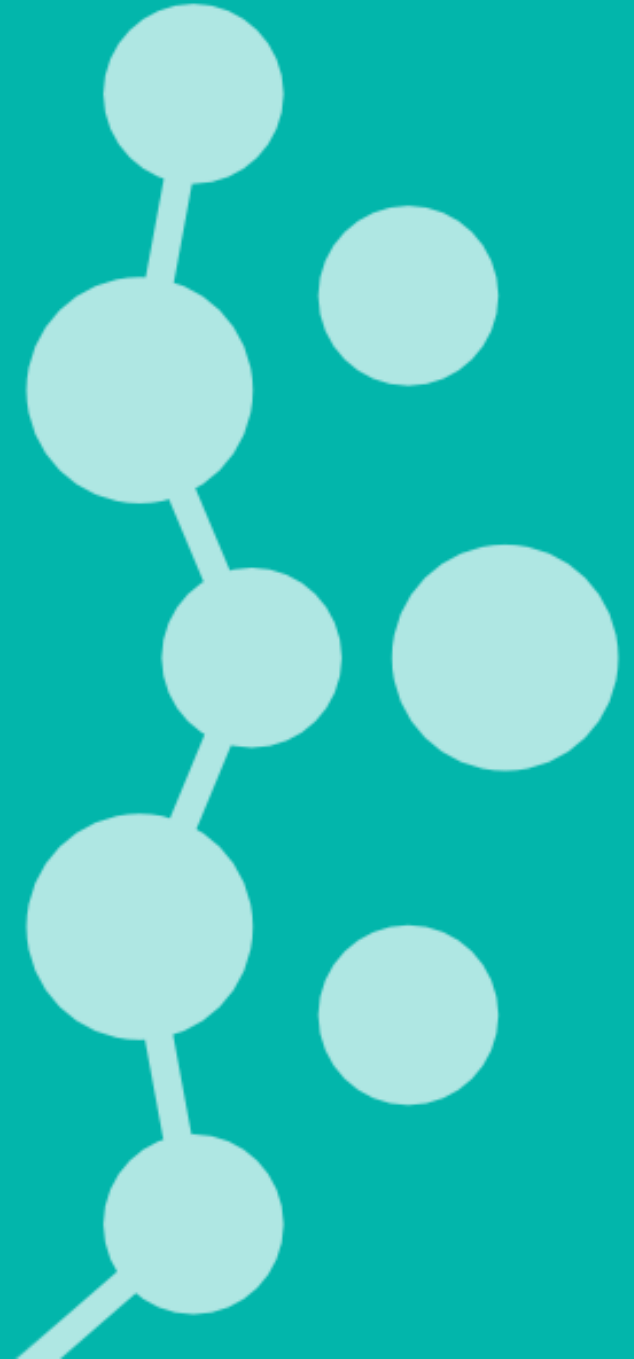
- Collaboration with **Indorama Ventures** to build the world's first 100% biorecycling plant in France (Feb. 2022)
- **Demonstration plant completed** and operational (August 2022)
- **Long-term exclusive agreement with Novozymes** ensuring production and supply of Carbios' proprietary PET-degrading enzymes at industrial scale (January 2023)
- **Technical Information Summary** ready for licensing (March 2023)

## Corporate & finance

- **€30 million EIB loan** drawn down in June 2022
- **Talent acquisition** at all levels of the organization, starting with the **Executive Committee** and **Board of Directors** (May 2022-Jan. 2023)
- Operations relocated to a **new state-of-the-art facility** in Clermont-Ferrand
- Textile Consortium with **On, Patagonia, PUMA and Salomon** (July 2022), and **PVH Corp.** (Feb. 2023)
- Publication of Carbios' first **Sustainability report** (Dec. 2022)
- Carbios joins **Ellen MacArthur Foundation's** circular economy network (March 2023)



## 2022 Annual Results







# FY 2022 Consolidated statement of income

Consolidated statement of Income (in thousand euros)	December 31, 2022	December 31, 2021	December 31, 2021
	12 months	12 months	<i>proforma</i> 12 months
<b>Income</b>	<b>70</b>	<b>105</b>	<b>126</b>
<b>Net Research and Development expenses</b>	<b>(12,993)</b>	<b>(7,727)</b>	<b>(8,998)</b>
Research and Development expenses	(19,057)	(11,732)	(13,377)
Subsidies and other income from activities	4,776	3,597	3,971
Capitalisation of development costs	1,287	409	409
<b>Sales and marketing expenses</b>	<b>(4,373)</b>	<b>(1,976)</b>	<b>(2,300)</b>
<b>General and administrative expenses</b>	<b>(8,807)</b>	<b>(6,251)</b>	<b>(7,001)</b>
<b>Operating expenses</b>	<b>(26,173)</b>	<b>(15,954)</b>	<b>(18,300)</b>
Other operating income and expenses	2	21,211	(20,104)
<b>Operating income (2)</b>	<b>(26,101)</b>	<b>5,363</b>	<b>(1,931)</b>
<b>Financial income</b>	<b>(1,640)</b>	<b>(454)</b>	<b>(504)</b>
Income before tax	(27,741)	4,908	1,426
Income tax	-	-	-
<b>Share and profit (loss) of equity affiliates (3)</b>	<b>-</b>	<b>(1,128)</b>	<b>-</b>
<b>Net income (loss) for the period (4)</b>	<b>(27,741)</b>	<b>3,780</b>	<b>1,426</b>
IFRS accounting impact related to the takeover of Carbiolice:			
Other operating income and expenses (1)	-	21,211	20,104
Share of profit (loss) of equity affiliates (3)	-	(1,128)	-
<b>Operating income (loss) « adjusted » of the IFRS impacts related to the takeover of Carbiolice (2)-(1)</b>	<b>(26,101)</b>	<b>(15,848)</b>	<b>(18,173)</b>
<b>Net income (loss) « adjusted » of the IFRS impacts related to the takeover of Carbiolice (4)-(1)-(3)</b>	<b>(27,741)</b>	<b>(16,303)</b>	<b>(18 678)</b>

## (1) R&D expenses

- Full-year operation of the demo plant versus 1Q in 2021, use of external services in connection with the reference unit project and sustained efforts in R&D

## (2) Sales and Marketing

- Increased efforts to secure the commercial roll-out of Carbios technology

## (3) G&A expenses

- Increase in the number of employees in 2022 to further structure the Company's functions, consulting services and one-offs

## (4) Other operating income and expenses (2021)

- Takeover of Carbiolice (P&L 2021)

## (5) Income

- Some of Carbios' contracts for the supply of goods and services do not fall within the definition of revenue under IFRS (notably consortium contracts and research collaboration contracts). These revenues are presented as a deduction from the charges incurred by Carbios

## (6) Operating income

- For 2021, sales and operating expenses from Carbiolice are fully consolidated as of June 4, 2021
- For 2022, sales and operating expenses from Carbiolice are fully integrated.

## (7) Financial income

- Increase in financial expenses related to the new EIB loan



# FY 2022 Consolidated statement of financial position

Consolidated statement of financial position (in thousand euros)	December 31, 2022	December 31, 2021
<b>ASSETS</b>		
Goodwill	20,583	20,583
Intangible assets	22,457	23,188
Tangible assets	24,965	16,466
Right-of-use assets	6,765	6,989
Equity accounted securities	-	-
Financial assets	906	388
<b>Non-current assets</b>	<b>75,674</b>	<b>67,614</b>
Trade receivables	57	16
Other current assets	7,670	6,128
Cash and cash equivalents	100,557	104,956
<b>Current assets</b>	<b>108,284</b>	<b>111,120</b>
<b>Total assets</b>	<b>183,959</b>	<b>178,734</b>

## (1) Goodwill

- Calculated between the market value of Carbiolice and the net asset acquired in 2021 – no impact as of Dec. 22

## (2) Intangible assets

- R&D capitalization (demo plant) for €1 M and subsidies
- At Carbiolice, € 1.7 M amortization of intangible assets resulting from the Carbiolice purchase price allocation exercise [Technologie Masterbatch technology €9.8 M/ Reacquired rights (licence agreement) €12.5 M]

## (3) Tangible assets

- €6.5 M investment at Carbios (demo plant) and €2 M at Carbios 54 (Reference Unit).

## (4) Right-of-use assets

- Lease assets at Carbios and Carbiolice - € 4.3 M related to the Cataroux site (Michelin)

## (5) Other current and non-current assets

- Variations explained by the activity of the three consolidated entities



# FY 2022 Consolidated statement of financial position

Consolidated statement of financial position (in thousand euros)	December 31, 2022	December 31, 2021
<b>EQUITY AND LIABILITIES</b>		
Share capital	7,870	7,826
Share and contribution premium	146,968	146,337
Consolidated reserves	(5,482)	(10,604)
Retained earnings	(3,826)	(600)
Net income – share attributable to equity holders of the parent company	(27,741)	3,780
<b>Shareholders' equity</b>	<b>125,441</b>	<b>146,739</b>
Provisions – Non-current portion	184	202
Loans and financial liabilities – Non-current portion	35,395	11,941
Lease liabilities – Non-current portion	5,142	5,358
Other liabilities – Non-current portion	546	-
Deferred tax liabilities	1,694	1,694
<b>Non-current liabilities</b>	<b>42,961</b>	<b>19,194</b>
Provisions - Current portion	-	76
Loans and financial liabilities – Current portion	2,782	1,376
Lease liabilities – Current portion	1,346	1,256
Trade payables	4,021	5,137
Other current liabilities	7,408	4,956
<b>Current liabilities</b>	<b>15,557</b>	<b>12,801</b>
<b>Total liabilities and equity</b>	<b>183,959</b>	<b>178,734</b>

EIB €4.2 M

(1)

(2)

(3) EIB €25.5 M

(4)

(5)

(6)

(2)

(3) EIB €0.3 M

(4)

(5)

(5)

EIB Total  
€30 M

## (1) Shareholders' equity

- Mainly impacted by :
  - Capital transactions €0.7 M
  - Issuance of equity instruments:
    - EIB loan warrants €4.2 M
    - Employees warrants plans €1.4M

## (2) Provisions

- Provision for retirement indemnities for the entire Group

## (3) Loans and financial liabilities

- New €30 M EIB loan partly offset by:
  - Warrants relating to the loan are recognized in equity for €4.2 M
  - Repayment of other loans for €1 M

## (4) Lease liabilities

- Counterpart to the « right of use » recognized as an asset in the balance sheet, relates to the lease liabilities of Carbios and Carbiolice leases

## (5) Trade payables and other liabilities

- Variations explained by the activity of the three consolidated entities

## (6) Deferred tax liabilities

- Net position relating to assets recognized following the purchase price allocation exercise



# FY 2022 Consolidated cash flow statement

Consolidated cash flow statement (in thousand euros)	December 31, 2022	December 31, 2021
<b>Cash at beginning of year</b>	<b>104,956</b>	<b>29,077</b>
Cash flow from operating activities	(21,820)	(9,044)
Cash flow from investing activities	(9,327)	(22,837)
Cash flow from financing activities	26,747	107,761
<b>Change in cash position</b>	<b>(4,399)</b>	<b>75,880</b>
<b>Cash at end of year</b>	<b>100,557</b>	<b>104,956</b>

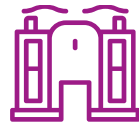




# Key takeaways



A team supported by leading partners in the field



A demonstration plant that confirms industrial and commercial scalability



Licensing ready to start with first revenues expected in 2024



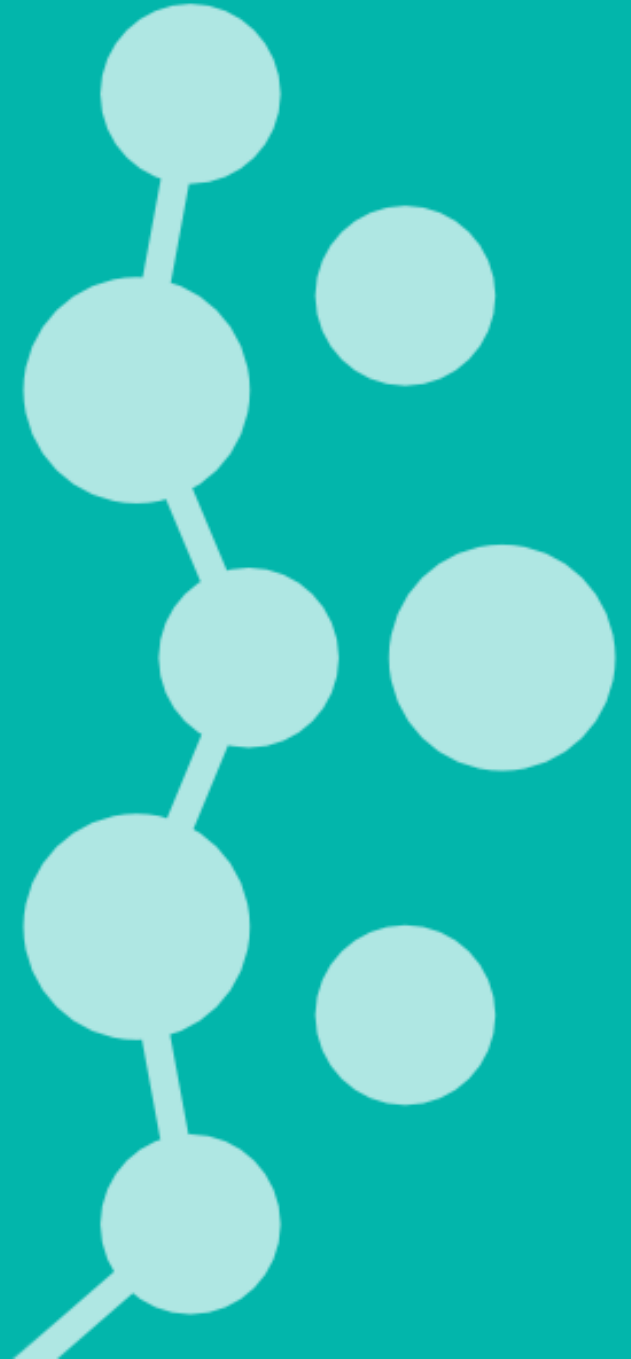
Industrial Unit:  
A project fully on track for the operational launch by 2025



# Q&A



## Appendix

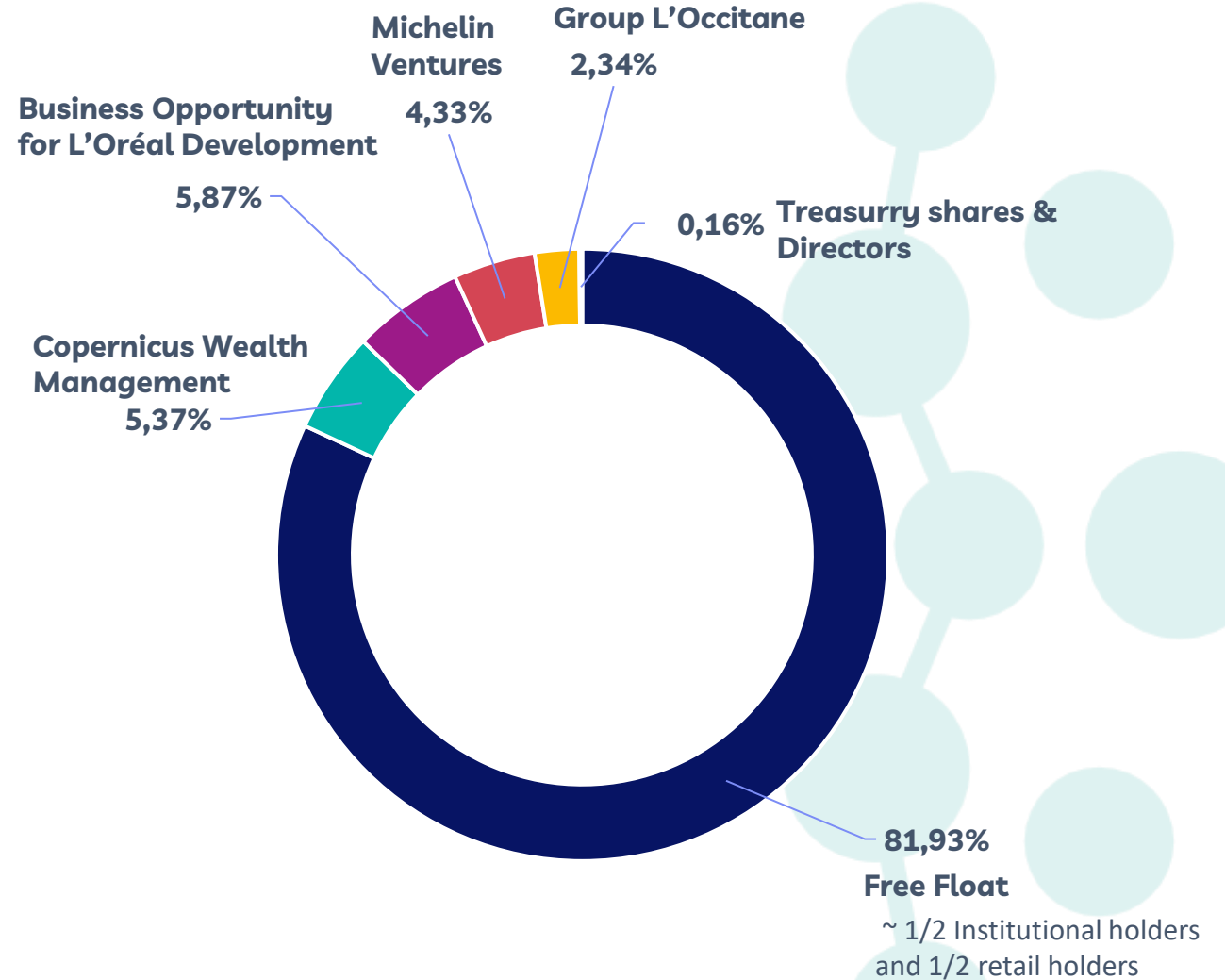




# Share & Shareholders as of December 31, 2022

Listing	Euronext Growth Paris
Ticker	ALCRB
ISIN Code	FR0011648716
Number of shares	11,207,356
ICB classification	Chemistry / Speciality chemistry

Analyst coverage	
ODDO BHF	Jeremy Garnier
BRYAN GARNIER	Paul de Froment
GILBERT DUPONT	Alexandre Letz
KEPLER CHEUVREUX	Baptiste de Leudeville
BNP PARIBAS EXANE	Laurent Jelebart







# An experienced management team



Emmanuel LADENT  
**CEO**

30 years' experience in the automotive sector



Pascal BRICOUT  
**Head of Strategy & Finance**

30 years of international experience in finance



Martine BRISSET  
**Senior Vice-President**

30 years' experience in the food and packaging industry



Lionel ARRAS  
**Industrial Development Director**

25 years' experience in the chemical industry & process engineering



Prof. Alain MARTY  
**Chief Scientific Officer**

International expert in enzymology & biological processes



Lise LUCCHESI  
**Intellectual Property Director**

Biotechnology engineer & intellectual property expert



Mathieu BERTHOUD  
**Sourcing and Public Affairs Director**

30 years' experience in the chemical & recycling industry



Stéphane FERREIRA  
**Director of Operations**

More than 20 years' experience in the chemical industry



Delphine DENOIZE  
**Innovation Programs funding, Regulation and LCA Director**

Agricultural engineer & innovation funding expert



# Our Board of Directors



**DR. PHILIPPE  
POULETTY**

**Chairman**

- Co-Founder & Executive Director of Truffle Capital



**PROF. KARINE  
AUCLAIR\***

- Prof. of Chemistry at McGill University
- Tier 1 Canada Research Chair in Antimicrobials and Green Enzymes



**SANDRINE  
CONSEILLER\***

- Former CEO of Aigle
- Former Marketing and Branding Vice-President at Lacoste



**VINCENT  
KAMEL\***

- Managing Director of the Solvay Polyamide Division
- Director of Coatis Business Unit
- Asia Director for Engineering plastics



**JUAN  
DE PABLO\***

- Prof. in Molecular Engineering at the University of Chicago's Pritzker School



**ISABELLE  
PARIZE\***

- Chairman of the Supervisory Board of DELSEY Paris
- Board member of Air-France KLM



**AMANDINE DE  
SOUZA\***

- General Manager Leboncoin
- Ex-General Manager of Le BHV Marais, Eataly and Home, DIY and Leisure Purchasing at Galeries Lafayette Group



**MATEUS  
SCHREINER  
GARCEZ LOPES\***

- Global Director for Energy Transition and Investments at Raizen
- Former Global Manager in Renewable Chemicals at Brasken



**EMMANUEL  
LADENT**

- CEO of Carbios
- 30 years' experience in the automotive sector



**LAURENT  
SCHMITT**

- BOLD, venture fund created by L'Oréal to support the development of innovative start-ups



**NICOLAS  
SEEBOTH**

- Michelin Venture, fund created by Michelin in order to materialize Michelin's open innovation approach and to invest in high-tech materials that include a sustainable development dimension



**ALEN  
VUKIC  
Observer**

- CFO of Copernicus Wealth Management
- Chairman of Thalia Capital Advisors and of Finpartner Financial Services, Board member of different AIFM and UCITS funds



# CARBIOS

Biotechnology **powering**  
plastic and textile **circularity**

**THANK YOU!**